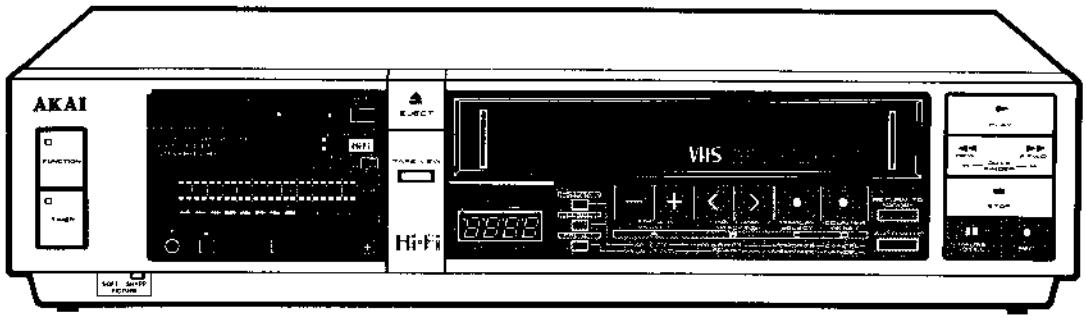
AKAI SERVICE MANUAL

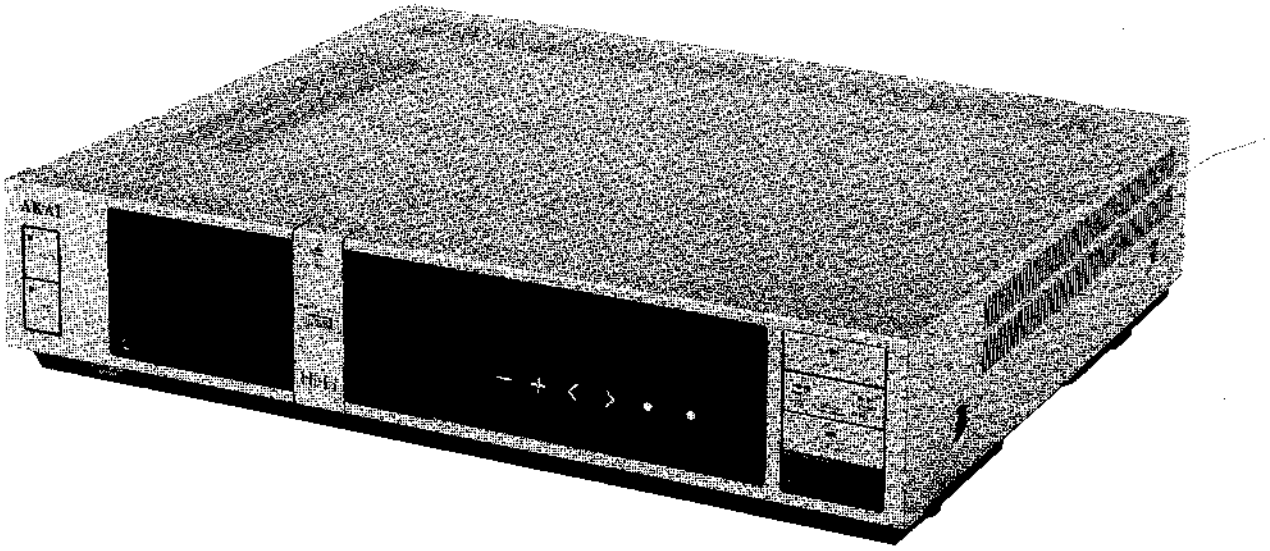


HiFi VIDEO CASSETTE RECORDER

MODEL VS-603EG/EK/ES/EZ
MODEL VS-606EA/EO
MODEL VS-607EO-G

ABBREVIATIONS LIST

ABBREVIATION	EXPLANATION
AC	Alternating Current
ACC	Auto Color Control
A/C	Audio and Control
ADJ	ADJust(ment)
AFC	Auto Frequency Control
AFT	Auto Fine Tuning
AGC	Auto Gain Control
AH(P)	Audio Head (Play Back)
AH(R)	Audio Head (Record)
AL	ALl
AL	ALways
ALC	Auto Level Control
A-SW-P	Audio-SWitching-Pulse
A-MUTE	Audio-MUTE
AUT/MAN	AUTO/MANual
ANT	ANTenna
APC	Automatic Phase Control
ASSY	ASSemblY
BAL	BALance
B/C	Buzz and Charactor
B DOWN	Break DOWN
BGP	Burst Gate Pulse
BLK	BLacK or BLock
BM	Balanced Modulator
BPF	Band Pass Filter
BS	Band Select
BS (SB)	Brake Supply (Supply Brake)
BT (TB)	Brake Takeup (Takeup Brake)
BU	Back Up
B/W	Black and White
CCIR	Comité Consultatif International des Radio Communications
CH (Ch.)	CHannel (Channel)
CK	Color Killer
CLK	CLocK
CLP	CLiP
CM	Capstan Motor
CN	CoNnector
COMP	COMParator
Comp	Comparison
C or R	Cue or Review
CR 1	Cue Review 1 (high)
CSW	Cassette SWitch
CTL	ConTroL
CUE	CUE
CW	Carrier Wave
DAC	Digital to Analog Converter
DC	Direct Current
DEMOD	DEMODulator
DET	DETect (DETector)
DL	Delay Line
DM	Drum Motor
DOC	Drop Out Compensator
D-P-E	Drum-Phase-Error
D-PG	Drum-Pulse Generator
D-TPZ	Drum-TraPeZoid
EE	Electronic to Electronic
EF	Emitter Follower
EM	Eject Motor
EMPHA	EMPHAsis
ENVIN	ENVelope INput
ESW	Eject SWitch
EQ	EQualizer
FE	Full track Erase
FF	Flip-Flop
FG	Frequency Generator
Fig.	Figure
FM	Frequency Modulation
Fo	resonance Frequency
FREQ	FREQuency
FSI	Field Start Inhibit
GND	GrouND
H	Horizontal
HP	Horizontal (sync) Pulse
HPF	High Pass Filter
HT	HeaTer
IC	Integrated Circuit
ID	IDentification
IDL	IDLe (Voltage)
INS	INSert
INV	INVerter
L-CTL	Lamp-ConTroL
LED	Light Emitting Diode
LDI	LoaD Input
LM	Loading Motor
LM STP	Loading Motor SToP
LP	Long Play
LPF	Low Pass Filter
LSW	Loading SWitch
ME-SECAM	Middle East SECAM
MI-COM	MIcro COMputer
MM	Mono-stayble Multi
MRS	Motor ReverSe
NG	Noise Gate
NON-LIN	NON-LINear
N.T.S.C.	National Television System Committee
O MUTE	Output MUTE
OSC	OSCillator
PAL	Phase Alternation Line
PB	Play Back
P-COM	Phase-COMparator
PDN	Power DowN
PG	Pulse Generator
PL, PLG	PLunger (PLunGer)
POS	POSition
PRG	PRoGram
P & S	Power supply & System control
PU	Pick Up (head, pulse)
PWR	PoWeR
Q	Quality factor
RC	Rotary Control
REC	RECord
REF	REFerence
REF-V	REFerence Vertical signal
REG	REGulator
REV (REVW)	REView (REVieW)
REW	REWind
RFB	Radio Frequency Booster
RM	Reel Motor
RM PWR	Reel Motor PoWeR
R-S SW	Record-Safety SWitch
RST (RES)	ReSeT (RESet)
RVS	ReVerSe
S	Sensor, Shield
SC	SimulCast
S CLK	Serial CLocK
S & A	Servo & Audio
SECAM	Séquentiel à Memoire
SEP (SEPA)	SEParator (SEPArator)
SFP	Sync Front Pulse
S & H	Sample and Hold
SLP	Super Long Play
SP	Standard Play
SPD	SPeeD
SRP	Supply Reel Pulse
SRV	SeRVo
SOW	Sync On Word
STBY	STandBY
SW	SWitch
SW'NG	SWitchiNG
SWP	SWitching Pulse
SYNC	SYNChronize
T-AUDIO	Tuner AUDIO
TA-MUTE	Tuner Audio MUTE
TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
TRK	TRacKing
TRP	Take up Reel Pulse
T/U	Take Up
TV	TeleVision
UHF	Ultra High Frequency
UNR	UNRegulated
V	Vertical
VCO	Voltage Controlled Oscillator
VD	Vertical Drive
VF	Voltage for Fine tuning
VHF	Very High Frequency
VHS	Video Home System
VID	VIDeo
VIDEO-J	VIDEO Judge
VIF	Video Intermediate Frequency
VJ	Video Judge
VM	Voltage for Memory
VOB	Video On Blank
VOW	Video On Word
VP	Vertical (sync) Pulse
VT	Voltage for Tuning
WHT	WHiTe
2H	2 Hour (SP)
6H	6 Hour (SLP)



HiFi VIDEO CASSETTE RECORDER

MODEL VS-603EG/EK/ES/EZ
MODEL VS-606EA/EO
MODEL VS-607EO-G

SECTION 1 OPERATING MANUAL 3
SECTION 2 SERVICE MANUAL 21
SECTION 3 PARTS LIST 57

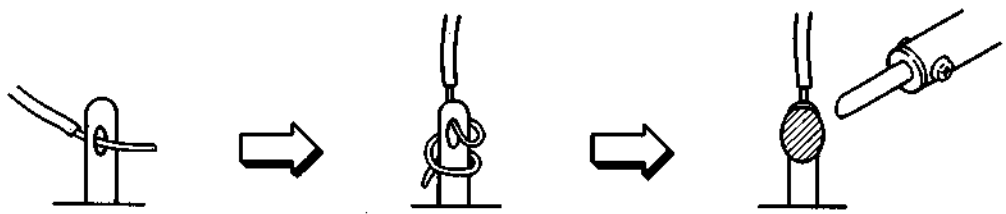
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

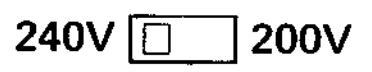
VOLTAGE CONVERSION

The models VS-603EZ, VS-606EA/EO and VS-607EO-G are not equipped with this facility. The operating voltages of these models are preset at the factory according to destination. However, the operating voltages of the models VS-603EG, VS-603EK and VS-603ES can be set to 110V or 220V, 200V or 240V, 220V or 250V respectively as required.

If your machine's voltage can be converted:

1. Disconnect the power cord.
2. Set the VOLTAGE SELECTOR located on the rear panel, with a screwdriver, until the correct voltage for your area is indicated.

VS-603EG



VS-603EK

VS-603ES

CYCLE CONVERSION

With DC MOTOR CYCLE CONVERSION is not necessary.

SECTION 1

OPERATING MANUAL

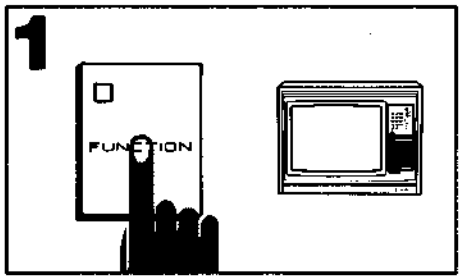
MODEL VS-603EG

TABLE OF CONTENTS

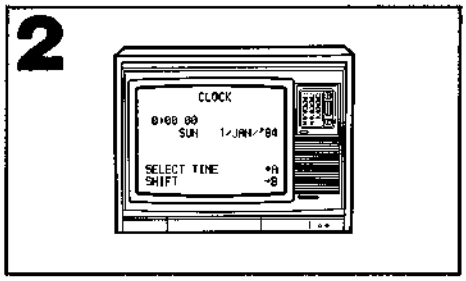
TUNING THE TV TO THE VIDEO CHANNEL 4
LET'S SET THE TIMER TO THE ACTUAL TIME 5
LET'S PLAYBACK A PRERECORDED TAPE 6
CONVENIENT FEATURES OF THE VCR 8
ON THE REMOTE CONTROL UNIT RC-V603 9
LET'S PRESET THE AKAI VCR WITH TV STATIONS 10
HI-FI VHS AUDIO RECORDING AND PLAYBACK 11
LET'S RECORD A TV PROGRAM 12
ADDITIONAL RECORDING AND PLAYBACK FUNCTIONS 13
PROGRAMMING THE AKAI VCR FOR AUTOMATIC RECORDING 14
LET'S PROCEED WITH AUTOMATIC RECORDING 16
SLEEP TIME SETTING 17
PROBLEM? LET'S CHECK 18

Tuning the TV to the video channel

The Akai VCR sends out a signal similar to that transmitted by a TV station. By tuning your TV (to the video channel) to receive this signal, you can select programs from the Akai VCR as you would select a program with the TV's channel selector.

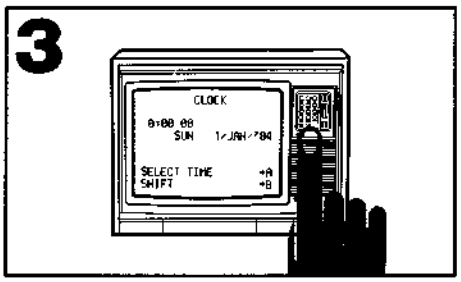


Depress the FUNCTION button to TURN ON.



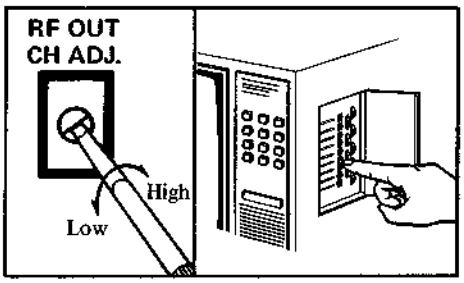
The CLOCK setting display will be sent to the TV. This will be your guide for fine tuning to the video channel.

If your TV has an Automatic Frequency Control (AFC) or Automatic Fine Tuning control (AFT), switch it off. (On some TV's this is done automatically when the control panel door is opened.) Turn it back on after tuning the video station, and check that there is no significant deterioration of the picture.



Adjust your TV tuner until a picture (the time information) is obtained in the neighbourhood of channel 36.
Fine tune the TV to optimize picture quality.
Whenever you want to watch programs from the Akai VCR, tune your TV to this video channel.

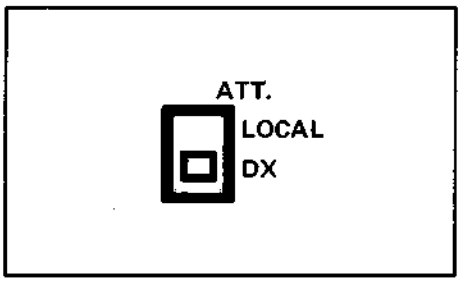
Rear Panel **TV**



If channel 36 is being used for broadcasting by a TV station in your area, your TV must be set to an unused channel between UHF 30 and 39. Do this by adjusting the TV channel selector a little at a time until the TV screen goes blank. (Set it towards a higher or lower station.)
Then adjust the RF converter on the rear panel of the VCR, a little at a time with a screwdriver until the CLOCK display appears clearly on the TV screen.

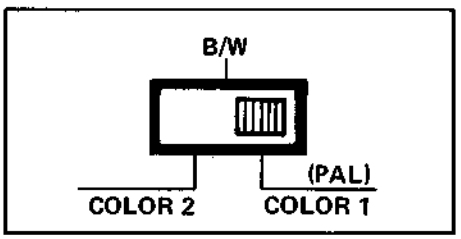
* If the channel selector was set higher, set the RF converter higher, etc.

Rear Panel



On the LOCAL/DX attenuator switch
The LOCAL/DX switch on the rear panel of the VCR is used to adjust the signal reception of the tuner section.
If the picture develops wavy lines during reception of a local TV station broadcast, it may be that the signal reception is too strong. In that case, move this selector to the LOCAL position to attenuate the signal strength.
If TV reception during, say a broadcast by satellite, is poor and contains too much picture "noise", set this switch to the DX position to improve the picture reception.
(Normally, leave this switch in the DX position.)

Rear Panel



Video mode selector

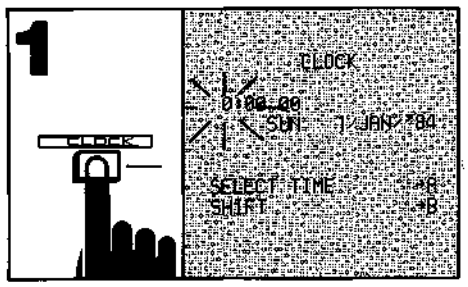
The video mode selector is used to select the type of signal to be recorded or played back.

COLOR-2	Set to this position for SECAM B/G color system recording or playback.
B/W	Set to this position for CCIR standard monochrome system recording or playback.
COLOR-1 (PAL)	Set to this position for PAL color (PAL) system recording or playback.

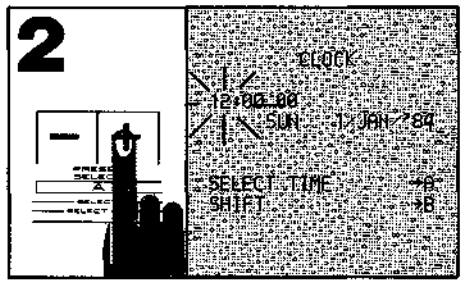
Now you are ready to watch prerecorded tapes. Or, choose a preset station for TV reception from the tuner inside the Akai VCR.

Let's set the timer to the actual time

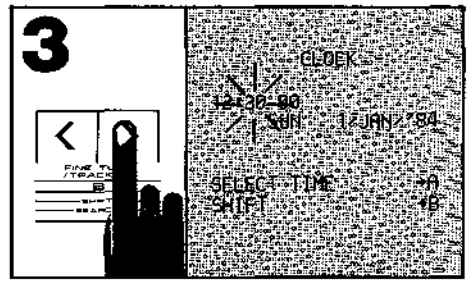
There is a 24 hour digital timer clock inside the Akai VCR, which keeps time for such operations as pre-set program recording. Therefore, the clock must be properly set.



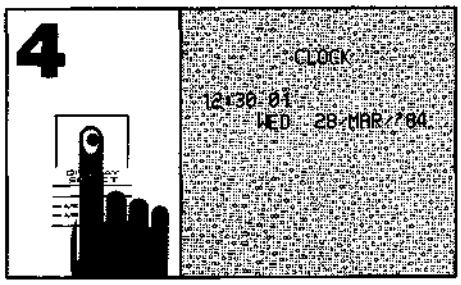
Depress the CLOCK button to display the information for setting the time to the actual time on your TV screen.



To follow the instruction "SELECT TIME → A", depress the '-▲+ button to select the correct hours.

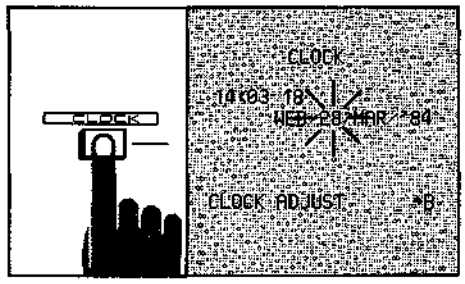


To follow the instruction "SHIFT → B", depress the ‹ ▣ › button to shift to the next item to be set: minutes.
Continue operating the -▲+ and ‹ ▣ › buttons until all the time and date settings are correct.



MEMORIZE

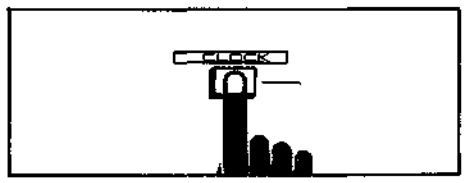
When you have correctly set the timer to the actual time, follow the instruction "IF OK, MEMORIZE → C", by depressing the ▣ button to memorize the data.
* The timer will start keeping time.



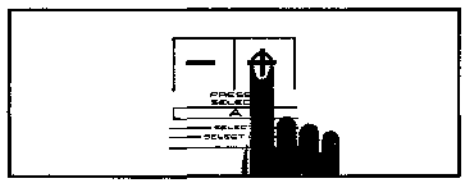
The full display is maintained for approximately 3 seconds. To recall the time, depress the CLOCK button again. Depressing the CLOCK button also removes the display.

If you want to reset the actual time and date

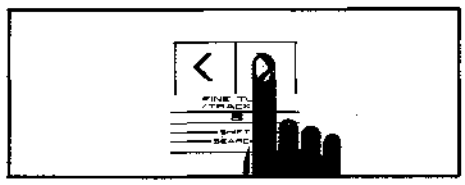
Depress the CLOCK button to display the information for resetting the timer to the actual time.

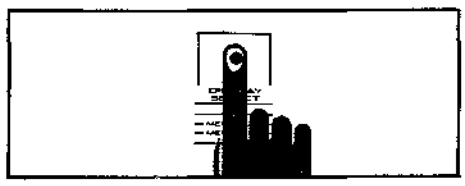


Follow the instruction "CLOCK ADJUST → B", by depressing the ‹ ▣ › button to display the information for setting the timer to the actual time.



To follow the instruction "SHIFT → B", depress the ‹ ▣ › button again and again until the item you want to reset flashes on and off. Then use the -▲+ and ‹ ▣ › buttons to reset the clock information.
Reset other items in the same manner. After you have reset all incorrect items, go to the next step.





Depress the ▣ button to memorize the new data.

Let's playback a prerecorded tape

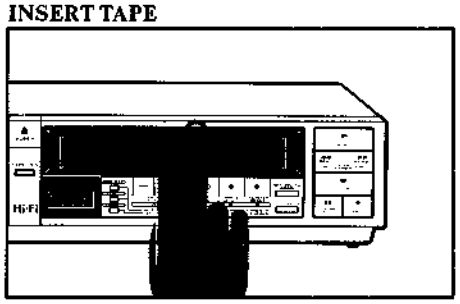
Check before starting

❶	Power cord is properly connected to the household AC outlet.
❷	TV set to the video channel.
❸	Amplifier is turned on and set to AUX or TAPE.

Important

A video cassette tape can be loaded or unloaded only when the Akai VCR is plugged in.
If a tape is inserted when the FUNCTION button is turned off, the VCR will automatically be turned on.

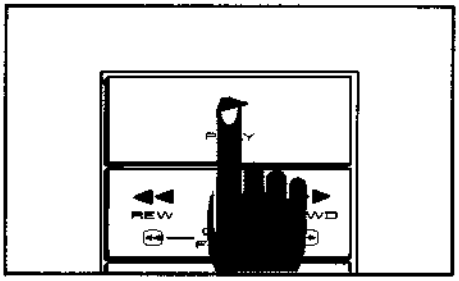
INSERT TAPE



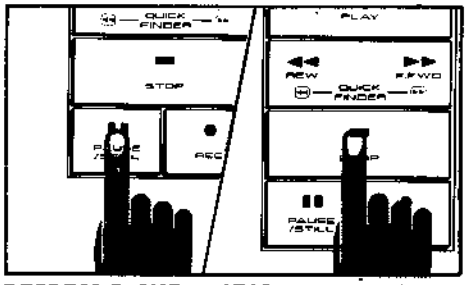
Insert the video cassette tape correctly into the cassette loading compartment and give it a little push.

* Follow the markings on the video cassette tape to correctly insert it into the cassette loading compartment. If the video cassette tape is not inserted correctly it will be ejected.

DEPRESS PLAY



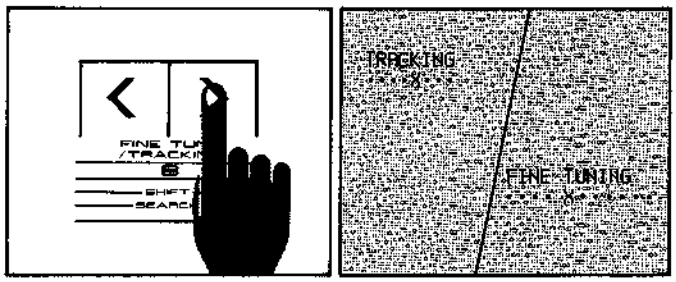
"PLAY" will be displayed on the TV screen for approximately 3 seconds.
The VCR will automatically set the playback speed to correspond with the speed at which the tape was recorded (LP, or SP).
Whenever the end of the tape is reached, the tape will automatically rewind to the beginning.



DEPRESS PAUSE or STOP to temporarily or permanently stop play.
To prevent damage to the tape, the VCR will automatically switch to the STOP mode after more than 3 min. in PAUSE.

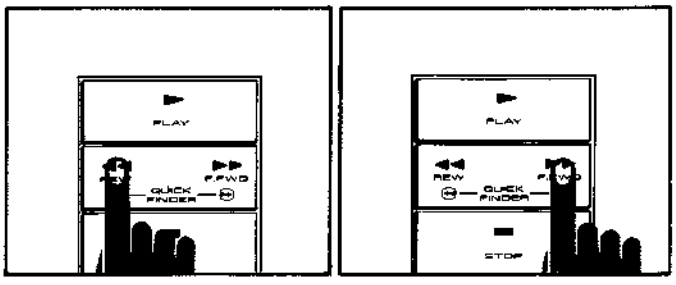
FINE TUNING/TRACKING control

There may be disturbances in the playback picture. This can occur when you play back a tape recorded with another video cassette recorder or when the broadcast from a TV station is not clear. To improve the picture, depress the ‹ ▭ › button.
The TRACKING display will appear on the TV screen when playing a tape, and the FINE TUNING display will appear when receiving a TV broadcast. The "X" is normally set to center of the display.
To improve the picture, depress the ‹ ▭ › button on the — or + side. The "X" moves to indicate TRACKING or FINE TUNING is taking place.
When the picture is clear, release the button The display will disappear a few seconds later.



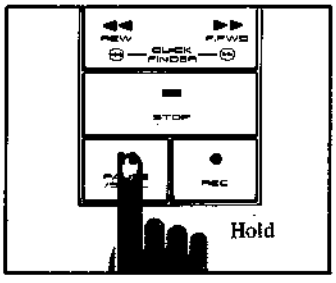
Quick Finder

Use the Akai quick finder system during playback to visually locate any point on a recorded tape. The tape will be played back very quickly and no sound will be heard during quick finder operation.
While in the PLAY mode, depress the QUICK FINDER (⏪) or (⏩) button just once. The picture will go forward or backward very quickly. When you reach the point you are looking for, depress the PLAY (►) button to resume normal playback.
Note: There will be disturbances in the picture during quick finder operation. This is normal and does not indicate a problem with the VCR.

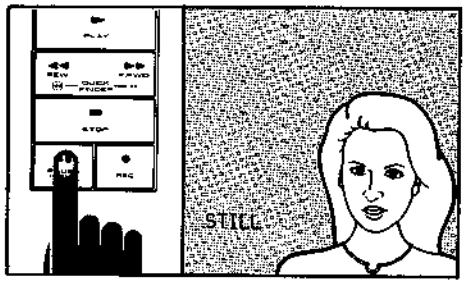


Slow motion

The VCR can play back the tape in slow motion by simply holding down the PAUSE/STILL button during PLAY. The tape will be played at 1/25th of its normal speed. If the PAUSE/STILL (▮▮) button is depressed more than 3 minutes, the VCR will automatically switch to the REC PAUSE mode. If this happens, depress the STOP button to reset.

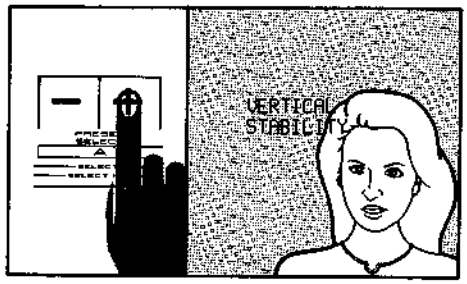


Still picture playback



During playback, you can obtain a still picture by depressing the PAUSE/STILL (❚❚) button just once.
No sound will be heard in the STILL mode. To advance the picture step by step, repeatedly depress and release the PAUSE/STILL (❚❚) button.
To resume normal playback depress the PLAY (►) button.

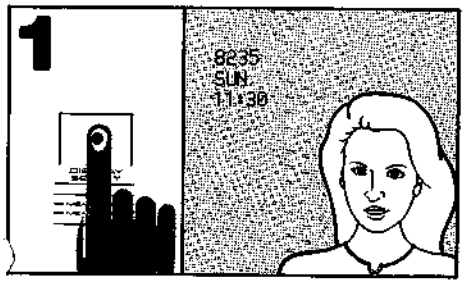
In LP there will be some noise bars during still picture playback.
The noise bars which appear during LP still picture playback, can be positioned in such a way that you can look clearly at the details you want. All you have to do is repeatedly depress the < ▣ > button until the noise bars are properly positioned.



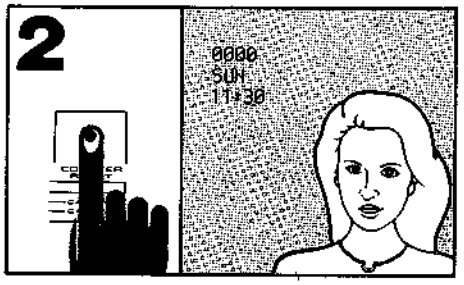
If the still picture vibrates, depress the < or > side of the -▣+ button. The display for "**VERTICAL STABILITY**" will be shown on the TV screen. Hold down either side of the -▣+ button until vibration is reduced. Release the button when finished, and the display will disappear.

RETURN TO "0000"

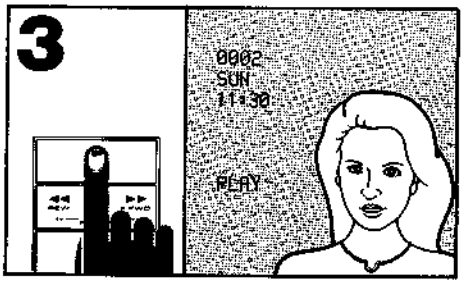
Use the RETURN TO "0000" system to quickly return to the beginning of any tape segment in either the play or record modes.



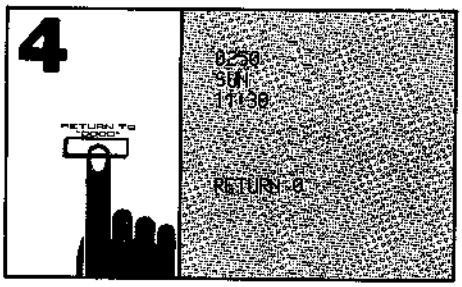
When you have located the point on the tape to which you want to return, repeatedly depress the ▣ button until the tape counter is displayed on the TV screen.



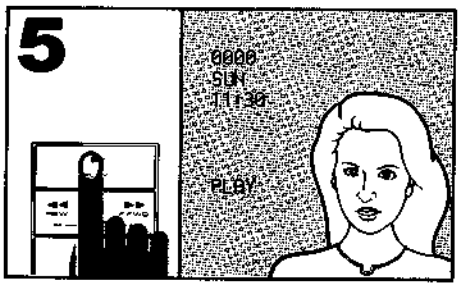
Depress the ▣ button to reset the tape counter to "0000".



Depress the PLAY (►) button for at least 1 second to begin playback.
* "PLAY" will be displayed on the TV screen for approximately 3 seconds.



When you are ready to return to the point where you began playback, depress the RETURN TO "0000" button.
The tape will rewind to the beginning of the program (in other words, to the counter reading of "0000") and stop.



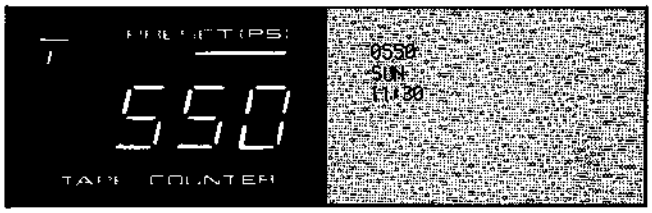
To repeat the process , depress the PLAY (►) button again.
NOTE:
To use the RETURN TO "0000" system during recording, depress the REC (●) button instead of the PLAY (►) button in step 3.

NOTES:
To **Unload** a tape
Depress the EJECT (▲) button. The video cassette tape will be ejected. Take out the video cassette tape.
The EJECT (▲) button can be depressed any time **except** during regular, automatic and sleep time recording.
The F.FWD and REW buttons have two functions, From the **PLAY** mode, they function as the Quick Finder control. From the **STOP** mode, they function as normal Fast Forward and Rewind.

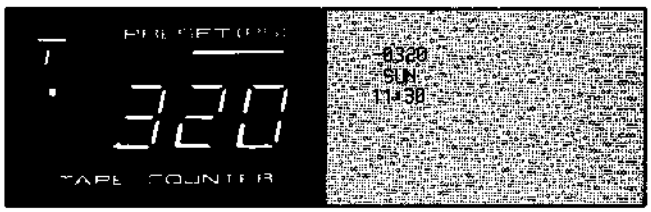
Convenient features of the VCR

On the Tape Counter and Channel display

The tape counter can be viewed on the front panel of the VCR, or on the TV screen display by depressing the ▣ button, when the VCR is in the EXT mode, or when the play button is depressed. When not in the EXT mode, the counter can be viewed on the TV screen only.

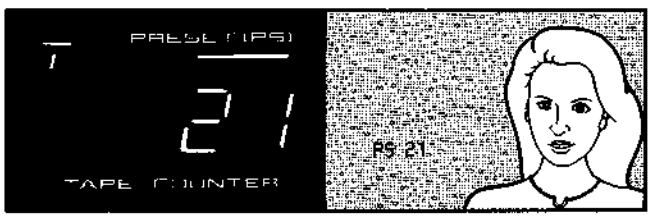


The tape counter mode contains a negative sign (-) on the TV display which is depicted by a dot (.) on the front panel display of the VCR. This negative sign appears whenever the tape is rewound past the counter reading of "0000" (for instance when "0000" is set somewhere in the middle of the tape for use with the RETURN TO "0000" function). When the negative sign appears, the counter will count "down" to "0000", before again counting up. Of course, you can reset the counter to "0000" at any time by use of the ▣ button.



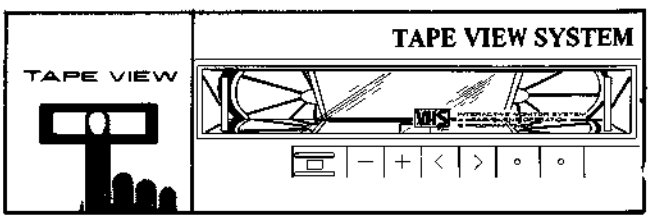
The front panel display of the VCR will also show the preset number, along with the TV screen display, whenever the -▣+ button is depressed to select a preset station. However, while the TV display disappears after a few seconds, the PS display on the front of the VCR remains to remind you of the station you are watching.

The Elapsed Time display tells you how many hours and minutes have elapsed since play back or recording began.
The Elapsed Time display is most useful in the PLAY and RECORD modes.



Tape View System

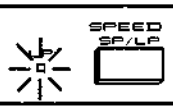
The Tape View System can be used for early detection of a problem with the tape or tape mechanism inside the VCR, by allowing you to directly view the tape during any mode. In addition, the Tape View System stays lit when the VCR is in the STOP, F.FWD, and REW modes, to let you know a tape is already loaded. During PLAY and REC, the Tape View system stays lit for 3 seconds only. The system works automatically when you depress a tape transport button, or at any time by depressing the TAPE VIEW button.



On the TAPE SPEED Selector

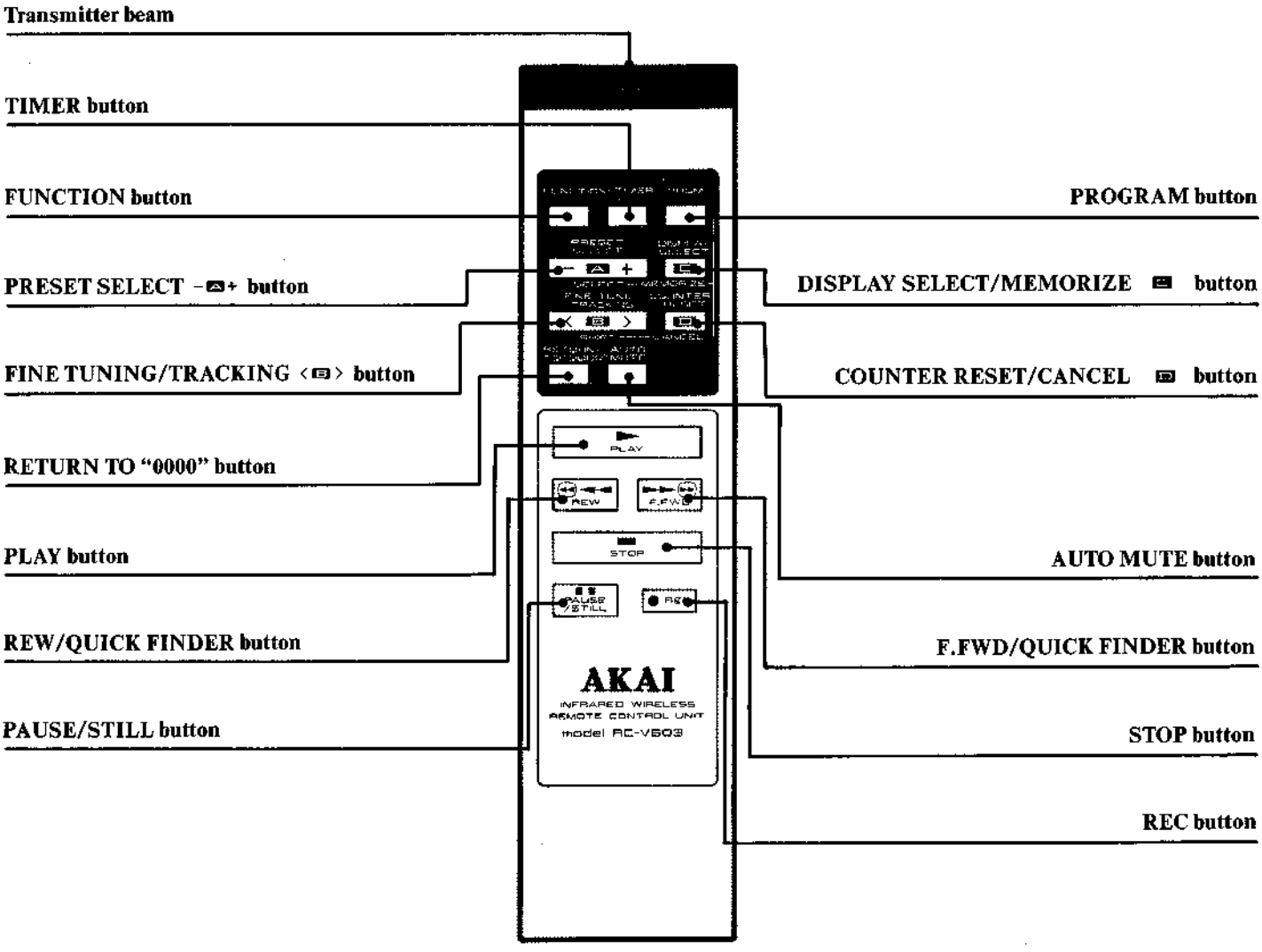
* Before recording, set the SPEED selector according to how long you want to record. During playback, the Akai VCR automatically detects and after a few seconds, plays back at the correct speed.

NOTE:
Akai does not recommend recording at two different speeds on one video cassette tape. Never change the SPEED selector during recording.

TAPE SPEED switch	Mode	Video Cassette				
		E-240	E-180	E-120	E-60	E-30
	Recording or playback Manual or Auto	4 hrs	3 hrs	2 hrs	1 hr	30 min
	Recording or playback Manual or Auto	8 hrs	6 hrs	4 hrs	2 hrs	1 hrs

On the remote control unit RC-V603

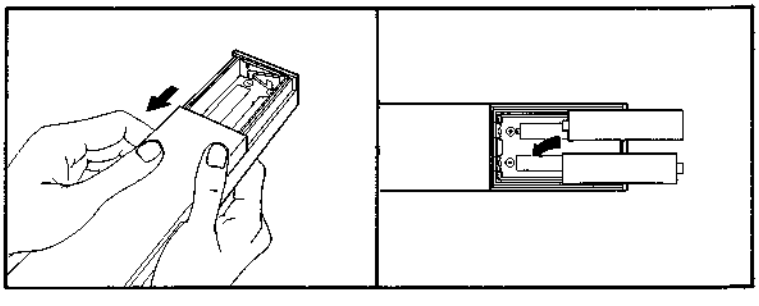
The operation buttons of the Akai RC-V603 are used the same way as the operation buttons on the front panel of the Akai VCR except for the EJECT, CLOCK, and PRESET buttons which do not appear on the RC-V603.



How to load the batteries for the Akai RC-V603

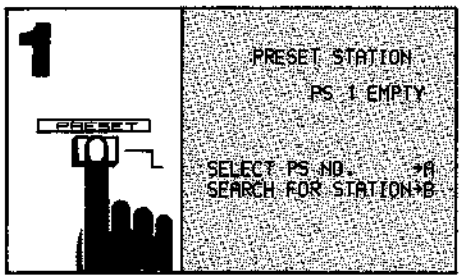
1. Slide back the battery compartment cover.
2. Insert two AA, R6 or equivalent size batteries into the battery compartment as shown in the illustration.
3. Replace the battery compartment cover.

NOTE:
When changing the batteries, change all the batteries at the same time.

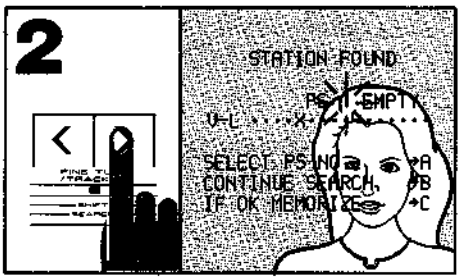


Let's preset the Akai VCR with TV stations

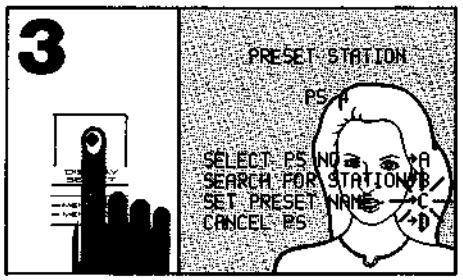
The Akai VCR must be tuned to the locally available TV stations. We call this procedure "presetting". Up to 16 TV stations can be preset.
There is an automatic station search system inside the Akai VCR which searches for and tunes in TV stations. We call this searching for and tuning in of TV stations "station search".



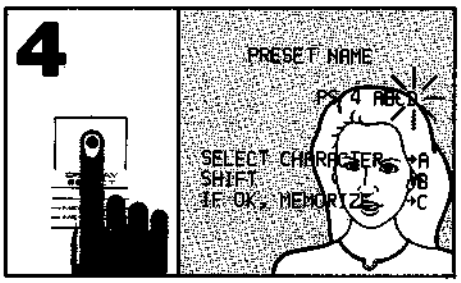
Depress the PRESET button to display the information for presetting the Akai VCR on your TV screen.
To follow the instruction "SEARCH FOR STATION — B", depress the <▣> button just once.
The "X" will move from the left to right, visually indicating the search for TV stations.



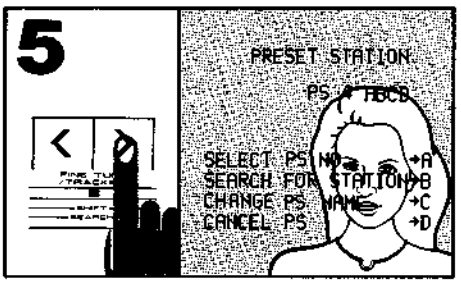
Station search stops when a TV station is found (i.e. tuned in) and this information and a program from the found TV station will be displayed. If the display and the program are not clear, the TV station may be incapable of being memorized. In that case, or if you do not want to memorize the station, depress the <▣> button to resume station search.



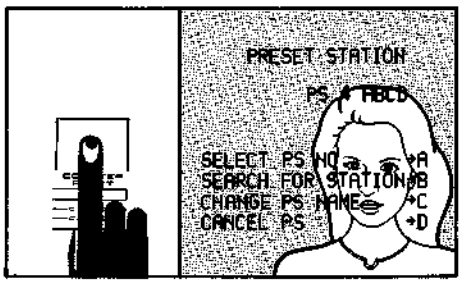
To follow the instruction "IF OK, MEMORIZE — C", depress the ▣ button. Then to follow the instruction "SET PRESET NAME — C", depress the ▣ button again to assign some call letters to the preset station.



Depress the −▣+ and <▣> buttons to select up to 4 characters (A to Z). If you don't wish to set any letters, depress the ▣ button to memorize the TV station into the selected preset station number.

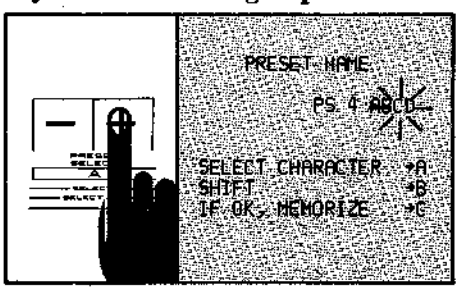


To follow the instruction "SEARCH FOR STATION — B", depress The <▣> button to restart station search.
The automatic search for stations proceeds through VHF Low, VHF High and UHF. The VCR scans all available stations. The station search can be repeated over the same area by depressing the (<) side of the <▣> button.
To stop station search operation, depress the PRESET button again. The display will disappear from the TV screen.

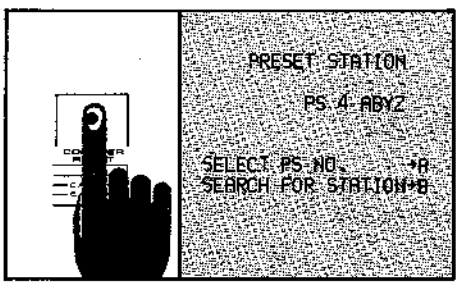


To cancel a preset TV station:
Depress the PRESET button.
Depress the −▣+ button to select the station to be canceled.
Depress the ▣ button to cancel the preset station.
Depress PRESET again to remove the display.

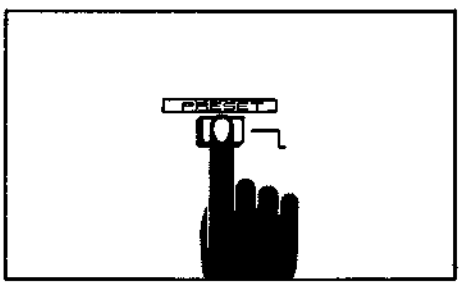
If you want to change a preset TV station number



Depress the PRESET button.
Depress the −▣+ button to select the station to be changed.



Depress the ▣ buttton to to display the information for resetting the TV station number.
Depress the −▣+ and <▣> buttons in order, to select a new number.



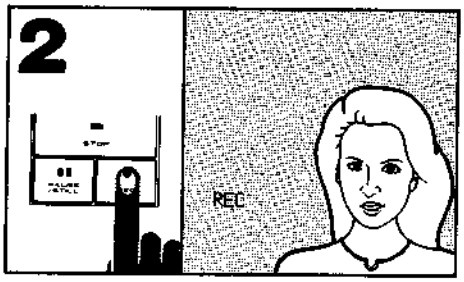
Depress the ▣ button to memorize.
To remove the display, depress the PRESET button.
The PS number will be displayed on the front panel of the VCR.

Let's record a TV program

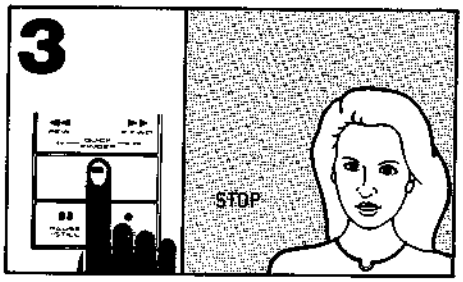
Check before starting

❶	A video cassette tape is loaded and it's recording defeat tab is not broken.
❷	The SPEED selector is set.

Depress the −⏏+ button to select the preset channel number memorized with the TV station to be recorded.



Turn on the Amplifier and set to the AUX or TAPE 2 position. Depress the REC (●) button for at least one second to begin recording. Or depress the PAUSE button and adjust the VCR's recording level before depressing the REC button.



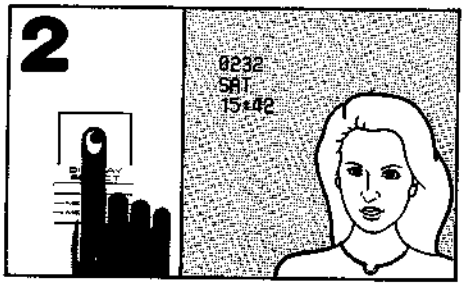
To stop recording depress the STOP (■) or PAUSE button.

Note: When using the REC and STOP buttons to record a program, their will be some overlap in the recorded images in order to prevent noise from appearing between cuts. However, if you want to be sure not to lose a few seconds of image between stops and starts, depress the PLAY button to forward the tape to the exact place you left off, before recording the next portion of tape.

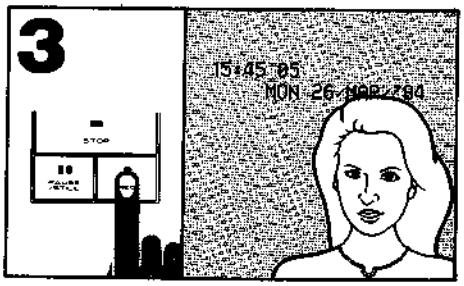
Would you like to index your recordings?

The date, time and preset channel number can be recorded automatically at the beginning of a recording for approximately 7 seconds. When you playback the tape at a later time, you can tell when it was recorded.

Depress the −⏏+ button to select the preset channel number memorized with the TV station to be recorded. The program from the selected TV station will be displayed on the TV screen. At the same time, the selected preset channel number will be displayed on the TV screen for approximately 3 seconds.



Repeatedly depress the ⏲ button until the display containing the day of the week and the actual time is shown on the TV screen.



Depress the REC (●) button for at least one second to begin recording.
The index (date, time and preset channel number) will be displayed on the middle of the TV screen. This display will be recorded for approximately 7 seconds.

Now when you playback this recording, the date, and time that recording took place will be documented at the beginning of the tape.

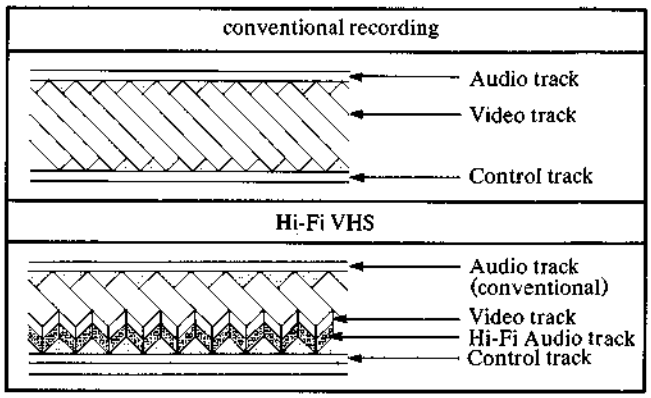
To watch one program while recording another

After following steps 1 and 2 of let's record,
Set the TV to the channel you want to watch with the TV's channel selector.
Recording will continue while you watch another station.

Hi-Fi VHS audio recording and playback

The Akai VCR is equipped with the ability to record or playback with full Hi-Fi stereo sound.

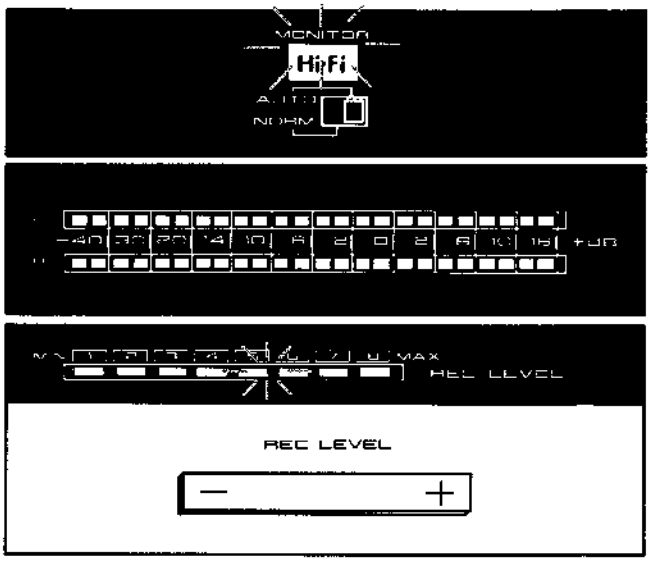
The VCR does this by using 2 audio heads mounted on the video drum, in addition to the 4 video heads. These heads run in the same path as the video heads and "layer" the audio track under the video track as illustrated.
Since you may want to playback tapes recorded with a conventional audio system, the Akai VCR is also equipped with a standard audio head and automatic selector to switch from normal to Hi-Fi playback. When a tape recorded on the conventional audio track is played on this VCR, the Hi-Fi indicator turns off, indicating automatic selection of the conventional audio track. The Hi-Fi NORMAL/AUTO selector is also provided to select the conventional or Hi-Fi tracks manually if you should need to. Normally, keep this selector in the AUTO position.
The playback volume is adjusted with the amplifiers volume control. Recording is always carried out on the Hi-Fi and conventional tracks simultaneously.



The VCR features a Peak Level meter and REC LEVEL control to allow better control when recording in the Hi-Fi mode only.
The VCR's Peak Level meter is color coded to make dB level identification quick and easy.
The dB level from −40 to 0dB is colored green.
The level from 0 to +6dB is colored orange.
The level above +6dB is colored red.
As the colors imply, green is a "safe" recording level; orange is a maximum recording level; red is an area where distortion is likely to occur. To produce the best recording results, set the REC LEVEL control so that the volume does not exceed the orange (+6dB) level on the VCR's Level meter.

The VCR is also equipped with an initialization circuit, which automatically sets conventional audio track recording level and resets to a preset, optimun recording level when the power cord is unplugged. This is indicated on the REC LEVEL display by the red light at number 5.
This preset level should produce excellent recording. However, if you would like to change the REC LEVEL, depress the + or − side of the REC LEVEL control.

The volume level during playback can be adjusted by use of the amplifier's volume control.

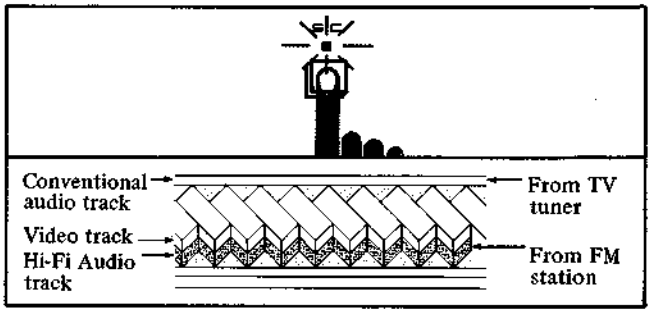


On the AUDIO MONITOR

The AUDIO MONITOR selector allows you to monitor the left or right channels of the Hi-Fi track independently.
This is useful when playing back bilingual tapes. Both indicators light when STEREO is selected. This selector is only for monitoring the Hi-Fi audio track.

On the Simulcast feature

The S.C. selector serves as a switch for mixing the video portion of a TV broadcast, with the audio from an FM radio broadcast. This function is necessary for the simultaneous recording of an FM broadcast and a TV broadcast called simulcast.
Connect the FM tuner to the amplifiers tuner jacks and connect the amplifier to the VCR as shown on page 4 (Hi-Fi sound in recording and play back).
Depress the S.C. selector of the VCR, (the indicator will light), and get ready for recording following the operations on page 13.
The FM sound is recorded on the Hi-Fi track. At the same time, the TV broadcast sound is recorded on the conventional track.

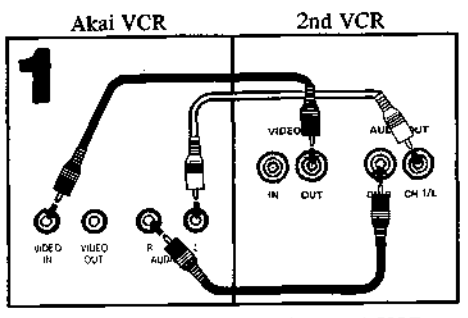


Additional recording and playback functions

The Akai VCR is equipped with several additional features to help make operation simple and convenient.

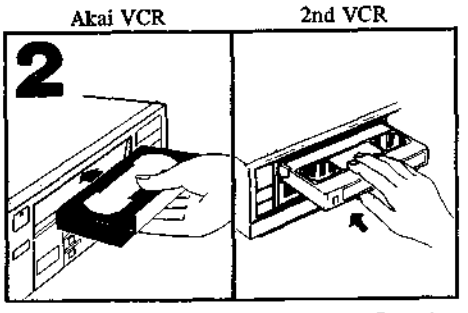
External recording (Tape dubbing)

The Akai VCR allows you to easily record from another VCR by use of the External mode (EXT) selected with the -⏏+ button. With another VCR as the source, you can make a copy of any tape on the Akai VCR.

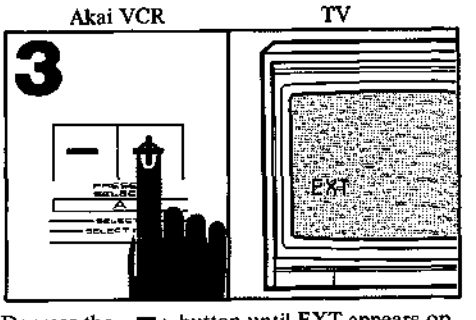


Connect a second VCR to the Akai VCR as shown.

Note: To use the Akai VCR as the source deck, while recording on the 2nd VCR, connect the VIDEO OUT and AUDIO OUT of the Akai VCR to the VIDEO IN and AUDIO IN of the 2nd VCR.



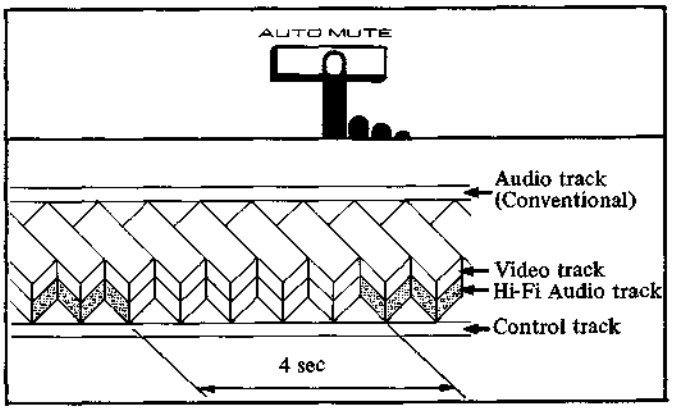
Turn on both VCR's and the TV. Put the source tape in the other VCR, and a blank tape into the Akai VCR.



Depress the -⏏+ button until EXT appears on the TV screen display. Then follow the recording instructions on page 13.

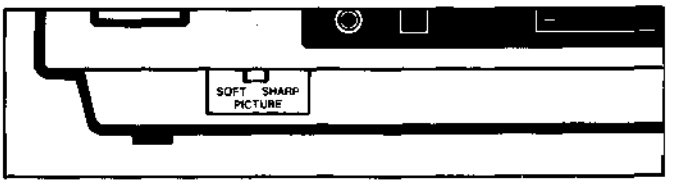
Auto Mute

The Auto Mute function automatically produces 4 seconds of blank tape in the audio track, whenever it is depressed during recording. This is useful when using the VCR as a tape deck for audio recording only.
When you have finished recording a song and are waiting to begin the next recording, depress the AUTO MUTE button to automatically produce 4 seconds of blank space.
Note: When recording video, be careful not to depress the Auto Mute button. Although the video portion of the recording will not be effected, there will be a 4sec. gap in the audio track.
After producing 4 seconds of blank space, the VCR goes into the REC PAUSE mode.



SHARP/SOFT PICTURE control

Use this 3 position switch to soften or sharpen the image on the TV screen. The switch should normally be left in it's PICTURE (center) position.

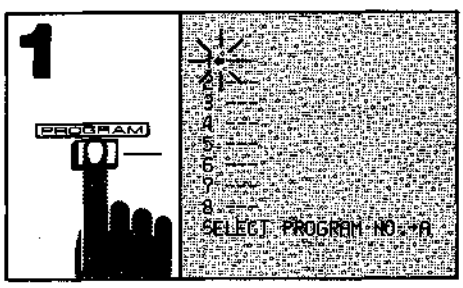


Further recording and playback notes:

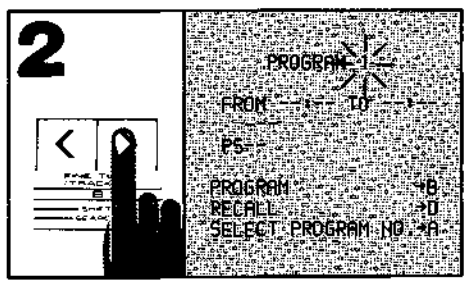
- To fast forward the tape, depress the F.FWD (►►) button while in the STOP mode. "FF" will be displayed on the TV screen for approximately 3 seconds.
- To rewind the tape, depress the REW (◄◄) button while in the STOP mode.
  * "REW" will be displayed on the TV screen for approximately 3 seconds.
- The tape is not visible during fast forward or rewind operations.
- If the REC (●) button will not function, check to see if the video cassette tape's recording defeat tab is broken. If it is, cover the hole with a piece of adhesive tape.
- If you repeatedly depress the -⏏+ button too quickly, the station number shown on the TV screen might not correctly indicate the TV station selected. However, the number shown on the VCR's front panel display will correctly show the station number.

Programming the Akai VCR for automatic recording

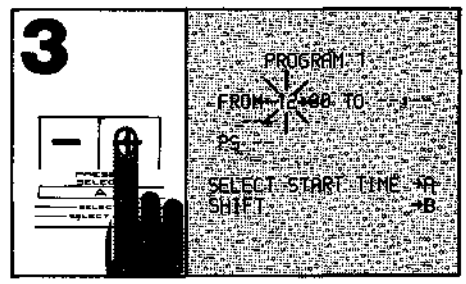
By programming the Akai VCR, you can make it turn itself on, record a TV program and turn itself off, all automatically.
Up to 8 programs can be set in advance you can freely choose the Time, Day, Week and TV station you wish to record, and you can program up to 4 weeks in advance.



Depress the PROGRAM button to display the information for programming on your TV screen.
To follow the instruction "SELECT PROGRAM NO. — A", hold the -+ button depressed until the arrow points to the program number you want to set.



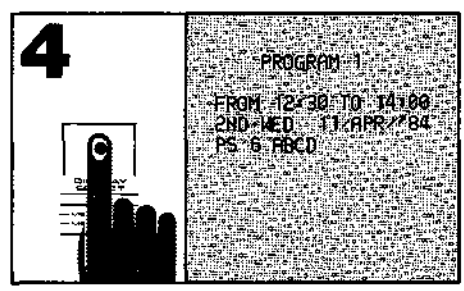
This information will be displayed when the -+ button is released.
To follow the instruction "PROGRAM — B", depress the < > button to start programming.



START TIME HOURS

To follow the instruction "SELECT START TIME — A", depress the -+ button to select the turn on hours.

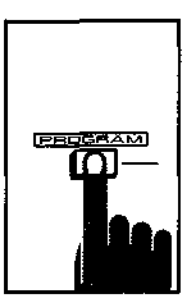
Continue by depressing the < > button to shift to the next setting, and the -+ button to change any of the information. As you proceed, you will notice that the display is instructing you to first select the **START TIME**, then the **STOP TIME** of the program you wish to record. The next indication is **SELECT DAY**, however the week must be set first. For details on this operation, see page 17. The next information to be set is the actual day of the week on which you want recording to be carried out. The actual date on the left of the screen will change automatically during this operation. The final information to be set is the actual channel which is broadcasting the show you wish to record. This is done by putting in the PRESET number which is memorized with that station. See PRESETTING page 11.

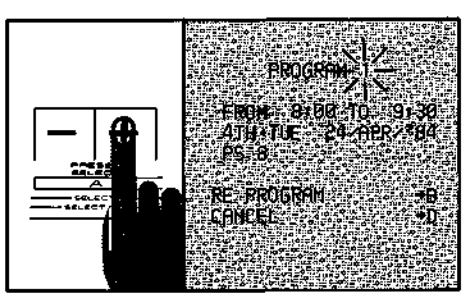


Programming is now finished.
To follow the instruction "IF OK, MEMORIZE — C", depress the button to memorize the program.
To program more automatic recording times, repeat the procedure from step 1.
If you want to remove the programming display from your TV screen, depress the PROGRAM button again.

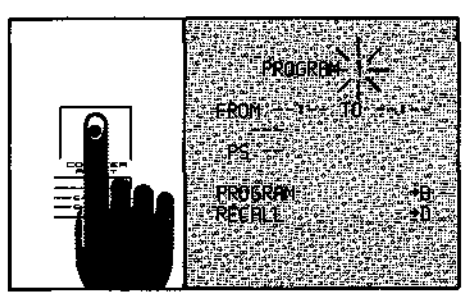
To cancel a program after it has been memorized

Depress the PROGRAM button.





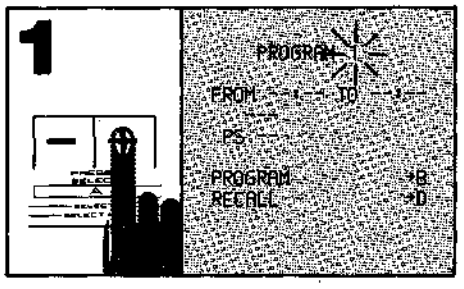
To follow the instruction "SELECT PROGRAM NO. — A", depress the -+ button until the arrow points to the program you want to cancel.



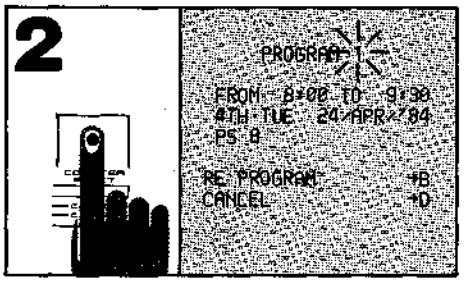
To follow the instruction "CANCEL → D", depress the button to cancel the program. To reprogram repeat the programming procedure above.

If you want to recall a finished or canceled program

When an automatic recording has been carried out according to a program, nothing will be displayed beside its program number when the PROGRAM button is depressed. To recall the program, modify it and carry it out again, follow these instructions.

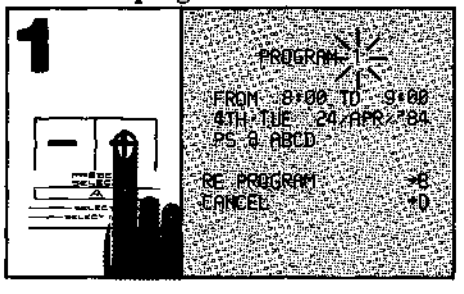


To follow the instruction "SELECT PROGRAM NO. → A", depress the -⏏+ button until the arrow points to the program you want to recall.

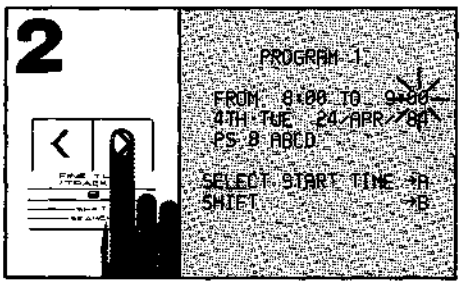


To follow the instruction "RECALL → D", depress the ⏏ button to recall the program. Same thing applies for canceled programs.
To remove the information depress the PROGRAM button.

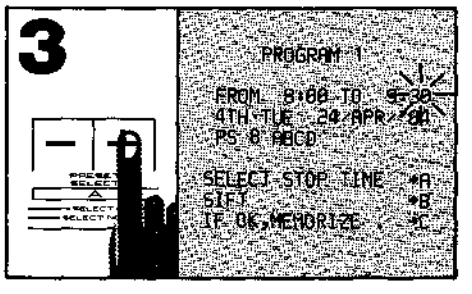
To reset a program after it has been memorized



Depress the PROGRAM button.
To follow the instruction "SELECT PROGRAM NO. → A", depress the -⏏+ button until the arrow points to the program you want to reset.

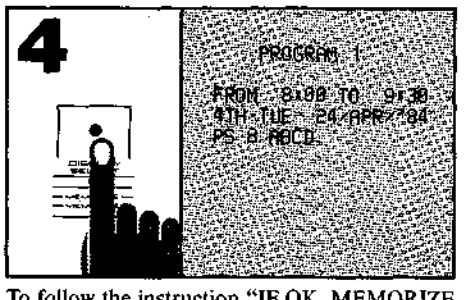


To follow the instruction "REPROGRAM → B", depress the > side of the < ⏏ > button.
To follow the instruction "SHIFT → B", depress the < ⏏ > button again until the item you want to reset flashes on and off.

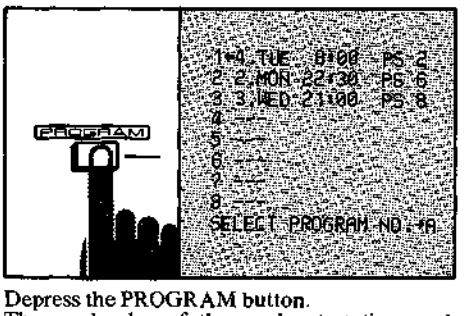


Then to follow the instruction "SELECT START TIME/STOP TIME/DAY/ or PRESET. → A", depress the -⏏+ button and reset the item. Reset other items in the same manner. After you have reset all the items, go to the next step.

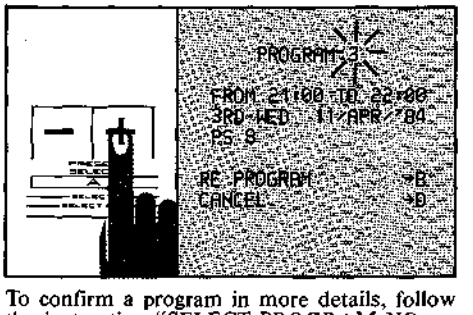
If you want to confirm a program



To follow the instruction "IF OK, MEMORIZE → C", depress the ⏏ button.
To remove the information, depress the PROGRAM button.



Depress the PROGRAM button.
The week, day of the week, start time and preset channel number of each program, will be displayed. "- - -" indicates that no program has been set or the program was carried out.



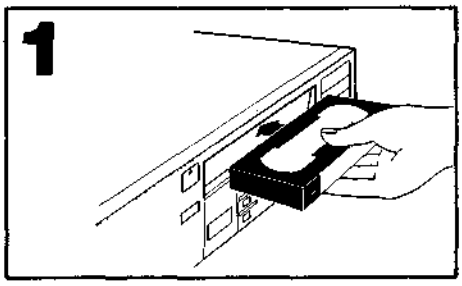
To confirm a program in more details, follow the instruction "SELECT PROGRAM NO. → A". Hold the -⏏+ button depressed until the arrow points to the program you want to confirm. To confirm other programs, follow the instruction "SELECT PROGRAM NO. → A", and depress the -⏏+ button.
To remove the information, depress the PROGRAM button.

Let's proceed with automatic recording

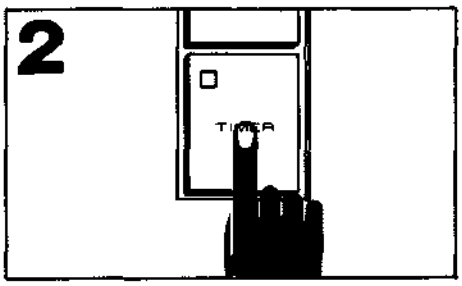
If you want to automatically record an index (date, time and preset channel), repeatedly depress the ▣ button until the display containing the day of the week and the actual time is displayed on the TV screen.

Check before starting

❶	SPEED selector is set.



Insert a video cassette tape.
Confirm that the recording defeat tab is not broken. If it is, cover the hole with a piece of adhesive tape.
Make sure that the video cassette tape will be long enough for the duration of automatic recording.



Depress the TIMER button to make the Akai VCR standby for automatic recording.
Confirm that its indicator is on.
The FUNCTION button will be turned off automatically.

NOTE:
You can watch a TV program during automatic recording by setting the TV itself to the channel you want.
* Turn off the TV if you are not going to watch a program.

The Akai VCR will turn on 6 seconds before the programmed turn on time. One second later, it will automatically start recording and at the programmed turn off time, it will stop recording and turn itself off.
When a tape is inserted, the tape counter is automatically set to "0000". After a timer program is carried out, the tape counter will remain set to the point where recording was finished. When you turn the VCR back on, simply depress the RETURN TO "0000" button. The tape will rewind to the beginning of the timer recorded program and stop.

AN EXAMPLE OF 4-WEEK TIMER SETTING

"4-week" pre-setting means that you can "reserve" recording time on any one of 28 days in advance-including the day of setting. This means that beginning with today, you can pre-program your Akai VCR to automatically record at any time on any day for 28 days.

For example, let's say that today is Monday AUG. 1st and you wish to preset a recording time for later on tonight. Then set the week and day for "1st Monday" which will mean today (AUG. 1st). So now it follows that if you want to pre-set time for next Monday (AUG. 8th), you will set the week and day for "2nd Monday" and so on for "3rd Monday" (AUG. 15th) and "4th Monday" (AUG. 22nd). The same thing applies to the other days of the week.

Now let's say its Tuesday AUG. 2nd at 9:00 PM and you want to pre-set recording time for 8:00 PM the following Tuesday (AUG. 9th). Since it is already past 8:00 PM today (AUG. 2nd) when you are doing the setting, you must set the week and day for "1st Tuesday" since the 1st Tuesday you can record at 8:00 PM is now next week (AUG. 9th). In other words, "1st Tuesday" means the first Tuesday you can record at the time desired. The same thing applies to the other days of the week.

August						
SUN	MON	TUE	WED	THE	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			
September						
				1	2	3
4	5	6	7	8	9	10

PROGRAM LIST

Program No.	Channel	TV program	Date	Start time	Stop time	Memo

IMPORTANT

PROGRAM PRIORITY

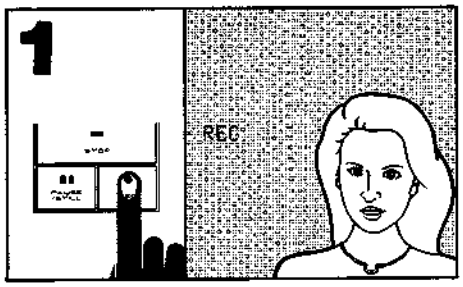
- If two programs are set to turn on at the same day and time the smaller program number has priority.
- If two programs overlap, the earlier program will be interrupted by the latter one.

Sleep time setting

Check before starting

❶	A video cassette tape is loaded.
❷	Amplifier is turned on.
❸	SPEED selector is set.

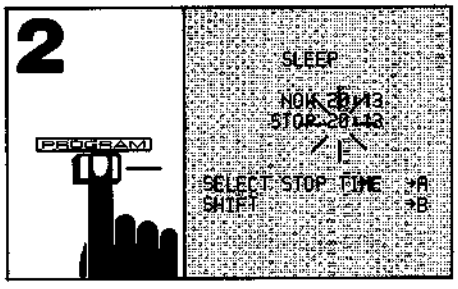
The Akai VCR can be set to stop recording and turn itself off automatically when you have to leave before the program you are recording is finished. We call this turn off time "SLEEP TIME".



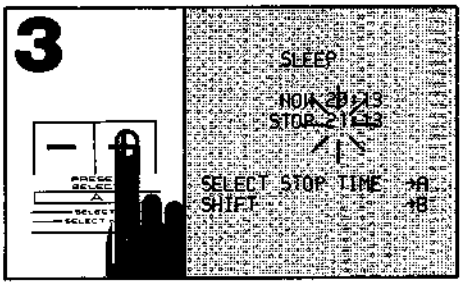
How to set sleep time

Depress the REC (●) button for at least 1 second to record a TV program.

* "REC" will be displayed on your TV screen for 3 seconds.



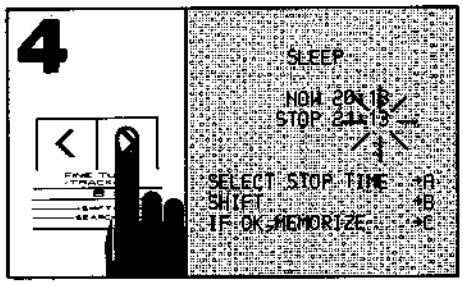
Depress the PROGRAM button to display the information for setting the sleep time on your TV screen.



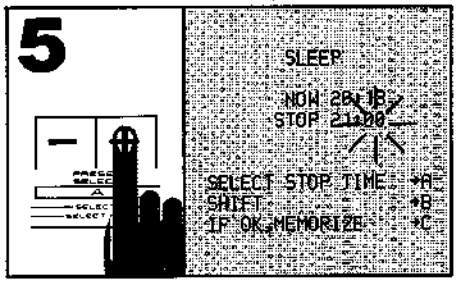
STOP TIME HOURS

To follow the instruction "SELECT STOP TIME — A", depress the −⏏+ button to select the stop time hours.

00 01 02 ... up to 23



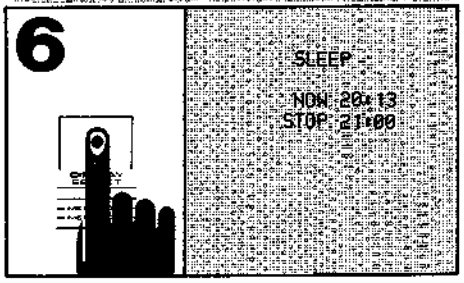
To follow the instruction "SHIFT → B", depress the 〈⏏〉 button to shift to the next item to be set: stop time minutes.



STOP TIME MINUTES

To follow the instruction "SELECT STOP TIME — A", depress the −⏏+ button to select the stop time minutes.

00 01 02 ... up to 59



MEMORIZE

The procedure is now finished.

To follow the instruction "IF OK, MEMORIZE → C", depress the ⏏ button to memorize the sleep time.

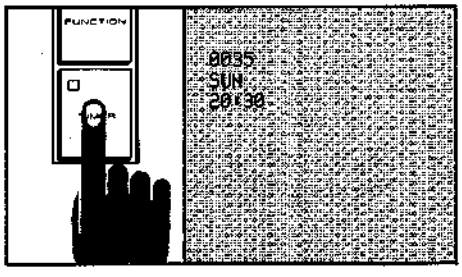
Once this operation has been completed, all the buttons will become inoperative.

* Don't forget to turn off the TV.

The Akai VCR will stop recording and turn itself off at the programmed sleep time.

To operate the Akai VCR again, depress the FUNCTION button. Its indicator will turn on.

To cancel sleep time operation during sleep time recording

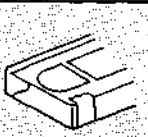
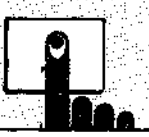
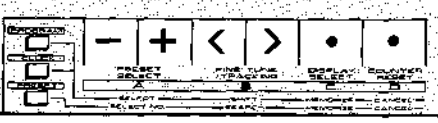
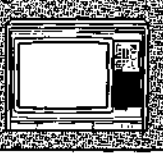
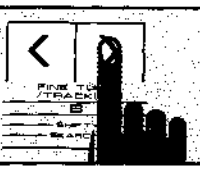
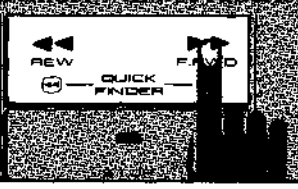
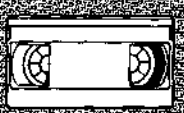
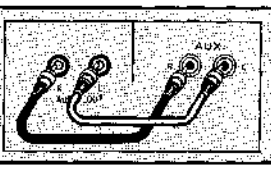


Depress the TIMER button. The sleep time operation will be canceled and the VCR goes into normal recording mode.

- If the tape ends before the programmed sleep time, the tape will rewind to the beginning and stop. When the tape has stopped, sleep time operation will be cancelled but the Akai VCR will not turn itself off. Therefore make sure that the length of the tape is longer than the sleep time.
- If a sleep timer setting and a preprogrammed recording setting overlap, the preprogrammed recording will take priority over the sleep time setting. In other words, the pre-recorded program will take place as scheduled both interrupting the program set with the sleep timer and keeping the VCR from turning itself off.
- If a program is set for recording in the VCR's memory, when the sleep time program is finished, the VCR will automatically set itself to TIMER. If the preset program is to far in the future, depress the FUNCTION button to turn it off.

Problem? Let's check

PROBLEM	CHECK POINT
No power	**Protection Circuit** The VCR is equipped with a Protection Circuit which protects the speakers from damaging bursts of noise such as "popping" or "crackling" caused by mixers, sanders, etc, which may be connected to the same electric power line. If the power to the VCR is suddenly cut off, first eliminate the source of the current "noise". Then, disconnect the power cord of the VCR and reconnect it while simultaneously depressing the STOP and REW buttons. If this fails to restore operation, servicing of the VCR may be required.
EJECT button will not function	Power cord plugged in?
No picture or display	TV set to video channel?
	Aerial cable connection correct?
Tape stops during rewind	Was the RETURN TO "0000" button depressed?
Cannot operate with the remote control unit	PRESET or CLOCK button on the VCR must be depressed before adjusting or setting with the RC-V603
	Replace the batteries of the remote control unit.

PROBLEM	CHECK POINT
No recording 	 Recording defeat tab is broken. Cover the opening with tape to record.
	 Recording button depressed after pause during stop. Depress the REC (●) button again.
Automatic recording or sleep time operation will not take place. 	Refer to pages 15-17 for correct programming procedure. 
Disturbances in playback picture 	 TRACKING
Quick finder will not function. 	 Is the VCR in playback mode?
Concerning video cassette tape 	Only tapes marked VHS and recorded using the PAL system can be used with the Akai VCR. VHS tapes are available from your Akai dealer.
	 Amplifier turned on and properly connected?
Sound is fuzzy during playback 	 Hi-Fi selector switch is not set correctly.

SECTION 2

SERVICE MANUAL

TABLE OF CONTENTS

I. **SPECIFICATIONS** 22
1-1. SPECIFICATIONS (VS-603EG/EK/ES/EZ) 22
1-2. SPECIFICATIONS (VS-606EA/EO) 23
1-3. SPECIFICATIONS (VS-607EO-G) 24
II. **MANUAL RESETTING OF MICRO-COMPUTERS** 25
III. **DISMANTLING OF UNIT** 26
IV. **CONTROLS** 27
V. **PRINCIPAL PARTS LOCATION** 28
VI. **MECHANICAL ADJUSTMENT** 31
6-1. BEFORE THE ADJUSTMENT 31
6-2. CONFIRMATION OF REGULATOR OUTPUT 32
6-3. TAKE-UP REEL TORQUE ADJUSTMENT 32
6-4. BACK TENSION ADJUSTMENT 32
6-5. LOADING LEADER HEIGHT ADJUSTMENT 33
6-6. TAPE CURL AT TAPE GUIDE ADJUSTMENT 34
6-7. AUDIO HEAD AZIMUTH ADJUSTMENT 34
6-8. RF ENVELOPE ADJUSTMENT 34
6-9. TAPE CURL AT TAPE GUIDE/IMPEDANCE GUIDE ADJUSTMENT 34
6-10. AUDIO HEAD HEIGHT ADJUSTMENT 34
6-11. CONTROL HEAD POSITION ADJUSTMENT 35
6-12. CUE/REVIEW ADJUSTMENT 35
6-13. HOW TO ASSEMBLE LOADING MECHANISM 36
VII. **HEAD DRUM REPLACEMENT** 38
7-1. REPLACEMENT PROCEDURE 38
7-2. AFTER REPLACEMENT 39
VIII. **ELECTRICAL ADJUSTMENT** 40
8-1. SERVO ADJUSTMENT 40
8-2. AUDIO ADJUSTMENT 44
8-3. VIDEO ADJUSTMENT 50
8-4. IMS (Interactive Monitor System) ADJUSTMENT 56
IX. **PC BOARD TITLES AND IDENTIFICATION NUMBERS** 56

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

1-1. SPECIFICATIONS (VS-603EG/EK/ES/EZ)

Format		VHS Standard
Video recording system		Rotary, slant azimuth two-head helical scan system
Rotary heads		4 video heads and 2 audio heads
RF input	EG	System B, G VHF: ch 2 to 12, UHF: ch 21 to 69
	EK	System I UHF: ch 21 to 69
	ES	System I VHF: ch 4 to 13, UHF: ch 21 to 69
	EZ	System B, G VHF: ch 1 to 10, UHF: ch 21 to 69
RF output	EG	System G type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
	EK	System I type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
	ES	System I type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
	EZ	System B type modulation VHF: ch 2, 3 switchable (preset ch 3)
Recording (line input)		PAL, CCIR (System B, G, I)
Playback (line output)		PAL, CCIR (System B, G, I)
Video	Line input level	0.5 to 2.0 Vp-p/75 ohms, unbalanced
	Line output level	1.0 Vp-p/75 ohms, unbalanced
	S/N ratio	More than 43 dB
	Horizontal resolution	More than 250 lines (SP mode)
Audio (VHS HiFi : 2ch, LINEAR : 1ch)		
	Line input level	−8 dBm/50 kohms, unbalanced (309 mVrms) (−20 dBm at Recording level control max)
	Line output level	−6 dBm/1 kohms, unbalanced (388 mVrms)
	Dynamic range	More than 80 dB (VHS HiFi)
	S/N ratio	More than 70 dB (VHS HiFi) More than 40 dB (Linear track, SP mode)
	Frequency Response	20 to 20,000 Hz (VHS HiFi) 70 to 10,000 Hz (Linear track, SP mode)
	Wow & Flutter	Less than 0.005% WRMS (VHS HiFi)
Recording/Playback time		240 min. with E-240 cassette on SP mode 480 min. with E-240 cassette on LP mode
Tape speed	SP Mode	23.39 mm/sec
	LP Mode	11.695 mm/sec
Quick finder	SP Mode	Approx. 7 times normal speed
	LP Mode	Approx. 15 times normal speed
FF, REW time		Approx. 4 min. with E-180 cassette
Timer	Programs	8 programs/ 4 week and sleep timer
	Clock reference	Quartz crystal
Display		TV screen (Tape counter, Timer etc.)
Power requirements	EG	110V/220V AC, 50 Hz/60 Hz
	EK	200V/240V AC, 50 Hz
	ES	220V/250V AC, 50 Hz
	EZ	230V AC, 50 Hz
Power consumption		36W
Operating temperature		5°C to 40°C (41°F to 104°F)
Dimensions		440 (W) × 99 (H) × 368 (D) mm (17.3 × 3.9 × 14.5 inches)
Weight		10.0 kg (22.0 lbs)

RC-V603

System	Infrared pulse position modulation system
Carrier frequency	38 kHz ± 0.2 kHz
Range	More than 8 meters
Directivity	±30° (at 4 meters)
Batteries	R6 (or AA, SUM-3) × 2 (3 volts)
Dimensions	42 (W) × 20 (H) × 165 (D) mm
Weight	60 g (without batteries)

1-2. SPECIFICATIONS (VS-606EA/EO)

Format		VHS Standard
Video recording system		Rotary, slant azimuth two-head helical scan system
Rotary heads		4 video heads and 2 audio heads
RF input	EA	System B, G with monaural or multiplexed 2 channel audio VHF: ch 0 to 5, 5A, 6 to 11, UHF: ch 21 to 69
	EO	System B, G with monaural or multiplexed 2 channel audio VHF: Low ch 2 to 4, S1 to S3 High ch M1 to M10, 5 to 12, U1 to U10 UHF: ch 21 to 69
RF output	EA	System B type modulation VHF: ch 0, 1 switchable (preset ch 1)
	EO	System G type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
Recording (line input)		PAL, CCIR (System B, G, I)
Playback (line output)		PAL, CCIR (System B, G, I)
Video	Line input level	0.5 to 2.0 Vp-p/75 ohms, unbalanced
	Line output level	1.0 Vp-p/75 ohms, unbalanced
	S/N ratio	More than 43 dB
	Horizontal resolution	More than 250 lines (SP mode)
Audio (VHS HiFi : 2ch, LINEAR : 1ch)		
	Line input level	−8 dBm/50 kohms, unbalanced (309 mVrms) (−20 dBm at Recording level control max)
	Line output level	−6 dBm/1 kohms, unbalanced (388 mVrms)
	Dynamic range	More than 80 dB (VHS HiFi)
	S/N ratio	More than 70 dB (VHS HiFi) More than 40 dB (Linear track, SP mode)
	Frequency Response	20 to 20,000 Hz (VHS HiFi) 70 to 10,000 Hz (Linear track, SP mode)
	Wow & Flutter	Less than 0.005% WRMS (VHS HiFi)
Recording/Playback time		240 min. with E-240 cassette on SP mode 480 min. with E-240 cassette on LP mode
Tape speed	SP Mode	23.39 mm/sec
	LP Mode	11.695 mm/sec
Quick finder	SP Mode	Approx. 7 times normal speed
	LP Mode	Approx. 15 times normal speed
FF, REW time		Approx. 4 min. with E-180 cassette
Timer	Programs	8 programs/ 4 week and sleep timer
	Clock reference	Quartz crystal
Display		TV screen (Tape counter, Timer etc.)
Power requirements	EA	240V AC, 50 Hz
	EO	220V AC, 50 Hz
Power consumption		36W
Operating temperature		5°C to 40°C (41°F to 104°F)
Dimensions		440 (W) × 99 (H) × 368 (D) mm (17.3 × 3.9 × 14.5 inches)
Weight		10.0 kg (22.0 lbs)

1-3. SPECIFICATION (VS-607EO-G)

Format		VHS Standard
Video recording system		Rotary, slant azimuth two-head helical scan system
Rotary heads		4 video heads and 2 audio heads
RF input		System B, G with monaural or multiplexed 2 channel audio VHF: ch 2 to 4, 5 to 12, S1 to S10, S11 to S20, S21 to S25, UHF: ch 21 to 69
RF output		System G type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
Recording (line input)		PAL, CCIR (System B, G, I)
Playback (line output)		PAL, CCIR (System B, G, I)
Video	Line input level	0.5 to 2.0 Vp-p/75 ohms, unbalanced
	Line output level	1.0 Vp-p/75 ohms, unbalanced
	S/N ratio	More than 43 dB
	Horizontal resolution	More than 250 lines (SP mode)
Audio (VHS HiFi : 2ch, LINEAR : 1ch)		
	Line input level	−8 dBm/50 kohms, unbalanced (309 mVrms) (−20 dBm at Recording level control max)
	Line output level	−6 dBm/1 kohms, unbalanced (388 mVrms)
	Dynamic range	More than 80 dB (VHS HiFi)
	S/N ratio	More than 70 dB (VHS HiFi) More than 40 dB (Linear track, SP mode)
	Frequency Response	20 to 20,000 Hz (VHS HiFi) 70 to 10,000 Hz (Linear track, SP mode)
	Wow & Flutter	Less than 0.005% WRMS (VHS HiFi)
Recording/Playback time		240 min. with E-240 cassette on SP mode 480 min. with E-240 cassette on LP mode
Tape speed	SP Mode	23.39 mm/sec
	LP Mode	11.695 mm/sec
Quick finder	SP Mode	Approx. 7 times normal speed
	LP Mode	Approx. 15 times normal speed
FF, REW time		Approx. 4 min. with E-180 cassette
Timer	Programs	8 programs/ 4 week and sleep timer
	Clock reference	Quartz crystal
Display		TV screen (Tape counter, Timer etc.)
Power requirements		220V AC, 50 Hz
Power consumption		36W
Operating temperature		5°C to 40°C (41°F to 104°F)
Dimensions		440 (W) x 99 (H) x 368 (D) mm (17.3 x 3.9 x 14.5 inches)
Weight		10.0 kg (22.0 lbs)

II. MANUAL RESETTING OF MICRO-COMPUTERS

2-1. MANUAL RESETTING OF MICRO-COMPUTERS

If the memory in a micro-computer is disturbed, the micro-computer might malfunction.
If this happens, reset the memory in the micro-computer manually (to clear the internal memory of the micro-computer), then the micro-computer will resume its correct functions.
Here's how to reset the micro-computers manually.

1) Pull out the AC power cord from the wall socket (or some other power source.)
2) Keep the REW and the STOP buttons on the front panel pressed.
3) Plug the AC power cord into the wall socket (or some other power source) and release the REW and the STOP buttons.

The models in this S/M are equipped with three micro-computers, namely the Operation, IMS and Syscon micro-computer. When the AC power is failed, for example in the case of a power cut or when the AC power cord is pulled out, the Ni-Cd batteries in the operation micro-computer and in the IMS micro-computer back up the contents of the RAM (Random Access Memory).
If the voltage of these batteries is sufficiently higher than the necessary value for back-up, the memory in the operation micro-computer and in the IMS is maintained, and the syscon micro-computer can be reset by the operation micro-computer.
If the micro-computers are not equipped with back-up batteries, or if the voltage is lower than the value required for back-up (less than about 2.0V), the contents of the RAM in the micro-computers cannot be maintained. In this case, all three micro-computers will be reset after the power is turned on again and the RAM is cleared.
However, if this does not happen because of external noise etc., the contents of the memory are disturbed and the micro-computers will not work or will malfunction. In this case, manual resetting of the micro-computers is required.

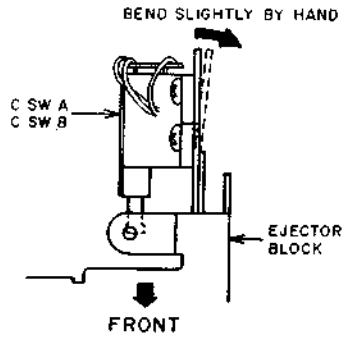
2-2. USEFUL INFORMATION (BREAK-DOWN)

This data refers to the situation where the unit does not functionable in spite of the FUNCTION SW being depressed after the power cord is plugged in (this condition called BREAK-DOWN).
This BREAK-DOWN system is designed for a protection of the tape in the unit and the unit itself from damage due to electrical malfunctions. Therefore check and confirm as follows to recover from BREAK-DOWN.

1. POWER SUPPLY
   1) POWER CORD
      Check that the power cord is properly plugged in. (When the POWER SUPPLY circuit functions normally, the STANDBY indicator on the FRONT PANEL is lit.)
   2) FUSE (on the POWER SUPPLY PCB)
      Check the FUSES F1, F2 on the POWER SUPPLY CIRCUIT. (Some models have another protection fuse on the SELECTOR PCB near the POWER TRANSFORMER).
   3) REGULATOR (on the POWER SUPPLY PCB)
      Check the voltage of the REGULATOR IC (IC1 STK5434) PIN ⑬ which should be around +3.5VDC.
   4) AL (on the POWER SUPPLY PCB)
      Check P107 ⑤ AL input which should be less than +0.2VDC.
2. MICRO-COMPUTER INPUT
   1) MECHA DRIVE I/O EXPANDER (on the MECHA DRIVE PCB)
      Check the IC1 (MB88305P) PIN ⑱ which should be around + 4.0VDC.
   2) SUPPLY/TAKE-UP BREAK COIL
      Check the SUPPLY and the TAKE-UP BREAK COIL DC resistance which should be 52 ohm ± 10%.
3. LOADING MOTOR FUNCTION
   1) LOADING MOTOR DC RESISTANCE
      Check the LOADING MOTOR DC resistance which should be 8.2 ohm ± 10%.
   2) LOADING MOTOR DRIVE (on the MECHA DRIVE PCB)
      Check the voltages between PIN ② and PIN ⑩ of IC5 (BA6229) a few moments after the POWER CORD has been plugged in. Before this check, the worm gear of the LOADING MOTOR has to be turned to the loaded direction (PLAY direction) by hand or by some other means.

CAUTION: Do not scratch the surface of the worm gear.

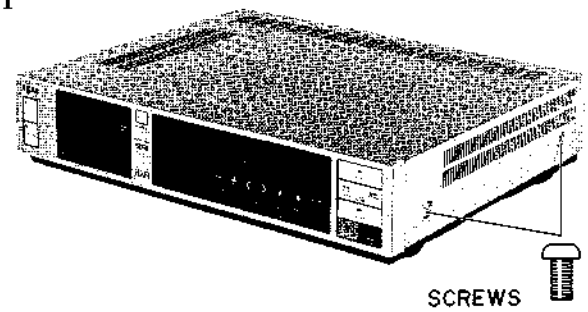
* NO TAPE EJECT
For situations where the CASSETTE TAPE can not be ejected in spite of the EJECT button being depressed (actually the CASSETTE TAPE comes up but then drops down), the position of the cassette switch A (C SW A) and the cassette SW B (C SW B) might be incorrect. Therefore the C SW A, B should be readjusted as indicated in the figure below.



III. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

1



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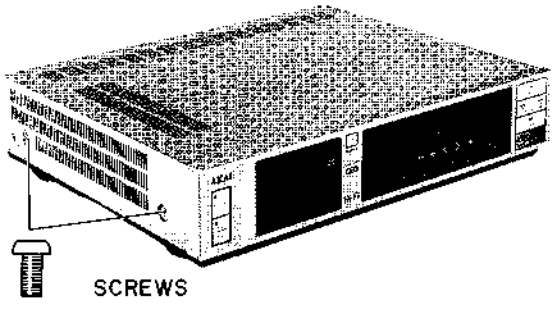

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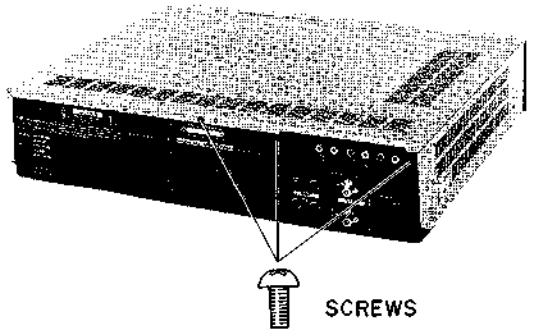
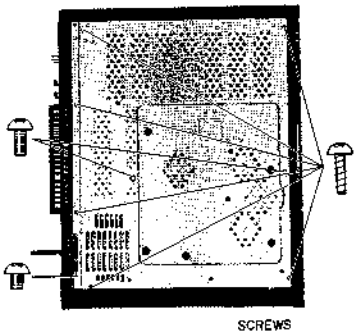


4



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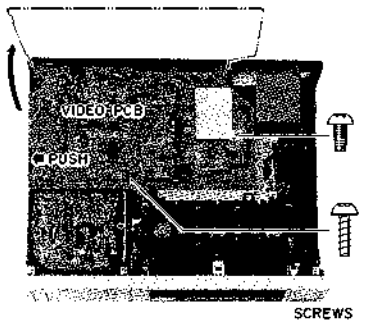
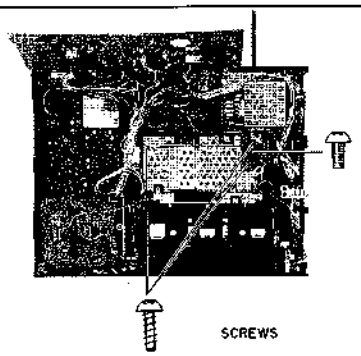
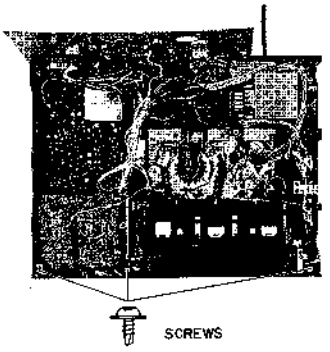


6



7



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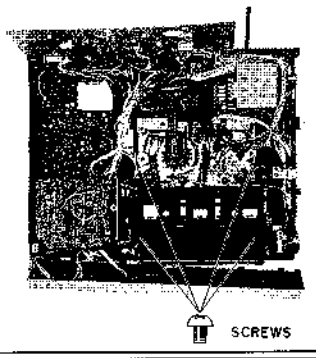
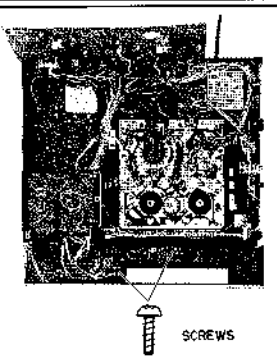


9



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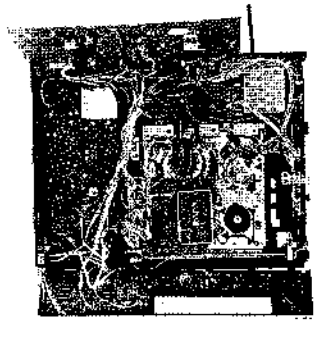


NOTE: Photographs employed in this paragraph is of the model VS-603U.

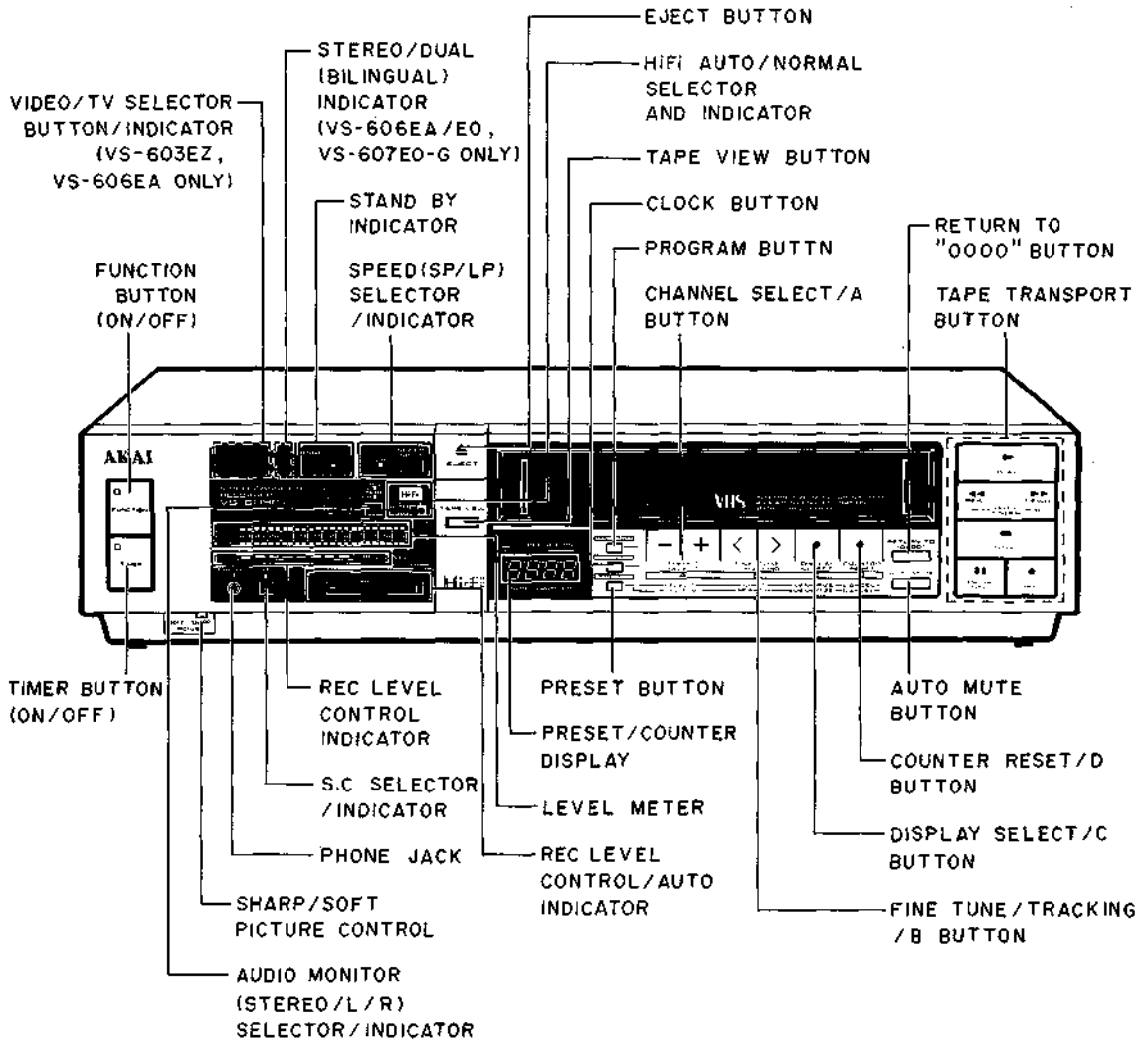

EJECT BUTTON
STEREO/DUAL (BILINGUAL) INDICATOR (VS-606EA/EO, VS-607EO-G ONLY)
HIFI AUTO/NORMAL SELECTOR AND INDICATOR
VIDEO/TV SELECTOR BUTTON/INDICATOR (VS-603EZ, VS-606EA ONLY)
TAPE VIEW BUTTON
STAND BY INDICATOR
CLOCK BUTTON
RETURN TO "0000" BUTTON
PROGRAM BUTTN
FUNCTION BUTTON (ON/OFF)
SPEED(SP/LP) SELECTOR /INDICATOR
CHANNEL SELECT/A BUTTON
TAPE TRANSPORT BUTTON
TIMER BUTTON (ON/OFF)
REC LEVEL CONTROL INDICATOR
PRESET BUTTON
AUTO MUTE BUTTON
PRESET/COUNTER DISPLAY
COUNTER RESET/D BUTTON
S.C SELECTOR /INDICATOR
LEVEL METER
PHONE JACK
REC LEVEL CONTROL/AUTO INDICATOR
DISPLAY SELECT/C BUTTON
SHARP/SOFT PICTURE CONTROL
FINE TUNE/TRACKING /B BUTTON
AUDIO MONITOR (STEREO/L/R) SELECTOR/INDICATOR

Fig. 4-1

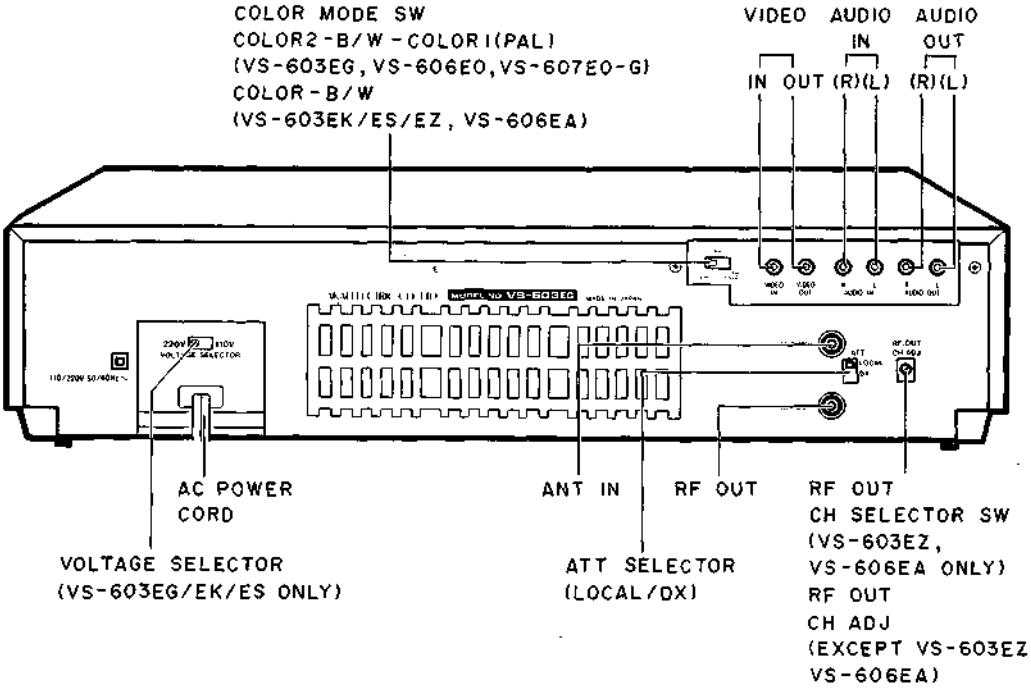

COLOR MODE SW
COLOR2-B/W-COLOR1(PAL)
(VS-603EG, VS-606EO, VS-607EO-G)
COLOR-B/W
(VS-603EK/ES/EZ, VS-606EA)
VIDEO IN
VIDEO OUT
AUDIO IN (R)(L)
AUDIO OUT (R)(L)
AC POWER CORD
ANT IN
RF OUT
RF OUT CH SELECTOR SW (VS-603EZ, VS-606EA ONLY)
VOLTAGE SELECTOR (VS-603EG/EK/ES ONLY)
ATT SELECTOR (LOCAL/DX)
RF OUT CH ADJ (EXCEPT VS-603EZ VS-606EA)

Fig. 4-2

V. PRINCIPAL PARTS LOCATION

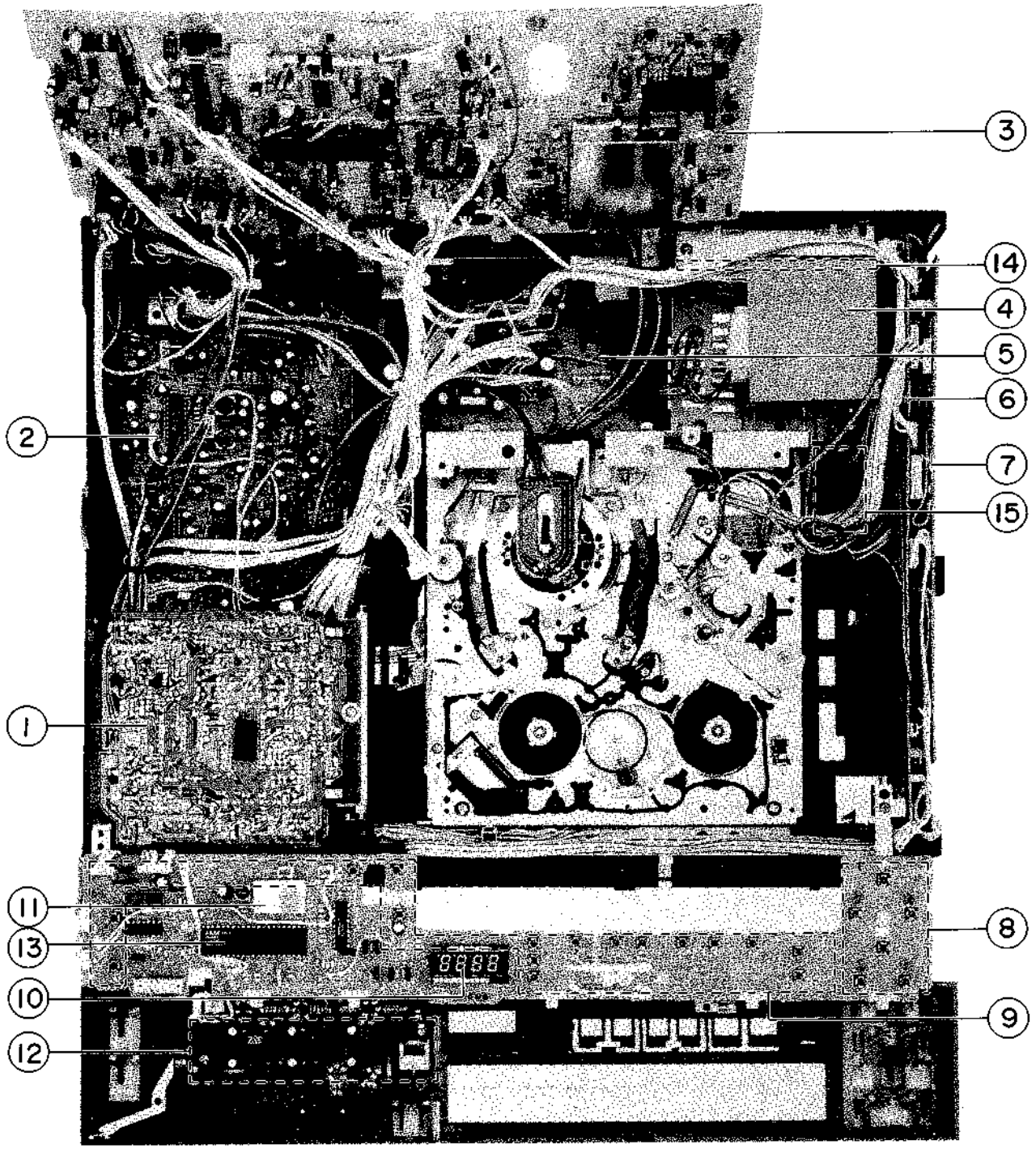


Fig. 5-1

1. MECHA DRIVE PC BOARD (V1030A5380)
2. HiFi AUDIO PC BOARD (V1030A5410)
3. VIDEO PC BOARD (V1030A5430)
4. POWER TRANSFORMER
5. POWER SUPPLY PC BOARD (V1030A5092)
6. SERVO (A) PC BOARD (V1030A542A)
7. SERVO (B) PC BOARD (V1030A542B)
8. TAPE TRANSPORT BUTTONS
9. FUNCTION ON/OFF, PROGRAM BUTTONS
10. PRESET/COUNTER DISPLAY
11. REMOTE CONTROL RECEIVER
12. LEVEL METER PC BOARD
13. OPERATION MICOM (MB88501-352M)
14. SELECTOR PC BOARD (V1027C5030, 5031, 5033, 5040, 5042)
15. SERVO SUB PC BOARD (V1030D5480)

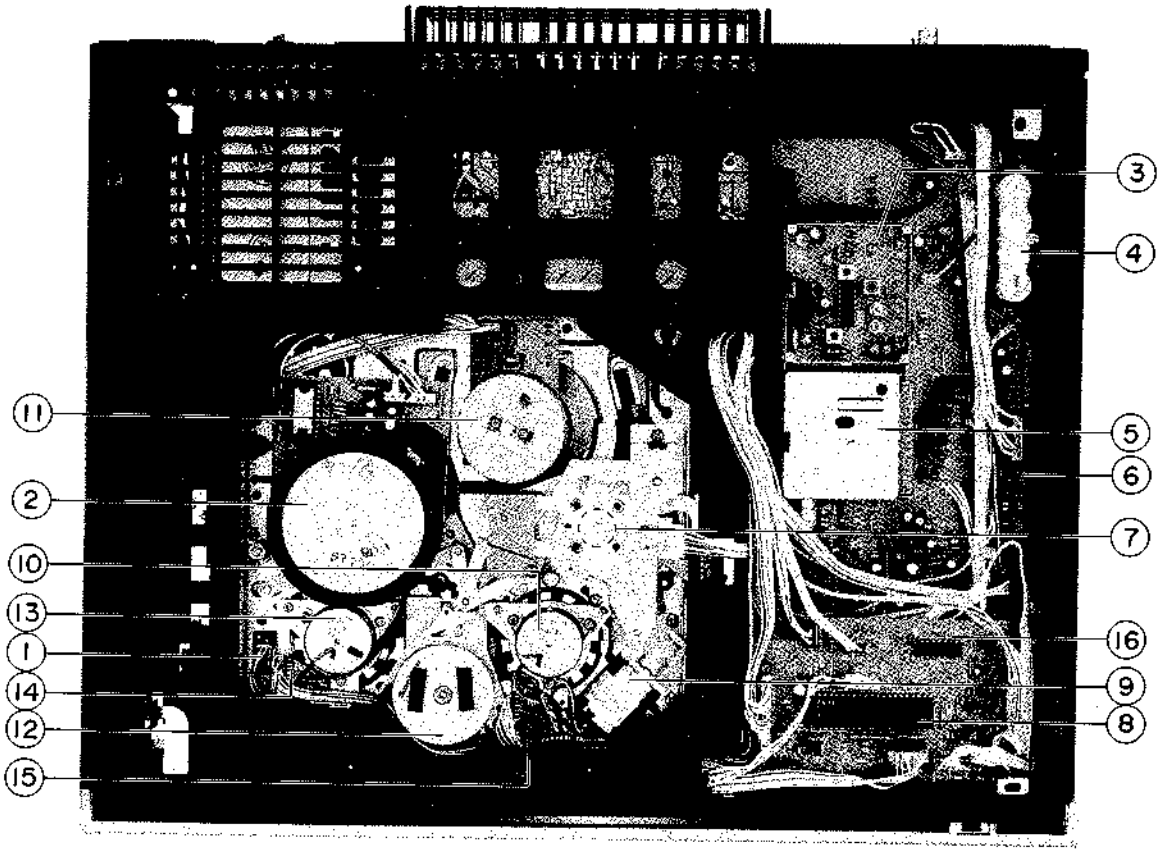


Fig. 5-2

1. CASSETTE SW & PC BOARD (V1030D5320) (C SW-C)
2. CAPSTAN MOTOR (M902) DD-XV021
3. VIF UNIT
4. BACK UP BATTERY
5. TUNER UNIT
6. DEMODULATOR PC BOARD(V1030A5051, 5440)
7. ROTARY ENCODER
8. IMS MICOM (MB88505-266M/285M/293M)
9. LOADING MOTOR (M903) MXN13AD12D
10. SUPPLY BRAKE
11. DRUM MOTOR (M901) SM-200 & PC BOARD (M3220C5010)
12. REEL MOTOR (M904) JME2B-K
13. TAKE UP BRAKE
14. SENSOR (T) PC BOARD (V1030D5020)
15. SENSOR (S) PC BOARD (V1030D5340)
16. SYSTEM CONTROL PC BOARD (V1030B5470)

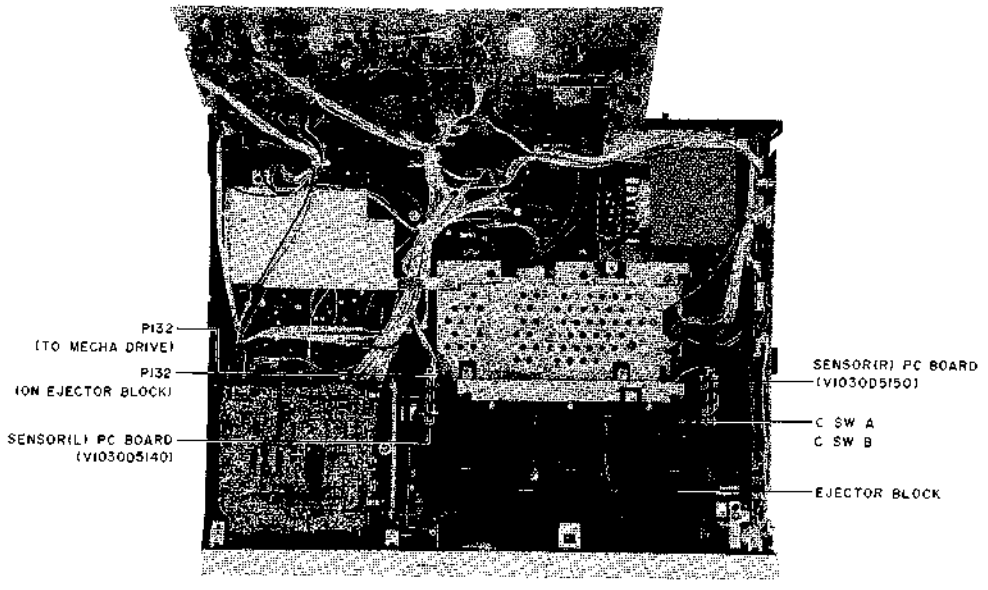


Fig. 5-3

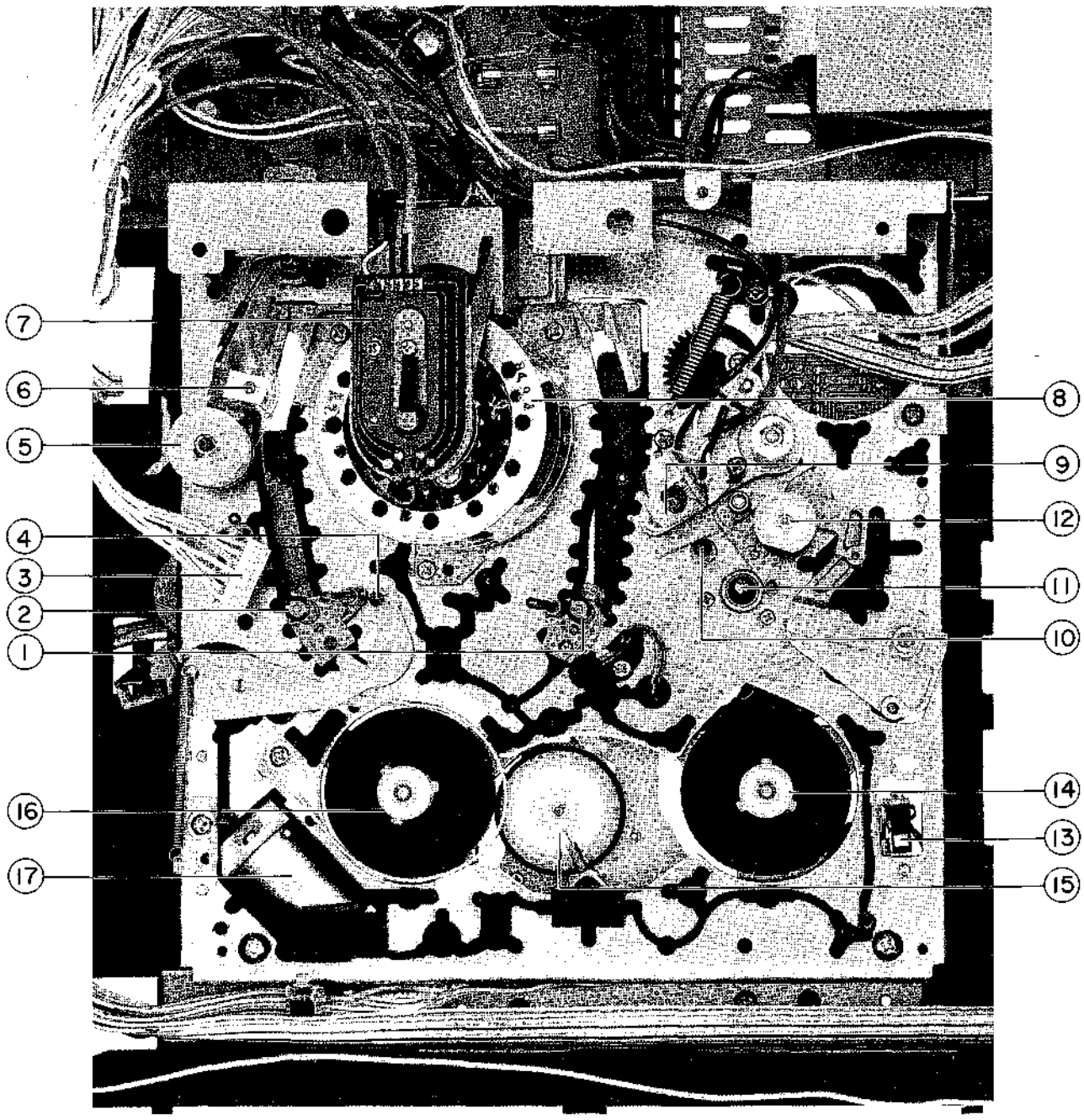


Fig. 5-4

1. LOADING LEADER (R)
2. LOADING LEADER (L)
3. J132 (CONNECTED WITH EJECTOR BLOCK)
4. TENSION ARM
5. IMPEDANCE GUIDE
6. FULL TRACK ERASE HEAD
7. STATOR COIL BLOCK
8. HEAD DRUM BLOCK
9. AUDIO (LINEAR) HEAD/CONTROL HEAD
10. TAPE GUIDE
11. CAPSTAN SHAFT
12. PINCH ROLLER
13. CASSETTE SW (C SW-C)
14. TAKE UP REEL TABLE
15. IDLER ARM
16. SUPPLY REEL TABLE
17. LOADING MOTOR (M903)

VI. MECHANICAL ADJUSTMENT

6-1. BEFORE THE ADJUSTMENT

The EJECTOR block has to be removed for mechanical adjustments. Consequently the J132 connected with P132 on EJECTOR block has to be disconnected, the unit does not function in this condition, to obtain the normal function without the EJECTOR block is as follows.

1) Disconnect J132 from P132 on the EJECTOR block.
2) Press the FUNCTION SW on the front panel.
3) Connect a dummy connector (the connector used to build this dummy connector is a plug 9P connector parts No. EJ-356347) to J132 as shown Fig. 6-1-2.
4) Press Cassette SW C in the vicinity of the TAKE-UP REEL while the dummy connector is connected to J132.
5) After the adjustments, press EJECT button then remove the dummy connector from J132.

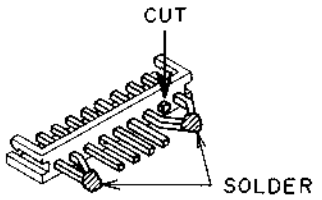


Fig. 6-1-1 Dummy Connector

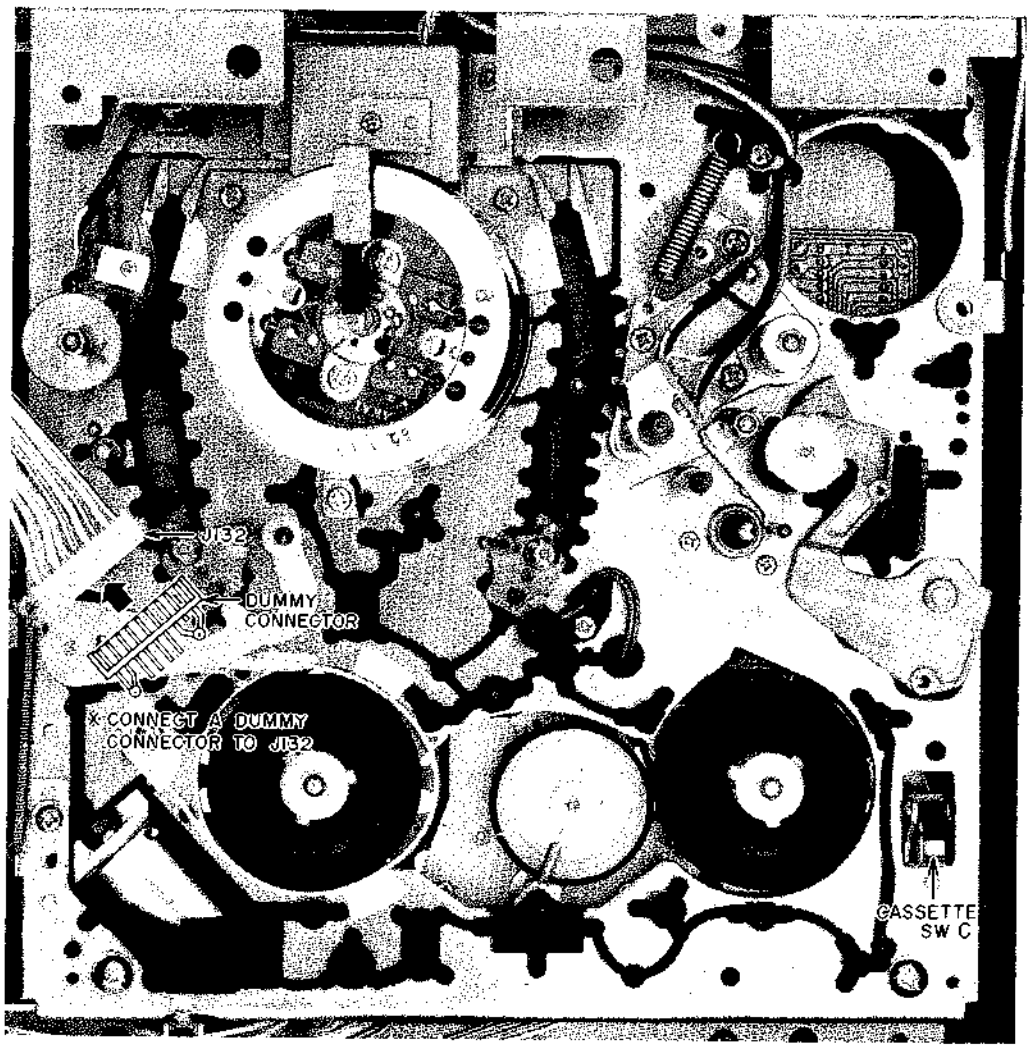


Fig. 6-1-2 Connection of Dummy Connector

6-2 CONFIRMATION OF REGULATOR OUTPUT

Check Items	Check Point	Result
IDL 5V	P108 4	5.1 ± 0.1V
IDL 12V	P105 8	12.0 ± 0.3V
AL 9V	P105 1	9.0 ± 0.1V
AL 16V	P108 6	16.0 ± 0.3V
UNREG 50V	P105 6	55V (Typical)

Chart 6-1

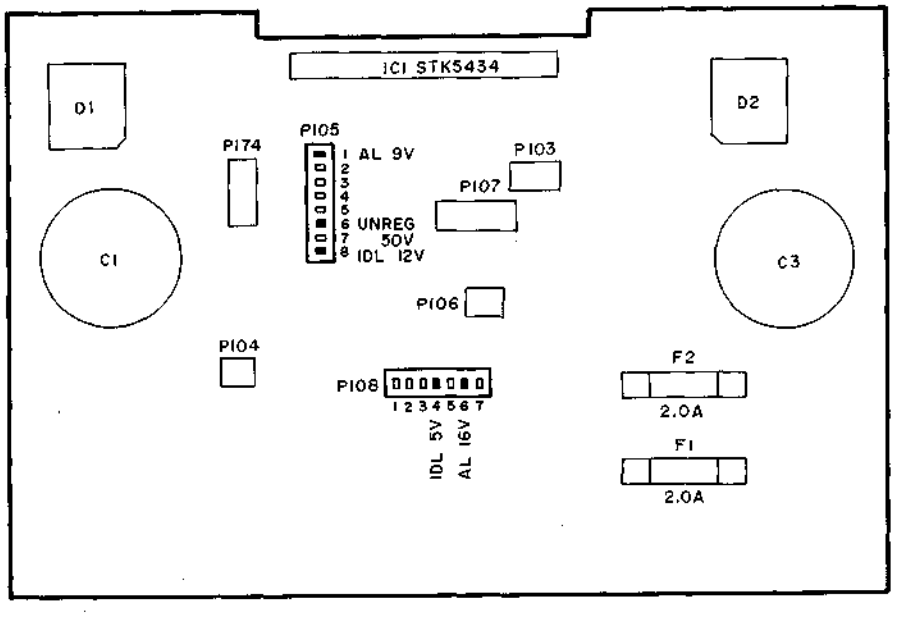
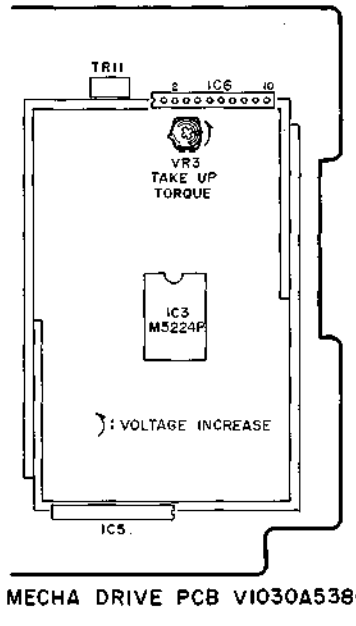


Fig. 6-2 POWER SUPPLY PCB V1030A5092

6-3. TAKE-UP REEL TORQUE ADJUSTMENT

1) Set a E-180 tape which has been rewound.
2) Press the PLAY button, check and adjust the voltage between IC6 PIN ⑩ (+) and IC6 PIN ② (–) on the MECHA DRIVE PC Board as 1.9 ± 0.1V by the VR3.



MECHA DRIVE PCB V1030A5380

Fig. 6-3 MECHA DRIVE PCB V1030A5380

6-4. BACK TENSION ADJUSTMENT

1) Set the Back Tension Jig (AT751181) and put some weight on the Back Tension Jig as a stabilizer.
2) Press the PLAY button, then check and adjust the back tension as 26 ± 4 g-cm by the TENSION HOLDER position.

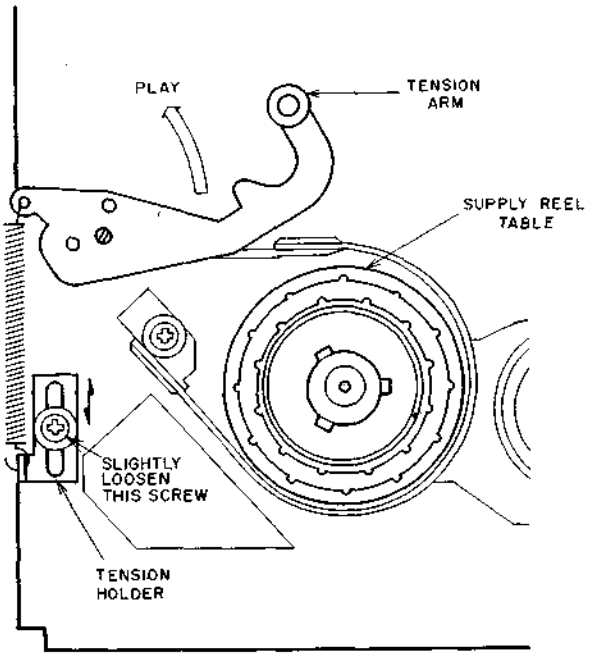


Fig. 6-4

6-5. LOADING LEADER HEIGHT ADJUSTMENT

1) Slightly loosen the set screw at the lower part of the LOADING LEADER so that the LOADING LEADER can be adjusted with reasonable tightness. Adjust the coarse height of the LOADING LEADER from the base mount as 0.6 to 0.8 mm.
2) Set the reference tape AT-750795 (TF-508RF) and press the PLAY button.
3) Connect an oscilloscope to TP7 on the VIDEO PC Board (RF ENVELOPE), turn the LOADING LEADER height adjustment screw head to obtain the flat envelope as Fig. 6-5-2 ideal envelope.
   After the adjustment, tighten the LOADING LEADER set screw.

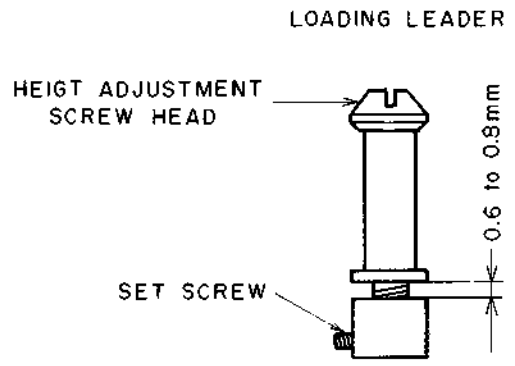


Fig. 6-5-1

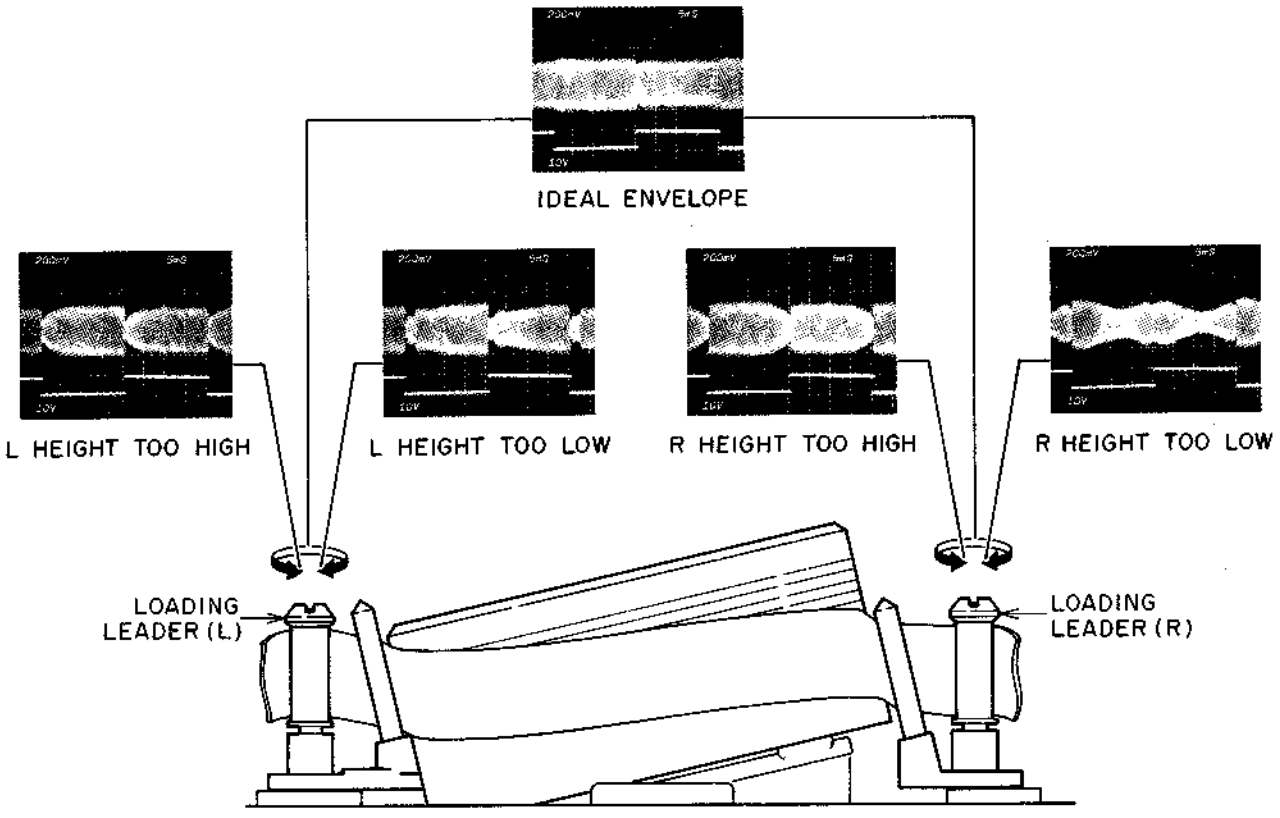


Fig. 6-5-2

6-6. TAPE CURL AT TAPE GUIDE ADJUSTMENT

Turn the screw ⓐ on the AC HEAD BLK so that the down edge of the tape touches the TAPE GUIDE lower part without any curl or waving.

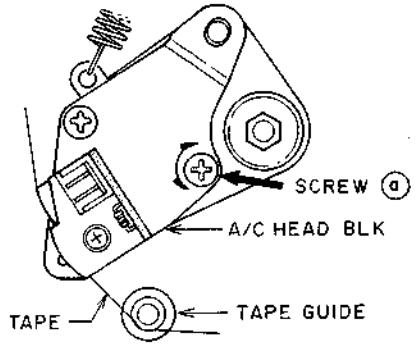


Fig. 6-6-1

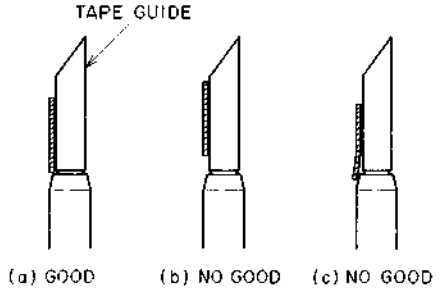


Fig. 6-6-2

6-7. AUDIO HEAD AZIMUTH ADJUSTMENT

1) Turn the nut ⓐ for coarse AC BLOCK height adjustment as in Figs. 6-7-1, & 6-7-2.

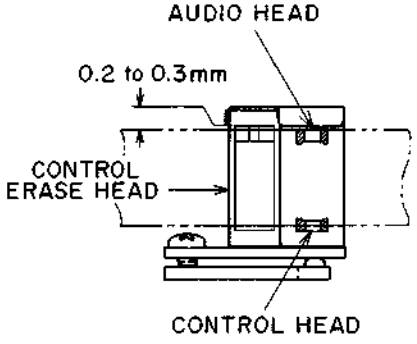


Fig. 6-7-1

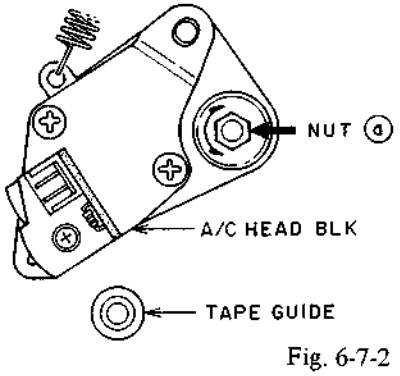


Fig. 6-7-2

2) Connect an oscilloscope or a AC voltmeter to the AUDIO LINE OUT.
3) Set the reference tape AT-750795 (TF-508RF) and press the PLAY button.
4) Turn the screw ⓑ shown in Fig. 6-7-3 to obtain the maximum audio signal output.

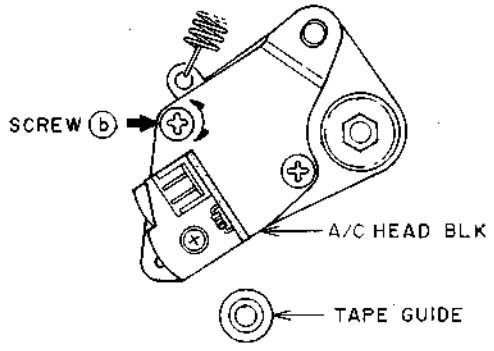


Fig. 6-7-3

6-8. RF ENVELOPE ADJUSTMENT

1) Set the reference tape AT-750795 (TF-508RF) and press the PLAY button.
2) Slightly turn the LOADING LEADER HEIGHT ADJUSTMENT SCREW HEAD (L) (R) to obtain the IDEAL ENVELOPE as shown in Fig. 6-5-2.

6-9. TAPE CURL AT TAPE GUIDE/ IMPEDANCE GUIDE ADJUSTMENT

1) Check the tape curl at TAPE GUIDE, slightly turn the screw ⓐ shown in Fig. 6-6-1 if the tape curl exists.
2) Check the tape curl at the IMPEDANCE GUIDE, turn the nut ⓑ if the tape curl at the IMPEDANCE GUIDE exists.

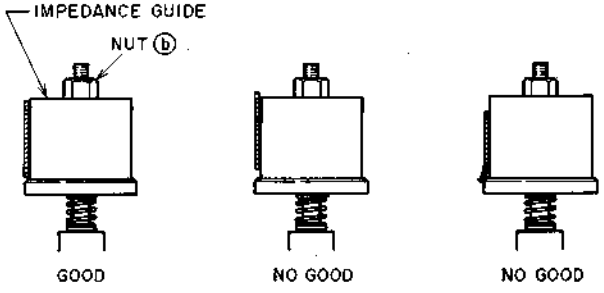


Fig. 6-9

6-10. AUDIO HEAD HEIGHT ADJUSTMENT

1) Connect an oscilloscope or a AC voltmeter to the LINE AUDIO OUT.
2) Set the reference tape AT-750795 (TF-508RF) and press the PLAY button.
3) Slightly turn the nut ⓐ shown in Fig. 6-7-2 to obtain the maximum audio output.

6-11. CONTROL HEAD POSITION ADJUSTMENT

1) Connect an oscilloscope to the TP7 on the VIDEO PC BOARD (RF ENVELOPE).
2) Set the reference tape AT-750795 (TF-508RF) and press the PLAY button.
3) Press "B" button (TRACKING) on the front panel and set "X" mark to the center position.
4) Loosen the screw ⓒ and turn the CTL ADJUST CAM by a screw driver to obtain the maximum RF ENVELOPE, after this adjustment tighten the screw ⓒ.

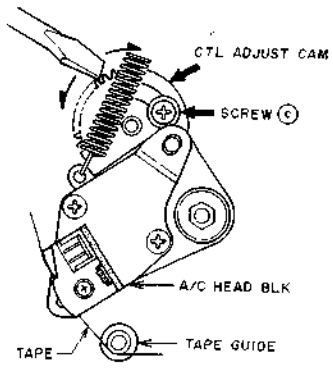


Fig. 6-11

6-12. CUE/REVIEW ADJUSTMENT

1) Set a E-180 tape, press the PLAY and the F.FWD button (CUE mode).
2) Turn the CUE/REVIEW GUIDE height adjustment nut ⓒ so that the wrinkle between the PINCH ROLLER and the CUE/REVIEW GUIDE is not existed.

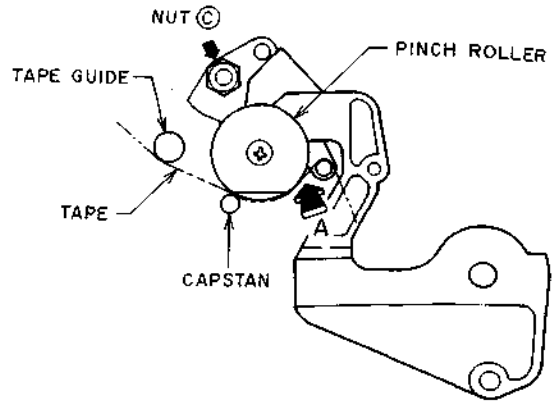


Fig. 6-12-1

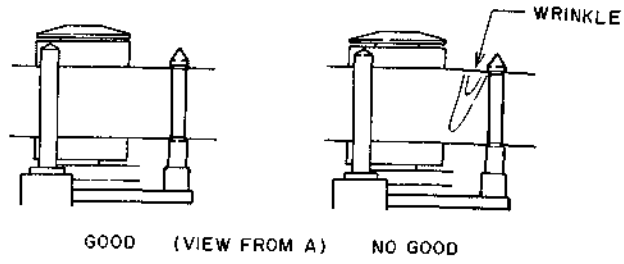


Fig. 6-12-2

3) Press the REV button (REVIEW mode) confirm the curl at the tape down edge is not existed at the TAPE GUIDE as shown in Fig. 6-6-2. (Fig. 6-6-2 (c) is not acceptable, but Fig. 6-6-2 (b) is acceptable.)
After the adjustment, tighten the nut ⓒ.

6-13. HOW TO ASSEMBLE LOADING MECHANISM

1) With the unit unloaded, attach Gear Loading (R) BLK and Gear Loading (L) BLK to Mecha chassis.

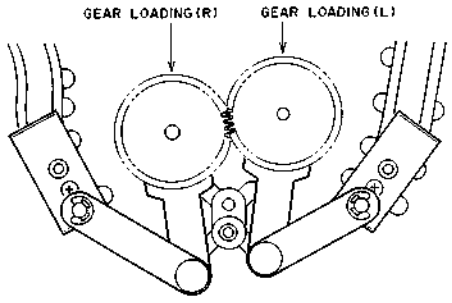


Fig. 6-13-1

2) Attach Holder Loading (B) Part to Mecha chassis and tighten with screw Ⓐ.

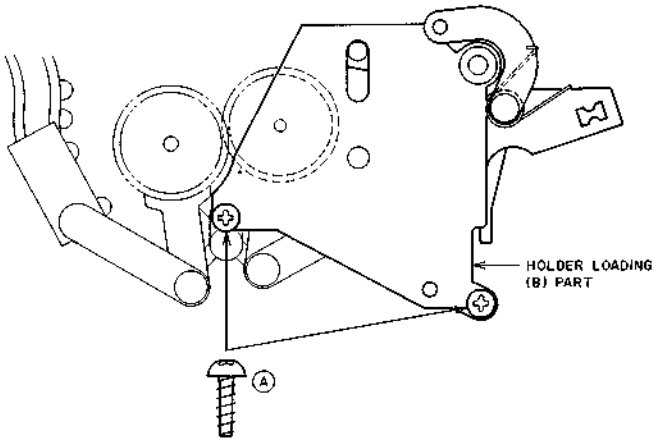


Fig. 6-13-2

3) Attach Lever Loading Gear Part to Holder Loading (B) Part so that part Ⓐ of Gear Loading (R) mates with the second tooth of Lever Loading Gear Part.

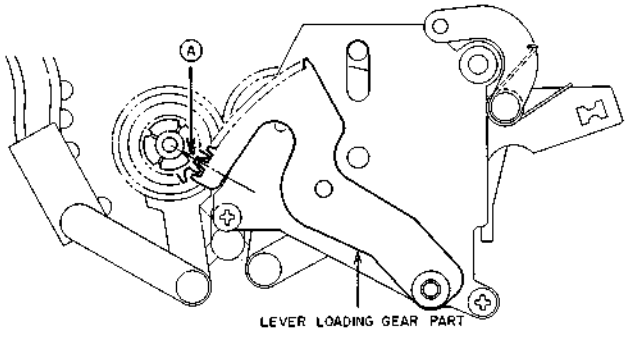


Fig. 6-13-3

4) Attach Main Gear to Holder Loading (B) so that a Round Hole Ⓐ faces upwards and insert E-ring into shaft slot.
Manually rotate Main Gear clockwise to confirm loading operation.

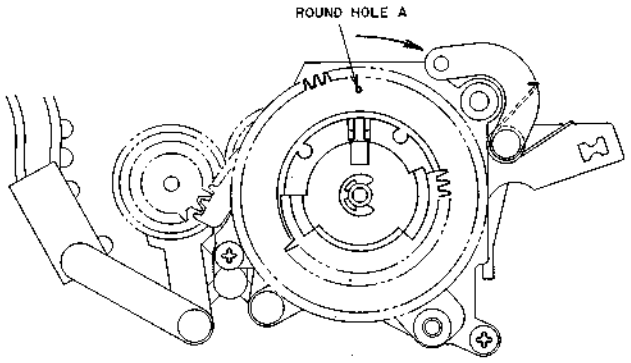


Fig. 6-13-4

5) Attach Gear Eject (A) part to Holder Loading (B) and insert E-ring into slot. Manually rotate Main Gear counterclockwise to confirm Eject operation.

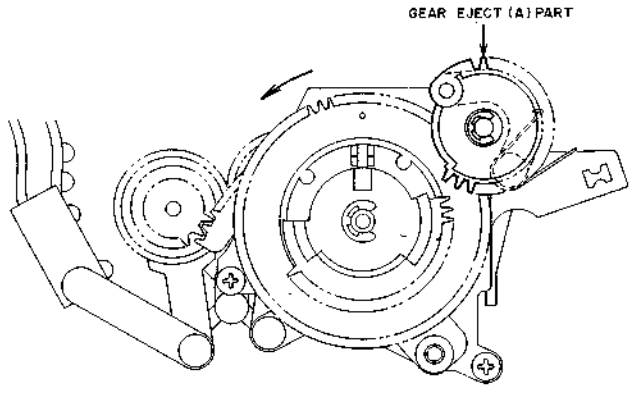


Fig. 6-13-5

6) Attach Lever Pinch Roller (A) to Mecha chassis so that pin Ⓐ goes into valley of Main Gear.

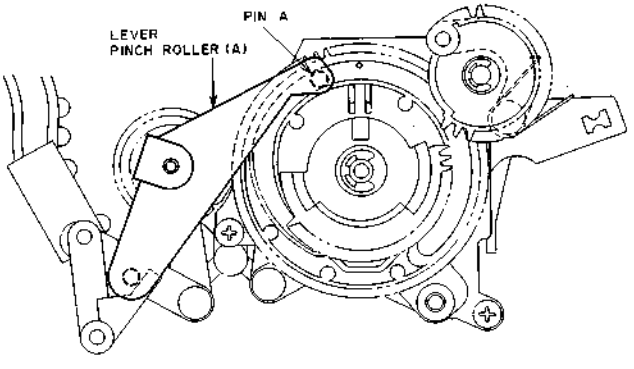


Fig. 6-13-6

7) Manually rotate Main Gear counterclockwise to drive unit into Eject state.

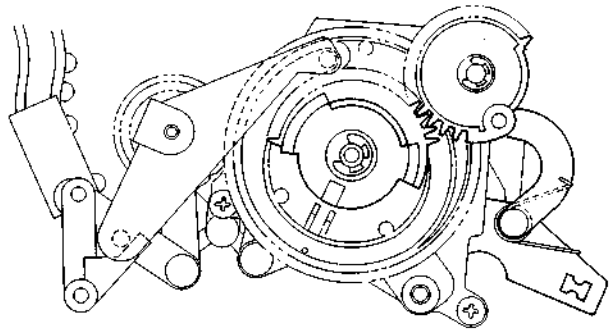


Fig. 6-13-7

8) Mount Gear relay onto Lever Loading Gear Part.

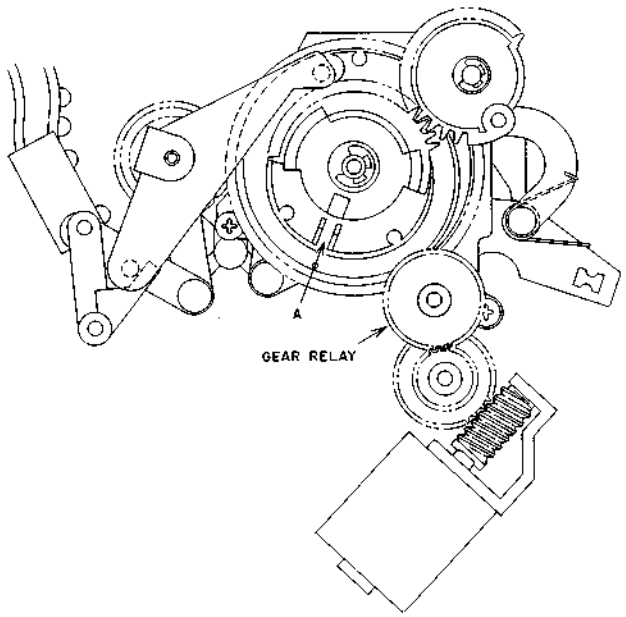


Fig. 6-13-8

9) Attach Holder Loading (A) BLK to Mecha chassis so that the latch of rotary encoder goes into slit A of Main Gear and tighten with screw Ⓑ.

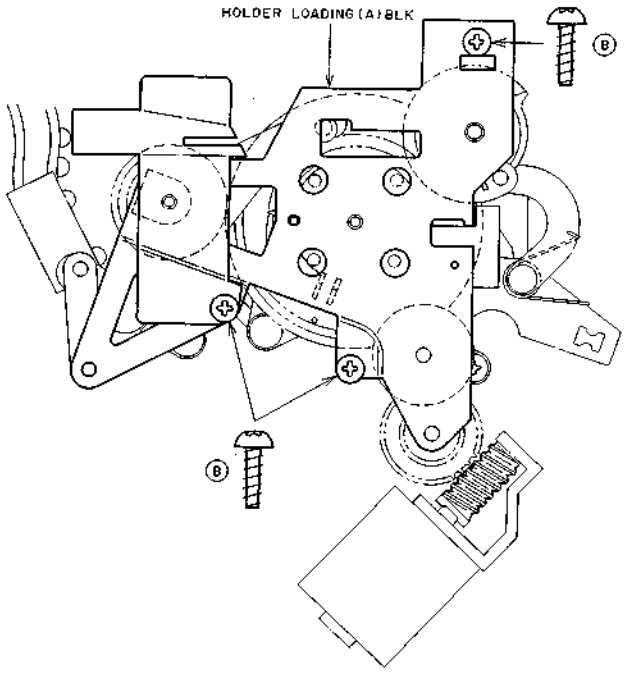


Fig. 6-13-9

VII. HEAD DRUM REPLACEMENT

7-1 REPLACEMENT PROCEDURE

1) Remove the Drum Shield Cover.
2) Remove the stator coil Block Fixing Screws.
3) Remove the Rotary coil set screw.
4) Unsolder the four wires connected between the Upper Drum Block and the Rotary Coil (A1: BRN, GRN A2: RED, GRN)
5) Remove the Upper Drum Fixing Screws.
6) Unsolder the eight wires from the Rotary Trans SP1: YLW, WHT SP2: YLW, BLK LP1: BLU, BRN LP2: BLU, RED)
7) Install the Upper Drum (Head Drum) and other parts in reverse order.

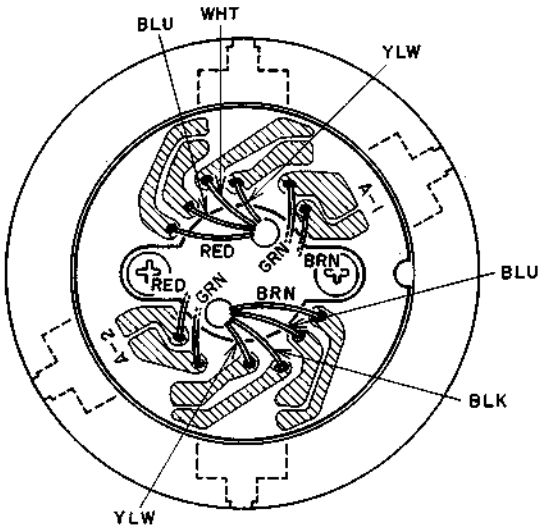


Fig. 7-1

NOTE: For the proper performance, height precisior is required for the relative height of video and HiFi head, and the head tips are fragile, the following points should be noted when replacing the upper drum block.

(a) Before fixing, clean both surfaces where the upper drum and the rotary transformer part meet with alcohol.
(b) Tighten the two upper drum fixing screws alternately and gradually. Tighten them at 6 kg-cm torque.
(c) When installation of upper drum, if it does not go on to the shaft easily, clean the hole in the upper drum with alcohol and put a little oil on the shaft.
(d) Do not loosen the set screw on the collar preload.
(e) When removing the stator coil block, make sure that the stator coil block does not touch the head tips.
(f) Make sure that the upper drum fixing screw holes on the rotary transformer part and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.

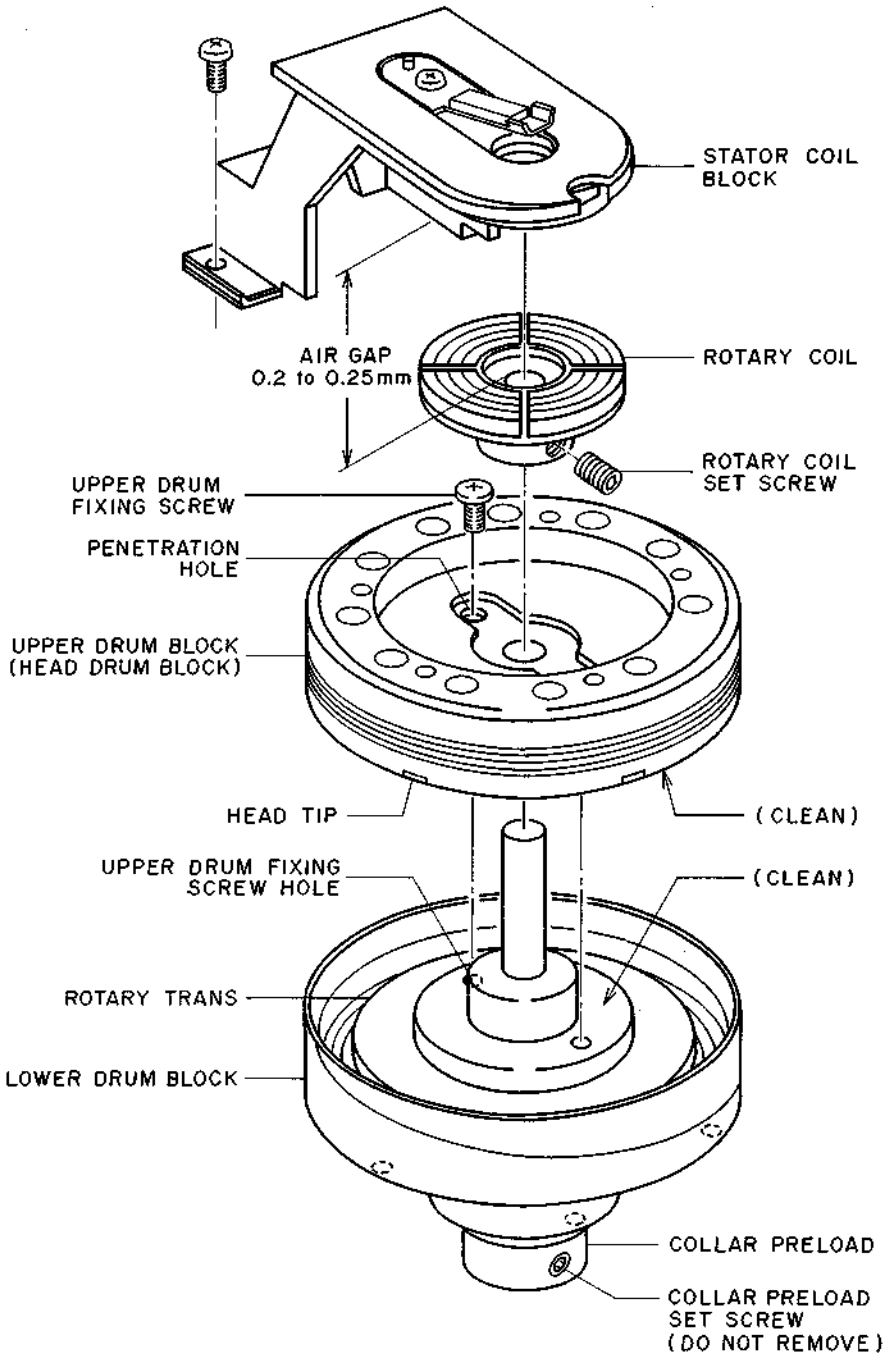


Fig. 7-2

7-2. AFTER REPLACEMENT

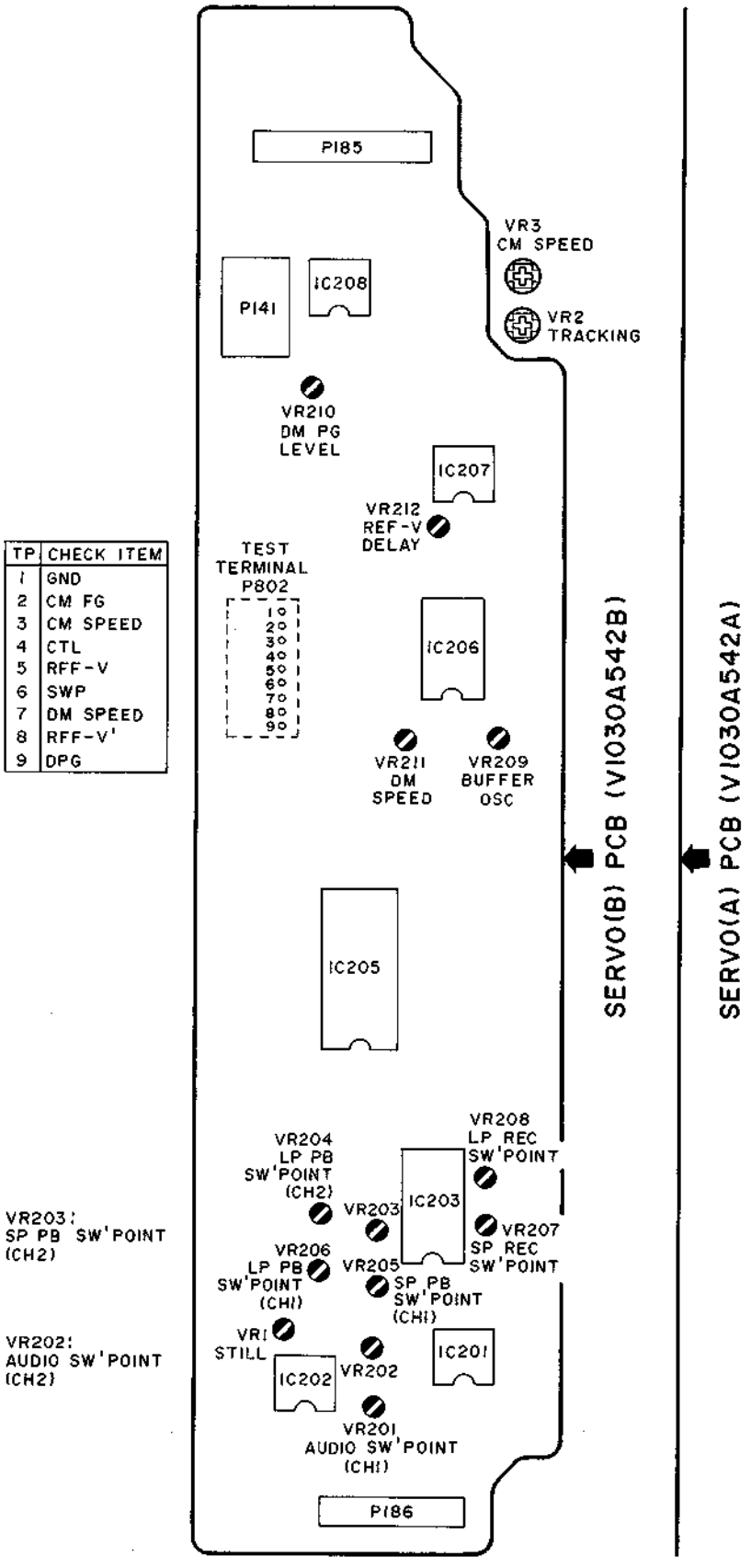
After replacement, the following adjustments and confirmations are necessary.

1) Confirmation of mechanical tracking (Control Head position adjustment 6-11).
2) PB switching point adjustment at SP/LP mode (Servo adjustment 8-1, in Step 7, 12).
3) REC switching point adjustment at SP/LP mode (Servo adjustment 8-1, in Step 8, 13).
4) Head peaking adjustment (Video adjustment 8-3, in Step 8).
5) REC current adjustment (Video adjustment 8-3, in Step 7).
6) FM REC current adjustment (HiFi Audio adjustment 8-2-1, in Step 3).
7) Audio Switching Point adjustment (HiFi Audio adjustment 8-2-1, in Step 6)
8) Confirmation of Y/C levels (Video adjustment 8-3, in Step 9, 11).
9) Confirmation of HiFi PB levels (HiFi Audio adjustment 8-2-1, in Step 4).

VIII. ELECTRICAL ADJUSTMENT

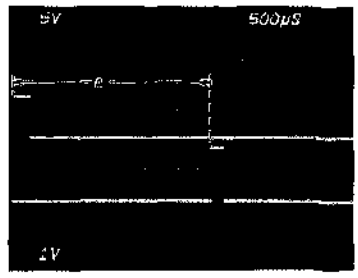
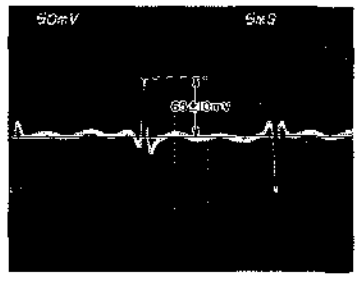
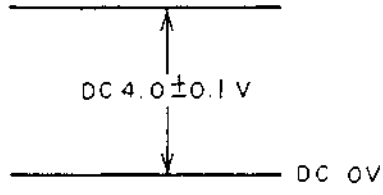
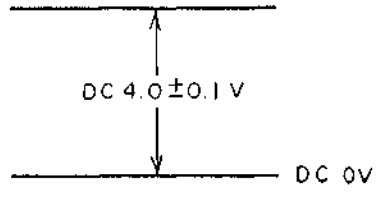
8-1. SERVO ADJUSTMENT

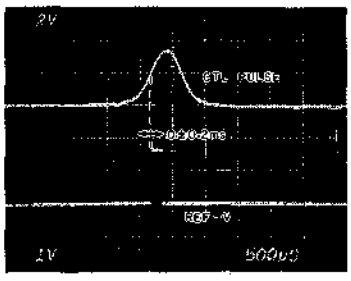
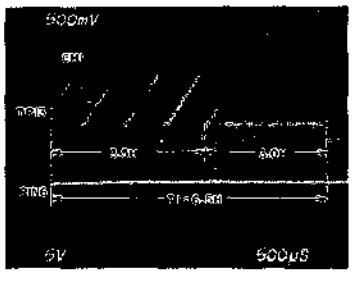
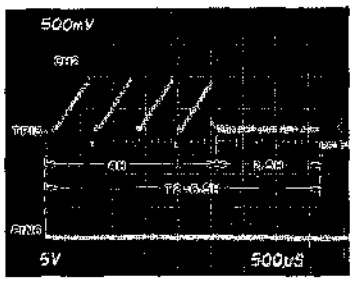
SERVO (A) PCB V1030A542A
SERVO (B) PCB V1030A542B

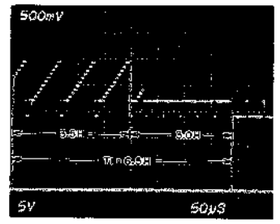
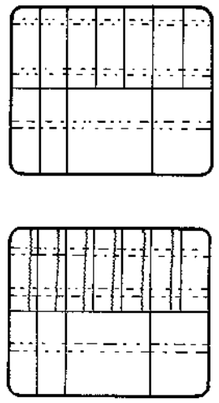


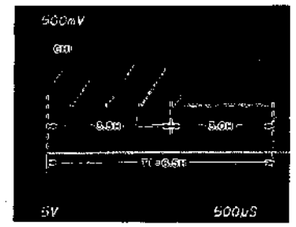
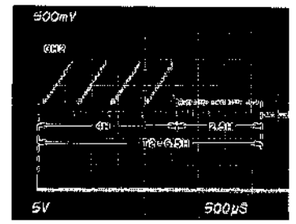
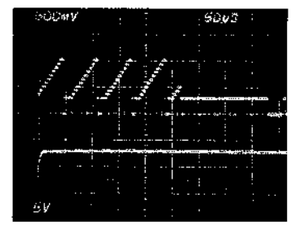
TP	CHECK ITEM
1	GND
2	CM FG
3	CM SPEED
4	CTL
5	RFF-V
6	SWP
7	DM SPEED
8	RFF-V'
9	DPG

Fig. 8-1 SERVO PCB ADJ Points

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	REF-V Delay	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 5 & 8)	VR212	 ●Adjust VR212 so that A is 3.0 ± 0.1 msec as shown.
2	Drum Motor PG level	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 9)	VR210	 ●Adjust VR210 so that the PG Level is within the levels shown above.
3	Drum Motor Speed	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 7)	VR211	 ●Adjust VR211 so that the Drum Servo phase error voltage is within DC4.0 ± 0.1V.
4	Capstan Motor Speed	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 3)	VR3	 ●Adjust VR3 so that the Capstan Servo phase error voltage is within DC4.0 ± 0.1V.
5	Capstan Motor FG	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 2)	confirmation	●Connect a frequency counter to Test Terminal Pin 2, and confirm the frequency is within 1200±6 Hz.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
6	Tracking Preset	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	Test Terminal (Pin 4) CTL pulse (Pin 8) REF-V'	VR2	 ●Tracking marker "X" on the monitor screen is set to the center of the dotted line by pressing the TRACKING button on the front panel so that the  ●Adjust VR2 so that the phase at raising part of CTL pulse and REF-V pulse are lined up.
7	SP PB Switching Point	PAL/SECAM Reference Test Tape AT-750795 (TF-508RF)	SP PB	TP13 (Video PCB) Test Terminal (Pin 6) for trigger	VR205 (CH-1) VR203 (CH-2)	  ●Adjust T1 with VR205, and T2 with VR203 to 6.5 ± 0.5H. ●The difference between T1 and T2 should be within 0.5H.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
8	SP REC Switching Point	PAL Color Bar from Color Bar Generator	SP REC	TP13 (Video PCB) Test Terminal (Pin 6)	VR207	●Adjust T1 and T2 waveforms to 6.5 ± 0.5H, as the same manner in Step 7. 
9	Buffer OSC	PAL Color Bar Test Tape AT-750791 (TF-510CB)	SP REVIEW	Monitor TV	VR209	 CORRECT INCORRECT ●Adjust VR209 so that color convergence on monitor TV is not blur.
10	LP Capstan Motor Speed	PAL/SECAM Reference Test Tape AT-751359 (TF-531RFL)	LP PB	Test Terminal (Pin 3)	Confirmation	●Confirm that the Capstan Servo error voltage is within DC 4.0 ± 0.1V.
11	LP Tracking Preset	PAL/SECAM Reference Test Tape AT-751359 (TF-531RFL)	LP PB	Test Terminal (Pin 4) CTL pulse (Pin 5) REF-V	Confirmation	●Confirm the Tracking Preset in Step 6 at LP mode.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
12	LP PB Switching Point	PAL/SECAM Reference Test Tape AT-751359 (TF-531RFL)	LP PB	TP13 (Video PCB) Test Terminal (Pin 6)	VR206 (CH-1) VR204 (CH-2)	  ●Adjust T1 with VR206, and T2 with VR204 to 6.5 ± 0.5H. ●The difference between T1 and T2 should be within 0.5H.
13	LP REC Switching Point	PAL Color Bar from Color Bar Generator	LP REC	TP13 (Video PCB) Test Terminal (Pin 6)	VR208	●Adjust T1 and T2 waveforms to 6.5 ± 0.5H, as the same manner in Step 12. 
14	STILL TRACKING	PAL/SECAM Reference Test Tape AT-750359 (TF-531RFL)	LP PB → PAUSE / STILL	Monitor TV	VR1 (on SERVO (A) PCB)	●Adjust VR1 only in the unsuccessful case that even after adjusted the STILL TRACKING on the Front Panel. ●Adjust VR1 so that the noise band is located within the 1/3 portion from the bottom of the TV screen.

8-2. AUDIO ADJUSTMENT

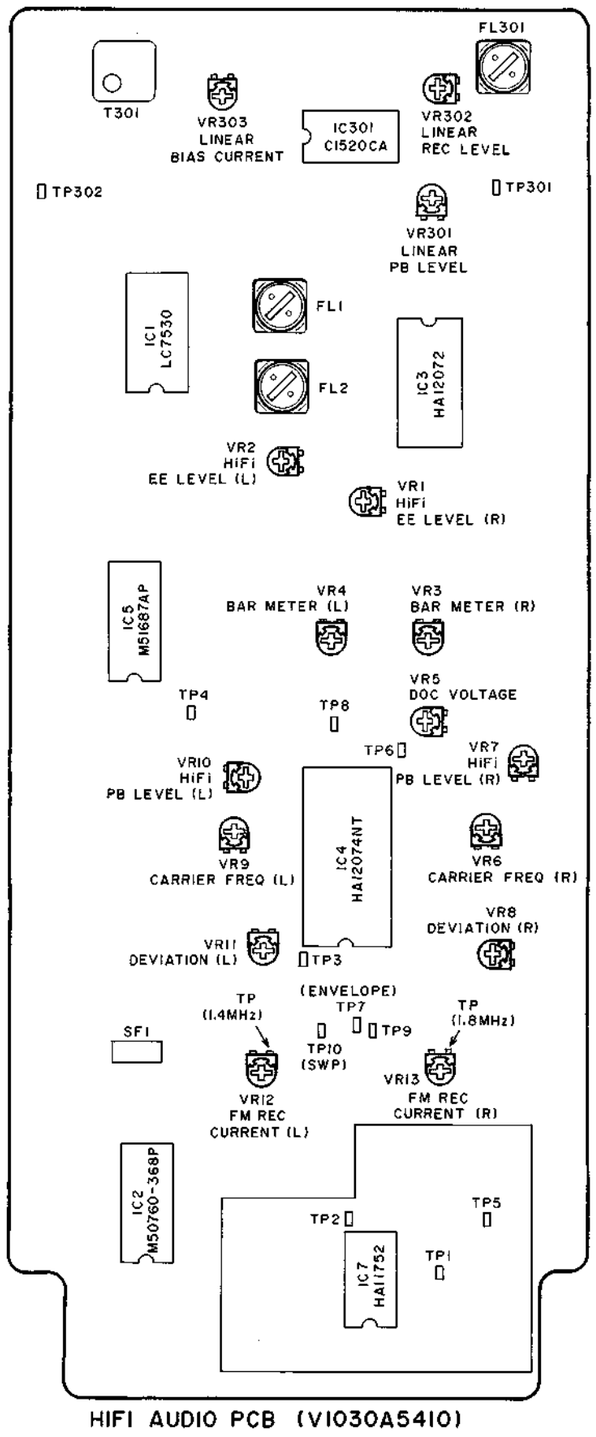
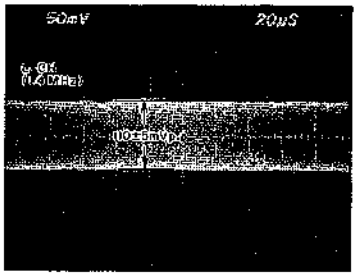
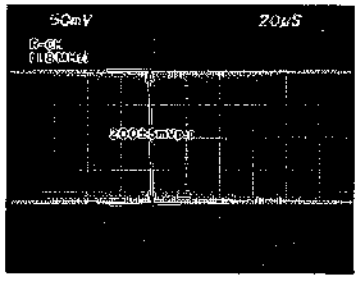
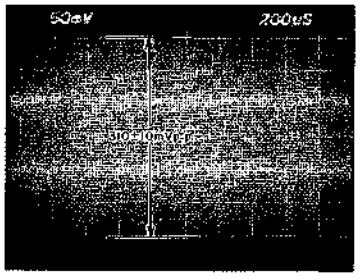
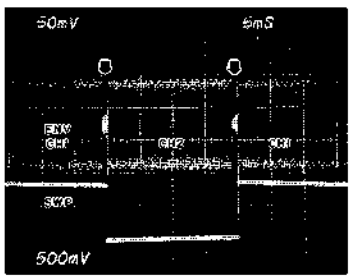
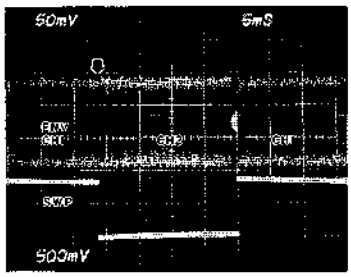
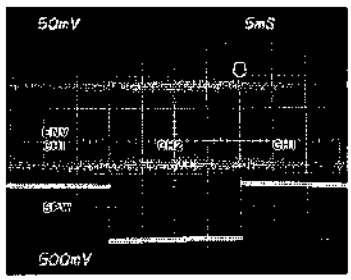


Fig. 8-2 HiFi AUDIO PCB ADJ Points

8-2-1. HiFi AUDIO ADJUSTMENT (Set the Monitor Selector to HiFi)

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	HiFi EE Level	PAL Color Bar from Color Bar Generator & Audio 1kHz, −8dBm input	EE	Audio out (L-CH)	VR2 (L-CH)	1. Connect an AC voltmeter to Audio out (L-CH). 2. Adjust VR2 so that the voltmeter reads −6.0 dBm ± 0.5 dBm.
				Audio out (R-CH)	VR1 (R-CH)	1. Connect an AC voltmeter to Audio out (R-CH). 2. Adjust VR1 so that the voltmeter reads −6.0 dBm ± 0.5 dBm.
2	Carrier Frequency	PAL Color Bar from Color Bar Generator, No Audio input	EE	VR12 (L-CH) VR13 (R-CH) * See Fig. 8-2	VR9 (L-CH) VR6 (R-CH)	1. Short-circuit between TP3 and TP4 after the power is turned on. 2. Connect a frequency counter to VR12 (See Fig. 8-2). 3. Adjust VR9 so that the frequency counter reads 1.4 MHz ± 10 kHz. 4. Connect a frequency counter to VR13 (See Fig. 8-2). 5. Adjust VR6 so that the frequency counter reads 1.8 MHz ± 10 kHz.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
3	FM REC Current	PAL Color Bar from Color Bar Generator, No Audio input	SP REC	TP1	VR12 (L-CH) VR13 (R-CH)	1. Connect an oscilloscope to TP1. 2. Turn the VR13 fully clockwise (zero output-R CH). 3. Adjust the VR12 so that the TP1 is 110 ± 5 mVp-p.  4. Mark the position of the VR12 then turn VR12 fully counter-clockwise. (zero output-L/R CH) 5. Adjust the VR13 so that the TP1 is 200 ± 5 mVp-p.  6. Then turn the VR12 counter-clockwise until the same position as marked in item 4. 
4	HiFi PB Level	PAL COL. HiFi Test Tape AT-751360 (TF-532CBS)	LP PB	Audio out (L-CH)	VR10 (L-CH)	1. Connect an AC Voltmeter to Audio out (L-CH). 2. Adjust VR10 so that the Volt-meter reads −6.0 dBm ± 0.5 dBm.
				Audio out (R-CH)	VR7 (R-CH)	1. Connect an AC Voltmeter to Audio out (R-CH). 2. Adjust VR7 so that the Volt-meter reads −6.0 dBm ± 0.5 dBm.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
5	Deviation	PAL Color Bar from Color Bar Generator & 400Hz, −8dBm Audio Signal	SP REC/PB	Audio out	VR11 (L-CH) VR8 (R-CH)	1. Connect AC Voltmeter to Audio out. 2. Adjust VR11 (L-CH) and VR8 (R-CH), so that the AC Voltmeter Reads −6.0 ± 0.5 dBm.
6	Audio Switching Point	PAL Color Bar from Color Bar Generator & No Audio input	SP REC/PB	TP7 (Envelope) TP10 (SWP) for trigger	VR201 (CH-1) Servo (6)B PCB) VR202 (CH-2) (Servo (6)B PCB)	1. First, turn the VR201, VR202 so that the AUDIO FM ENVELOPE is not continuous.  2. Then turn the VR201 until the CH-1 FM ENVELOPE is continuous.  3. Turn the VR202 until the CH-2 FM ENVELOPE is continuous. 

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
7	HiFi Distortion	PAL Color Bar from Color Bar Generator & Audio 1kHz, −8dBm input	SP REC/PB	Audio out (L-CH) (R-CH)	Confirmation	Less than 0.5%
8	DOC Voltage	PAL Color Bar from Color Bar Generator & Audio 1kHz, −8dBm input	SP REC/PB	TP6	VR5	1. Connect a Digital Voltmeter to TP6. 2. Adjust VR5 so that the Voltmeter reads 3.2 ± 0.1VDC.
9	Frequency Response	PAL Color Bar from Color Bar Generator & Audio 100Hz, 200Hz, −7kHz, 10kHz, 15kHz −28dBm input	SP REC/PB	Audio out	Confirmation	100 Hz : −26 ± 2 dBm 200 Hz to 7 kHz : −26 ± 1 dBm 10 kHz : −26 ± 2 dBm 15 kHz : −26 ± 3 dBm

8-2-2. LINEAR AUDIO ADJUSTMENT (Set the Monitor Selector to Normal)

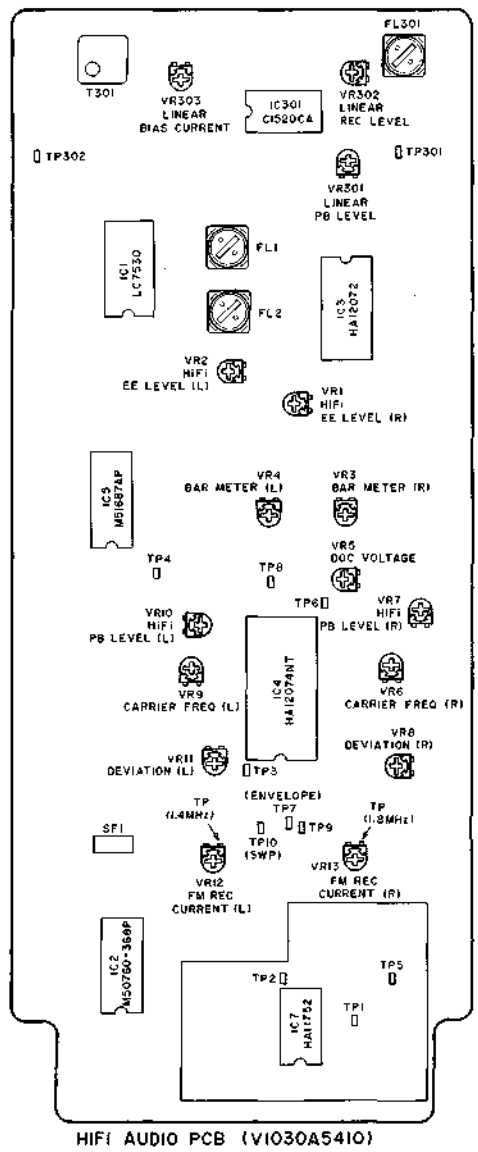
Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	EE Level	Audio 1kHz, −8dBm Input (AUDIO IN-L)	EE	Audio out	Confirmation	−6.0 ± 1.0 dBm
2	PB Level	PAL Reference Test Tape AT-751776 (TF-513L)	SP PB	Audio out L or Rch	VR301	−9.0 ± 0.5 dBm
3	Head Azimuth	PAL 6kHz Reference Test Tape AT-750795 (TF-508RF)	SP PB	Audio out L or Rch	Confirmation	$-9.0\ ^{+3.0}_{-1.0}$ dBm
		PAL 6kHz Reference Test Tape AT-751359 (TF-531RFL)	LP PB	Audio out L or Rch	Confirmation	−15.0 ± 2.0 dBm
4	Bias Current	Audio 1kHz, −8dBm input (AUDIO IN-L)	SP REC	A/C Head Test Terminal	VR303	1. Connect an AC voltmeter to A/C Head Test Terminal 2. Adjust VR303 so that the meter reads 28.0 ± 0.5 mV (RMS)
5	REC Level	Audio 1kHz, −8dBm input (AUDIO IN-L)	LP REC/PB	Audio out	VR302	−6.0 ± 2 dBm
			SP REC/PB	Audio out	Confirmation	−6.0 ± 2 dBm
6	Frequency Response	Audio 100Hz, 1kHz, 5kHz input (AUDIO IN-L)	LP REC/PB	Audio out	VR303 Readjust	100 kHz : −26.0 ± 3 dBm 1 kHz : −26.0 ± 2 dBm 5 kHz : −26.0 ± 3 dBm
		Audio 1kHz, 7kHz, −28dBm input (AUDIO IN-L)	SP REC	Audio out	Confirmation	1 kHz : −26.0 ± 1 dBm 7 kHz −26.0 ± 1 dBm
7	Distortion	Audio 1kHz, −8dBm input (AUDIO IN-L)	LP REC/PB	Audio out	Confirmation	Less than 3%
			SP REC/PB	Audio out	Confirmation	Less than 3%

8-2-3. BAR METER ADJUSTMENT

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	0 dB Display	Audio 1kHz, −8dBm input	EE	Bar Meter	VR4 (L-CH) VR3 (R-CH) (on HiFi Audio PC Board	1. Set Note 1. 2. Adjust VR4 and VR3 so that the green LEDs up to 0 dB are lit.
2	Meter Display Step	Audio 1kHz, −8dBm input	EE	Bar Meter	Confirmation	See Note 2.

NOTES: 1. Adjust the REC LEVEL button so that the AUDIO OUTPUT LEVEL is −6 dBm.

2. After the adjustment in Step 2, confirm that two orange LEDs are lit when the REC volume (+) on the Front Panel is pressed once.
   Next, press the REC volume (−) once, and confirm that those two orange LEDs are gone out.
   Then, press the REC volume (−) once more, and confirm that the green LEDs between 0 dB and −2 dB are gone out.



HIFI AUDIO PCB (V1030A5410)

8-3. VIDEO ADJUSTMENT

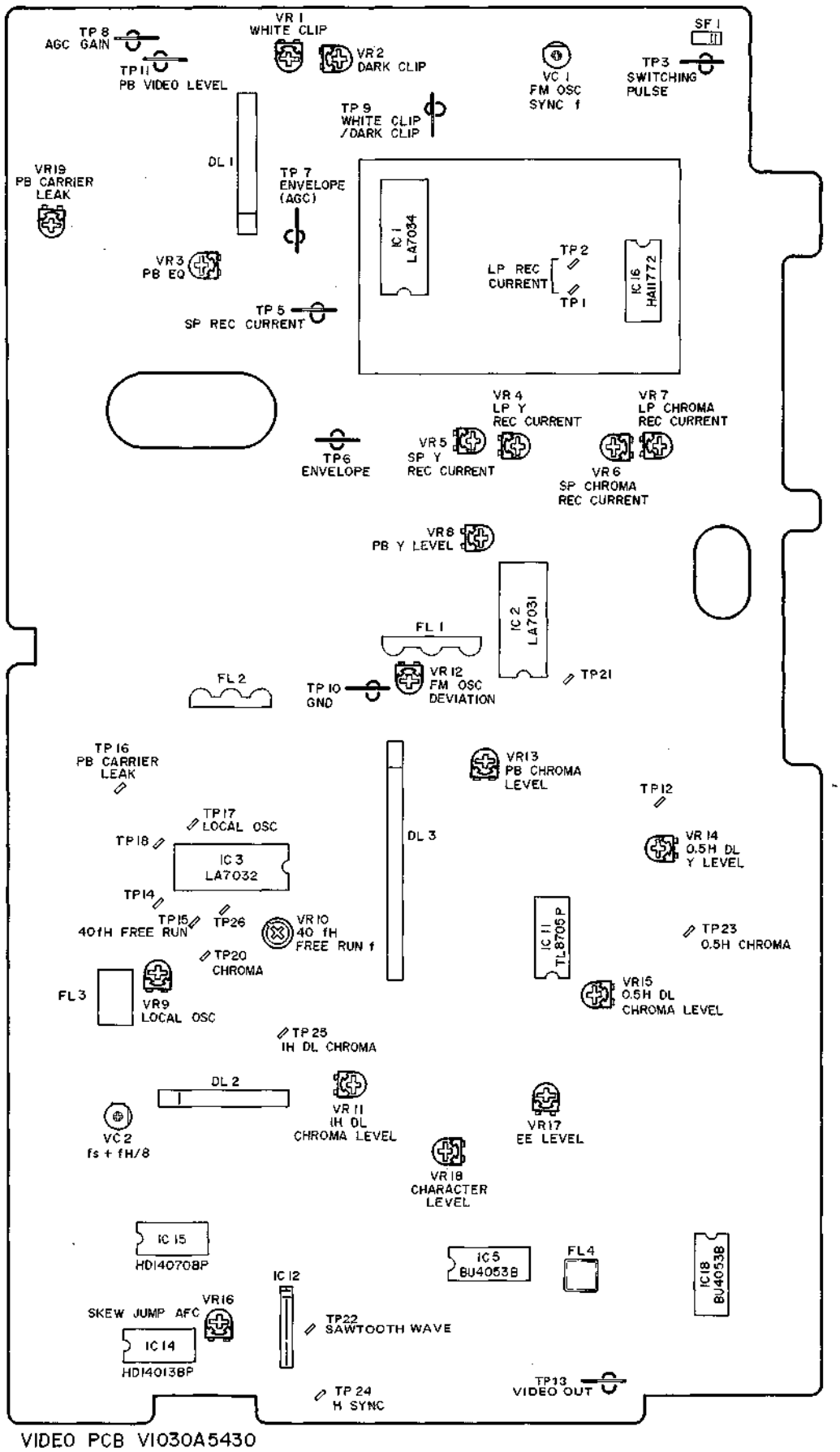
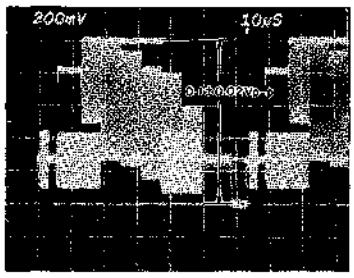
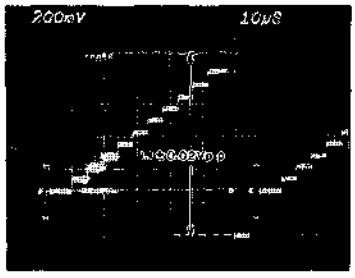
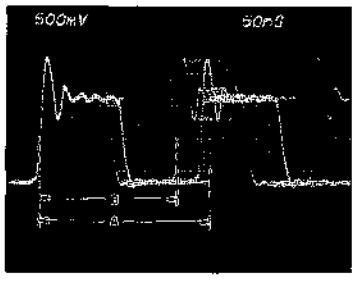
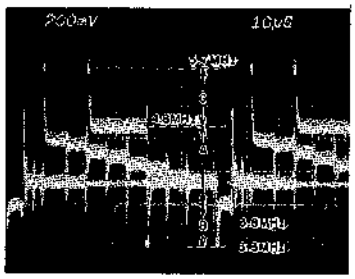
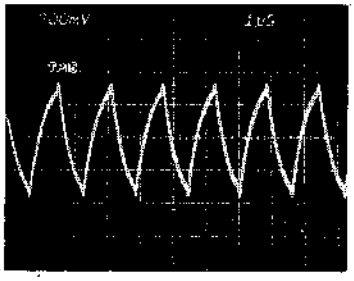
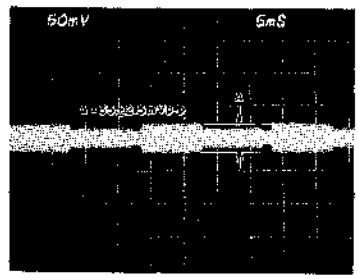
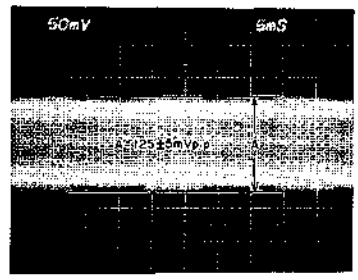
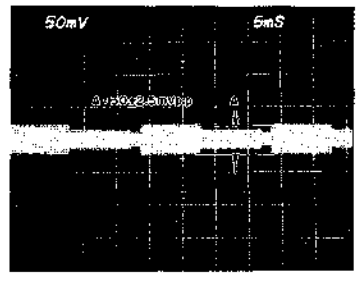
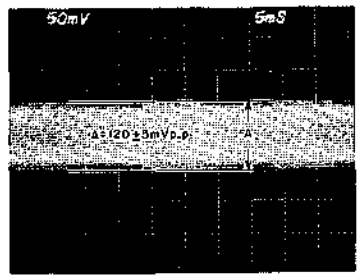


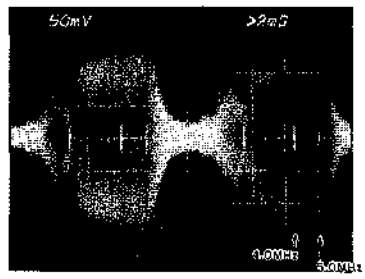
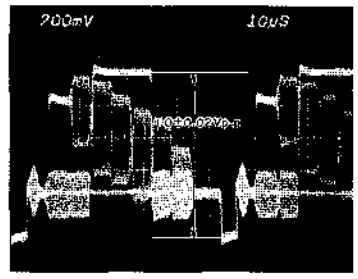
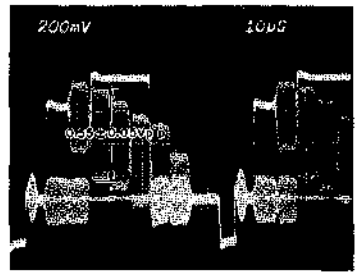
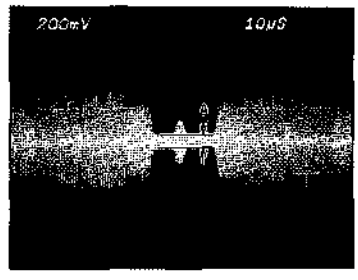
Fig. 8-3 VIDEO PCB ADJ Points

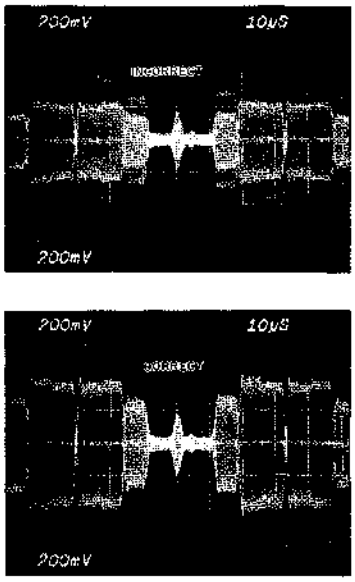
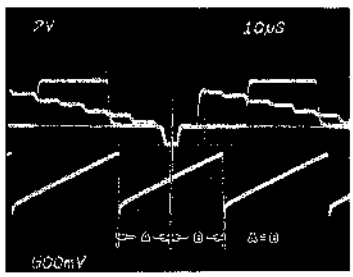
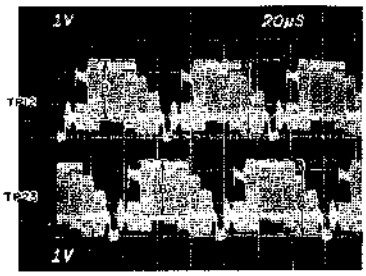
Precautionary items prior to adjustments
1. The color bar generator output should be 1.0 Vp-p.
2. Video output terminal should be terminated with 75 ohms (dummy or load).

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	EE level	PAL Color from Color Bar Generator 1 Vp-p	EE	TP13	VR17	 ●Adjust VR17 so that the video output (TP13) is within 1.0 ± 0.02 Vp-p.
2	Character level	PAL Stairstep from Color Bar Generator 1 Vp-p	EE	TP13	VR18	 ●Indicate tape counter on the monitor screen by pressing the Display button on the Front Panel. ●Adjust VR18 so that the video signal level is 1.1 ± 0.02 Vp-p. ●Confirm that the buzz from the Monitor TV speaker is not existed.
3	FM OSC	PAL Color Bar from Color Bar Generator	REC	TP6	VC1 (Sync f) VR12 (Deviation)	 ●Sync f set = A = 0.263 μS (3.8 MHz) ●Deviation = B = 0.208 μS (4.8 MHz)

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
4	White Clip and Dark Clip	PAL Color Bar from Color Bar Generator	EE	TP9	VR1 (White Clip) VR2 (Dark Clip)	 ●Adjust VR1 and VR2 so that the waveform at TP9 as shown above. White clip A : C = 1 : 0.9 Dark clip A : B = 1 : 0.5
5	40 fH Free Run Frequency	PAL Color Bar from Color Bar Generator	EE	TP15	VR10	 ●Connect a frequency counter between TP15 and TP10 (GND). ●Connect AL9V to TP14 through a resister (470 ohms). ●Adjust VR10 so that the counter reads 625 ± 25 kHz.
6	fs+fH/8 Frequency	PAL Color Bar from Color Bar Generator	EE	TP14	VC2	●Connect a frequency counter between TP14 and TP10 (GND). ●Adjust VC2 so that counter reads 4.435571 MHz ± 10 Hz.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
7	REC CURRENT	PAL Color Bar from Color Bar Generator	SP REC	TP5	VR6 (chroma)	●Turn VR5 fully counterclockwise (Y → zero)  ●Adjust VR6 so that the chroma REC waveform is 35 ± 2.5 mVp-p as shown above.
					VR5 (Y)	 ●Adjust VR5 so that the Y REC Current waveform is 125 ± 5.0 mVp-p as shown above.
			LP REC	TP1 or TP2	VR7 (chroma)	●Turn VR4 fully counterclockwise (Y → zero)  ●Adjust VR7 so that the chroma REC current waveform is 30 ± 2.5 mVp-p as shown above.
					VR4 (Y)	 ●Adjust VR4 so that the Y REC current waveform is 120 ± 5.0 mVp-p as shown above.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
8	PB EQ (Head Peaking)	RF Sweep Test Tape AT-750802 (TF-515SW)	SP PB	TP7	VR3	 ●Adjust VR3 so that the peak Frequency (CH-1/CH-2) is 4.7 MHz as shown above.
9	PB Y Level	PAL Color Bar from Color Bar Generator	SP REC/PB	TP13	VR8	 ●Adjust VR8 so that the Y signal is 1.0 ± 0.02 mVp-p as shown above.
10	LOCAL OSC (4.43 MHz)	PAL Color Bar from Color Bar Generator	SP REC/PB	TP17	VR9	●Connect a Frequency counter between TP17 and TP10 (GND) ●Adjust VR9 so that the counter reads 4.433619 MHz ± 10 Hz.
11	PB Chroma Level	PAL Color Bar from Color Bar Generator	SP REC/PB	TP13	VR13	 ●Adjust VR13 so that the cyan level is within 550 ± 1.0 mVp-p.
12	PB Carrier Leak	PAL Color Bar Test Tape AT-750797 (TF-510CB)	SP PB	TP16	VR19	 ●Adjust VR19 so that the level of the waveform at TP16 (A = carrier leak) is minimum.

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
13	1H Delay Chroma Level	PAL Color Bar Test Tape AT-750797 (TF-510CB)	SP PB	TP20 & TP25	VR11	●Adjust VR11 so that the chroma levels at TP20 and TP25 are equal. 
14	Skew Jump AFC	PAL Color Bar Test Tape AT-750797 (TF-510CB)	SP PB	TP22 & TP24	VR16	●Adjust VR16, so that the H sync locates at the counter of the wave-form as shown. 
15	0.5H Delay Y Level	PAL Color Bar Test Tape AT-750797 (TF-510CB)	SP PB	TP12 & TP23	VR14	●Adjust VR14 so that the Y level at TP12 and TP23 are equal. (A = A') 
16	0.5H Delay Chroma Level	PAL Color Bar Test Tape AT-750797 (TF-510CB)	SP PB	TP12 & TP23	VR15	●Adjust VR15 so that the chroma levels at TP12 and TP23 are equal (B = B') as shown in Step 15.

8-4. IMS (Interactive Monitor System) ADJUSTMENT

Step	Adjustment Item	Input Signal or Test Tape	Mode	Test Point	Adjustment Parts	Result & Remarks
1	Character Position	PAL Color Bar from Color Bar Generator	FUNCTION OFF ↓ ON (EE)	Monitor TV	VR1 on DEMODULATOR PCB	●Press CLOCK button and display CLOCK on the Monitor TV screen. ●Adjust VR1 so that the characters on the Monitor TV screen are central.
2	SYNC AFC	PAL Color Bar from Color Bar Generator	EE	Monitor TV	VR2 on DEMODULATOR PCB	●Adjust VR2 so that the characters on the Monitor TV screen are stabilized.

IX. PC BOARD TITLES AND IDENTIFICATION NUMBERS

PC Board Title		PC Board Number	Remarks
VIDEO	PC Board	V1030A5430	
HiFi AUDIO	PC Board	V1030A5410	
SERVO (A)	PC Board	V1030A542A	
SERVO (B)	PC Board	V1030A542B	
SERVO SUB	PC Board	V1030D5480	
SYSTEM CONTROL	PC Board	V1030B5470	
OPERATION	PC Board	V1027A5020 (5ED)	
MECHA DRIVE	PC Board	V1030A5380 (2ED)	
DEMODULATOR	PC Board	V1030A5051 (6ED)	VS-603EG/EK/ES/EZ
DEMODULATOR	PC Board	V1030A5440	VS-606EA/EO, VS-607EO-G
POWER SUPPLY	PC Board	V1030A5092 (5ED)	
MOTOR	PC Board	M3220C5010 (6ED)	
SENSOR (T)	PC Board	V1030D5020 (2ED)	
SENSOR (S)	PC Board	V1030D5340 (2ED)	
SENSOR (L)	PC Board	V1030D5140	
SENSOR (R)	PC Board	V1030D5150	
SENSOR LED	PC Board	V1030D5350	
SWITCH (EJ)	PC Board	V1030D5190	
CASSETTE SW	PC Board	V1030D5320	
A/C HEAD	PC Board	V1030D5180	
FULL ERASE	PC Board	V1030D5170	
SELECTOR	PC Board	V1027C5030	VS-606EO, VS-607EO-G
SELECTOR	PC Board	V1027C5031	VS-603EG
SELECTOR	PC Board	V1027C5033	VS-603EZ
SELECTOR	PC Board	V1027C5040	VS-603EK/ES
SELECTOR	PC Board	V1027C5042	VS-606EA

SECTION 3

PARTS LIST

TABLE OF CONTENTS

RECOMMENDED SPARE PARTS LIST 59
1. HEAD DRUM BLOCK 60
2. CHASSIS MECHA BLOCK (1) 61
3. CHASSIS MECHA BLOCK (2) 62
4. EJECTOR BLOCK 63
5. PC BOARD BLOCK 64
6. VIDEO PC BOARD 64
7. HIFI AUDIO PC BOARD 65
8. LEVEL METER PC BOARD 66
9. SERVO (A) PC BOARD 66
10. SERVO (B) PC BOARD 66
11. OPERATION PC BOARD 67
12. MECHA DRIVE PC BOARD 67
13. SYSTEM CONTROL PC BOARD 67
14. DEMODULATOR PC BOARD 67
15. VIF BLOCK (VS-603EG/EK/ES/EZ) 68
15A. VIF BLOCK (VS-606EA/EO, VS-607EO-G) 68
16. POWER SUPPLY PC BOARD 69
17. SELECTOR (S) PC BOARD 69
18. SENSOR (S) PC BOARD 69
19. SENSOR (T) PC BOARD 69
20. SENSOR LED PC BOARD 69
21. SENSOR (L) PC BOARD 70
22. SENSOR (R) PC BOARD 70
23. SW (EJ) PC BOARD 70
24. MOTOR PC BOARD 70
25. PHONE J PC BOARD 70
26. SERVO SUB PC BOARD 70
27. ASSEMBLY BLOCK 70
28. FINAL ASSEMBLY BLOCK 71
29. REMOTE CONTROL UNIT RC-V603 72
INDEX 73

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description of each part. If any of this information is omitted, there are instances in which parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because part numbers and part definitions and supply in the Preliminary Parts List may have been the subject of changes, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows those parts which are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts" from which these parts should be selected and parts.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the parts list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P C BOARD BLOCK

REF. NO.	PART NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

5. The kind of part and its installation position can both be determined by the Part Number. To determine where a part number is listed, utilize the Parts Index at the end of the Parts List. It is necessary first of all to find the Part Number. This can be accomplished by using the Reference Number listed at the right of the part number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT

RECOMMENDED SPARE PARTS LIST

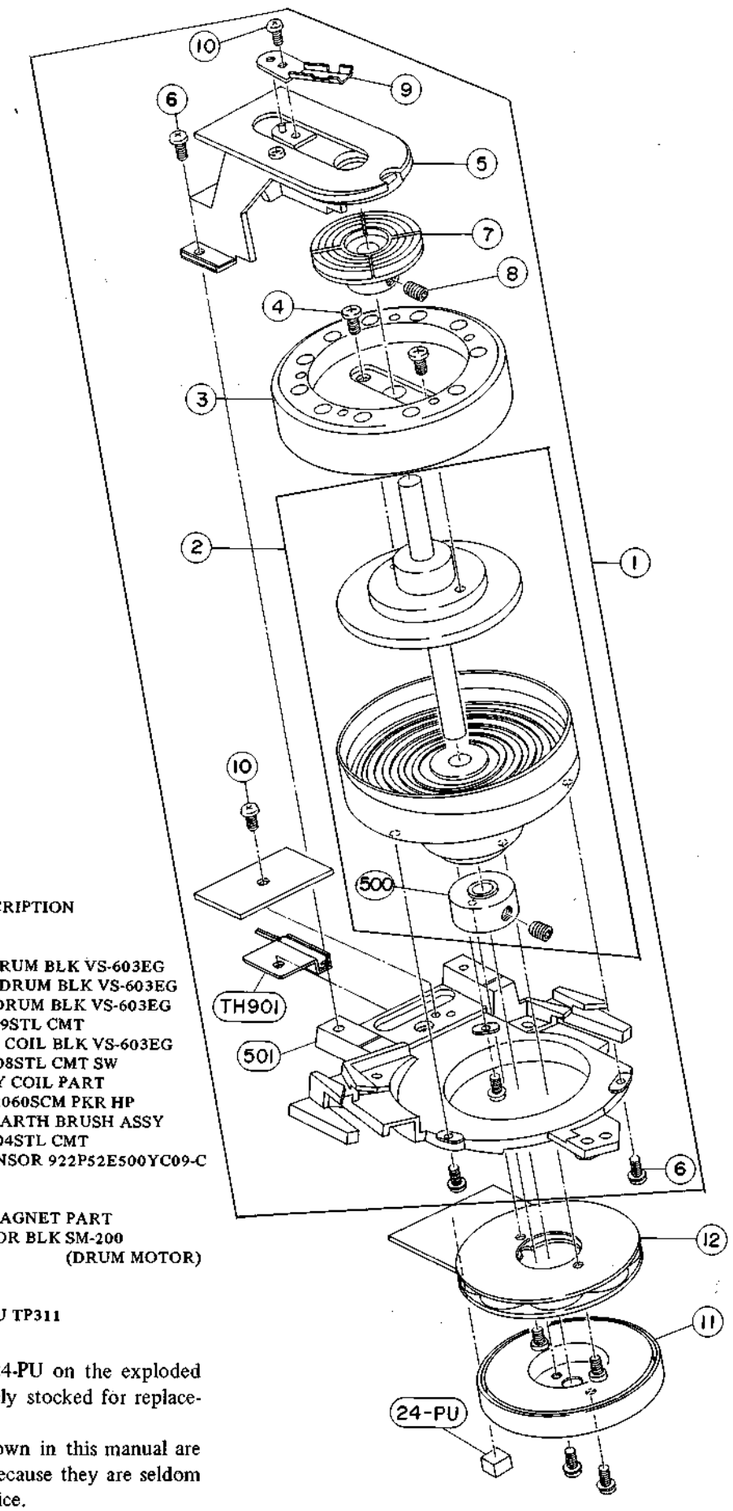
Because, if the parts listed below are on hand almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

NO.		PART NO.	DESCRIPTION
1		BM-353630	CAPSTAN MOTOR DDV6-20A
2		BM-360149	REEL MOTOR JME2B92
3		BR-B359158	REEL TABLE COMP (2) PART
4	N	BR-362130	TAKE-UP REEL TABLE COMP PART
5		BT-353936	⚠ TRANS POWER V1027 EG 220-110 [EG]
6		BT-356595	⚠ TRANS POWER V1027 EO 220 [EA,EO-G]
7		BT-354342	⚠ TRANS POWER V1027 ES 250-220 [ES]
8		BT-356594	⚠ TRANS POWER V1027 EZ 230-115 [EZ]
9		BT-357703	⚠ TRANS POWER V1030EK 240-200 [EK,EO]
10		BV-V1030A100A	LOADING DRIVE BLK VS-603
11	N	BV-V1030A210C	LOWER DRUM BLK VS-603EG
12		BV-V1030A030A	PINCH ROLLER BLK VS-603
13		BV-353841	RF CONVERTER SW MDLL5S150A [EA]
14		BV-354879	RF CONVERTER/BOOSTER MDLL5D073A [EZ]
15		BV-353839	RF CONVERTER/BOOSTER MDLL6D023A [EG]
16		BV-353840	RF CONVERTER/BOOSTER MDLL6I023A [EK,ES]
17		BV-353842	RF CONVERTER/BOOSTER MDLL6S023A [EO,EO-G]
18	N	BV-V1030A220A	UPPER DRUM BLK VS-603EG
19		EC-346765	C S-FIX H ECR-HA010A11 2.8-10
20		EC-346764	C S-FIX H ECR-HA020D11 4-20
21		ED-353550	⚠ D SILICON DBA30C-K12 200/3.0A
22		ED-357754	⚠ D SILICON DS135D 200/1.0A
23		ED-348205	⚠ D SILICON V MC931 DOUBLE
24		ED-319463	⚠ D SILICON 4B4B41 100/4.0A
25		ED-359232	⚠ D THYRISTER DRA2TB 100V 2.00A
26		ED-316389	⚠ D ZENER H HZ11 A2
27		ED-309069	⚠ D ZENER H HZ6 B2
28		ED-347776	D LED BG5608S GREEN
29		ED-347777	D LED BR5628S RED
30		ED-354313	D LED EBG3423S GREEN
31		ED-352723	D LED LD-603MG GREEN
32		ED-358056	D LED LN-68 INFRARED
33		ED-357540	D LED LN59
34		ED-356359	D LED PR5531K RED
35		ED-714631	D LED TLN105A
36		ED-348990	D SILICON H DS446
37		ED-301911	D SILICON H DS448
38		ED-344280	D SILICON H GMA-01-FY2 F05
39		ED-360318	D SILICON H MA700
40	N	ED-717489	D SILICON H 1SS119-04TJ [EA,EO,EO-G]
41		ED-523427	D SILICON H 1SS16
42		ED-624903	D SILICON H 1S2473
43		ED-347767	D SILICON V MC911 DOUBLE
44		ED-714603	D VARACTOR 1SV70-20FG
45		ED-356430	D ZENER H HZS8.2E F05 B2,B3
46		ED-310387	D ZENER H HZ12 B2
47		ED-331626	D ZENER H HZ3 B2
48		ED-346631	D ZENER H HZ36 3
49		ED-305655	D ZENER H HZ4 B3
50		ED-302269	D ZENER H HZ5 A2
51		ED-300035	D ZENER H HZ6 B3
52		ED-307610	D ZENER H HZ7 A2
53		ED-351392	D ZENER H HZ9 B [EZ,EA,EO,EO-G]
54		ED-356781	D ZENER H MA1062-L
55		ED-359238	D ZENER H MA1100-L
56		ED-359237	D ZENER H MA1130-H
57		EE-353832	TV TUNER TEEB1-020A [EK]
58		EE-353831	TV TUNER TEED1-A10A [EG]
59		EE-353833	TV TUNER TEEE1-A07A [EO]
60		EE-359413	TV TUNER TEEE1-A13 [EO-G]
61		EE-353835	TV TUNER TEES1-025A [EA]
62		EE-353834	TV TUNER TEEZ1-024A [ES]
63		EE-356135	TV TUNER TEEZ1-032A [EZ]
64		EF-347968	⚠ FUSE ICP-F10 150V 0.4A
65		EF-346880	⚠ FUSE ICP-F15 150V 0.6A
66		EF-355398	⚠ FUSE BET T 2.00A 250V
67		EF-601301	⚠ FUSE SEMKO T 2.00A 250V
68		EH-358801	DL EFD-BR124A13V
69		EH-353817	DL EFD-VN645A83F
70	N	EH-359258	DL EFD-VN645A83H
71	N	EH-358849	FILTER CE SFE13.3MA
72		EH-356067	FILTER LC BP GZV-322-1A 5.06MHZ
73	N	EH-360324	FILTER LC BP LJ25BP1.4M03-32
74	N	EH-360326	FILTER LC BP LJ25BP1.803-32
75		EH-356672	FILTER LC BP SLC2915 4.43MHZ
76		EH-354086	FILTER LC DL GYV-501-1T [EG,EZ]
77	N	EH-360327	FILTER LC LP FX-100E
78		EH-345113	FILTER LC LP LJ25LP3.4M01-32
79		EI-353421	⚠ IC BA6229
80		EI-356381	⚠ IC STK5434
81		EI-330986	⚠ IC TA78L009AP
82		EI-337530	⚠ IC μPC574J
83		EI-K5001A010A	IC AF2401
84		EI-324203	IC AN6342N
85		EI-353478	IC AN6881
86		EI-356288	IC BA225A
87		EI-356289	IC BA226A
88		EI-358853	IC BA235
89		EI-337625	IC BA236
90		EI-357040	IC BA6302A
91	N	EI-360316	IC BA6305
92		EI-353695	IC BA634
93	N	EI-358844	IC BA7023
94		EI-354399	IC BU4001B
95		EI-354400	IC BU4011B
96	N	EI-356457	IC BU4013B
97		EI-356455	IC BU4053B
98		EI-354401	IC BU4066B
99		EI-352714	IC HA11752
100		EI-353800	IC HA11772
101	N	EI-358500	IC HA12072NT
102	N	EI-358501	IC HA12074NT
103		EI-200495	IC HD14013BP
104		EI-328593	IC HD14053BP
105		EI-328693	IC HD14070BP
106		EI-347781	IC LA6393D
107		EI-347779	IC LA6393S
108		EI-353813	IC LA7031
109		EI-353815	IC LA7032
110		EI-353814	IC LA7034
111		EI-356370	IC LA7224
112	N	EI-717488	IC LA7755M [EA,EO,EO-G]
113		EI-353848	IC LA7808
114		EI-348111	IC LC4071B
115		EI-353867	IC LC4077
116		EI-345759	IC LC7350
117		EI-361554	IC MB88301A-P
118		EI-347773	IC MB88303M
119		EI-353851	IC MB88305-P
120	N	EI-360087	IC MB8841-1429J B-PAL
121	N	EI-360089	IC MB88501-352M OPE3
122		EI-353783	IC MB88505-266M IMS-U [EZ,EA]
123		EI-357092	IC MB88505-285M IMS-E [EG,EK,ES,EO]
124		EI-357093	IC MB88505-293M IMS-G [EO-G]
125	N	EI-359325	IC M50760-368P B-PAL
126	N	EI-358502	IC M51687AP
127		EI-346071	IC M5218L-21 [EA,EO,EO-G]
128		EI-349719	IC M5218P
129		EI-356811	IC M5224P
130		EI-353893	IC M54565P
131		EI-355709	IC M54572L
132		EI-714602	IC TA7337P [EG,EK,ES,EZ]
133		EI-358842	IC TA7347P
134	N	EI-358845	IC TA7374
135		EI-705494	IC TA7607AP
136		EI-310036	IC TC4066BP [EA,EO,EO-G]
137	N	EI-358843	IC TL8705
138		EI-749828	IC μPC1391H [EA,EO,EO-G]
139		EI-353475	IC μPC1504C
140	N	EI-358506	IC μPC1513HA
141	N	EI-358505	IC μPC1520CA
142	N	EI-358504	IC μPC1522HA
143		EI-353477	IC μPC1526C
144		EI-749983	IC μPD1943G
145		EI-349372	OSC CE CSA4.00MG 4MHZ
146		EI-710044	OSC CE CSB455EB 455KHZ
147		EI-356371	OSC X'TAL MS-309 4.194304MHZ
148		EI-309878	OSC X'TAL 4.433619MHZ
149		EI-322347	OSC X'TAL 4.435571MHZ
150		EL-353625	PL CORD 8.0V 100MA 175/175
151		EL-353624	PL CORD 8.0V 100MA 235/235
152		EM-353891	IND LE GL3E416
153	N	EM-361786	IND LE LT-1162 GRAPH
154		ER-345751	⚠ R FUSE ERD2FC S10 1/4W 15R0G
155	N	ER-362061	R THERMO H 3000PPM 1/4W 103J
156		ES-354430	⚠ SW SLIDE 00220950 02-02-2N [EG,ES,EK]
157		ES-354308	SW LEAF MSW-1595C
158		ES-353653	SW MODE SRZZ0002A1
159		ES-353622	SW PUSH EVQ-WU7001 02-2
160		ES-347048	SW PUSH SSCSP1072A 1-01-02N
161		ES-353708	SW SLIDE SSSY12083A 2-02-03N
162		ES-201527	SW SLIDE SSS212 1-01-02N
163		ES-347755	SW TACT EVQ-QSE05T
164		ES-357786	SW TACT SKHHPC011A
165		ET-349882	⚠ TR 2SA1283 D,E
166		ET-348948	⚠ TR 2SD1273 P,Q
167		ET-330717	PHOTO SENSOR NJL1644L
168		ET-353635	PHOTO SENSOR ON2160 Q.R.S
169		ET-354370	TR DTA124ES
170		ET-360824	TR DTC144E F
171		ET-354414	TR DTC144ES
172		ET-356236	TR FET 2SK363 GR.BL
173		ET-318308	TR PHOT PN202S
174		ET-359700	TR PHOT PN202S S
175		ET-308472	TR 2SA1115 E,F,G
176		ET-356224	TR 2SA1286 G,H,J
177		ET-349725	TR 2SA1391 S,T
178		ET-336845	TR 2SB641 Q,R,S,T
179		ET-356153	TR 2SB643 Q,R,S,T
180		ET-357546	TR 2SB895A P,Q,R
181		ET-321644	TR 2SC1213 C
182		ET-306719	TR 2SC2236 O,Y
183		ET-308141	TR 2SC2603 G
184		ET-355669	TR 2SC3246 G,H,J
185		ET-349081	TR 2SC3383 S,T
186		ET-352994	TR 2SC3401
187		ET-349366	TR 2SC3402
188		ET-338324	TR 2SD1012-V H
189		ET-360695	TR 2SD1302 S,T
190		ET-318604	TR 2SD545NP E,F
191		ET-309434	TR 2SD636 Q,R,S,T
192		ET-200986	TR 2SD863-V8 F
193		EV-358860	R S-FIX H H0615C 3P 101
194		EV-356579	R S-FIX H H0615C 3P 102
195		EV-356577	R S-FIX H H0615C 3P 103
196		EV-356575	R S-FIX H H0615C 3P 222
197		EV-358829	R S-FIX H H0615C 3P 223
198		EV-356583	R S-FIX H H0615C 3P 332
199		EV-356576	R S-FIX H H0615C 3P 472
200		EV-356582	R S-FIX H H0615C 3P 473
201		EV-358862	R S-FIX H H0615C 3P 474
202		EV-336769	R S-FIX H H0621A 3P 0.30W 473
203	N	EV-356448	R S-FIX H H0624C 3P 0.30W 154
204		EV-356447	R S-FIX H H0624C 3P 0.30W 333

NO.		PART NO.	DESCRIPTION
205		EV-356445	R S-FIX H H0624C 3P 0.30W 473
206		EV-356444	R S-FIX H0624C 3P 0.30W 683
207		EV-361358	R S-FIX H H0624C 3P 030W 104
208		EV-348204	R S-FIX H H0651A 3P 0.05W 683
209		EV-356324	R S-FIX H KVSF637A 3P 103
210		EV-358808	R S-FIX H KVSF637A 3P 152
211		EV-353425	R S-FIX H RVF6P01 3P 103
212		EV-353423	R S-FIX H RVF6P01 3P 503 [EA,EO,EO-G]
213	N	EV-717487	R S-FIX H RVF6P01 104 [EA,EO,EO-G]
214		EV-337949	R S-FIX H TM64K3 3P 0.30W 103
215	N	EV-360317	R S-FIX V RHLON 3P 0.3W 104
216		EV-713607	R S-FIX RVF6P01-103
217		EV-714599	R S-FIX RVF6P01-202
218		EV-714581	R S-FIX RVF6P01-502 [EA,EO,EO-G]
219		EX-338414	⚠ POSISTER PTH61G27BD2R2N
220		EX-330533	⚠ POSISTER PTH61G27BD3R3N
221		EX-355657	⚠ POSISTER PTH61G27BD6R8N
222	N	EX-359420	⚠ POSISTER PTH62G08BD1R0N016
223		EX-357642	DEW SENSOR 922P52E500YC09-C
224	N	EX-359254	THERMISTER ERT-D2ZHL153S
225		EZ-356237	BATTERY P-01H-F4N4
226		HC-353332	HEAD PU TP311
227		HF-325273	HEAD E HVFSA0001A V
228		HR-353638	HEAD COMBO HVMSA1015B
229	N	MI-361964	IDLER PART
230		MZ-353166	GEAR (1)
231		MZ-353167	GEAR (2)
232		MZ-353168	GEAR (3)
233		MZ-353169	GEAR (4)
234		MZ-B353201	GEAR EJECT PART
235		MZ-B351526	GEAR EJECTOR (A) PART VS-603
236		MZ-353170	GEAR IDLER
237		MZ-351524	GEAR LOADING (L)
238		MZ-351525	GEAR LOADING (R)
239		MZ-B351529	GEAR MAIN PART VS-603
240		MZ-351527	GEAR RELAY
241		MZ-353364	GEAR WORM WHEEL
242		VT-B353093	ROTARY COIL PART
243	N	VT-V1030A230B	STATER COIL BLK VS-603EG

"NOTE" N: New Parts

HEAD DRUM BLOCK

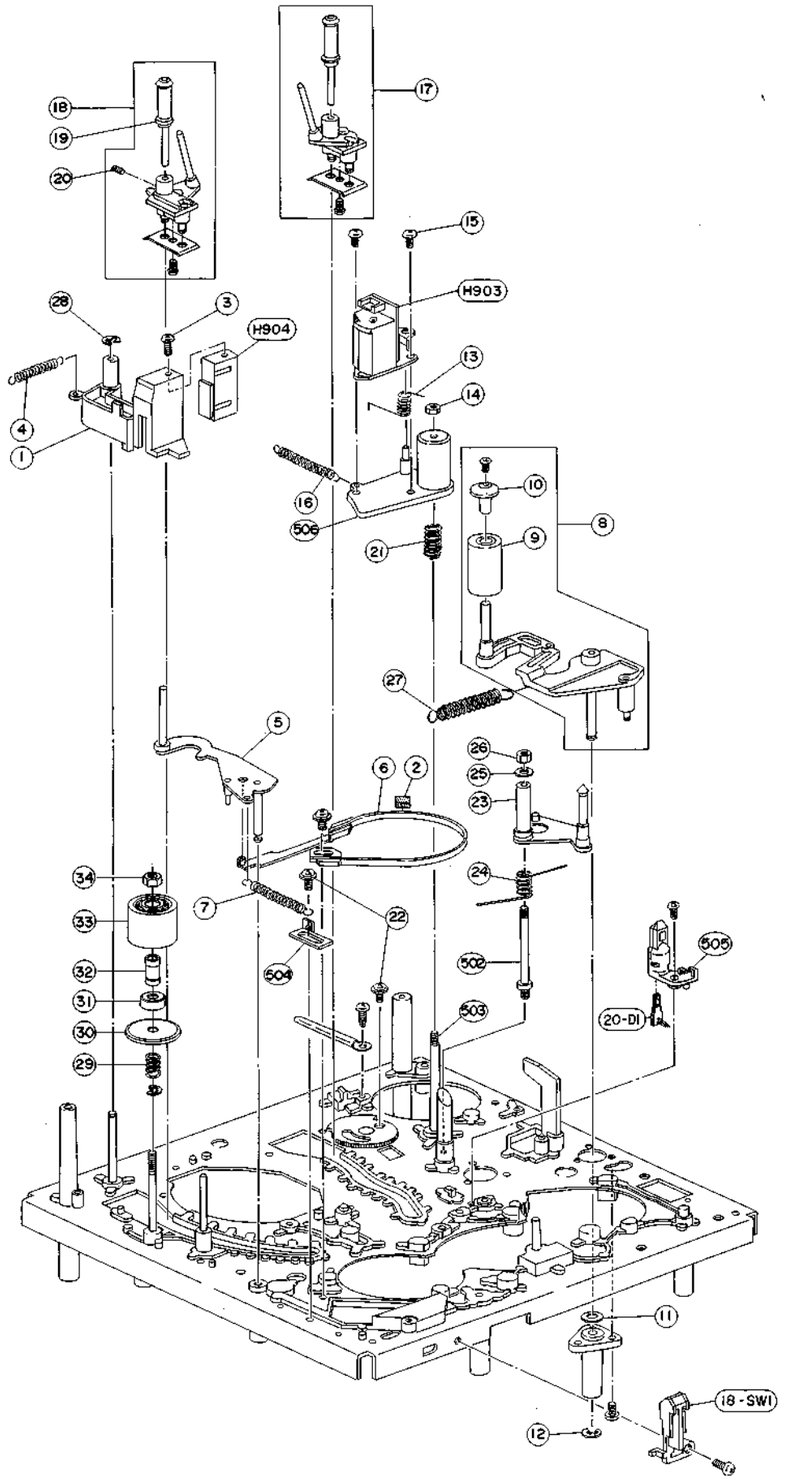


1. HEAD DRUM BLOCK

REF. NO.	PART NO.	DESCRIPTION
	HEAD DRUM BLOCK	
1-1	BV-V1030A200A	HEAD DRUM BLK VS-603EG
1-2	BV-V1030A210C	LOWER DRUM BLK VS-603EG
1-3	BV-V1030A220A	UPPER DRUM BLK VS-603EG
1-4	ZS-362241	BID30x09STL CMT
1-5	VT-V1030A230B	STATER COIL BLK VS-603EG
1-6	ZS-354332	PAN26x08STL CMT SW
1-7	VT-B353093	ROTARY COIL PART
1-8	ZS-356815	6SET30x060SCM PKR HP
1-9	VT-353098	DRUM EARTH BRUSH ASSY
1-10	ZS-432843	PAN26x04STL CMT
1-TH901	EX-357642	DEW SENSOR 922P52E500YC09-C
	MOTOR SM-200 BLOCK	
1-11	BV-B353329	YOKE MAGNET PART
1-12	BM-M3220A020A	PC MOTOR BLK SM-200 (DRUM MOTOR)
	MOTOR PC BOARD	
24-PU	HC-353332	HEAD PU TP311

NOTE: Parts listed in 1-1 to 24-PU on the exploded view and list are normaly stocked for replacement purpose.
The remaining parts shown in this manual are not normaly stocked, because they are seldom required for routine service.

CHASSIS MECHA BLOCK (1)



2. CHASSIS MECHA BLOCK (1)

REF. NO.	PART NO.	DESCRIPTION
		CHASSIS MECHA BLOCK
2-1	ML-353146	ARM FE HEAD
2-2	MB-357976	CUSHION WALL
2-3	ZS-460440	PAN20×04STL CMT
2-4	ZG-357866	SP T6-04.0&0.40-20.0 T6-113
2-5	BL-B353122X1	LEVER TENSION (2) PART
2-6	BV-B352377	ARM TENSION BAND PART VS-603
2-7	ZG-357769	SP PULL TENSION
2-8	BV-V1030A030A	PINCH ROLLER BLK VS-603
2-9	MP-357547	ROLLER PINCH 16×20
2-10	SR-357552	CAP PINCH ROLLER
2-11	ZW-259738	PW41×070×025PSL
2-12	ZW-270101	RING E 300SUP CMT
2-13	ZG-313261	SP C-04.5/1.00-08.0 C-105
2-14	ZW-516993	N30STL CMT 1
2-15	ZS-379350	PAN30×06STL CMT
2-16	ZG-321598	SP T2-06.3/0.80-31.5 T2-199
2-17	VT-V1030A080A	LOADING LEADER (R) BLK VS-603
2-18	VT-V1030A090A	LOADING LEADER (L) BLK VS-603
2-19	VT-353658	VERTICAL POLE
2-20	ZS-302938	6SET20×030SCM PKR WP
2-21	ZG-313209	SP C-05.5/0.80-12.5 C-054
2-22	ZS-328607	SCREW TRIPLE PAN30×05
2-23	BL-B357555	LEVER REVIEW PART VS-603
2-24	ZG-357559	SP TORSION REV
2-25	ZW-324417	PW31×060×050PSL
2-26	ZW-350839	N30 NYLON
2-27	ZG-353626	SP PULL PINCH
2-28	ZW-357164	RING E 230SUP CMT
2-29	ZG-359184	SP PUSH ROLLER IMPEDANCE VOL2
2-30	MI-359475	GUIDE IMPEDANCE ROLLER
2-31	MZ-359183	COLLAR SHAFT 2
2-32	MZ-359182	COLLAR SHAFT 1
2-33	MR-359181	ROLLER IMPEDANCE VOL 2
2-34	ZW-350839	N30 NYLON
2-H903	HR-353638	HEAD COMBO HVMSA1015B
2-H904	HE-325273	HEAD HVFSA0001A V
		SENSOR (S) PC BOARD
18-SW1	ES-354308	SW LEAF MSW-1595C
		SENSOR LED PC BOARD
20-D1	ED-357540	D LED LN59

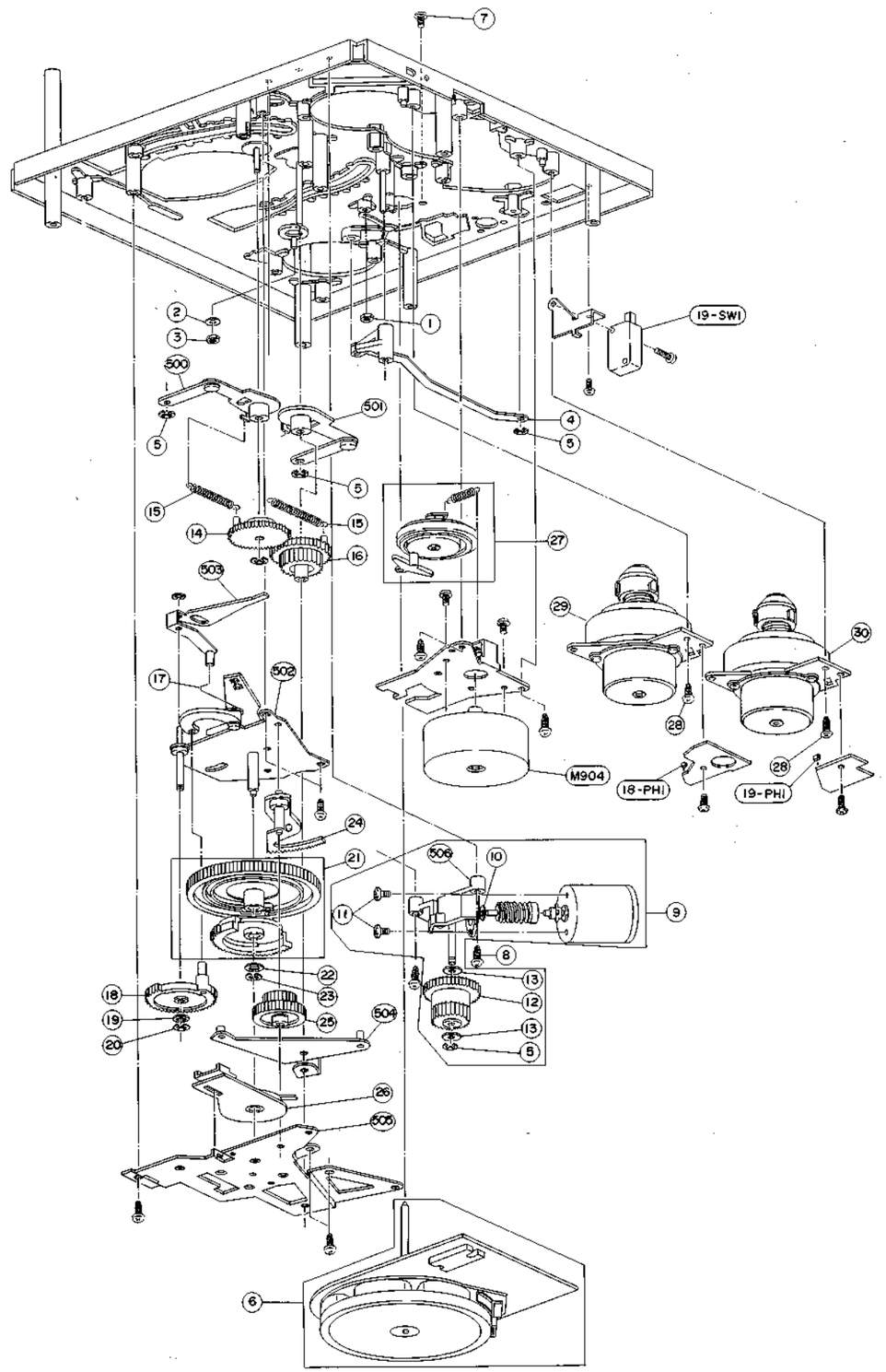
NOTE: Parts listed in 2-1 to 20-D1 on the exploded view and list are normaly stocked for replacement purpose.
The remaining parts shown in this manual are not normaly stocked, because they are seldom required for routine service.

3. CHASSIS MECHA BLOCK (2)

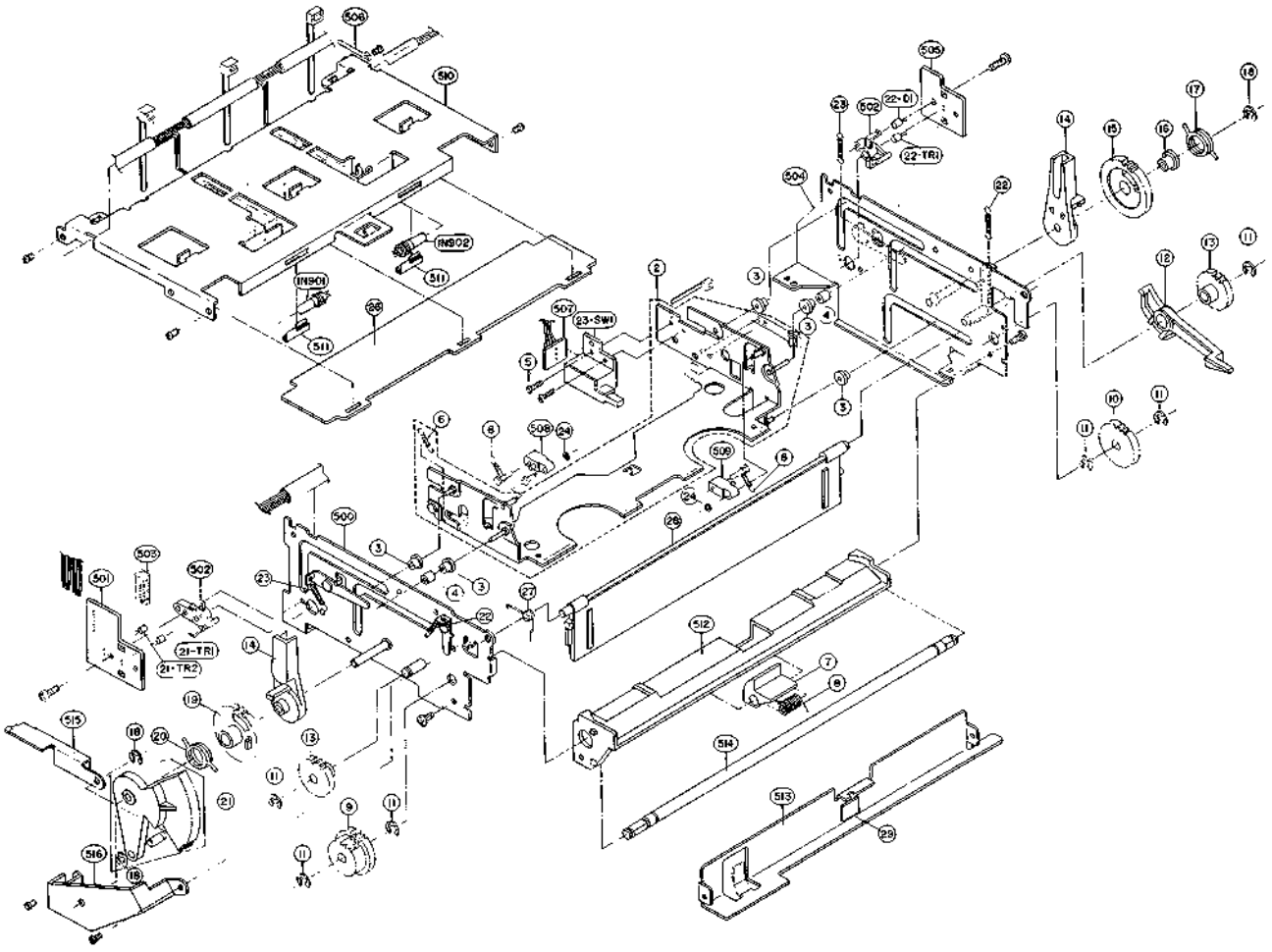
REF. NO.	PART NO.	DESCRIPTION
		CHASSIS MECHA BLOCK
3-1	ZW-609434	N FRANGE 30STL CMT
3-2	ZW-381881	PW41×130×100STL CMT
3-3	ZW-413188	N40STL CMT 1
3-4	BL-B353126	LEVER PINCH ROLLER LINK PART VS-603
3-5	ZW-357164	RING E 230SUP CMT
3-6	BM-353630	CAPSTAN MOTOR DDV6-20A
3-7	ZS-608220	PAN26×06STL CMT
3-8	ZS-417194	BID30×10STL CMT
3-9	BV-V1030A100A	LOADING DRIVE BLK VS-603
3-10	ZW-354346	PW21×060×025PBR
3-11	ZS-422076	PAN30×05STL CMT
3-12	MZ-353364	GEAR WORM WHEEL
3-13	ZW-288797	PW31×070×025PSL
3-14	MZ-351524	GEAR LOADING (L)
3-15	ZG-353648	SP PULL
3-16	MZ-351525	GEAR LOADING (R)
3-17	ZG-356682	SP TORSION
3-18	MZ-B351526	GEAR EJECTOR(A) PART VS-603
3-19	ZW-259738	PW41×070×025PSL
3-20	ZW-270101	RING E 300SUP CMT
3-21	MZ-B351529	GEAR MAIN PART VS-603
3-22	ZW-353647	PW50×090×025PSL
3-23	ZW-270123	RING E 400SUP CMT
3-24	ML-B351942	LEVER LOADING GEAR PART VS-603
3-25	MZ-351527	GEAR REALY
3-26	ES-353653	SW MODE SRZZ0002A
3-27	MI-361964	IDLER PART
3-28	ZS-354402	PT PAN26×10STL CMT
3-29	BR-B359158	REEL TABLE COMP (2) PART
3-30	BR-362130	TAKE-UP REEL COMP PART
3-M904	BM-360149	REEL MOTOR JME2B92
		SENSOR (S) PC BOARD
18-PH1	ET-353635	PHOTO SENSOR ON2160 Q.R.S
		SENSOR (T) PC BOARD
19-PH1	ET-353635	PHOTO SENSOR ON2160 Q.R.S
19-SW1	ES-347048	SW PUSH SSCSP1072A 1-01-02N

NOTE: Parts listed in 3-1 to 19-SW1 on the exploded view and list are normaly stocked for replacement purpose.
The remaining parts shown in this manual are not normaly stocked, because they are seldom required for routine service.

CHASSIS MECHA BLOCK (2)



EJECTOR BLOCK



4. EJECTOR BLOCK

REF. NO.	PART NO.	DESCRIPTION
	EJECTOR BLOCK	
4-1	BV-V1030A250A	EJECTOR BLK VS-603
4-2	MZ-B353211	HOLDER CASSETTE PART
4-3	MR-353164	ROLLER (1)
4-4	MR-353165	ROLLER (2)
4-5	ZS-417216	PAN30x04STL CMT
4-6	ZG-357865	SP T5-04.0/0.40-11.2 T5-108
4-7	MZ-355643	STOPPER (C)
4-8	ZG-353204	SP TORSION (B)
4-9	MZ-353166	GEAR (1)
4-10	MZ-353167	GEAR (2)
4-11	ZW-270123	RING E 400SUP CMT
4-12	ML-353161	ARM OPENER
4-13	MZ-353170	GEAR IDLER
4-14	ML-353162	ARM LOADING
4-15	MZ-353169	GEAR (4)
4-16	MZ-353163	COLLAR
4-17	ZG-353205	SP TORSION (A)
4-18	ZW-270101	RING E 300SUP CMT
4-19	MZ-353168	GEAR (3)
4-20	ZG-356911	SP TORSION (L)
4-21	MZ-B353201	GEAR EJECT PART
4-22	ZG-357753	SP T5-04.0/0.40-12.5 T5-109
4-23	ZG-357158	SP T5-05.0/0.55-20.0 T5-156
4-24	ZW-343120	PW17x040x025PSL
4-IN901	EL-353625	PL CORD 8.0V 100MA 175/175
4-IN902	EL-353624	PL CORD 8.0V 100MA 235/235

REF. NO.	PART NO.	DESCRIPTION
	ASSEMBLY BLOCK	
4-26	SP-353210	PLATE MIRROR
4-27	ZG-353206	SP TORSION MASK CASSETTE
4-28	SE-353040E	MASK CASSETTE (ENGLISH PAL)
4-29	MB-357511	CUSHION PC (1)
	SENSOR (L) PC BOARD	
21-TR1	ET-318308	TR PHOT PN202S
21-TR2	ET-359700	TR PHOT PN202S S
	SENSOR (R) PC BOARD	
22-TR1	ET-318308	TR PHOT PN202S
22-D1	ED-358056	D LED LN-68 INFRARED
	SW (EJ) PC BOARD	
23-SW1	ES-353622	SW PUSH EVQ-WU7001 02-2

NOTE: Parts listed in 4-1 to 23-SW1 on the exploded view and list are normaly stocked for replacement purpose.
The remaining parts shown in this manual are not normaly stocked, because they are seldom required for routine service.

5. PC BOARD BLOCK

REF. NO.	PART NO.	DESCRIPTION
5-1A	BA-V1030A300A	PC VIDEO (B-PAL) BLK VS-603EG [EG]
5-1B	BA-V1030A300B	PC VIDEO (B-PAL) BLK VS-603EK/ES [EK,ES]
5-1C	BA-V1030A300C	PC VIDEO (B-PAL) BLK VS-603EZ [EZ]
5-1D	BA-V1030A300D	PC VIDEO (B-PAL) BLK VS-606EA
5-1E	BA-V1030A300E	PC VIDEO (B-PAL) BLK VS-606EO
5-1F	BA-V1030A300F	PC VIDEO (B-PAL) BLK VS-607EO-G
5-2	BA-V1030A310A	PC HIFI AUDIO BLK VS-603EG
5-3	BA-V1030A320A	PC SERVO(B-PAL) BLK VS-603EG
5-4A	BA-V1030A330A	PC OPERATION BLK VS-603EG [EXCEPT EZ]
5-4B	BA-V1030A330B	PC OPERATION BLK VS-603EZ [EZ]
5-4C	BA-V1030A330C	PC OPERATION BLK VS-606EA
5-4D	BA-V1030A330D	PC OPERATION BLK VS-606EO
5-5	BA-V1030A370D	PC MECHA DRIVE BLK VS-603EG
5-6	BA-V1030A390A	PC SYSCON (PAL) BLK VS-603EG
5-7A	BA-V1030A360A	PC DEMODULATOR B-P BLK VS-603EG
5-7B	BA-V1030A360B	PC DEMODULATOR B-P BLK VS-603EK
5-7C	BA-V1030A360C	PC DEMODULATOR B-P BLK VS-603ES
5-7D	BA-V1030A360D	PC DEMODULATOR B-P BLK VS-603EZ
5-7E	BA-V1030B350A	PC DEMODULATOR BLK VS-606EA
5-7F	BA-V1030B350B	PC DEMODULATOR BLK VS-606EO
5-7G	BA-V1030B350C	PC DEMODULATOR BLK VS-607EO-G
5-8A	BV-V1030A900B	VID BLK VS-301EG-G [EG]
5-8B	BV-V1030A900E	VIF BLK VS-303ES [ES]
5-8C	BV-V1030A900F	VIF BLK VS-303EZ [EZ]
5-8D	BV-V1030A900G	VIF BLK VS-301EK [EK]
5-8E	BV-V1030B900A	VIF BLK VS-606EA
5-8F	BV-V1030B900B	VIF BLK VS-606EO
5-8G	BV-V1030B900C	VIF BLK VS-607EO-G
5-9	BA-V1030A340F	PC POWER BLK VS-603EG

NOTE: (1) PC SERVO (B-PAL) BLK consists of SERVO (A) PC BOARD and SERVO (B) PC BOARD.
(2) PC DEMODULATOR BLK consists of VIF BLK.

6. VIDEO PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-353814	IC LA7034
6-IC2	EI-353813	IC LA7031
6-IC3	EI-353815	IC LA7032
6-IC4	EI-324203	IC AN6342N
6-IC5	EI-356455	IC BU4053B
6-IC6to10	EI-358842	IC TA7347P
6-IC11	EI-358843	IC TL8705
6-IC12	EI-358844	IC BA7023
6-IC13	EI-358845	IC TA7473
6-IC14	EI-200495	IC HD14013BP
6-IC15	EI-328693	IC HD14070BP
6-IC16	EI-353800	IC HA11772
6-IC17	EI-358853	IC BA235
6-IC18	EI-356455	IC BU4053B
6-TR1to10	ET-308141	TR 2SC2603 G
6-TR11	ET-360695	TR 2SD1302 S,T
6-TR12to22	ET-308141	TR 2SC2603 G
6-TR23	ET-308141	⚠ TR 2SC2603 G
6-TR24,25	ET-308141	TR 2SC2603 G
6-TR26,27	ET-308141	⚠ TR 2SC2603 G
6-TR28	ET-321644	TR 2SC1213 C
6-TR29to44	ET-308141	TR 2SC2603 G
6-TR45	ET-360695	TR 2SD1302 S,T
6-TR46to50	ET-308141	TR 2SC2603 G
6-TR51to55	ET-308472	TR 2SA1115 E,F,G
6-TR56	ET-308471	⚠ TR 2SA1115 E,F,G
6-TR57to59	ET-308472	TR 2SA1115 E,F,G
6-TR60	ET-308472	⚠ TR 2SA1115 E,F,G
6-TR61	ET-349366	TR 2SC3402
6-TR62,63	ET-308472	TR 2SA1115 E,F,G
6-TR64	ET-308472	TR 2SA1115 E,F,G [EG]
6-TR65to67	ET-308472	TR 2SA1115 E,F,G
6-TR68	ET-308141	TR 2SC2603 G [EG]
6-TR69to73	ET-352994	TR 2SC3401
6-TR74to82	ET-349366	TR 2SC3402
6-TR84	ET-356224	⚠ TR 2SA1286 G,H,J
6-TR85	ET-352994	TR 2SC3401
6-D1to21	ED-344280	D SILICON H GMA-01-FY2 F05
6-D22,23	ED-344280	D SILICON H GMA-01-FY2 F05 [EG,EO,EO-G]
6-D24,25	ED-344280	D SILICON H GMA-01-FY2 F05
6-D26	ED-344280	D SILICON H GMA-01-FY2 F05 [EG, EO, EO-G]
6-D27to30	ED-344280	D SILICON H GMA-01-FY2 F05
6-D31	ED-523427	D SILICON H 1SS16
6-VR1,2	EV-356577	R S-FIX H H0615C 3P 103
6-VR3to7	EV-356579	R S-FIX H H0615C 3P 102
6-VR8	EV-356575	R S-FIX H0615C 3P 222
6-VR9	EV-356576	R S-FIX H H0615C 3P 472
6-VR10	EV-337949	R S-FIX H TM64K3 3P 0.30W 103
6-VR11	EV-358860	R S-FIX H H0615C 3P 101
6-VR12	EV-356577	R S-FIX H H0615C 3P 103
6-VR13,14	EV-356575	R S-FIX H H0615C 3P 222
6-VR15	EV-356583	R S-FIX H H0615C 3P 332
6-VR16	EV-356582	R S-FIX H H0615C 3P 473
6-VR17	EV-356575	R S-FIX H H0615C 3P 222
6-VR18	EV-356576	R S-FIX H H0615C 3P 472
6-VR19	EV-356583	R S-FIX H H0615C 3P 332
6-DL1	EH-353817	DL EFD-VN645A83F
6-DL2	EH-359258	DL EFD-VN645A83H
6-DL3	EH-358801	DL EFD-BR124A13V
6-FL1	EH-345113	FILTER LC LP LJ25LP3.4M01-32
6-FL2	EH-356672	FILTER LC BP SLC2915 4.43MHZ
6-FL3	EH-356067	FILTER LC BP GZV-322-1A 5.06MHZ
6-FL4	EH-354086	FILTER LC DL GYV-501-1T [EXCEPT EK,ES]
6-FL5	EH-358849	FILTER CE SFE13.3MA
6-L1,2	EO-330252	COIL FIX 1 EL0606SKI 101K
6-L3to5	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L6	EO-351865	COIL FIX 1 LAL02 F05 330J
6-L7	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L8	EO-353900	COIL FIX 1 LAL02 F05 150K

REF. NO.	PART NO.	DESCRIPTION
6-L10,11	EO-353900	COIL FIX 1 LAL02 F05 150K
6-L12	EO-351864	COIL FIX 1 LAL02 F05 220J
6-L13	EO-353901	COIL FIX 1 LAL02 F05 560K
6-L14	EO-351869	COIL FIX 1 LAL02 F05 820K
6-L15	EO-353901	COIL FIX 1 LAL02 F05 560K
6-L16,17	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L18	EO-353901	COIL FIX 1 LAL02 F05 560K
6-L19	EO-360555	COIL FIX 1 LAL02 F05 180K
6-L20	EO-351865	COIL FIX 1 LAL02 F05 330J
6-L21,22	EO-330252	COIL FIX 1 EL0606SKI 101K
6-L23	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L24	EO-351869	COIL FIX 1 LAL02 F05 820K
6-L25	EO-356599	COIL FIX 1 LAL02 F05 270K
6-L26	EO-357508	COIL FIX 1 LAL02 F05 151K
6-L27,28	EO-357507	COIL FIX 1 LAL02 F05 121K
6-L29	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L30	EO-353900	COIL FIX 1 LAL02 F05 150K
6-L31	EO-351868	COIL FIX 1 LAL02 F05 470K
6-L32	EO-330253	COIL FIX 1 EL0606SKI 271K
6-L33	EO-357508	COIL FIX 1 LAL02 F05 151K
6-L34	EO-330241	COIL FIX 1 EL0606SKI 221K
6-L35,36	EO-353900	COIL FIX 1 LAL02 F05 150K
6-L37	EO-361368	COIL FIX 1 L-8 222J
6-L38to40	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L41	EO-353900	COIL FIX 1 LAL02 F05 150K
6-L42	EO-360140	COIL FIX 1 L-8 822J
6-L43	EO-351865	COIL FIX 1 LAL02 F05 330J
6-L44	EO-351868	COIL FIX 1 LAL02 F05 470K
6-L45	EO-351865	COIL FIX 1 LAL02 F05 330J
6-L46,47	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L49,50	EO-351867	COIL FIX 1 LAL02 F05 390K
6-L51	EO-353900	COIL FIX 1 LAL02 F05 150K
6-L52,53	EO-330252	COIL FIX 1 EL0606SKI 101K
6-L54to56	EO-354600	COIL FIX 1 LAL02 F05 101K
6-L57,58	EO-351864	COIL FIX 1 LAL02 F05 220J
6-SF1	EF-347968	⚠ FUSE ICP-F10 150V 0.4A
6-TH1	EX-359254	THERMISTER ERT-D2ZHL153S
6-X1	EI-309878	OSC X'TAL 4.433619MHZ
6-X2	EI-322347	OSC X'TAL 4.435571MHZ
6-VC1	EC-346764	C S-FIX H ECR-HA020D11 4-20
6-VC2	EC-346765	C S-FIX H ECR-HA010A11 2.8-10
6-C44	EC-332052	C EC V F05 NP SM 4R7M 35DC
6-C101	EC-200948	C EC V F05 NP SM 1R0M 50DC
6-C115,309	EC-332052	C EC V F05 NP SM 4R7M 35DC
6-C313	EC-357966	C EC S05 SU 102M 10DC
6-C321	EC-332052	C EC V F05 NP SM 4R7M 35DC
6-C418	EC-307793	C EC V F05 NP SM 220M 10DC
6-1A	EJ-357891	JACK PLATE VIDEO 606EG [EG,EO]
6-1B	EJ-357890	JACK PLATE VIDEO 606EA [EK,ES,EZ,EA]
6-1C	EJ-357892	JACK PLATE VIDEO 606EG-G [EO-G]
6-2	ZS-357528	DELL TIGHT BR30×08STL CMT [PC BOARD FIX]
6-3	ZS-356675	PLX BR30×10STL BLUE [PC BOARD FIX]
6-4	ZS-356677	DELL TIGHT BR30×06STL BLUE [PC BOARD FIX]

7. FIFI AUDIO PC BOARD

REF. NO.	PART NO.	DESCRIPTION
7-IC1	EI-345759	IC LC7530
7-IC2	EI-359325	IC M50760-368P B-PAL
7-IC3	EI-358500	IC HA12072NT
7-IC4	EI-358501	IC HA12074NT
7-IC5	EI-358502	IC M51687AP
7-IC6	EI-358504	IC μPC1522HA
7-IC7	EI-352714	IC HA11752
7-IC8,9	EI-K5001A010A	IC AF2401
7-IC301	EI-358505	IC μPC1520CA
7-IC302	EI-358506	IC μPC1513HA
7-TR1	ET-200986	⚠ TR 2SD863-V8 F
7-TR2,3	ET-349081	TR 2SC3383 S,T
7-TR4	ET-308472	⚠ TR 2SA1115 E,F,G
7-TR5,6	ET-349081	TR 1SC3383 S,T
7-TR7	ET-354414	TR DTC144ES
7-TR8,9	ET-200986	⚠ TR 2SD863-V8 F
7-TR12	ET-308141	TR 2SC2603 G
7-TR13to16	ET-354414	TR DTC144ES
7-TR17	ET-308141	TR 2SC2603 G
7-TR19	ET-349725	TR 2SA1391 S,T
7-TR20,21	ET-349081	TR 2SC3383 S,T
7-TR22	ET-200986	TR 2SD863-V8 F
7-TR23,24	ET-308141	TR 2SC2603 G
7-TR25to27	ET-338324	TR 2SD1012-V H
7-TR28	ET-354414	TR DTC144ES
7-TR29	ET-354370	TR DTA124ES
7-TR30	ET-354414	TR DTC144ES
7-TR301	ET-308141	TR 2SC2603 G
7-TR302	ET-354414	TR DTC144ES
7-D1	ED-302269	D ZENER H HZ5 A2
7-D2	ED-316389	⚠ D ZENER H HZ11 A2
7-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
7-D5,6	ED-309069	⚠ D ZENER H HZ6 B2
7-D7to10	ED-344280	D SILICON H GMA-01-FY2 F05
7-D13,14	ED-344280	D SILICON H GMA-01-FY2 F05
7-D15	ED-300035	D ZENER H HZ6 B3
7-D16	ED-344280	D SILICON H GMA-01-FY2 F05
7-D18,19	ED-344280	D SILICON H GMA-01-FY2 F05
7-D301,302	ED-344280	D SILICON H GMA-01-FY2 F05
7-VR1,2	EV-358829	R S-FIX H H0615C 3P 223
7-VR3,4	EV-356577	R S-FIX H0615C 3P 103
7-VR5	EV-358862	R S-FIX H H0615C 3P 474
7-VR6	EV-356579	R S-FIX H H0615C 3P 102
7-VR7	EV-356577	R S-FIX H H0615C 3P 103
7-VR8	EV-358829	R S-FIX H H0615C 3P 223
7-VR9	EV-356579	R S-FIX H H0615C 3P 102
7-VR10	EV-356577	R S-FIX H H0615C 3P 103
7-VR11	EV-358829	R S-FIX H H0615C 3P 223
7-VR12,13	EV-358860	R S-FIX H H0615C 3P 101
7-VR301	EV-356579	R S-FIX H H0615C 3P 102
7-VR302	EV-358829	R S-FIX H H0615C 3P 223
7-VR303	EV-356582	R S-FIX H H0615C 3P 473
7-FL1,2	EH-360327	FILTER LC LP FX-100E
7-FL3	EH-360324	FILTER LC BP LJ25BP1.4M03-32
7-FL4	EH-360326	FILTER LC BP LJ25BP1.8M03-32
7-FL301	EO-353774	COIL TUN2 VS-B-P
7-L1	EO-330252	COIL FIX 1 EL0606SKI 101K
7-L2,3	EO-357507	COIL FIX 1 LAL02 F05 121K
7-L4,5	EO-354600	COIL FIX 1 LAL02 F05 101K
7-L6to8	EO-330252	COIL FIX 1 EL0606SKI 101K
7-L9	EO-353901	COIL FIX 1 LAL02 F05 560K
7-L10	EO-330252	COIL FIX 1 EL0606SKI 101K
7-L301	EO-458932	COIL FIX 1 FL7H 222J
7-L302	EO-321254	COIL FIX 1 FL07H 562J
7-L303	EO-443722	COIL FIX 1 FL09H102J
7-SF1	EF-347968	⚠ FUSE ICP-F10 150V 0.4A
7-T301	EO-356442	COIL OSC 1 0512-071
7-C15,32	EC-325320	C EC V F05 NP AWA 2R2M 50DC
7-C71	EC-314990	C STY V S05 CQFS 101J 50DC
7-C74	EC-307494	C STY V F05 CQ09S 331J 50DC
7-C88	EC-314990	C STY V S05 CQFS 101J 50DC
7-C89	EC-307494	C STY V F05 CQ09S 331J 50DC
7-1	ZS-356676	PLX BR30×08STL BLUE

8. LEVEL METER PC BOARD

REF. NO.	PART NO.	DESCRIPTION
8-1	EM-361786	IND LE LT-1162 GRAPH
8-D1	ED-352723	D LED LD-603MG GREEN
8-D2	ED-354313	D LED EBG3423S GREEN
8-SW1	ES-357786	SW TACT SKHHPC011A
8-SW2	ES-201527	SW SLIDE SSS212 1-01-02N

9. SERVO (A) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
9-IC1	EI-353867	IC LC4077
9-IC2	EI-356457	IC BU4013B
9-IC3	EI-354400	IC BU4011B
9-IC4	EI-357040	IC BA6302A
9-IC5	EI-356288	IC BA225A
9-IC6	EI-347781	IC LA6393D
9-IC7	EI-360316	IC BA6305
9-IC8	EI-353478	IC AN6881
9-IC9	EI-353478	IC AN6881
9-IC10	EI-354401	IC BU4066B
9-IC11	EI-353477	IC μPC1526C
9-IC12	EI-349719	IC M5218P
9-IC13	EI-354401	IC BU4066B
9-TR1to4	ET-309434	TR 2SD636 Q,R,S,T
9-TR5	ET-336845	TR 2SB641 Q,R,S,T
9-TR6	ET-309434	TR 2SD636 Q,R,S,T
9-TR7	ET-336845	TR 2SB641 Q,R,S,T
9-TR8	ET-309434	TR 2SD636 Q,R,S,T
9-TR9	ET-336845	TR 2SB641 Q,R,S,T
9-TR10,11	ET-309434	TR 2SD636 Q,R,S,T
9-TR12	ET-356224	⚠ TR 2SA1286 G,H,J
9-TR13	ET-309434	TR 2SD636 Q,R,S,T
9-TR14	ET-356224	⚠ TR 2SA1286 G,H,J
9-TR15	ET-336845	TR 2SB641 Q,R,S,T
9-TR16	ET-309434	TR 2SD636 Q,R,S,T
9-D1to15	ED-344280	D SILICON H GMA-01-FY2 F05
9-VR1	EV-360317	R S-FIX V RHLON 3P 0.3W 104
9-VR2	EV-348204	R S-FIX H H0651A 3P 0.05W 683
9-VR3	EV-336769	R S-FIX H H0621A 3P 0.30W 473
9-TH1	EX-359420	⚠ POSISTER PTH62G08BD1R0N016
9-R37	ER-200380	R MF H F05 1/6W 5601F
9-R38	ER-356337	R MF H F05 1/6W 3601F
9-R39	ER-343989	R MF H F05 1/6W 1001F
9-R40,41	ER-340554	R MF H F05 1/6W 5602F
9-R48	ER-200376	R MF H F05 1/6W 4702F
9-R60	ER-349195	R MF H F05 1/6W 6201F
9-R61	ER-353585	R MF H F05 1/6W 4701F
9-R66	ER-356574	R MF H F05 1/6W 1603F
9-C12	EC-361965	C EC V F05 NP SRA 2R2M 35.0DC
9-C28	EC-361682	C COMP V HSC 273J 50DC
9-C47	EC-361966	C EC V F05 NP SRA 100M 16.0DC
9-1	ZS-356677	DELL TIGHT BR30x06STL BLUE [PC BOARD FIX]

10. SERVO (B) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
10-IC201	EI-349719	IC M5218P
10-IC202	EI-356289	IC BA226A
10-IC203	EI-328593	IC HD14053BP
10-IC204	EI-353695	IC BA634
10-IC205	EI-353475	IC μPC1504C
10-IC206	EI-354401	IC BU4066B
10-IC207	EI-356288	IC BA225A
10-IC208	EI-349719	IC M5218P
10-IC209	EI-330986	⚠ IC TA78L009AP
10-TR201	ET-309434	TR 2SD636 Q,R,S,T
10-TR202	ET-360824	TR DTC144E F
10-TR203	ET-309434	TR 2SD636 Q,R,S,T
10-TR205	ET-336845	TR 2SB641 Q,R,S,T
10-TR206to208	ET-309434	TR 2SD636 Q,R,S,T
10-TR209,210	ET-360824	TR DTC144E F
10-TR211	ET-336845	TR 2SB641 Q,R,S,T
10-TR212	ET-336845	TR 2SB641 Q,R,S,T
10-D201to214	ED-344280	D SILICON H GMA-01-FY2 F05
10-VR201to206	EV-361358	R S-FIX H H0624C 3P 030W 104
10-VR207	EV-356444	R S-FIX H H0624C 3P 0.30W 683
10-VR208	EV-356445	R S-FIX H H0624C 3P 0.30W 473
10-VR209	EV-361358	R S-FIX H H0624C 3P 030W 104
10-VR210	EV-356448	R S-FIX H H0624C 3P 0.30W 154
10-VR211	EV-356447	R S-FIX H H0624C 3P 0.30W 333
10-VR212	EV-356445	R S-FIX H H0624C 3P 0.30W 473
10-TH201	EX-338414	⚠ POSISTER PTH61G27BD2R2N
10-R201	ER-200381	R MF H F05 1/6W 1003F
10-R202	ER-340544	R MF H F05 1/6W 1002F
10-R203,204	ER-361679	R MF H F05 1/6W 4700F
10-R205	ER-340544	R MF H F05 1/6W 1002F
10-R206,207	ER-356344	R MF H F05 1/6W 1203F
10-R210	ER-336972	R MF H F05 1/6W 1303F
10-R211	ER-356344	R MF H F05 1/6W 1203F
10-R212	ER-336972	R MF H F05 1/6W 1303F
10-R213	ER-356344	R MF H F05 1/6W 1203F
10-R214	ER-336974	R MF H F05 1/6W 2403F
10-R215	ER-356344	R MF H F05 1/6W 1203F
10-R222	ER-336754	R MF H F05 1/6W 2002F
10-R223	ER-340541	R MF H F05 1/6W 2203F
10-R224	ER-200379	R MF H F05 1/6W 3901F
10-R225	ER-340544	R MF H F05 1/6W 1002F
10-R226	ER-353107	R MF H F05 1/6W 2202F
10-R227	ER-340554	R MF H F05 1/6W 5602F
10-R228	ER-361680	R MF H F05 1/6W 3602F
10-R230	ER-337339	R MF H F05 1/6W 3902F
10-R238	ER-352348	R MF H F05 1/6W 1501F
10-R239	ER-362061	R THERMO H 3000PPM 1/4W 103J
10-R265	ER-353064	R MF H F05 1/6W 1502F
10-R266,268	ER-200522	R MF H F05 1/6W 2201F
10-R269,270	ER-340544	R MF H F05 1/6W 1002F
10-C211	EC-361683	C COMP V HSC 563J 50DC
10-C222	EC-361882	C COMP V HSC 104J 50DC
10-C234	EC-361968	C EC V F05 NP SRA 4R7M 16.0DC

11. OPERATION PC BOARD

REF. NO.	PART NO.	DESCRIPTION
11-IC1	EI-360089	IC MB88501-352M OPE3
11-IC2	EI-353893	IC M54565P
11-IC3	EI-354399	IC BU4001B
11-IC4	EI-348111	IC LC4071B
11-IC5	EI-356370	IC LA7224
11-TR1,2	ET-336845	TR 2SB641 Q,R,S,T
11-TR3to6	ET-356153	TR 2SB643 Q,R,S,T
11-TR7,8	ET-309434	TR 2SD636 Q,R,S,T
11-D1	ED-347777	D LED BR5628S RED
11-D2,3	ED-347776	D LED BG5608S GREEN
11-D4to7	ED-347777	D LED BR5628S RED
11-D8	ED-356359	D LED PR5531K RED [EZ,EA]
11-D9	ED-356359	D LED PR5531K RED [EA,EO,EO-G]
11-D10	ED-356367	D LED AA5531K ORANGE [EA,EO,EO-G]
11-D11,13	ED-356359	D LED PR5531K RED
11-D15	EM-353891	IND LE GL3E416
11-D16	ED-348990	D SILICON H DS446
11-D17to20	ED-344280	D SILICON H GMA-01-FY2 F05
11-D21	ET-330717	PHOTO SENSOR NJL1644L
11-D22,23	ED-344280	D SILICON H GMA-01-FY2 F05
11-SW1	ES-353708	SW SLIDE SSSY12083A 2-02-03N
11-SW2to10	ES-347755	SW TACT EVQ-QSE05T
11-SW12to20	ES-347755	SW TACT EVQ-QSE05T
11-SW21	ES-347755	SW TACT EVQ-QSE05T [EZ,EA]
11-SW22to24	ES-347755	SW TACT EVQ-QSE05T
11-FL1	EO-356372	COIL TUN 1 038-332 38KHZ
11-SF1	EF-347968	⚠ FUSE ICP-F10 150V 0.4A
11-X1	EI-356371	OSC X'TAL MS-309 4.194304MHZ
11-IB1	EH-347743	COMP R RKC1/8B4 103J
11-1	ZW-259503	PW31×080×050NYL [PC BOARD FIX]
11-2	ZS-356676	PLX BR30×08STL BLUE [PC BOARD FIX]

12. MECHA DRIVE PC BOARD

REF. NO.	PART NO.	DESCRIPTION
12-IC1	EI-353851	IC MB88305-P
12-IC2	EI-361554	IC MB88301A-P
12-IC3	EI-356811	IC M5224P
12-IC4	EI-347779	IC LA6393S
12-IC5,6	EI-353421	⚠ IC BA6229
12-TR2,3	ET-308141	TR 2SC2603 G
12-TR4to7	ET-308472	TR 2SA1115 E,F,G
12-TR8	ET-308141	TR 2SC2603 G
12-TR10,11	ET-348948	⚠ TR 2SD1273 P,Q
12-TR12	ET-308141	TR 2SC2603 G
12-TR13	ET-306719	TR 2SC2236 O,Y
12-TR14to16	ET-308472	TR 2SA1115 E,F,G
12-TR17	ET-355669	TR 2SC3246 G,H,J
12-TR19	ET-308472	TR 2SA1115 E,F,G
12-TR24	ET-357546	TR 2SB895A P,Q,R
12-TR26	ET-308141	TR 2SC2603 G
12-D1	ED-357754	⚠ D SILICON DS135D 200/1.0A
12-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05
12-D5	ED-357754	⚠ D SILICON DS135D 200/1.0A
12-D6,7	ED-346631	D ZENER H HZ36 3
12-D8,9	ED-331626	D ZENER H HZ3 B2
12-D10,11	ED-624903	D SILICON H 1S2473
12-D12	ED-344280	D SILICON H GMA-01-FY2 F05
12-D17,18	ED-344280	D SILICON H GMA-01-FY2 F05
12-D19	ED-348990	D SILICON H DS446
12-D22	ED-624903	D SILICON H 1S2473
12-D200	ED-348205	D SILICON V MC931 DOUBLE
12-VR3	EV-353425	R S-FIX H RVF6P01 3P 103
12-TH1	EX-355657	⚠ POSISTER PTH61G27BD6R8N
12-X1	EI-322347	OSC X'TAL 4.435571MHZ
12-SF1	EF-346880	⚠ FUSE ICP-F15 150V 0.6A
12-IB1	EH-353789	COMP R RKC1/8B6 103J
12-IB2	EH-347743	COMP R RKC1/8B4 103J
12-IB3	EH-351973	COMP R RKC1/8B4 472J
12-IB4	EH-353790	COMP R RKC1/8B4 223J
12-IB5	EH-351973	COMP R RKC1/8B4 472J
12-R19	ER-353878	⚠ R OMF H S15 FS 1W 2R2J
12-R42,43	ER-333582	⚠ R CB H S15 FS RDS 1/2W 2R2J
12-R45	ER-353878	⚠ R OMF H S15 FS 1W 2R2J
12-1	ZS-357528	DELL TIGHT BR30×08STL CMT [PC BOARD FIX]
12-2	ZS-356287	DELL TIGHT BR30×06STL CMT [PC BOARD FIX]

13. SYSTEM CONTROL PC BOARD

REF. NO.	PART NO.	DESCRIPTION
13-IC1	EI-360087	IC MB8841-1429J B-PAL
13-IC2	EI-353867	IC LC4077
13-TR1,2	ET-308141	TR 2SC2603 G
13-TR3to5	ET-356224	⚠ TR 2SA1286 G,H,J
13-TR6	ET-308472	TR 2SA1115 E,F,G
13-D1to5	ED-344280	D SILICON H GMA-01-FY2 F05
13-X1	EI-349372	OSC CE CSA4.00MG 4MHZ
13-SF1	EF-347968	⚠ FUSE ICP-F10 150V 0.4A
13-IB1	EH-346822	COMP C B7ZC0716-33N
13-IB2	EH-358855	COMP C B5RC0124-33N
13-IB3	EH-360306	COMP R RKC1/8B7 103J
13-1	ZS-358026	PLX BR30×06STL BLUE [PC BOARD FIX]

14. DEMODULATOR PC BOARD

REF. NO.	PART NO.	DESCRIPTION
14-IC1A	EI-357092	IC MB88505-285M IMS-E [EG,EK,ES,EO]
14-IC1B	EI-353783	IC MB88505-266M IMS-U [EZ,EA]
14-IC1C	EI-357093	IC MB88505-293H IMS-G [EO-G]
14-IC2	EI-361554	IC MB88301A-P
14-IC3	EI-347779	IC LA6393S
14-IC4	EI-347773	IC MB88303M
14-IC5	EI-353848	IC LA7808
14-IC6	EI-337530	⚠ IC μPC574J
14-IC7	EI-355709	IC M54572L
14-TR1	ET-308472	TR 2SA1115 E,F,G [EG,EK,ES,EZ]
14-TR3,4	ET-308141	TR 2SC2603 G
14-TR5	ET-349882	⚠ TR 2SA1283 D,E
14-TR6to11	ET-308141	TR 2SC2603 G
14-TR12	ET-308472	TR 2SA1115 E,F,G
14-TR13	ET-308141	TR 2SC2603 G
14-TR14	ET-308141	TR 2SC2603 G [EG,EK,ES,EZ]
14-TR15,101	ET-308141	TR 2SC2603 G
14-TR102	ET-356224	⚠ TR 2SA1286 G,H,J
14-TR103	ET-308472	TR 2SA1115 E,F,G
14-TR104	ET-308141	TR 2SC2603 G

REF. NO.	PART NO.	DESCRIPTION
14-TR105	ET-356236	TR FET 2SK363 GR.BL
14-TR106	ET-308141	TR 2SC2603 G
14-TR110	ET-308141	TR 2SC2603 G [EA,EO]
14-TR111	ET-308141	TR 2SC2603 G [EG,EK,ES,EZ]
14-D1	ED-351392	D ZENER H HZ9 B [EZ,EA,EO]
14-D3	ED-344280	D SILICON H GMA-01-FY2 F05
14-D4	ED-346622	D ZENER H HZ30 1 [EZ,EA,EO]
14-D5	ED-344280	D SILICON H GMA-01-FY2 F05
14-D6	ED-348205	⚠ D SILICON V MC931 DOUBLE
14-D7,8	ED-344280	D SILICON H GMA-01-FY2 F05
14-D9	ED-360318	D SILICON H MA700
14-D10to13	ED-344280	D SILICON H GMA-01-FY2 F05
14-D14	ED-305655	D ZENER H HZ4 B3
14-D101,102	ED-344280	D SILICON H GMA-01-FY2 F05
14-D103	ED-624903	D SILICON H 1S2473
14-L1	EO-330252	COIL FIX 1 EL0606SKI 101K
14-VR1	EV-358808	R S-FIX H KVSF637A 3P 152
14-VR2	EV-356324	R S-FIX H KVSF637A 3P 103
14-X1,2	EI-349372	OSC CE CSA4.00MG 4MHZ
14-IB1,2	EH-353788	COMP R RKC1/8B15 103J
14-IB3	EH-347743	COMP R RKC1/8B4 103J
14-R12	ER-356133	⚠ R OMF H S15 FS 1W 512J
14-R16	ER-357764	R MF H F05 1/6W 6040F
14-R18,19	ER-356338	R MF H F05 1/6W 1201F
14-R24	ER-345751	⚠ R FUSE ERD2FC S10 1/4W 15ROG
14-R33	ER-338208	R MF H F05 1/6W 1002F
14-R34	ER-336751	R MF H F05 1/6W 1103F
14-R35	ER-343997	R MF H F05 1/6W 2001F
14-R101	ER-356338	R MF H F05 1/6W 1201F
14-R102	ER-357764	R MF H F05 1/6W 6040F
14-R103	ER-356338	R MF H F05 1/6W 1201F
14-CB1	EH-354077	COMP C B7ZC0711-33N
14-C13A	EC-358805	C TT V EF R47M 35.0DC [EG,EK,ES,EZ]
14-C13B	EC-363534	C TT V EF R47M 50.0DC [EA,EO,EO-G]
14-C101,103	EC-356352	C TT V EF R68M 50.0DC
14-BT1	EZ-356237	BATTERY P-01H-F4N4
14-1A	BV-V1030A900B	VIF BLK VS-301EG-G [EG]
14-1B	BV-V1030A900E	VIF BLK VS-303ES [ES]
14-1C	BV-V1030A900F	VIF BLK VS-303EZ [EZ]
14-1D	BV-V1030A900G	VIF BLK VS-301EK [EK]
14-1E	BV-V1030B900A	VIF BLK VS-606EA
14-1F	BV-V1030B900B	VIF BLK VS-606EO
14-1G	BV-V1030B900C	VIF BLK VS-607EO-G

15. VIF BLOCK (VS-603EG/EK/ES/EZ)

REF. NO.	PART NO.	DESCRIPTION
15-1A	EE-353831	TV TUNER TEED1-A10A [EG]
15-1B	EE-353834	TV TUNER TEEZ1-024A [ES]
15-1C	EE-356135	TV TUNER TEEZ1-032A [EZ]
15-1D	EE-353832	TV TUNER TEEB1-020A [EK]
15-IC1	EI-705495	IC TA7607AP
15-IC2	EI-714602	IC TA7337P
15-D1	ED-714603	D VARACTOR 1SV70-20FG
15-VR1	EV-713607	R S-FIX RVF6P01-103 [EXCEPT EK]
15-VR2	EV-713607	R S-FIX RVF6P01-103
15-VR3	EV-714599	R S-FIX RVF6P01-202
15-CF1A	EH-714625	FILTER SAW SAF38.9MZ70Z [EG,EZ]
15-CF1B	EH-714628	FILTER SAW SAF39.5MZ70Z [EK]
15-CF1C	EH-714627	FILTER SAW SAF38.9MW70Z [ES]
15-CF2A	EH-742622	FILTER CE TPS 5.5MHZ [EG,EZ]
15-CF2B	EH-705502	FILTER CE TPS 6MHZ [EK,ES]
15-CF3A	EH-705499	FILTER CE SFE 5.5MHZ [EG,EZ]
15-CF3B	EH-705500	FILTER CE SFE 6MHZ [EK,ES]
15-L1A	EO-714604	COIL FIX 1 LAL02 R68M [EXCEPT EK]
15-L1B	EO-714605	COIL FIX 1 LAL02 R39M [EK]
15-L2	EO-714606	COIL FIX 1 LAL02 2R7M
15-L3A	EO-714607	COIL RF 6F16112B1 [EXCEPT ES]
15-L3B	EO-714609	COIL RF 6F16112B4 [ES]
15-L4A	EO-714610	COIL RF 6F16113B1 [EG,ES,EZ]
15-L4B	EO-714612	COIL RF 6F16113B2 [EK]
15-L5A	EO-714614	COIL RF 6F16115B1 [EG,ES,EZ]
15-L5B	EO-714615	COIL RF 6F16115B2 [EK]
15-L6	EO-714617	COIL FIX 1 LAL02 120K
15-L7	EO-714618	COIL FIX 1 LAL02 150K
15-L8A	EO-714619	COIL FIX 1 LAL02 180M [EG,EZ]
15-L8B	EO-714620	COIL FIX 1 LAL02 150M [EK,ES]
15-L9A	EO-714621	COIL SIF-DET 5A 6F16122B1 [EG,EZ]
15-L9B	EO-714623	COIL SIF-DET 5A 6F16122B2 [EK,ES]
15-C19	EC-749821	C TT R47M 35V
15-C28	EC-714601	C MMY DEP 682J 50DC

15A. VIF BLOCK (VS-606EA/EO, VS-607EO-G)

REF. NO.	PART NO.	DESCRIPTION
15A-1A	EE-353835	TV TUNER TEES1-025A [EA]
15A-1B	EE-353833	TV TUNER TEEE1-A07A [EO]
15A-1C	EE-359413	TV TUNER TEEE1-A13 [EO-G]
15A-IC1,2	EI-705494	IC TA7607AP
15A-IC3,4	EI-749828	IC μPC1391H
15A-IC5	EI-717488	IC LA7755M
15A-IC101	EI-346071	IC M5218L-21
15A-IC102	EI-310036	IC TC4066BP
15A-D1	ED-714603	D VARACTOR 1SV70-20FG
15A-D2,3	ED-717489	D SILICON H 1SS119-04TJ
15A-D103,104	ED-331667	D ZENER H HZ7 A1
15A-D105	ED-305706	D ZENER H HZ7 B3
15A-VR1,2	EV-713607	R S-FIX RVF6P01-103
15A-VR3	EV-353423	R S-FIX H RVF6P01 3P 503
15A-VR4	EV-717487	R S-FIX H RVF6P01 104
15A-VR101	EV-714581	R S-FIX RVF6P01-502
15A-VR102	EV-713607	R S-FIX RVF6P01-103
15A-VR104,105	EV-714599	R S-FIX RVF6P01-202
15A-CF1A	EH-714625	FILTER SAW SAF38.9MZ70Z [EO]
15A-CF1B	EH-714626	FILTER SAW SAF36.9MZ70Z [EA]
15A-CF1C	EH-717503	FILTER SAW SAF38.9MZH71Z [EO-G]
15A-CF2	EH-742622	FILTER CE TPS 5.5MHZ
15A-CF3A	EH-717504	FILTER SAW SAF33.4MD727 [EO,EO-G]
15A-CF3B	EH-717505	FILTER SAW SAF31.4MDA71Z [EA]
15A-CF4	EH-712603	FILTER CE SFT 5.5MA
15A-CF5	EH-717506	FILTER CE CDA 5.5MC19A
15A-CF6	EH-712604	FILTER CE SFT 5.74MA
15A-CF7	EH-712605	FILTER CE CDA5.74MC19A
15A-CF8	EH-717507	FILTER CE SFK 54.7B
15A-L1A	EO-717490	COIL FIX 1 EL0606RA-R68M [EA,EO]
15A-L1B	EO-717493	COIL FIX 1 EL0606RA-R82M [EO-G]

REF. NO.	PART NO.	DESCRIPTION
15A-L2A	EO-717492	COIL FIX 1 EL0606RA-1R2M [EA,EO]
15-L2B	EO-717494	COIL FIX 1 EL0606RA-1R5M [EO-G]
15A-L3A	EO-717495	COIL RF 7KL 6F16151B1 [EO,EO-G]
15A-L3B	EO-717496	COIL RF 7KL 6F16151B2 [EA]
15A-L4A	EO-714610	COIL RF 6F16113B1 [EO,EO-G]
15A-L4B	EO-714613	COIL RF 6R16113B3 [EA]
15A-L5A	EO-714614	COIL RF 6F16115B1 [EO,EO-G]
15A-L5B	EO-714616	COIL RF 6F16115B3 [EA]
15A-L6	EO-717497	COIL FIX 1 EL0606RA-120K
15A-L7	EO-714141	COIL FIX1 EL0606RA 15UH J
15A-L8	EO-717498	COIL FIX 1 EL0606RA-2R7M
15A-L9A	EO-717499	COIL TANK 7KL 6F16158A1 [EO,EO-G]
15A-L9B	EO-717500	COIL TANK 7KL 6F16158A2 [EA]
15A-L10	EO-717501	COIL FIX 1 EL0606RA-180K
15A-L11	EO-712599	COIL PILOT 284XNS-1054Z
15A-C15,22	EC-749821	C TT R47M 35V
15A-C39	EC-713292	C PP 1H R027K 50DC
15A-C48	EC-713291	C PP 1H R022K 50DC
15A-C49	EC-713154	C PP 1H 473J 50DC
15A-C50	EC-713155	C PP 1H 104K 50DC
15A-C108,112	EC-713291	C PP 1H R022K 50DC

16. POWER SUPPLY PC BOARD

REF. NO.	PART NO.	DESCRIPTION
		POWER SUPPLY PC BOARD
16-IC1	EI-356381	⚠ IC STK5434
16-TR1	ET-308472	⚠ TR 2SA1115 E,F,G
16-TR2	ET-308472	TR 2SA1115 E,F,G
16-TR3to5	ET-308141	TR 2SC2603 G
16-TR6	ET-306719	TR 2SC2236 O,Y
16-TR7,8	ET-308141	TR 2SC2603 G
16-TR9	ET-356224	⚠ TR 2SA1286 G,H,J
16-TR10	ET-308141	TR 2SC2603 G
16-TR11	ET-306719	⚠ TR 2SC2236 O,Y
16-TR12	ET-306719	TR 2SC2236 O,Y
16-TR50	ET-200986	⚠ TR 2SD863-V8 F
16-D1	ED-353550	⚠ D SILICON DBA30C-K12 200/3.0A
16-D2	ED-319463	⚠ D SILICON 4B4B41 100/4.0A
16-D3,4	ED-357754	⚠ D SILICON DS135D 200/1.0A
16-D6	ED-307610	D ZENER H HZ7 A2
16-D7	ED-344280	D SILICON H GMA-01-FY2 F05
16-D8	ED-301911	D SILICON H DS448
16-D9	ED-347767	D SILICON V MC911 DOUBLE
16-D11	ED-344280	D SILICON H GMA-01-FY2 F05
16-D13	ED-357754	⚠ D SILICON DS135D 200/1.0A
16-D14	ED-344280	D SILICON H GMA-01-FY2 F05
16-D15	ED-302269	D ZENER H HZ5 A2
16-D21to23	ED-344280	D SILICON H GMA-01-FY2 F05
16-D50	ED-359232	⚠ D THYRISTER DRA2TB 100V 2.00A
16-D51,52	ED-357754	⚠ D SILICON DS135D 200/1.0A
16-D53	ED-356781	D ZENER H MA1062-L
16-D54	ED-359237	D ZENER H MA1130-H
16-D55	ED-359238	D ZENER H MA1100-L
16-D57	ED-310387	D ZENER H HZ12 B2
16-SF1	EF-346880	⚠ FUSE ICP-F15 150V 0.6A
16-TH1	EX-330533	⚠ POSISTER PTH61G27BD3R3N
16-R1,4	ER-356382	⚠ R OMF H SNP 1W R22J
16-R50	ER-552712	R CT W F10 PLATE 2W R47K
16-C1	EC-353572	⚠ C EC V S10 KME 682M 35.0DC
16-C3	EC-356383	⚠ C EC V S10 KME 103M 25.0DC
16-C13	EC-333977	C EC V CUT NP SM 101M 50DC
16-C14	EC-328081	C EC V CUT SM 221M 80DC
16-1	ZS-357920	PLX BR30×12STL BLUE [PC BOARD FIX]
		ASSEMBLY BLOCK
16-F1A	EF-601301	⚠ FUSE SEMKO T 2.00A 250V [EG,ES,EZ,EA,EO,EO-G]
16-F1B	EF-355398	⚠ FUSE BET T 2.00A 250V [EK]
16-F2A	EF-601301	⚠ FUSE SEMKO T 2.00A 250V [EG,ES,EZ,EA,EO,EO-G]
16-F2B	EF-355398	⚠ FUSE BET T 2.00A 250V [EK]

17. SELECTOR PC BOARD

REF. NO.	PART NO.	DESCRIPTION
17-C1	EC-349921	⚠ C CE V F 103Z 400AC

18. SENSOR (S) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
18-SW1	ES-354308	SW LEAF MSW-1595C
18-PH1	ET-353635	PHOTO SENSOR ON2160 Q.R.S.

19. SENSOR (T) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
19-SW1	ES-347048	SW PUSH SSCSP1072A 1-01-02N
19-PH1	ET-353635	PHOTO SENSOR ON2160 Q.R.S

20. SENSOR LED PC BOARD

REF. NO.	PART NO.	DESCRIPTION
20-D1	ED-357540	D LED LN59

21. SENSOR (L) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
21-TR1	ET-318308	TR PHOT PN202S
21-TR2	ET-359700	TR PHOT PN202S

22. SENSOR (R) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
22-TR1	ET-318308	TR PHOT PN202S
22-D1	ED-358056	D LED LN-68 INFRARED

23. SW (EJ) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
23-SW1	ES-353622	SW PUSH EVQ-WU7001 02-2

24. MOTOR PC BOARD

REF. NO.	PART NO.	DESCRIPTION
24-D1	ED-356430	D ZENER H HZS8.2E F05 B2,B3
24-PU	HC-353332	HEAD PU TP311

25. PHONE J PC BOARD

REF. NO.	PART NO.	DESCRIPTION
25-J901	EJ-358840	PHONE J 3P HSJ5061-01-440 3.5

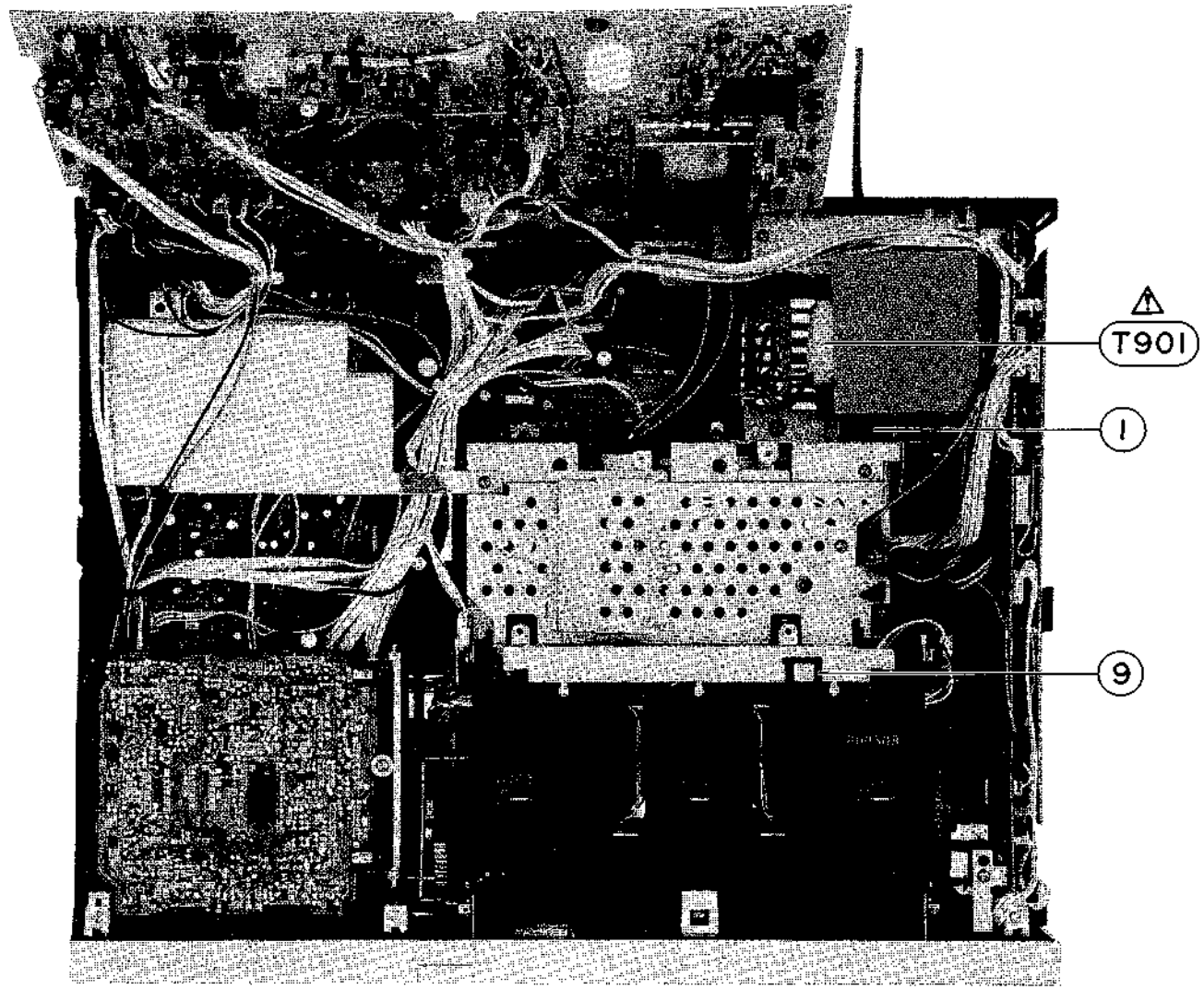
26. SERVO SUB PC BOARD

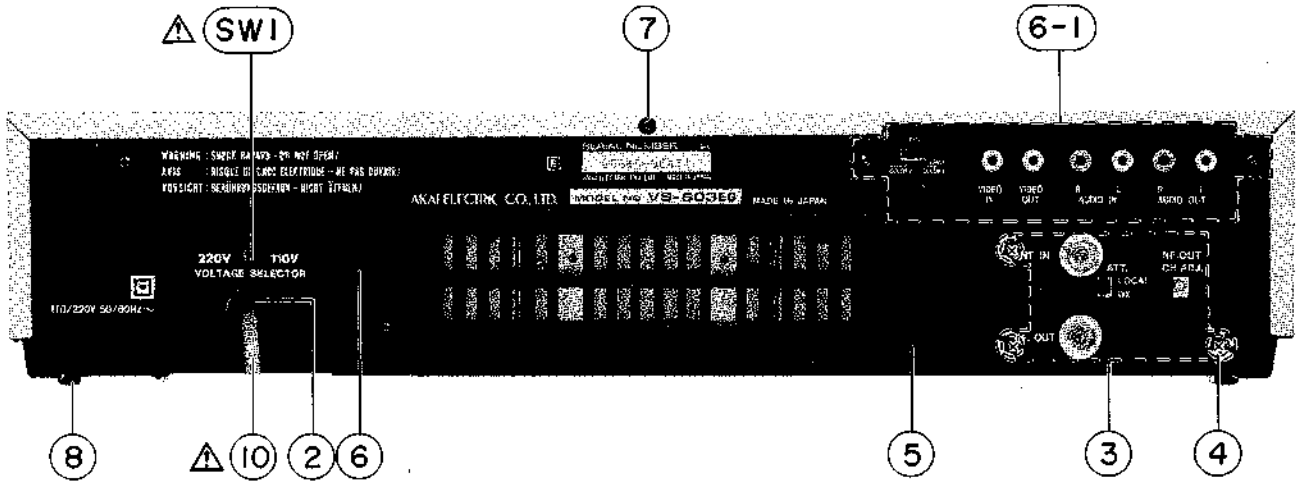
REF. NO.	PART NO.	DESCRIPTION
26-IC1	EI-356455	IC BU4053B
26-IC2	EI-337625	IC BA236
26-TR1to3	ET-352994	TR 2SC3401
26-R5	ER-364123	R MF H F05 1/6W 1503F

27. ASSEMBLY BLOCK

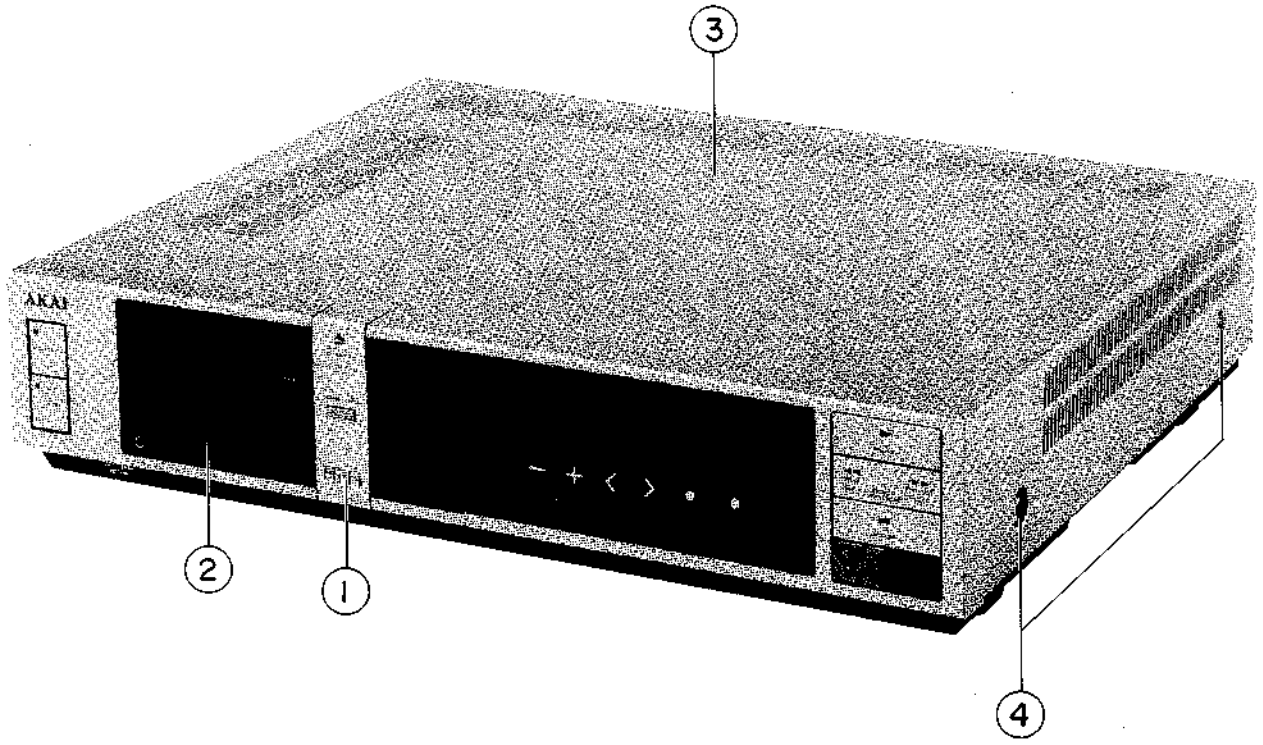
REF. NO.	PART NO.	DESCRIPTION
	ASSEMBLY BLOCK	
27-1	ZS-357528	DELL TIGHT BR30×08STL CMT [POWER TRANS FIX]
27-2	EZ-692908	STRAIN RELIEF SR-5N-4[EZ,EA]
27-3A	BV-353839	RF CONVERTER/BOOSTER MDLL6D023A [EG]
27-3B	BV-353840	RF CONVERTER/BOOSTER MDLL6I023A [EK,ES]
27-3C	BV-354879	RF CONVERTER/BOOSTER MDLL5D073A [EZ]
27-3D	BV-353841	RF CONVERTER SW MDLL5S150A [EA]
27-3E	BV-353842	RF CONVERTER/BOOSTER MDLL6S023A [EO,EO-G]
27-4	ZS-356675	PLX BR30×10STL BLUE [RF CONVERTER FIX]
27-5A	SP-354642A	PANEL REAR VS-603EG
27-5B	SP-354642B	PANEL REAR VS-603EK
27-5C	SP-354642C	PANEL REAR VS-603ES
27-5D	SP-354642D	PANEL REAR VS-603EZ
27-5E	SP-354642H	PANEL REAR VS-606EA
27-5F	SP-354642K	PANEL REAR VS-606EO
27-5G	SP-354642M	PANEL REAR VS-607EO-G
27-6	SZ-354739	CAP PANEL
27-7	ZS-357944	ST BR30×10STL BNI SPECIAL
27-8	SA-353927B	FOOT (2)
27-9	MZ-357839	GUIDE CASSETTE (F)
27-10A	EW-356588	⚠ AC CORD 2 CORES KP419C, LTCE2F-CB EV [EG,ES,EO,EO-G]
27-10B	EW-356589	⚠ AC CORD 3 CORES VM-0418, 3×0.75 S [EZ,EA]
27-10C	EW-356592	⚠ AC CORD 2 CORES NRBS, LC2×0.75-CB B [EK]
27-T901A	BT-353936	⚠ TRANS POWER V1027 EG 220-110 [EG]
27-T901B	BT-354342	⚠ TRANS POWER V1027 ES 250-220 [ES]
27-T901C	BT-356594	⚠ TRANS POWER V1027 EZ 230-115 [EZ]
27-T901D	BT-357703	⚠ TRANS POWER V1030EK 240-200 [EK,EA]
27-T901E	BT-356595	⚠ TRANS POWER V1027 EO 220 [EO,EO-G]
27-SW1	ES-354430	⚠ SW SLIDE 00220950 02-02-2N [EG,ES,EK]
	VIDEO PC BOARD	
6-1A	EJ-357891	JACK PLATE VIDEO 606EG [EG,EO]
6-1B	EJ-357890	JACK PLATE VIDEO 606EA [EK,ES,EZ,EA]
6-1C	EJ-357892	JACK PLATE VIDEO 606EG-G [EO-G]

ASSEMBLY BLOCK





FINAL ASSEMBLY BLOCK



28. FINAL ASSEMBLY BLOCK

REF. NO.	PART NO.	DESCRIPTION
		PANEL FRONT BLOCK
28-1A	BD-V1030A130A	PANEL FRONT BLK VS-603EG
28-1B	BD-V1030A130B	PANEL FRONT BLK VS-603EK
28-1C	BD-V1030A130C	PANEL FRONT BLK VS-603ES
28-1D	BD-V1030A130D	PANEL FRONT BLK VS-603EZ
28-1E	BD-V1030B130A	PANEL FRONT BLK VS-603EG-B
28-1F	BD-V1030B130B	PANEL FRONT BLK VS-603EK-B
28-1G	BD-V1030B130F	PANEL FRONT BLK VS-603EZ-B
28-1H	BD-V1030A130E	PANEL FRONT BLK VS-606EA
28-1I	BD-V1030A130F	PANEL FRONT BLK VS-606EO
28-1J	BD-V1030B130C	PANEL FRONT BLK VS-606EA-B
28-1K	BD-V1030B130D	PANEL FRONT BLK VS-606EO-B
28-1L	BD-V1030A130G	PANEL FRONT BLK VS-607EO-G
28-1M	BD-V1030B130E	PANEL FRONT BLK VS-607EO-GB
28-2A	SP-355395A	PLATE DECORATION (C) VS-603EG
28-2B	SP-355395B	PLATE DECORATION (C) VS-603EK
28-2C	SP-355395C	PLATE DECORATION (C) VS-603ES
28-2D	SP-355395D	PLATE DECORATION VS-603EZ
28-2E	SP-355395F	PLATE DECORATION (C) VS-606EA
28-2F	SP-355395H	PLATE DECORATION (C) VS-606EO
28-2G	SP-355395J	PLATE DECORATION (C) VS-607EO-G
		FINAL ASSEMBLY BLOCK
28-3	SP-353796	COVER UPPER
28-3B	SP-353796B	COVER UPPER-B
28-4	ZS-357953	ST BID40x08STL NI3 SPECIAL
28-4B	ZS-357954	ST BID40x08STL BNI SPECIAL
28-5x	EW-348414	CORD PAL [ACCESSORY]

29. REMOTE CONTROL UNIT RC-V603

REF. NO.	PART NO.	DESCRIPTION
29-1A	AV-354008	REMOCON RC-V603B-E1 WIRELESS (T) [EG,EK,ES,EO]
29-1B	AV-357907	REMOCON RC-V603B-E2 WIRELESS (T) [EZ,EA]
29-1C	AV-354013	REMOCON RC-V603B-E1B WIRELESS (T) [EK-B, EG-B, EO-B]
29-1D	AV-357908	REMOCON RC-V603B-E2B WIRELESS (T) [EA-B,EZ-B]
29-1E	AV-354009	REMOCON RC-V603B-G WIRELESS (T) [EO-G]
29-1F	AV-359117	REMOCON RC-V603B-GB WIRELESS (T) [EO-GB]
29-IC1	EI-749983	IC UPD1943G
29-TR1	ET-318604	TR 2SD545NP E,F
29-D1	ED-714631	D LED TLN105A
29-D2	ED-714631	D LED TLN105A
29-D3	ED-557447	D SILICON H 1S1588
29-D4	ED-557447	D SILICON H 1S1588
29-X1	EI-710044	OSC CE CSB455EB 455KHZ

SYMBOL FOR COLOR VARIATION

NON : STANDARD COLOR
B or BL : BLACK

INDEX

PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.
AV-354008	29-1A	EC-200948	6-C101	ED-344280	11-D17	ED-346622	14-D4
AV-354009	29-1F	EC-307494	7-C89	ED-344280	11-D18	ED-346631	12-D6
AV-354013	29-1C	EC-307494	7-C74	ED-344280	11-D19	ED-346631	12-D7
AV-357907	29-1B	EC-307793	6-C418	ED-344280	11-D20	ED-347767	16-D9
AV-357908	29-1D	EC-314990	7-C88	ED-344280	11-D23	ED-347776	11-D2
AV-359117	29-1F	EC-314990	7-C71	ED-344280	11-D22	ED-347776	11-D3
BA-V1030A300A	5-1A	EC-325320	7-C32	ED-344280	12-D4	ED-347777	11-D1
BA-V1030A300B	5-1B	EC-325320	7-C15	ED-344280	12-D12	ED-347777	11-D5
BA-V1030A300C	5-1C	EC-328081	16-C14	ED-344280	12-D17	ED-347777	11-D4
BA-V1030A300D	5-1D	EC-332052	6-C321	ED-344280	12-D18	ED-347777	11-D6
BA-V1030A300E	5-1E	EC-332052	6-C44	ED-344280	12-D3	ED-347777	11-D7
BA-V1030A300F	5-1F	EC-332052	6-C115	ED-344280	13-D5	ED-348205	12-D200
BA-V1030A310A	5-2	EC-332052	6-C309	ED-344280	13-D2	ED-348205	14-D6
BA-V1030A320A	5-3	EC-333977	16-C13	ED-344280	13-D1	ED-348990	11-D16
BA-V1030330A	5-4A	EC-346764	6-VC1	ED-344280	13-D4	ED-348990	12-D19
BA-V1030A330B	5-4B	EC-346765	6-VC2	ED-344280	13-D3	ED-351392	14-D1
BA-V1030A330C	5-4C	EC-349921	17-C1	ED-344280	14-D8	ED-352723	8-D1
BA-V1030A330D	5-4D	EC-353572	16-C1	ED-344280	14-D5	ED-353550	16-D1
BA-V1030A340F	5-9	EC-356352	14-C101	ED-344280	14-D7	ED-354313	8-D2
BA-V1030A360A	5-7A	EC-356352	14-C103	ED-344280	14-D3	ED-356359	11-D9
BA-V1030A360B	5-7B	EC-356383	16-C3	ED-344280	14-D10	ED-356359	11-D13
BA-V1030A360C	5-7C	EC-357966	6-C313	ED-344280	14-D11	ED-356359	11-D11
BA-V1030A360D	5-7D	EC-358805	14-C13	ED-344280	14-D13	ED-356359	11-D8
BA-V1030A370D	5-5	EC-361682	9-C28	ED-344280	14-D12	ED-356367	11-D10
BA-V1030A390A	5-6	EC-361683	10-C211	ED-344280	14-D101	ED-356430	24-D1
BA-V1030B350A	5-7E	EC-361882	10-C222	ED-344280	14-D102	ED-356781	16-D53
BA-V1030B350B	5-7F	EC-361965	9-C12	ED-344280	16-D7	ED-357540	20-D1
BA-V1030B350C	5-7G	EC-361966	9-C47	ED-344280	16-D14	ED-357540	20-D1
BD-V1030A130A	28-1A	EC-361968	10-C234	ED-344280	16-D11	ED-357754	12-D1
BD-1030A130B	28-1B	EC-363534	14-C3B	ED-344280	16-D23	ED-357754	12-D5
BD-V1030A130C	28-1C	EC-713154	15A-C49	ED-344280	16-D21	ED-357754	16-D3
BD-V1030A130D	28-1D	EC-713155	15A-C50	ED-344280	16-D22	ED-357754	16-D13
BD-V1030A130E	28-1H	EC-713291	15A-C48	ED-344280	6-D6	ED-357754	16-D52
BD-V1030A130F	28-1I	EC-713291	15A-C108	ED-344280	6-D5	ED-357754	16-D51
BD-V1030A130G	28-1L	EC-713291	15A-C112	ED-344280	6-D25	ED-357754	16-D4
BD-V1030B130A	28-1E	EC-713292	15A-C39	ED-344280	6-D13	ED-358056	22-D1
BD-V1030B130B	28-1F	EC-714601	15-C28	ED-344280	6-D12	ED-358056	22-D1
BD-V1030B130C	28-1J	EC-749821	15-C19	ED-344280	6-D21	ED-359232	16-D50
BD-V1030B130D	28-1K	EC-749821	15A-C15	ED-344280	6-D24	ED-359237	16-D54
BD-V1030B130E	28-1M	EC-749821	15A-C22	ED-344280	6-D28	ED-359238	16-D55
BD-V1030B130F	28-1G	ED-300035	7-D15	ED-344280	6-D2	ED-360318	14-D9
BL-B353122X1	2-5	ED-301911	16-D8	ED-344280	6-D27	ED-523427	6-D31
BL-B353126	3-4	ED-302269	7-D1	ED-344280	6-D15	ED-557447	29-D3
BL-B357555	2-23	ED-302269	16-D15	ED-344280	6-D14	ED-557447	29-D4
BM-M3220A020A	1-12	ED-305655	14-D14	ED-344280	6-D26	ED-624903	12-D11
BM-353630	3-6	ED-305706	15A-D105	ED-344280	6-D16	ED-624903	12-D22
BM-360149	3-M904	ED-307610	16-D6	ED-344280	6-D4	ED-624903	12-D10
BR-B359158	3-29	ED-309069	7-D5	ED-344280	6-D30	ED-624903	14-D103
BR-362130	3-30	ED-309069	7-D6	ED-344280	6-D29	ED-714603	15-D1
BT-353936	27-T901A	ED-310387	16-D57	ED-344280	6-D3	ED-714603	15A-D1
BT-354342	27-T901B	ED-316389	7-D2	ED-344280	6-D20	ED-714631	29-D2
BT-356594	27-T901C	ED-319463	16-D2	ED-344280	6-D7	ED-714631	29-D1
BT-357703	27-T901D	ED-331626	12-D9	ED-344280	6-D23	ED-717489	15A-D2
BV-B352377	2-6	ED-331626	12-D8	ED-344280	6-D1	ED-717489	15A-D3
BV-B353329	1-11	ED-331667	15A-D103	ED-344280	6-D10	EE-353831	15-1A
BV-V1030A030A	2-8	ED-331667	15A-D104	ED-344280	6-D22	EE-353832	15-1D
BV-V1030A100A	3-9	ED-344280	6-D17	ED-344280	6-D8	EE-353833	15A-1B
BV-V1030A200A	1-1	ED-344280	9-D9	ED-344280	6-D9	EE-353834	15-1B
BV-V1030A210C	1-2	ED-344280	9-D8	ED-344280	6-D18	EE-353835	15A-1A
BV-V1030A220A	1-3	ED-344280	9-D7	ED-344280	6-D11	EE-356135	15-1C
BV-V1030A250A	4-1	ED-344280	9-D11	ED-344280	6-D19	EE-359413	15A-1C
BV-V1030A900B	5-8A	ED-344280	9-D12	ED-344280	7-D7	EF-346880	12-SF1
BV-V1030A900B	14-1A	ED-344280	9-D13	ED-344280	7-D9	EF-346880	16-SF1
BV-V1030A900E	5-8B	ED-344280	9-D2	ED-344280	7-D3	EF-347968	6-SF1
BV-V1030A900E	14-1B	ED-344280	9-D3	ED-344280	7-D4	EF-347968	7-SF1
BV-V1030A900F	5-8C	ED-344280	9-D1	ED-344280	7-D302	EF-347968	11-SF1
BV-V1030A900F	14-1C	ED-344280	10-D210	ED-344280	7-D19	EF-347968	13-SF1
BV-V1030A900G	5-8D	ED-344280	10-D209	ED-344280	7-D16	EF-355398	16-F1B
BV-V1030A900G	14-1D	ED-344280	10-D208	ED-344280	7-D18	EF-355398	16-F2B
BA-V1030B900A	5-8E	ED-344280	10-D202	ED-344280	7-D301	EF-601301	16-F1A
BA-V1030B900A	14-1E	ED-344280	10-D201	ED-344280	7-D8	EF-601301	16-F2A
BA-V1030B900B	5-8F	ED-344280	10-D204	ED-344280	7-D14	EH-345113	6-FL1
BA-V1030B900B	14-1F	ED-344280	10-D203	ED-344280	7-D10	EH-346822	13-IB1
BA-V1030B900C	5-8G	ED-344280	10-D205	ED-344280	7-D13	EH-347743	11-IB1
BA-V1030B900C	14-1G	ED-344280	10-D213	ED-344280	9-D15	EH-347743	12-IB2
BV-353839	27-3A	ED-344280	10-D214	ED-344280	9-D5	EH-347743	14-IB3
BV-353840	27-3B	ED-344280	10-D212	ED-344280	9-D10	EH-351973	12-IB3
BV-353841	27-3D	ED-344280	10-D207	ED-344280	9-D4	EH-351973	12-IB5
BV-353842	27-3E	ED-344280	10-D206	ED-344280	9-D6	EH-353788	14-IB1
BV-354879	27-3C	ED-344280	10-D211	ED-344280	9-D14	EH-353788	14-IB2

INDEX

PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.
EH-353789	12-IB1	EI-354401	9-IC10	EO-351868	6-L44	EO-717501	15A-L10
EH-353790	12-IB4	EI-354401	9-IC13	EO-351868	6-L31	EO-200376	9-R48
EH-353817	6-DL1	EI-354401	10-IC206	EO-351869	6-L14	ER-200379	10-R224
EH-354077	14-CB1	EI-355709	14-IC7	EO-351869	6-L24	ER-200380	9-R37
EH-354086	6-FL4	EI-356288	9-IC5	EO-353774	7-FL301	ER-200381	10-R201
EH-356067	6-FL3	EI-356288	10-IC207	EO-353900	6-L11	ER-200522	10-R266
EH-356672	6-FL2	EI-356289	10-IC202	EO-353900	6-L41	ER-200522	10-R268
EH-358801	6-DL3	EI-356370	11-IC5	EO-353900	6-L8	ER-333582	12-R42
EH-358849	6-FL5	EI-356371	11-X1	EO-353900	6-L10	ER-333582	12-R43
EH-358855	13-IB2	EI-356381	16-IC1	EO-353900	6-L51	ER-336751	14-R34
EH-359258	6-DL2	EI-356455	6-IC5	EO-353900	6-L35	ER-336754	10-R222
EH-360306	13-IB3	EI-356455	6-IC18	EO-353900	6-L36	ER-336972	10-R210
EH-360324	7-FL3	EI-356455	26-IC1	EO-353900	6-L30	ER-336972	10-R212
EH-360326	7-FL4	EI-356457	9-IC2	EO-353901	6-L15	ER-336974	10-R214
EH-360327	7-FL2	EI-356811	12-IC3	EO-353901	6-L13	ER-337339	10-R230
EH-360327	7-FL1	EI-357040	9-IC4	EO-353901	6-L18	ER-338208	14-R33
EH-705499	15-CF3A	EI-357092	14-IC1A	EO-353901	7-L9	ER-340541	10-R223
EH-705500	15-CF3B	EI-357093	14-IC1C	EO-354600	6-L3	ER-340544	10-R202
EH-705502	15-CF2B	EI-358500	7-IC3	EO-354600	6-L7	ER-340544	10-R225
EH-712603	15A-CF4	EI-358501	7-IC4	EO-354600	6-L4	ER-340544	10-R205
EH-712604	15A-CF6	EI-358502	7-IC5	EO-354400	6-L17	ER-340544	10-R269
EH-712605	15A-CF7	EI-358504	7-IC6	EO-354600	6-L29	ER-340544	10-R270
EH-714625	15-CF1A	EI-358505	7-IC301	EO-354600	6-L23	ER-340554	9-R40
EH-714625	15A-CF1A	EI-358506	7-IC302	EO-354600	6-L55	ER-340554	9-R41
EH-714626	15A-CF1B	EI-358842	6-IC6	EO-354600	6-L54	ER-340554	10-R227
EH-714627	15-CF1C	EI-358842	6-IC10	EO-354600	6-L5	ER-343989	9-R39
EH-714628	15-CF1B	EI-358842	6-IC8	EO-354600	6-L46	ER-343997	14-R35
EH-717503	15A-CF1C	EI-358842	6-IC9	EO-354600	6-L40	ER-345751	14-R24
EH-717504	15A-CF3A	EI-358842	6-IC7	EO-354600	6-L47	ER-349195	9-R60
EH-717505	15A-CF3B	EI-358843	6-IC11	EO-354600	6-L56	ER-352348	10-R238
EH-717506	15A-CF5	EI-358844	6-IC12	EO-354600	6-L39	ER-353064	10-R265
EH-717507	15A-CF8	EI-358845	6-IC13	EO-354600	6-L16	ER-353107	10-R226
EH-742622	15-CF2A	EI-358853	6-IC17	EO-354600	6-L38	ER-353585	9-R61
EH-742622	15A-CF2	EI-359325	7-IC2	EO-354600	7-L5	ER-353878	12-R19
EI-K5001A010A	7-IC9	EI-360087	13-IC1	EO-354600	7-L4	ER-353878	12-R45
EI-K5001A010A	7-IC8	EI-360089	11-IC1	EO-356372	11-FL1	ER-356133	14-R12
EI-200495	6-IC14	EI-360316	9-IC7	EO-356442	7-T301	ER-356337	9-R38
EI-309878	6-X1	EI-361554	12-IC2	EO-356599	6-L25	ER-356338	14-R19
EI-310036	15A-IC102	EI-361554	14-IC2	EO-357507	6-L28	ER-356338	14-R18
EI-322347	6-X2	EI-705494	15-IC1	EO-357507	6-L27	ER-356338	14-R103
EI-322347	12-X1	EI-705494	15A-IC1	EO-357507	7-L2	ER-356338	14-R101
EI-324203	6-IC4	EI-705494	15A-IC2	EO-357507	7-L3	ER-356344	10-R213
EI-328593	10-IC203	EI-710044	29-X1	EO-357508	6-L26	ER-356344	10-R207
EI-328693	6-IC15	EI-714602	15-IC2	EO-357508	6-L33	ER-356344	10-R211
EI-330986	10-IC209	EI-717488	15A-IC5	EO-360140	6-L42	ER-356344	10-R215
EI-337530	14-IC6	EI-749828	15A-IC3	EO-360555	6-L19	ER-356344	10-R206
EI-337625	26-IC2	EI-749828	15A-IC4	EO-361368	6-L37	ER-356382	16-R1
EI-345759	7-IC1	EI-749983	29-IC1	EO-443722	7-L303	ER-356382	16-R4
EI-346071	15A-IC101	EJ-357890	6-1B	EO-458932	7-L301	ER-356574	9-R66
EI-347773	14-IC4	EJ-357891	6-1A	EO-712599	15A-L11	ER-357764	14-R102
EI-347779	12-IC4	EJ-357892	6-1C	EO-714141	15A-L7	ER-357764	14-R16
EI-347779	14-IC3	EJ-358840	25-J901	EO-714604	15-L1A	ER-361679	10-R203
EI-347781	9-IC6	EL-353624	4-IN902	EO-714605	15-L1B	ER-361679	10-R204
EI-348111	11-IC4	EL-353625	4-IN901	EO-714606	15-L2	ER-361680	10-R228
EI-349372	13-X1	EM-353891	11-D15	EO-714607	15-L3A	ER-362061	10-R239
EI-349372	14-X1	EM-361786	8-1	EO-714609	15-L3B	ER-364123	26-R5
EI-349372	14-X2	EO-321254	7-L302	EO-714610	15-L4A	ER-552712	16-R50
EI-349719	9-IC12	EO-330241	6-L34	EO-714610	15A-L4A	ES-201527	8-SW2
EI-349719	10-IC201	EO-330252	6-L52	EO-714612	15-L4B	ES-347048	19-SW1
EI-349719	10-IC208	EO-330252	6-L2	EO-714613	15A-L4B	ES-347048	19-SW1
EI-352714	7-IC7	EO-330252	6-L1	EO-714614	15-L5A	ES-347755	11-SW3
EI-353421	12-IC6	EO-330252	6-L21	EO-714614	15A-L5A	ES-347755	11-SW8
EI-353421	12-IC5	EO-330252	6-L22	EO-714615	15-L5B	ES-347755	11-SW5
EI-353475	10-IC205	EO-330252	6-L53	EO-714616	15A-L5B	ES-347755	11-SW7
EI-353477	9-IC11	EO-330252	7-L10	EO-714617	15-L6	ES-347755	11-SW6
EI-353478	9-IC9	EO-330252	7-L1	EO-714618	15-L7	ES-347755	11-SW23
EI-353478	9-IC8	EO-330252	7-L7	EO-714619	15-L8A	ES-347755	11-SW13
EI-353695	10-IC204	EO-330252	7-L6	EO-714620	15-L8B	ES-347755	11-SW12
EI-353783	14-IC1B	EO-330252	7-L8	EO-714621	15-L9A	ES-347755	11-SW17
EI-353800	6-IC16	EO-330252	14-L1	EO-714623	15-L9B	ES-347755	11-SW22
EI-353813	6-IC2	EO-330253	6-L32	EO-717490	15A-L1A	ES-347755	11-SW14
EI-353814	6-IC1	EO-351864	6-L57	EO-717492	15A-L2A	ES-347755	11-SW18
EI-353815	6-IC3	EO-351864	6-L58	EO-717493	15A-L1B	ES-347755	11-SW16
EI-353848	14-IC5	EO-351864	6-L12	EO-717494	15A-L2B	ES-347755	11-SW15
EI-353851	12-IC1	EO-351865	6-L43	EO-717495	15A-L3A	ES-347755	11-SW20
EI-353867	9-IC1	EO-351865	6-L45	EO-717496	15A-L3B	ES-347755	11-SW21
EI-353867	13-IC2	EO-351865	6-L6	EO-717497	15A-L6	ES-347755	11-SW19
EI-353893	11-IC2	EO-351865	6-L20	EO-717498	15A-L8	ES-347755	11-SW24
EI-354399	11-IC3	EO-351867	6-L50	EO-717499	15A-L9A	ES-347755	11-SW2
EI-354400	9-IC3	EO-351867	6-L49	EO-717500	15A-L9B	ES-347755	11-SW10

INDEX

PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.
ES-347755	11-SW9	ET-308141	12-TR12	ET-336845	10-TR211	EV-356445	10-VR212
ES-347755	11-SW4	ET-308141	12-TR3	ET-336845	10-TR212	EV-356447	10-VR211
ES-353622	23-SW1	ET-308141	12-TR2	ET-336845	11-TR1	EV-356448	10-VR210
ES-353622	23-SW1	ET-308141	13-TR2	ET-336845	11-TR2	EV-356575	6-VR17
ES-353653	3-26	ET-308141	13-TR1	ET-338324	7-TR26	EV-356575	6-VR14
ES-353708	11-SW1	ET-308141	14-TR11	ET-338324	7-TR25	EV-356575	6-VR13
ES-354308	18-SW1	ET-308141	14-TR10	ET-338324	7-TR27	EV-356575	6-VR8
ES-354308	18-SW1	ET-308141	14-TR9	ET-348948	12-TR10	EV-356576	6-VR18
ES-354430	27-SW1	ET-308141	14-TR15	ET-348948	12-TR11	EV-356576	6-VR9
ES-357786	8-SW1	ET-308141	14-TR14	ET-349081	7-TR2	EV-356577	6-VR12
ET-200986	7-TR9	ET-308141	14-TR13	ET-349081	7-TR6	EV-356577	6-VR2
ET-200986	7-TR22	ET-308141	14-TR101	ET-349081	7-TR5	EV-356577	6-VR1
ET-200986	7-TR8	ET-308141	14-TR104	ET-349081	7-TR3	EV-356577	7-VR4
ET-200986	7-TR1	ET-308141	14-TR6	ET-349081	7-TR21	EV-356577	7-VR7
ET-200986	16-TR50	ET-308141	16-TR10	ET-349081	7-TR20	EV-356577	7-VR3
ET-306719	12-TR13	ET-308141	16-TR4	ET-349366	6-TR79	EV-356577	7-VR10
ET-306719	16-TR12	ET-308141	16-TR7	ET-349366	6-TR80	EV-356579	6-VR4
ET-306719	16-TR11	ET-308141	16-TR5	ET-349366	6-TR78	EV-356579	6-VR3
ET-306719	16-TR6	ET-308141	16-TR3	ET-349366	6-TR61	EV-356579	6-VR6
ET-308141	6-TR31	ET-308141	16-TR8	ET-349366	6-TR74	EV-356579	6-VR5
ET-308141	6-TR50	ET-308472	6-TR63	ET-349366	6-TR76	EV-356579	6-VR7
ET-308141	6-TR9	ET-308472	6-TR57	ET-349366	6-TR82	EV-356579	7-VR6
ET-308141	6-TR30	ET-308472	6-TR56	ET-349366	6-TR75	EV-356579	7-VR301
ET-308141	6-TR8	ET-308472	6-TR60	ET-349366	6-TR77	EV-356379	7-VR9
ET-308141	6-TR7	ET-308472	6-TR55	ET-349366	6-TR81	EV-356582	6-VR16
ET-308141	6-TR15	ET-308472	6-TR54	ET-349725	7-TR19	EV-356582	7-VR303
ET-308141	6-TR21	ET-308472	6-TR59			EV-356583	6-VR19
ET-308141	6-TR14	ET-308472	6-TR58	ET-349882	14-TR5	EV-356583	6-VR15
ET-308141	6-TR12	ET-308472	6-TR62	ET-352994	6-TR72	EV-358808	14-VR1
ET-308141	6-TR20	ET-308472	6-TR51	ET-352994	6-TR71	EV-358829	7-VR302
ET-308141	6-TR2	ET-308472	6-TR65	ET-352994	6-TR85	EV-358829	7-VR11
ET-308141	14-TR106	ET-308472	6-TR52	ET-352994	6-TR73	EV-358829	7-VR8
ET-308141	14-TR111	ET-308472	6-TR64	ET-352994	6-TR70	EV-358829	7-VR2
ET-308141	14-TR3	ET-308472	6-TR53	ET-352994	6-TR69	EV-358829	7-VR1
ET-308141	14-TR4	ET-308472	6-TR66	ET-352994	26-TR1	EV-358860	6-VR11
ET-308141	14-TR7	ET-308472	6-TR67	ET-352994	26-TR2	EV-358860	7-VR13
ET-308141	14-TR8	ET-308472	7-TR4	ET-352994	26-TR3	EV-358860	7-VR12
ET-308141	6-TR16	ET-308472	12-TR6	ET-353635	19-PH1	EV-358862	7-VR5
ET-308141	6-TR17	ET-308472	12-TR5	ET-353635	18-PH1	EV-360317	9-VR1
ET-308141	6-TR10	ET-308472	12-TR7	ET-353635	18-PH1	EV-361358	10-VR206
ET-308141	6-TR19	ET-308472	12-TR4	ET-353635	19-PH1	EV-361358	10-VR209
ET-308141	6-TR18	ET-308472	12-TR19	ET-354370	7-TR29	EV-361358	10-VR201
ET-308141	6-TR49	ET-308472	12-TR15	ET-354414	7-TR30	EV-361358	10-VR204
ET-308141	6-TR27	ET-308472	12-TR14	ET-354414	7-TR302	EV-361358	10-VR203
ET-308141	6-TR4	ET-308472	12-TR16	ET-354414	7-TR16	EV-361358	10-VR202
ET-308141	6-TR23	ET-308472	13-TR6	ET-354414	7-TR14	EV-361358	10-VR205
ET-308141	6-TR5	ET-308472	14-TR12	ET-354414	7-TR15	EV-713607	15-VR1
ET-308141	6-TR22	ET-308472	14-TR1	ET-354414	7-TR28	EV-713607	15-VR2
ET-308141	6-TR6	ET-308472	14-TR103	ET-354414	7-TR13	EV-713607	15A-VR1
ET-308141	6-TR13	ET-308472	16-TR2	ET-354414	7-TR7	EV-713607	15A-VR2
ET-308141	6-TR25	ET-308472	16-TR1	ET-355669	12-TR17	EV-713607	15A-VR102
ET-308141	6-TR24	ET-309434	9-TR4	ET-356153	11-TR4	EV-714581	15A-VR101
ET-308141	6-TR39	ET-309434	9-TR3	ET-356153	11-TR3	EV-714599	15A-VR104
ET-308141	6-TR29	ET-309434	9-TR2	ET-356153	11-TR6	EV-714599	15A-VR105
ET-308141	6-TR26	ET-309434	9-TR8	ET-356153	11-TR5	EV-714599	15-VR3
ET-308141	6-TR37	ET-309434	9-TR6	ET-356224	6-TR84	EV-717487	15A-VR4
ET-308141	6-TR34	ET-309434	9-TR1	ET-356224	9-TR14	EW-348414	28-5x
ET-308141	6-TR33	ET-309434	9-TR10	ET-356224	9-TR12	EW-356588	27-10A
ET-308141	6-TR32	ET-309434	9-TR11	ET-356224	13-TR3	EW-356589	27-10B
ET-308141	6-TR36	ET-309434	9-TR13	ET-356224	13-TR5	EW-356592	27-10C
ET-308141	6-TR35	ET-309434	9-TR16	ET-356224	13-TR4	EX-330533	16-TH1
ET-308141	6-TR38	ET-309434	10-TR208	ET-356224	14-TR102	EX-338414	10-TH201
ET-308141	6-TR3	ET-309434	10-TR203	ET-356224	16-TR9	EX-355657	12-TH1
ET-308141	6-TR48	ET-309434	10-TR207	ET-356236	14-TR105	EX-357642	1-TH901
ET-308141	6-TR42	ET-309434	10-TR201	ET-357546	12-TR24	EX-359254	6-TH1
ET-308141	6-TR43	ET-309434	10-TR206	ET-359700	21-TR2	EX-359420	9-TH1
ET-308141	6-TR1	ET-309434	11-TR8	ET-359700	21-TR2	EZ-356237	14-BT1
ET-308141	6-TR41	ET-309434	11-TR7	ET-360695	6-TR11	EZ-692908	27-2
ET-308141	6-TR40	ET-318308	21-TR1	ET-360695	6-TR45	HC-353332	24-PU
ET-308141	6-TR47	ET-318308	22-TR1	ET-360824	10-TR209	HC-353332	24-PU
ET-308141	6-TR46	ET-318308	21-TR1	ET-360824	10-TR210	HE-325273	2-H904
ET-308141	6-TR44	ET-318308	22-TR1	ET-360824	10-TR202	HR-353638	2-H903
ET-308141	6-TR68	ET-318604	29-TR1	EV-336769	9-VR3	MB-357511	4-29
ET-308141	7-TR24	ET-321644	6-TR28	EV-337949	6-VR10	MB-357976	2-2
ET-308141	7-TR23	ET-330717	11-D21	EV-348204	9-VR2	MI-359475	2-30
ET-308141	7-TR301	ET-336845	9-TR5	EV-353423	15A-VR3	MI-361964	3-27
ET-308141	7-TR12	ET-336845	9-TR7	EV-353425	12-VR3	ML-B351942	3-24
ET-308141	7-TR17	ET-336845	9-TR15	EV-356324	14-VR2	ML-353146	2-1
ET-308141	12-TR8	ET-336845	9-TR9	EV-356444	10-VR207	ML-353161	4-12
ET-308141	12-TR26	ET-336845	10-TR205	EV-356445	10-VR208	ML-353162	4-14

INDEX

PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.
MP-357547	2-9	SP-354642D	27-5D	ZG-357559	2-24	ZS-417216	4-5
MR-353164	4-3	SP-354642H	27-5E	ZG-357753	4-22	ZS-422076	3-11
MR-353165	4-4	SP-354642K	27-5F	ZG-357769	2-7	ZS-432843	1-10
MR-359181	2-33	SP-354642M	27-5G	ZG-357865	4-6	ZS-460440	2-3
MZ-B351526	3-18	SP-355395A	28-2A	ZG-357866	2-4	ZS-608220	3-7
MZ-B351529	3-21	SP-355395B	28-2B	ZG-359184	2-29	ZW-259503	11-1
MZ-B353201	4-21	SP-355395C	28-2C	ZS-302938	2-20	ZW-259738	2-11
MZ-B353211	4-2	SP-355395D	28-2D	ZS-328607	2-22	ZW-259738	3-19
MZ-351524	3-14	SP-355395F	28-2E	ZS-354332	1-6	ZW-270101	2-12
MZ-351525	3-16	SP-355395H	28-2F	ZS-354402	3-28	ZW-270101	3-20
MZ-351527	3-25	SP-355395J	28-2G	ZS-356287	12-2	ZW-270101	4-18
MZ-353163	4-16	SR-357552	2-10	ZS-356675	6-3	ZW-270123	3-23
MZ-353166	4-9	SZ-354739	27-6	ZS-356675	27-4	ZW-270123	4-11
MZ-353167	4-10	VT-B353093	1-7	ZS-356676	7-1	ZW-288797	3-13
MZ-353168	4-19	VT-V1030A080A	2-17	ZS-356676	11-2	ZW-324417	2-25
MZ-353169	4-15	VT-V1030A090A	2-18	ZS-356676	14-1	ZW-343120	4-24
MZ-353170	4-13	VT-V1030A230B	1-5	ZS-356677	6-4	ZW-350839	2-26
MZ-353364	3-12	VT-353098	1-9	ZS-356677	9-1	ZW-350839	2-34
MZ-355643	4-7	VT-353658	2-19	ZS-356815	1-8	ZW-353647	3-22
MZ-357839	27-9	ZG-313209	2-21	ZS-357528	6-2	ZW-354346	3-10
MZ-359182	2-32	ZG-313261	2-13	ZS-357528	12-1	ZW-357164	2-28
MZ-359183	2-31	ZG-321598	2-16	ZS-357528	27-1	ZW-357164	3-5
SA-353927B	27-8	ZG-353204	4-8	ZS-357920	16-1	ZW-381881	3-2
SE-353040E	4-28	ZG-353205	4-17	ZS-357944	27-7	ZW-413188	3-3
SP-353210	4-26	ZG-353206	4-27	ZS-357953	28-4	ZW-516993	2-14
SP-353796	28-3	ZG-353626	2-27	ZS-357954	28-4B	ZW-609434	3-1
SP-353796B	28-3B	ZG-353648	3-15	ZS-358026	13-1		
SP-354642A	27-5A	ZG-356682	3-17	ZS-362241	1-4		
SP-354642B	27-5B	ZG-356911	4-20	ZS-379350	2-15		
SP-354642C	27-5C	ZG-357158	4-23	ZS-417194	3-8		

AKAI

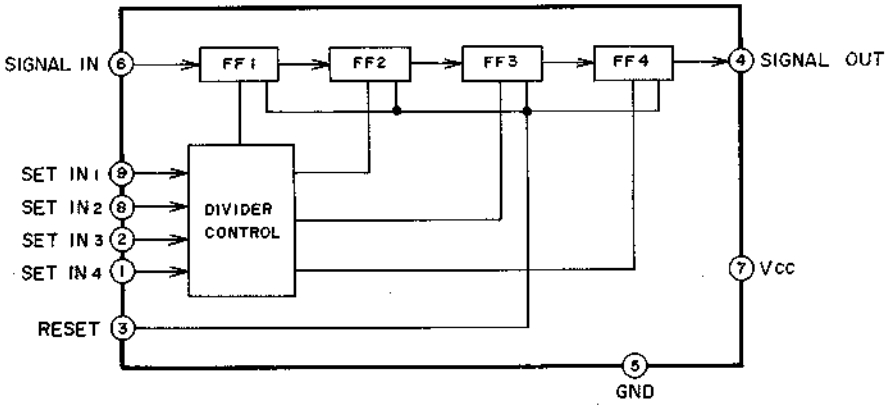
MODEL VS-603EG/EK/ES/EZ
MODEL VS-606EA/EO
MODEL VS-607EO-G

SCHEMATIC DIAGRAM
AND PC BOARDS

TABLE OF CONTENTS

1. SCHEMATIC DIAGRAM OF ICs 2
2. CONTROL BLOCK DIAGRAM 8
3. POWER SUPPLY BLOCK DIAGRAM 9
4. MECHA DRIVE BLOCK DIAGRAM 9
5. MECHA MODE AND ACTIONFLOW 10
6. HiFi AUDIO BLOCK DIAGRAM 11
7. VIDEO BLOCK DIAGRAM 12
8. SERVO BLOCK DIAGRAM 13
9. CONNECTION DIAGRAM 14
10. SELECTOR PC BOARD AND OTHER PC BOARDS 15
11. POWER SUPPLY SCHEMATIC DIAGRAM 16
12. POWER SUPPLY PC BOARD 17
13. SYSTEM CONTROL SCHEMATIC DIAGRAM 18
14. SYSTEM CONTROL PC BOARD 19
15. OPERATION SCHEMATIC DIAGRAM 20
16. OPERATION PC BOARD 21
17. SERVO (A)/(B)/SUB SCHEMATIC DIAGRAM 22
18. SERVO (A)/(B)/SUB PC BOARD 23
19. MECHA DRIVE SCHEMATIC DIAGRAM ... 24
20. MECHA DRIVE PC BOARD 25
21. MOTOR SCHEMATIC DIAGRAM AND MOTOR PC BOARD 25
22. VIDEO SCHEMATIC DIAGRAM 26
23. VIDEO PC BOARD 27
24. HiFi AUDIO SCHEMATIC DIAGRAM 28
25. HiFi AUDIO PC BOARD 29
26. VS-603EG/EK/ES/EZ DEMODULATOR SCHEMATIC DIAGRAM 30
27. VS-603EG/EK/ES/EZ DEMODULATOR PC BOARD 31
28. VS-606EA/EO, VS-607EO-G DEMODULATOR SCHEMATIC DIAGRAM 32
29. VS-606EA/EO, VS-607EO-G DEMODULATOR PC BOARD 33
30. VS-603EG TUNER/VIF UNIT SCHEMATIC DIAGRAM AND VIF UNIT PC BOARD .. 34
31. VS-603EK TUNER/VIF UNIT SCHEMATIC DIAGRAM AND VIF UNIT PC BOARD .. 35
32. VS-603ES TUNER/VIF UNIT SCHEMATIC DIAGRAM AND VIF UNIT PC BOARD .. 36
33. VS-603EZ TUNER/VIF UNIT SCHEMATIC DIAGRAM AND VIF UNIT PC BOARD .. 37
34. VS-606EA TUNER/VIF UNIT SCHEMATIC DIAGRAM 38
35. VS-606EO TUNER/VIF UNIT SCHEMATIC DIAGRAM 39
36. VS-607EO-G TUNER/VIF UNIT SCHEMATIC DIAGRAM 40
37. ST BLOCK/VIF UNIT PC BOARD 41
38. LEVEL METER SCHEMATIC DIAGRAM ... 42
39. REMOTE CONTROL UNIT SCHEMATIC DIAGRAM AND PC BOARD 43

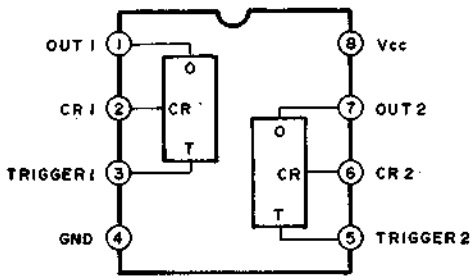
AN6881 (1~16 FREQUENCY DEVIDER)



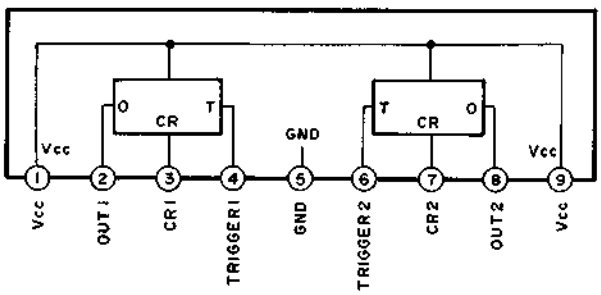
TRUTH TABLE

PIN NUMBER \ DEVIDED RATIO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
9	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H
8	L	L	H	H	L	L	H	H	L	L	H	H	L	L	H	H
2	L	L	L	L	H	H	H	H	L	L	L	L	H	H	H	H
1	L	L	L	L	L	L	L	L	H	H	H	H	H	H	H	H

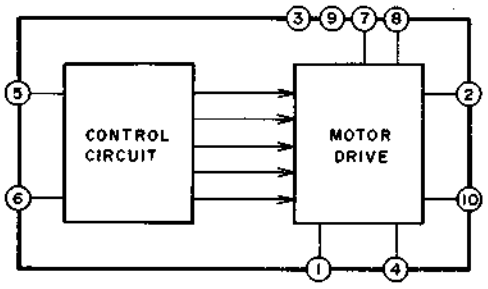
BA225A/226A (DUAL MONO MULTI)



BA235A/236A (DUAL MONO MULTI)



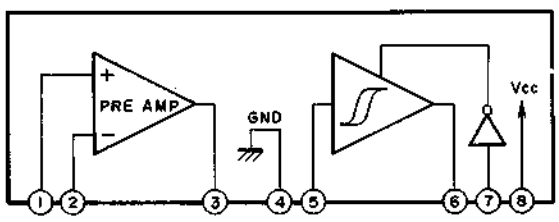
BA6229 (BI-DIRECTIONAL MOTOR DRIVER)



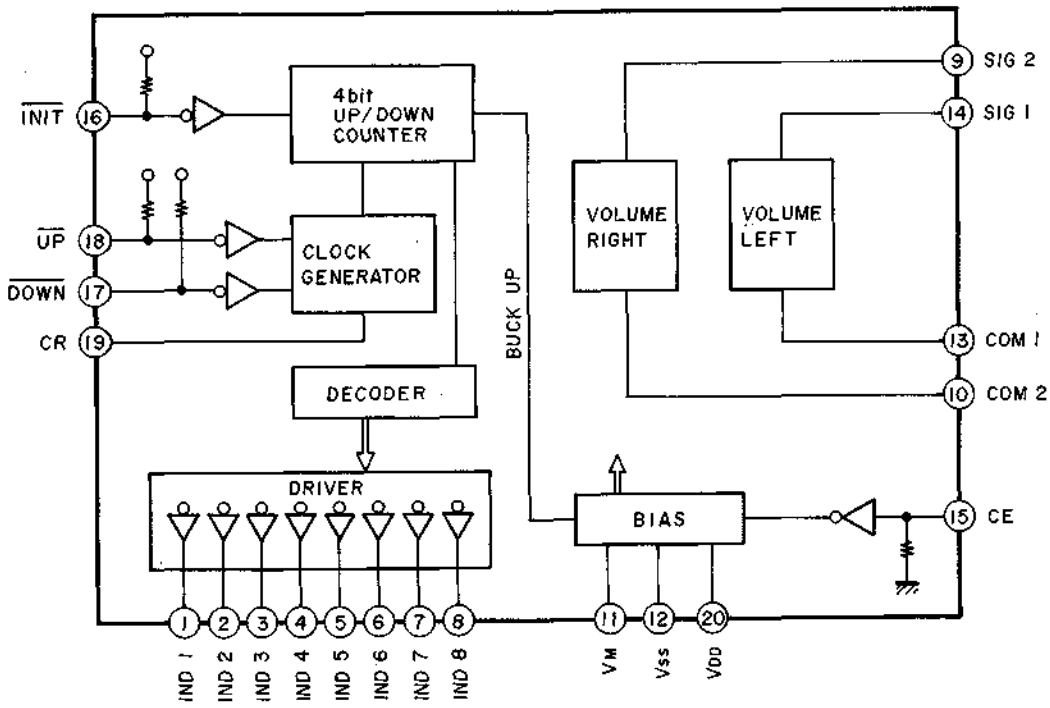
CONTROL MODE

MODE	INPUT		OUTPUT	
	5pin	6pin	2pin	10pin
STOP	L	L	OPEN	OPEN
NORMAL	H	L	H	L
REVERSE	L	H	L	H
BRAKE	H	H	L	L

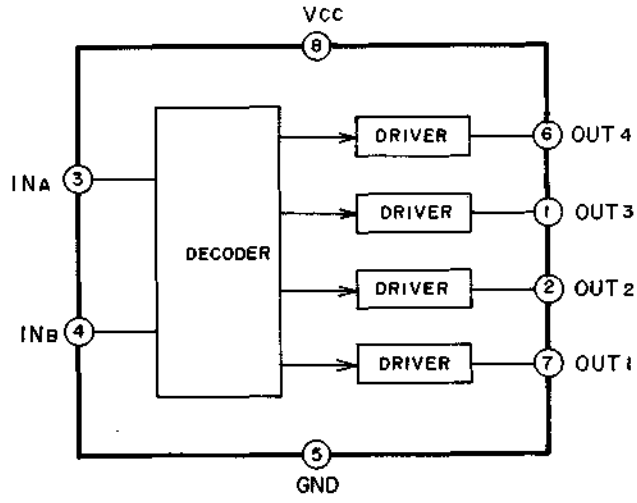
BA6305 (CTL/FG AMPLIFIER)



LC7530 (ELECTRONIC VOLUME)



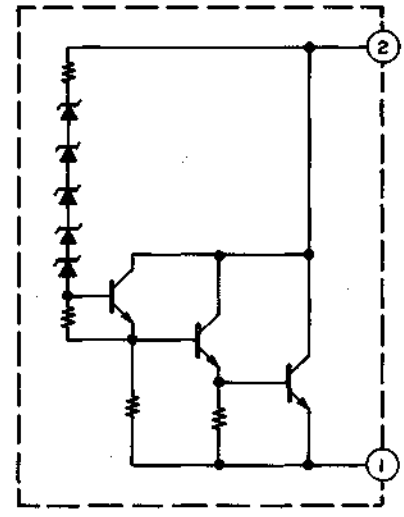
M54572L (TUNER BAND SELECTOR)



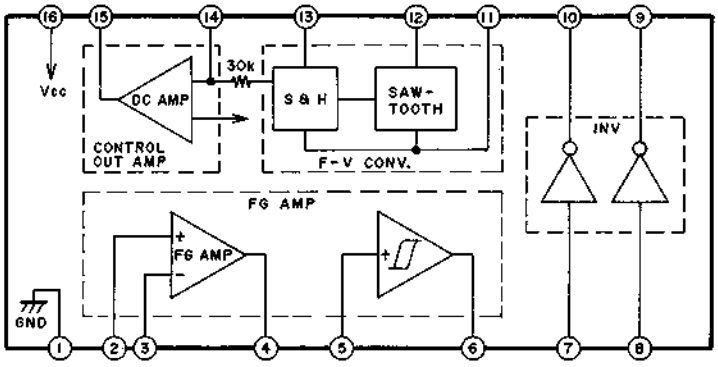
INPUT		OUTPUT				TUNER MODE
INA	INB	OUT1	OUT2	OUT3	OUT4	
0	0	1	Z	Z	Z	UHF
0	1	Z	Z	1	Z	VHF (L)
1	0	Z	1	Z	Z	VHF (SUPER)
1	1	Z	Z	1	0	VHF (M)

0: LOW
1: HIGH
Z: OPEN

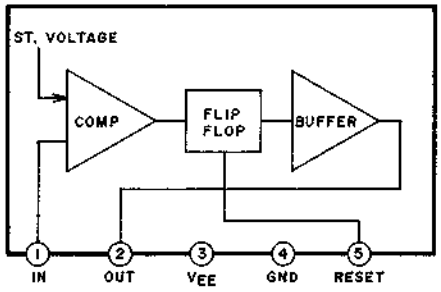
μPC574J (REGULATOR)



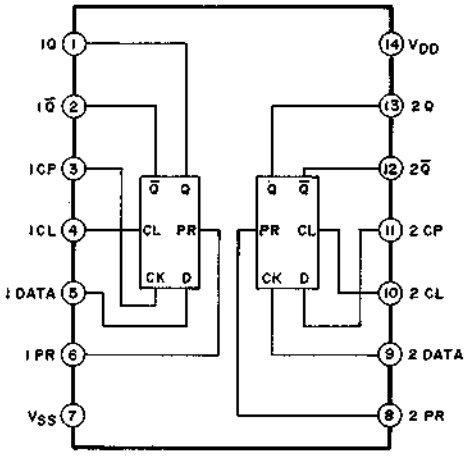
BA6302A (FG SPEED CONTROL SYSTEM)



BA634 (T-TYPE FLIP-FLOP)



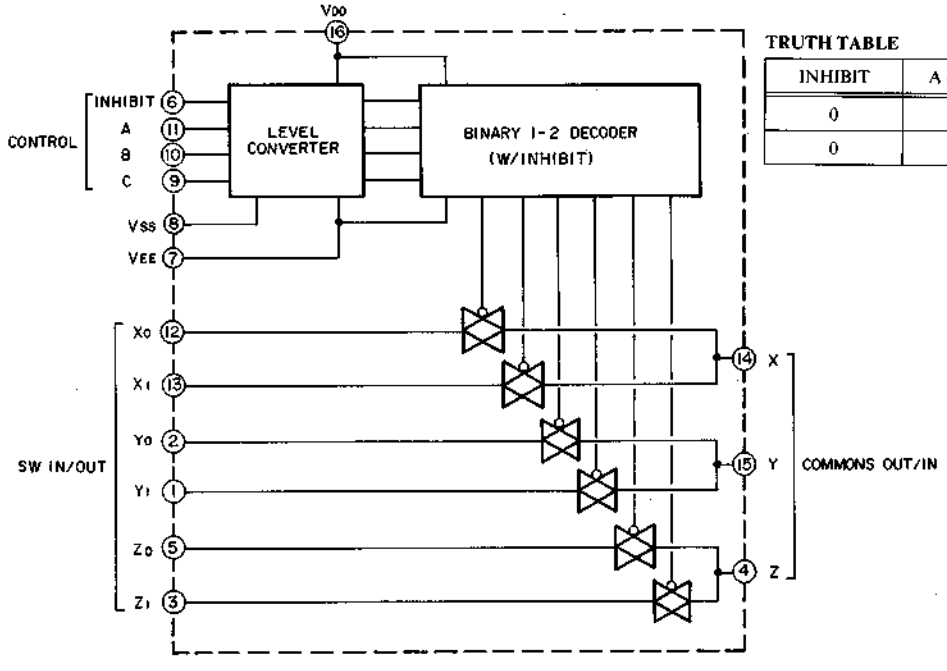
BU4013B/HD14013BP (DUAL D-TYPE FLIP-FLOP)



INPUTS				OUTPUTS		
CLOCK†	DATA	RESET	SET	Q	$\overline{Q}$	
⌐‾	0	0	0	0	1	
⌐‾	1	0	0	1	0	
‾⌐	×	0	0	Q	$\overline{Q}$	No Change
×	×	1	0	0	1	
×	×	0	1	1	0	
×	×	1	1	1	1	

× = Don't Care
† = Level Change

BU4053B/HD14053BP (ANALOG MULTIPLEXERS/DEMULTIPLEXERS)



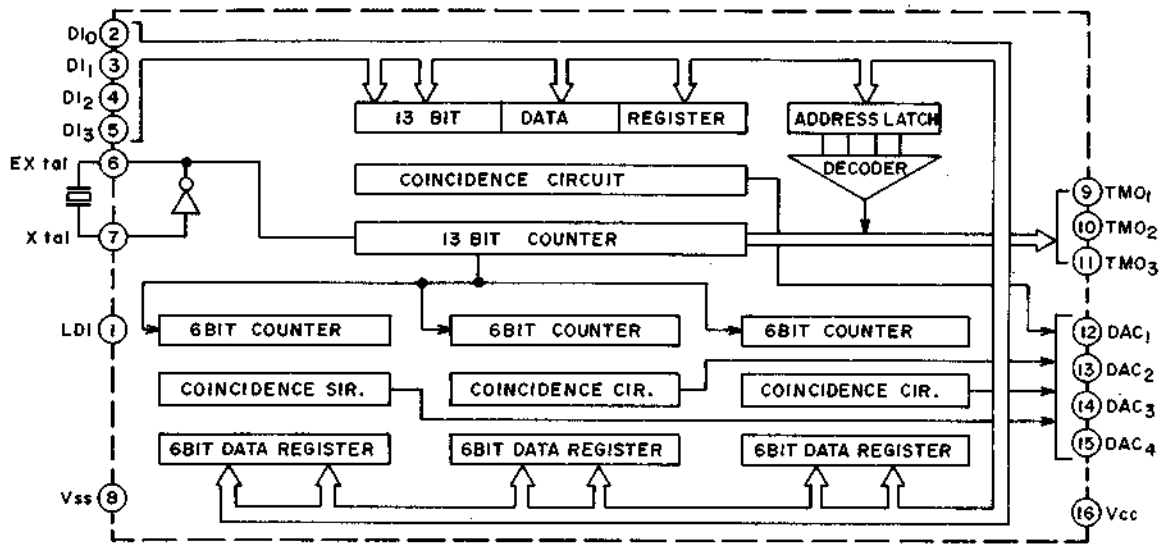
TRUTH TABLE

INHIBIT	A or B or C	"ON" CHANNEL
0	0	X_0 or Y_0 or Z_0
0	1	X_1 or Y_1 or Z_1

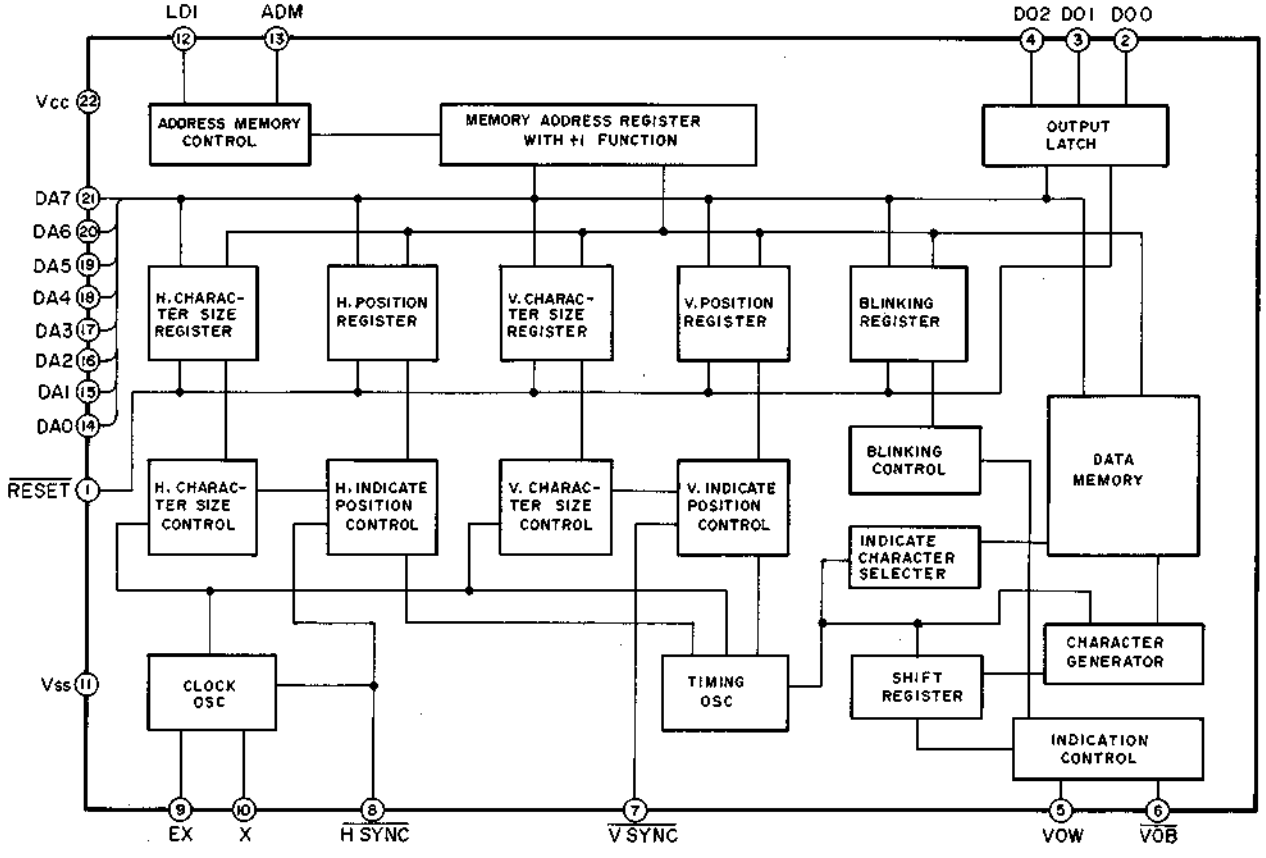
Terminal Description of M50760-368P (IC2 on HiFi AUDIO PCB)

<table>
<tr><th>Pin No.</th><th>Part Name</th><th>I/O</th><th>Active</th><th>Description</th></tr>
<tr><td>1</td><td>$\overline{D3}$</td><td>I</td><td>L</td><td>SC (Simalcast) ON/OFF Key input
"L" while the SC button's pressed
(Only effective while Input CTL: Pin ⑫ is "H".)</td></tr>
<tr><td>2</td><td>$\overline{D4}$</td><td>O</td><td>L</td><td>SC LED drive output, lit at "L".</td></tr>
<tr><td>3</td><td>$\overline{D5}$</td><td>O</td><td>L</td><td>HiFi LED drive output, lit at "L".</td></tr>
<tr><td>4</td><td>CN VSS</td><td>–</td><td>–</td><td>Connect to GND</td></tr>
<tr><td>5</td><td>VSS</td><td>–</td><td>–</td><td>Connect to GND</td></tr>
<tr><td>6
7</td><td>$\overline{D6}$
$\overline{D7}$</td><td>O
O</td><td>L
L</td><td>L
R LED drive output, lit at "L"
<table>
<tr><th>MODE / PORT</th><th>NORMAL</th><th>L</th><th>L+R</th><th>R</th></tr>
<tr><td>D6 (L)</td><td>H</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>D7 (R)</td><td>H</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>8</td><td>D8</td><td>O</td><td>H</td><td>AUDIO MUTE output.</td></tr>
<tr><td>9</td><td>F0</td><td>I</td><td>H</td><td>FM MUTE input (FM Carrier → "L", No FM Carrier → "H")</td></tr>
<tr><td>10</td><td>F1</td><td>I</td><td>–</td><td>AL9V input</td></tr>
<tr><td>11</td><td>F2</td><td>O</td><td>–</td><td>AUDIO INT/$\overline{EXT}$ Selection output
(EXT → "L": when INPUT CTL is "L" or SC is ON)
(INT → "H": when INPUT CTL is "H")</td></tr>
<tr><td>12</td><td>F3</td><td>I</td><td>–</td><td>INPUT CTL input ("H" → INT, "L" → EXT)</td></tr>
<tr><td>13</td><td>$\overline{RESET}$</td><td>I</td><td>L</td><td>Power-on Reset terminal</td></tr>
<tr><td>14
15</td><td>X OUT
X IN</td><td>–
–</td><td>–
–</td><td>} Internal OSC (300 kHz) drive resister connection terminal.</td></tr>
<tr><td>16</td><td>S</td><td>I</td><td>–</td><td>EE 9V input (EE/$\overline{PB}$ detection input)</td></tr>
<tr><td>17</td><td>$\overline{D0}$</td><td>I</td><td>L</td><td>A MUTE input ("L" while CUE, REV, STILL functions)</td></tr>
<tr><td>18</td><td>$\overline{D1}$</td><td>I</td><td>L</td><td>L/R/STEREO Key input ("L" while L/R/STEREO button is pressed)</td></tr>
<tr><td>19</td><td>D2</td><td>I</td><td>–</td><td>AUTO/NORMAL switch input (AUTO → "L", NORMAL → "H")</td></tr>
<tr><td>20</td><td>VDD</td><td>–</td><td>–</td><td>Power Supply terminal (IDL 5V)</td></tr>
</table>

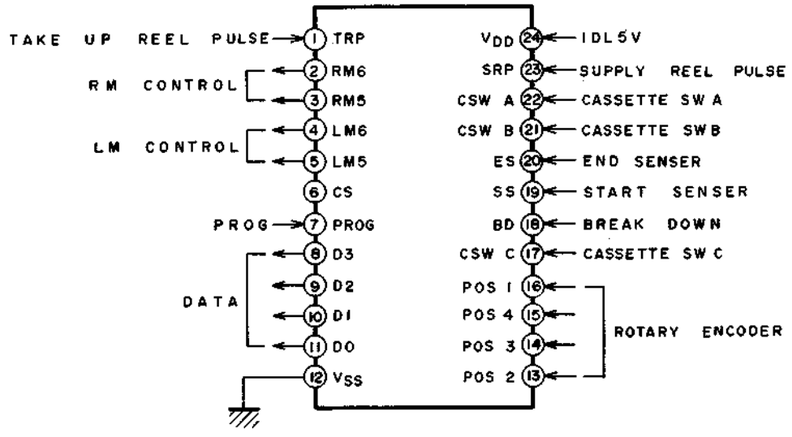
M88301A-P (D/A CONVERTER)



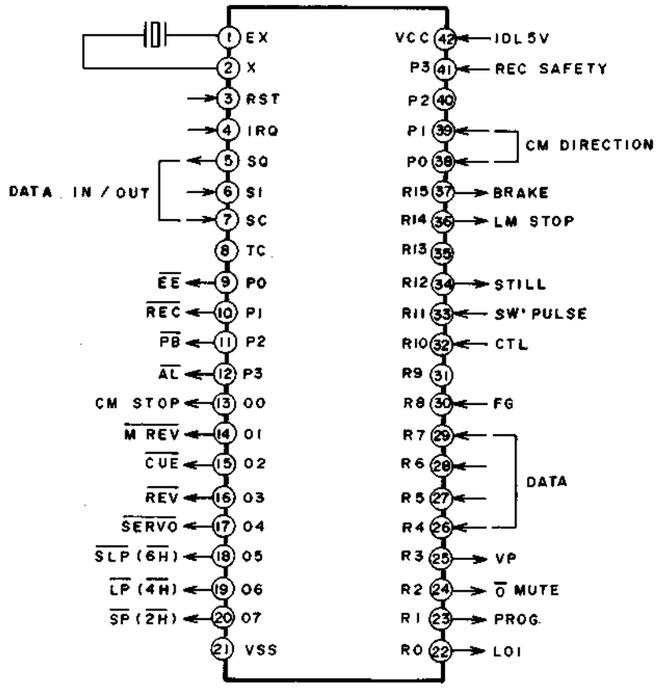
MB88303M (CHARACTER GENERATOR)



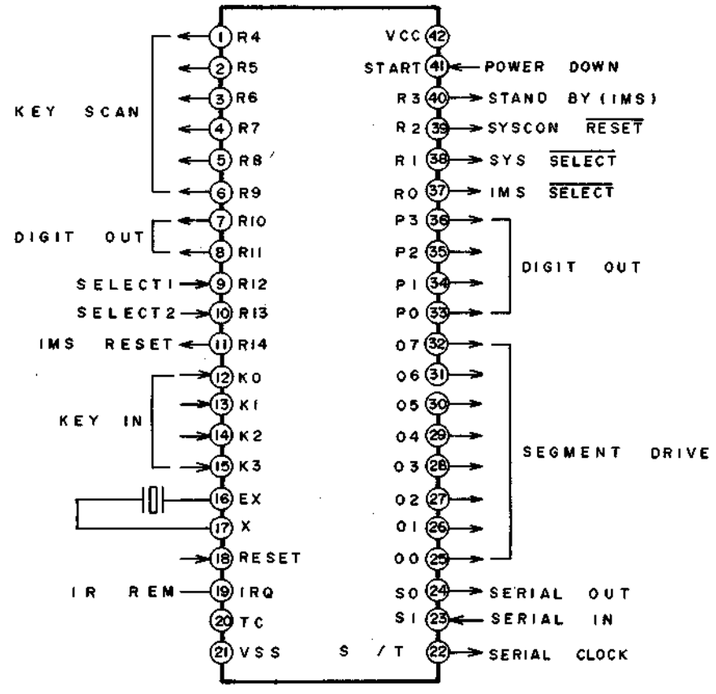
MB88305-P (MECHA DRIVE MI-COM)



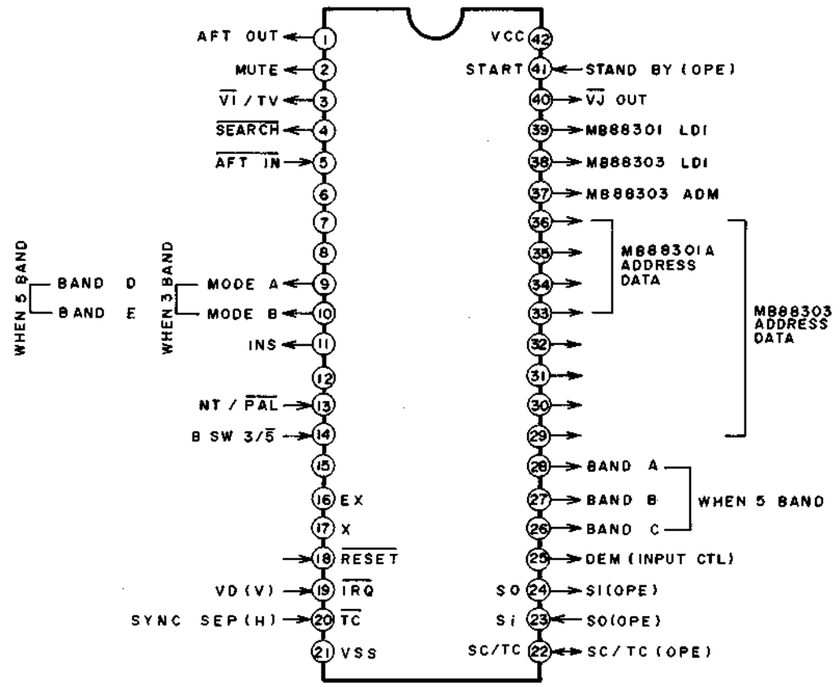
MB8841-1429J (SYSTEM CONTROL MI-COM)



MB88501-352M (OPERATION MI-COM)



MB88505 (IMS MI-COM)



VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
CONTROL BLOCK DIAGRAM

NO.6-1 841020E (A2)

AUDIO CTL MPU (HiFi model only)
M50760-368P (1KCMOS)

- HiFi KEY CONTROL
- HiFi LED CONTROL
- MUTE CONTROL
- HiFi MODE CONTROL

KEY
L/R/STEREO
Hi Fi
SC
AUTO/NORM

D0 D5 D3 D8 Vdd X X CNVSS Vss FO S

HIFI
Lch
Rch
INT/EXT
MUTE
EVR CENTER
AL12
EE12
IDL5

HiFi AUDIO PCB

Xtal 4.19MHz

BU5

TR1 TR2 TR3 TR4 TR5 TR6

COUNTER LED
D15

LED DRIVER

SEG 0 ... SEG 7
SCAN R4 ... SCAN R9
KEY 0 ... KEY 3
SELECT 1
SELECT 2
IRQ

EX X P0 P1 P2 P3 R10 R11 Vcc Vss R2 SO R1 SC SI RO R14 R3 START

SYSCON RESET
SYS
IMS
IMS RESET
STAND-BY
P-DWN

TRANSFER DATA SELECTER

KEY-MATRIX
KI KO
*J2 *J1

IR REMCON AMP

*	J1	J2	PROGRAM	COUNTER LED DIGIT
201/301	NO	NO	1	2
303	YES	NO	4	2
—	NO	YES	8	2
603	YES	YES	8	4

OPERATION MPU
MB88501 352M OPE(4KCMOS)

- KEY SCAN/JUDGE
- LED DISPLAY
- CLOCK/TIMER CONTROL
- SYSTEM SUPERVISION
(RESET, STAND-BY, TRANSFER)

OPERATION PCB

SYSCON MPU
MB8841 [429M B-PAL (2KNMOS)

- MECHA CONTROL
- POWER CONTROL
- SENSOR CHECK
- SERVO CONTROL
- TRACKING CONTROL

CERAMIC 4.00MHz

IDL5

Vcc Vss EX X FG STILL CTL SWITCHING PULSE CM DIRECTION (MR) SLK RESET SC SO SI IRQ
R0 R1 R4 R7 R8 R12 R10 R11 K0 K1 K2 R14

DATA 4

MB88301A-P
LDI DAC
BRAKE TAKE UP
BRAKE SUPPLY
REEL MOTOR
REEL-I/V/LAMP

MB88305P
I/O EXPANDER PROG
R.ENCODER SW
REC SAFETY
BREAK DOWN
START SENSOR
END SENSOR
C SW-A
C SW-B
START REEL PULSE
TAKE UP REEL PULSE
LM CONTROL
RM CONTROL

R2 A MUTE
R3 VP
R15 BRAKE
00 CMSTP
01 MRVS
02 CUE
03 REV
04 SERVO
05 SP/LP
06 GND
07 GND
P0 EE
P1 REC
P2 PB
P3 AL
LM STP
SWP. EDGE

SYSTEM CONTROL PCB
MECHA DRIVE PCB

DEMODULATOR PCB

CERAMIC 4.00MHz

BU5

EX X Vcc SI SC SO RESET START IRQ Vss
O0 O1 O2 RI2 RI3 R0 R1 P0 P3 O4 O7 R2 R3 R4 R5 R6 R7 R8

INPUT CTL
BAND CONTROL

MB88303M
TV DISPLAY CONTROL
ADM LDI
VOW
V SYNC
H SYNC

DATA 8

MB88301A-P
DAC LDI
L.P.F
L.P.F
L.P.F
TWIN T
TRACKING
VF
VT

VJ OUT
AFT OUT
MUTE
VIDEO/TV
SEARCH
AFT IN

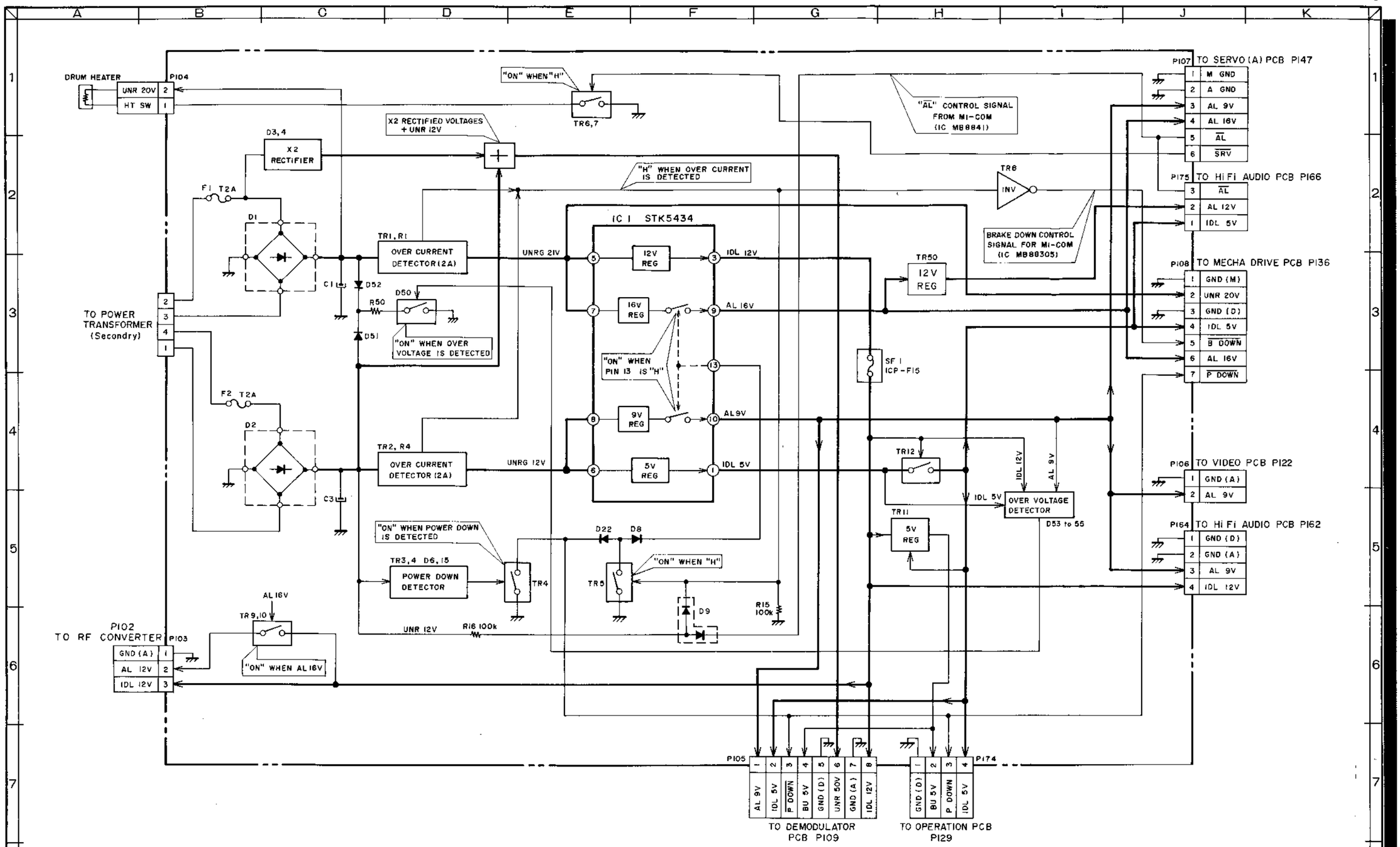
NT/PAL
BSW(5)

INS
SEPA SYNC
TC

VD

IMS MPU
MB88505 285M IMS-E
266M IMS-U
293M IMS-G (4KCMOS)

- TUNER CONTROL
- IMS CONTROL
- TV DISPLAY CONTROL
- VIDEO JUDGE
- TRACKING OUTPUT



POWER SUPPLY BLOCK DIAGRAM

NO.6-2 850901B (A3)

NO.6-2 850501B (A3)

TO HI-FI AUDIO PCB P160

P173 — fs IN, GND

TO SYSTEM CONTROL PCB P144

P137: L-CTL 1, IDL 5V 2, R S SW 3, LM STP 4, D3 5, D2 6, D1 7, D0 8, PROG 9, LDI 10, GND (D) 11

I/O EXPANDER — IC1 MB88305P

TRP, RM6, RM5, LM6, LM5, CS, PROG, D3, D2, D1, D0, VSS, VDD, SRP, CSW A, CSW B, ES, SS, BD, CSW C, POS 1, POS 4, POS 3, POS 2

TAKE UP REEL PULSE SHAPER — IC4

SUPPLY REEL PULSE SHAPER — IC4

D/A CONVERTER — IC2 MB88301A

LDI, D0, D1, D2, D3, VDD, RM, TB, SB, MODE, TM, XI

IDL 5V

TR12, TR13

AL 16V

TR4 ON "L"

IC5 BA6229 — LM6 VCC, LM5, OUT CTL, LM(+), LM(−)

IC5

⑤ ⑥	② ⑩	LOADING MOTOR DIRECTION
H	H	BRAKE
L	H	L H EJECT
H	L	H L LOADING
L	L	OPEN

D1, R19, TR5, TR6

CUE/REV VOLTAGE LIMITER

D20 9V ZENOR, TR27 ON "H", D5, R45

IC6 BA6229 — RM6 VCC, RM5, OUT CTL, RM(+), RM(−)

IC6

⑤ ⑥	② ⑩	REEL MOTOR DIRECTION
H	H	BRAKE
L	H	L H FWD
H	L	H L REV
L	L	OPEN

IC3, D3, D4, VR3 TAKE UP REEL TORQUE, TR19

"L"(GND) AT CONSTANT VOLTAGE DRIVE (FF/FWD), "H"(16V or OPEN) AT CONSTANT CURRENT DRIVE (PB, CUE/REV)

TO POWER SUPPLY PCB P108

P136: P DOWN 1, AL 16V 2, B-DWN 3, IDL 5V 4, GND (D) 5, UNR 20V 6, GND (A) 7

TO ROTARY ENCODER P133

P135: POS-2 5, POS-3 4, GND (D) 3, POS-4 2, POS-1 1

TO SENSOR(L) PCB P132

P134: SLK 1, IDL 5V 2, R-LAMP (−) 3, R-LAMP (+) 4 ← AL 16V, START S 5, END S 6, CSW-B 7, CSW-A 8, GND (D) 9

P172: 1 SLK, 2

TO SYSTEM CONTROL PCB P144

TR17 "H" ON, R50, IDL 5V

TR16 ON "L"

TR2 LEADER OFF

TR3 LEADER OFF

UNR 20V

SF1

REGULATOR — TR24, TR26

R60, 15kHz, R2, R7

REVIEW ON TR23

IC3, TR10, TR11

R26, R25, R27, UNR 20V

R53, "L" ON, TR7, TR8 ON "L"

TO RECTIFY 15kHz RIPPLES

D11, D10, C22, C21, TR14 ON "L", TR15 ON "L"

WHEN POWER DOWN TR8 IS OFF RAPIDLY TO DRIVE MAX BRAKE

"L" WHEN BRAKE COIL IS OPEND, SHORTED OR BRAKE DRIVE TR IS BROKEN

P140: 9 C SW-C, 8 D GND, 7 TR P (C), 6 TR P (DC), 5 TR P (GA), 4 S-LAMP (+), 3 S-LAMP (−), 2 TB (+), 1 TB (−)

CASSETTE SW, TAKE UP REEL BRAKE — TO SENSOR(T) PCB

139: 6 RM (+), 5 RM (−), 4 SR P (GA), 3 SR P (DC), 2 SR P (C), 1 D GND

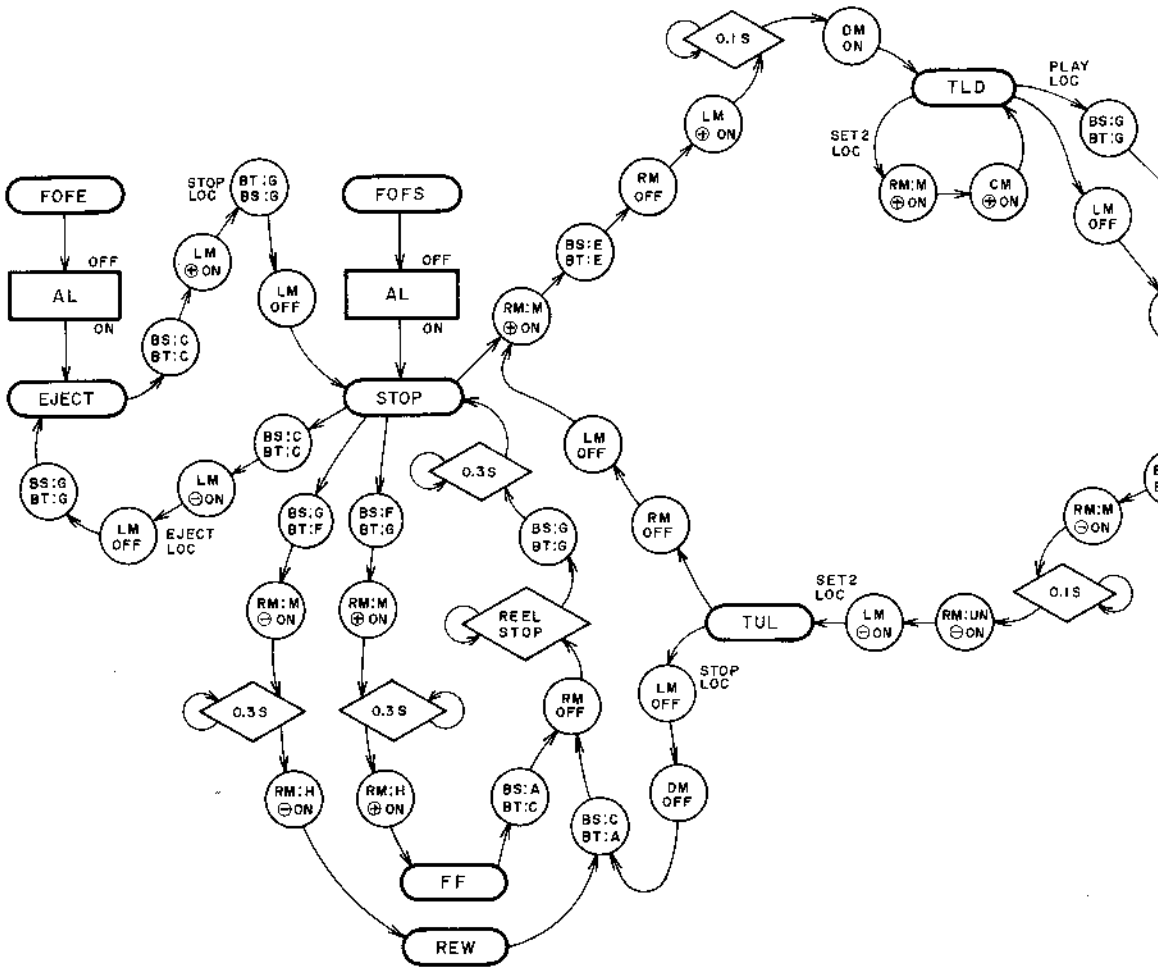
REEL MOTOR — TO SENSOR(S) PCB

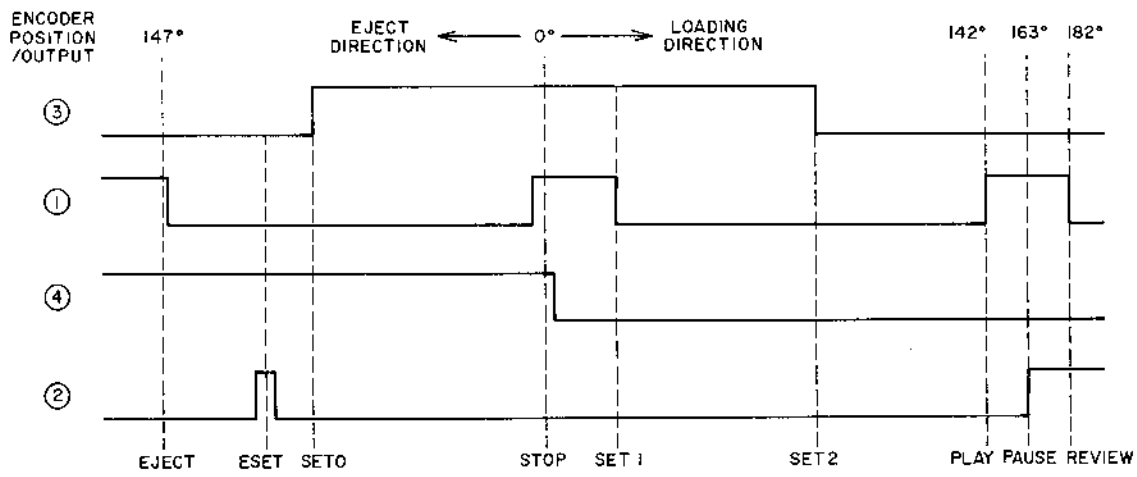
P138: 6 D GND, 5 RS SW, 4 LM (+), 3 LM (−), 2 SB (+), 1 SB (−)

REC SAFETY SW, LOADING MOTOR, SUPPLY REEL BRAKE — TO SENSOR(R) PCB

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
MECHA DRIVE BLOCK DIAGRAM
NO.6-3 841002E (A2)

MECHA MODE AND ACTIONFLOW





ABBREVIATIONS

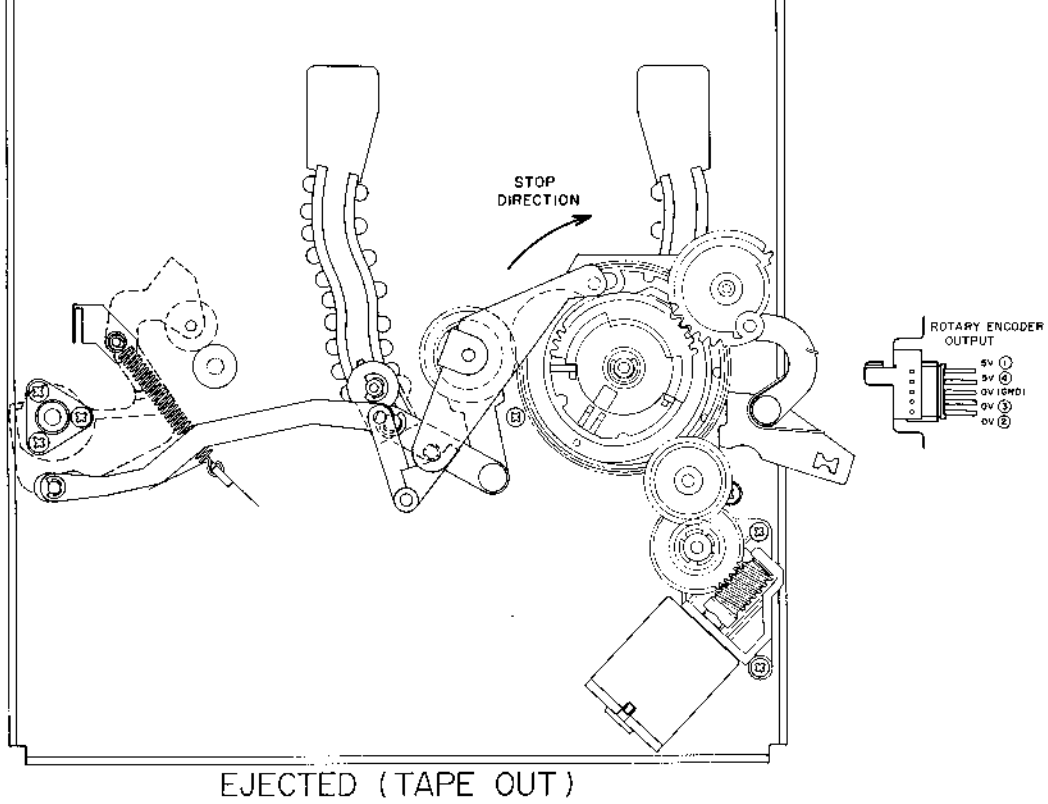
Reel Motor Torque Voltage Drive Mode
- M : Idler Position Change
- H : FF REW

Current Drive Mode
- CL : LP CUE REV
- AE : AEC
- P : PLAY REC
- UN : Unloading
- CS : SP LP CUE REV

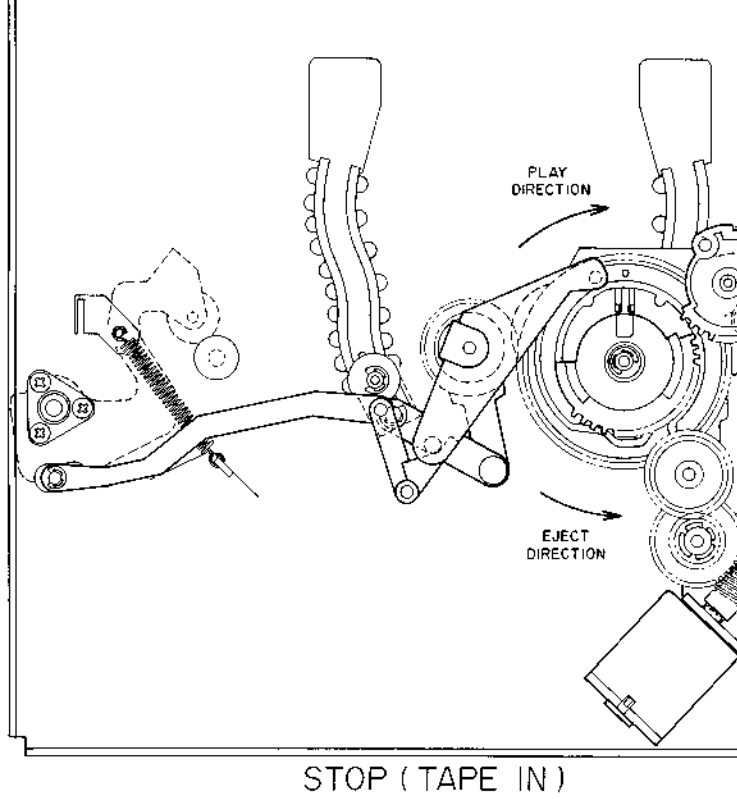
Magnetic Brake Torque
- A : From FF REW To STOP(Supply Side)
- C : From FF REW To STOP(Winding Side)
- D : REV Back Tension
- E : Unloading Brake
- F : FF REW Back Tension(Supply Side)
- G : FF RWD(Take Up Side)

Increase ↓ Decrease

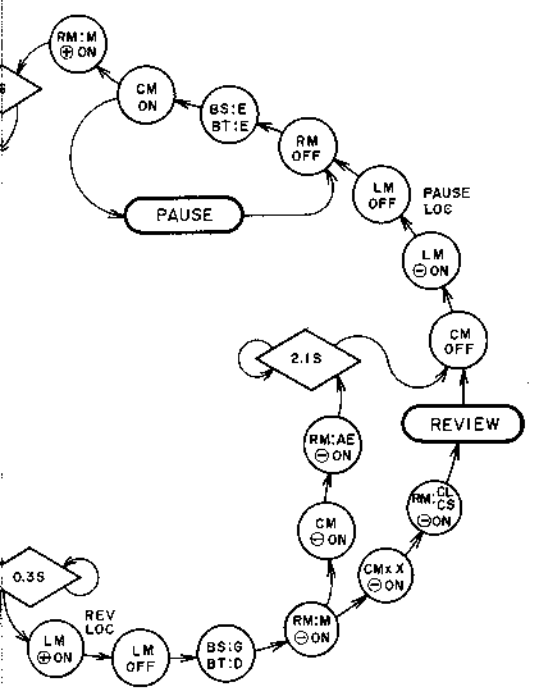
DM : Drum Mot
CM : Capstan
BT : Take Up
BS : Supply M
RM : Reel Mot
LM : Loading
FOFE : Ejecte
(Withe
FOFS : Stoppe
(With
AL : Always
LOC : Locati
TLD : Tape L
TUL : Tape U
LM ⊕ ON : Loa
(Lo
RM ⊕ ON : Ree
(PI
CMxX ⊕ ON : C



EJECTED (TAPE OUT)



STOP (TAPE IN)

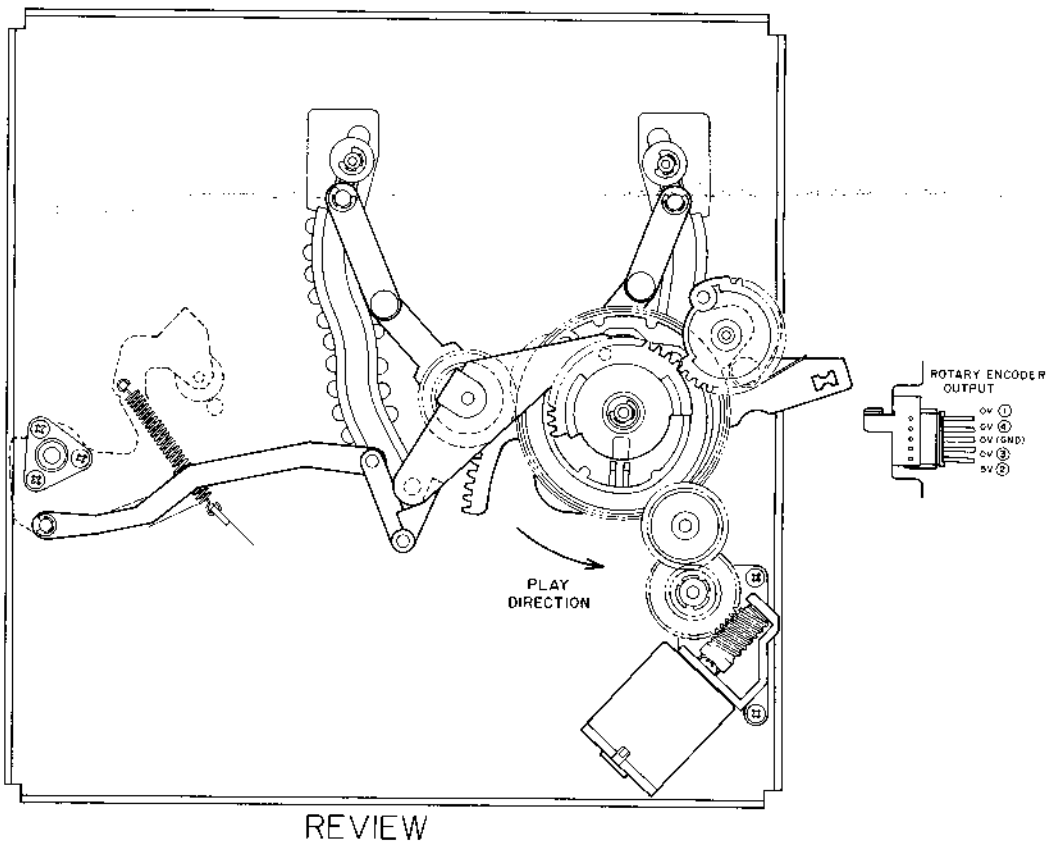


ive Mode

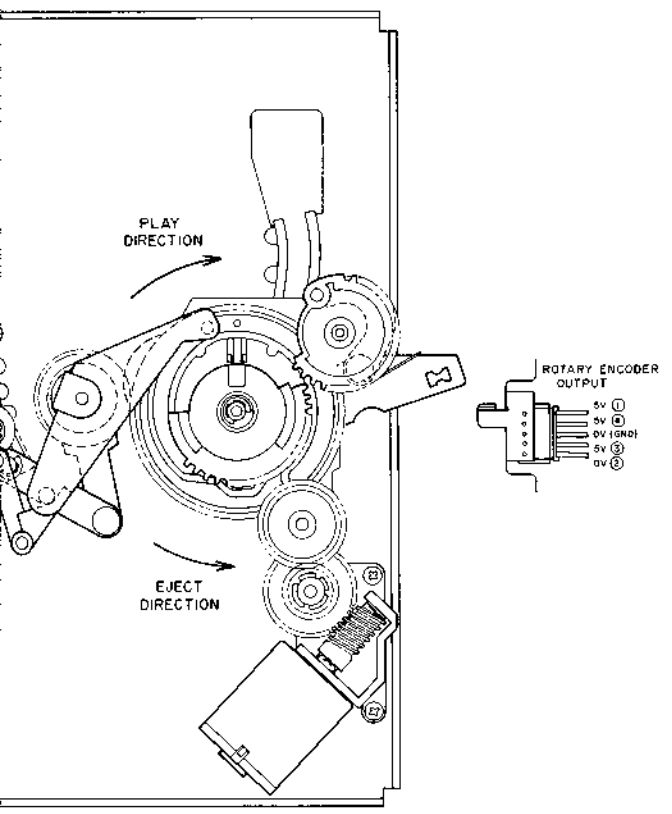
pply Side)
ding Side)

pply Side)

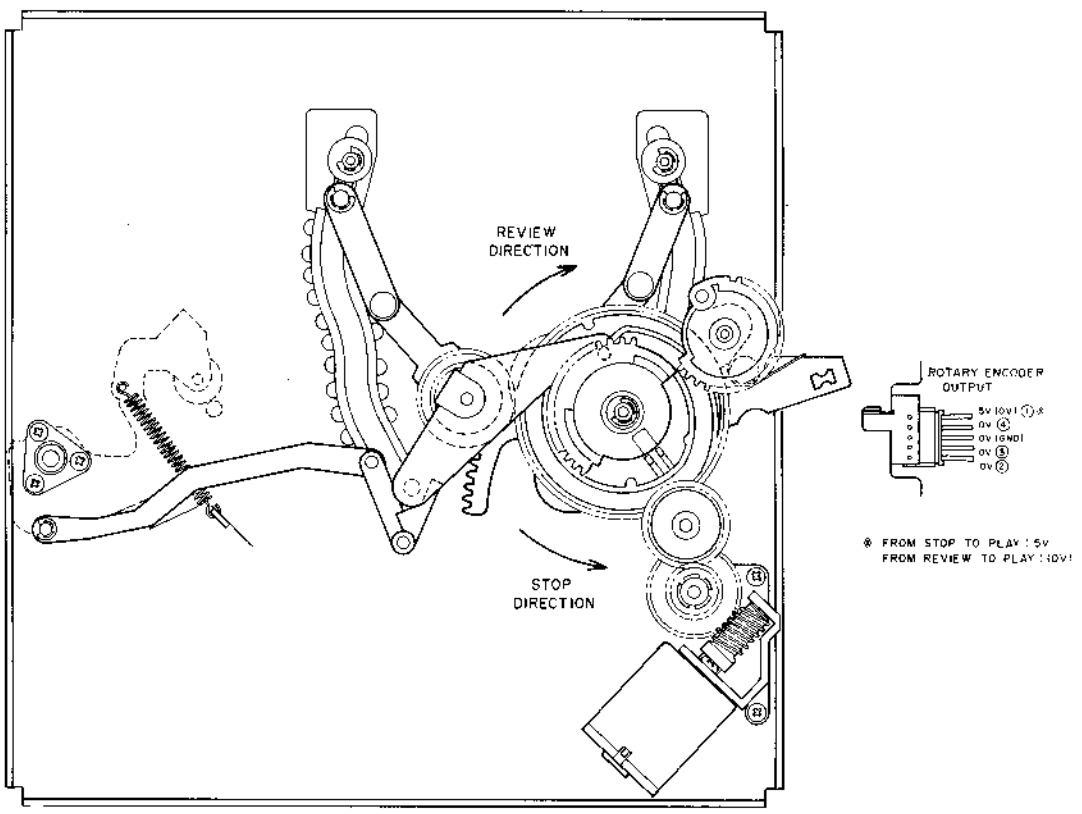
DM : Drum Motor
CM : Capstan Motor
BT : Take Up Magnetic Brake
BS : Supply Magnetic Brake
RM : Reel Motor
LM : Loading Motor
FOFE : Ejected Function Off
(Without Tape)
FOFS : Stopped Function Off
(With Tape)
AL : Always Function
LOC : Location(Detecting Rotary Encoder)
TLD : Tape Loading
TUL : Tape Unloading
LM ⊕ ON : Loading Motor Rotation
(Loading Direction)
RM ⊕ ON : Reel Motor Rotation
(PLAY Direction)
CMxX ⊕ ON : Capstan Motor Speedy Rotation
(CUE Direction)



REVIEW

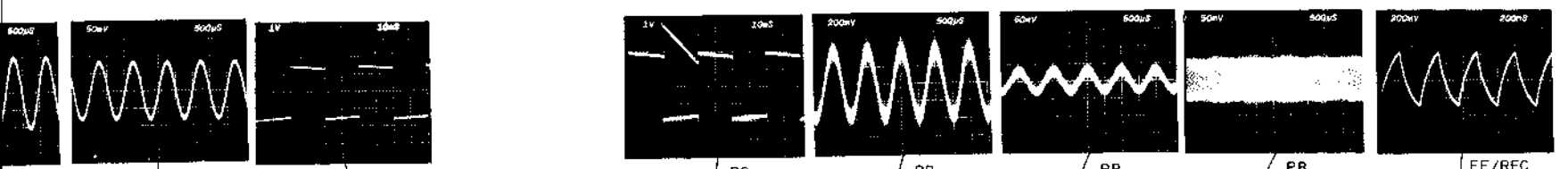


(TAPE IN)



PLAY

EE/REC
EE/REC
PB
EE/REC
PB
PB
EE/REC
PB
PB (NORMAL)
EE/REC /PB
TO MECHA DRIVE PCB P173
TO SERVO(A) PCB P176
TO LEVELMETER PCB J187
TO VIDEO PCB P150
TO VIDEO PCB P152
TO LEVEL METER PCB W191 J192
TO POWER SUPPLY PCB P175
TO POWER SUPPLY PCB P164
TO PHONE JACK PCB J901
TO VIDEO PCB P151
TO SYSTEM CONTROL PCB P179
TO VIDEO PCB P153
VR UP/DOWN KEY INPUT
E-VR OUT(Rch)
E-VR OUT(Lch)
LEVEL IND DRIVE
IC1 LC7530
IC2 M50760-368P (AKAI B-PAL : AUDIO MI-COM)
IC3 HA17072NT (VHS NOISE REDUCTION)
IC5 M51687AP (LINE AMP, HEADPHONE AMP, POWER MUTE)
IC301 µPC1520CA (NORMAL AUDIO LINE AMP EQ AMP & SWITCHING)
IC302 µPC1513HA (NORMAL AUDIO HEAD REC/PB SWITCHING)
HiFi EE LEVEL (Rch)
HiFi EE LEVEL (Lch)
BAR METER SENS(Rch)
BAR METER SENS(Lch)
NORMAL AUDIO REC LEVEL
NORMAL AUDIO PB LEVEL
NORMAL AUDIO BIAS CURRENT
HiFi/NORMAL AUDIO(Lch)
HiFi/NORMAL AUDIO(Rch)
NORMAL AUDIO REC SIGNAL
NORMAL AUDIO PB SIGNAL
AUDIO HEAD
AUDIO ERASE
FULL ERASE HEAD
REC/PB
EE/REC
PB
REC
REC
PB
EE/REC
REC



TO LEVEL METER PCB J187

IND. 0	VR UP	VR DOWN	LEVEL (R)		GND	LEVEL (L)
1	2	3	4		5	6

P166

HiFi EE LEVEL (Rch) VR1

IC8 AF2401 (20 KHz LPF)

TR12 METER AMP, EMPHASIS

BAR METER SENS (Rch) VR3

TR13 TR14 TR15 TR16 TR17 TR18

TR13 to 18 MUTE → ON ("H" → ON)

METER AMP, EMPHASIS TR17

BAR METER SENS (Lch) VR4

HiFi EE LEVEL (Lch) VR2

IC9 AF2401 (20KHz LPF)

TR26 "H" → ON

TR29 "L" → ON

MUTE (ALL AUDIO)

VR302 NORMAL AUDIO OUT

REC EQ

NORMAL AUDIO REC LEVEL

FL301 15KHz /70KHz TRAP

SP/LP EQ SW AGC AUDIO OUT

MUTING AMP

IC301 μPC1520CA (NORMAL AUDIO LINE AMP EQ AMP & SWITCHING)

PB REC LINE AMP PB AMP AGC MUTE LINE IN GND

NORMAL AUDIO PB LEVEL VR301 C304

TP301 NA IN (NORMAL AUDIO IN)

T301 ERASE /BIAS OSC

REC 9V

NORMAL AUDIO BIAS CURRENT VR303

TR302 REC → ON

P123 2 1 GND FE

FULL ERASE HEAD

REC/PB SWITCHING

REC/PB Vcc R325 REC 9V

PRE AUDIO HEAD SW OUT

TO LEVEL METER PCB J187

DOC VOLTAGE VR5 TP6

AL5V R60

PB FM (Rch) PB FM (Lch)

TP9

VR7 TR20 100KHz LPF

HiFi PB LEVEL (Rch)

CARRIER f (Rch) VR6

DEVIATION (R ch) VR8

REC FM OUT (Rch)

1/2 Vcc

1s IN (2.2MHz)

PULSE DELAY B.EDG TRIG HOLD TIME HOLD AMP Vref FM LIMIT GND (R) PB REC PHASE COMP PRE-EM AUDIO LIMIT VCO COUNT DOWN DO DET MUTE DET

IC4 HA12074NT FM MODULATOR / DEMODULATOR

HOLD AMP FM LIMIT GND (L) PHASE COMP PRE-EM AUDIO LIMIT VCO COUNT DOWN PB/REC Vcc (L) PAL/NTSC INJ fo CHK

A-SWP D16 FM MUTE

CARRIER f (Lch) VR9

DEVIATION (Lch) VR11 1/2 Vcc

HiFi PB LEVEL (Lch) VR10 TR21 EF 100KHz LPF

TP3 Carrier f(fo) Check

PB FM (Lch) PB OUT (Lch) REC FM OUT (Lch)

IC7 HA11752 (HiFi AUDIO HEAD AMP)

PB 5V TR22 5V REG PB 9V

CHANNEL SW AMP 2ND AMP CASCODE AMP CH2 IN CASCODE AMP CH1 IN 2ND AMP CH SW AGC DET VCA FM AGC OUT GAIN SW GND

TR23 TR24 PB FM (L+R) EF

FL3 1.4 MHz BPF FL4 1.8MHz BPF

L9, C130 2.2MHz LPF

GAIN CHANGABLE AMP Vcc 2

TR25 REC → "H" → ON TR26 REC → "H" → ON TR27 PB → "H" → ON

TP1 TP2 TP5 REC CURRENT TP7

P161

6	AH CH2 (REC)
5	AH CH1 PB
4	GND
3	GND
2	AH CH1 (PB)
1	AH CH1 (REC)

CH2 CH1 HiFi AUDIO HEAD

IC6 μPC1522HA (HiFi REC AMP)

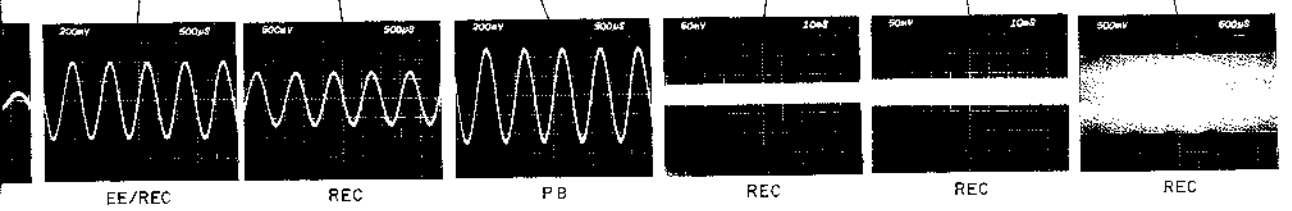
MIX AMP OUTPUT DC DET

FM IN1 Vcc FM IN2 REF R FB

Rch 2.2M LPF REC FM CURRENT (Rch) VR13

Lch 1.8M LPF REC FM CURRENT (Lch) VR12

REC FM 1.8M(Rch) REC 9V REC FM 1.4MHz (Lch) REC FM(MIX) OUT

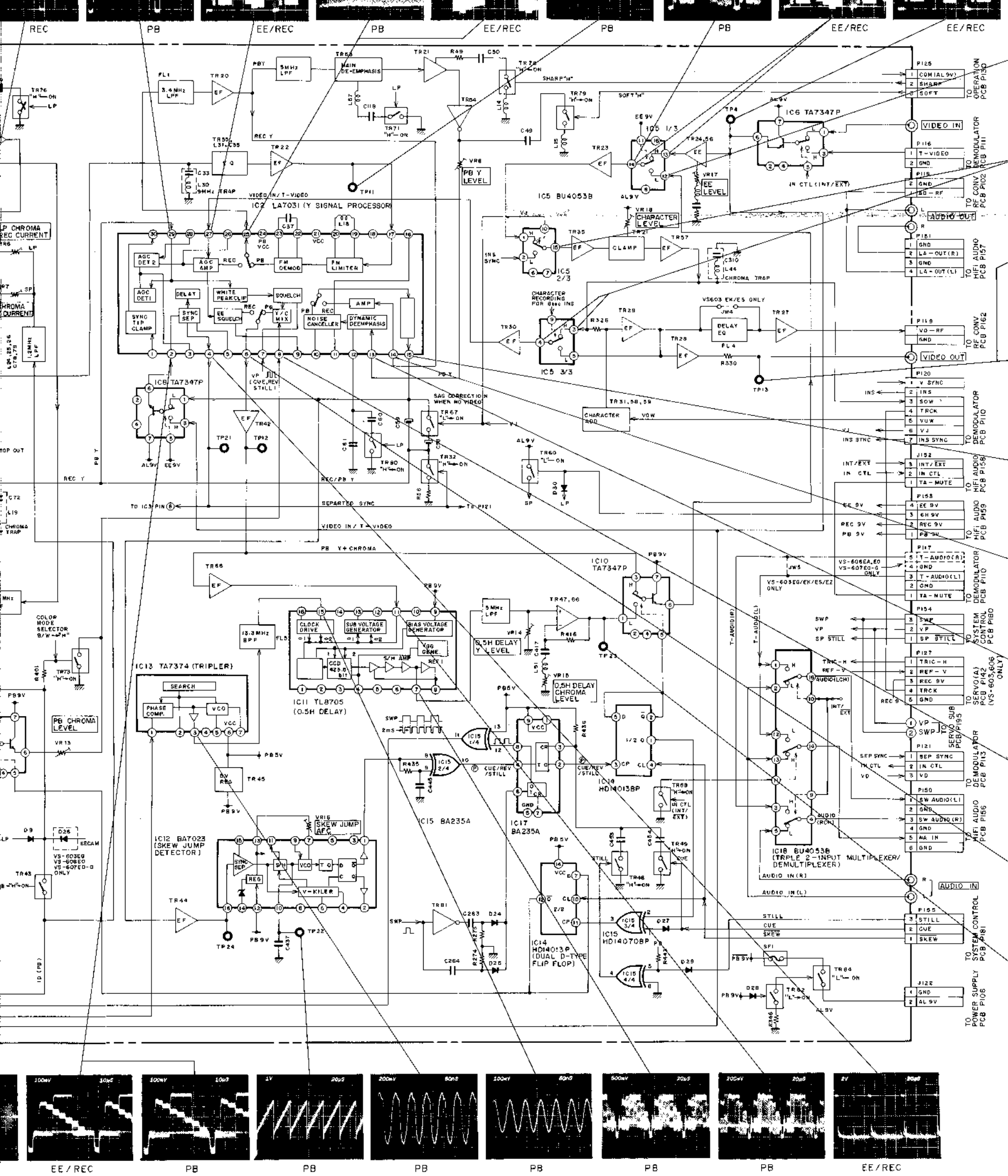


UNLESS OTHERWISE SPECIFIED, PHOTOGRAPHS ARE TAKEN AT SP MODE

VS-603EG/EK/ES/EO
VS-606EA/EO
VS-607EO-G
HiFi AUDIO
BLOCK DIAGRAM
NO.6-4 851108A (A1)

A
B
C
D
E
F
1
2
3
4
5
6
7
8
REC
PB
PB
PB
REC
PB
P149
TO LP VIDEO HEAD
LPCH2(P)
LPCH2(R)
GND
GND
LPCH1(R)
LPCH1(P)
P804
TEST POINT
GND
SWEEP(LP)
SWEEP(SP)
SWP
P126
TO SP VIDEO HEAD
SPCH1(P)
SPCH1(R)
GND
GND
SPCH2(P)
SPCH2(R)
TP2
PB RF CH2 (LP)
TR3 "H"→ON
TR1 "H"→ON
TR2 "H"→ON
TR5 "H"→ON
LP
SP/REC
SP STILL
TR74 "H"→ON
R3
D1
D2
D3
D4
SP
REC 9V
TP1
C101
TR9,51
REC AMP
TR10
EF
TR4 "H"→ON
TR7 "H"→ON
TR6 "H"→ON
TR8 "H"→ON
PB 9V
Y/CHROMA REC
PB RF CH1 (SP)
PB RF CH2 (SP)
R113
C109
R112
VC1
SYNC f
TP9
L20
R120
C111
R115
R116
D11
D10
NOR GATE
TR52 "L"→ON
SP STILL
TR75 "H"→ON
D14
R118
D13
D12
TR69 "H"→ON
CARRIER OFF-SET AT LP MODE WITH SWITCHING PULSE
VR2
DARK CLIP
VR1
WHITE CLIP
EE/REC 9V (PB9V)
TR50 "H"→ON
R117
SWP
R262
R212
TP3
PB5V
R8
SWP (SP STILL→"L")
5V REG
D7
D8
LP
1C16 NJM772 (PB PRE AMP-LP)
2nd AMP
1st AMP
SW
PB RF (LP) SP STILL→PB RF CH2
PB RF (SP) SP STILL→PB RF CH2
IC7 TA7342P
TR18
TP6
PB9V
C20
L6
C21
R13
R62
C19
VR3
PB FM PEAKING
TR76 "H"→ON
TR12
PB Y PEAKING AMP
TR13
EF
PB CHROMA
CHROMA REC
Y REC
1C1 LA7034 (PRE AMP & Y SIGNAL PROCESSOR)
TP5
R76
PHASE EQ L29 C82 R92
TP7
LP
VR4
LP Y REC CURRENT
SP
VR5
SP Y REC CURRENT
VR6
LP CHROMA REC CURRENT
VR7
SP CHROMA REC CURRENT
1.2MHz LPF
L24,25,26 C78,79
Y/C MIX
BUFF AMP
CH1 PRE AMP
SW AMP
CH2 PRE AMP
FM MOD
CLAMP
FB AMP
MAIN PRE EMPHER
WHITE CLIP
DARK CLIP
AGC AMP
AGC DET
DOC
DYNAMIC EMPHASIS
SWP (SP STILL→"L")
L58
C116
C117
TR77 "H"→ON
DL1
1H DELAY LINE
1H DELAY FOR DROP OUT COMPENSATION
TR19
EF
C72
L19
CHROMA TRAP
REC Y
TO IC3 PIN (6)
FL1
3.4MHz LPF
AGC DET 2
AGC AMP
DELAY
SYNC TIP CLAMP
SYNC SEP
IC8 TA7347P
AL9V
EE9V
C33
L30
5MHz TRAP
IC4 AN6342N
COUNT DOWN
DIC
LOCAL OSC 4.433619MHz
401H FREE RUN FAEQUENCY
TP14
TP15
VR9
D21
VR10
FL3
6.06MHz BPF
TR33
EF
C254
C255
VC2
X2
4.43361.9MHz
4.43557MHz
(514-1/8-1H)
C258
R267
WAVE SHAPER
TR63
TR34
R260
V0 (To P121)
REF-V (To P127)
V SYNC (To P120)
PB9V
TR72 "H"→ON
C268
TR81 "H"→ON
TRIC→H (LP)
TR78 "H"→ON
TRIC→H
R282
C267
VR19
PB CARRIER LEAK
C211
L37
15KHz TRAP
TR38
EF
PB CHROMA AMP
TR39
1.2MHz LPF
COLOR MODE SELECTOR B/W→"H"
TR73 "H"→ON
R401
IC13 TA7374 (TRIPLER
SEARCH
PHASE COMP.
VCO
IC9 TA7347P (ANALOG SW)
DL2 (SKEW JUMP 1H)
1H DELAY LINE
TR40
TP20
TP25
VR11
VR13
PB CHROMA LEVEL
1H DELAY CHROMA LEVEL
TR41
EF
SUB CONV
PAL
BURST DEEMPR KILLER AMP
RP DET
PB-MAIN CONV
COLOR DET
VXO
180fH VCO
INVERTER
φ4 SHIFTER
1/4
REC APC DET
P.B APC DET
401H VCO
ACC DET
B-G.P GENERATOR
4.43MHz VXO
REC AFC DET
P.B AFC DET
VO GEN
HALF H KILLER
ACC AMP
REC MAIN CONV BURST EMP KILLER
IC3 LA7032 (CHROMA SIGNAL PROCESSOR)
4.433619MHz
X1
TP17
TP18
C244
FL2
4.43 MHz BPF
R241
R242
C243
R243
C242
C240
TR36
EF
TR35
REC CHROMA
TP16
TR82 "H"→ON
EE/REC→LOW FREQUENCY CONVERTED REC CHROMA
PB→ID PULSE
ID (PB)
DL3 2H DELAY LINE EFD BR 124A 13A
TR37
EF
VS-605EG
VS-606EO
VS-607EO-G ONLY
TR68 "H"→ON
SECAM (COLOR MODE SELECTOR)
D9
D26
SECAM
VS-605EG
VS-606EO
VS-607EO-G ONLY
TR43
PB→"H"→ON
TR44
EF
TP24
IC12 BA7023 (SKEW JUMP DETECTOR)
EE/REC
PB
EE/REC
PB
EE/REC
PB
EE/REC
PB

12

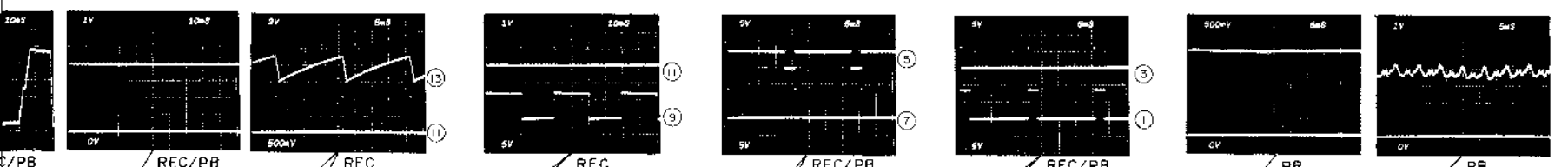


UNLESS OTHERWISE SPECIFID, PHOTOGRAPHS ARE TAKEN AT SP MODE

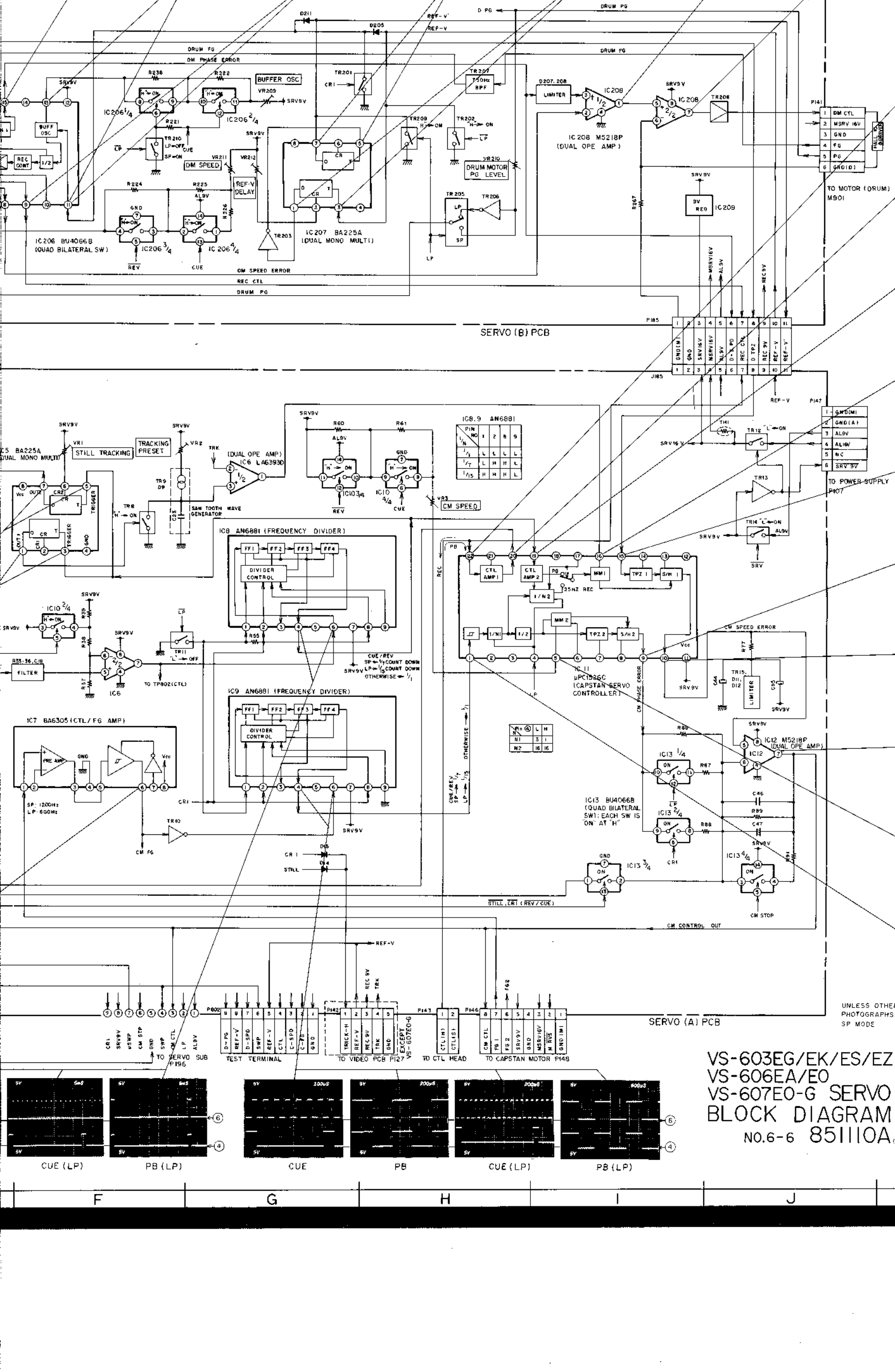
VS-603EG/EK/ES/EZ VS-606EA/EO VS-607EO-G VIDEO BLOCK DIAGRAM

NO.6-5 851109A

SERVO SUB PCB
IC2 BA236A (DUAL MONO MULTI)
IC1 BU4053B
TO VIDEO PCB ① ②
TO SERVO(A) ① to ⑨
PB
PB
PB
REC/PB
REC/PB
REC/PB
REC/PB
REC/PB
IC203 HD14053BP (TRIPLE 2-CH MULTIPLEXER/DEMULTIPLEXER)
CH2 PB SWITCHING POINT
CH1 PB SWITCHING POINT
REC SWITCHING POINT
AUDIO SW POINT (CH1)
AUDIO SW POINT (CH2)
IC202 BA226A (DUAL MONO MULTI)
IC204 BA634 (ONE STAGE FREQUENCY DIVIDER)
IC205 μPC1584C (DRUM SPEED)
IC206 BU4066B (QUAD BILATERAL SW)
REC PHASE
DRUM FG
DM PHASE
DM SPEED
AUDIO SWITCHING PULSE
IC1 LC4077 (QUAD 2-INPUT EXCLUSIVE NOR GATE)
IC2 BU4013B (DUAL D-TYPE FLIP FLOP)
IC3 BU4011B (QUAD 2-INPUT NAND GATE)
IC4 BA6302 (FG SYSTEM SPEED CONTROL)
IC5 BA225A (DUAL MONO MULTI)
STILL TRACKING
TRACKING PRESET
IC6
IC7 BA6305 (CTL/FG AMP)
IC10 BU4066B (QUAD BILATERAL SW)
TO HiFi AUDIO P162
TO SYSTEM CONTROL P183
TO SYSTEM CONTROL P182
TO SERVO SUB P196
PB
PB
REC/PB
CUE
PB
CUE (LP)
PB (LP)



SERVO (B) PCB



UNLESS OTHERWISE SPECIFIED, PHOTOGRAPHS ARE TAKEN AT SP MODE

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G SERVO BLOCK DIAGRAM

NO.6-6 851110A(A1)

SELECTOR PCB V1027C5040

SELECTOR PCB V1027C5042 EA 5030 EO-G, EO

SELECTOR PCB V1027C5031

SELECTOR PCB V1027C5033

POWER SUPPLY PCB V1030A5092(5ED)

A/C HEAD PCB V1030D5180

FULL ERASE PCB V1030D5170

RF CONV BOOSTER
MDLL6D023A EG
61023A EK, ES
5D073A EZ
5S150A EA
6S023A EO, EO-G

TV TUNER UNIT

VIF UNIT 6A0013BA1

ST BLOCK 6A0015 1A2

DEMODULATOR PCB
VS-603EG/EK/ES/EZ
V1030A5051(6ED)
VS-606EA/EO
VS-607EO-G
V1030A5440

HiFi AUDIO PCB V1030A5410

LEVEL METER PCB

V1031D5060
V1031D5010 2/2

HiFi AUDIO HEAD

MECHA DRIVE PCB V1030A5380(2ED)

SENSOR(T) PCB V1030D5020(2ED)

ENCODER

SENSOR(L) PCB V1030D5140(2ED)

SENSOR(S) PCB V1030D5340(2ED)

SENSOR(R) PCB V1030D5150

SW(EJ) PCB V1030D5190

EJECTOR BLK

TAKE UP REEL BRAKE COIL

CASSETTE SW PCB V1030D5320

SENSOR LED PCB V1030D5350

REC SAFETY

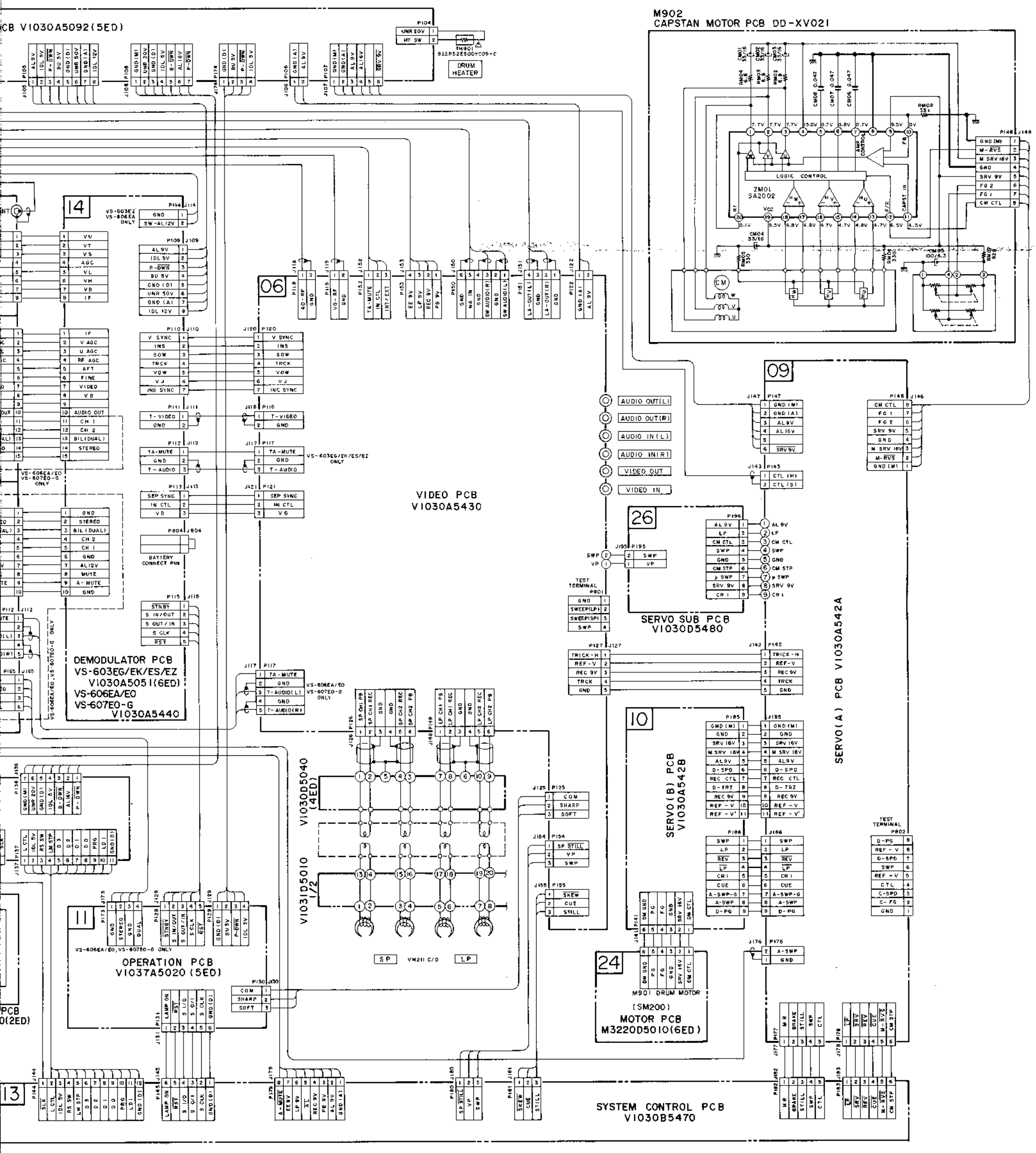
LOADING MOTOR

SUPPLY REEL BRAKE COIL

REEL MOTOR

OPERATION PCB V1037A5020 (5ED)

001798



WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

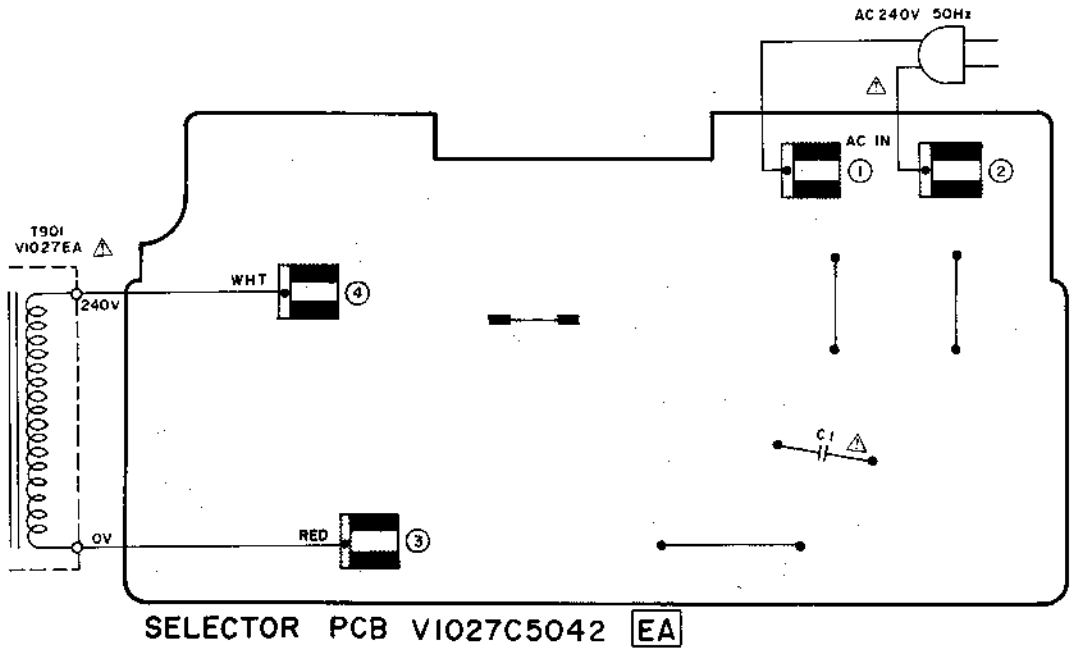
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

NOTE

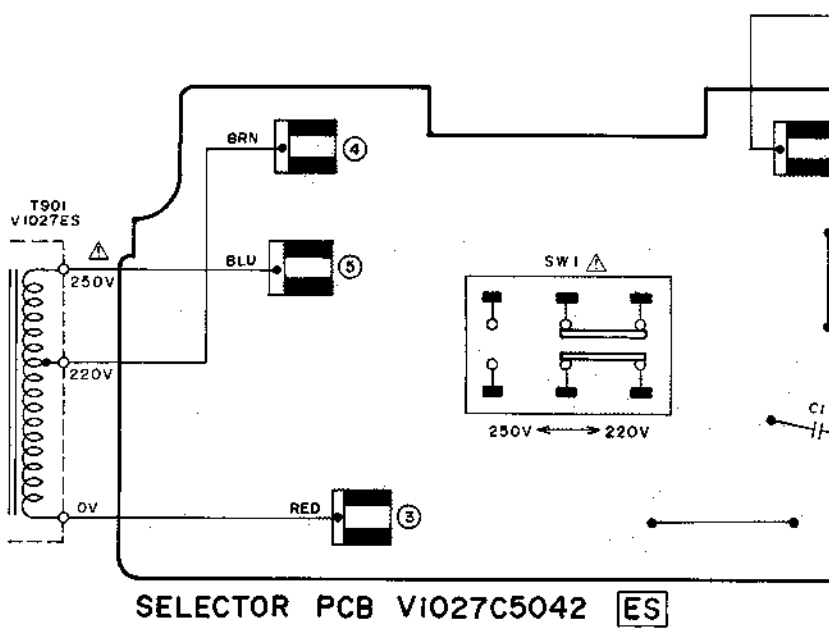
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
CONNECTION DIAGRAM

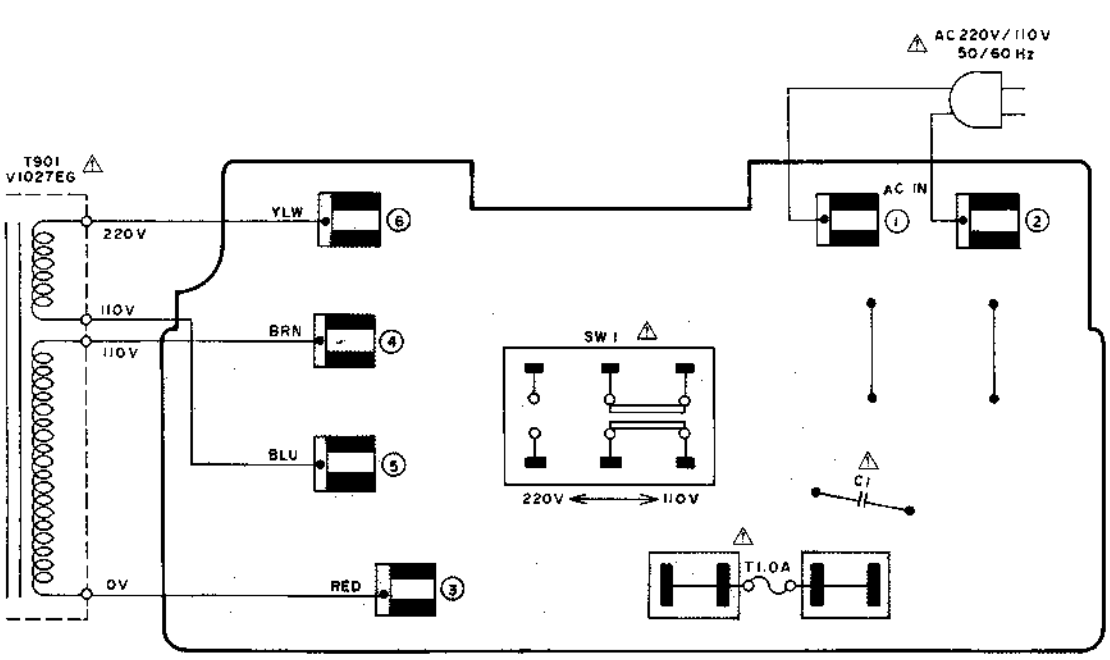
NO.20-1 851102A₂



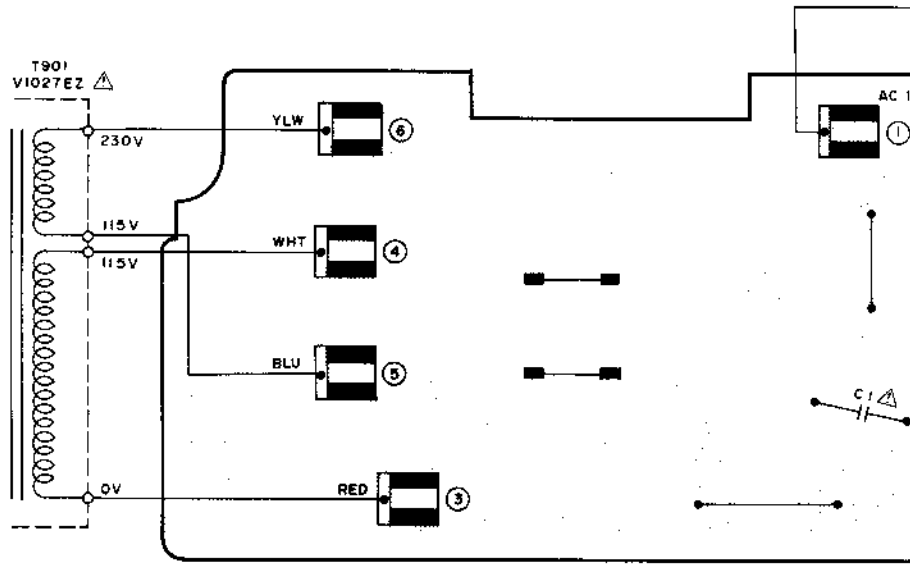
SELECTOR PCB V1027C5042 EA



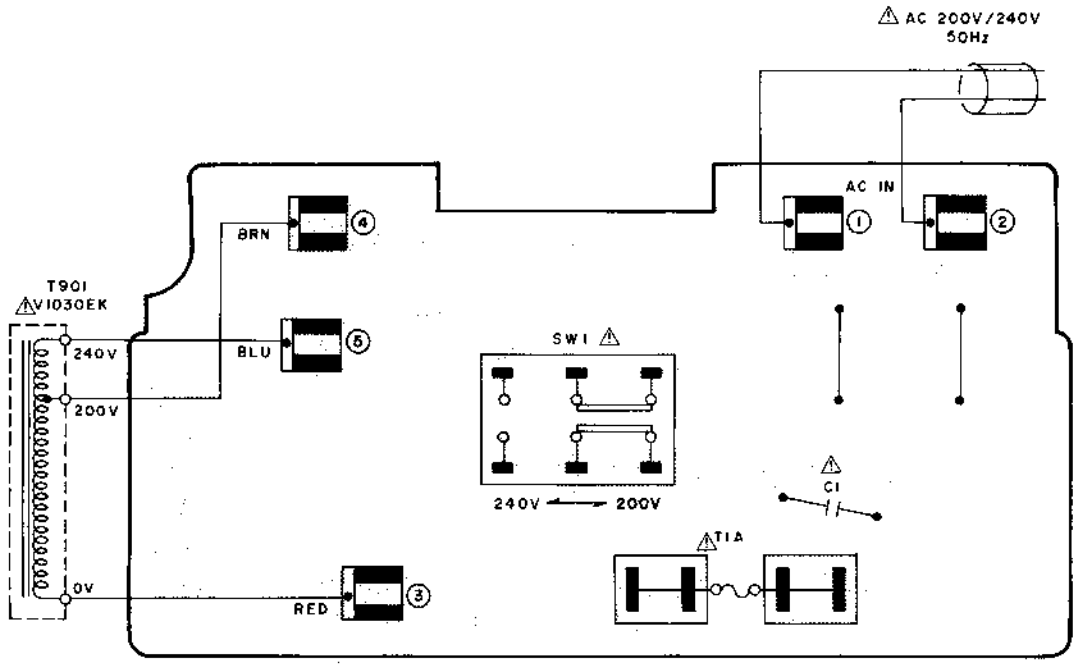
SELECTOR PCB V1027C5042 ES



SELECTOR PCB V1027C5031 EG



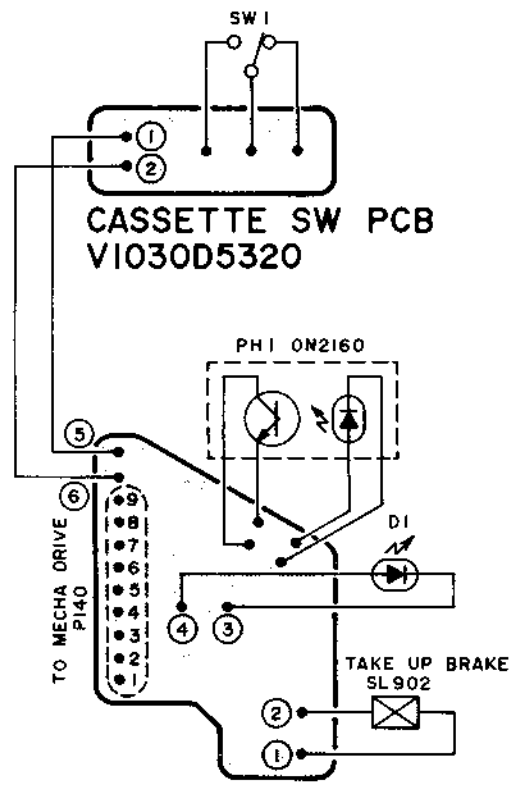
SELECTOR PCB V1027C5033 EZ

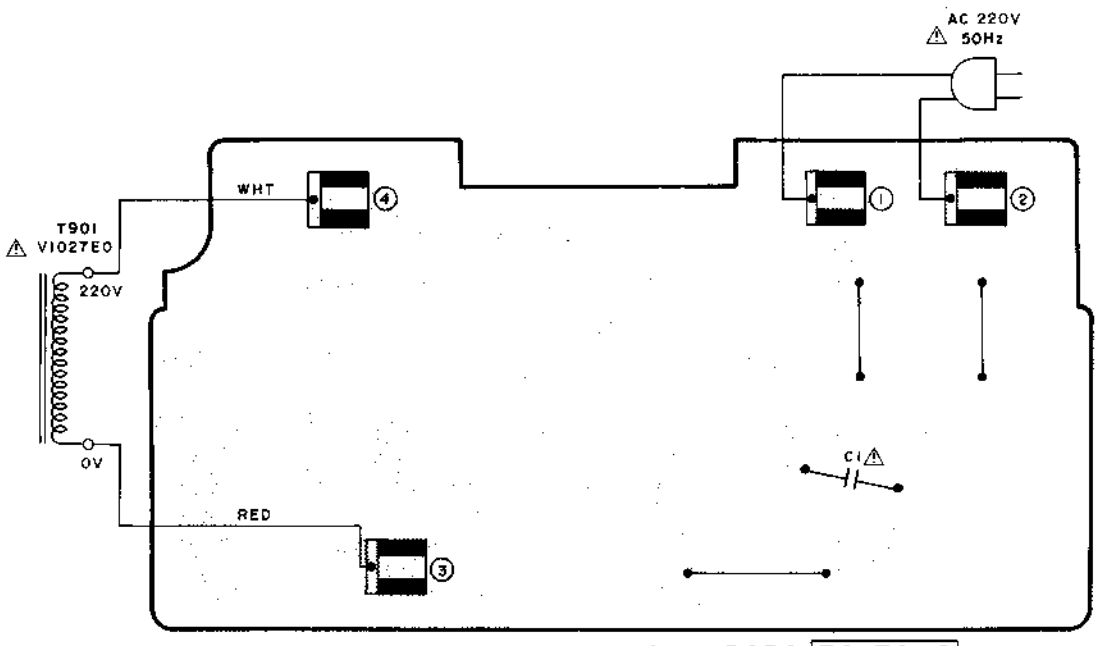


SELECTOR PCB V1027C5040 EK

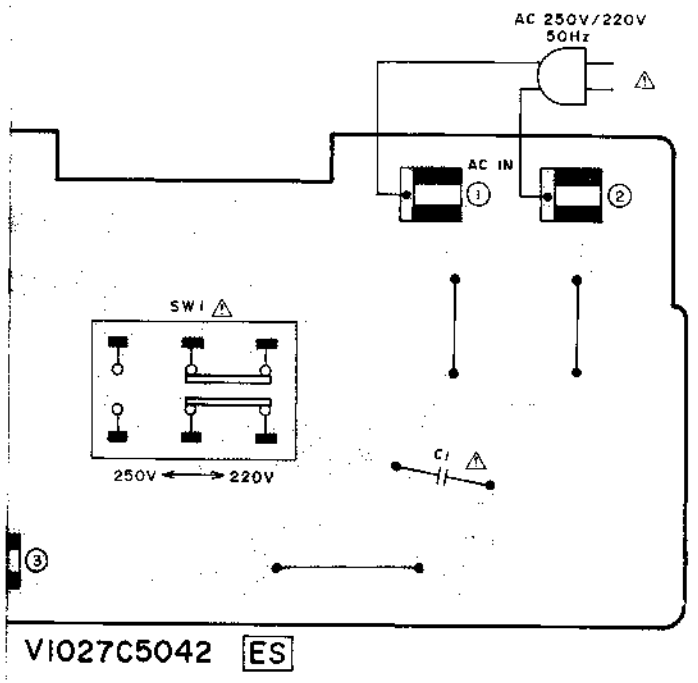
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

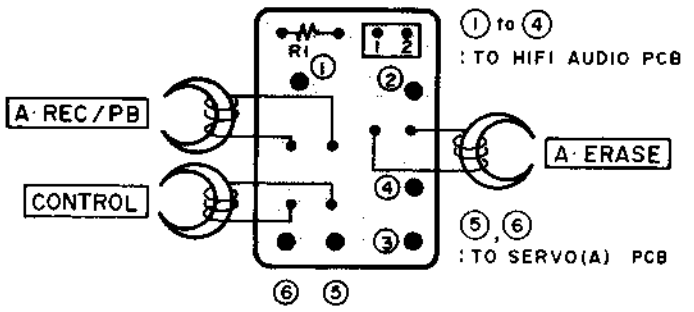




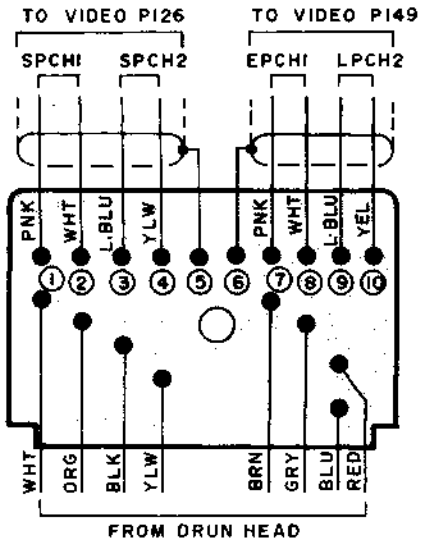
SELECTOR PCB V1027C5030 EO, EO-G



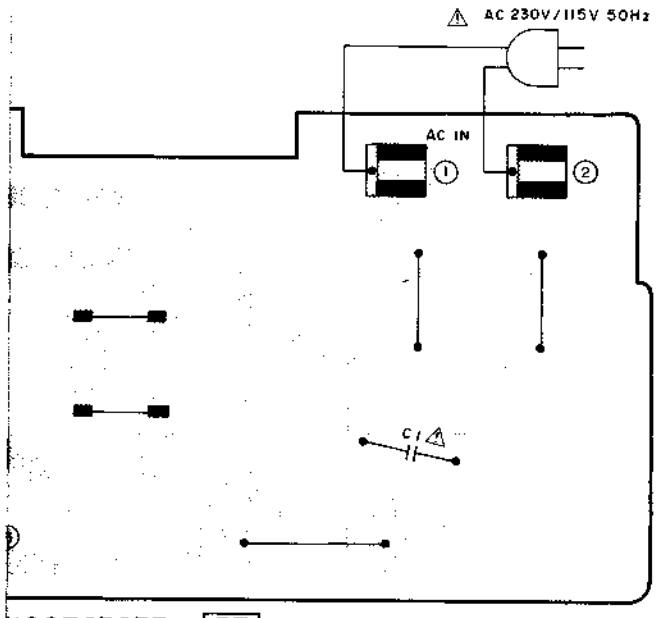
V1027C5042 ES



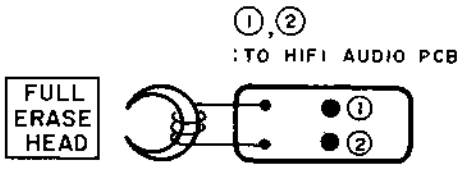
A/C HEAD PCB
V1030D5180



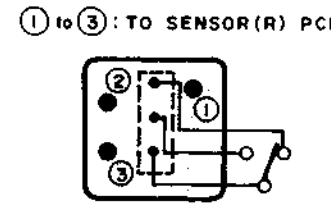
JUNCTION PCB
V1030D5040(4ED)



1027C5033 EZ



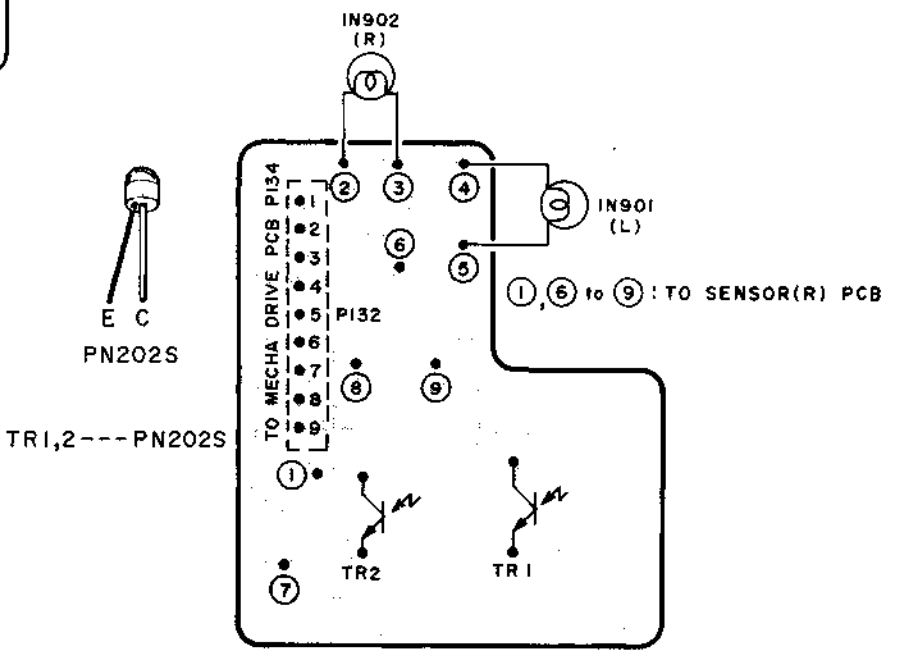
FULL ERASE PCB
V1030D5170



SWITCH (EJ) PCB
V1030D5190

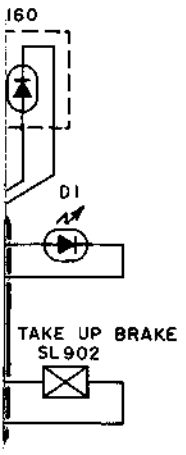
AL COMPONENTS FOR CONTINUED SAFETY.
COMPONENTS ONLY WITH MANUFACTURER'S

MPOSANTS CRITIQUES DE SÉCURITÉ.
DE SÉCURITÉ DE L'APPAREIL,
ÈCES RECOMMANDEES PAR LE FABRICANT

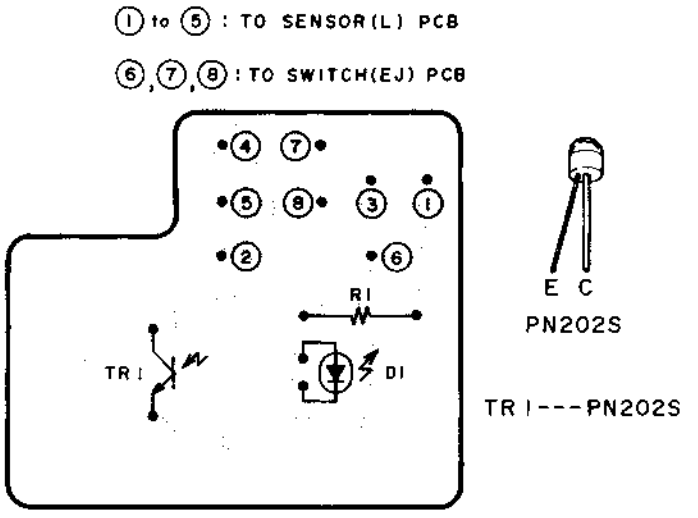


SENSOR (L) PCB
V1030D5140 (2ED)

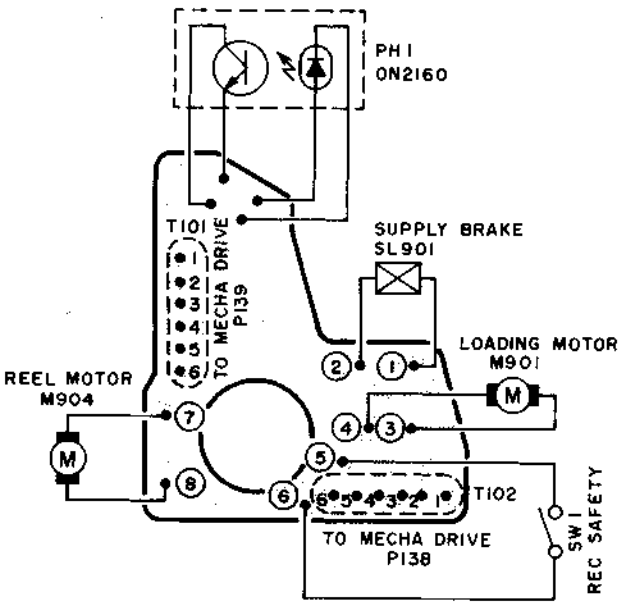
PCB



B



SENSOR (R) PCB V1030D5500



SENSOR (S) PCB
V1030D5520

16

TO DRUM HEATER
P104
UNR 20V 1
HT SW 2

TO POWER TRANS. T901
P101
AC12V 1
AC16V 2
AC16V 3
AC12V 4

TO RF CONV P102
P103
GND(A) 1
AL 12V 2
IDL 12V 3

F1 T2A
C13 100/50(M) (B.P)
D3 DS135E
AC19V
TH1 3.3N
D4 DS135E
D1 DBA30
C5 0.01(Z)
C6 0.01(Z)
C7 0.01(Z)
C8 0.01(Z)
20.9V
C28 100/25(M)
21.8V
C1 6800/35(M)
C2 0.01(Z)
D13 DS135E

R1 1W 0.22
20.9V
R3 1k
20.8V
0.1V TR1 2SA1115 (D,E,F)
R2 68k
R4 1W 0.22
13.1V
R5 1k
12.9V
0.1V TR2 2SA1115 (D,E,F)
R6 68k
C27 10/16(M)

D50 DRA2TB
R51 1k
R52 1k
R50 2W 20.7V 0.47(k)
D52 DS135E
D51 DS135E
D53 MA1062-L
D54 MA1130-H
D55 MA1100-L

C33 100/6.3
C16 0.01(Z)
C17 100/25(M)
C18 0.01(Z)
C19 10/25(M)
C20 220/25(M)
C21 0.01(Z)
C22 330/16(M)
C23 0.01(Z)
R28 1k

TR12 2SC2236
R31 560 5.8V
SF-1 1CP-F15 15.6V
12.1V
5.1V 0V
1 2 3 4 5 6 7 8 9 10 11 12
IDL 5
IDL 12
UNRER 20
UNRER 12
UNRER 20
UNRER 12
AL 16
AL 9
20.9V 13.0V 13.0V 16.1V 9.1V 10.3V

IC1 STK5434
R16 100
R17 5k
R14 1.5k
R15 2.4k
R11 2k
R12 1k
R13 1k
R8 600
R9 1.2k
R6 1.4k
R10 3.9k
R7 2.2k
R5 2k
22k
C2
C3
Q1 Q2 Q3 Q5 Q6 Q7
ZD1

F2 T2A
D2 4B4B41
AC12V
C12 0.01(Z)
C9 0.01(Z)
C11 0.01(Z)
C10 0.01(Z)
12.6V
C3 10000/25(M)
C4 0.01(Z)
C30 10/25(M)
R8 1.5k
R9 680
D15 HZ5A-2
0.7V
TR3
TR3,4 2SC2603 (D,E,F)
D6 HZ7A-2
R7 680
R11 680
R10 100k
D7 GMA-01
TR4 0V
4.8V
49.5V
C14 220/80 (M)

TR9 2SA1286 (G,H,J)
12.1V
11.5V
12.1V
R23 1/4W 2.2k
0.1V
R22 100k
0.6V
TR10 2SC2603 (D,E,F)
R21 10k
R20 100k
C32 0.01(Z)

TR9,10,R20 to R23:
EXCEPT VS-603EZ, VS-606EA

P105
1 AL 9V
2 IDL 5V
3 P DOWN
4 BU 5V
5 GND(D)
6 UNR 50V
7 GND(A)
8 IDL 12V
TO DEMODU. PCB P109

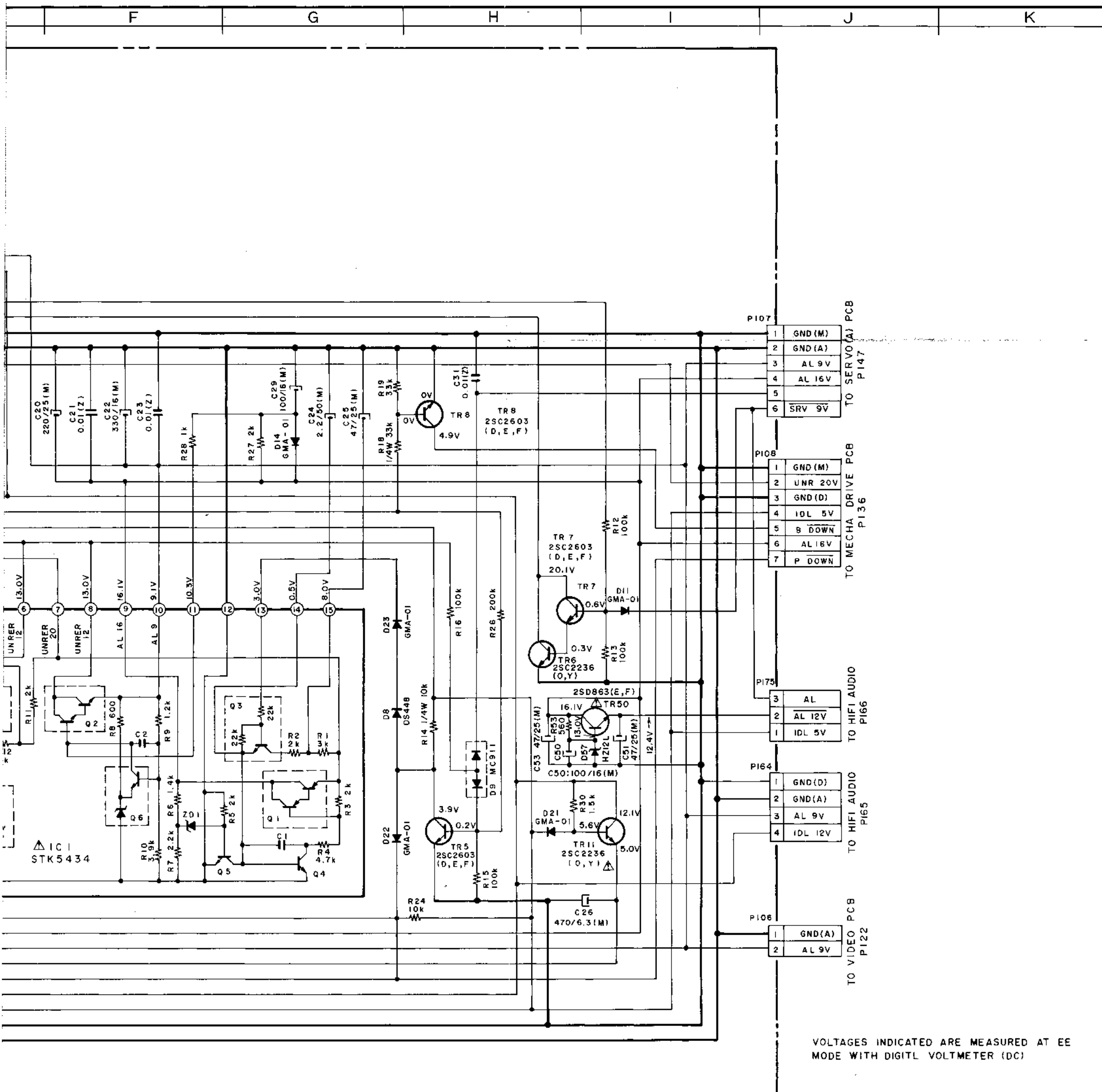
P174
1 GND(D)
2 BU 5V
3 P DOWN
4 IDL 5V
TO OPERATION PCB P129

POWER SUPPLY PCB
V1030A5092(5ED)

E C B 2SD863
E C B 2SA1286 2SC2236
E C B 2SA1115 2SC2603

WARNING: ⚠INDICATES
REPLACE SAF
RECOMMEND
AVERTISSEMENT: ⚠IL I
POUR MAINTE
NE REMPLAC

001649



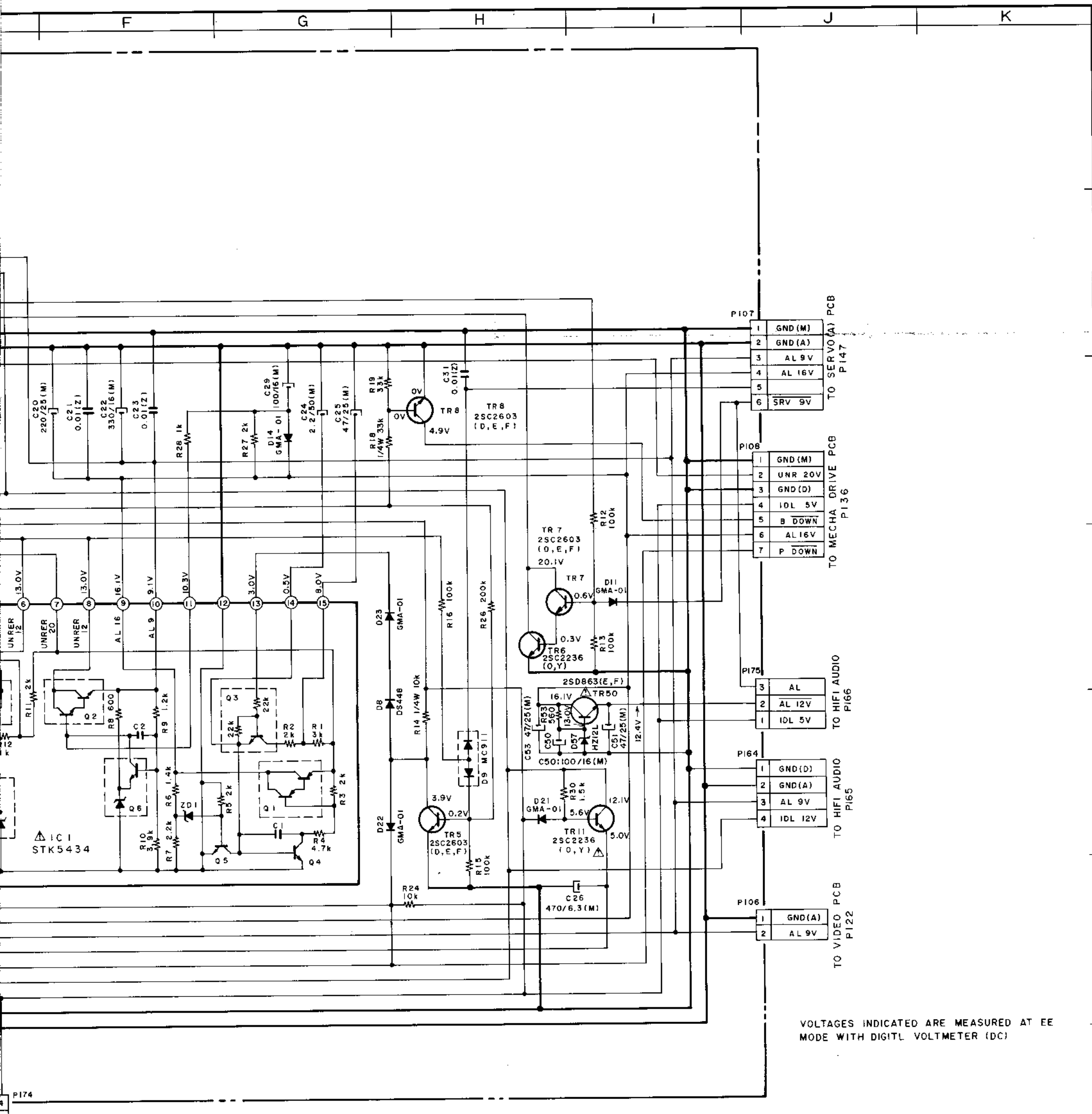
VOLTAGES INDICATED ARE MEASURED AT EE MODE WITH DIGITL VOLTMETER (DC)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
POWER SUPPLY
SCHEMATIC DIAGRAM
NO.20-2 850412D (A2)
2



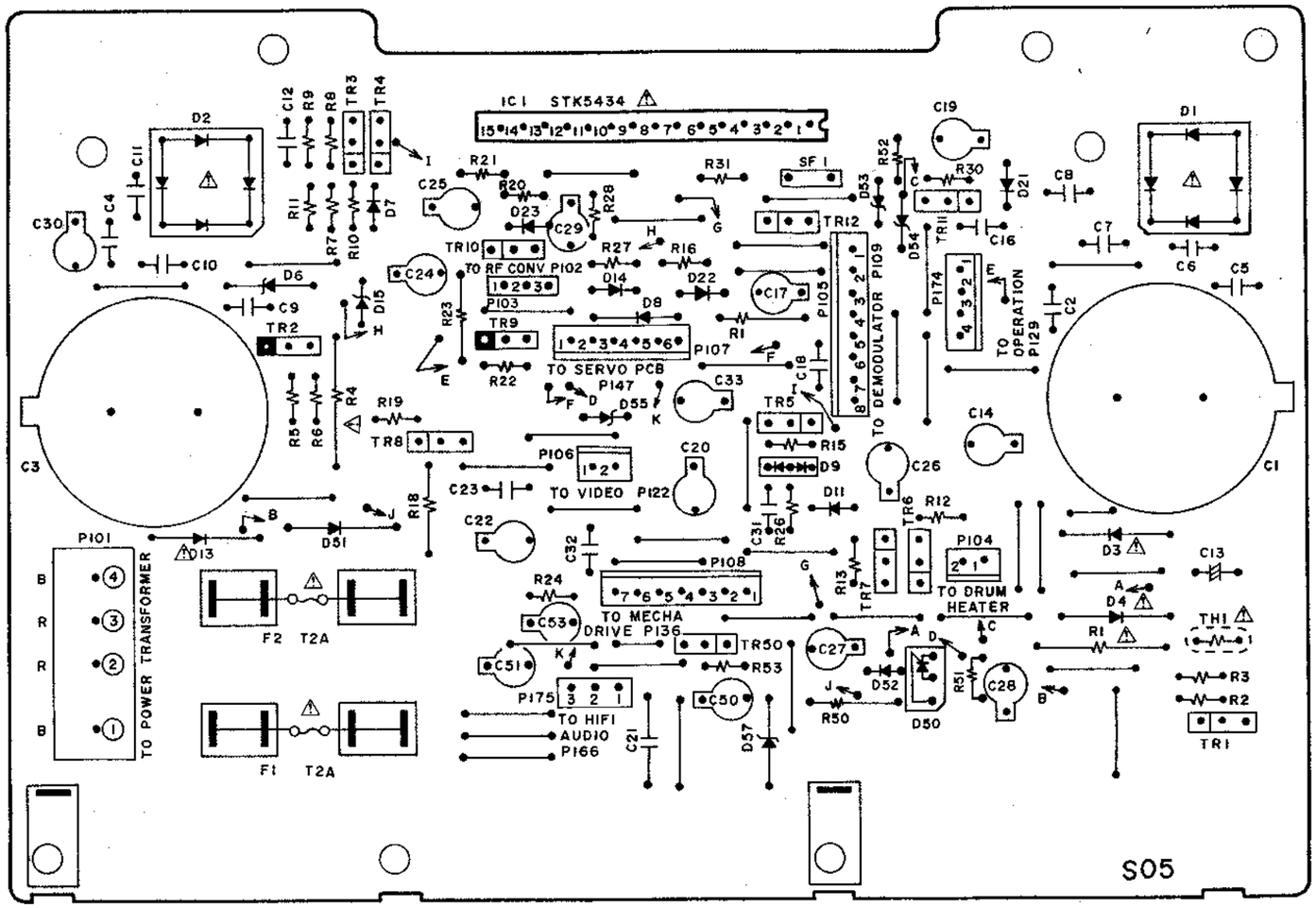
VOLTAGES INDICATED ARE MEASURED AT EE MODE WITH DIGITL VOLTMETER (DC)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

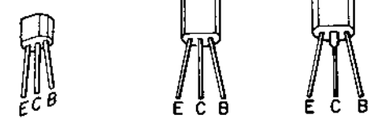
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
POWER SUPPLY
SCHEMATIC DIAGRAM
NO.20-2 850412D (A2)
2



POWER SUPPLY PCB V1030A5092(5ED)

TR1,2 ---------2SA1115
TR3,4,5,7,8, ----2SC2603
TR6,11,12 ------2SC2236
TR9 ----------2SA1286
TR50 ---------2SD863



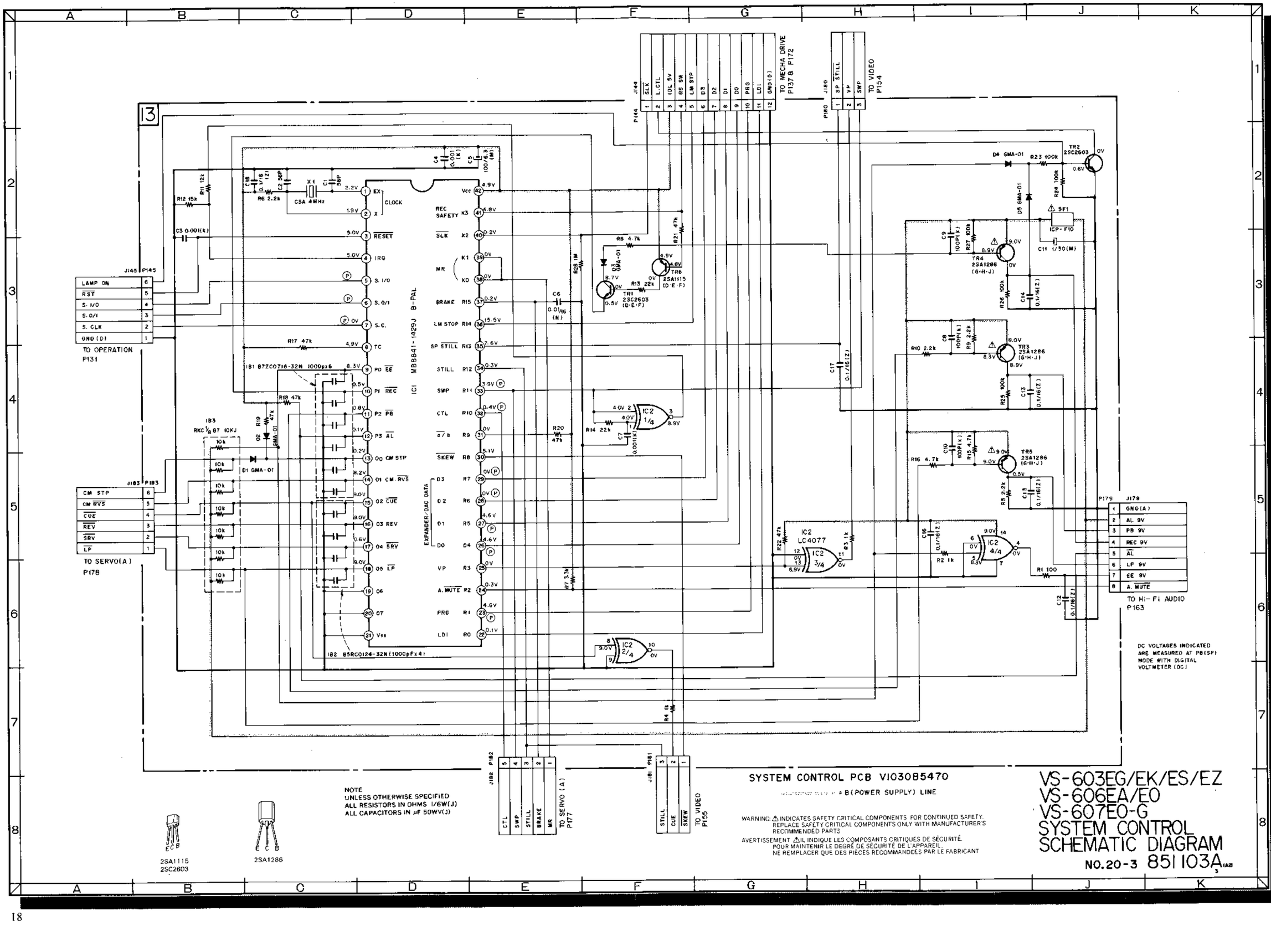
2SA1115 2SC2603 | 2SA1286 2SC2236 | 2SD863

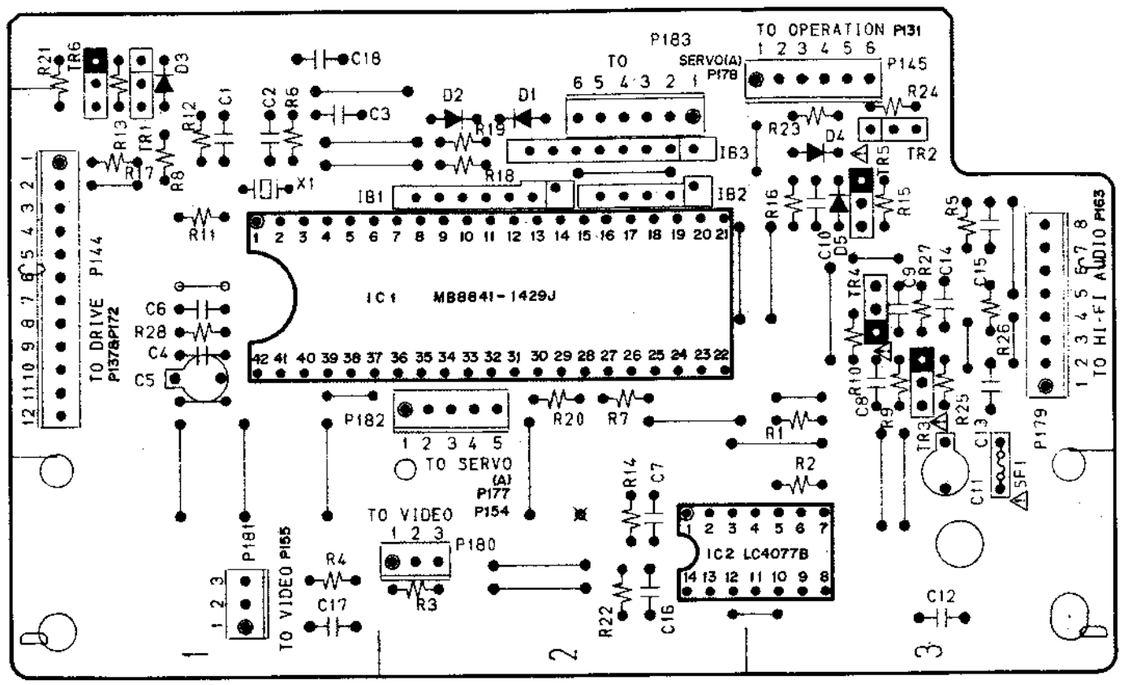
= PNP TRANSISTOR

= NPN TRANSISTOR

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

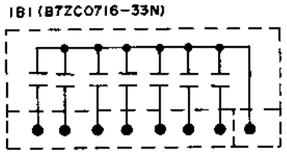
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


13
J144 P144
SLK
L.CTL
LOL 5V
RS SW
LM STP
D3
D2
D1
D0
PRG
LDI
GND(0)
TO MECHA DRIVE P137 & P172
J180 P180
SP STILL
VP
SWP
TO VIDEO P154
J145 P145
LAMP ON 6
RST 5
S. I/O 4
S. O/I 3
S. CLK 2
GND (D) 1
TO OPERATION P131
J183 P183
CM STP 6
CM RVS 5
CUE 4
REV 3
SRV 2
LP 1
TO SERVO(A) P178
IC1 MB8841-142SJ B-PAL
EX
X
RESET
IRQ
S. I/O
S. O/I
S.C.
TC
PO EE
P1 REC
P2 PB
P3 AL
00 CM STP
01 CM. RVS
02 CUE
03 REV
04 SRV
05 LP
06
07
Vss
Vcc
REC SAFETY K3
SLK K2
MR K1 K0
BRAKE R15
LM STOP R14
SP STILL R13
STILL R12
SWP R11
CTL R10
R9
SKEW R8
D3 R7
D2 R6
D1 R5
D0 R4
VP R3
A.MUTE R2
PRG R1
LDI R0
EXPANDER/DAC DATA
CLOCK
R11 12k
R12 15k
C3 0.001(K)
C18 0.1/16(Z)
C2 56P
C1 56P
X1 CSA 4MHz
R6 2.2k
C4 0.001 (K)
C5 100/6.3 (M)
R17 47k
R18 47k
R19 47k
D2 GMA-01
D1 GMA-01
183 RKC1/8 B7 10KJ
182 B5RC0124-32N (1000pF x 4)
181 B7ZC0716-32N 1000pF x 6
R8 4.7k
R21 47k
R28 1M
D3 GMA-01
TR1 2SC2603 (D·E·F)
TR6 2SA1115 (D·E·F)
R13 22k
C6 0.01/16 (K)
R20 47k
R14 22k
C7 0.001(K)
IC2 1/4
IC2 2/4
R7 3.3k
R4 1k
J182 P182
CTL
SWP
STILL
BRAKE
MR
TO SERVO(A) P177
J181 P181
STILL
CUE
SKEW
TO VIDEO P155
D4 GMA-01
D5 GMA-01
R23 100k
R24 100k
TR2 2SC2603
9F1
ICP-F10
C11 1/50(M)
C9 100P(K)
R27 100k
TR4 2SA1286 (G·H·J)
R26 100k
C14 0.1/16(Z)
C8 100P(K)
R9 2.2k
TR3 2SA1286 (G·H·J)
R10 2.2k
R25 100k
C13 0.1/16(Z)
C17 0.1/16(Z)
C10 100P(K)
R15 4.7k
TR5 2SA1286 (G·H·J)
R16 4.7k
R5 2.2k
C15 0.1/16(Z)
IC2 LC4077
IC2 3/4
IC2 4/4
R22 47k
R3 1k
C16 0.1/16(Z)
R2 1k
R1 100
C12 0.1/16(Z)
P179 J179
GND(A)
AL 9V
PB 9V
REC 9V
AL
LP 9V
EE 9V
A.MUTE
TO Hi-Fi AUDIO P163
DC VOLTAGES INDICATED ARE MEASURED AT PB(SP) MODE WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)
2SA1115
2SC2603
2SA1286
SYSTEM CONTROL PCB VI030B5470
B(POWER SUPPLY) LINE
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
SYSTEM CONTROL
SCHEMATIC DIAGRAM
NO.20-3 851103A(A2)

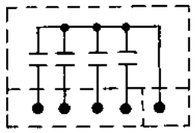


SYSCON PCB V1030B5470

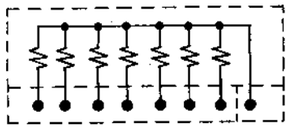
IB1 (B7ZC0716-33N)



IB2 (B5RC0124-33N)



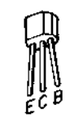
IB3 (RKC1/8B7-10KJ)



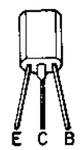
TR1, 2 ..... 2SC2603 (D,E,F)
TR 3 to 5 ..... 2SA1286 (G,H,J)
TR6 ..... 2SA1115 (D,E,F)

= PNP TRANSISTOR

= NPN TRANSISTOR



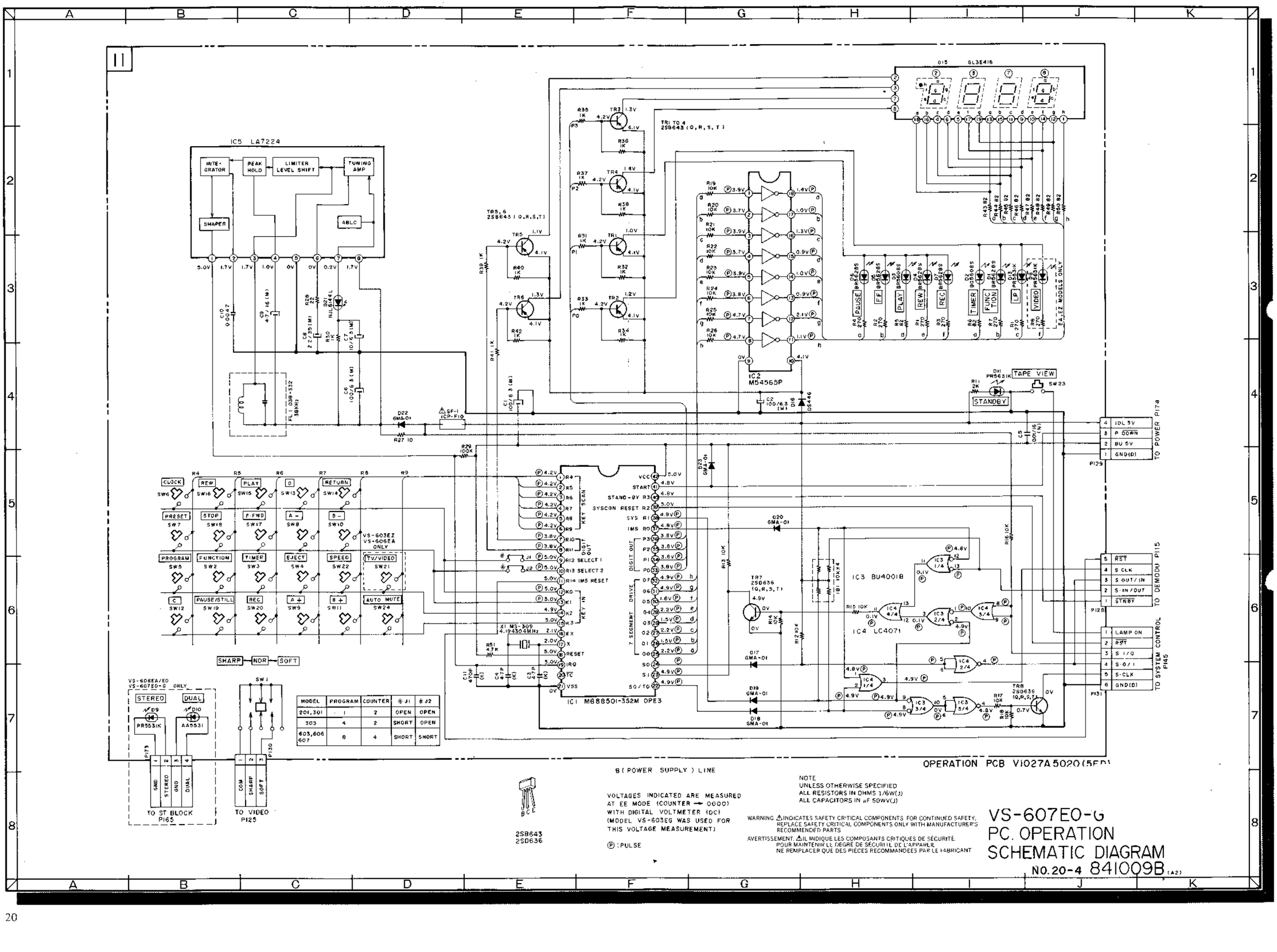
2SA1115
2SC2603



2SA1286

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



MODEL	PROGRAM	COUNTER	※J1	※J2
201,301	1	2	OPEN	OPEN
303	4	2	SHORT	OPEN
603,606 607	8	4	SHORT	SHORT

2SB643
2SD636

B(POWER SUPPLY) LINE

VOLTAGES INDICATED ARE MEASURED AT EE MODE (COUNTER → 0000) WITH DIGITAL VOLTMETER (DC) (MODEL VS-603EG WAS USED FOR THIS VOLTAGE MEASUREMENT)

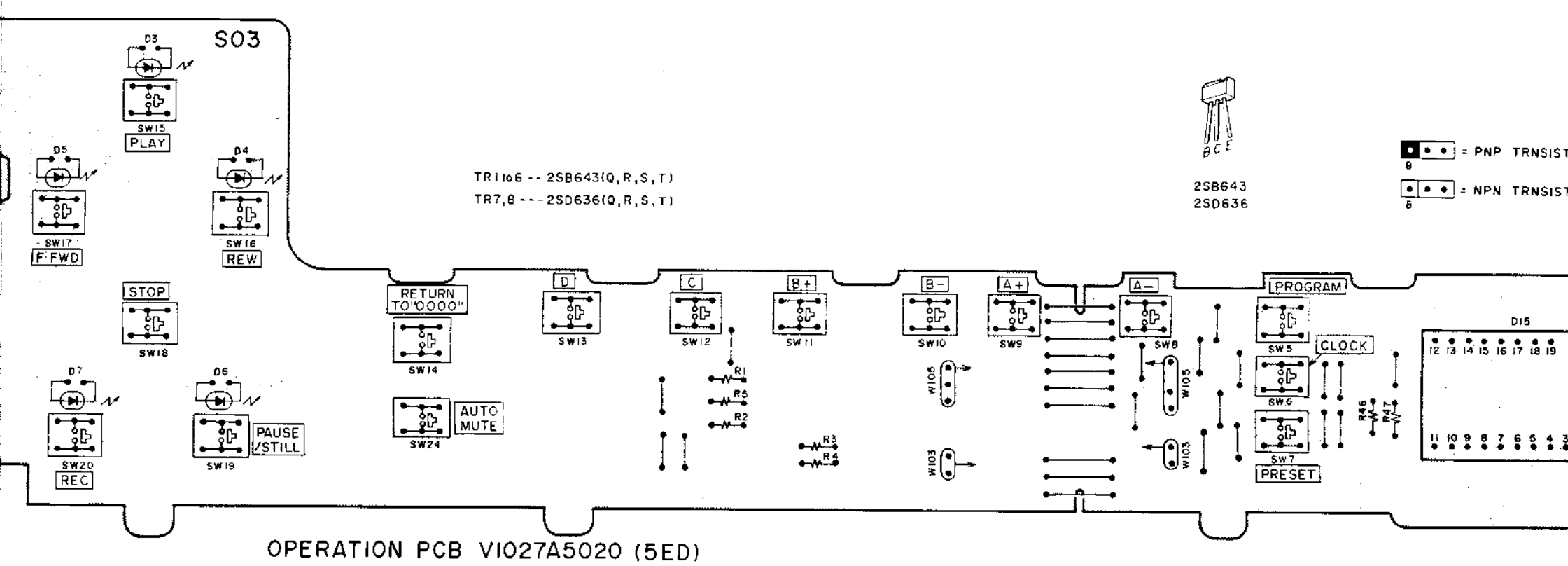
Ⓟ : PULSE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

WARNING ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

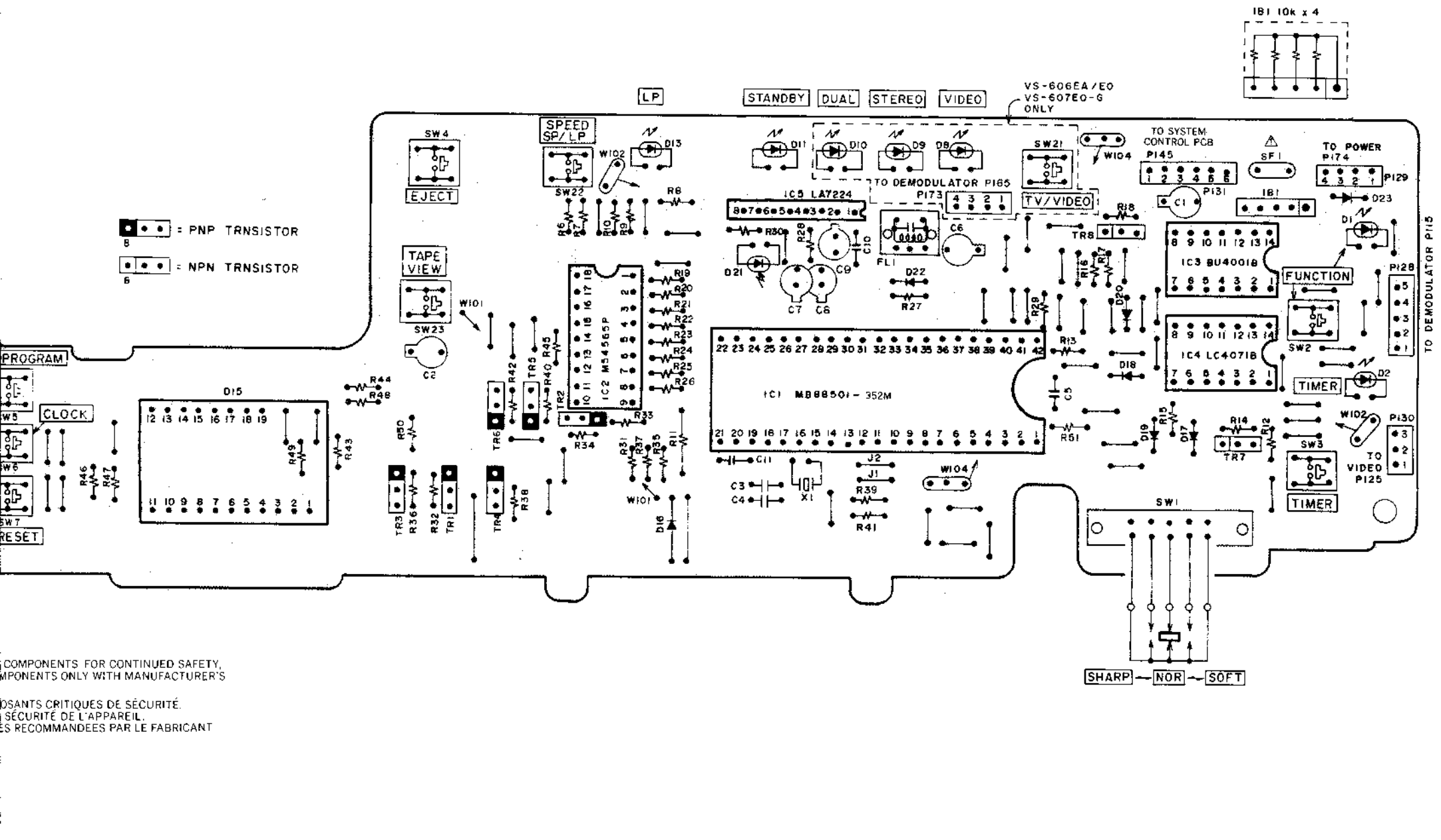
VS-607EO-G
PC. OPERATION SCHEMATIC DIAGRAM
NO.20-4 841009B (A2)



OPERATION PCB V1027A5020 (5ED)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



COMPONENTS FOR CONTINUED SAFETY,
MPONENTS ONLY WITH MANUFACTURER'S

OSANTS CRITIQUES DE SÉCURITÉ.
SÉCURITÉ DE L'APPAREIL,
ÉS RECOMMANDEES PAR LE FABRICANT

SERVO(B) PCB V1030A542B

SERVO SUB PCB V1030D5480

SERVO(A) PCB V1030A542A

TO VIDEO PCB ①,②

TO HIFI AUDIO PCB(PI62)

TO SYSTEM CONTROL PCB(PI83)

TO SYSTEM CONTROL PCB(PI82)

B(POWER SUPPLY) LINE

DRUM SPEED LINE

DRUM PHASE LINE

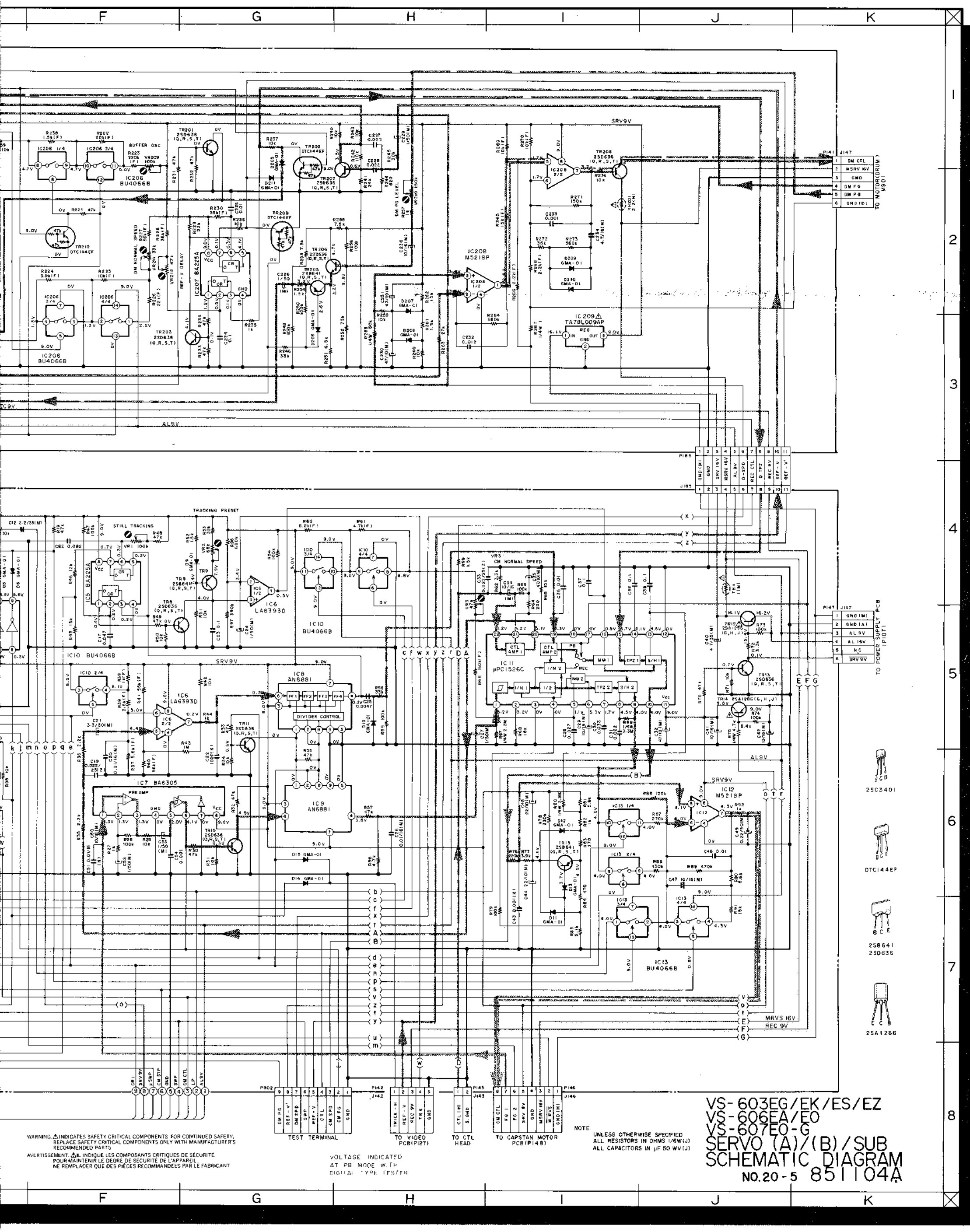
CAPSTAN SPEED LINE

CAPSTAN PHASE LINE

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CO
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE
POUR MAINTENIR LE DEGRE DE SÉCURITÉ DE L'APPAR
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PA

001801



WARNING. ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

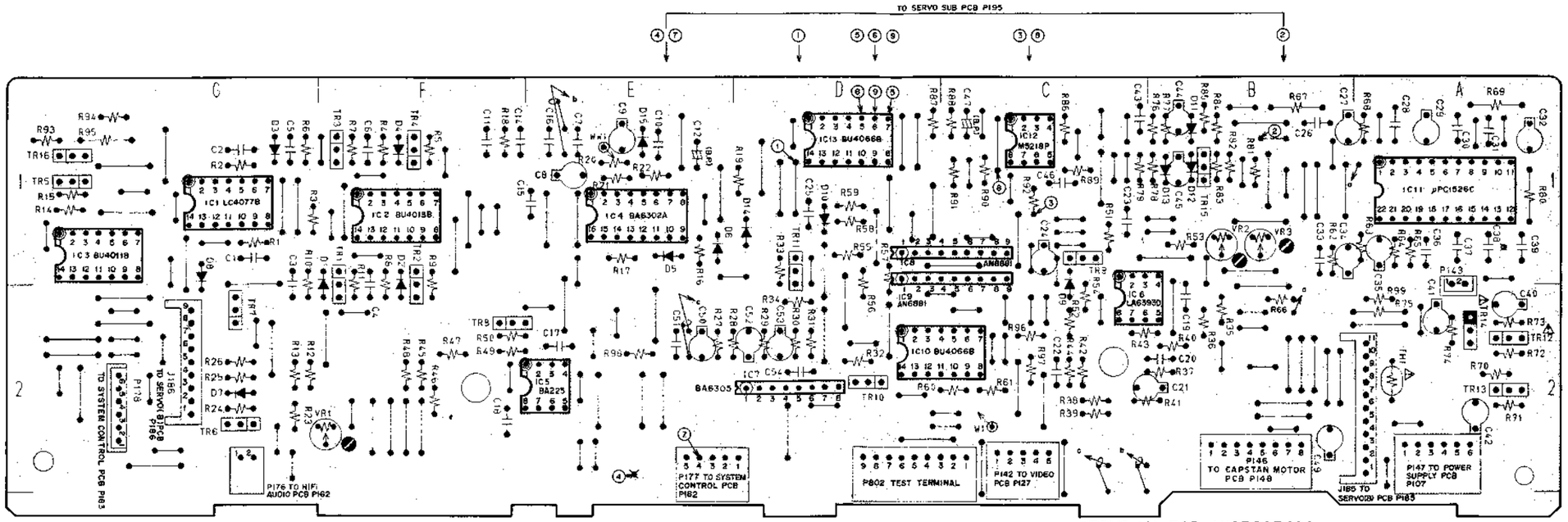
AVERTISSEMENT. ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

VOLTAGE INDICATED AT PB MODE WITH DIGITAL TYPE TESTER

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
SERVO (A)/(B)/SUB SCHEMATIC DIAGRAM

NO.20-5 851104A



SERVO (A) PCB V1030A542A

TR1 to 4,6,8,10,11,13,16 ..... 2SD636 (Q,R,S,T)
TR5,7,9,15 ..... 2SB641 (Q,R,S,T)
TR12,14 ..... 2SA1286 (G,H,J)

SERVO (A) PCB

LOCATION OF COMPONENTS

(IC)

IC1 ..... G1
IC2 ..... F1
IC3 ..... G1
IC4 ..... E1
IC5 ..... E2
IC6 ..... C2
IC7 ..... D2
IC8 ..... C1
IC9 ..... C1
IC10 ..... D2
IC11 ..... A1
IC12 ..... C1
IC13 ..... D1

(TR)

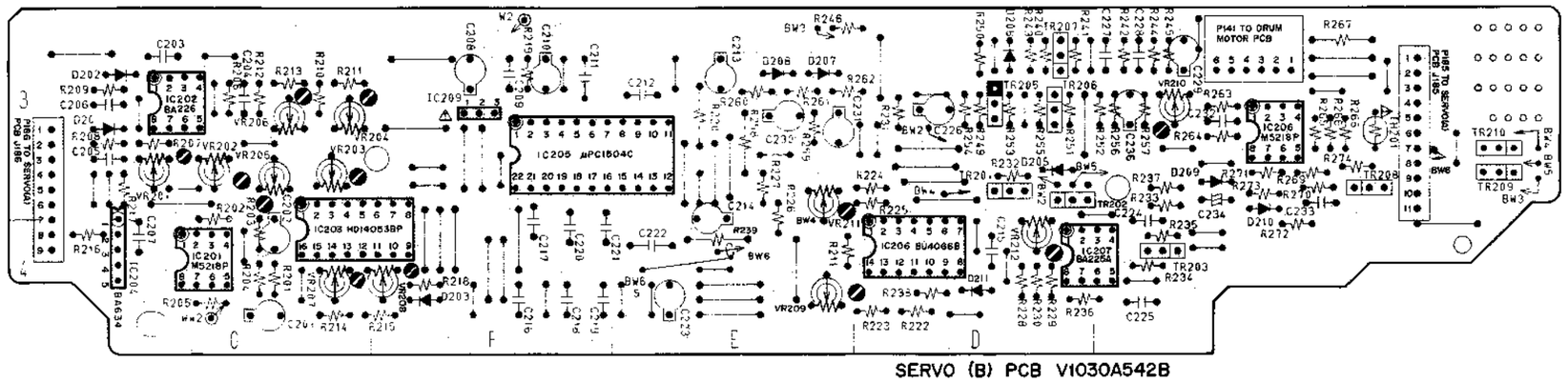
TR1 ..... F1
TR2 ..... F1
TR3 ..... F1
TR4 ..... F1
TR5 ..... G1
TR6 ..... G2
TR7 ..... G2
TR8 ..... F2
TR9 ..... C1
TR10 ..... D2
TR11 ..... D1
TR12 ..... A2
TR13 ..... A2
TR14 ..... A2
TR15 ..... B1
TR16 ..... G1

(ADJ POINT)

VR1 (F2) STILL TRACKING
VR2 (B1) TRACKING PRESET
VR3 (B1) CM SPEED

(TERMINAL)

P142 ..... C2
P143 ..... A1
P146 ..... B2
P147 ..... A2
P176 ..... G2
P177 ..... E2
P178 ..... G2
J185 ..... A2
J186 ..... G2
P802 ..... D2
1,5,6,9 ..... D1
2 ..... B1
3,8 ..... C1
4 ..... E2



SERVO (B) PCB V1030A542B

TR201,203,206, to 208 ..... 2SD636 (Q,R,S,T)
TR202,209,210 ..... DTC144EF
TR205 ..... 2SB641 (Q,R,S,T)

SERVO (B) PCB

LOCATION OF COMPONENTS

(IC)

IC201 ..... G4
IC202 ..... G3
IC203 ..... G4
IC204 ..... G4
IC205 ..... F3
IC206 ..... D4
IC207 ..... D4
IC208 ..... C3
IC209 ..... F3

(TR)

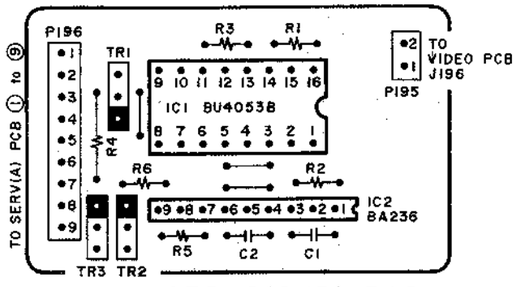
TR201 ..... D3
202 ..... D3
203 ..... C4
205 ..... D3
206 ..... D3
207 ..... D3
208 ..... B3
209 ..... B3
210 ..... B3

(TERMINAL)

P141 ..... C3
P185 ..... B3
P186 ..... G3

(ADJ POINT)

VR201 (G3): AUDIO SWITCHING POINT (CH1)
VR202 (G3): AUDIO SWITCHING POINT (CH2)
VR203 (G3): CH2 PB SWITCHING POINT (SP)
VR204 (G3): CH2 PB SWITCHING POINT (LP)
VR205 (G3): CH1 PB SWITCHING POINT (SP)
VR206 (G3): CH1 PB SWITCHING POINT (LP)
VR207 (G4): REC SWITCHING POINT (SP)
VR208 (G4): REC SWITCHING POINT (LP)
VR209 (E4): BUFFER OSC
VR210 (C3): DM PG LEVEL
VR211 (E3): DM NORMAL SPEED
VR212 (D4): REF-V DELAY



SERVO(SUB) PCB
V1030D5480

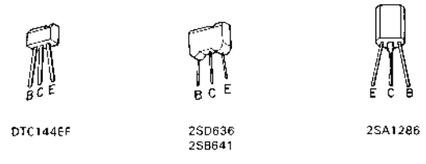
TR1,2,3---2SC3401

= PNP TRANSISTOR

= NPN TRANSISTOR

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

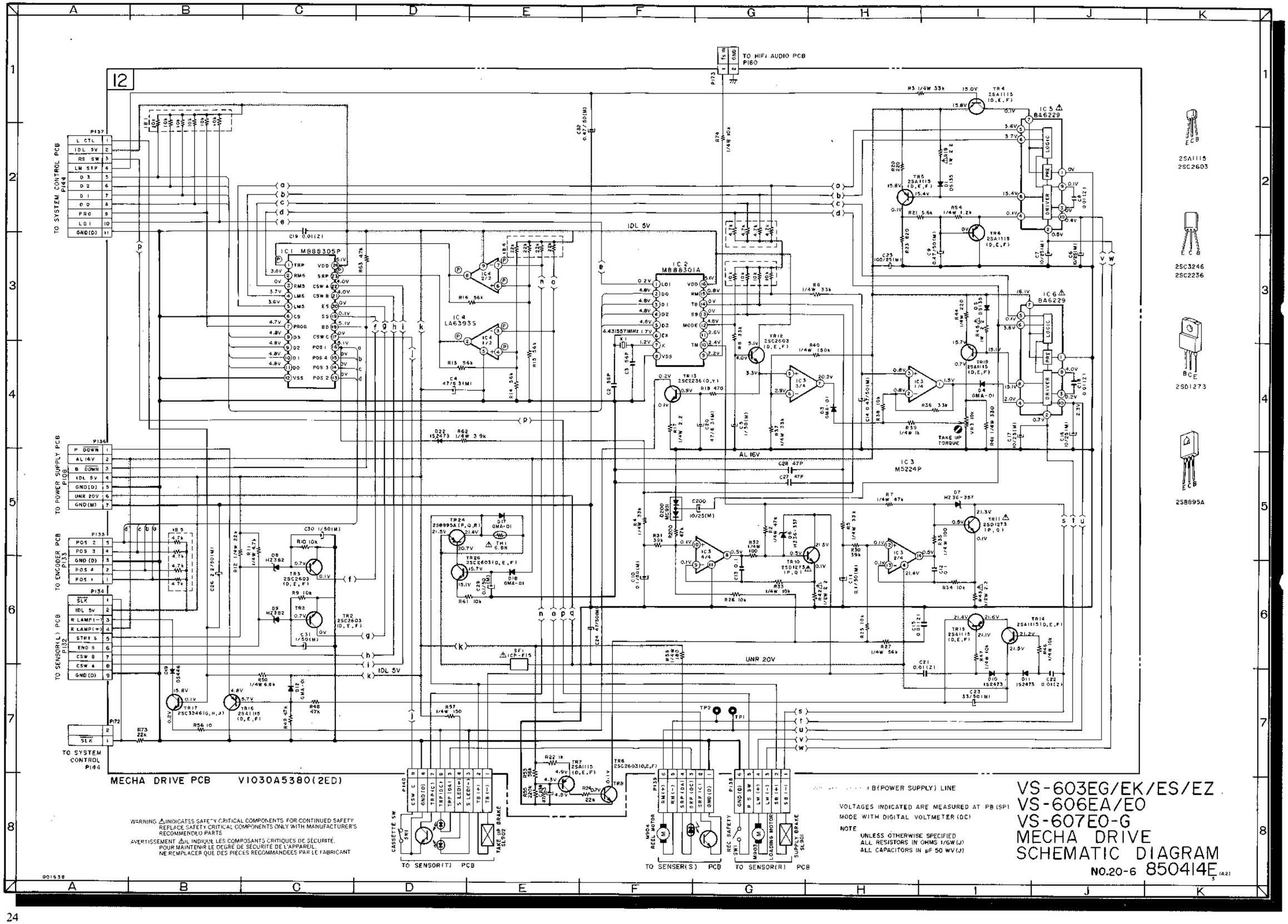
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

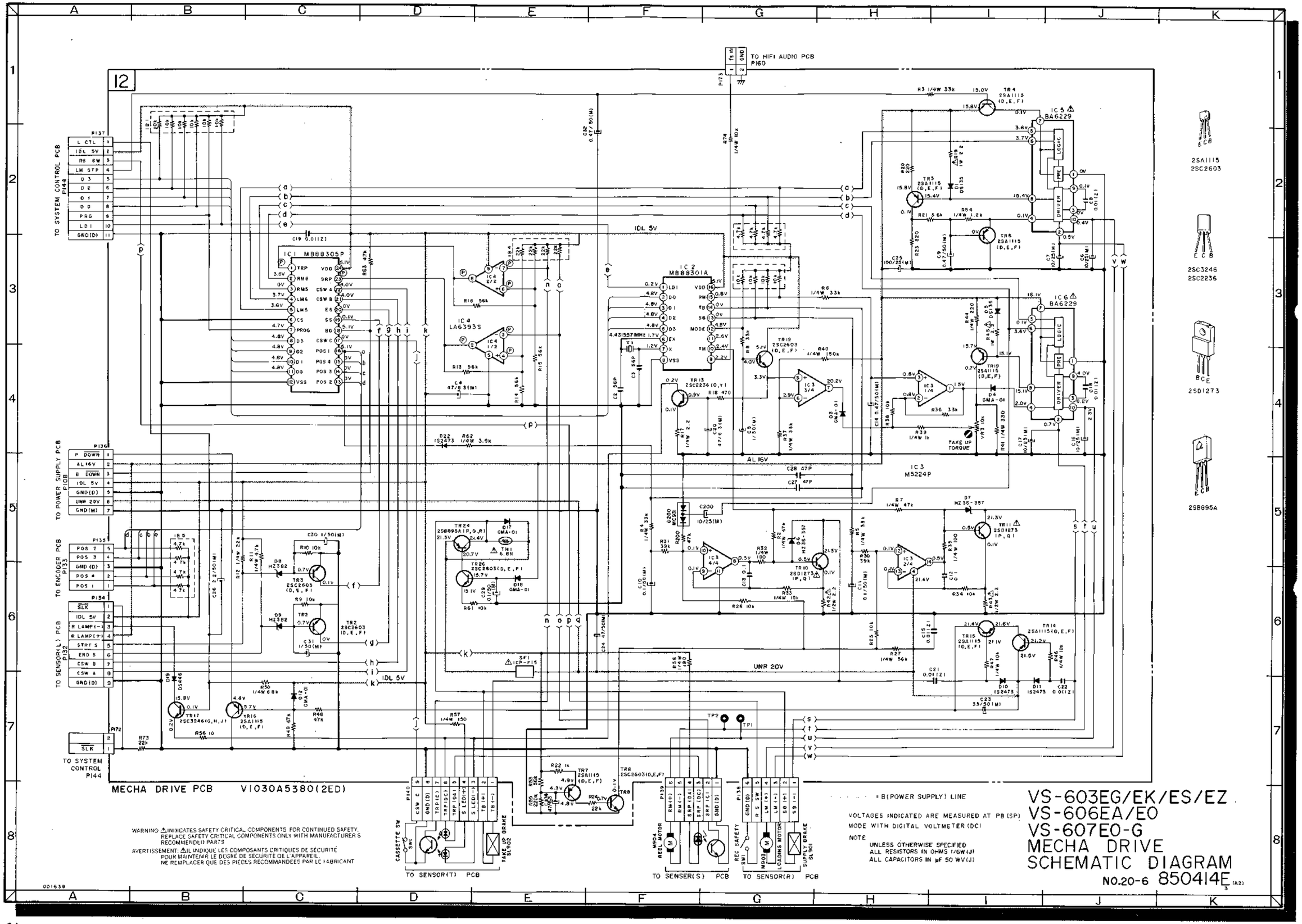


DTC144EF

2SD636
2SB641

2SA1286

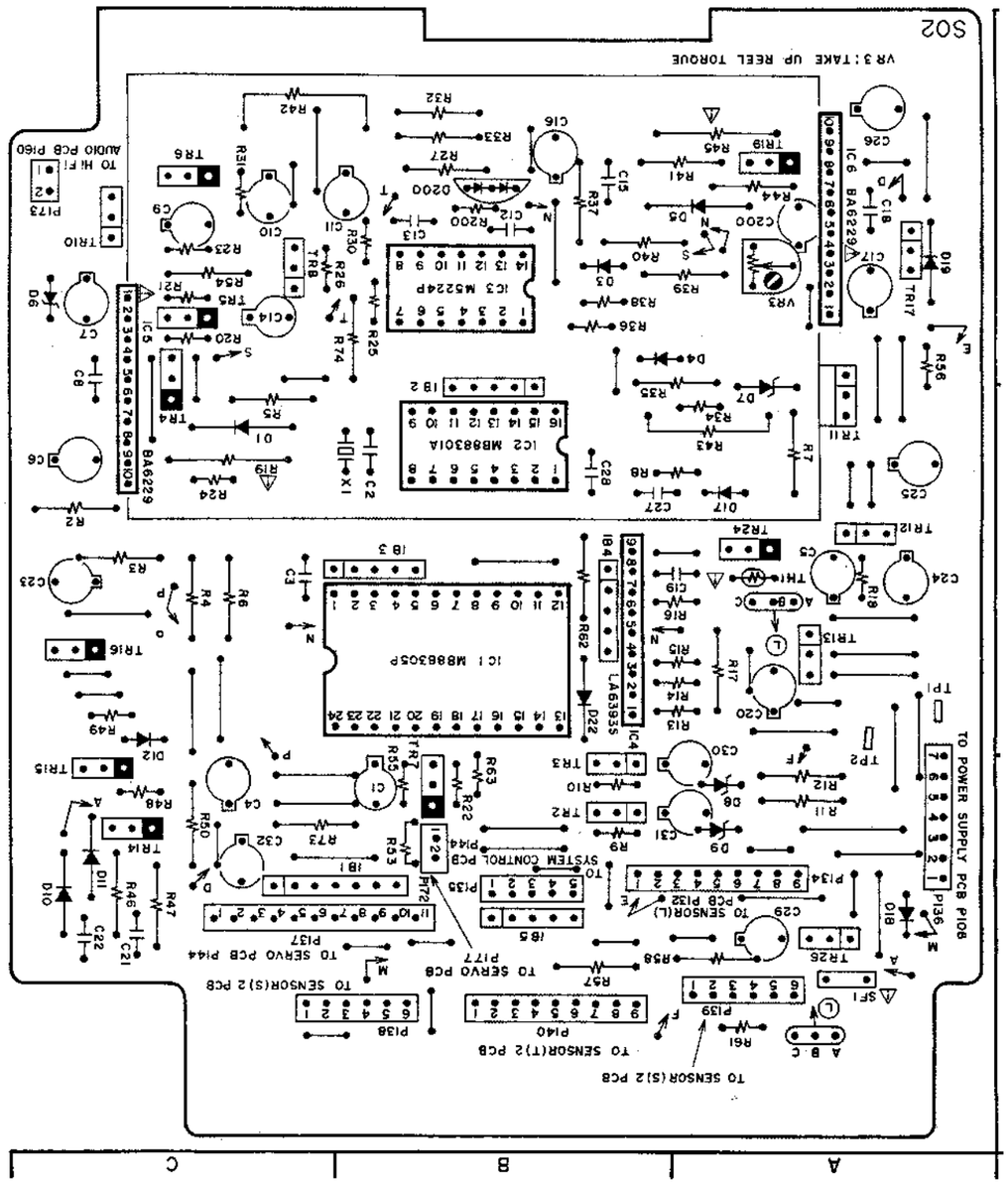

12
TO HIFI AUDIO PCB P160
P173
TO SYSTEM CONTROL PCB P144
P137
L CTL
IDL 5V
RS SW
LM STP
D 3
D 2
D 1
D 0
PRG
LDI
GND(D)
IC1 MB88305P
IC2 MB88301A
IC3 M5224P
IC4 LA6393S
IC5 BA6229
IC6 BA6229
4.431557MHz
IDL 5V
AL 16V
UNR 20V
TAKE UP TORQUE
TO POWER SUPPLY PCB P108
P136
P DOWN
AL 16V
B DOWN
IDL 5V
GND(D)
UNR 20V
GND(M)
TO ENCODER PCB P133
P135
POS 2
POS 3
GND (D)
POS 4
POS 1
TO SENSOR(L) PCB P132
P134
SLK
IDL 5V
R LAMP(-)
R LAMP(+)
STRT S
END S
CSW B
CSW A
GND(D)
P172
SLK
TO SYSTEM CONTROL P144
2SB895A(P,Q,R)
2SC2603(D,E,F)
2SA1115(D,E,F)
2SC3246(G,H,J)
2SC2236(O,Y)
2SC2603(O,E,F)
2SC2603I(O,E,F)
2SC2603IO(E,F)
2SD1273(P,Q)
HZ362
HZ382
HZ36-357
1S2473
DS135
DS446
GMA-01
MECHA DRIVE PCB V1030A5380(2ED)
TO SENSOR(T) PCB
TO SENSER(S) PCB
TO SENSOR(R) PCB
CASSETTE SW SW1
TAKE UP BRAKE SL902
REEL MOTOR M902
LOADING MOTOR M903
REC SAFETY SW1
SUPPLY BRAKE SL901
B(POWER SUPPLY) LINE
VOLTAGES INDICATED ARE MEASURED AT PB(SP1) MODE WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)
WARNING ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT
2SA1115
2SC2603
2SC3246
2SC2236
2SD1273
2SB895A
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
MECHA DRIVE
SCHEMATIC DIAGRAM
NO.20-6 850414E (A2)
001638


MECHA DRIVE PCB V1030A5380(2ED)
TO SYSTEM CONTROL PCB P144
TO POWER SUPPLY PCB P108
TO ENCODER PCB P133
TO SENSOR(L) PCB P132
TO SYSTEM CONTROL P144
TO HIFI AUDIO PCB P160
IC1 MB88305P
IC2 MB88301A
IC3 M5224P
IC4 LA6393S
IC5 BA6229
IC6 BA6229
TO SENSOR(T) PCB
TO SENSER(S) PCB
TO SENSOR(R) PCB
CASSETTE SW SW1
TAKE UP BRAKE SL902
REEL MOTOR M902
LOADING MOTOR M903
SUPPLY BRAKE SL901
REC SAFETY SW1
TAKE UP TORQUE
IDL 5V
AL 15V
UNR 20V
= B(POWER SUPPLY) LINE
VOLTAGES INDICATED ARE MEASURED AT PB(SP) MODE WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT
2SA1115 2SC2603
2SC3246 2SC2236
2SD1273
2SB895A
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
MECHA DRIVE
SCHEMATIC DIAGRAM
NO.20-6 850414E (A2)

WARNING: △INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

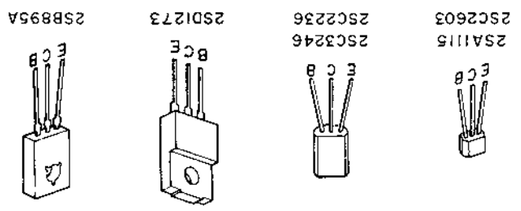
AVERTISSEMENT: △IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

MECHA DRIVE PCB V1030A5380 (2ED)



= NPN TRANSISTOR

= PNP TRANSISTOR

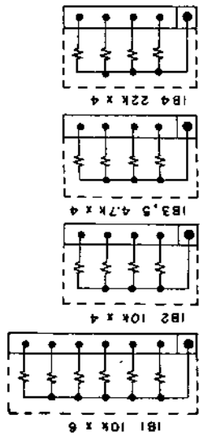


LOCATION OF COMPONENT

TRS
TR2,3.....B1
TR4,5,6.....C3
TR7.....B1
TR8,10.....C3
TR11,12,13...A2
TR14,15.....C1
TR16.....C2
TR17,19.....A3
TR24.....A2
TR26.....A1

ICS
IC1,2.....B2
IC3.....B3
IC4.....B2
IC5.....C3
IC6.....A3

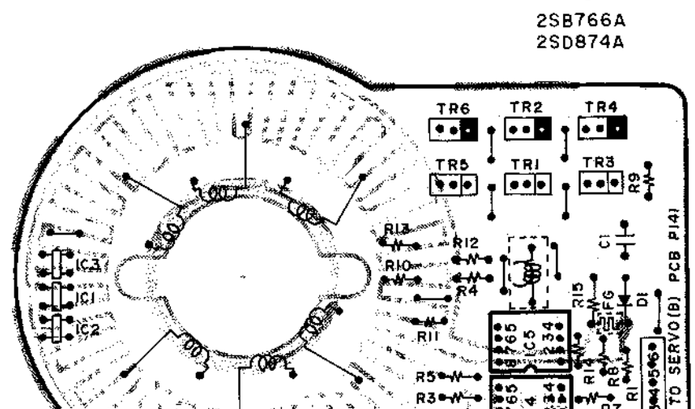
TR4 to 7,14,15,16,19...2SA1115(D,E,F)
TR2,3,8,12,26.....2SC2603(D,E,F)
TR10,11.....2SD1273(P,Q)
TR13.....2SC2236(O,Y)
TR17.....2SC3246(G,H,J)
TR24.....2SB895A(P,Q,R)



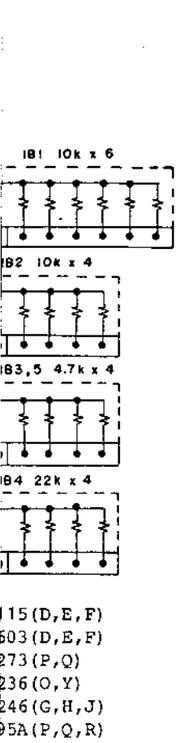
TO SERVO(B) PCB PI41

TR2,4,6 ---2SB766A
TR1,3,5 ----2SD874A

2SB766A
2SD874A

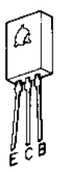


MOTOR PCB M3220C5010(6ED)

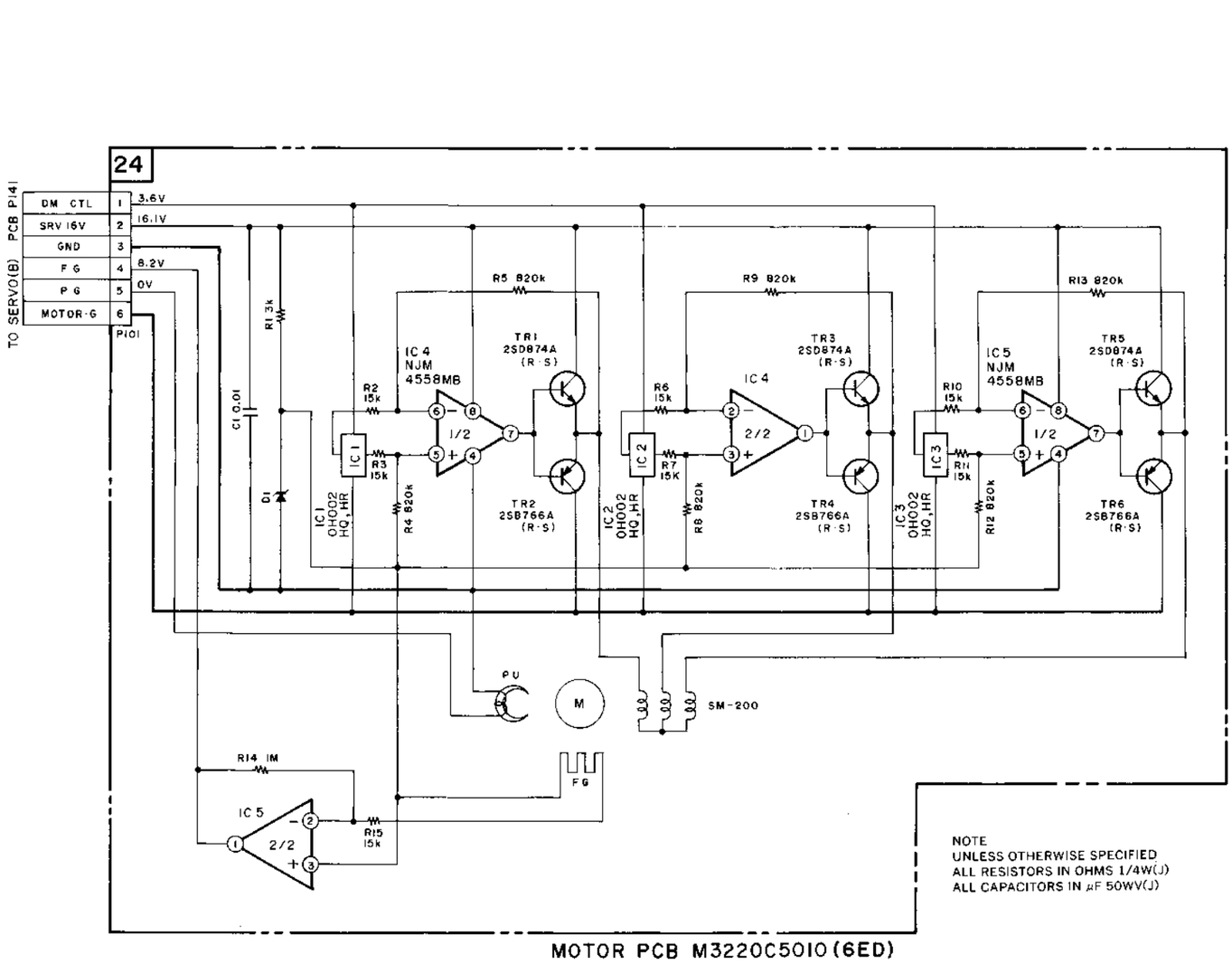


115(D,E,F)
503(D,E,F)
273(P,Q)
236(O,Y)
246(G,H,J)
95A(P,Q,R)

DI273



2SB895A



NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

MOTOR PCB M3220C5010(6ED)

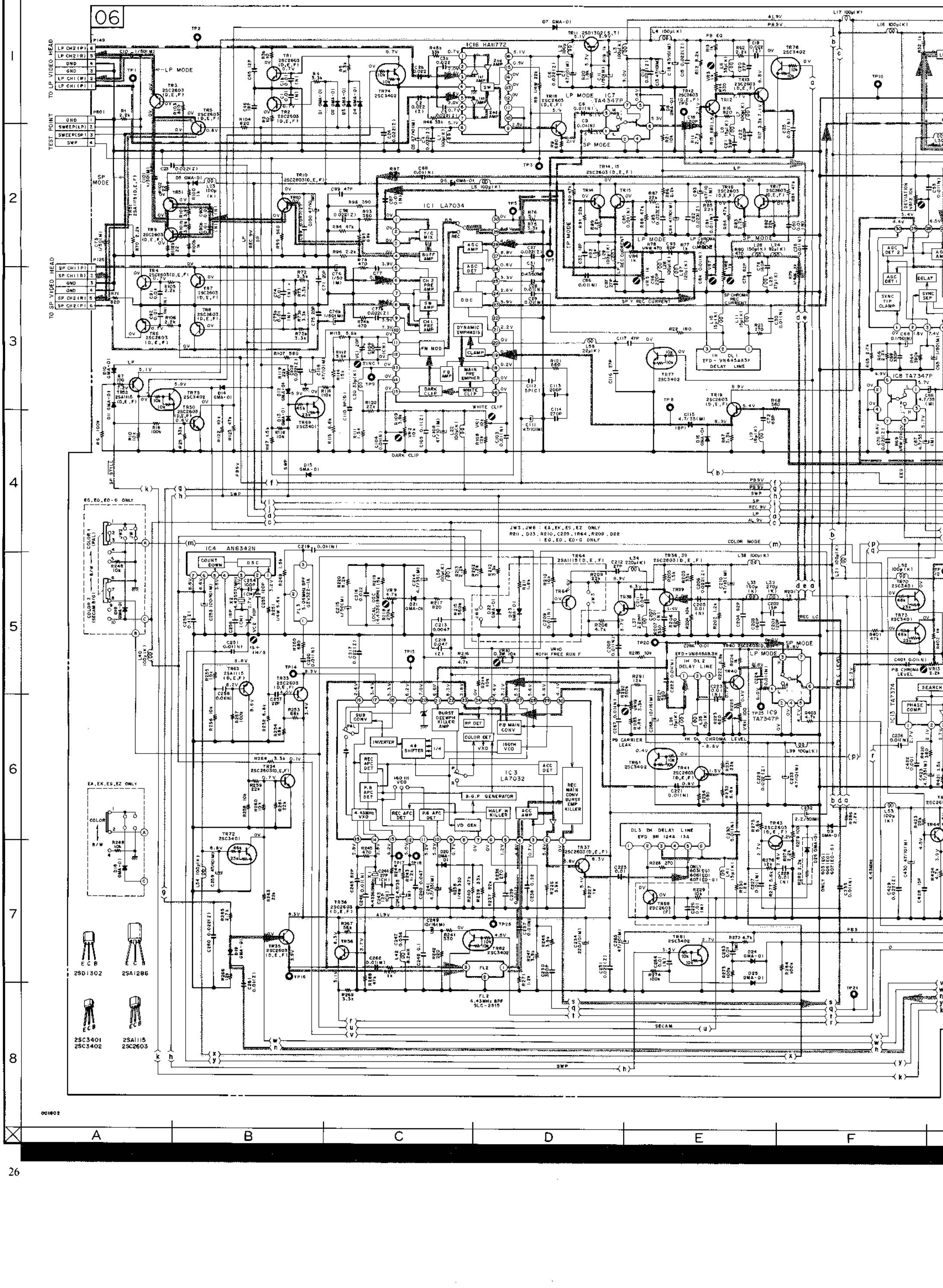
2SB766A
2SD874A

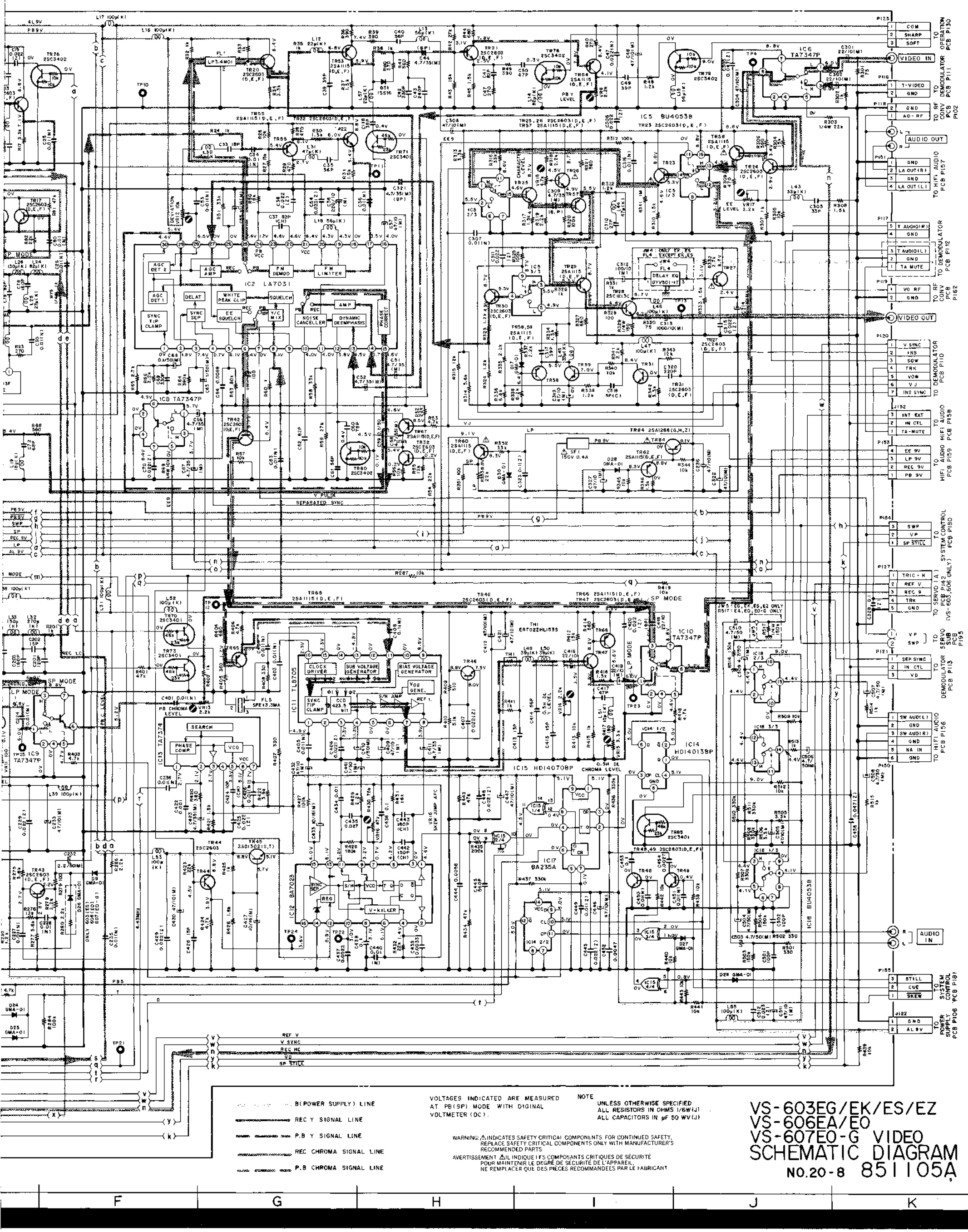
TR2,4,6 ---2SB766A
TR1,3,5 ----2SD874A

VOLTAGE INDICATED ARE MEASURED AT PB MODE
WITH DIGITAL TYPE TESTER

MOTOR PCB SCHEMATIC DIAGRAM

NO.20-7 850419D(A3)2


06
TO LP VIDEO HEAD
LP CH2(P)
LP CH2(R)
GND
GND
LP CH1(R)
LP CH1(P)
TEST POINT
GND
SWEEP(LP)
SWEEP(SP)
SWP
TO SP VIDEO HEAD
SP CH1(P)
SP CH1(R)
GND
GND
SP CH2(R)
SP CH2(P)
LP MODE
SP MODE
IC16 HA11772
IC7 TA4347P
IC1 LA7034
IC4 AN6342N
IC3 LA7032
IC8 TA7347P
IC9 TA7347P
IC13 TA7374
DL1 EFD-VN645A83F DELAY LINE
DL2 EFD-VN645A9.3H DELAY LINE
DL3 2H DELAY LINE EFD BR 1244 13A
FL2 4.43MHz BPF SLC-2815
FL3 5.96MHz BPF CFW322-1A
EG,ED,ED-G ONLY
EA,EK,ES,EZ ONLY
JW3,JW6 : EA,EK,ES,EZ ONLY
R211,D23,R210,C209,TR64,R208,D22 : EG,ED,ED-G ONLY
COLOR MODE
SECAM
2SD1302
2SA1286
2SC3401 2SC3402
2SA1115 2SC2603
001802



VOLTAGES INDICATED ARE MEASURED AT PB(SP) MODE WITH DIGINAL VOLTMETER (DC).

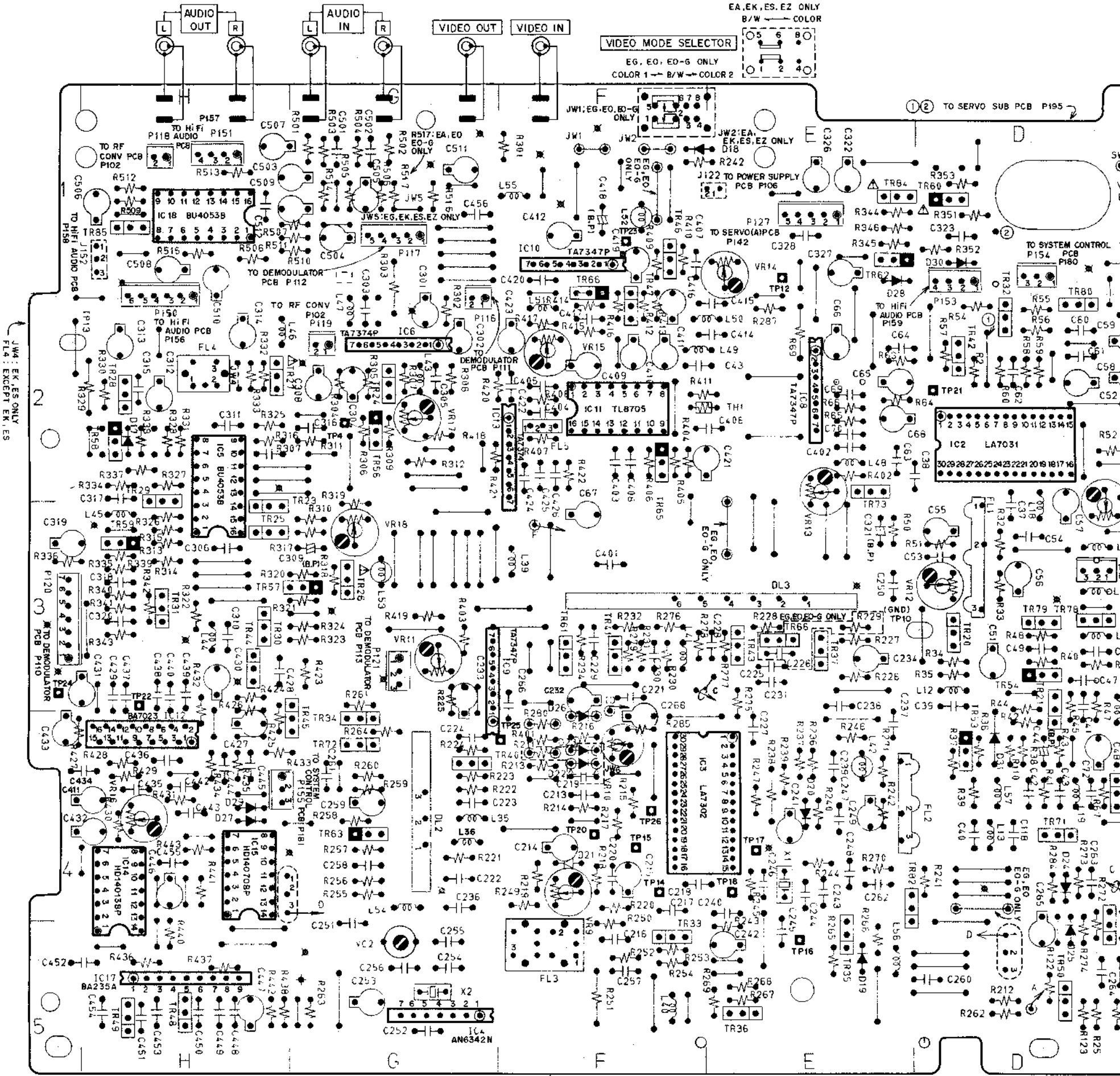
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G VIDEO
SCHEMATIC DIAGRAM

NO.20-8 851105A



D22, D23, R211 : EG, EO, EO-G ONLY
JW6 : EA, EK, ES, EZ ONLY

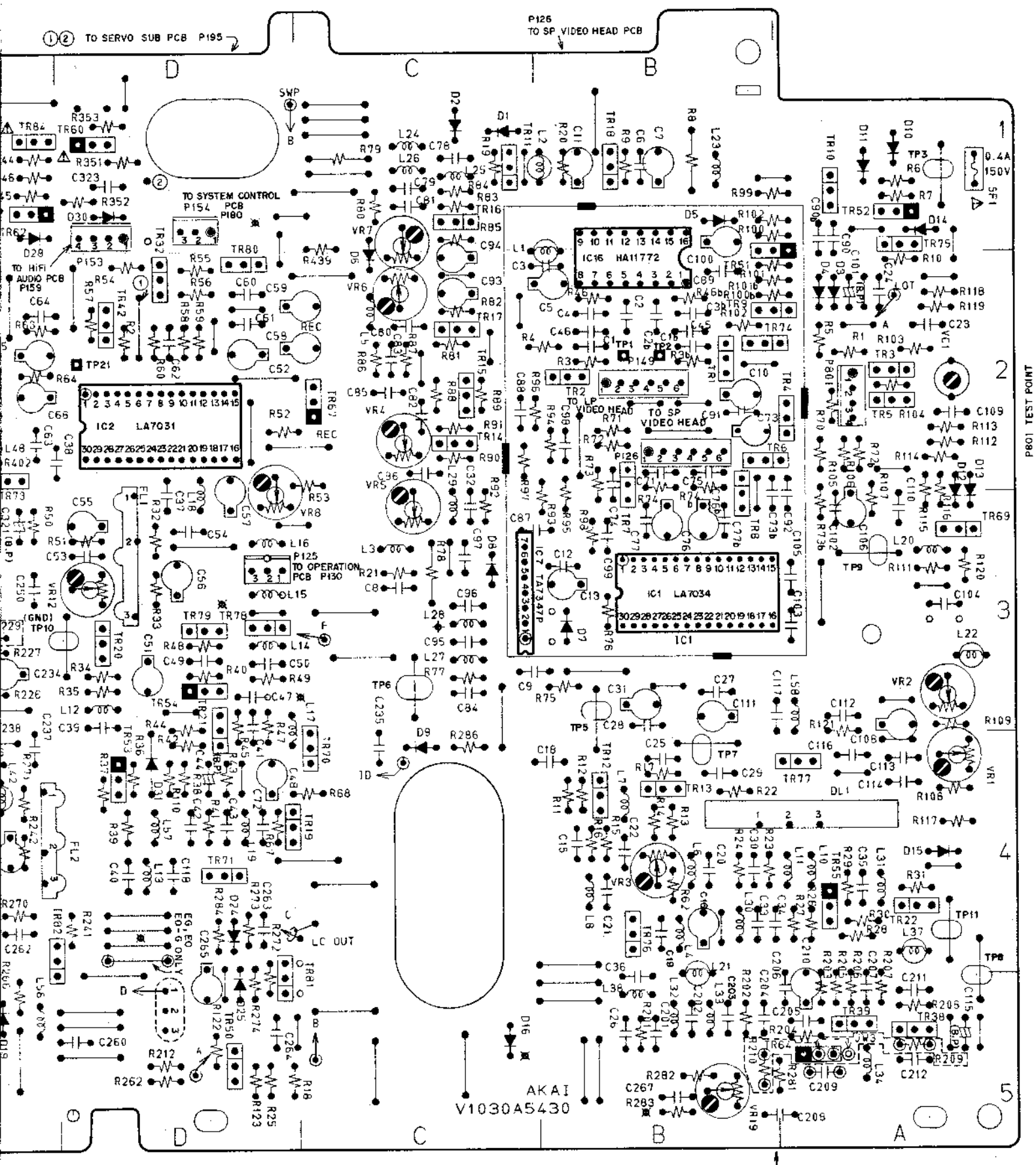
VIDEO P

TR1 to 10, 12 to 27,
29 to 44, 46 to 50, 68 ..... 2SC2603 (D,E,F)
TR11, 45 ..... 2SD1302 (S,T)
TR28 ..... 2SC1213 (C)
TR51 to 60, 62 to 67 ..... 2SA1115 (D,E,F)
TR61, 74 to 82 ..... 2SC3402 (E,F,G)
TR69 to 73, 85 ..... 2SC3401
TR84 ..... 2SA1286 (G,H,J)

2SD1302 | 2SA1115 2SC2603 | 2SC3401 2SC3402 | 2SA1286

PNP TRANSISTO
NPN TRANSISTO

WARNING: ⚠INDICATES SAFETY C
REPLACE SAFETY CRIT
RECOMMENDED PARTS
AVERTISSEMENT: ⚠IL INDIQUE LE
POUR MAINTENIR LE DI
NE REMPLACER QUE D



VIDEO PCB V1030A5430

TR64, R209, R210: EG, EO, EO-G ONLY
JW3: EA, EK, ES, EZ ONLY

(ADJUSTMENT POINTS)

VR1	(A4)	WHITE CLIP
VR2	(A3)	DARK CLIP
VR3	(B4)	PB EQ (HEAD PEAKING)
VR4	(C2)	LP Y REC CURRENT
VR5	(C3)	SP Y REC CURRENT
VR6	(C2)	SP CHROMA REC CURRENT
VR7	(C1)	LP CHROMA REC CURRENT
VR8	(D3)	PB Y LEVEL
VR9	(F4)	LOCAL OSC (4.433619 MHz)
VR10	(F4)	40 fH FREE RUN f
VR11	(G3)	1H DL CHROMA LEVEL
VR12	(D3)	DEVIATION
VR13	(E2)	PB CHROMA LEVEL
VR14	(E1)	0.5 H DL Y LEVEL
VR15	(F2)	0.5 H DL CHROMA LEVEL
VR16	(H4)	SKEW JUMP AFC
VR17	(G2)	EE LEVEL
VR18	(G3)	CHARACTER LEVEL
VR19	(B5)	PB CARRIER LEAK
VC1	(A2)	SYNC f
VC2	(G5)	fs + fH/8

(TERMINAL)

P116	G2
P117	G1
P118	H1
P119	G2
P120	H3
P121	G3
J122	E1
P125	D3
P126	B2
P127	E1
P149	B2
P150	H2
P151	H1
J152	H1
P153	D1
P154	D1
P155	H4
P801	A2
①	D2
②	D1

LOCATION OF COMPONENTS

(IC)

IC1	B3
IC2	D2
IC3	F4
IC4	G5
IC5	H2
IC6	G2
IC7	B3
IC8	E2
IC9	G3
IC10	F1
IC11	F2
IC12	H4
IC13	F2
IC14	H4
IC15	H4
IC16	B2
IC17	H5
IC18	H1

(TR)

TR1	B2
TR2	B2
TR3	A2
TR4	B2
TR5	A2
TR6	B2
TR7	B2
TR8	B3
TR9	B2
TR10	A1
TR11	C1
TR12	B4
TR13	B4
TR14	C2
TR15	C2
TR16	C1
TR17	C2
TR18	B1
TR19	D4
TR20	D3
TR21	D3
TR22	A4
TR23	H3
TR24	G2
TR25	H3
TR26	G3
TR27	H2
TR28	H2
TR29	H2
TR30	H3
TR31	H3
TR32	D2
TR33	F5
TR34	G4
TR35	E5
TR36	E5
TR37	E3
TR38	A5
TR39	A5
TR40	G4
TR41	F3
TR42	D2
TR43	E3
TR44	H3
TR45	G4
TR46	F1
TR47	F2
TR48	H5
TR49	H5
TR50	D5
TR51	B2
TR52	A1
TR53	D4
TR54	D3
TR55	A4
TR56	G2
TR57	G3
TR58	H2
TR59	H3
TR60	D1
TR61	F3
TR62	E1
TR63	G4
TR64	A5
TR65	F2
TR66	F1
TR67	C2
TR68	E3
TR69	A3
TR70	C4
TR71	D4
TR72	G4
TR73	E2
TR74	B2
TR75	A1
TR76	B4
TR77	A4
TR78	D3
TR79	D3
TR80	D2
TR81	D5
TR82	E4
TR84	E1
TR85	H1

P PNP TRANSISTOR
N NPN TRANSISTOR

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (J)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

07

HiFi AUDIO PCB V1030A5410

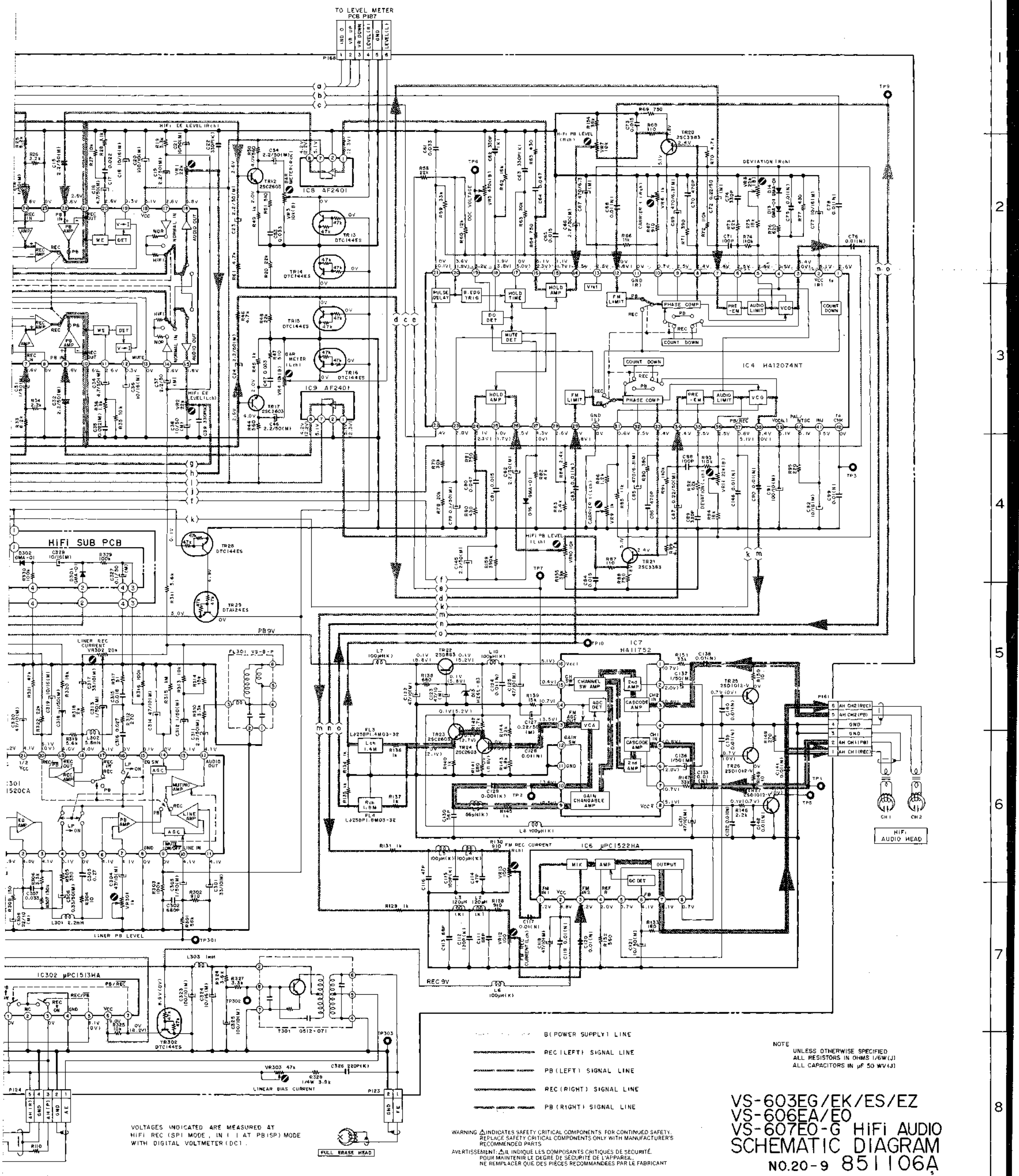
2SD863 (E C B)

2SD1012-V
DTA124ES
DTC144ES (E C B)

2SA1115
2SC2603 (E C B)

VOLTAGES INDICATED ARE
HiFi REC (SP) MODE , IN
WITH DIGITAL VOLTMETER

001805



B(POWER SUPPLY) LINE

REC (LEFT) SIGNAL LINE

PB (LEFT) SIGNAL LINE

REC (RIGHT) SIGNAL LINE

PB (RIGHT) SIGNAL LINE

VOLTAGES INDICATED ARE MEASURED AT HIFI REC (SP) MODE, IN (-) AT PB (SP) MODE WITH DIGITAL VOLTMETER (DC).

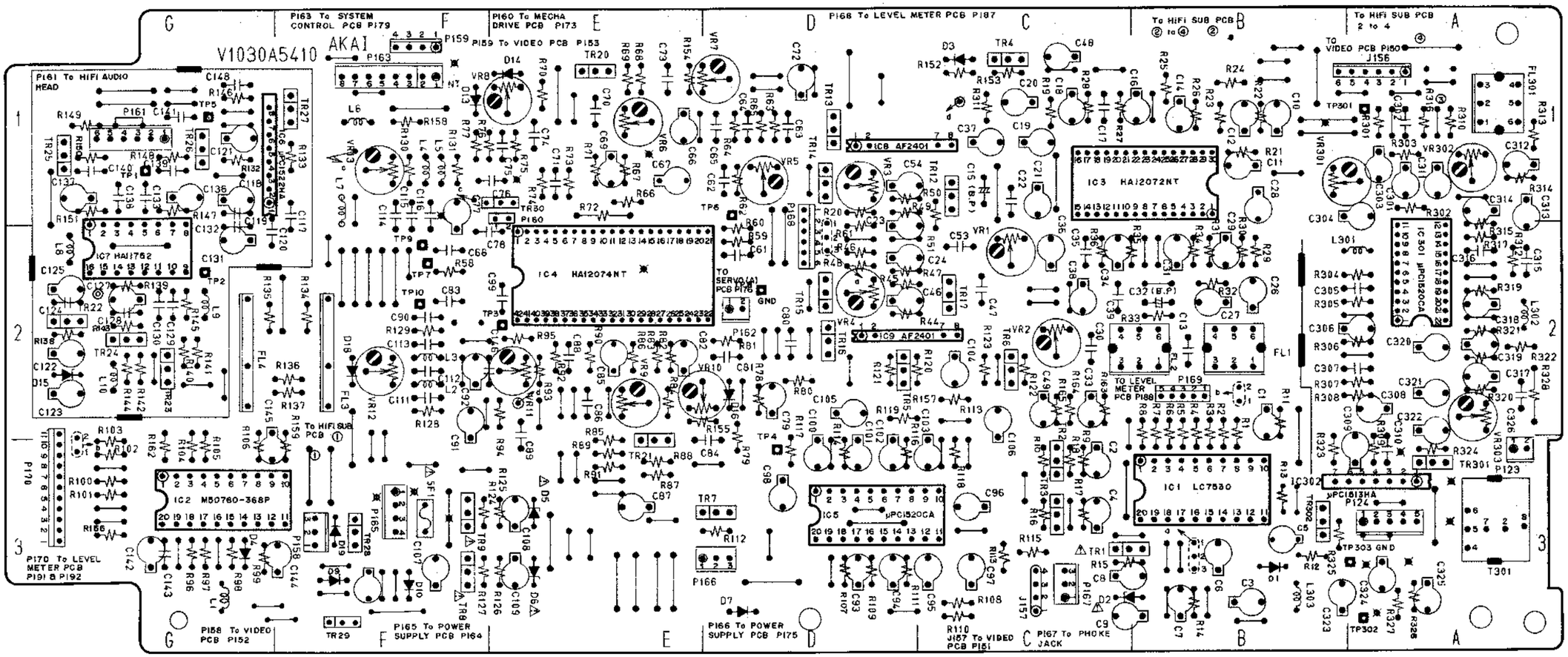
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G HiFi AUDIO SCHEMATIC DIAGRAM

NO.20-9 851106A



(LOCATION OF COMPONENTS)

(IC)

IC1 ..... B3
IC2 ..... G3
IC3 ..... B1
IC4 ..... E2
IC5 ..... D3
IC6 ..... G1
IC7 ..... G2
IC8 ..... D1
IC9 ..... D2
IC301 ..... A2
IC302 ..... A3

(TR)

TR1 ..... C3
TR2 ..... C3
TR3 ..... C3
TR4 ..... C1
TR5 ..... D2
TR6 ..... C2
TR7 ..... D3
TR8 ..... F3
TR9 ..... F3
TR12 ..... C1
TR13 ..... D1
TR14 ..... D1
TR15 ..... D2
TR16 ..... D2
TR17 ..... C2
TR20 ..... E1
TR21 ..... E3
TR22 ..... G2
TR23 ..... G2
TR24 ..... G2
TR25 ..... G1
TR26 ..... G1
TR27 ..... F1
TR28 ..... F3
TR29 ..... F3
TR30 ..... E1
TR301 ..... A3
TR302 ..... A3

(CONNECTOR)

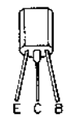
P123 ..... A3
P124 ..... A3
P156 ..... A1
P157 ..... C3
P158 ..... F3
P159 ..... F1
P160 ..... E1
P161 ..... G1
P162 ..... D2
P163 ..... F1
P165 ..... F3
P166 ..... D3
P167 ..... C3
P168 ..... D2
P169 ..... B2
P170 ..... G3

(TP)

TP1 ..... G1
TP2 ..... G2
TP3 ..... E2
TP4 ..... D3
TP5 ..... G1
TP6 ..... D1
TP7 ..... F2
TP8 ..... D2
TP9 ..... F2
TP10 ..... F2

(ADJUSTMENT POINTS)

VR	1	EE LEVEL (R)
	2	EE LEVEL (L)
	3	METER (R)
	4	METER (L)
	5	DOC VOLTAGE
	6	CARRIER f(R)
	7	HiFi PB LEVEL (R)
	8	DEVIATION (R)
	9	CARRIER f(L)
	10	HiFi PB LEVEL (L)
	11	DEVIATION (L)
	12	FM REC CURRENT (L)
	13	FM REC CURRENT (R)
	301	LINEAR PB LEVEL
	302	LINEAR REC CURRENT
	303	LINEAR BIAS CURRENT



2SD863

2SD1012-V
DTA124ES
DTC144ES

2SA1115
2SC2603

2SA1391

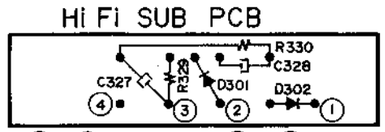
= PNP TRANSISTOR

= NPN TRANSISTOR

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

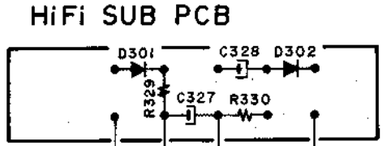
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

Hi Fi SUB PCB

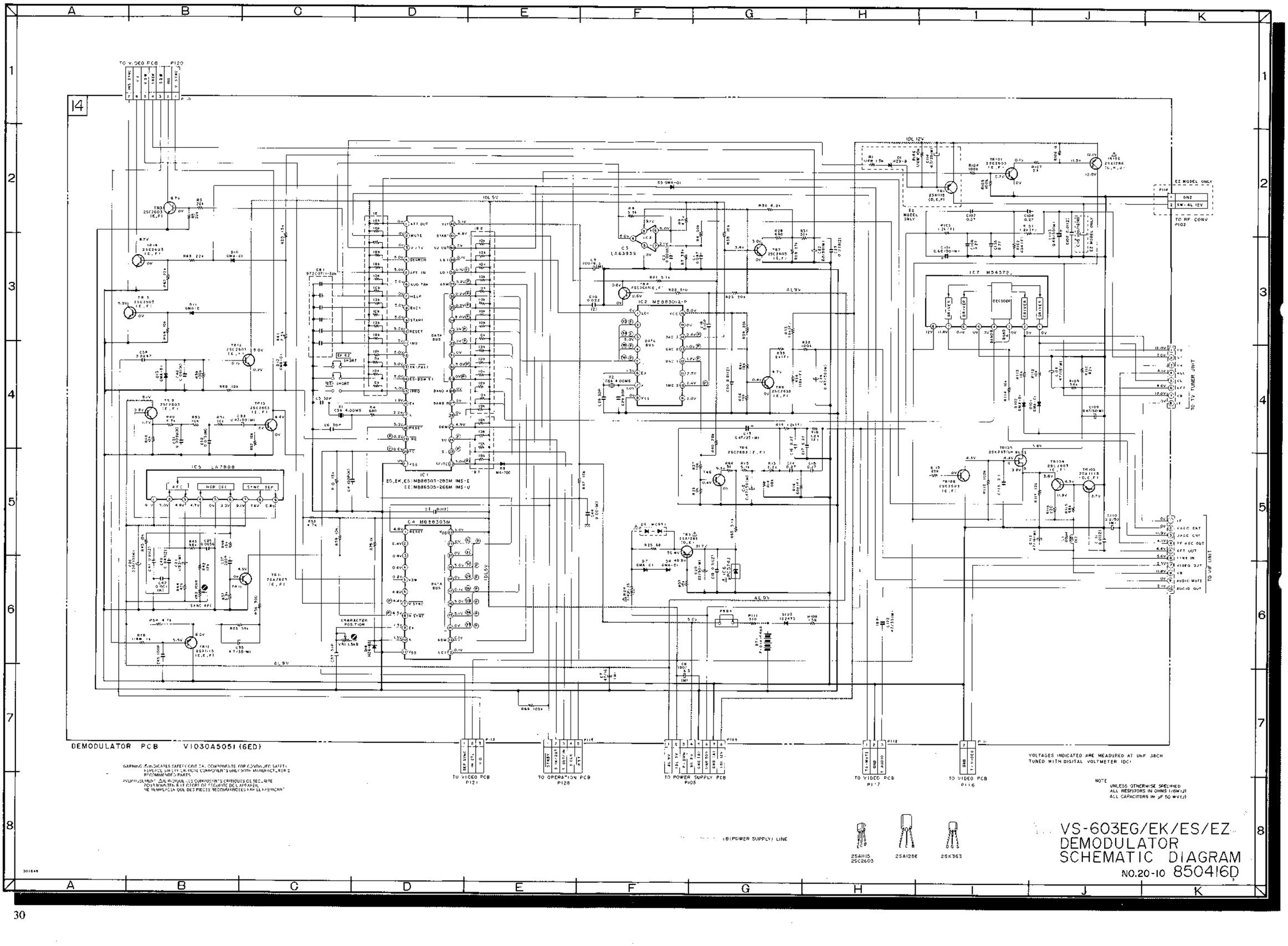


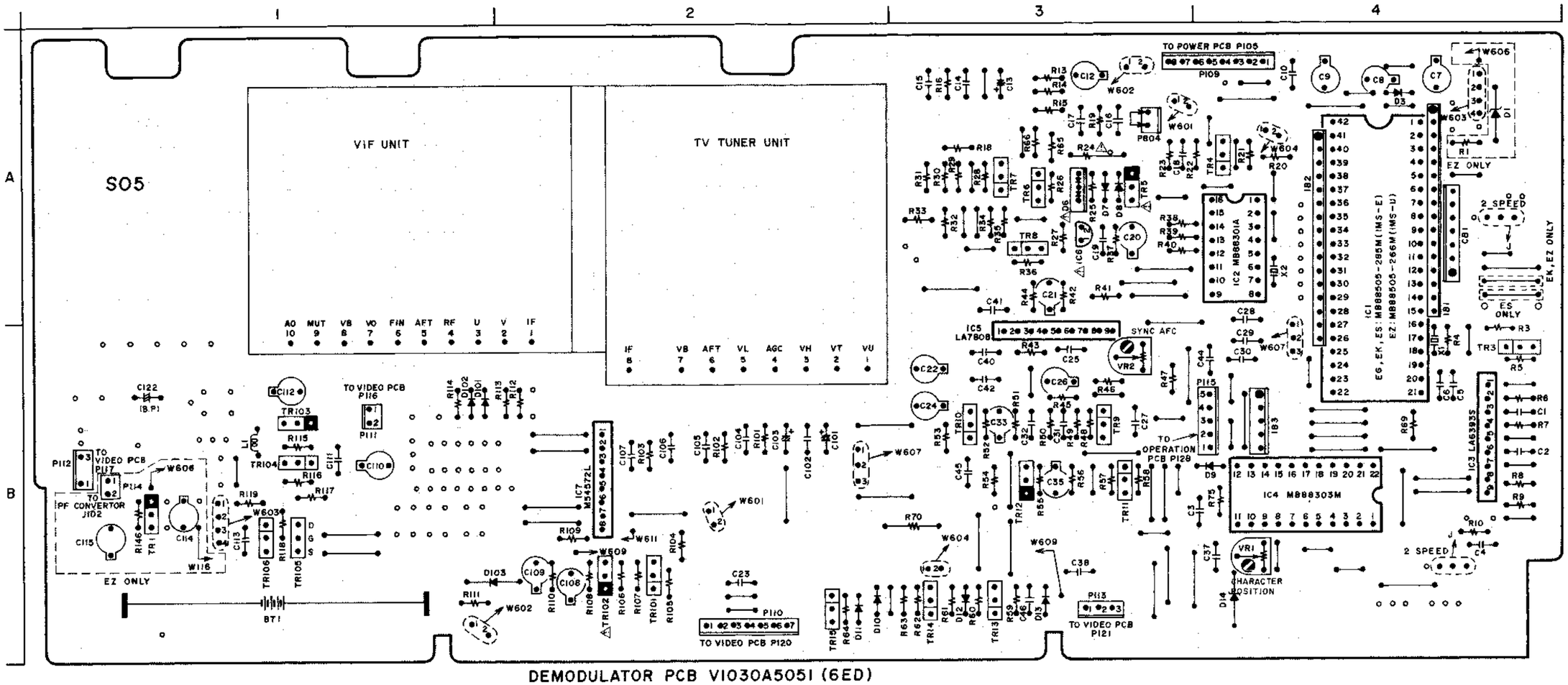
① to ④ : TO Hi Fi PCB ① to ④

HiFi SUB PCB



TO HiFi AUDIO PCB


14
DEMODULATOR PCB V1030A5051 (6ED)
VOLTAGES INDICATED ARE MEASURED AT UHF 38CH TUNED WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)
: (B+)POWER SUPPLY LINE
2SA1115 2SC2603
2SA1286
2SK363
VS-603EG/EK/ES/EZ
DEMODULATOR
SCHEMATIC DIAGRAM
NO.20-10 850416D



DEMODULATOR PCB V1030A5051 (6ED)

LOCATION OF COMPONENTS

TRs

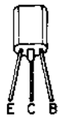
TR1.....B1	ICs
TR3.....B4	IC1.....A4
TR4.....A4	IC2.....A4
TR5 to 8...A3	IC3.....B4
TR9 to 15..B3	IC4.....B4
TR101.....B2	IC5.....A3
TR102.....B2	IC6.....A3
TR103.....B1	IC7.....B2
TR104.....B1	
TR105.....B1	
TR106.....B1	

TR3,4,6 to 11,13
14,15,101,104,106 - - 2SC2603
TR5 - - - - - - - - - - 2SA1283
TR1,12,103 - - - - - - 2SA1115
TR102 - - - - - - - - - 2SA1286
TR105 - - - - - - - - - 2SK363

B
= NPN TRANSISTOR

B
= PNP TRANSISTOR

2SA1115
2SC2603



2SA1286
2SA1283

2SK363

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

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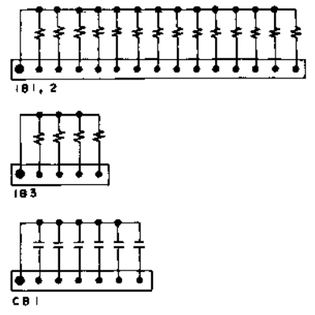
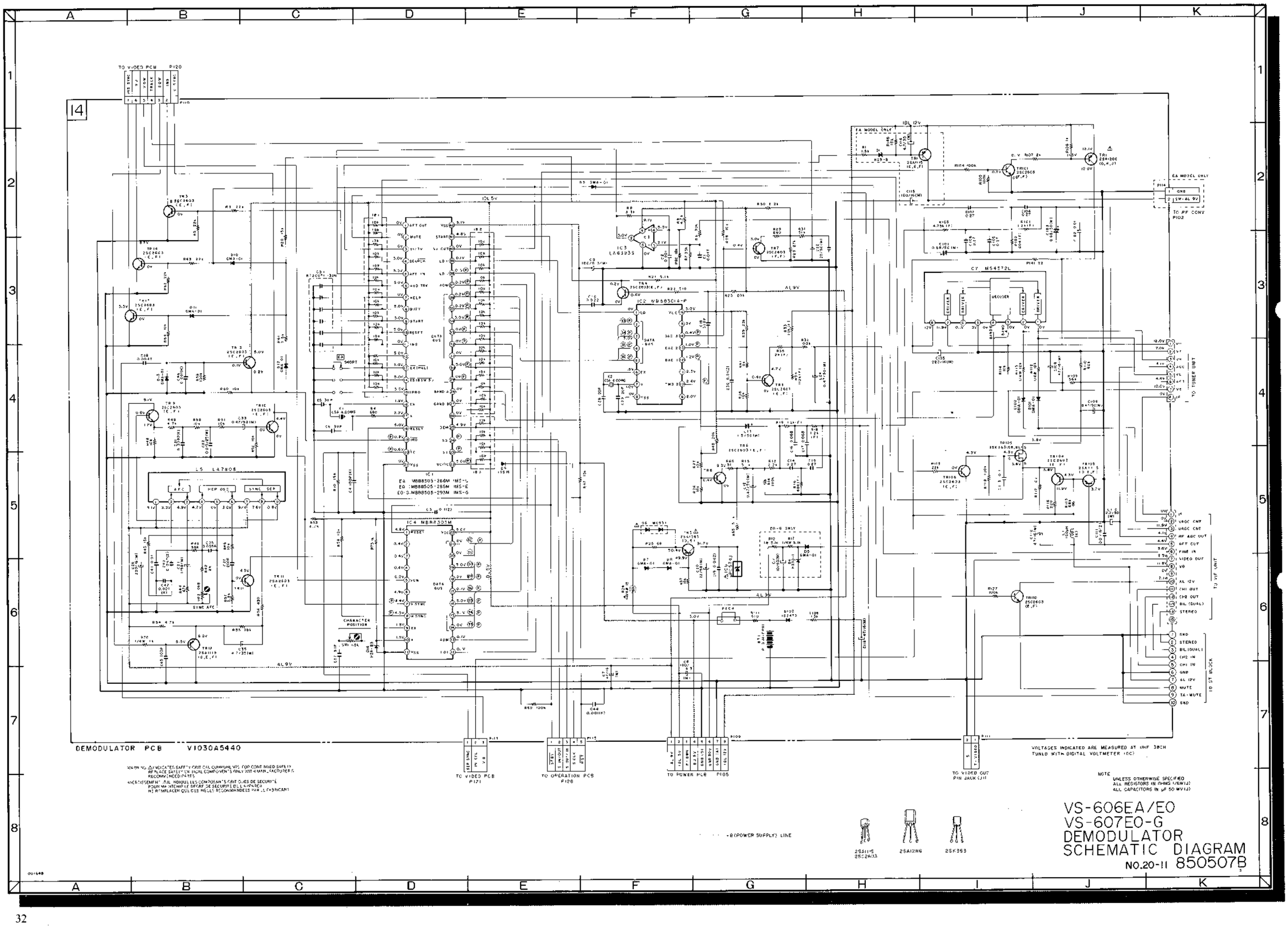
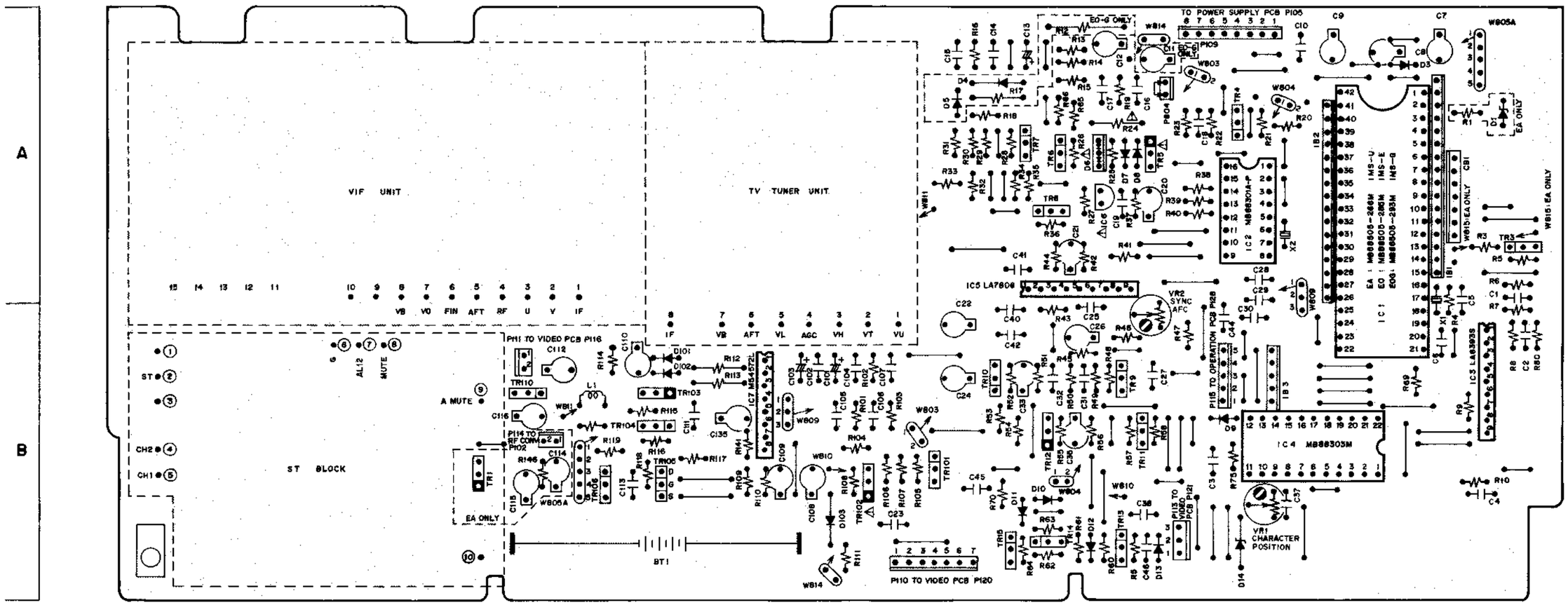



DEMODULATOR PCB V1030A5440
TO VIDEO PCB P121
TO OPERATION PCB P128
TO POWER PCB P105
TO VIDEO OUT PIN JACK (J1)
TO TUNER UNIT
TO VIF UNIT
TO ST BLOCK
TO RF CONV P102
-B(POWER SUPPLY) LINE
VOLTAGES INDICATED ARE MEASURED AT UHF 38CH TUNED WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)
2SA1115
2SC2603
2SA1216
2SK363
VS-606EA/EO
VS-607EO-G
DEMODULATOR
SCHEMATIC DIAGRAM
NO.20-11 850507B



DEMODULATOR PCB VI030A5440

LOCATION OF COMPONENTS

⟨IC⟩	⟨TR⟩	⟨TERMINAL⟩
IC1 ..... A4	TR1 ..... B1	P109 ..... A4
IC2 ..... A4	TR3,4 ..... A4	P110 ..... B3
IC3 ..... B4	TR5 to 8 ..... A3	P111 ..... B1
IC4 ..... B4	TR9 to 15 ..... B3	P113 ..... B3
IC5 ..... B3	TR101 ..... B3	P114 ..... B2
IC6 ..... A3	TR102 to 106 ..... B2	P115 ..... B4
IC7 ..... B2	TR110 ..... B1	

TR1, 3, 4, 6 to 11,
13 to 15, 101, 104
106, 110 ..... 2SC2603 (E,F)
TR5 ..... 2SA1283 (D,E)
TR12, 103 ..... 2SA1115 (D,E,F)
TR102 ..... 2SA1286 (G,H,J)
TR105 ..... 2SK363 (GR,BL)

= PNP TRANSISTOR

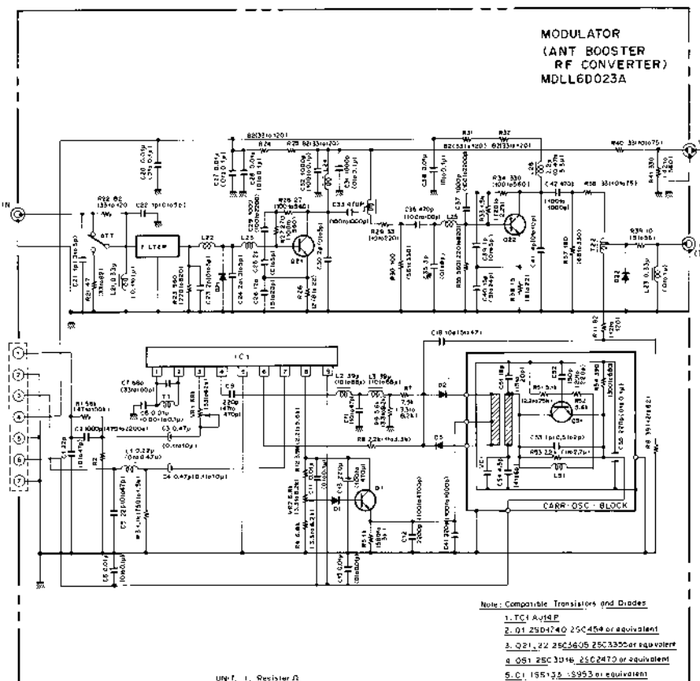
= NPN TRANSISTOR

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

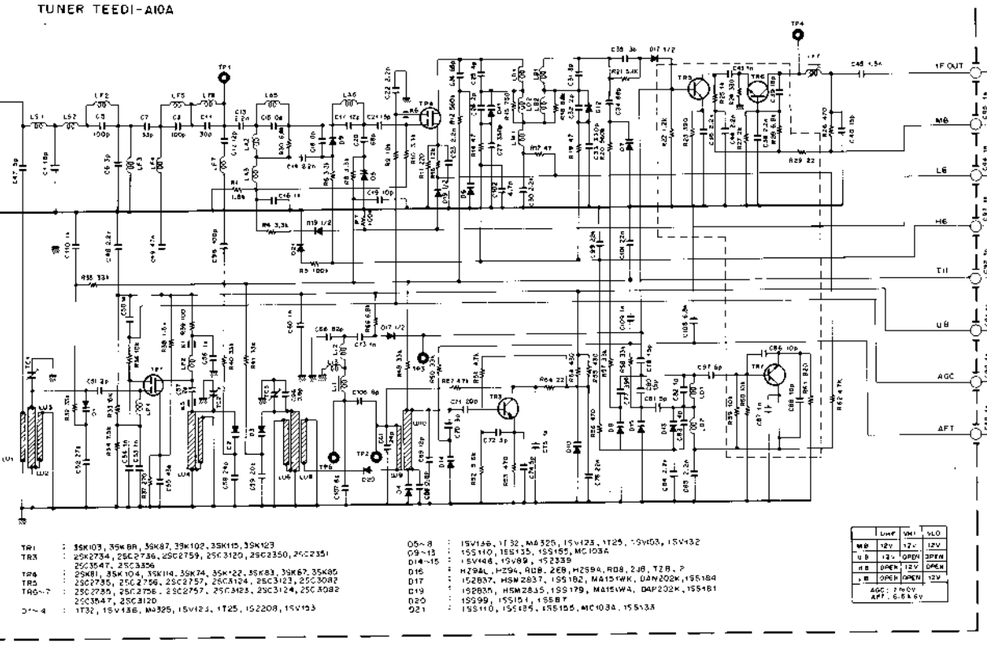
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

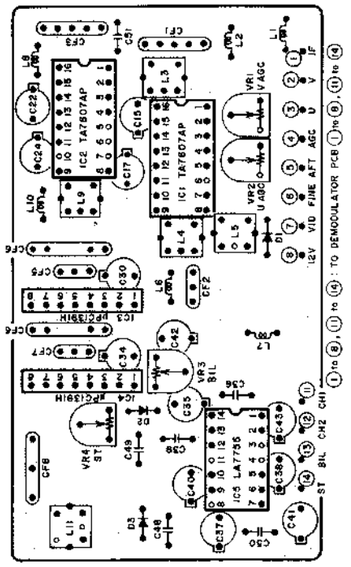
2SD1302 | 2SA1115 2SC2603 | 2SC3401 2SC3402 | 2SA1286

MODULATOR
(ANT BOOSTER
RF CONVERTER)
MDLL6D023A



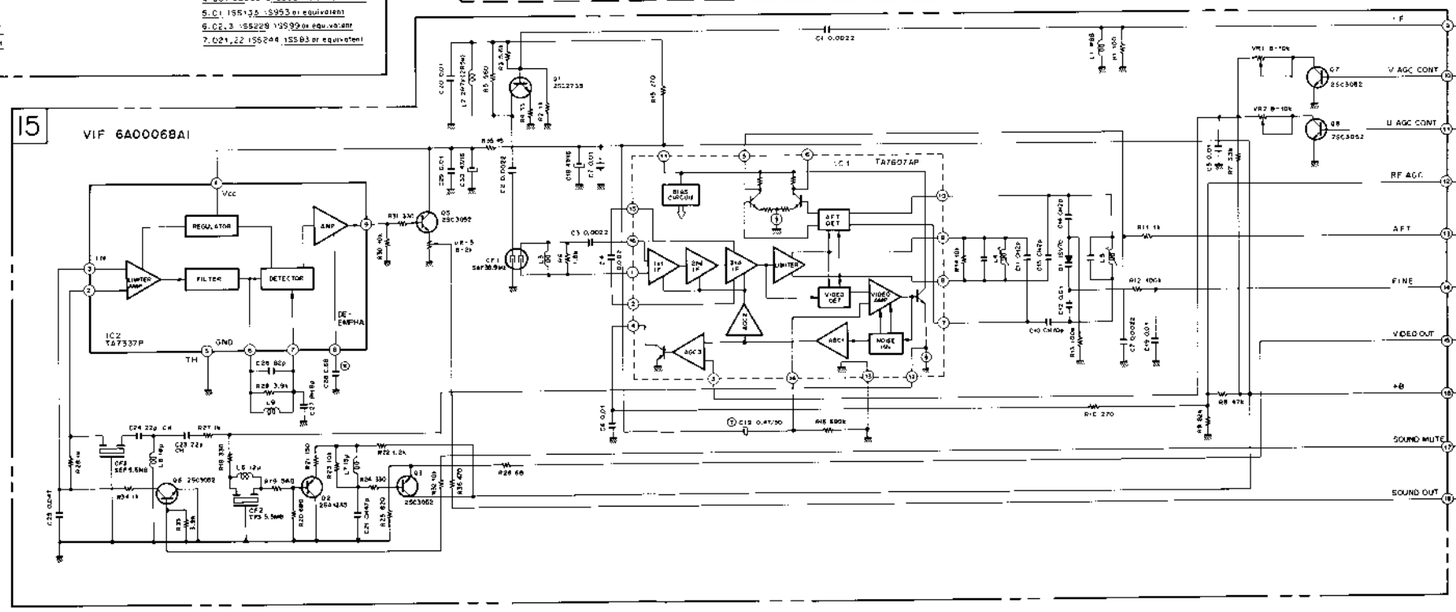
TUNER TEEDI-A10A





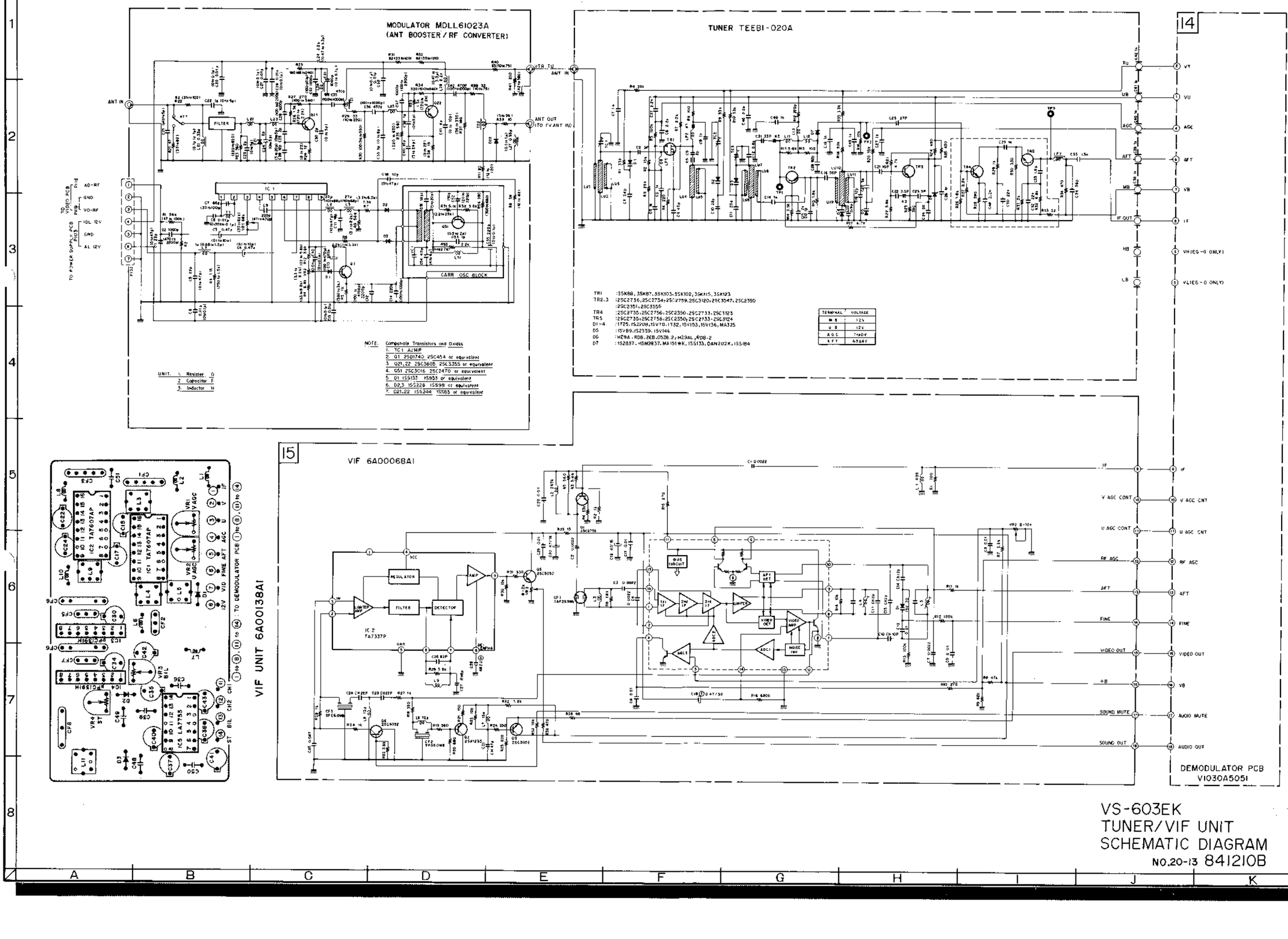
VIF UNIT 6A00138AI

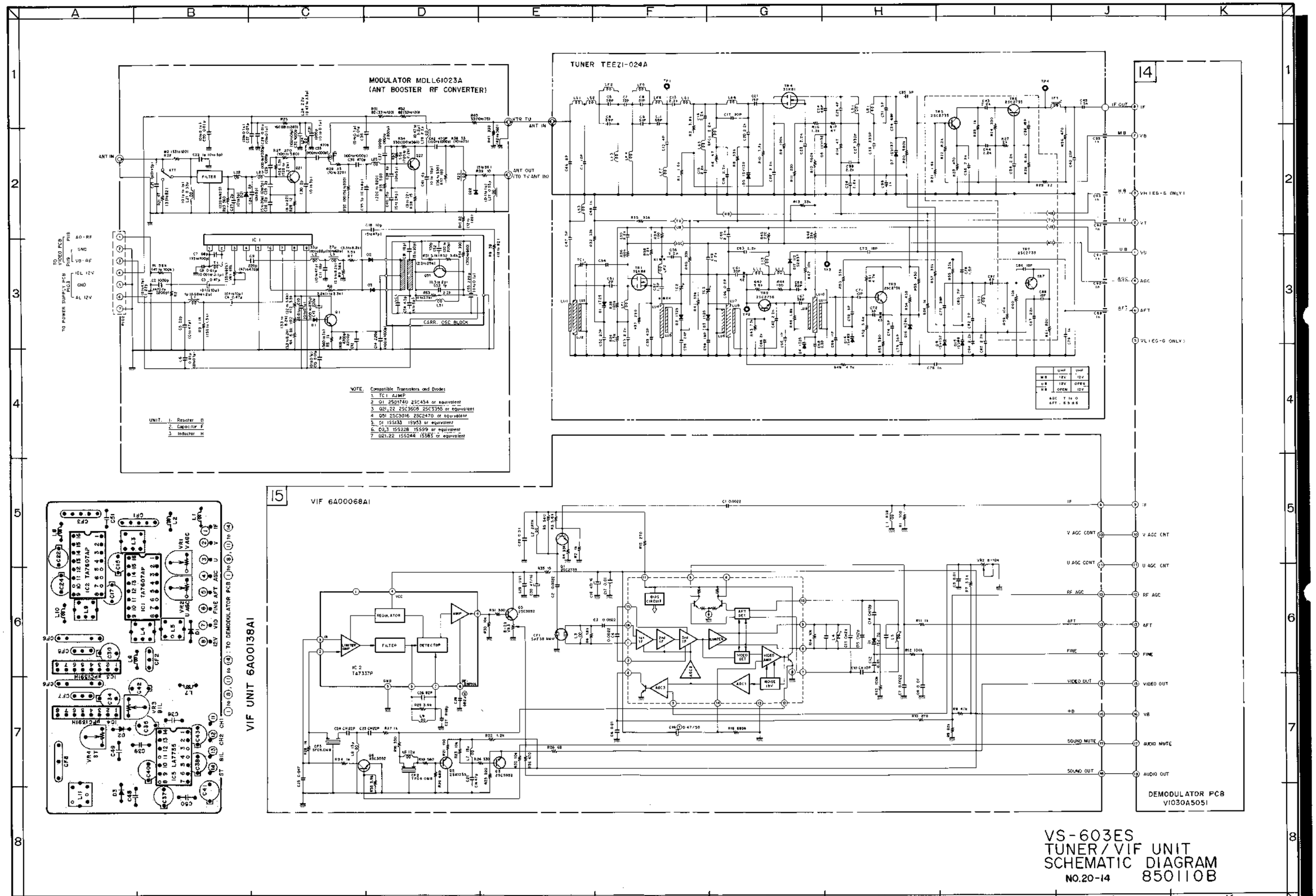
VIF 6A00068AI



DEMODULATOR PCB
V1030A5051

VS-603EG
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-12 841211B


MODULATOR MDLL61023A
(ANT BOOSTER / RF CONVERTER)
ANT IN
VTR TU ANT IN
ANT OUT (TO TV ANT IN)
FILTER
ATT
TO VIDEO PCB
A0-RF
GND
VO-RF
10L 12V
GND
AL 12V
TO POWER SUPPLY PCB
CARR OSC BLOCK
NOTE. Compatible Transistors and Diodes
1. TC1 AN1MP
2. Q1 2SD1740 2SC454 or equivalent
3. Q21,22 2SC3605 2SC3355 or equivalent
4. Q51 2SC3016 2SC2470 or equivalent
5. D1 1SS133 1S953 or equivalent
6. D2,3 1SS220 1SS98 or equivalent
7. D21,22 1SS244 1SS83 or equivalent
UNIT. 1. Resister Ω
2. Capacitor F
3. Inductor H
TUNER TEEBI-020A
14
TU
UB
AGC
AFT
MB
IF OUT
HB
LB
VT
VU
AGC
AFT
VB
IF
VHI(EG-G ONLY)
V(LIEG-G ONLY)
TERMINAL
VOLTAGE
M B
12V
U B
12V
A G C
1~4.0V
A F T
4.5~8.6V
TR1 : 3SK88, 3SK87, 3SK103-3SK102, 3SK115, 3SK123
TR2,3 : 2SC2736, 2SC2734-2SC2759, 2SC3120-2SC3547, 2SC2350
: 2SC2351, 2SC3356
TR4 : 2SC2735, 2SC2756-2SC2350-2SC2733, 2SC3123
TR5 : 2SC2735-2SC2756-2SC2350, 2SC2133-2SC3124
D1~4 : 1T25, 1S2208, 1SV70, 1T32, 1SV150, 1SV136, MA325
D5 : 1SVB9, 1S2339, 1SV146
D6 : HZ9A-RDB-2EB, 052B-2, MZ9AL, RDB-2
D7 : 1S2837-HSM2837, MA151WK, 1SS133, DAN202K, 1SS184
VIF UNIT 6A00138A1
TO DEMODULATOR PCB
IC2 TA7607AP
IC1 TA7607AP
IC3 μPC1318H
IC4 μPC1318H
IC5 LA7755
VR1 V AGC
VR2 U AGC
VR3 B/L
VR4 ST
15
VIF 6A00068A1
IC 2 TA7337P
REGULATOR
AMP
FILTER
DETECTOR
LIMITER AMP
BIAS CIRCUIT
AFT DET
VIDEO OUT
VIDEO AMP
NOISE INV
AGC
SELECT
ADJ
IF
V AGC CONT
U AGC CONT
RF AGC
AFT
FINE
VIDEO OUT
+B
SOUND MUTE
SOUND OUT
AUDIO OUT
DEMODULATOR PCB
V1030A5051
VS-603EK
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-13 841210B


MODULATOR MDLL61023A
(ANT BOOSTER RF CONVERTER)
TUNER TEEZI-024A
14
15
VIF 6A00068AI
VIF UNIT 6A00138AI
DEMODULATOR PCB
V1030A5051
IF OUT
IF
MB
VB
HB
VH (EG-6 ONLY)
TU
VT
UB
VU
AGC
AFT
VL (EG-6 ONLY)
ANT IN
ANT OUT
(TO TV ANT IN)
VTO TU
FILTER
CARR. OSC BLOCK
TO VIDEO PCB
TO POWER SUPPLY PCB
AO - RF
GND
VO - RF
VL 12V
GND
AL 12V
IF
V AGC CONT
U AGC CONT
RF AGC
AFT
FINE
VIDEO OUT
+B
SOUND MUTE
SOUND OUT
AUDIO MUTE
AUDIO OUT
REGULATOR
AMP
LIMITER AMP
FILTER
DETECTOR
IC 2
TA7337P
IC1 TA7607AP
IC2 TA7607AP
IC4 μPC1359H
IC5 LA7755
VR1 V AGC
VR2 U AGC
VR3 BIL
VR4 ST
CH1
CH2
ST
BIL
NOTE. Compatible Transistors and Diodes
1. TC1 AJMP
2. Q1 2SD1740 2SC454 or equivalent
3. Q21,22 2SC3606 2SC3355 or equivalent
4. Q51 2SC3016 2SC2470 or equivalent
5. D1 1SS133 1S953 or equivalent
6. D43 1S2228 1S509 or equivalent
7. D21,22 1S2244 1S585 or equivalent
UNIT. 1. Resistor Ω
2. Capacitor F
3. Inductor H
VS-603ES
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-14
850110B

MODULATOR MDLL5D073A
(ANT BOOSTER/RF CONVERTER)

TUNER TEEZI-032A

14

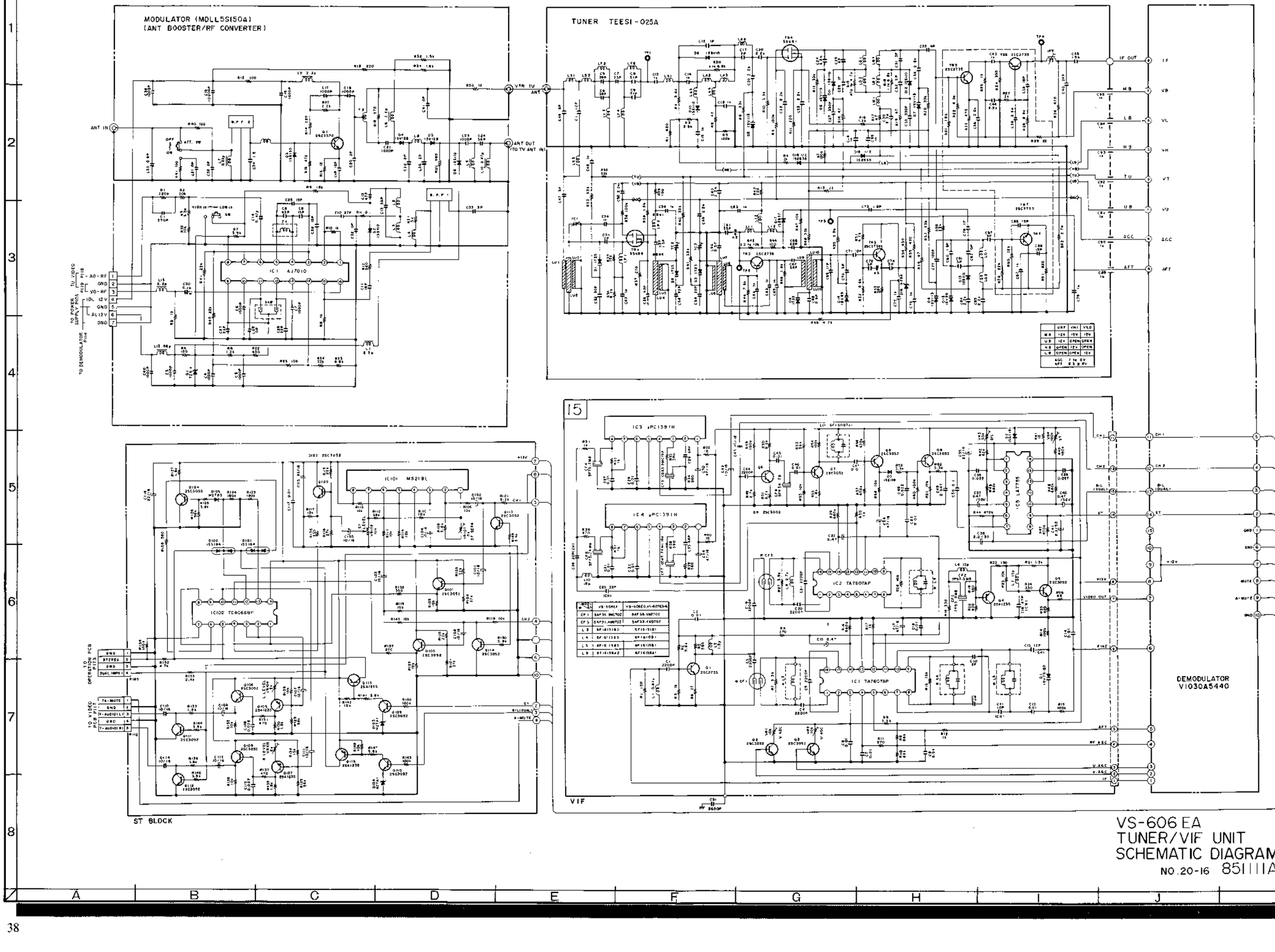
VIF UNIT 6A00138AI

15

VIF 6A00068AI

DEMODULATOR PCB
VI030A5051

VS-603EZ
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-15 850111B


MODULATOR (MDLL5S150A)
(ANT BOOSTER/RF CONVERTER)
TUNER TEESI-025A
ANT IN
ANT OUT (TO TV ANT IN)
VTR TV ANT
IC 4J7010
IF OUT
MB
LB
HB
TU
UB
AGC
AFT
TO POWER SUPPLY PIC3
TO DEMODULATOR P104
TO VIDEO PCB P117
TO OPERATION PCB P173
ST BLOCK
IC101 M52181
IC102 TC4066BP
IC3 μPC1391H
IC4 μPC1391H
IC2 TA7607AP
IC1 TA7607AP
IC5 LA7705
DEMODULATOR V1030A5440
VIF
VS-606 EA
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-16 851111A

Note: Complete Transistors and Diodes

1. TC1 AJ149
2. Q13 2SD1740 2SC654 or equivalent
3. Q21, 22 2SC3605 2SC3355 or equivalent
4. Q51 2SC3016 2SC2470 or equivalent
5. D1 1SS133 1S953 or equivalent
6. D2, 3 1SS128 1S389 or equivalent
7. D23, 27 1SS244 1SS83 or equivalent

UNIT: 1. Resistor Ω
2. Capacitor F
3. Inductor H

	U-HF	SW1	V.C
MB	12 V	12 V	2 V
UB	12 V	OPEN	OPEN
RB	OPEN	12 V	OPEN
LB	OPEN	OPEN	12 V

ANT: 7 to 0 V
AFT: 0.5 ± 4 V

MODULATOR MOLL6S023A
(ANT BOOSTER / RF CONVERTER)

TUNER TEEEI-A07A

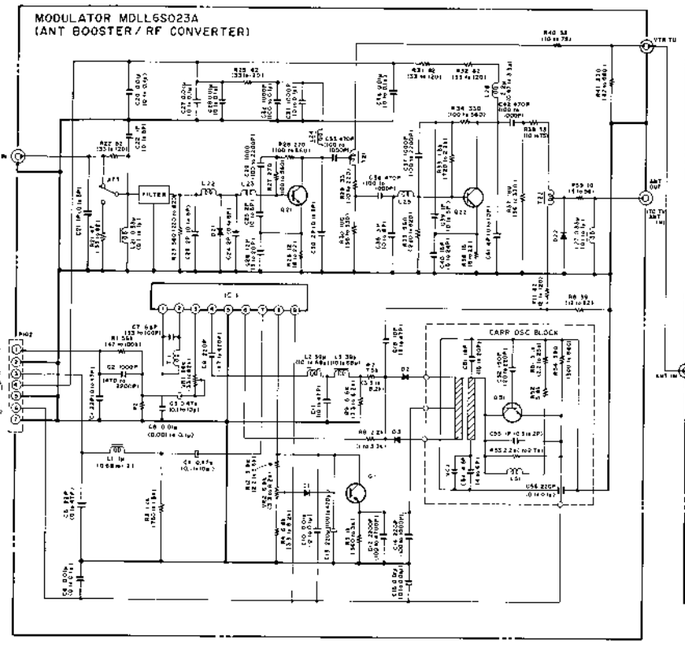
ST BLOCK

VIF

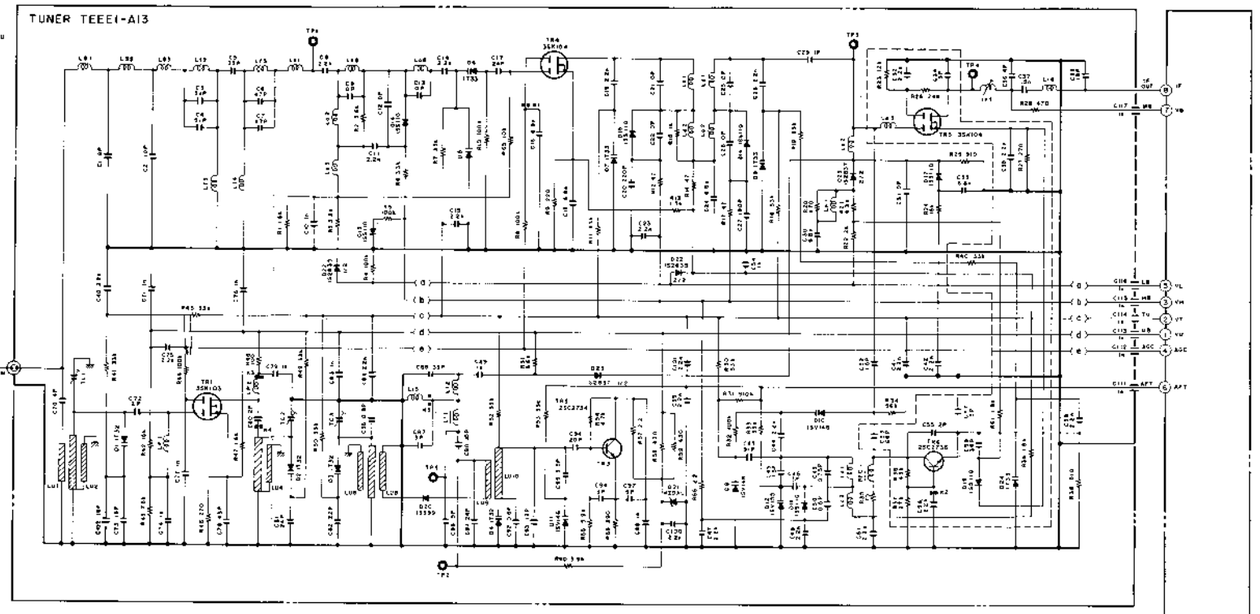
DEMODULATOR
V1030A5440

VS-606EO
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-17 851112A

MODULATOR MDLL6S023A
(ANT BOOSTER / RF CONVERTER)



TUNER TEE61-A13

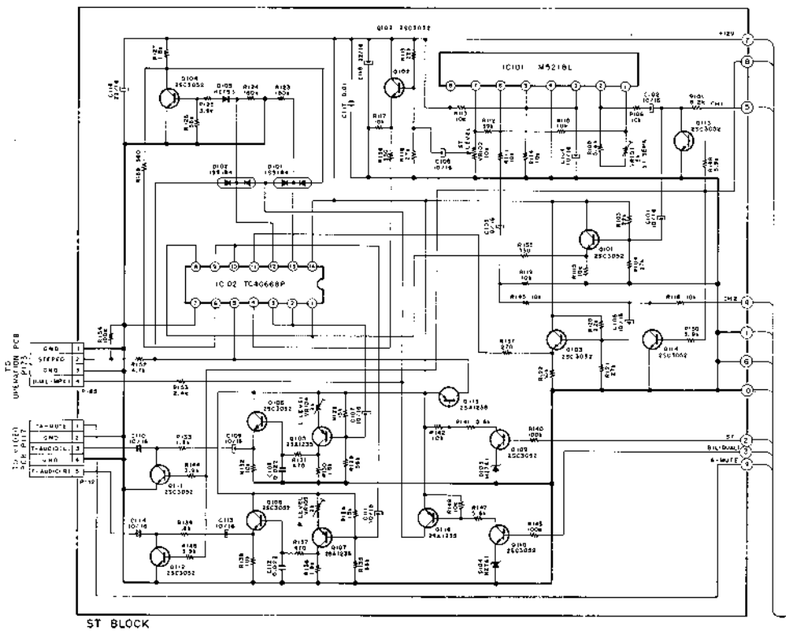


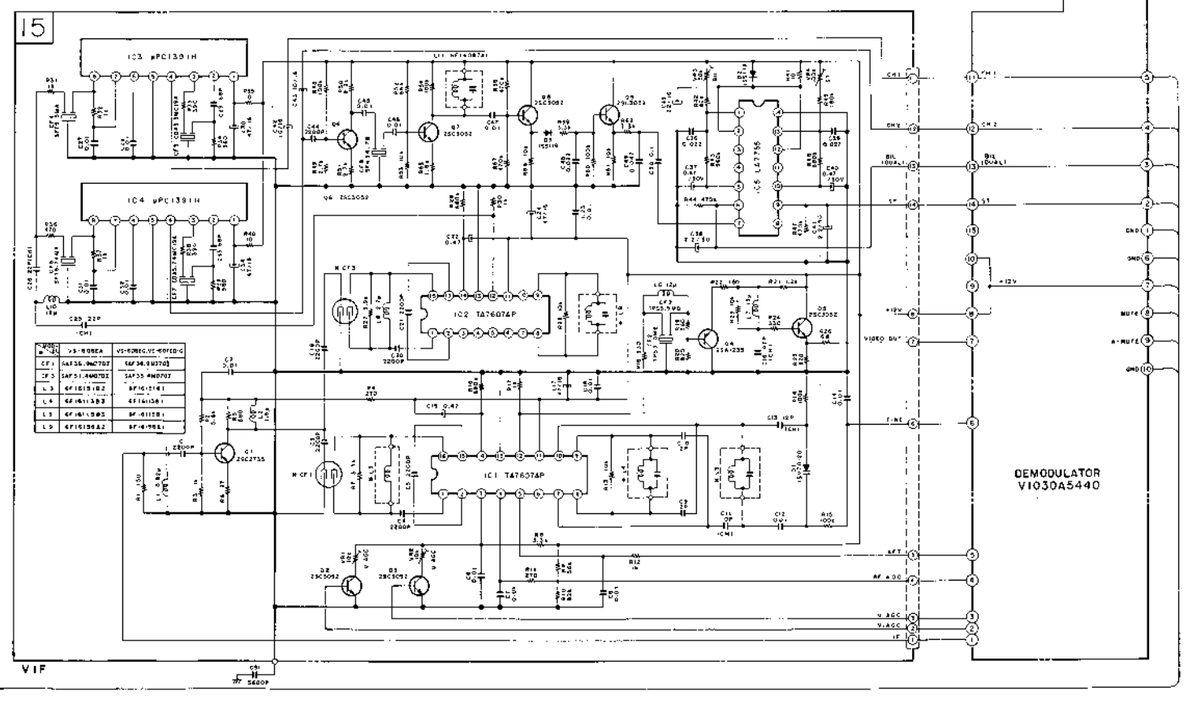
TUNER	VT	VLO
MID	12V	12V
LOW	2V	OPEN OPEN
HI	OPEN	2V OPEN
L/S	OPEN	OPEN 12V

36C 7 to 8V
SFT A.T @ 4V

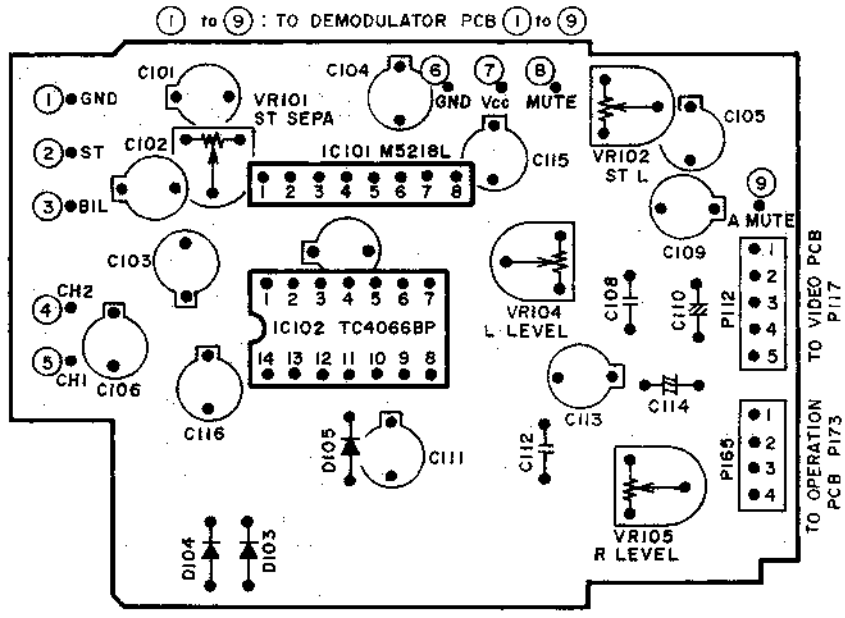
Note: Common Use Transistors and Diodes
1. TC1 A2149
2. Q1, 2SD1781 2SC454 or equivalent
3. Q21, 22 2SC3638, 2SC3356 or equivalent
4. D51, 2SC3016, 2SC2470 or equivalent
5. D1 1SS133 1SS53 or equivalent
6. D2, 7, 8 RD24S 1SS99 or equivalent
7. D21, 22 1SS108 1SS83 or equivalent

UNIT 1. Resistor 2
2. Capacitor 7
3. Inductor 4



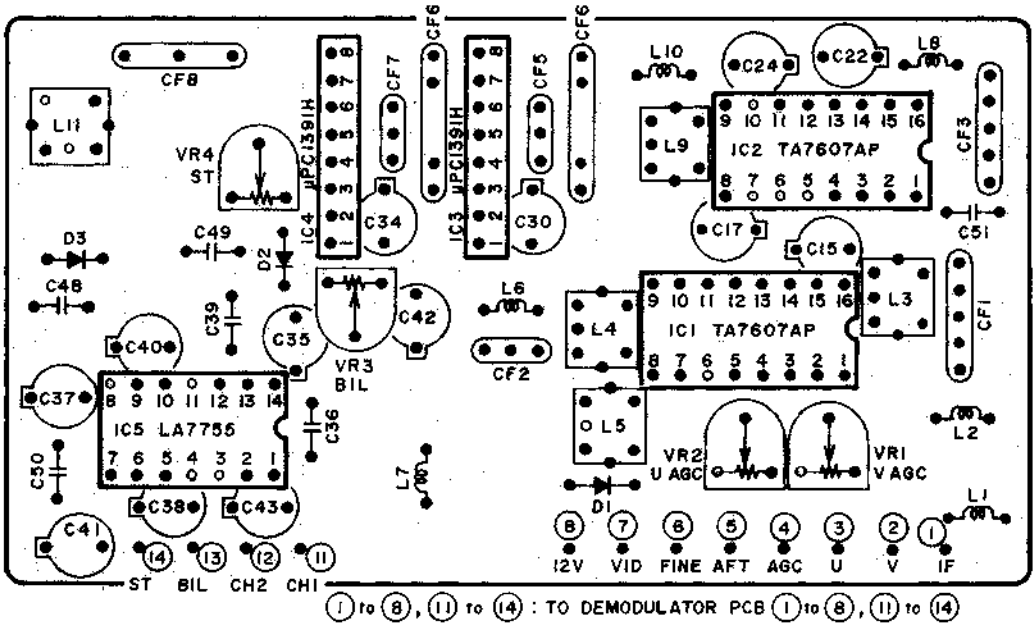


VS-607EO-G
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.20-18 851113A



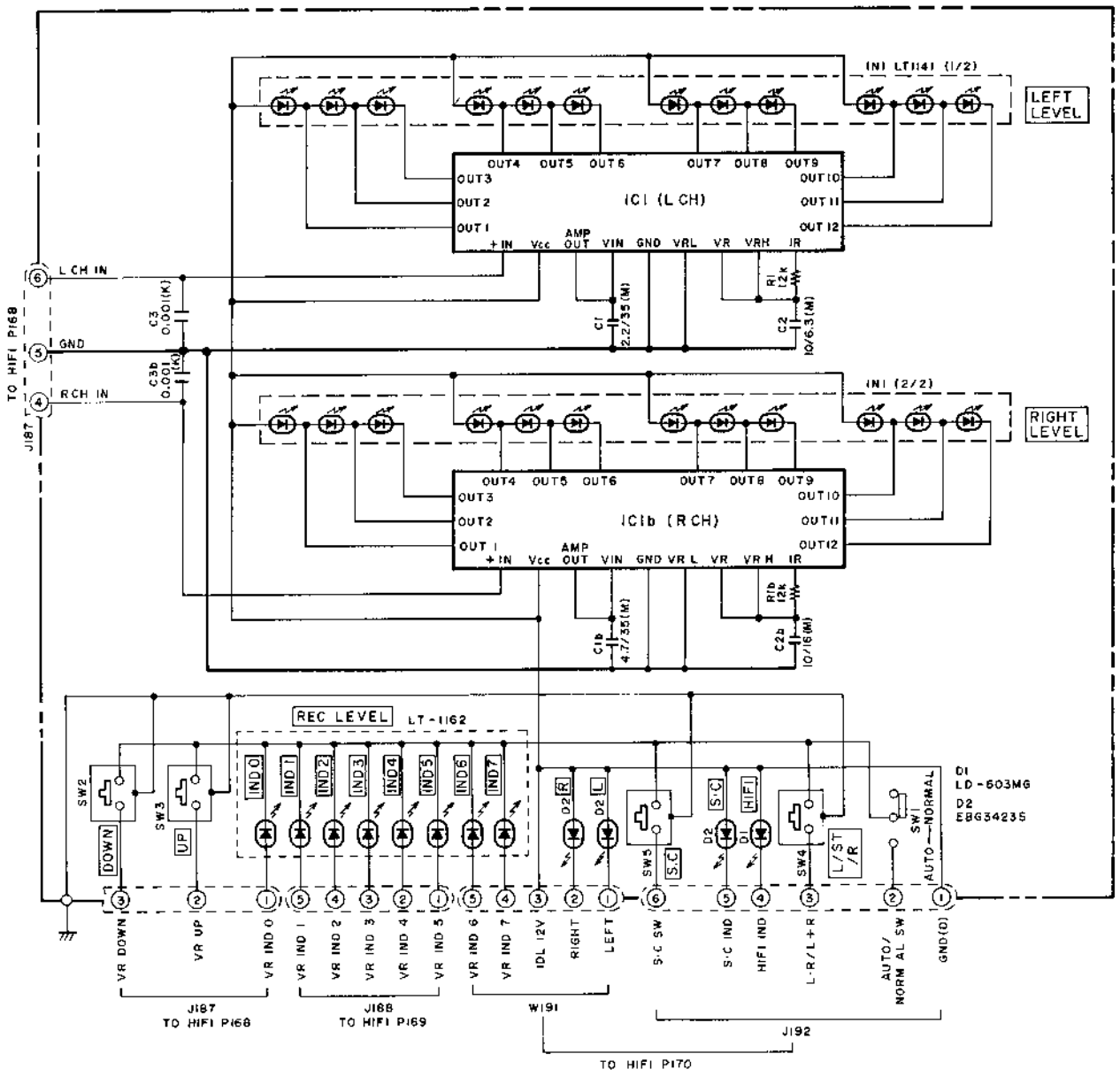
ST BLOCK 6A00151A2

NOTE: CHIP PARTS(C,R) ARE NOT SHOWN ON THESE PATTERNS

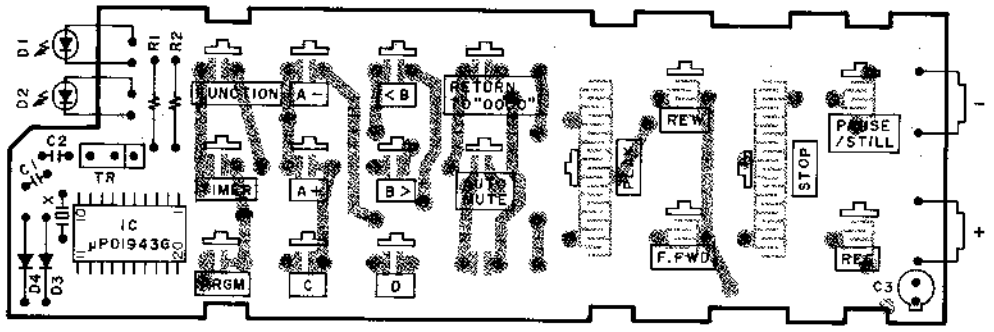


VIF UNIT 6A00138A1

NOTE: CHIP PARTS(C,R) ARE NOT SHOWN ON THESE PATTERNS



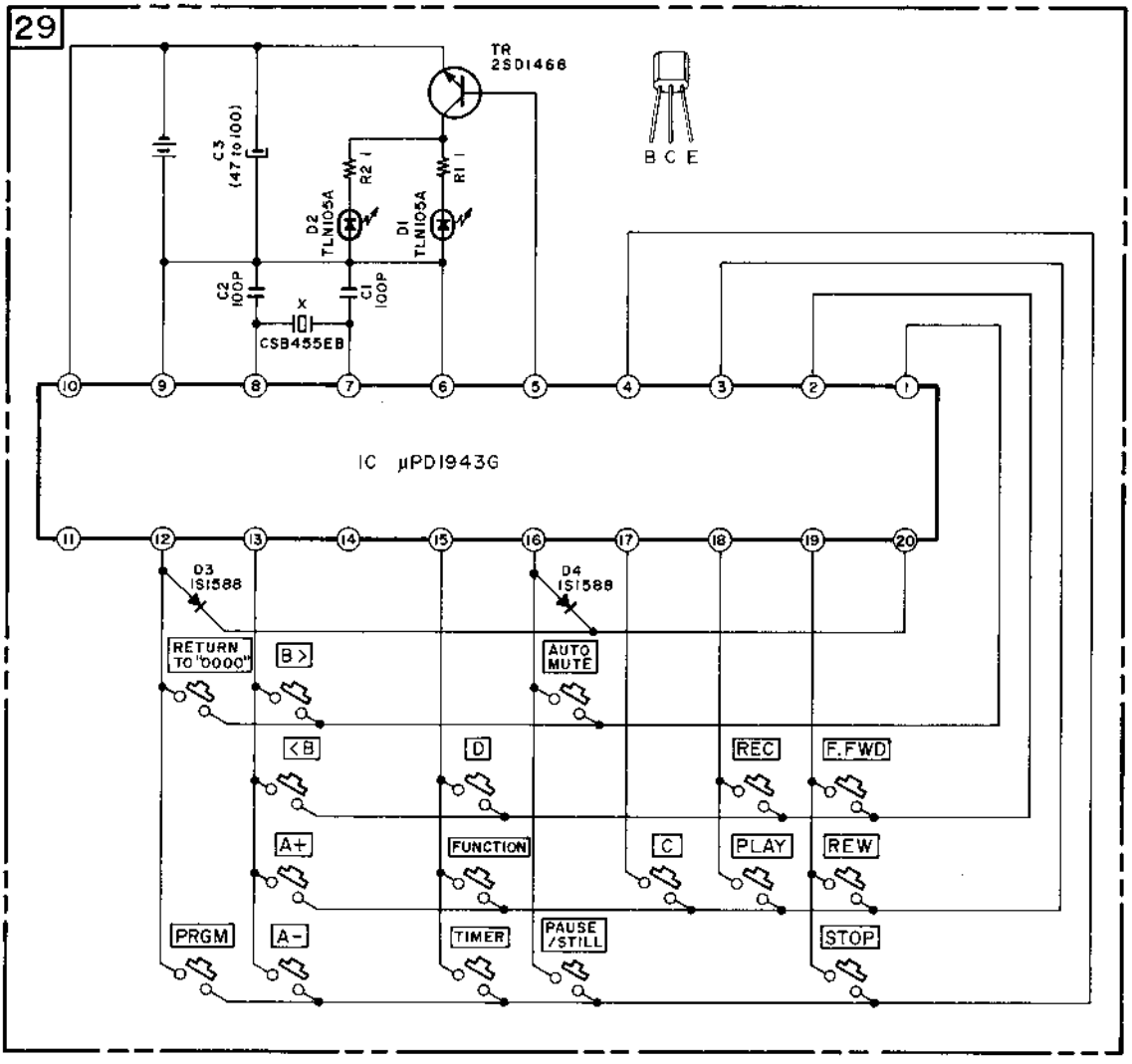
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
LEVEL METER
SCHEMATIC DIAGRAM
NO.20-19 850112A (A3)



2SD1468

▭ = NPN TRANSISTOR

A+	PRESET SELECT +
A−	PRESET SELECT −
< B	FINE TUNE/TRACKING
B >	FINE TUNE/TRACKING
C	DISPLAY SELECT
D	COUNTER RESET



A+	CANNEL SELECT +
A−	CANNEL SELECT −
B >	FINE TUNE/TRACKING
< B	FINE TUNE/TRACKING
C	DISPLAY SELECT
D	COUNTER RESET

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

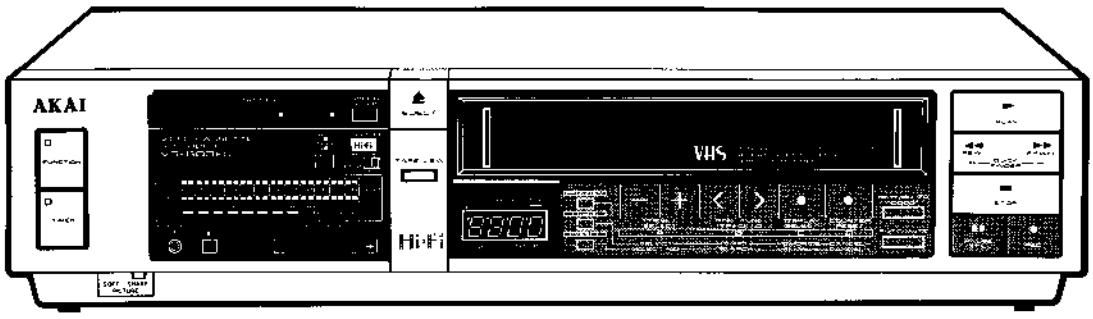
REMOTE CONTROL UNIT SCHEMATIC DIAGRAM

NO.20-20 841019C

VS-626EO

AKAI SERVICE MANUAL (ADDITIONAL)

* This additional Schematic Diagram is made for the models VS-603EG/EK/ES/EZ, VS-606EA/ED, VS-607EO-G, VS-626EO. Due to the new models VS-626EO have been addid for the VS-603E Series.
Use this additional Schematic Diagram together with the model VS-603EG/EK/ES/EZ, VS-606EA/EO, VS-607EO-G SERVICE MANUAL which published previously.



HiFi VIDEO CASSETTE RECORDER

MODEL VS-603EG/EK/ES/EZ
MODEL VS-606EA/EO
MODEL VS-607EO-G
MODEL VS-626EO

SPECIFICATIONS

Format		VHS Standard
Video recording system		Rotary, slant azimuth two-head helical scan system
Rotary heads		4 video heads and 2 audio heads
RF input		System B, G with monaural or multiplexed 2 channel audio VHF: Low ch 2 to 4, SI to S3 High ch M1 to M10, 5 to 12, U1 to U10 UHF: ch 21 to 69
RF output		System G type modulation UHF: ch 30 to 39 adjustable (preset ch 36)
Recording (line input)		PAL, CCIR (System B, G, I)
Playback (line output)		PAL, CCIR (System B, G, I)
Video	Line input level	0.5 to 2.0 Vp-p/75 ohms, unbalanced
	Line output level	1.0 Vp-p/75 ohms, unbalanced
	S/N ratio	More than 43 dB
	Horizontal resolution	More than 250 lines (SP mode)
Audio (VHS HiFi: 2ch, LINEAR: 1 ch)		
	Line input level	−8 dBm/50 kohms, unbalanced (309 mVrms) (−20 dBm at Recording level control max)
	Line output level	−6 dBm/1 kohms, unbalanced (388 mVrms)
	Dynamic range	More than 80 dB (VHS HiFi)
	S/N ratio	More than 70 dB (VHS HiFi) More than 40 dB (Linear track, SP mode)
	Frequency Response	20 to 20,000 Hz (VHS HiFi) 70 to 10,000 Hz (Linear track, SP mode)
	Wow & Flutter	Less than 0.005% WRMS (VHS HiFi)
Recording/Playback time		240 min. with E-240 cassette on SP mode 480 min. with E-240 cassette on LP mode
Tape speed	SP Mode	23.39 mm/sec
	LP Mode	11.695 mm/sec
Quick finder	SP Mode	Approx. 7 times normal speed
	LP Mode	Approx. 15 times normal speed
FF, REW time		Approx. 4 min. with E-180 cassette
Timer	Programs	8 programs/4 week and sleep timer
	Clock reference	Quartz crystal
Display		TV screen (Tape counter, Timer etc.)
Power requirements	EA	240V AC, 50 Hz
	EO	220V AC, 50 Hz
Power consumption		36W
Operating temperature		5°C to 40°C (41°F to 104°F)
Dimensions		440 (W) x 99 (H) x 368 (D) mm (17.3 x 3.9 x 14.5 inches)
Weight		10.0 kg (22.0 lbs)

PARTS LIST

The available service parts for the model VS-626EO are identical to those of the model VS-606EO except for the parts listed hereunder. Refer to the Parts List in the VS-606EO Service Manual for the parts not listed in this Parts List.

2. CHASSIS MECHA BLOCK (1)

REF. NO.	PART NO.	DESCRIPTION
2-5	ML-B365141	LEVER TENSION (2) PART

3. CHASSIS MECHA BLOCK (2)

REF. NO.	PART NO.	DESCRIPTION
18-PH1	ET-365248	DETECTOR ON2160 Q,R
19-PH1	ET-365248	DETECTOR ON2160 Q,R

4. EJECTOR BLOCK

REF. NO.	PART NO.	DESCRIPTION
4-26	SP-364666	PLATE MIRROR (2)
4-28	SE-353040L	MASK CASSETTE (ENGLISH HQ,PAL)
21-TR1	ET-359700	TR PHOT PN202S S
22-TR1	ET-359700	TR PHOT PN202S S

6. VIDEO PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-TR56	ET-308472	⚠ TR 2SA111 5E,F,G F05
6-TR64	ET-308472	TR 2SA1115 E,F,G F05
6-TR601	ET-349366	TR 2SC3402 F05
6-D601	ED-344280	D SILICON H GMA-01-FY2 F05
6-D602	ED-624903	D SILICON H 1S2473
6-VC1	EC-362054	C S-FIX H ECR-HA030E11 5.5-30

7. HIFI AUDIO PC BOARD

REF. NO.	PART NO.	DESCRIPTION
7-D18	ED-624903	D SILICON H 1S2473
7-VR7,10	EV-358829	R S-FIX H RH0615CJ4J 3P 223

"TR19, D8 are not required for this model."

12. MECHA DRIVE PC BOARD

REF. NO.	PART NO.	DESCRIPTION
12-TR80	ET-308472	TR 2SA1115 E,F,G F05

13. SYSTEM CONTROL PC BOARD

REF. NO.	PART NO.	DESCRIPTION
13-IC1	EI-364329	IC MB8841-1450J B-PAL2

14. DEMODULATOR PC BOARD

"D1, D4, R12 are not required for this model."

17. SELECTOR PC BOARD

REF. NO.	PART NO.	DESCRIPTION
17-C1	EC-338577	⚠ C CE V F472M 400AC

18. SENSOR (S) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
18-PH1	ET-365248	DETECTOR ON2160 Q,R

19. SENSOR (T) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
19-PH1	ET-365248	DETECTOR ON2160 Q,R

21. SENSOR (L) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
21-TR1	ET-359700	TR PHOT PN202S S

22. SENSOR (R) PC BOARD

REF. NO.	PART NO.	DESCRIPTION
22-TR1	ET-359700	TR PHOT PN202S S

26. SERVO SUB PC BOARD

"SERVO SUB PC BOARD is not required for this model."

26. ASSEMBLY BLOCK

REF. NO.	PART NO.	DESCRIPTION
26-1	ZS-357528	DELL TIGHT BR30×08STL CMT [POWER TRANS FIX]
26-2	EW-356588	⚠ AC CORD 2 CORES KP419C LTCE2F-CB EV
26-3	BV-353842	RF CONVERTER/BOOSTER MDLL6S023A
26-4	ZS-356675	PLX BR30×10STL BLUE [RF CONVERTER FIX]
26-5	SP-364027F	PANEL REAR VS-626EO
26-6	SZ-354739	CAP PANEL
26-7	ZS-357944	ST BR30×10STL BNI SPECIAL [COVER UPPER FIX]
26-8	SA-353927B	FOOT (2)
26-9	MZ-357839	GUIDE CASSETTE (F)
26-T901	BT-356595	⚠ TRANS POWER V1027 EO 220

27. FINAL ASSEMBLY BLOCK

REF. NO.	PART NO.	DESCRIPTION
	PANEL FRONT BLOCK	
27-1	BD-V1030A130H	PANEL FRONT BLK VS-626EO
27-1-B	BD-V1030B130G	PANEL FRONT BLK VS-626EO-B
27-2	SK-B353757C	KNOB PLAY PART
27-2-B	SK-B353757F	KNOB PLAY-B PART
27-3	SK-B353759C	KNOB QUICK FINDER PART
27-3-B	SK-B353759F	KNOB QUICK FINDER-B PART
27-4	SK-353762C	KNOB STOP
27-4-B	SK-353762D	KNOB STOP-B
27-5	SK-B353765B	KNOB PAUSE/STILL PART
27-5-B	SK-B353765E	KNOB PAUSE/STILL-B PART
27-6	SK-B353764B	KNOB REC PART
27-6-B	SK-B353764E	KNOB REC-B PART
27-7	SK-B353768C	KNOB FUNCTION PART
27-7-B	SK-B353768H	KNOB FUNCTION-B PART
27-8	SK-B353768F	KNOB TIMER PART
27-8-B	SK-B353768L	KNOB TIMER-B PART
27-9	SK-353499C	KNOB EJECT
27-9-B	SK-353499E	KNOB EJECT-B
27-10	SP-355395K	PLATE DECORATION (C) VS-626EO
	FINAL ASSEMBLY BLOCK	
27-11	SP-353796	COVER UPPER
27-11-B	SP-353796B	COVER UPPER-B
27-12	ZS-357953	ST BID40×08STL NI3 SPECIAL [COVER UPPER FIX]
27-12-B	ZS-357954	ST BID40×08STL BNI SPECIAL [COVER UPPER FIX]
27-13x	EW-348414	CORD PAL [ANTENNA CABLE]

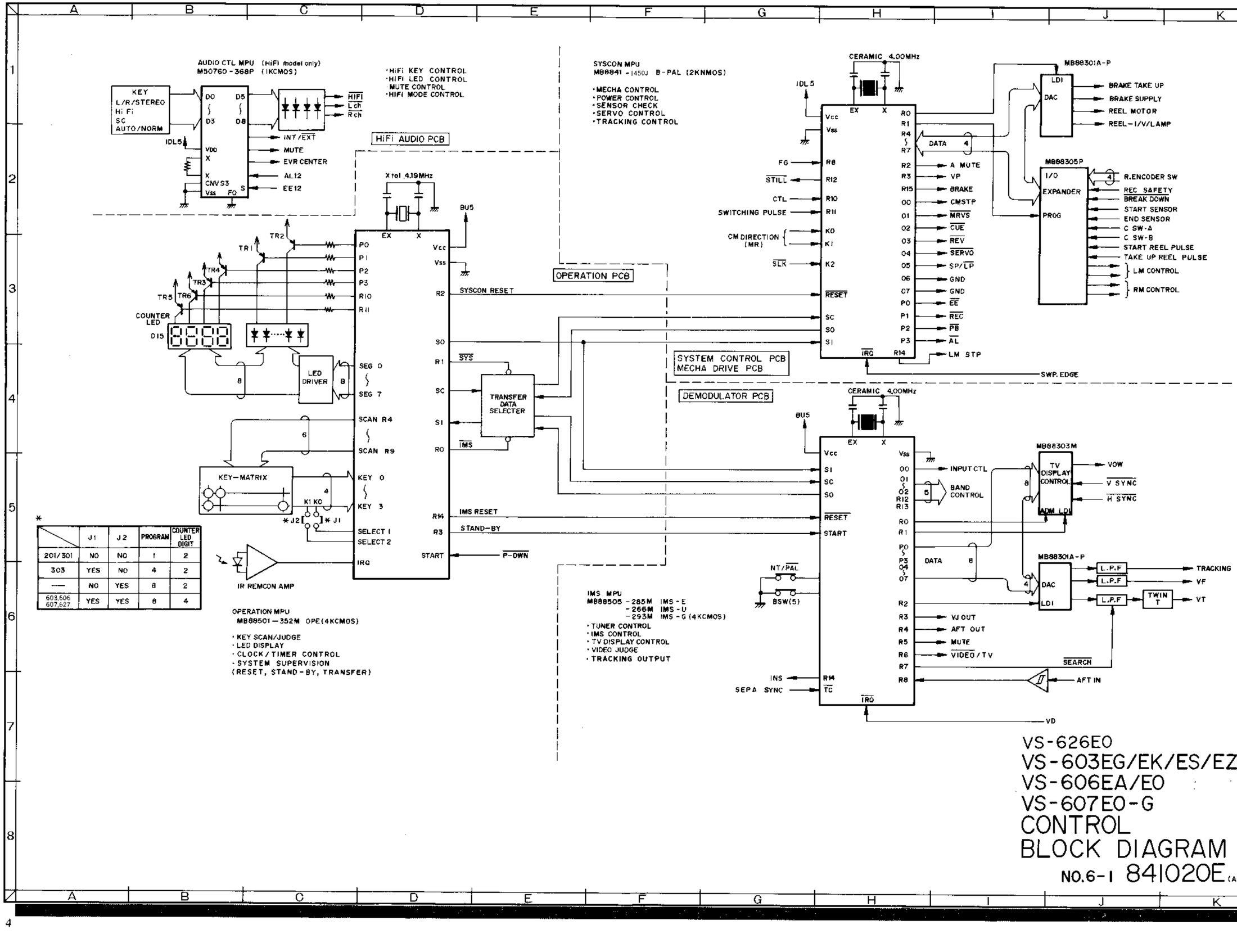
28. REMOTE CONTROL UNIT RC-V603

REF. NO.	PART NO.	DESCRIPTION
28-1	AV-354008	REMOCON RC-V603B-E1 WIRELESS(T)
28-1-B	AV-354013	REMOCON RC-V603B-E1B WIRELESS(T)
28-IC1	EI-749983	IC UPD1943G
28-TR1	ET-318604	TR 2SD545NP E,F
28-D1	ED-714631	D LED TLN105A
28-D2	ED-714631	D LED TLN105A
28-D3	ED-557447	D SILICON H 1S1588
28-D4	ED-557447	D SILICON H 1S1588
28-X1	EI-710044	OSC CE CSB455EB 455KHZ
28-2	SC-718283	COVER BOTTOM
28-2-B	SC-718284	COVER BOTTOM-B
28-3	SZ-718285	PLATE REMOCON

SCHEMATIC DIAGRAM AND PC BOARDS

TABLE OF CONTENTS

1. CONTROL BLOCK DIAGRAM 4
2. POWER SUPPLY BLOCK DIAGRAM 5
3. MECHA DRIVE BLOCK DIAGRAM 5
4. MECHA MODE AND ACTIONFLOW 6
5. HiFi AUDIO BLOCK DIAGRAM 7
6. VIDEO BLOCK DIAGRAM 8
7. SERVO BLOCK DIAGRAM 9
8. CONNECTION DIAGRAM 10
9. SELECTOR PC BOARD AND OTHER PC BOARDS 11
10. POWER SUPPLY SCHEMATIC DIAGRAM 12
11. POWER SUPPLY PC BOARD 13
12. SYSTEM CONTROL SCHEMATIC DIAGRAM 14
13. SYSTEM CONTROL PC BOARD 15
14. OPERATION SCHEMATIC DIAGRAM 16
15. OPERATION PC BOARD 17
16. SERVO (A)/(B) SCHEMATIC DIAGRAM 18
17. SERVO (A)/(B) PC BOARD 19
18. MECHA DRIVE SCHEMATIC DIAGRAM 20
19. MECHA DRIVE PC BOARD 21
20. MOTOR SCHEMATIC DIAGRAM AND MOTOR PC BOARD 21
21. VIDEO SCHEMATIC DIAGRAM 22
22. VIDEO PC BOARD 23
23. HiFi AUDIO SCHEMATIC DIAGRAM 24
24. HiFi AUDIO PC BOARD 25
25. VS-603EG/EK/ES/EZ DEMODULATOR SCHEMATIC DIAGRAM 26
26. VS-603EG/EK/ES/EZ DEMODULATOR PC BOARD 27
27. VS-606EA/EO, VS-607EO-G, VS-626EO DEMODULATOR SCHEMATIC DIAGRAM 28
28. VS-606EA/EO, VS-607EO-G, VS-626EO DEMODULATOR PC BOARD 29
29. VS-606EO, VS-626EO TUNER/VIF UNIT SCHEMATIC DIAGRAM 30
30. ST BLOCK/VIF UNIT PC BOARD 31
31. LEVEL METER SCHEMATIC DIAGRAM 32
32. REMOTE CONTROL UNIT SCHEMATIC DIAGRAM AND PC BOARD 33

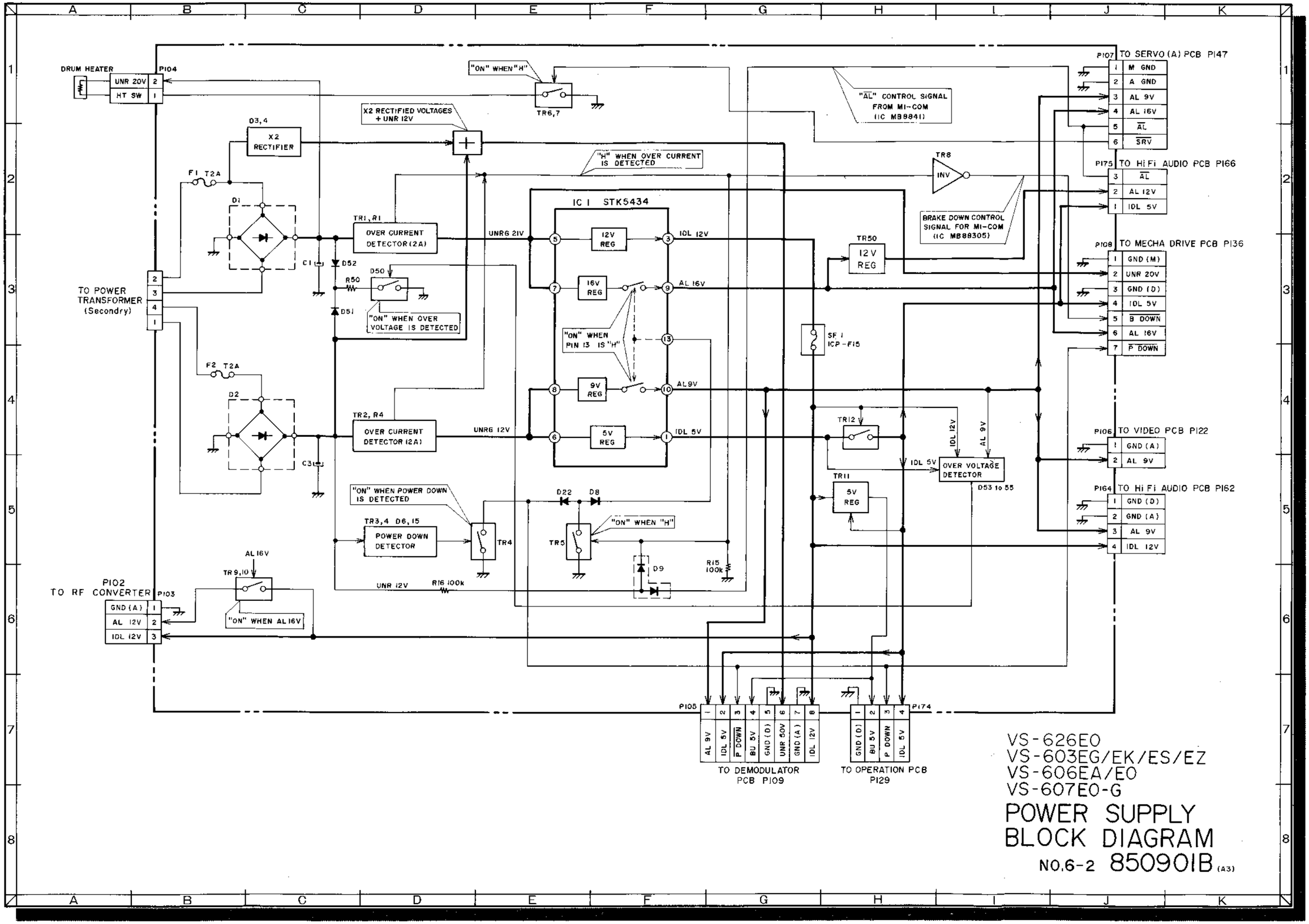


*

	J1	J2	PROGRAM	COUNTER LED DIGIT
201/301	NO	NO	1	2
303	YES	NO	4	2
——	NO	YES	8	2
603,606 607,627	YES	YES	8	4

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
CONTROL BLOCK DIAGRAM

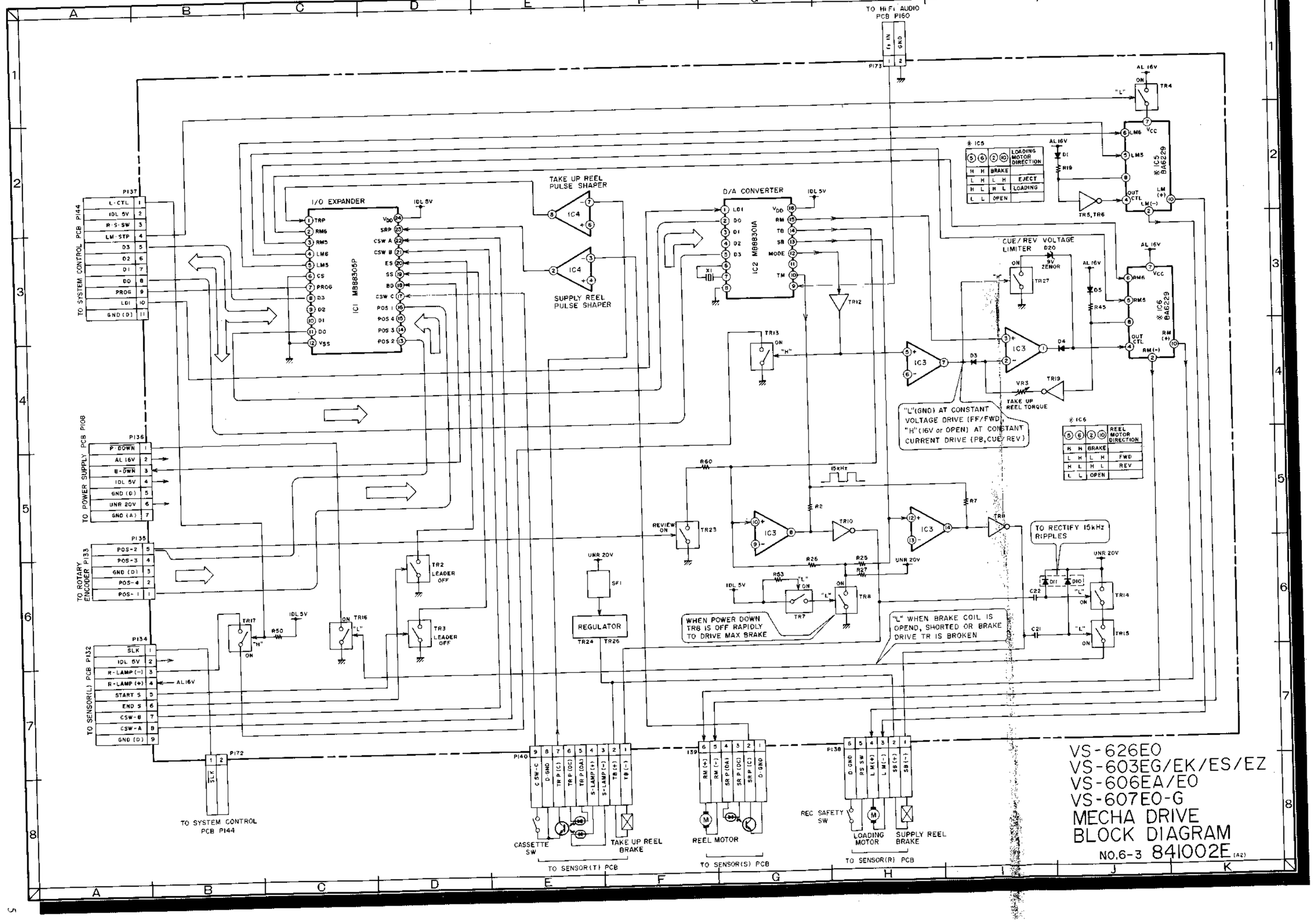
NO.6-1 841020E (A2)



VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G

POWER SUPPLY BLOCK DIAGRAM

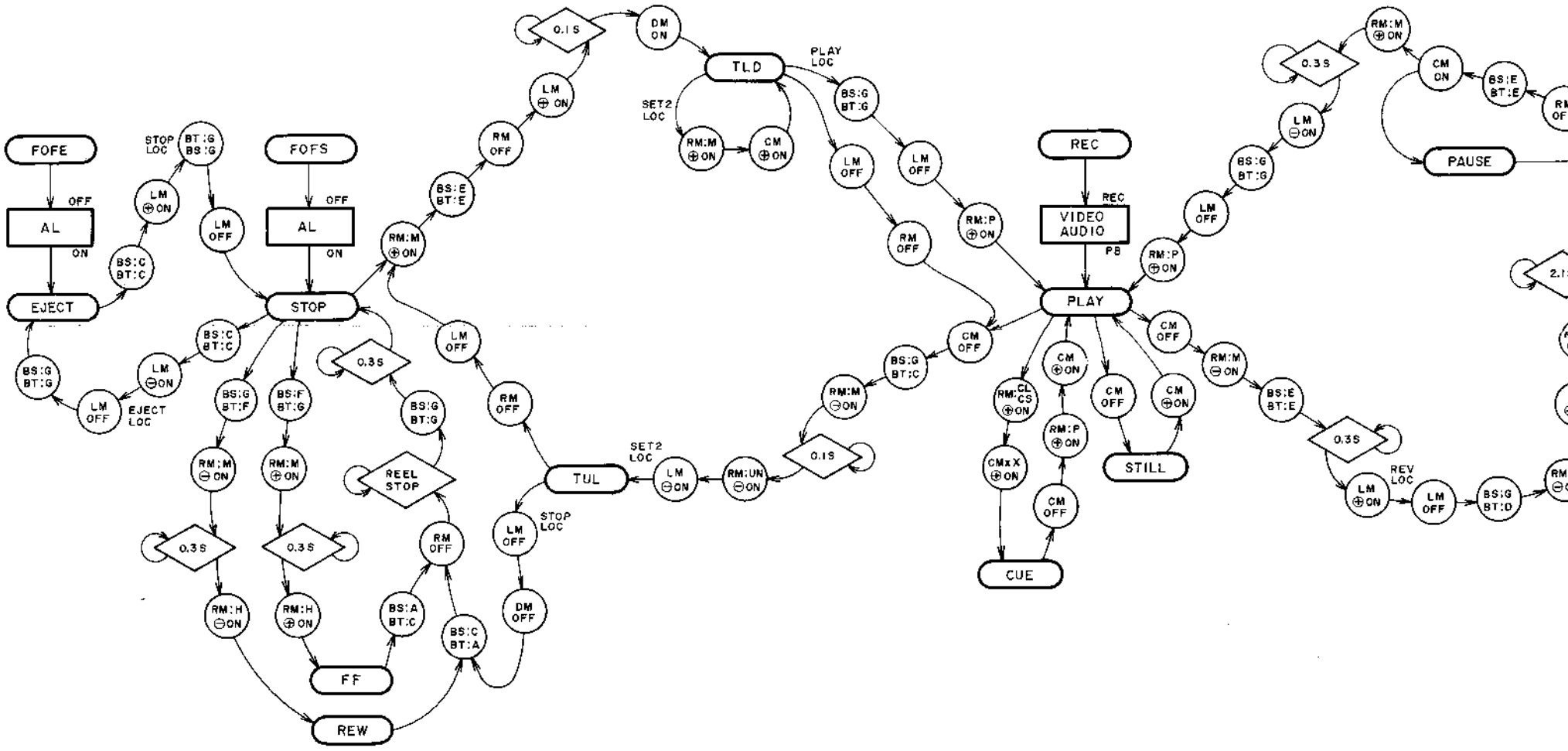
NO.6-2 850901B (A3)

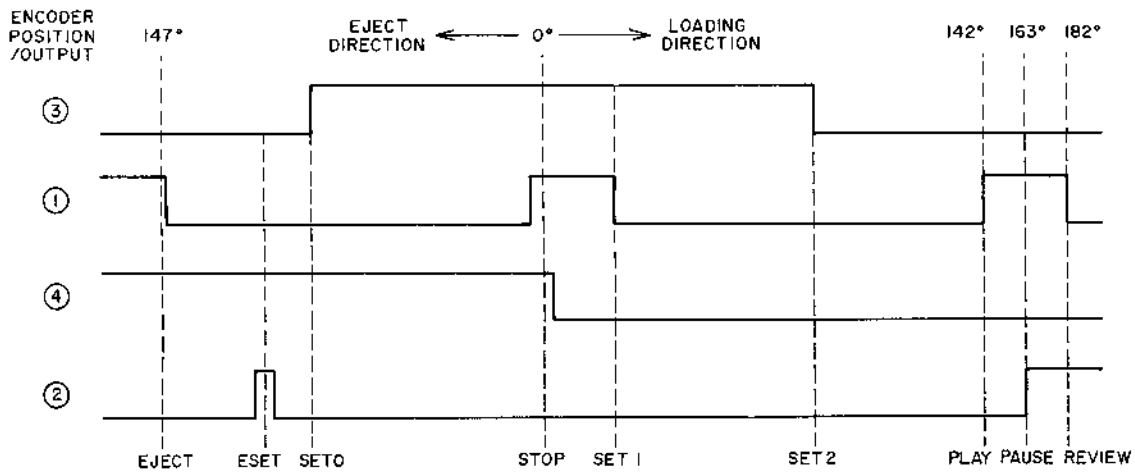


VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
MECHA DRIVE BLOCK DIAGRAM

NO.6-3 841002E (A2)

MECHA MODE AND ACTIONFLOW





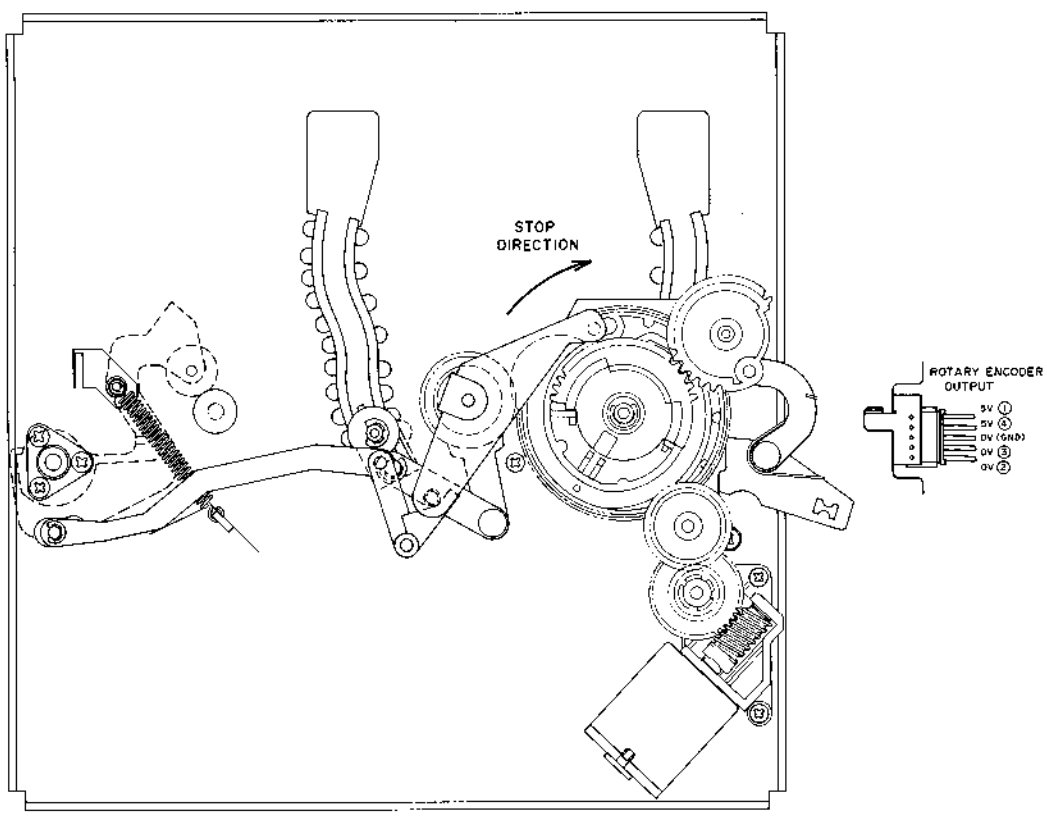
ABBREVIATIONS

Reel Motor Torque Voltage Drive Mode
- M : Idler Position Change
- H : FF REW

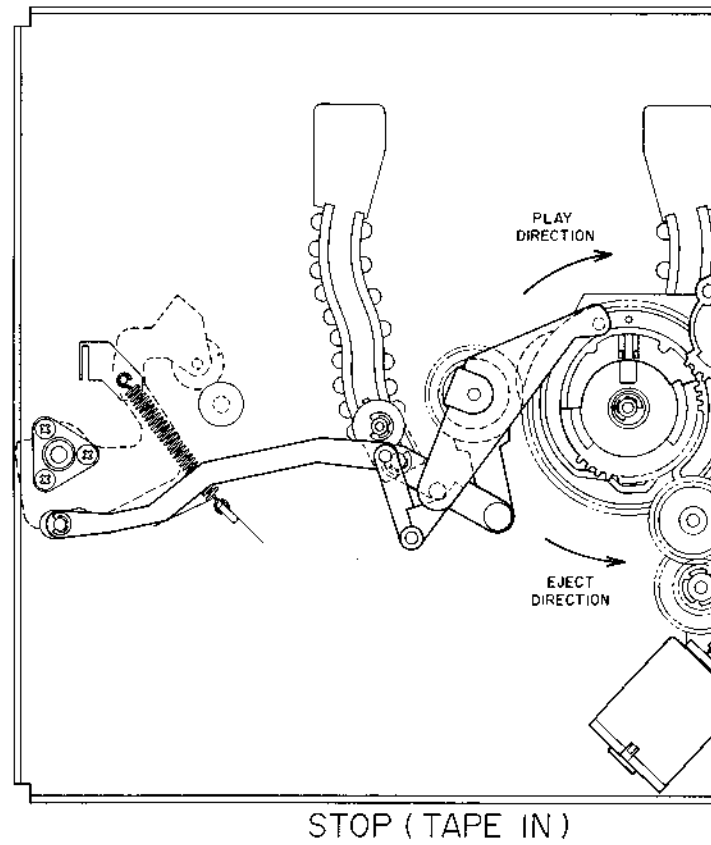
Current Drive Mode
- CL : LP CUE REV
- AE : AEC
- P : PLAY REC
- UN : Unloading
- CS : SP LP CUE REV

Magnetic Brake Torque
- A : From FF REW To STOP(Supply Side)
- Increase C : From FF REW To STOP(Winding Side)
- D : REV Back Tension
- E : Unloading Brake
- Decrease F : FF REW Back Tension(Supply Side)
- G : FF RWD(Take Up Side)

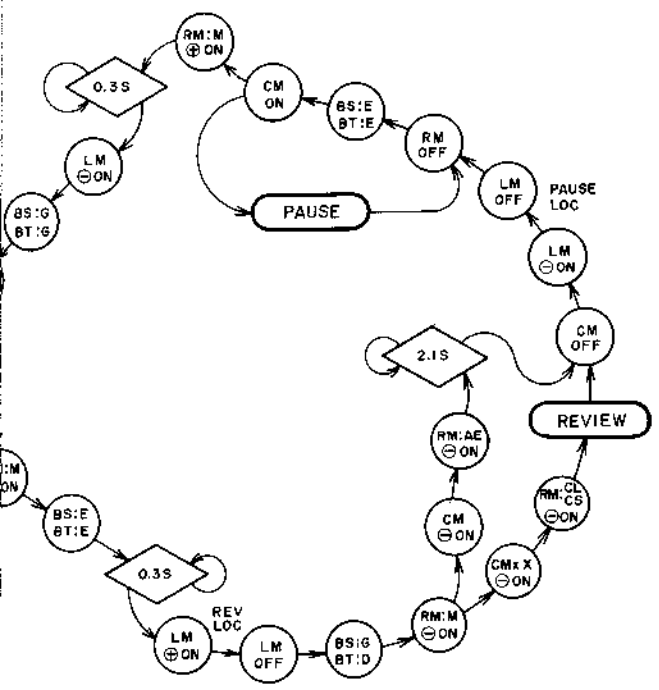
DM : Drum
CM : Capst
BT : Take
BS : Suppl
RM : Reel
LM : Loadi
FOFE : Eje (Wi
FOFS : Sto (Wi
AL : Alway
LOC : Loca
TLD : Tape
TUL : Tape
LM ⊕ ON :
RM ⊕ ON :
CMxX ⊕ ON

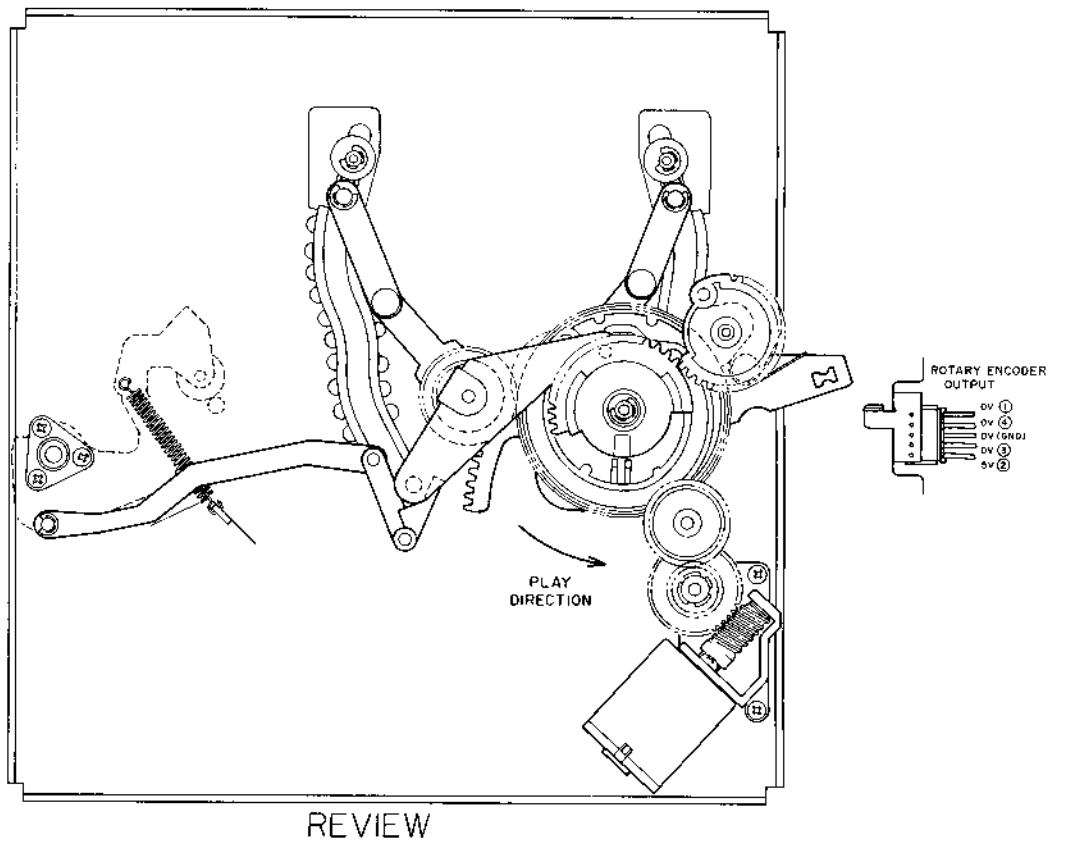


EJECTED (TAPE OUT)



STOP (TAPE IN)





REVIEW

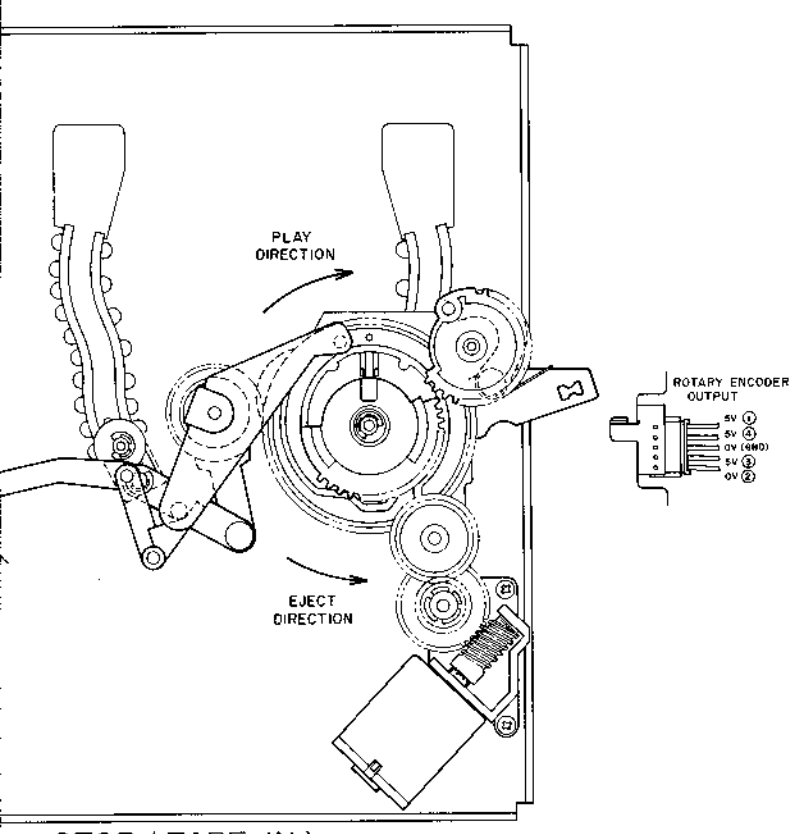
ONS

Voltage Drive Mode
n Change

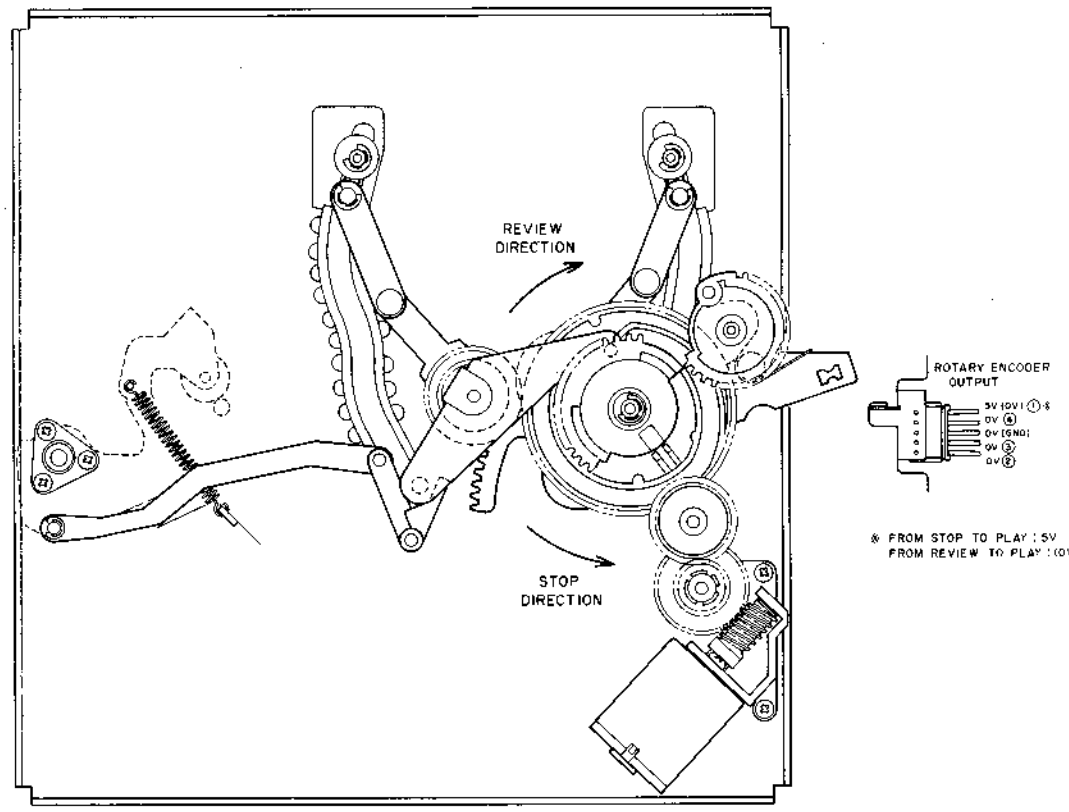
V

que
To STOP(Supply Side)
To STOP(Winding Side)
sion
ake
Tension(Supply Side)
Up Side)

DM : Drum Motor
CM : Capstan Motor
BT : Take Up Magnetic Brake
BS : Supply Magnetic Brake
RM : Reel Motor
LM : Loading Motor
FOFE : Ejected Function Off
(Without Tape)
FOFS : Stopped Function Off
(With Tape)
AL : Always Function
LOC : Location(Detecting Rotary Encoder)
TLD : Tape Loading
TUL : Tape Unloading
LM ⊕ ON : Loading Motor Rotation
(Loading Direction)
RM ⊕ ON : Reel Motor Rotation
(PLAY Direction)
CMxX ⊕ ON : Capstan Motor Speedy Rotation
(CUE Direction)

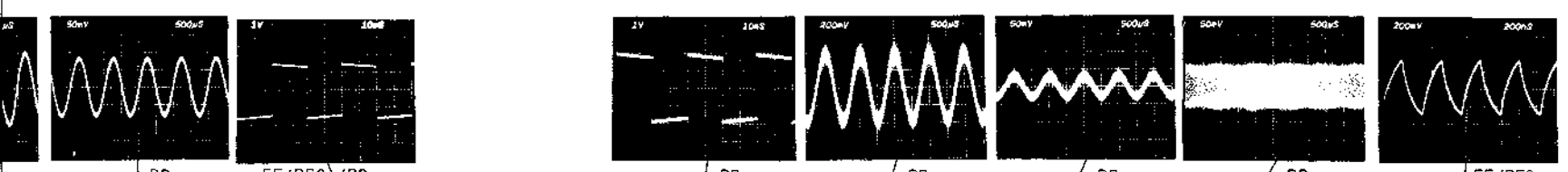


STOP (TAPE IN)



PLAY

EE/REC
EE/REC
PB
EE/REC
PB
PB
EE/REC
PB
PB (NORMAL)
EE/REC
TO MECHA DRIVE PCB P173
J160
SP160
fs IN
GND
PB9V
TR30 "H"→ON
P162
A-SWP
GND
TO SERVO(A) PCB P176
P169
LEVEL IND DRIVE
IND 5
IND 4
IND 3
IND 2
IND 1
TO LEVELMETER PCB J157
P156
GND
NA IN
GND
SW AUDIO(R)
GND
SW AUDIO(L)
TO VIDEO PCB P150
P158
TA MUTE
IN CTL
INT/EXT
TO VIDEO PCB P152
P170
GND (D)
AUTO/NORM
L+R/L+R
HIFI IND
SC IND
SC SW
L IND
R IND
IDL 12V
IND 7
IND 6
TO LEVEL METER PCB WISI J192
P166
IDL 5V
AL 12V
AL
TO POWER SUPPLY PCB P175
P165
IDL 12V
AL 9V
GND (A)
GND (D)
TO POWER SUPPLY PCB P164
P167
PHONE(L)
GND(D)
PHONE(R)
TO PHONE JACK PCB J901
P157
LA-OUT(L)
GND(A)
LA-OUT(R)
GND(A)
TO VIDEO PCB P151
P163
A-MUTE
EE 9V
6H 9V
AL
REC 9V
PB 9V
AL 9V
GND (A)
TO SYSTEM CONTROL PCB P179
P159
EE 9V
6H9V
REC9V
PB9V
TO VIDEO PCB P153
VR UP/DOWN KEY INPUT
E-VR OUT(Rch)
TR2
EF
FL1
20KHz LPF
D3
EE9V
EE REC
AL9V
TR8
5V REG
TR4 EE REC OFF
AL5V
IC3 HA17072NT (VHS NOISE REDUCTION)
REC IN (Rch)
PB IN (Rch)
HiFi EE LEVEL (Rch)
VR1
AUDIO OUT(Rch)
NORMAL IN
BIL
AGC
AMP
REC AMP
PB AMP
REC
PB
W E
DET
V-I
NOR
HIFI
LOGIC CONT
ST48
MUTE ON/OFF
AUDIO OUT(Lch)
REC IN(Lch)
PB IN(Lch)
VR2
HiFi EE LEVEL (Lch)
TR12
METER AMP EMPHASIS
BAR METER SENS(Rch)
TR17
METER AMP EMPHASIS
BAR METER SENS(Lch)
E-VR OUT(Lch)
TR3
FL2
20KHz LPF
TA-MUTE
IN CTL (INT/EXT)
AUDIO (INT/EXT)
IDL 5V
R162
R96
R97
A-MUTE EE 9V
R158
R98 300KHz
R99
D4
C144
IC2 M50760-368P (AKAI B-PAL (AUDIO MI-COM.)
SC ON/OFF
SC IND
HiFi IND
AUTO/NORM
L+R/L+R
A-MUTE
EE9V
X IN
X OUT
RESET
INPUT CTL
AUDIO MUTE
FM MUTE
AUDIO IN/EXT
AL9V
HiFi / NORMAL AUDIO (Lch)
HiFi / NORMAL AUDIO (Rch)
D16
A-MUTE
D19
TA-MUTE
TR28 "H"→ON
D301
GH9V
C328
D302
R329
R330
IDL 5V
SP/LP SWITCHING NOISE MUTE (ONE SHOT MUTE)
TR29 "L"→ON
MUTE (ALL AUDIO)
VR302
NORMAL AUDIO OUT
NORMAL AUDIO REC LEVEL
REC EQ
C327
C312
R313
FL 301
15KHz /70KHz TRAP
SP/LP
AL9V
EE 9V
Vcc
1/2 Vcc
REC/PB
REC OUT
EQ SW
AUDIO OUT
REC AM
PB AM
LP ON
MUTING AMP
LINE AMP
EQ AMP
PB EQ
C304
VR301
NORMAL AUDIO PB LEVEL
IC301 μPC1520CA (NORMAL AUDIO LINE AMP EQ AMP & SWITCHING)
TP301
NA IN (NORMAL AUDIO IN)
T301
ERASE /BIAS OSC
REC 9V
NORMAL AUDIO BIAS CURRENT
VR303
IC302 μPC1513HA (NORMAL AUDIO HEAD REC/PB SWITCHING)
NORMAL AUDIO REC SIGNAL
NORMAL AUDIO PB SIGNAL
PB→ON REC→ON
REC/PB
TR302 REC→ON
R325
P124
AM(E)
GND
AM(P)
GND
AE
AUDIO HEAD
RI 10
AUDIO ERASE
FULL ERASE
SF1
TR8
5V REG
AL5V
TR9
5V REG
AL5V
D10
D7
D9
TA-MUTE
R107
TR6
AL12V
L/R CONTROL
BUFFER
L IN
MUTE CONTROL
L OUT
AMP /MUTE
E.VR
H/P AMP
Vcc
STANDARD VOLTAGE
L/ST
R/ST
R IN
R OUT
H/P VR
GND
IC5 M51687AP (LINE AMP, HEADPHONE AMP, POWER MUTE)
TR7 H→ON
TR5
REC/PB
EE/REC
PB
REC
REC
PB
EE/REC
REC



TO LEVEL METER PCB J187

IND D	VR UP	VR DOWN	LEVEL (R)	GND	LEVEL (L)
1	2	3	4	5	6

P188

IC8 AF2401 (20KHz LPF)

IC9 AF2401 (20KHz LPF)

IC4 HA12074NT (FM MODULATOR / DEMODULATOR)

IC7 HA11752 (HiFi AUDIO HEAD AMP)

IC6 μPC1522HA (HiFi REC AMP)

IC301 μPC1520CA (NORMAL AUDIO LINE AMP & SWITCHING)

HiFi EE LEVEL (Rch)

HiFi EE LEVEL (Lch)

DOC VOLTAGE

HiFi PB LEVEL (Rch)

HiFi PB LEVEL (Lch)

CARRIER f (Rch)

CARRIER f (Lch)

DEVIATION (R ch)

DEVIATION (Lch)

METER AMP, EMPHASIS

BAR METER SENS (Rch)

BAR METER SENS (Lch)

PULSE DELAY

B.EDG TRIG

HOLD TIME

HOLD AMP

DO DET

MUTE DET

FM LIMIT

PHASE COMP

PRE -EM

AUDIO LIMIT

VCO

COUNT DOWN

GND (R)

GND (L)

Vref

Vcc (R)

fsc

5V REG

CHANNEL SW AMP

2ND AMP

CASCODE AMP

AGC DET

VCA

FM AGC OUT

GAIN SW

GAIN CHANGABLE AMP

MIX

AMP

OUTPUT

DC DET

REF R

FB

FM IN1

FM IN2

Vcc

REC FM (MIX) OUT

REC FM CURRENT (Rch)

REC FM CURRENT (Lch)

Rch 2.2M LPF

Lch 1.8M LPF

REC FM 1.8MHz (Rch)

REC FM 1.4MHz (Lch)

L9, C130 2.2MHz LPF

FL3 1.4MHz BPF

FL4 1.8MHz BPF

FL 301 15KHz /70KHz TRAP

NORMAL AUDIO REC LEVEL

NORMAL AUDIO PB LEVEL

NORMAL AUDIO BIAS CURRENT

ERASE /BIAS OSC

MUTE (ALL AUDIO)

NORMAL AUDIO OUT

NORMAL AUDIO IN (NORMAL AUDIO IN)

PRE AUDIO HEAD SWP OUT

A-SWP

FM MUTE

REC FM OUT (Rch)

REC FM OUT (Lch)

PB FM (Rch)

PB FM (Lch)

PB OUT (Rch)

PB OUT (Lch)

PB 5V

REC 9V

TP9 TP6 TP7 TP2 TP1 TP5 TP3 TP301

TP3 Carrier f (fo) Check

TP5 REC CURRENT

TR13 to 16 MUTE → ON ("H" → ON)

TR28 "H" → ON

TR25 REC → "H" → ON

TR26 REC → "H" → ON

TR27 PB → "H" → ON

TR302 REC → ON

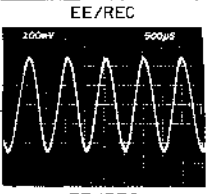
HiFi AUDIO HEAD

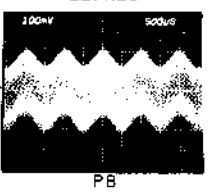
6	AH CH2 (REC)
5	AH CH1 (PB)
4	GND
3	GND
2	AH CH1 (PB)
1	AH CH1 (REC)

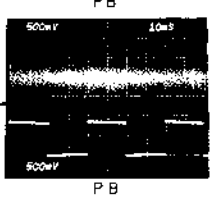
CH2

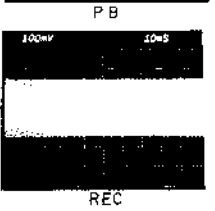
CH1

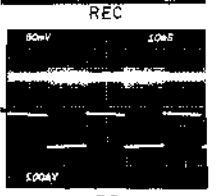
FULL ERASE HEAD

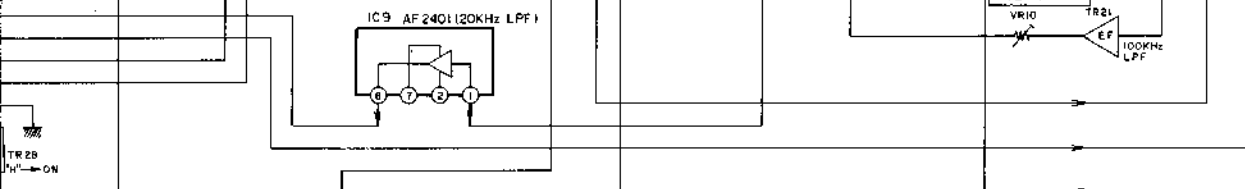












UNLESS OTHERWISE SPECIFIED, PHOTOGRAPHS ARE TAKEN AT SP MODE

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
HiFi AUDIO
BLOCK DIAGRAM
NO.6-4 851108A (A1)

REC
PB
PB
PB
REC
PB
TO LP VIDEO HEAD
P149
LPCH2(P) 6
LPCH2(R) 5
GND 4
GND 3
LPCH1(R) 2
LPCH1(P) 1
TEST POINT
P801
GND 1
SWEEP(LP) 2
SWEEP(SP) 3
SWP 4
TO SP VIDEO HEAD
P125
SPCH1(P) 1
SPCH1(R) 2
GND 3
GND 4
SPCH2(P) 5
SPCH2(R) 6
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP14
TP15
TP16
TP17
TP18
TP20
TP25
PB RF CH2 (LP)
PB RF CH1 (SP)
PB RF CH2 (SP)
SP/REC
SP STILL
IC16 HA11772 (PB PRE AMP - LP)
IC7 TA7342P
IC1 LA7034 (PRE AMP & Y SIGNAL PROCESSOR)
IC3 LA7032 (CHROMA SIGNAL PROCESSOR)
IC4 AN6342N
IC8 TA7347P
IC9 TA7347P (ANALOG SW)
IC13 TA7374 (TRIPLE
IC12 BA7023 (SKEW JUMP DETECTOR)
PB CHROMA
PB Y
REC Y
CHROMA REC
Y REC
Y/CHROMA REC
LP CHROMA REC CURRENT
SP CHROMA REC CURRENT
LP Y REC CURRENT
SP Y REC CURRENT
PB CHROMA LEVEL
1H DELAY CHROMA LEVEL
PB FM PEAKING
PB Y PEAKING AMP
PB CARRIER LEAK
1H DELAY FOR DROP OUT COMPENSATION
CHROMA TRAP
DARK CLIP
WHITE CLIP
CARRIER OFF-SET AT LP MODE WITH SWITCHING PULSE
LOCAL OSC 4.433619MHz
40fH FREE RUN FAEQUENCY
4.43557 MHz fS+1/8-fH
REC APC DET
P.B APC DET
REC AFC DET
P.B AFC DET
ACC DET
ACC AMP
BURST DEEMP KILLER AMP
SUB CONV
INVERTER
Φ4 SHIFTER
1/4
180fH VCO
B.G.P GENERATOR
VD GEN
HALF H KILLER
REC MAIN CONV BURST EMP KILLER
COLOR DET
APC DET
PB MAIN CONV
WAVE SHAPER
DYNAMIC EMPHASIS
FM MOD
MAIN PRE EMPHER
DOC
CLAMP
SYNC TIP CLAMP
SYNC SEP
AGC DET 1
AGC DET 2
AGC AMP
DELAY
PHASE COMP.
SEARCH
COLOR MODE SELECTOR B/W→"H"
DL1 1H DELAY LINE
DL2 (SKEW JUMP IH)
DL3 2H DELAY LINE EFO BR 1244 13A
PHASE EQ L29 C32 R92
1.2MHz HPE
1.2MHz LPF
3.4MHz LPF
5.06MHz BPF
4.43MHz BPF
SECAM (COLOR MODE SELECTOR)
EE/REC LOW FREQUENCY CONTENTED REC CHROMA
PB→ID PULSE
EE/REC
PB
EE/REC
PB
EE/REC
PB
EE/REC
PB
EE/REC
PB
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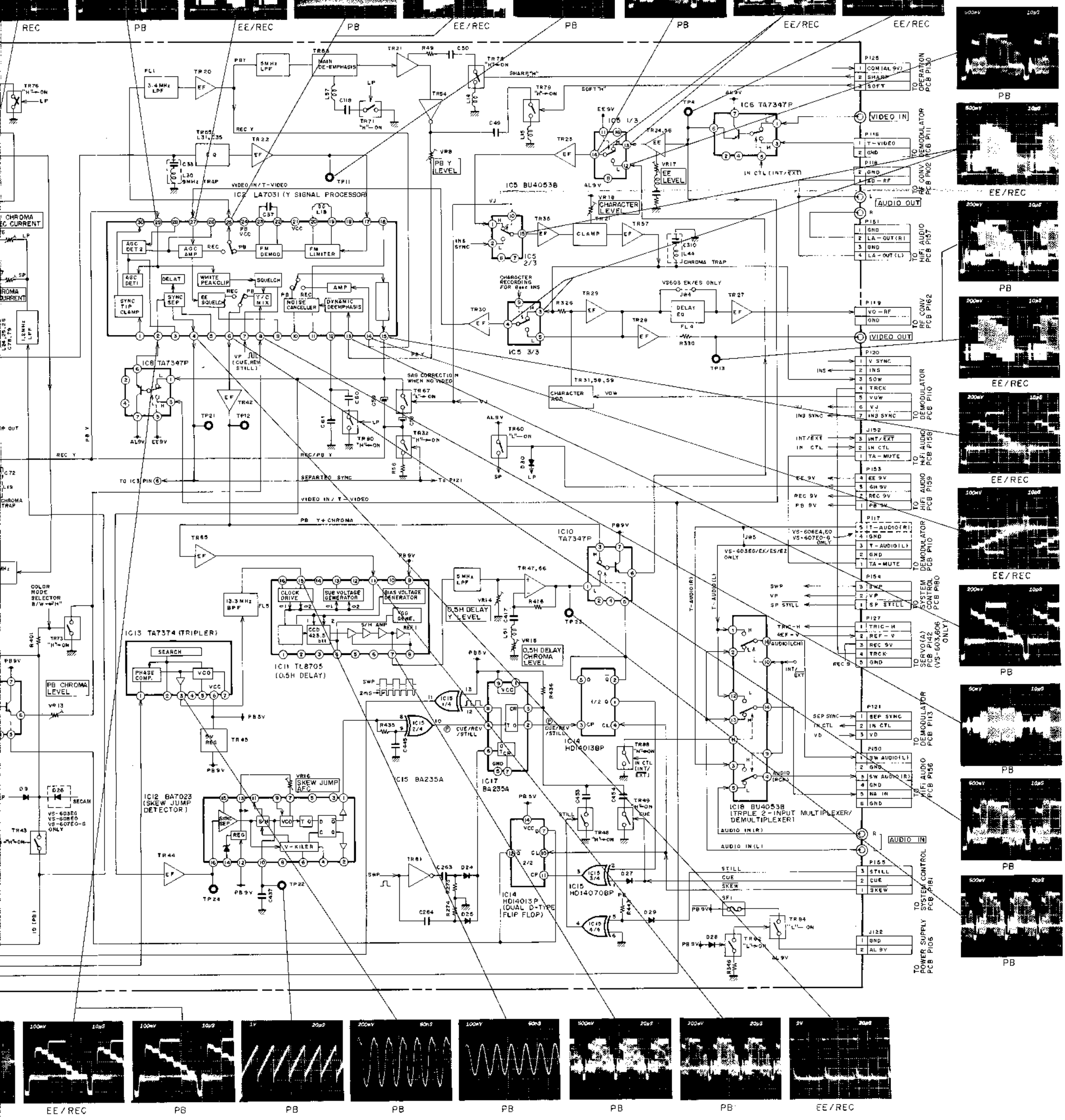
PB
A
B
C
D
E
F
1
2
3
4
5
6
7
8

8



UNLESS OTHERWISE SPECIFID, PHOTOGRAPHS ARE TAKEN AT SP MODE

VS-626EO VS-603EG/EK/ES/EZ VS-606EA/EO VS-607EO-G VIDEO BLOCK DIAGRAM

NO.6-5 851109A

CH2 PB SWITCHING POINT

CH1 PB SWITCHING POINT

REC SWITCHING POINT

IC203 HD14053BP (TRIPLE 2-CH MULTIPLEXER/DEMULTIPLEXER)

AUDIO SW POINT (CH1)

AUDIO SW POINT (CH2)

IC202 BA226A (DUAL MONO MULTI)

IC204 BA634 (ONE STAGE FREQUENCY DIVIDER)

IC205 μPC1504C (DRUM SPEED)

IC206 BU4066B (QUAD BILATERAL SW)

REC PHASE

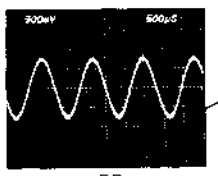
DRUM FG

DM PHASE

DM SPEED

TO P196, TP802

AUDIO SWITCHING PULSE



IC1 LC4077 (QUAD 2-INPUT EXCLUSIVE NOR GATE)

IC2 BU4013B (DUAL D-TYPE FLIP FLOP)

IC3 BU4011B (QUAD 2-INPUT NAND GATE)

IC4 BA6302 (FG SYSTEM SPEED CONTROL)

IC5 BA225A (DUAL MONO MULTI)

IC6

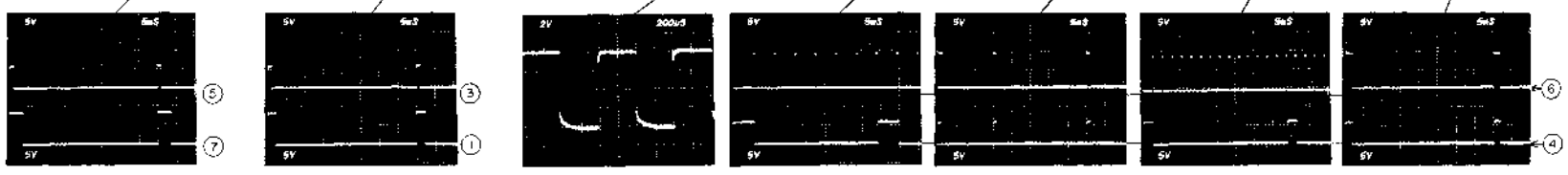
IC7 BA6305 (CTL/FG AMP)

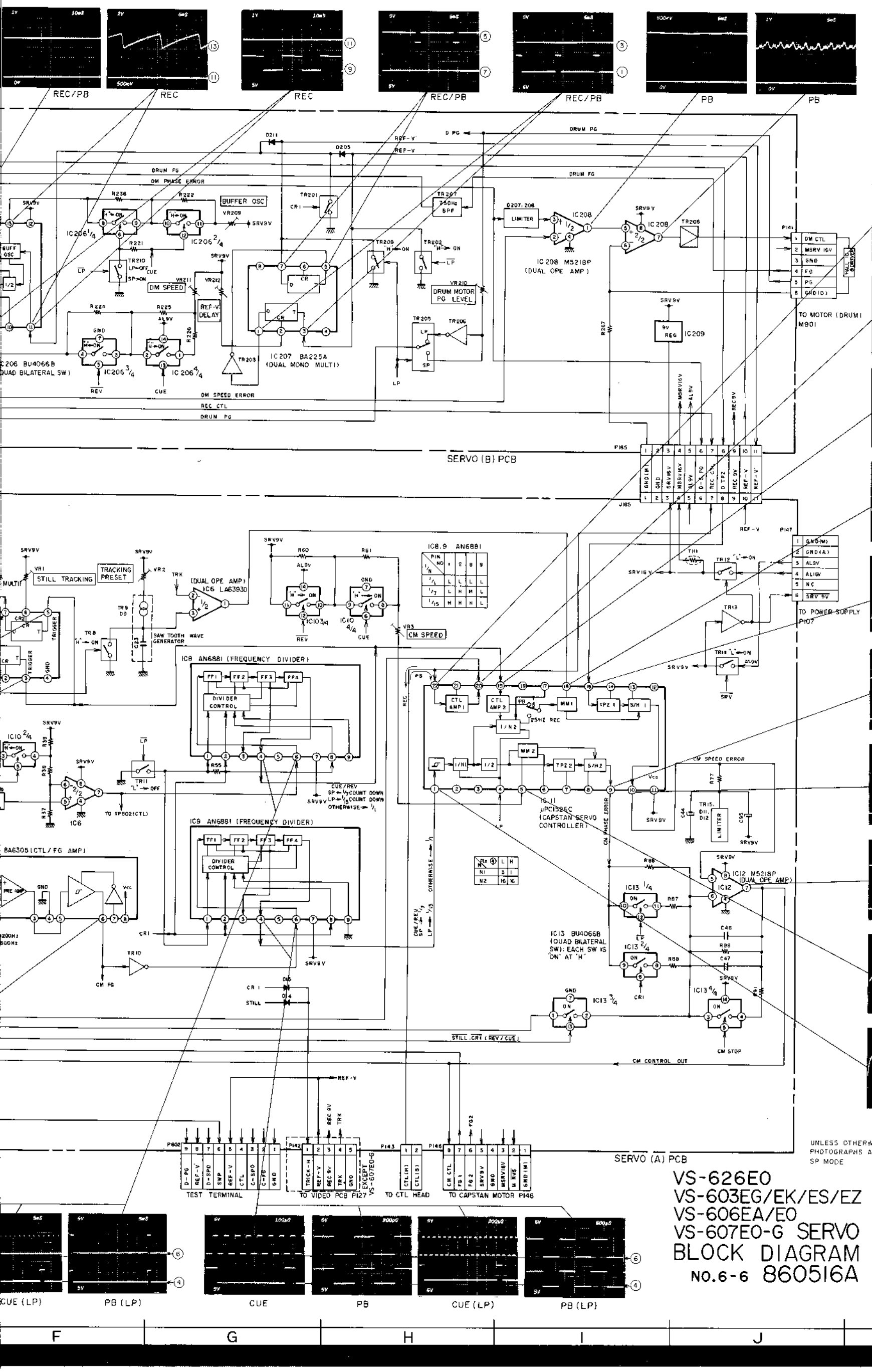
IC10 BU4066B (QUAD BILATERAL SW)

TO HiFi AUDIO P162

TO SYSTEM CONTROL P163

TO SYSTEM CONTROL P182





UNLESS OTHERWISE SPECIFIED, PHOTOGRAPHS ARE TAKEN AT SP MODE

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G SERVO BLOCK DIAGRAM
NO.6-6 860516A

SELECTOR PCB V1027C5040

SELECTOR PCB V1027C5042 EA 5030 EO-G, EO

SELECTOR PCB V1027C5031

SELECTOR PCB V1027C5033

POWER SUPPLY PCB V1030A5092(6ED)

A/C HEAD PCB V1030D5180

FULL ERASE PCB V1030D5170

RF CONV BOOSTER
MDLL6D023A EG
61023A EK, ES
5D073A EZ
5S150A EA
6S023A EO, EO-G

TV TUNER UNIT

VIF UNIT 6A00138A1

ST BLOCK 6A00151A2

DEMODULATOR PCB
VS-603EG/EK/ES/EZ V1030A5051(6ED)
VS-606EA/EO
VS-607EO-G, VS-626EO V1030A5440

HiFi AUDIO PCB V1030A5410(2ED)

LEVEL METER PCB

V1031D5060

V1031D5010 2/2

HiFi AUDIO HEAD

MECHA DRIVE PCB V1030A5380(3ED)

SENSOR(T) PCB V1030D5020(2ED)

ENCODER

SENSOR(L) PCB V1030D5140(2ED)

SENSOR(S) PCB V1030D5340(2ED)

SENSOR(R) PCB V1030D5150

SW(EJ) PCB V1030D5190

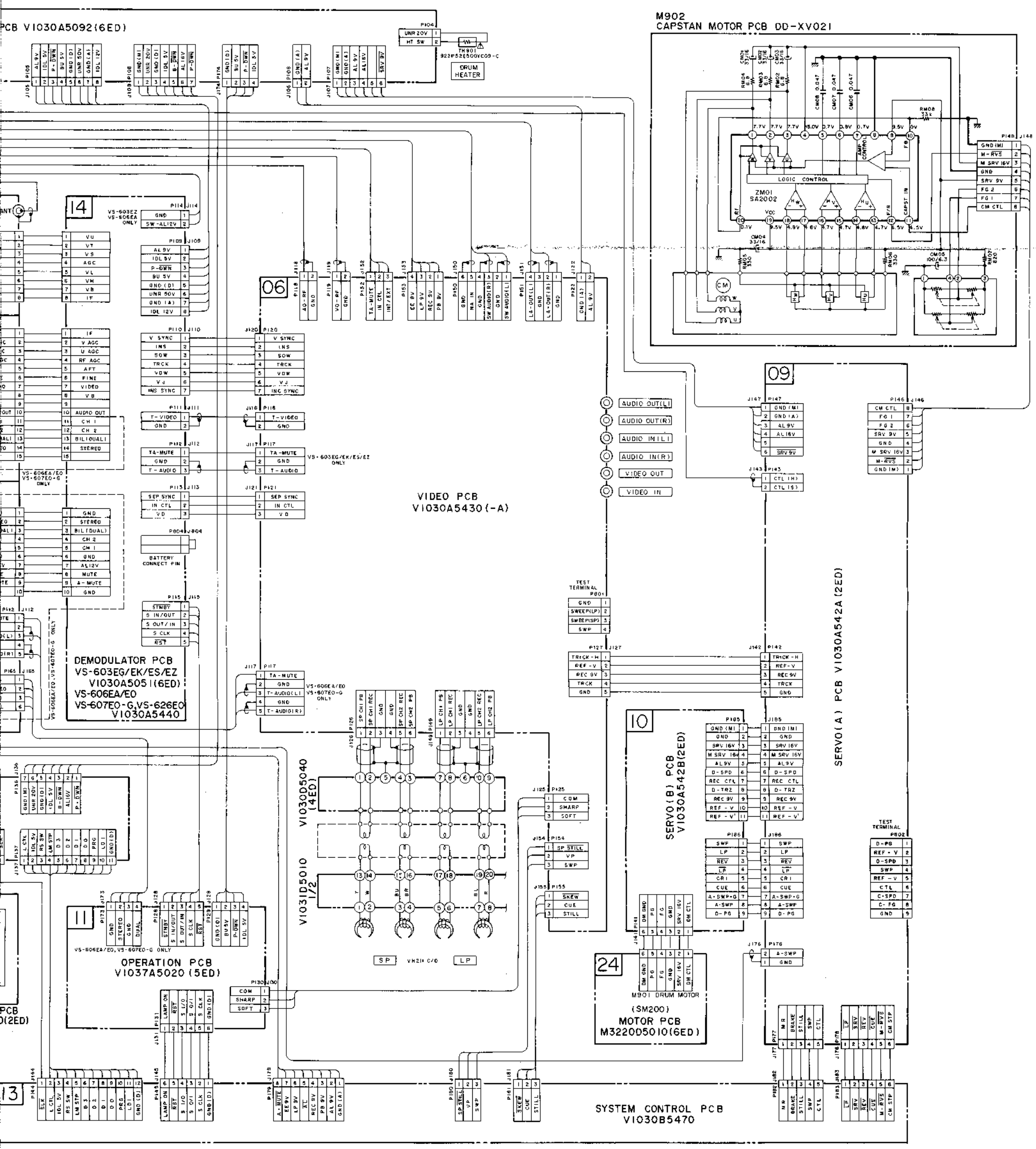
EJECTOR BLK

CASSETTE SW PCB V1030D5320

SENSOR LED PCB V1030D5350

OPERATION V1037A5020

001798

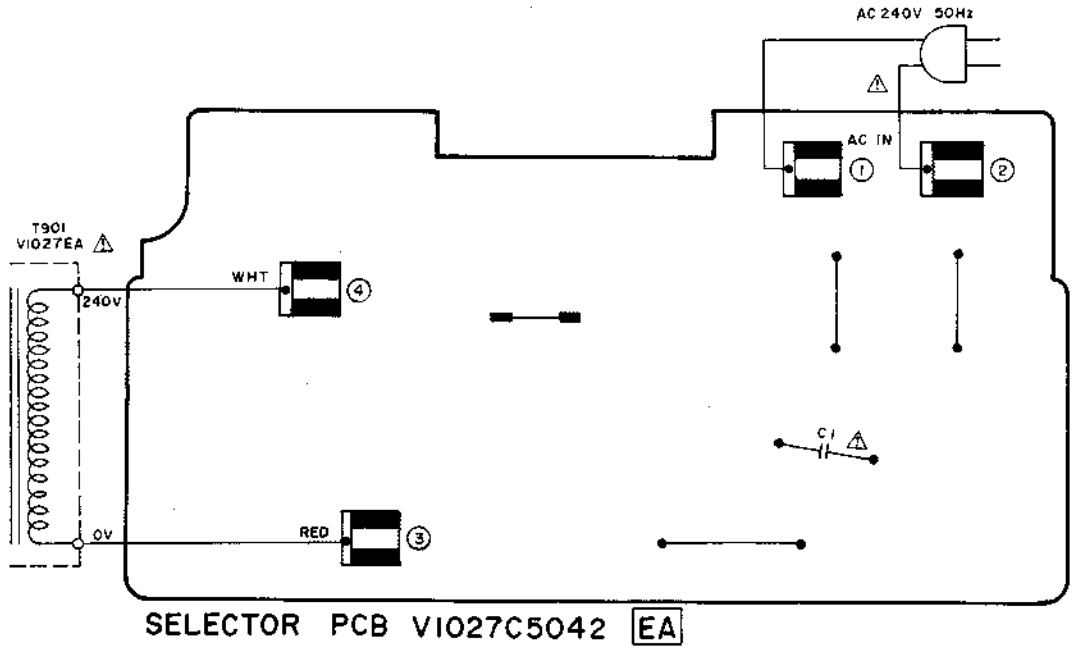


VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
CONNECTION DIAGRAM
NO.14-1 860517A

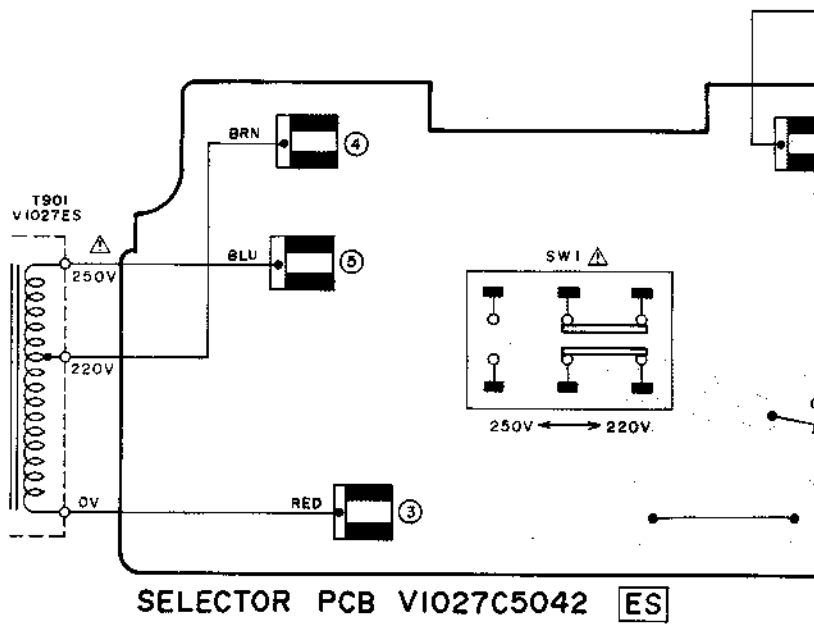
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT. ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

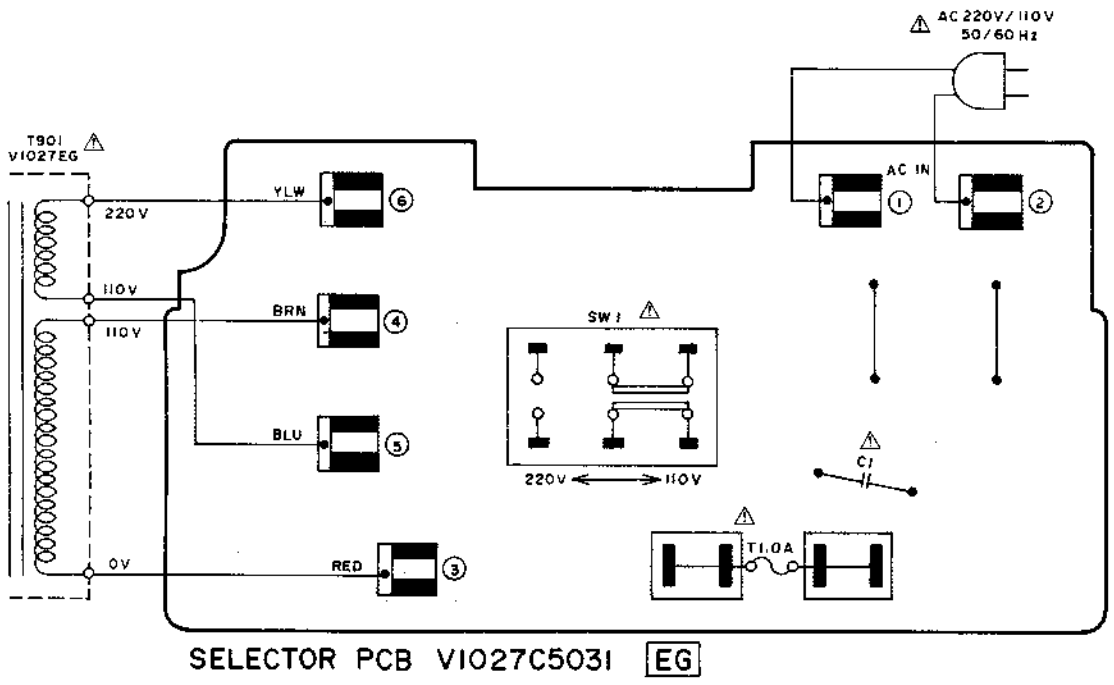
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA



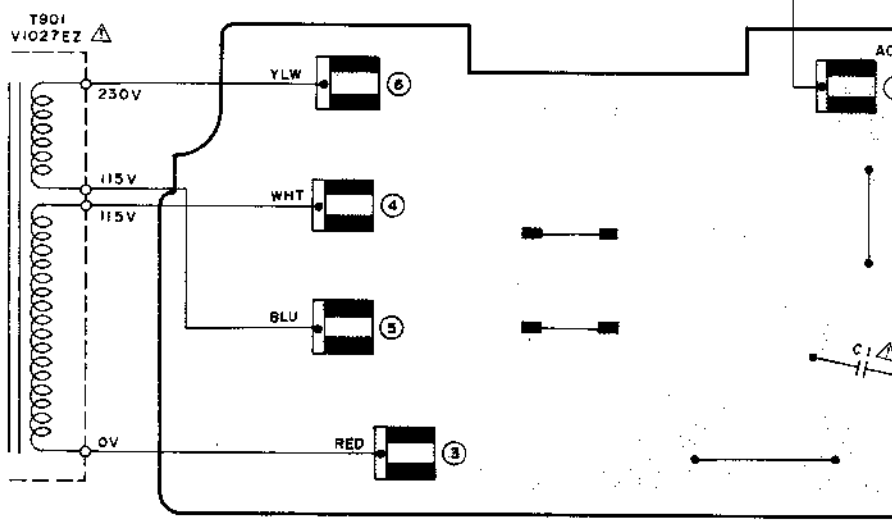
SELECTOR PCB V1027C5042 EA



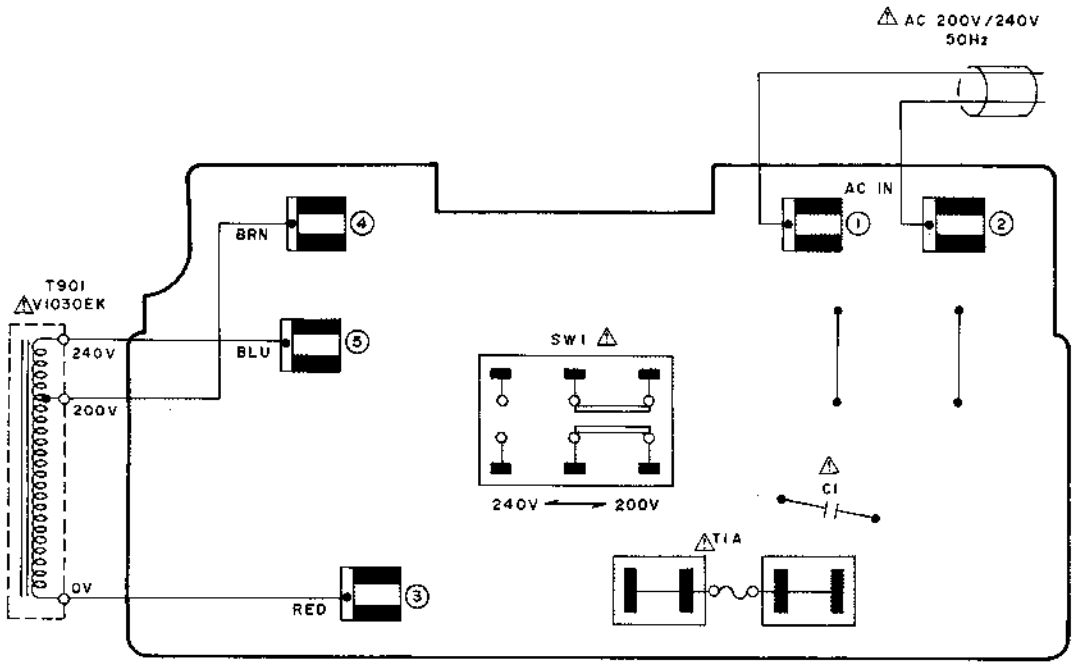
SELECTOR PCB V1027C5042 ES



SELECTOR PCB V1027C5031 EG



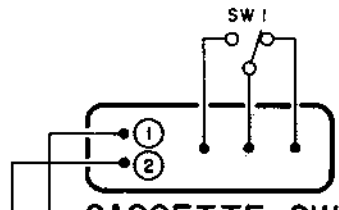
SELECTOR PCB V1027C5033 EZ



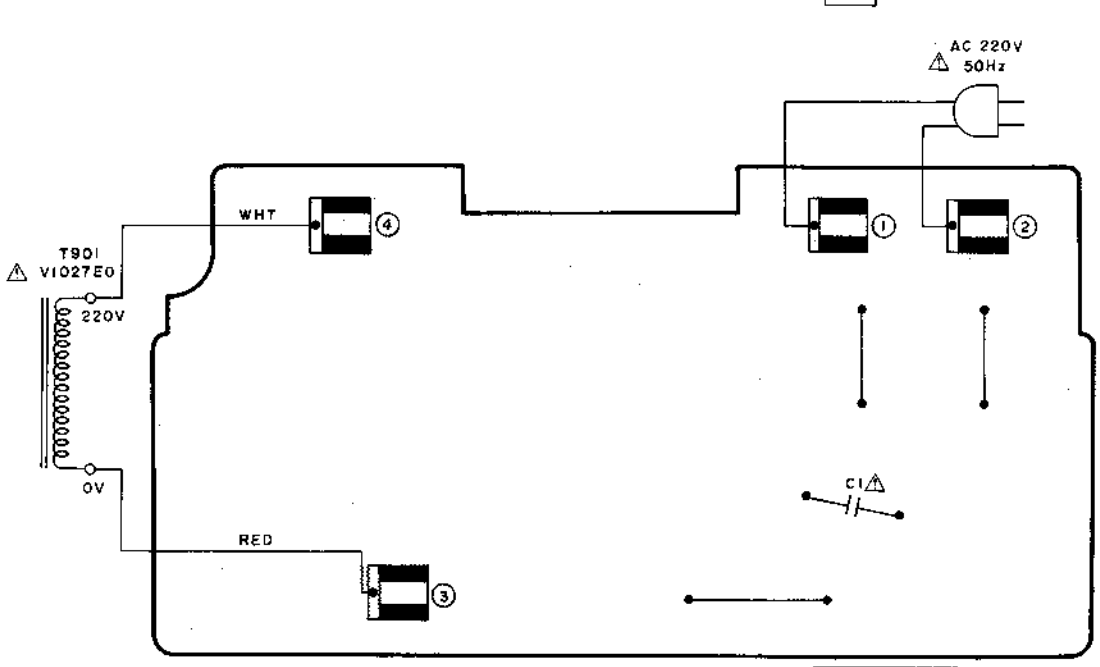
SELECTOR PCB V1027C5040 EK

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

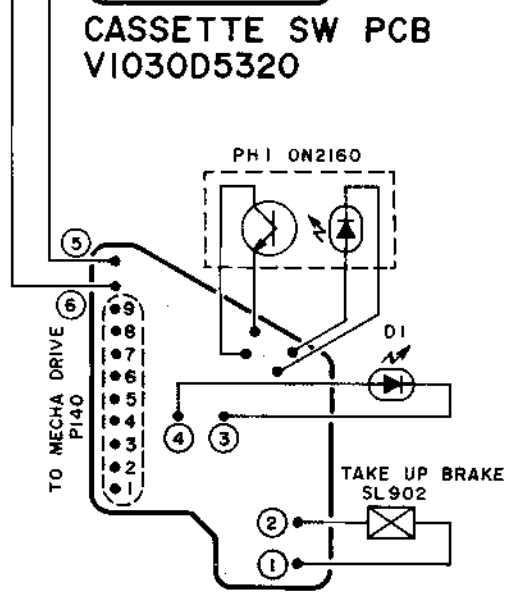
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



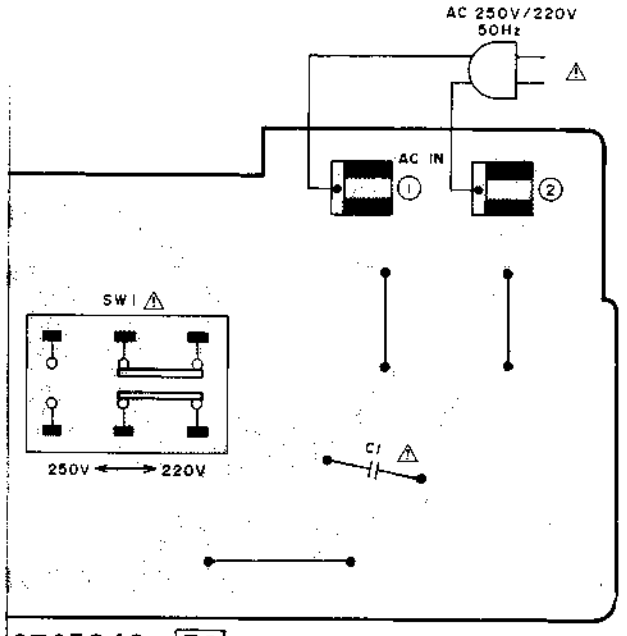
CASSETTE SW PCB
V1030D5320



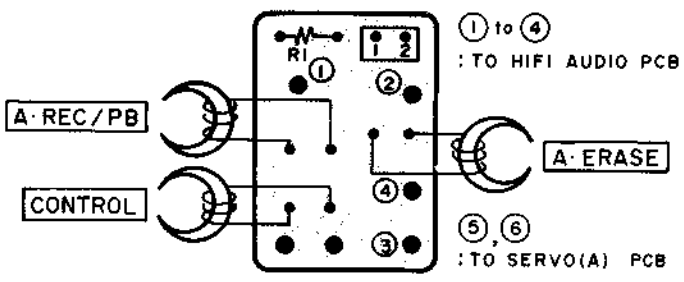
SELECTOR PCB V1027C5030 E0.E0-G



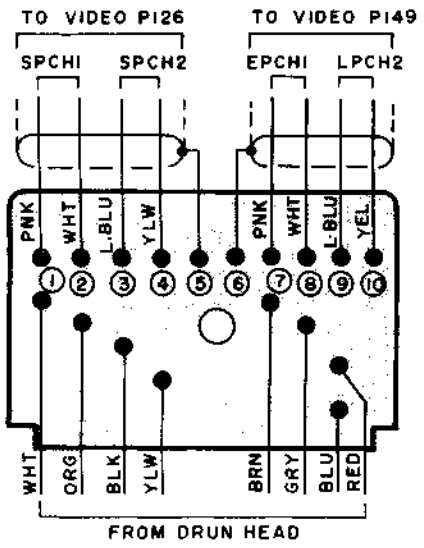
SENSOR (T) PCB
V1030D5510



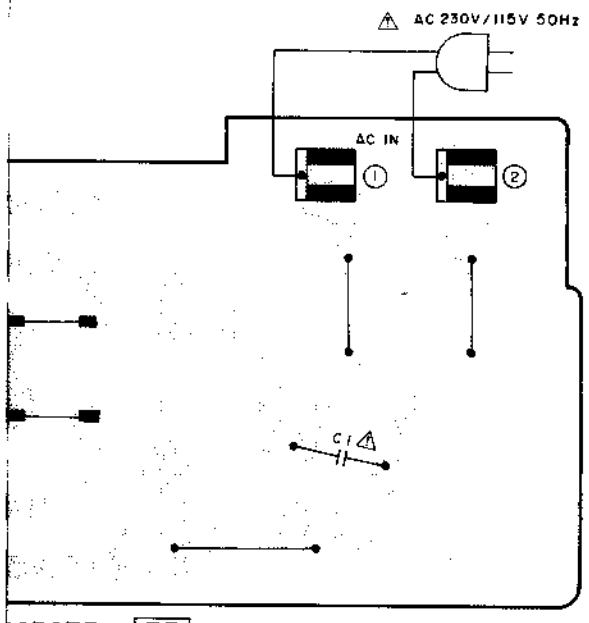
27C5042 ES



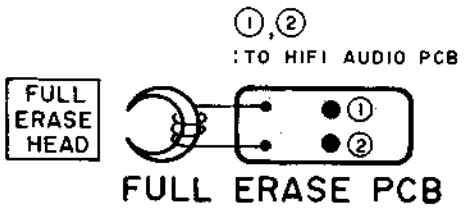
A/C HEAD PCB
V1030D5180



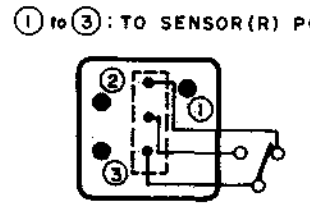
JUNCTION PCB
V1030D5040 (4ED)



C5033 EZ



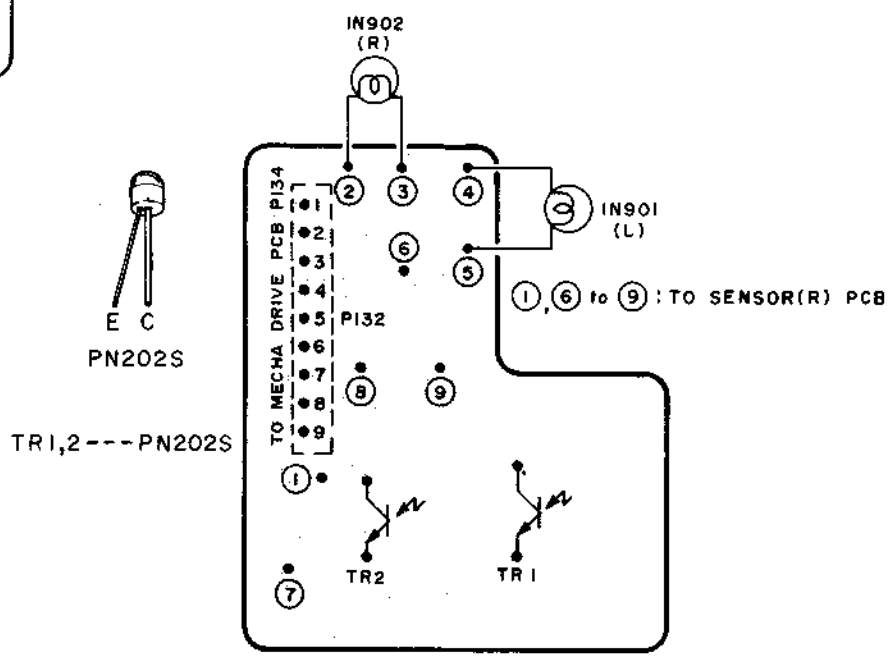
FULL ERASE PCB
V1030D5170



SWITCH (EJ) PCB
V1030D5190

MPONENTS FOR CONTINUED SAFETY.
NENTS ONLY WITH MANUFACTURER'S

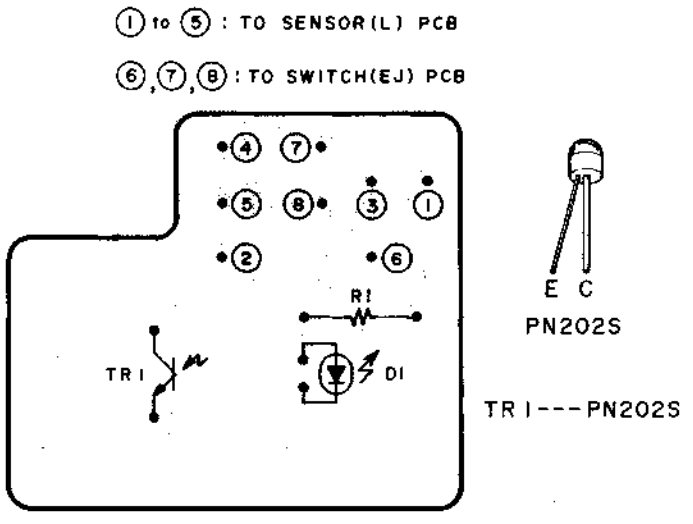
NTS CRITIQUES DE SÉCURITÉ.
CURITÉ DE L'APPAREIL.
ECOMMANDEES PAR LE FABRICANT



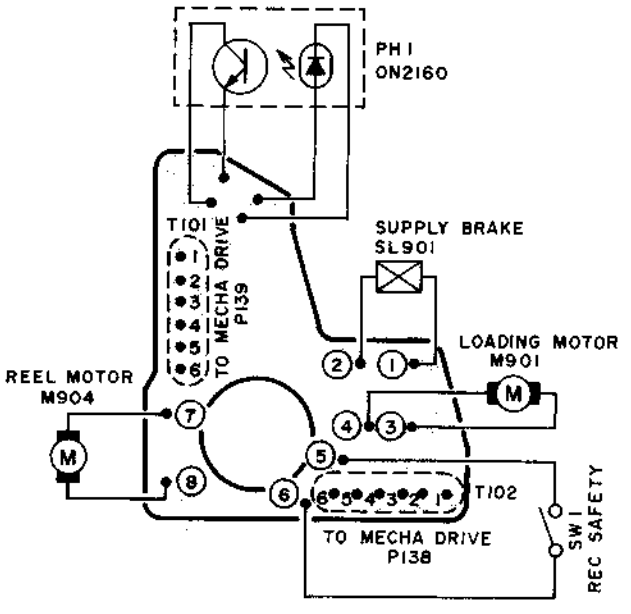
SENSOR (L) PCB
V1030D5140 (2ED)

CB

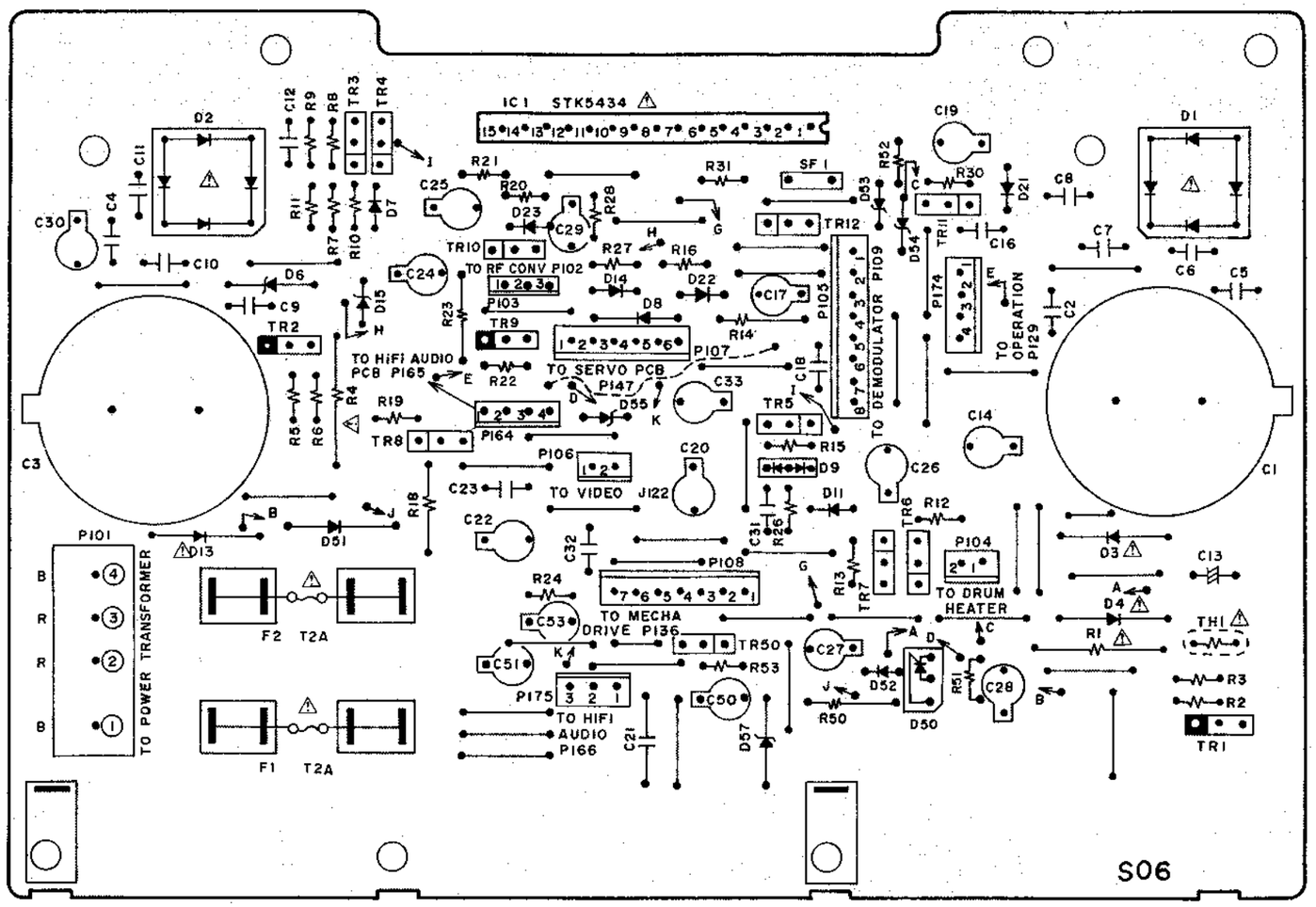
UP BRAKE
02



SENSOR (R) PCB V1030D5500

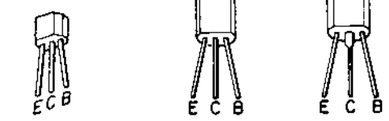


SENSOR (S) PCB
V1030D5520



POWER SUPPLY PCB V1030A5092 (6ED)

TR1,2 ----------2SA1115
TR3,4,5,7,8,10 ---2SC2603
TR6,11,12 -------2SC2236
TR9 ----------2SA1286
TR50 ----------2SD863



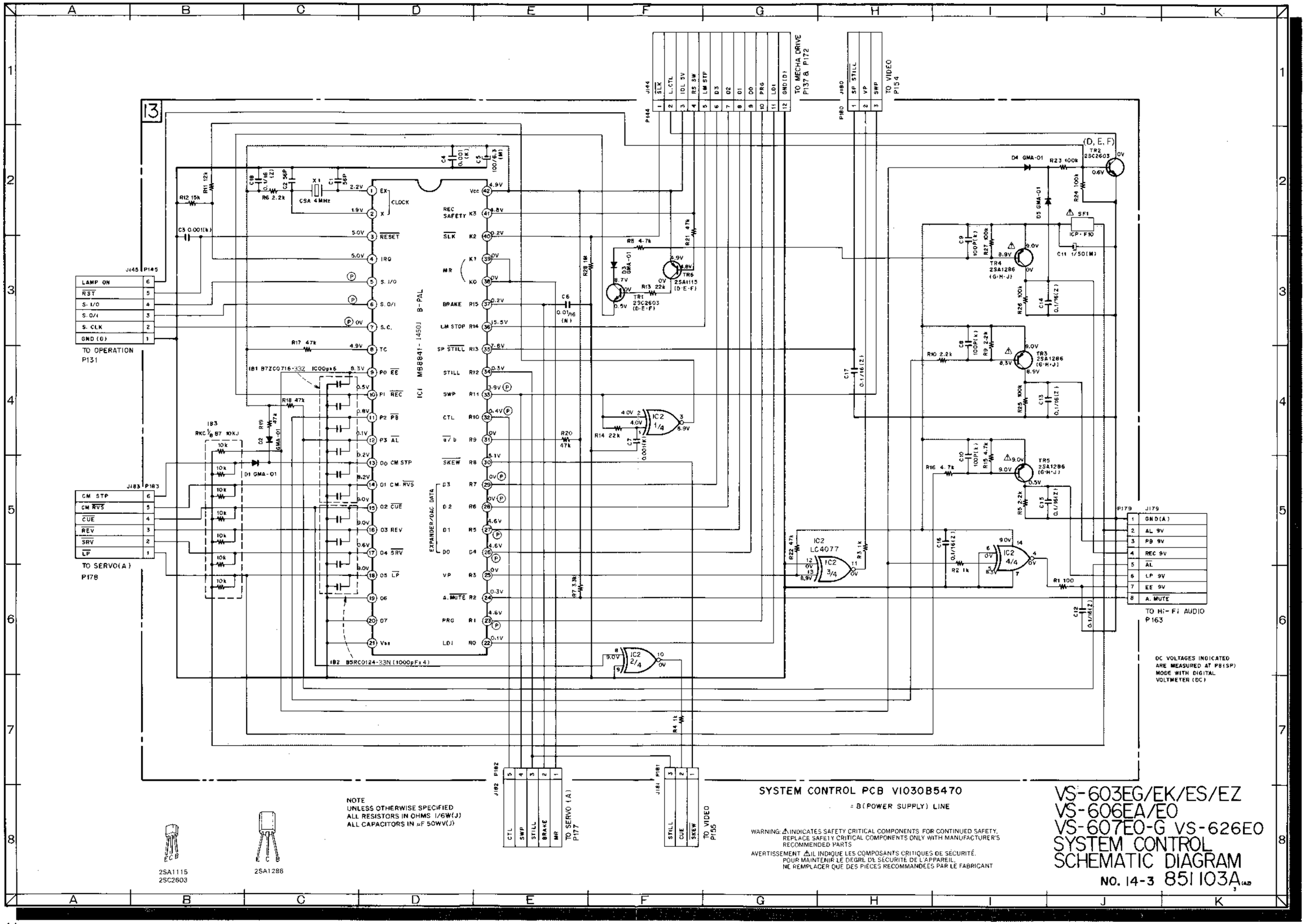
2SA1115 2SC2603 | 2SA1286 2SC2236 | 2SD863

B = PNP TRANSISTOR

B = NPN TRANSISTOR

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

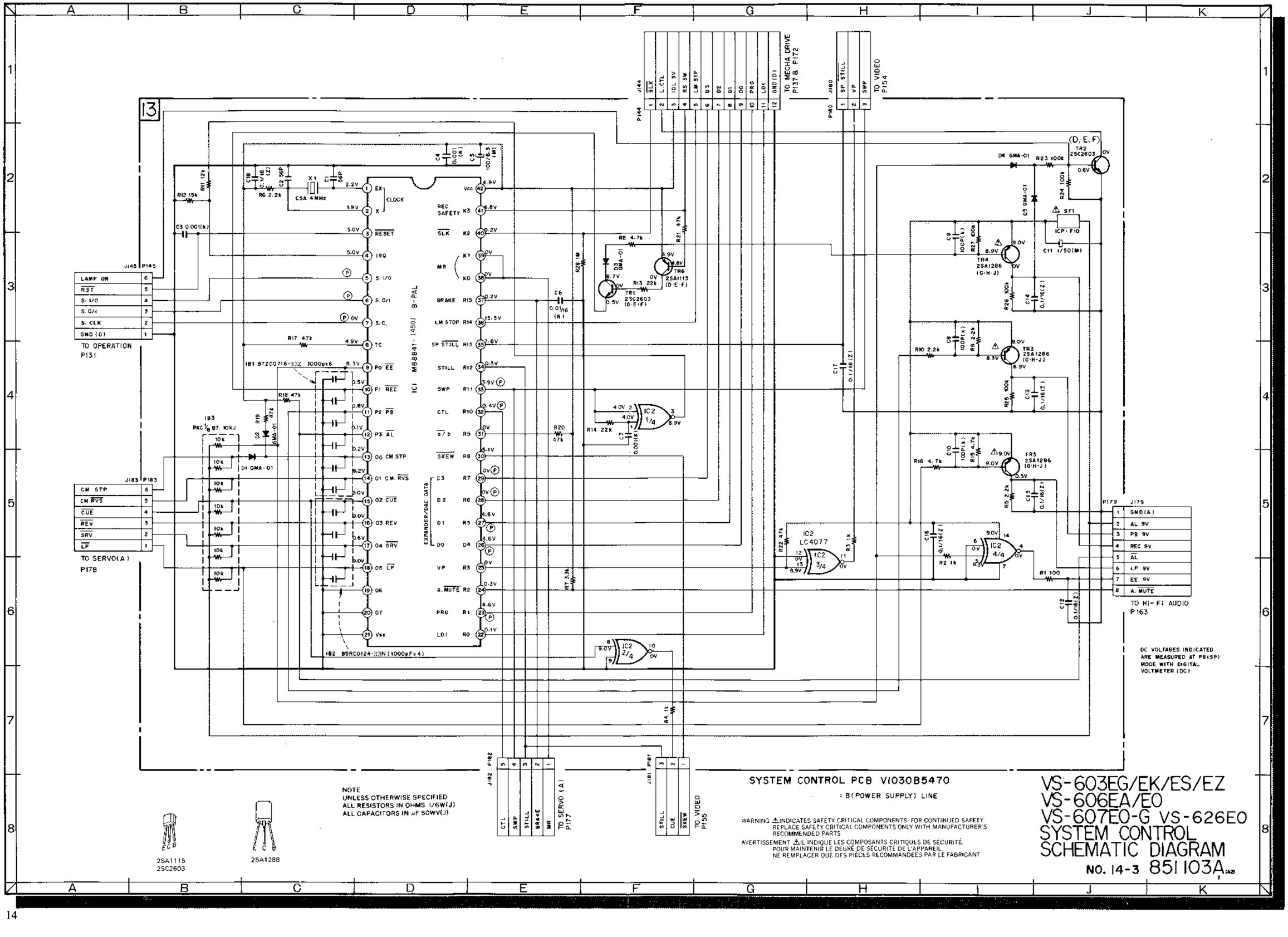
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



SYSTEM CONTROL PCB V1030B5470

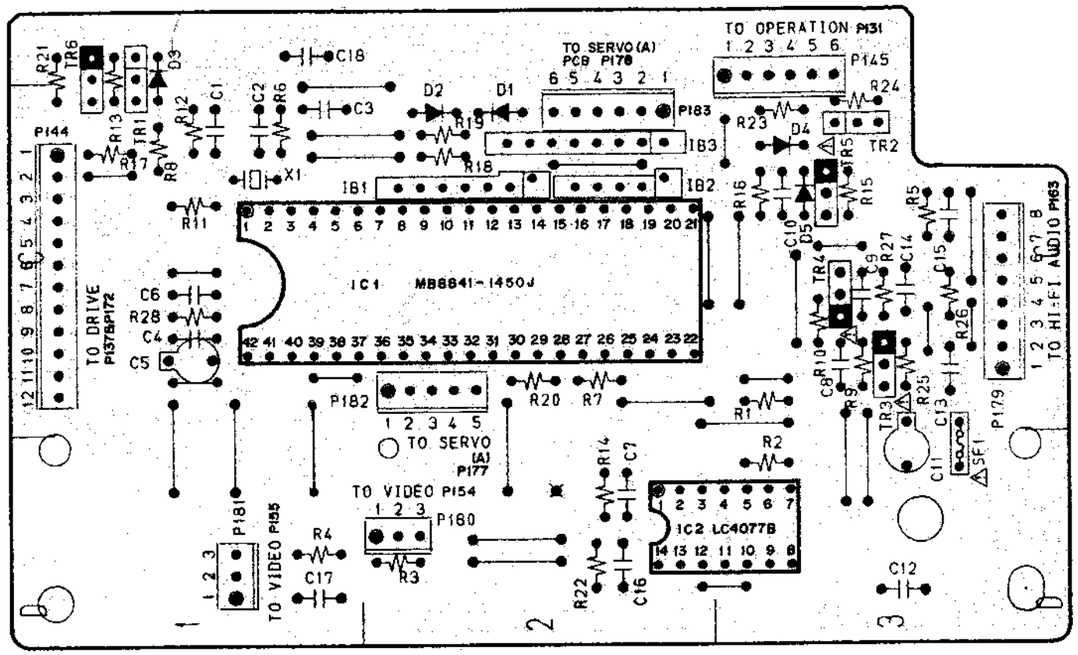
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G VS-626EO
SYSTEM CONTROL SCHEMATIC DIAGRAM

NO. 14-3 851103A(A2)

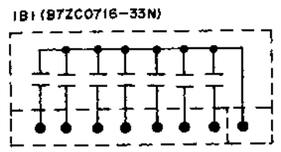


VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G VS-626EO
SYSTEM CONTROL SCHEMATIC DIAGRAM

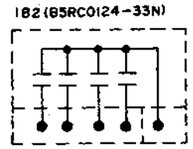
NO. 14-3 851103A(A2)



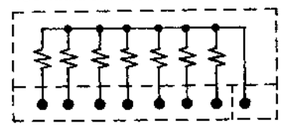
IB1 (B7ZC0716-33N)



IB2 (B5RC0124-33N)



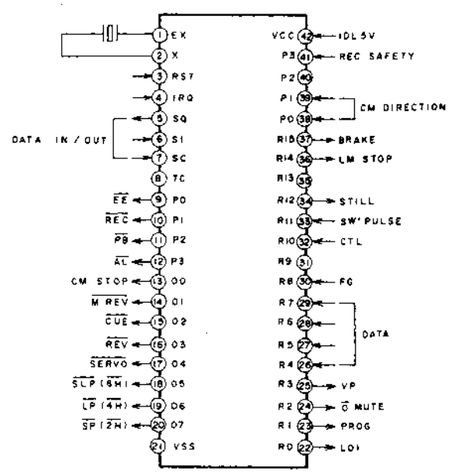
IB3 (RKC1/8B7-10KJ)



TR1, 2..... 2SC2603 (D,E,F)
TR 3 to 5 ..... 2SA1286 (G,H,J)
TR6..... 2SA1115 (D,E,F)

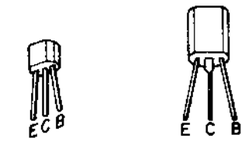
SYSCON PCB VI030B5470

MB8841-1450J (SYSTEM CONTROL MI-COM)



= PNP TRANSISTOR

= NPN TRANSISTOR



2SA1115
2SC2603

2SA1286

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

13

IC5 LA7224

INTE-GRATOR | PEAK HOLD | LIMITER LEVEL SHIFT | TUNING AMP | SHAPER | ABLC

5.0V 1.7V 1.7V 1.0V 0V 0V 0.2V 1.7V

FL1 038-352 38kHz

D22 GMA-01

SF-1 TCP-F10

IC1 MB8850I-352M OPE3

IC2 M54565P

TR1 TO 4 2SB643 (Q,R,S,T)

TR5,6 2SB643 (Q,R,S,T)

TR7 2SD636 (Q,R,S,T)

TR8 2SD636 (Q,R,S,T)

D15 GL3E416

D6 PAUSE | D5 F.F | D4 PLAY | D7 REW | D3 REC | D11 TIMER | D10 FUNCTION | D9 LP | D8 VIDEO

EA,EZ MODELS ONLY

D11 PR5631K TAPE VIEW SW23

STANDBY

TO POWER P174

P129

TO DEMOD P115

TO SYSTEM CONTROL P145

P131

IC3 LC4071

IC4 LC4071

CLOCK SW6 | REW SW16 | PLAY SW15 | D SW13 | RETURN SW14

PRESET SW7 | STOP SW18 | F.FWD SW17 | A- SW8 | B- SW10

PROGRAM SW5 | FUNCTION SW2 | TIMER SW3 | EJECT SW4 | SPEED SW22 | TV/VIDEO SW21

C SW12 | PAUSE/STILL SW19 | REC SW20 | A+ SW9 | B+ SW11 | AUTO MUTE SW24

VS-603EZ VS-606EA ONLY

SOFT — NOR — SHARP

VS-626EO VS-606EA/EO VS-607EO-G ONLY

STEREO D9 PR5631K | DUAL D10 AA5531

P173: GND | STEREO | GND | DUAL

TO ST BLOCK P165

SW1

P130: COM | SHARP | SOFT

TO VIDEO P125

MODEL	PROGRAM	COUNTER	※J1	※J2
201,301	1	2	OPEN	OPEN
303	4	2	SHORT	OPEN
603,606 607,626	8	4	SHORT	SHORT

B(POWER SUPPLY) LINE

2SB643 2SD636

VOLTAGES INDICATED ARE MEASURED AT EE MODE (COUNTER → 0000) WITH DIGITAL VOLTMETER (DC) (MODEL VS-603EG WAS USED FOR THIS VOLTAGE MEASUREMENT)

Ⓟ:PULSE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

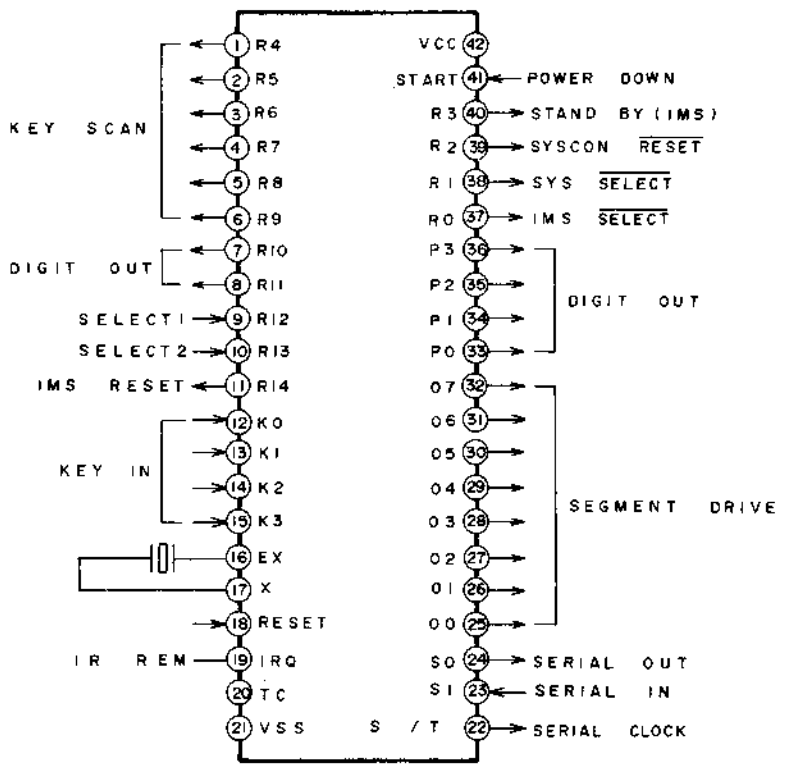
AVERTISSEMENT ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

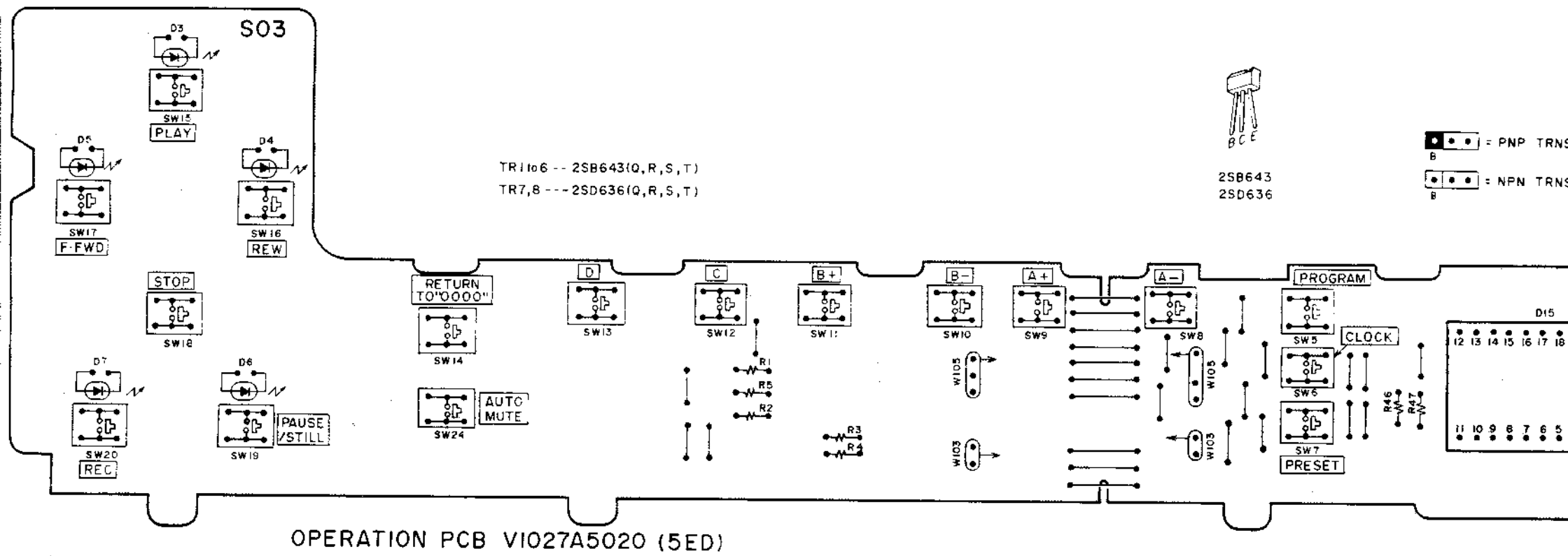
OPERATION PCB V1027A5020(5ED)

VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G VS-626EO
PC. OPERATION SCHEMATIC DIAGRAM

NO. 14-4 860518A (A2)

MB88501-352M (OPERATION MI-COM)





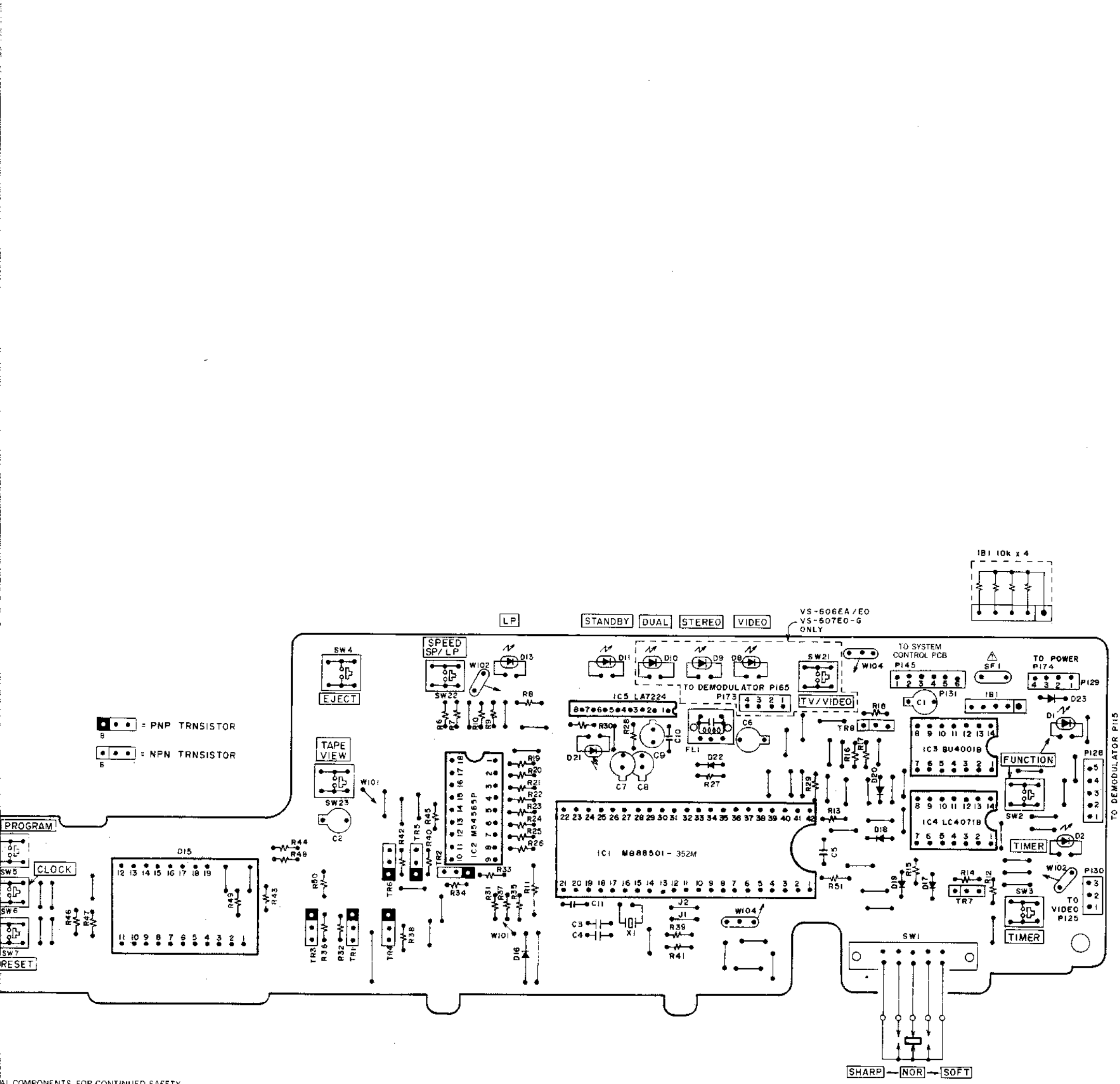
TR1 to 6 -- 2SB643(Q,R,S,T)
TR7,8 --- 2SD636(Q,R,S,T)

2SB643
2SD636

OPERATION PCB V1027A5020 (5ED)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



AL COMPONENTS FOR CONTINUED SAFETY.
OMPONENTS ONLY WITH MANUFACTURER'S

MPOSANTS CRITIQUES DE SECURITÉ.
DE SÉCURITÉ DE L'APPAREIL,
CES RECOMMANDEES PAR LE FABRICANT

SERVO(B) PCB V1030A542B(2ED)

10

IC203 HD14053BP

IC201 M5218P

IC202 BA226A

IC204 BA634

IC205 μPC1504C

IC206 BU4066B

IC203 1/3

IC203 2/3

IC203 3/3

IC206 1/4

IC206 2/4

IC206 3/4

IC206 4/4

TR206 2SD636 (Q,R,S,T)

TR210 DTC144EF

TR211,212 2SB641(Q,R,S,T)

SRV9V

REC9V

4L9V

J186

SERVO(A) PCB V1030A542A(2ED)

09

IC1 LC4077

IC2 1/2 BU4013B

IC2 2/2 BU4013B

IC3 BU4011B

IC4 BA6302A

IC5 BA2254

IC6 LA6393

IC7 BA6305

IC10 BU4066B

IC10 BU40669

TR1 2SD636 (Q,R,S,T)

TR3 2SD636(Q,R,S,T)

TR4 2SD636 (Q,R,S,T)

TR5 2SB641 (Q,R,S,T)

TR6 2SD636(Q,R,S,T)

TR7 2SB641 (Q,R,S,T)

TR8 2SD636 (Q,R,S,T)

TR9 2SB641 (Q,R,S,T)

TR16 2SD636 (Q,R,S,T)

TR203 2SD636 (Q,R,S,T)

AL9V

J176 P176 — GND, A-SWP — TO HIFI AUDIO PCB(P162)

J178 P178 — LP, SWP, REV, CUE, M-RVS, CM-STP — TO SYSTEM CONTROL PCB(P183)

J177 P177 — MP, BRAKE, STILL, SWP, CTL — TO SYSTEM CONTROL PCB(P182)

(B) POWER SUPPLY LINE

DRUM SPEED LINE

DRUM PHASE LINE

CAPSTAN SPEED LINE

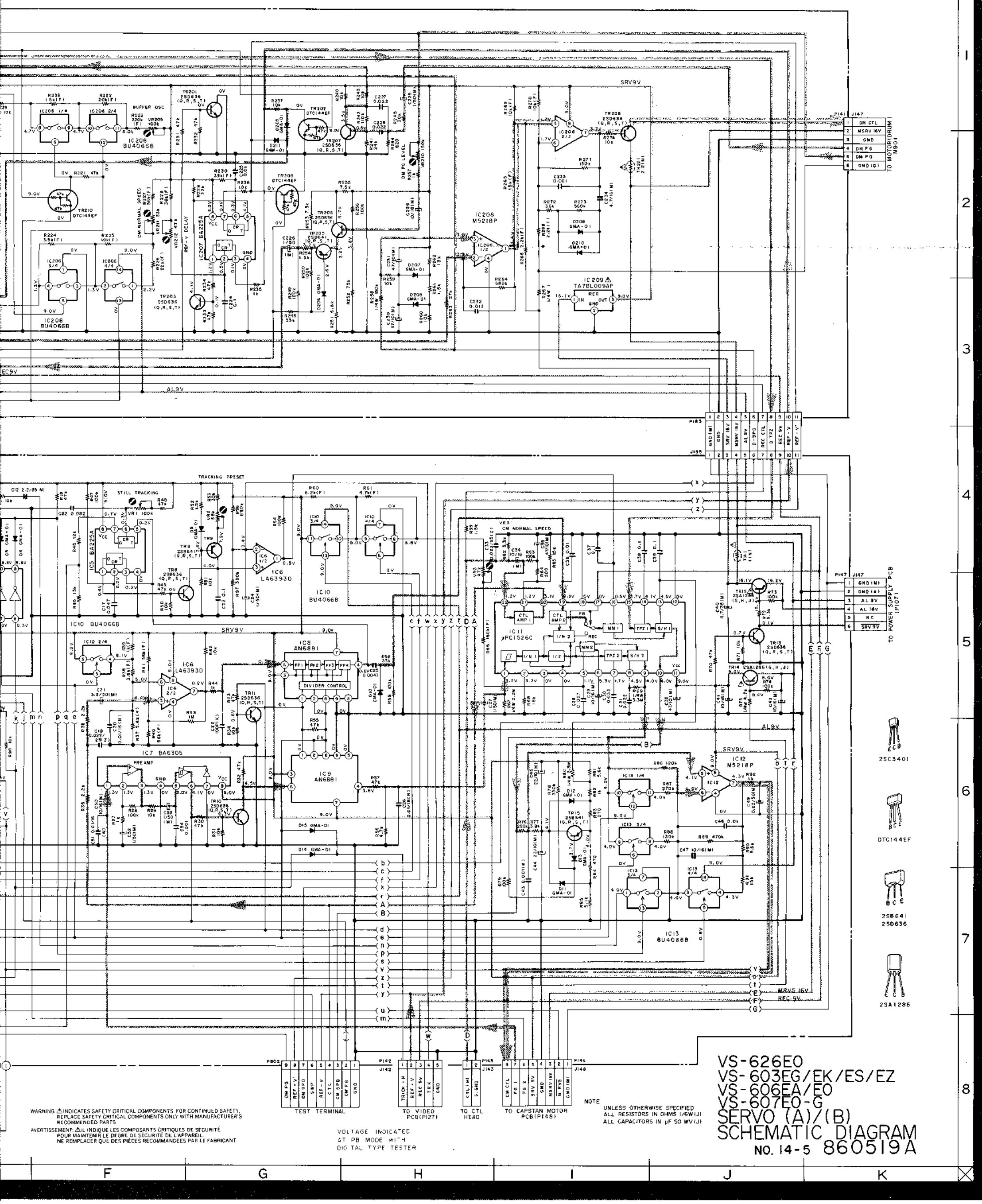
CAPSTAN PHASE LINE

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTI
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MA
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉC
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LI

001801

18



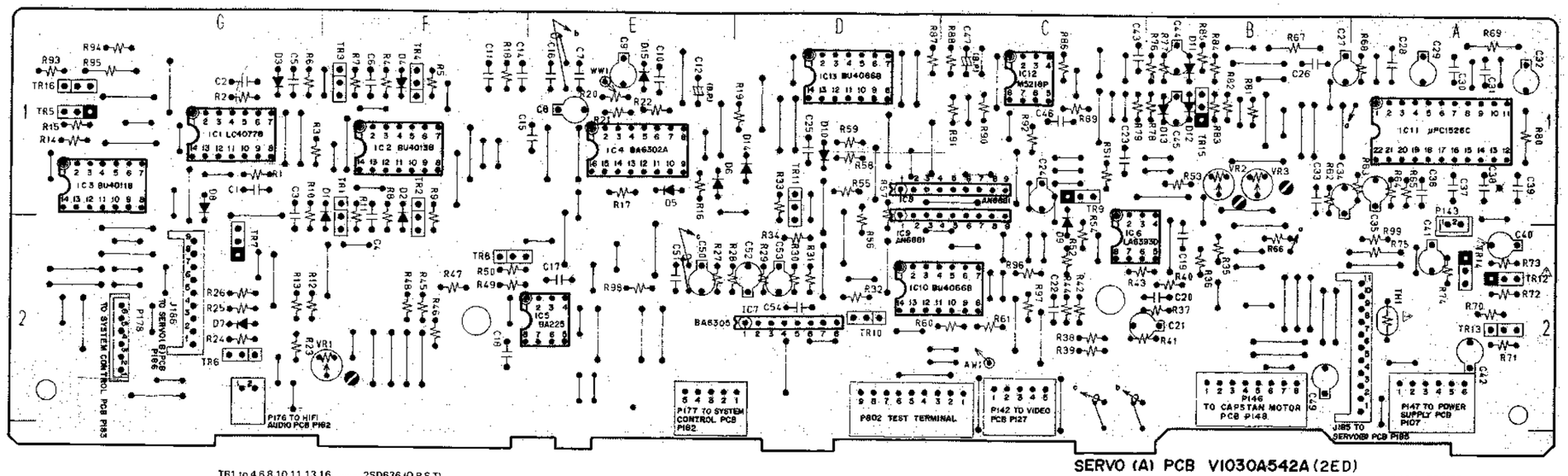
WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

VOLTAGE INDICATED AT PB MODE WITH DIGITAL TYPE TESTER

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
SERVO (A)/(B) SCHEMATIC DIAGRAM
NO. 14-5 860519A



SERVO (A) PCB V1030A542A (2ED)

TR1 to 4,6,8,10,11,13,16 ..... 2SD636 (Q,R,S,T)
TR5,7,9,15 ..... 2SB641 (Q,R,S,T)
TR12,14 ..... 2SA1286 (G,H,J)

SERVO (A) PCB

LOCATION OF COMPONENTS

(IC)

IC1	G1
IC2	F1
IC3	G1
IC4	E1
IC5	E2
IC6	C2
IC7	D2
IC8	C1
IC9	C1
IC10	D2
IC11	A1
IC12	C1
IC13	D1

(TR)

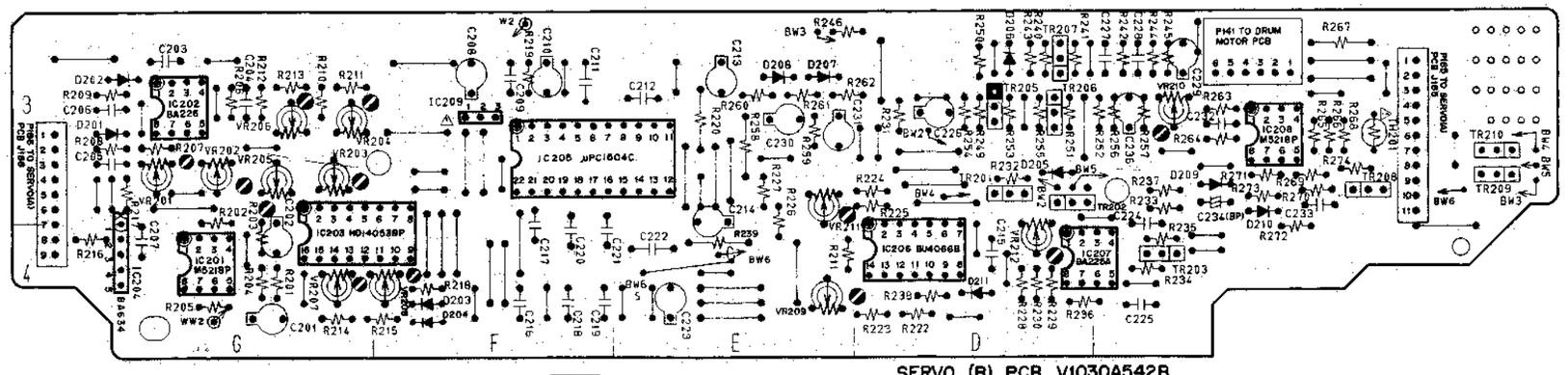
TR1	F1
TR2	F1
TR3	F1
TR4	F1
TR5	G1
TR6	G2
TR7	G2
TR8	F2
TR9	C1
TR10	D2
TR11	D1
TR12	A2
TR13	A2
TR14	A2
TR15	B1
TR16	G1

(TERMINAL)

P142	C2
P143	A1
P146	B2
P147	A2
P176	G2
P177	E2
P178	G2
J185	A2
J186	G2
PB02	D2
1,5,6,9	D1
2	B1
3,8	C1
4	E2

(ADJ POINTS)

VR1 (F2)	STILL TRACKING
VR2 (B1)	TRACKING PRESET
VR3 (B1)	CM SPEED



SERVO (B) PCB V1030A542B

TR201,203,204,206, to 208 ... 2SD636 (Q,R,S,T)
TR202,209,210 ..... DTC144EF
TR205 ..... 2SB641 (Q,R,S,T)

= PNP TRANSISTOR

= NPN TRANSISTOR

WARNING ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

SERVO (B) PCB

LOCATION OF COMPONENTS

(IC)

IC201	G4
IC202	G3
IC203	G4
IC204	G4
IC205	F3
IC206	D4
IC207	D4
IC208	C3
IC209	F3

(TR)

TR201	D3
TR202	D3
TR203	C4
TR204	D3
TR205	D3
TR206	D3
TR207	D3
TR208	B3
TR209	B3
TR210	B3

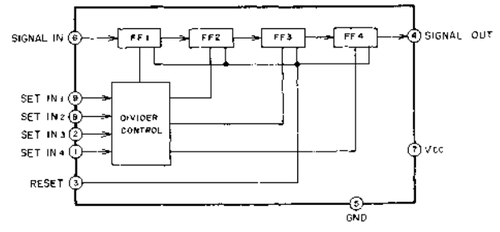
(TERMINAL)

P141	C3
P185	B3
P186	G3

(ADJ POINTS)

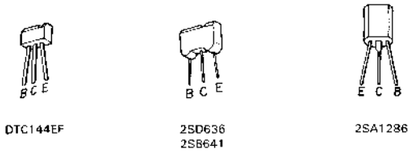
VR201 (G3):	AUDIO SWITCHING POINT (CH1)
VR202 (G3):	AUDIO SWITCHING POINT (CH2)
VR203 (G3):	CH2 PB SWITCHING POINT (SP)
VR204 (G3):	CH2 PB SWITCHING POINT (LP)
VR205 (G3):	CH1 PB SWITCHING POINT (SP)
VR206 (G3):	CH1 PB SWITCHING POINT (LP)
VR207 (G4):	REC SWITCHING POINT (SP)
VR208 (G4):	REC SWITCHING POINT (LP)
VR209 (E4):	BUFFER OSC
VR210 (C3):	DM PG LEVEL
VR211 (E3):	DM NORMAL SPEED
VR212 (D4):	REF-V DELAY

AN6881 (1~16 FREQUENCY DEVIDER)



TRUTH TABLE

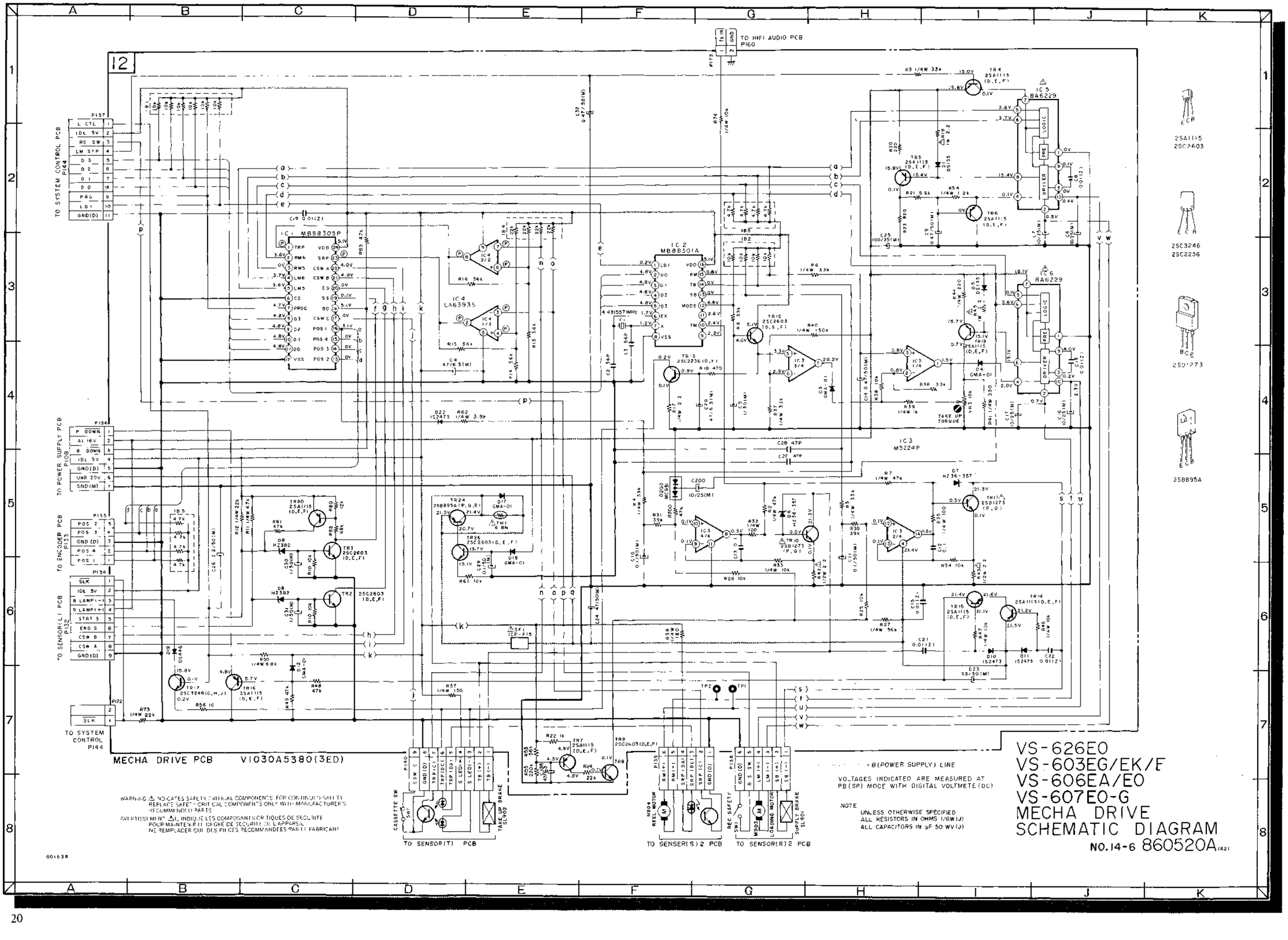
PIN NUMBER \ DEVIDED RATIO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
9	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H
8	L	L	H	H	L	L	H	H	L	L	H	H	L	L	H	H
2	L	L	L	L	H	H	H	H	L	L	L	L	H	H	H	H
1	L	L	L	L	L	L	L	L	H	H	H	H	H	H	H	H



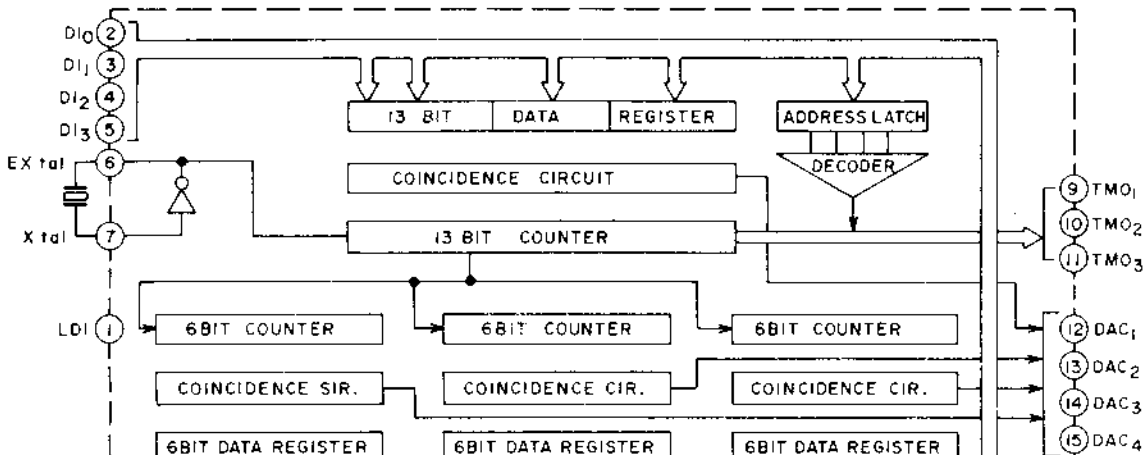
DTC144EF

2SD636
2SB641

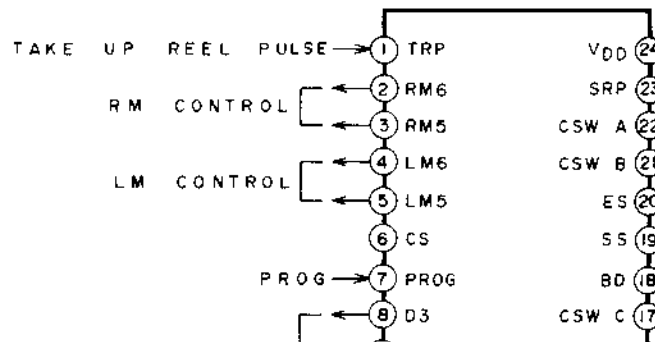
2SA1286


12
TO HIFI AUDIO PCB P160
TO SYSTEM CONTROL PCB P144
TO POWER SUPPLY PCB P108
TO ENCODER PCB P133
TO SENSOR(L) PCB P132
TO SYSTEM CONTROL P144
IC1 MB88305P
IC2 MB88301A
IC3 M5224P
IC4 LA6393S
IC5 BA6229
IC6 BA6229
MECHA DRIVE PCB V1030A5380(3ED)
TO SENSOR(T) PCB
TO SENSER(S)2 PCB
TO SENSOR(R)2 PCB
VOLTAGES INDICATED ARE MEASURED AT PB(SP) MODE WITH DIGITAL VOLTMETE(DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(U)
2SA1115
2SC2603
2SC3246
2SC2236
2SB1273
2SB895A
VS-626EO
VS-603EG/EK/F
VS-606EA/EO
VS-607EO-G
MECHA DRIVE
SCHEMATIC DIAGRAM
NO.14-6 860520A(421)

M88301A-P (D/A CONVERTER)

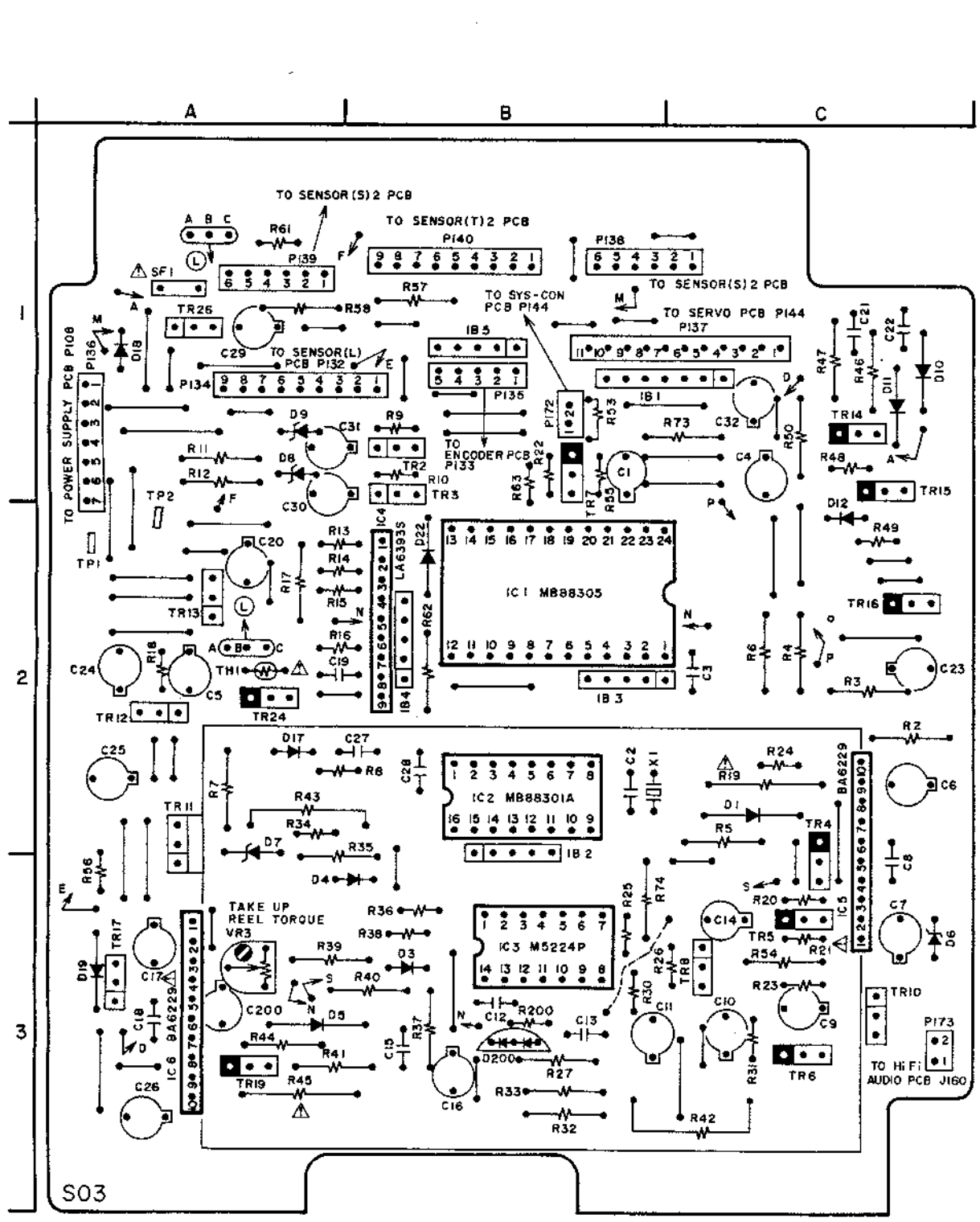


MB88305-P (MECHA DRIVE MI-COM)



BA6229 (BI-DIRECTIONAL MOTOR

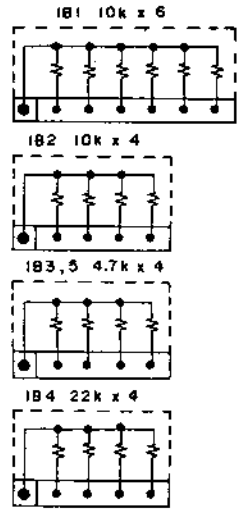
MODE	INPUT		OUTPUT	
	5pin	6pin	2pin	10
STOP	L	L	OPEN	OP
NORMAL	H	L	H	L
REVERSE	L	H	L	H
BRAKE	H	H	L	L



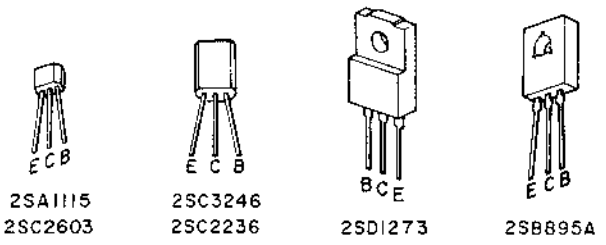
LOCATION OF COMPONENT

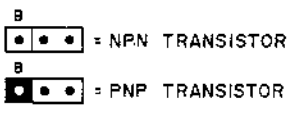
TRs
TR2,3.....B1
TR4,5,6.....C3
TR7.....B1
TR8,10.....C3
TR11,12,13...A2
TR14,15.....C1
TR16.....C2
TR17,19.....A3
TR24.....A2
TR26.....A1

ICs
IC1,2.....B2
IC3.....B3
IC4.....B2
IC5.....C3
IC6.....A3



TR4 to 7,14,15,16,19...2SA1115(D,E,F)
TR2,3,8,12,26.....2SC2603(D,E,F)
TR10,11.....2SD1273(P,Q)
TR13.....2SC2236(O,Y)
TR17.....2SC3246(G,H,J)
TR24.....2SB895A(P,Q,R)



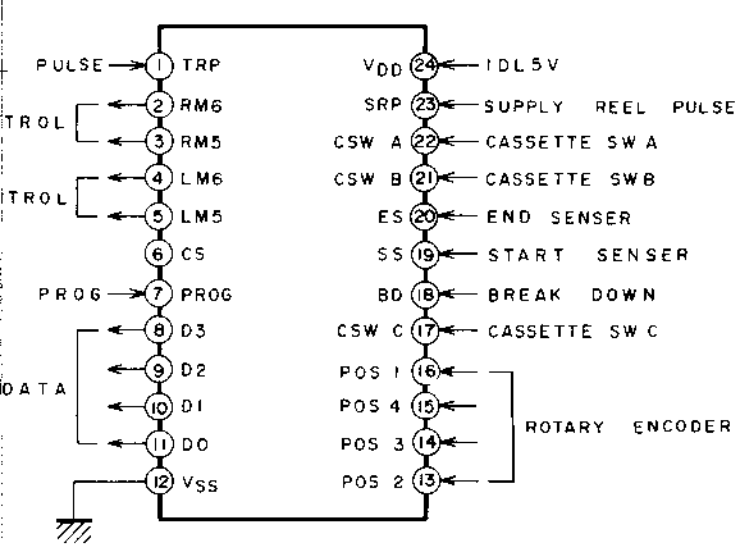


MECHA DRIVE PCB V1030A5380(3ED)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL. NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

IVE MI-COM)



A6229 (BI-DIRECTIONAL MOTOR DRIVER)

CONTROL MODE

MODE	INPUT		OUTPUT	
	5pin	6pin	2pin	10pin
STOP	L	L	OPEN	OPEN
NORMAL	H	L	H	L
REVERSE	L	H	L	H
BRAKE	H	H	L	L

x 6

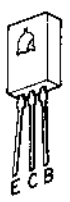
4

k x 4

4

F)
F)

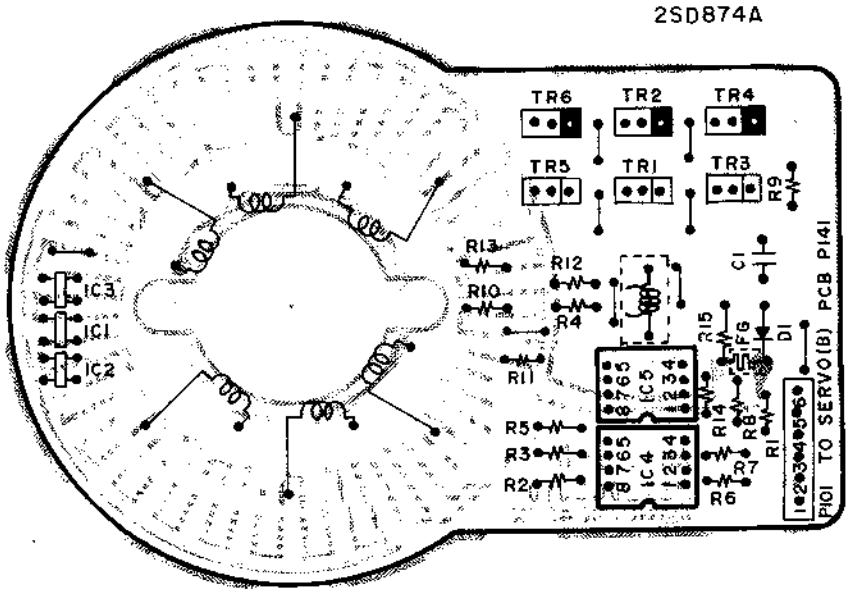
J)
R)



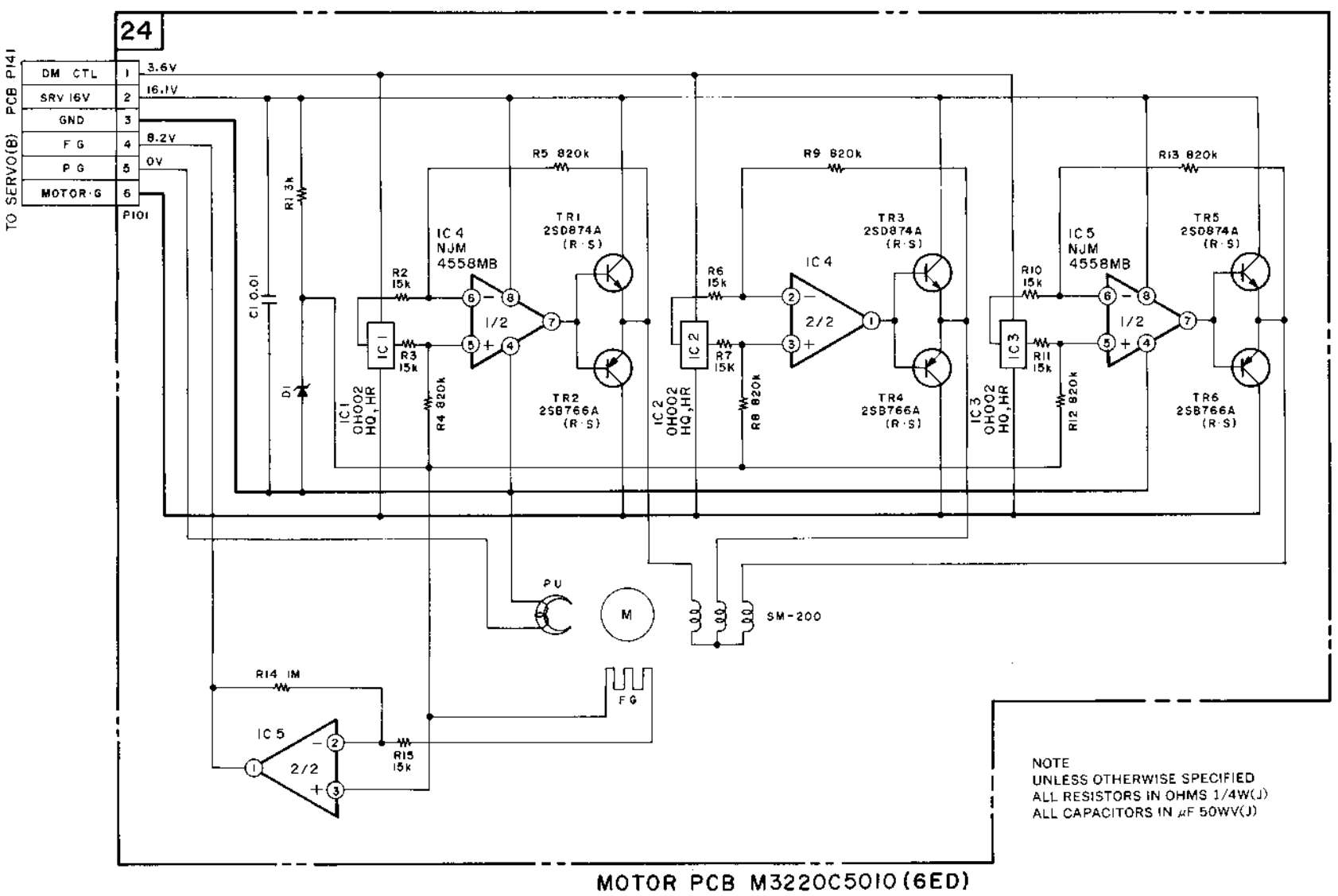
2SB895A

TR2,4,6 ---2SB766A
TR1,3,5 ----2SD874A

2SB766A
2SD874A



MOTOR PCB M3220C5010(6ED)



NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

MOTOR PCB M3220C5010(6ED)

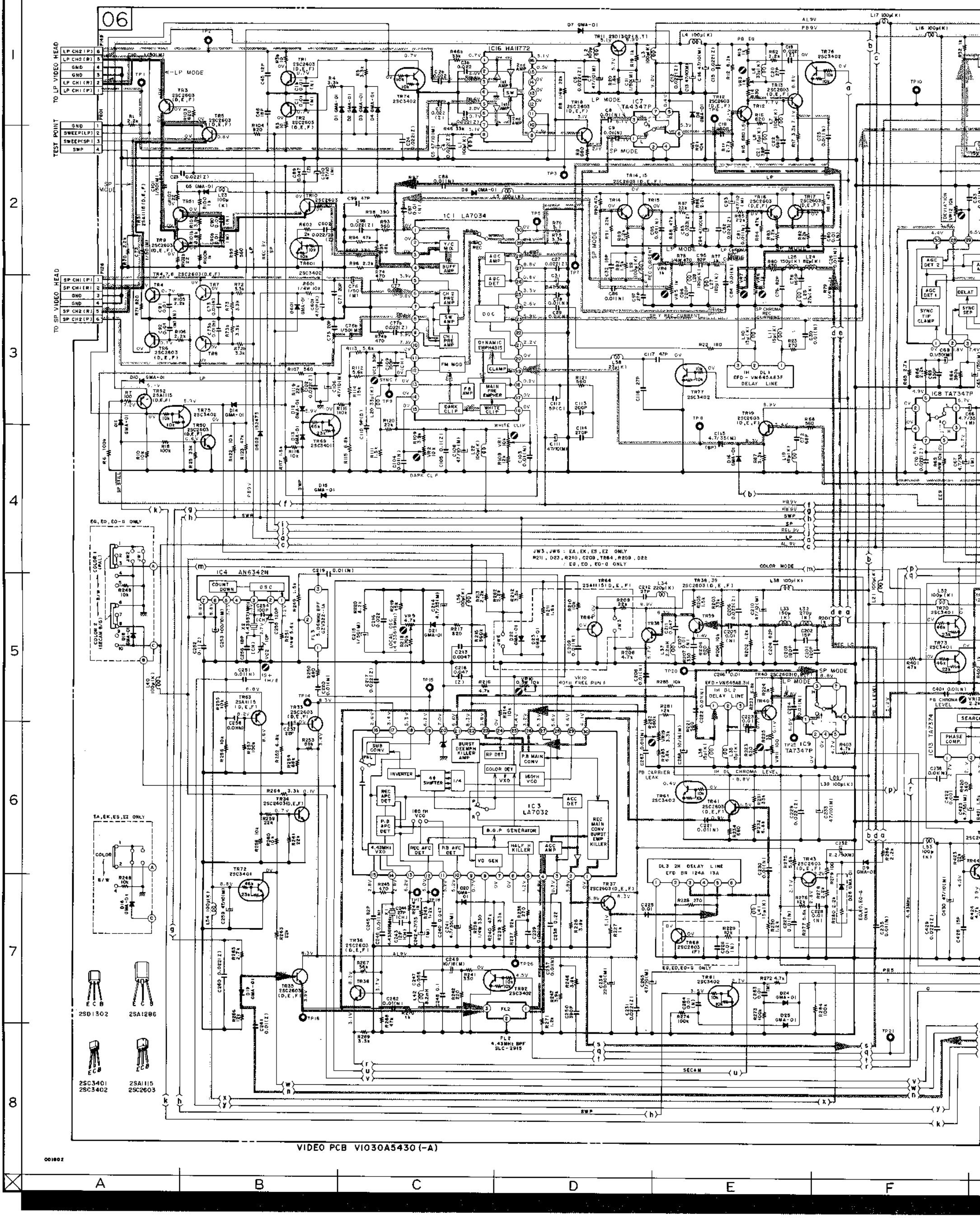
2SB766A
2SD874A

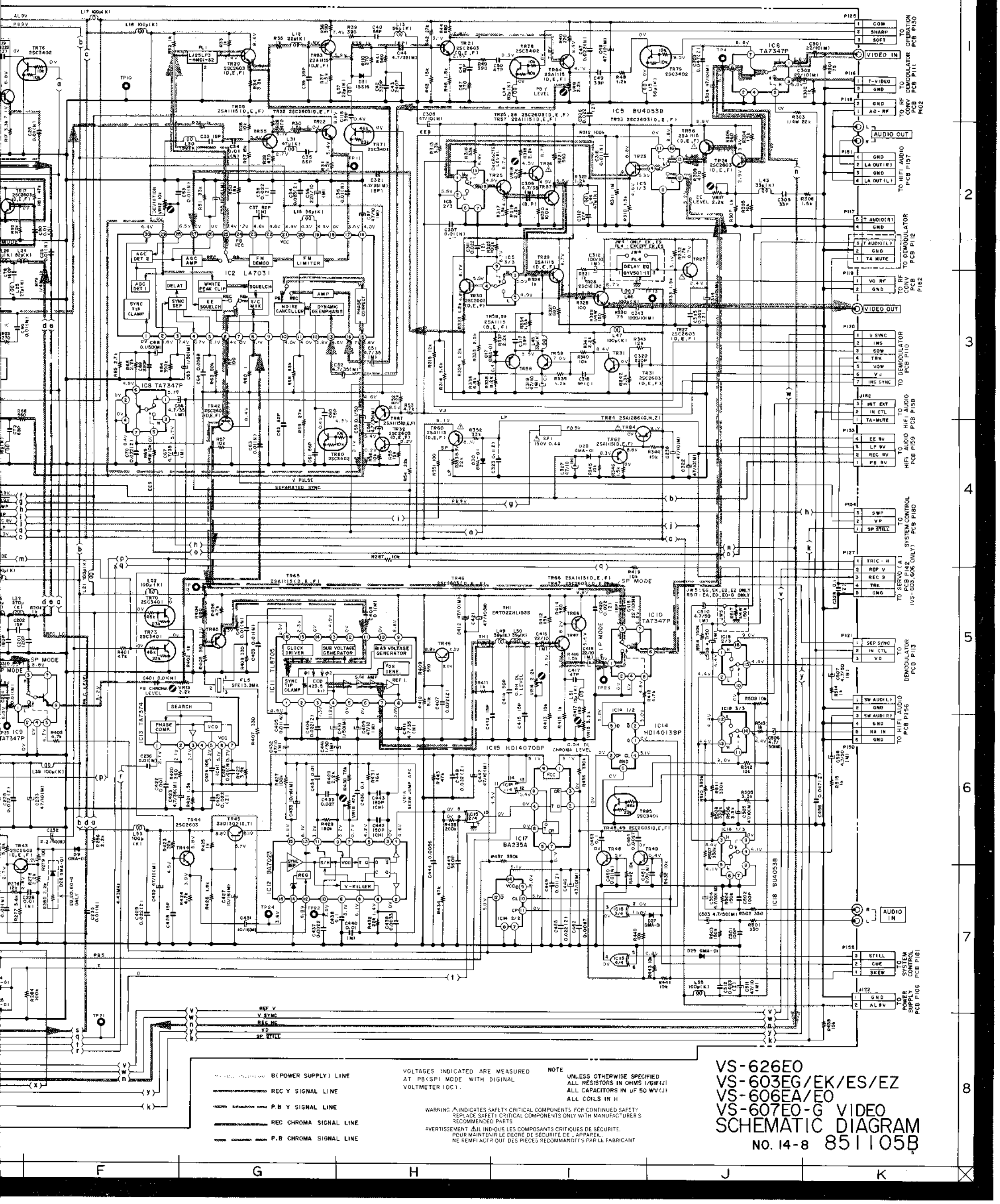
TR2,4,6 ---2SB766A
TR1,3,5 ----2SD874A

VOLTAGE INDICATED ARE MEASURED AT PB MODE
WITH DIGITAL TYPE TESTER

MOTOR PCB SCHEMATIC DIAGRAM

NO.14-7 850419D(A3)
2


06
TO LP VIDEO HEAD
LP CH2 (P) 6
LP CH2 (R) 5
GND 4
GND 3
LP CH1 (R) 2
LP CH1 (P) 1
TEST POINT
GND 1
SWEEP(LP) 2
SWEEP(SP) 3
SWP 4
TO SP VIDEO HEAD
SP CH1 (P) 1
SP CH1 (R) 2
GND 3
GND 4
SP CH2 (R) 5
SP CH2 (P) 6
IC16 HA11772
IC7 TA4347P
IC1 LA7034
IC4 AN6342N
IC3 LA7032
IC8 TA7347P
IC13 TA7374
IC9 TA7347P
VIDEO PCB V1030A5430(-A)
001802



VOLTAGES INDICATED ARE MEASURED AT PB(SP) MODE WITH DIGINAL VOLTMETER (DC).

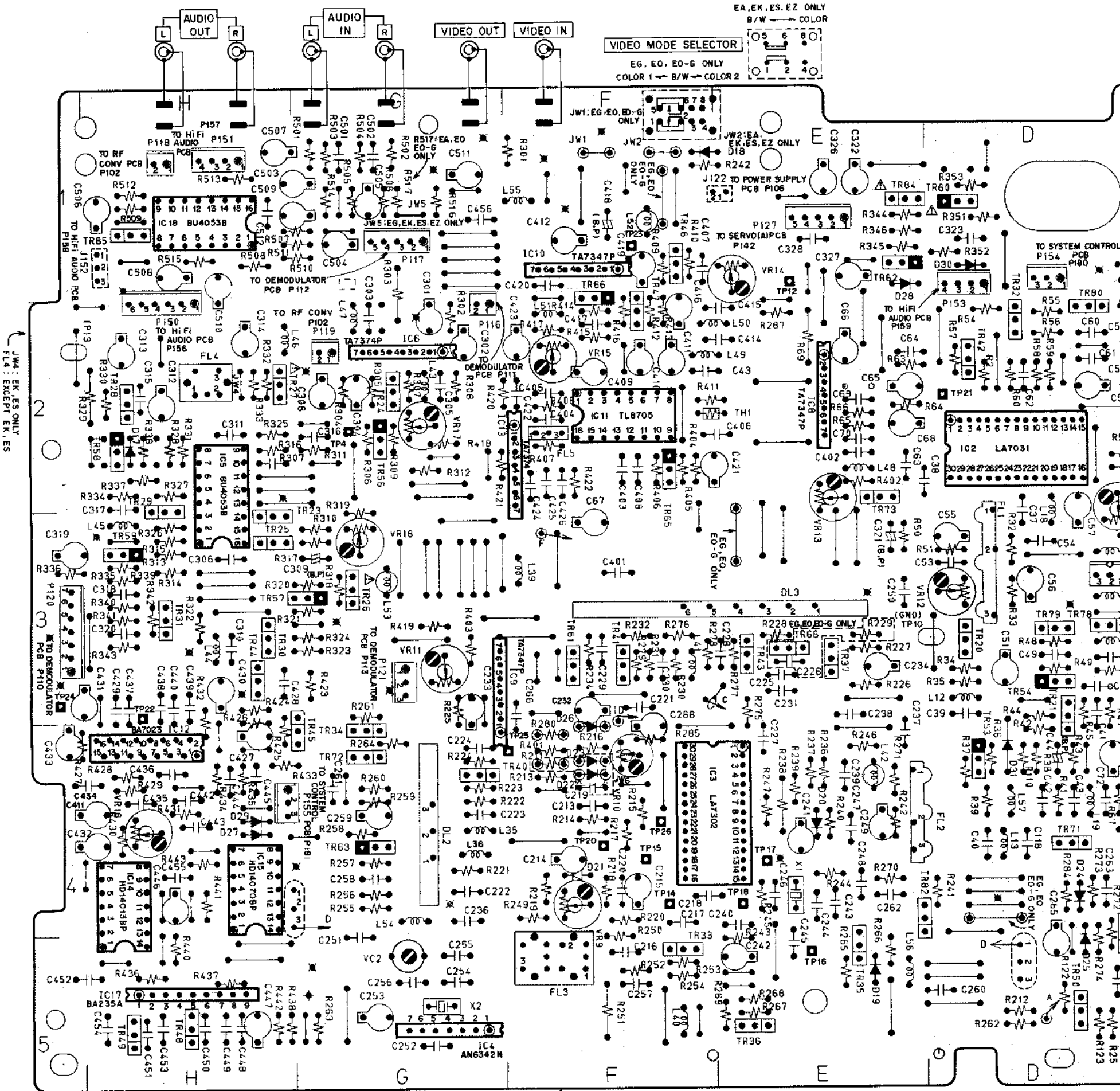
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(J)
ALL COILS IN H

WARNING ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G VIDEO
SCHEMATIC DIAGRAM

NO. 14-8 851105B

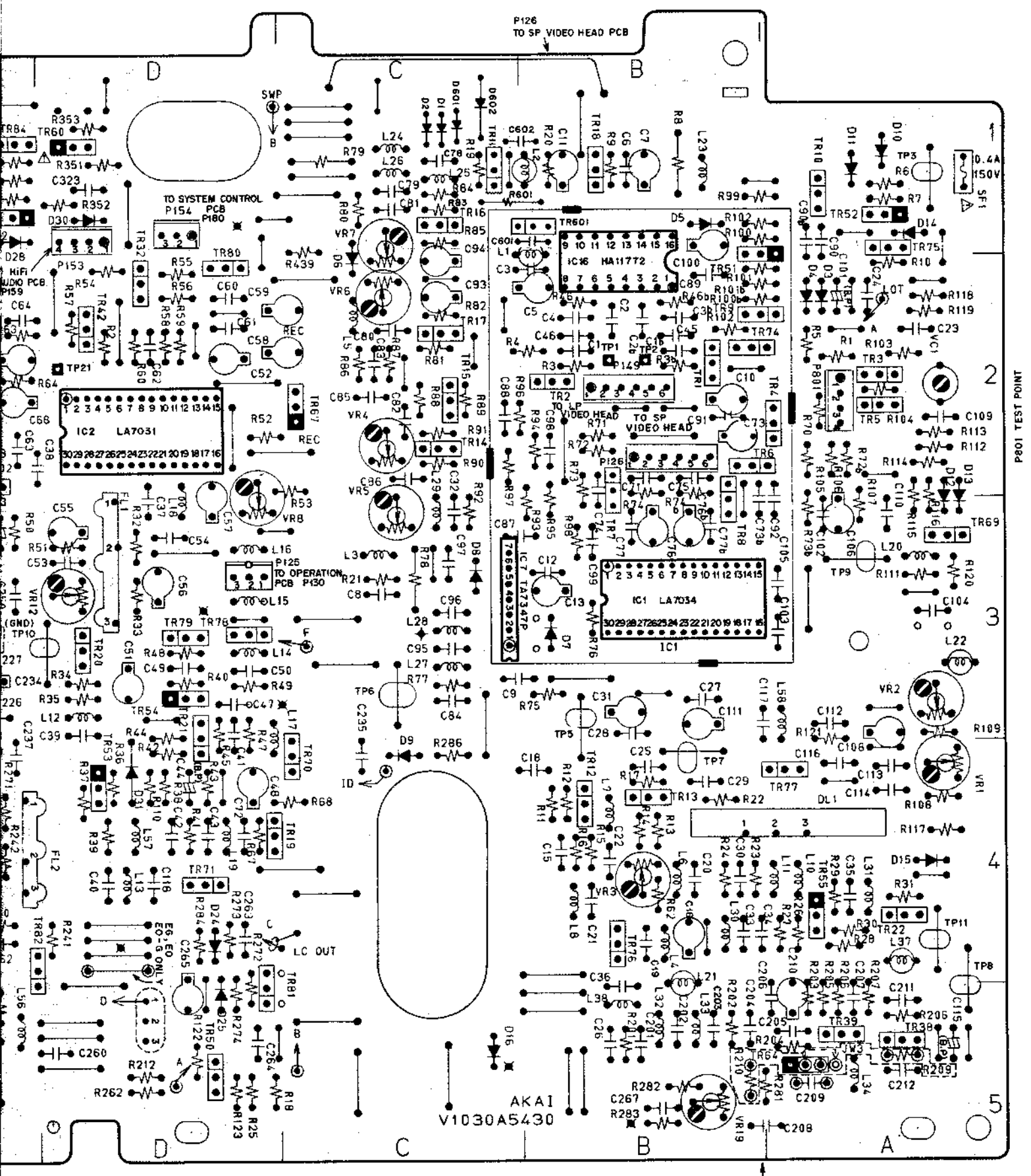


TR1 to 10, 12 to 27, 29 to 44, 46 to 50, 68	2SC2603 (D,E,F)
TR11, 45	2SD1302 (S,T)
TR28	2SC1213 (C)
TR51 to 60, 62 to 67	2SA1115 (D,E,F)
TR61, 74 to 82	2SC3402 (E,F,G)
TR69 to 73, 85	2SC3401
TR84	2SA1286 (G,H,J)

PNP TRANSI
NPN TRANSI

WARNING: ⚠INDICATES SAFE
REPLACE SAFETY C
RECOMMENDED PA
AVERTISSEMENT: ⚠IL INDIQU
POUR MAINTENIR L
NE REMPLACER QU

VIDEO



VIDEO PCB V1030A5430(-A)

TR64, R209, R210: EG, EO, EO-G ONLY
JW3: EA, EK, ES, EZ ONLY

PNP TRANSISTOR
NPN TRANSISTOR

NOTE.
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (J)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

LOCATION OF COMPONENTS

〈IC〉

IC1 ..... B3
IC2 ..... D2
IC3 ..... F4
IC4 ..... G5
IC5 ..... H2
IC6 ..... G2
IC7 ..... B3
IC8 ..... E2
IC9 ..... G3
IC10 ..... F1
IC11 ..... F2
IC12 ..... H4
IC13 ..... F2
IC14 ..... H4
IC15 ..... H4
IC16 ..... B2
IC17 ..... H5
IC18 ..... H1

〈TR〉

TR1 ..... B2
TR2 ..... B2
TR3 ..... A2
TR4 ..... B2
TR5 ..... A2
TR6 ..... B2
TR7 ..... B2
TR8 ..... B3
TR9 ..... B2
TR10 ..... A1
TR11 ..... C1
TR12 ..... B4
TR13 ..... B4
TR14 ..... C2
TR15 ..... C2
TR16 ..... C1
TR17 ..... C2
TR18 ..... B1
TR19 ..... D4
TR20 ..... D3
TR21 ..... D3
TR22 ..... A4
TR23 ..... H3
TR24 ..... G2
TR25 ..... H3
TR26 ..... G3
TR27 ..... H2
TR28 ..... H2
TR29 ..... H2
TR30 ..... H3
TR31 ..... H3
TR32 ..... D2
TR33 ..... F5
TR34 ..... G4
TR35 ..... E5
TR36 ..... E5
TR37 ..... E3
TR38 ..... A5
TR39 ..... A5
TR40 ..... G4
TR41 ..... F3
TR42 ..... D2
TR43 ..... E3
TR44 ..... H3
TR45 ..... G4
TR46 ..... F1
TR47 ..... F2
TR48 ..... H5
TR49 ..... H5
TR50 ..... D5
TR51 ..... B2
TR52 ..... A1
TR53 ..... D4
TR54 ..... D3
TR55 ..... A4
TR56 ..... G2
TR57 ..... G3
TR58 ..... H2
TR59 ..... H3
TR60 ..... D1
TR61 ..... F3
TR62 ..... E1
TR63 ..... G4
TR64 ..... A5
TR65 ..... F2
TR66 ..... F1
TR67 ..... C2
TR68 ..... E3
TR69 ..... A3
TR70 ..... C4
TR71 ..... D4
TR72 ..... G4
TR73 ..... E2
TR74 ..... B2
TR75 ..... A1
TR76 ..... B4
TR77 ..... A4
TR78 ..... D3
TR79 ..... D3
TR80 ..... D2
TR81 ..... D5
TR82 ..... E4
TR84 ..... E1
TR85 ..... H1

〈TERMINAL〉

P116 ..... G2
P117 ..... G1
P118 ..... H1
P119 ..... G2
P120 ..... H3
P121 ..... G3
J122 ..... E1
P125 ..... D3
P126 ..... B2
P127 ..... E1
P149 ..... B2
P150 ..... H2
P151 ..... H1
J152 ..... H1
P153 ..... D1
P154 ..... D1
P155 ..... H4
P801 ..... A2
① D2
② D1

07

HIFI AUDIO PCB V1030A5410

IC1 LC7530

IC2 M50760-368P

IC5 M51687AP

IC3 HA12072NT

IC301 μPC1520CA

IC302 μPC1513HA

TR1 2SD863

TR2 2SC3383

TR3 2SC3383

TR4 2SA1115

TR6 2SC3383

TR7 DTC144ES

TR8 2SD863

TR9 2SD863

TR30 DTC144ES

TR301 2SC2603

TR302 DTC144ES

FL1 FX-100E

FL2 FX-100E

IDL 12V

AL 12V

AL 9V

IDL 5V

REC/PB

LOGIC CONT

L/R CONTROL

MUTE CONTROL

STANDARD VOLTAGE

BUFFER

AMP/MUTE

E.VR

H/P AMP

REC AMP

PB AMP

EQ AMP

MUTING AMP

LINE AMP

WE

DET

AGC

STABI

NOR

HIFI

NORMAL IN

AUDIO OUT

LINER REC CURRENT VR302 20k

LINER PB LEVEL

HIFI EE LEVEL

TO MECHA DRIVE PCB P173

TO SERVO(A) PCB P176

TO LEVEL METER PCB J187

TO VIDEO PCB P150

TO VIDEO PCB P152

TO LEVEL METER PCB W191, J192

TO POWER SUPPLY PCB P175

TO POWER SUPPLY PCB P64

TO PHONE JACK PCB 9901

TO VIDEO PCB P151

TO SYSTEM CONTROL PCB P179

TO VIDEO PCB P153

P160 FL IN / GND

P162 A-SWP / GND

P169 IND 5 / IND 4 / IND 3 / IND 2 / IND 1

P156 GND / NA IN / GND / SW AUDIO(R) / GND / SW AUDIO(L)

P158 TA MUTE / IN CTL / INT/EXT

P170 GND (D) / AUTO/NORM / L·R/L+R / HIFI IND / SC IND / SC SW / L IND / R IND / IDL 12V / IND 7 / IND 6

P166 IDL 5V / AL 12V / AL

P165 IDL 12V / AL 9V / GND (A) / GND (D)

P167 PHONE (L) / GND (D) / PHONE (R)

P157 LA-OUT (L) / GND (A) / LA-OUT (R) / GND (A)

P163 A-MUTE / EE 9V / LP 9V / AL / REC 9V / PB 9V / AL 9V / GND (A)

P159 EE 9V / LP 9V / REC 9V / PB 9V

P124 5 AH (R) / 4 GND / 3 H (P) / 2 GND / 1 AE

AUDIO HEAD

AUDIO ERASE

EE 9V

LP 9V

REC 9V

PB 9V

2SD863

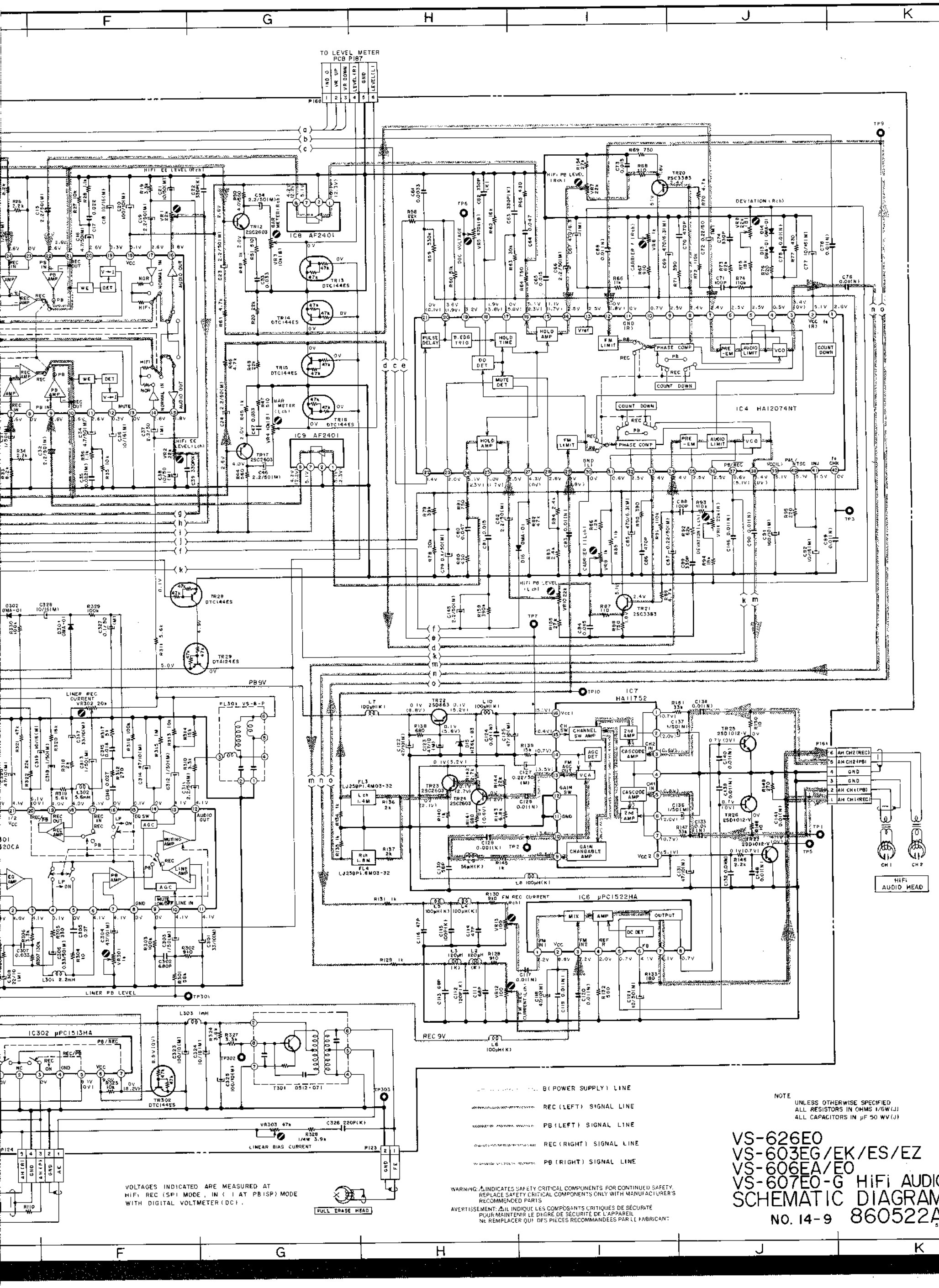
2SD1012-V
DTA124ES
DTC144ES

2SA1115
2SC2603

VOLTAGES INDICATED
HIFI REC (SP) MODE
WITH DIGITAL VOLTM

A B C D E F

1 2 3 4 5 6 7 8



B (POWER SUPPLY) LINE

REC (LEFT) SIGNAL LINE

PB (LEFT) SIGNAL LINE

REC (RIGHT) SIGNAL LINE

PB (RIGHT) SIGNAL LINE

VOLTAGES INDICATED ARE MEASURED AT HiFi REC (SP) MODE, IN ( ) AT PB (SP) MODE WITH DIGITAL VOLTMETER (DC).

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

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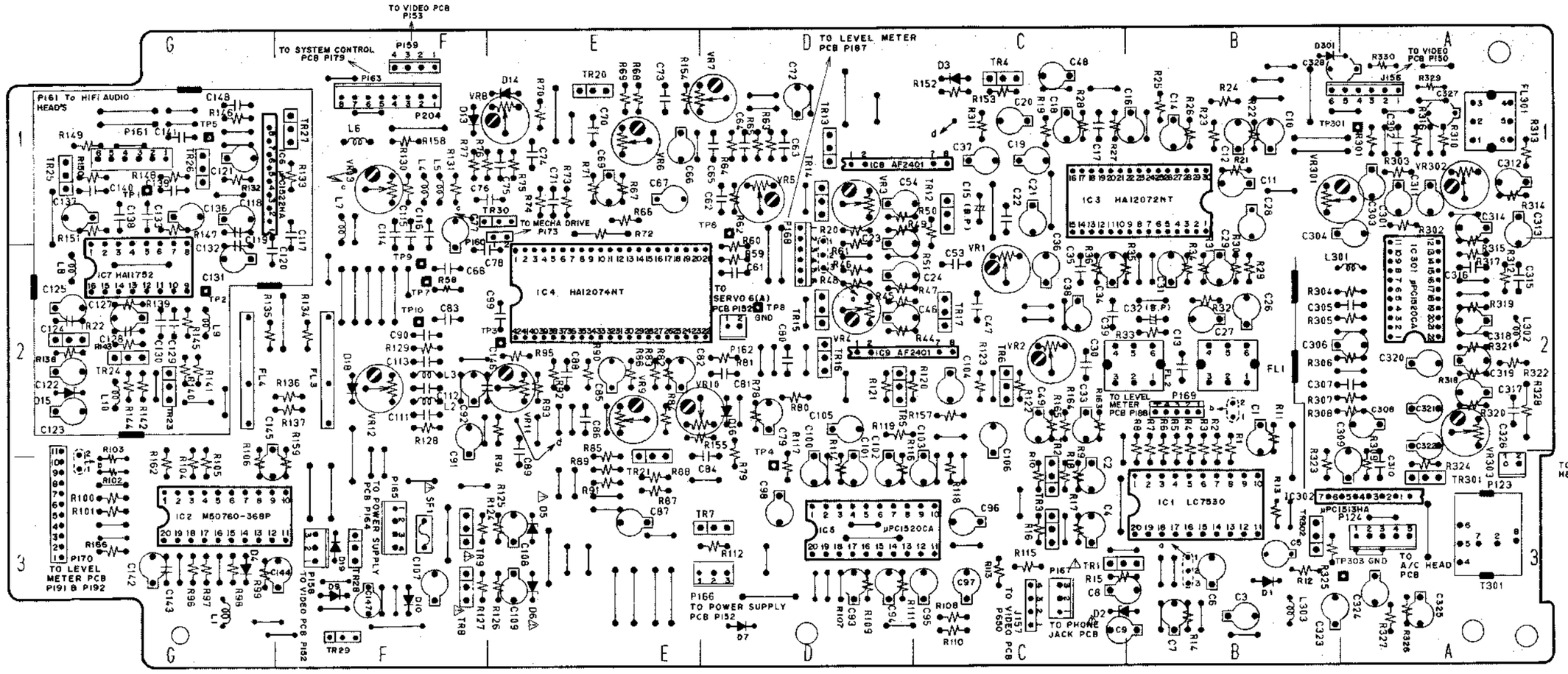
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G HiFi AUDIO SCHEMATIC DIAGRAM

NO. 14-9 860522A



HiFi AUDIO PCB V1030A5410(2ED)

(LOCATION OF COMPONENTS)

(IC)

IC1 ..... B3
IC2 ..... G3
IC3 ..... B1
IC4 ..... E2
IC5 ..... D3
IC6 ..... G1
IC7 ..... G2
IC8 ..... D1
IC9 ..... D2
IC301 .... A2
IC302 .... A3

(TR)

TR1 ..... C3
TR2 ..... C3
TR3 ..... C3
TR4 ..... C1
TR5 ..... D2
TR6 ..... C2
TR7 ..... D3
TR8 ..... F3
TR9 ..... F3
TR12 ..... C1
TR13 ..... D1
TR14 ..... D1
TR15 ..... D2
TR16 ..... D2
TR17 ..... C2
TR20 ..... E1
TR21 ..... E3
TR22 ..... G2
TR23 ..... G2
TR24 ..... G2
TR25 ..... G1
TR26 ..... G1
TR27 ..... F1
TR28 ..... F3
TR29 ..... F3
TR30 ..... E1
TR301 ..... A3
TR302 ..... A3

(CONNECTOR)

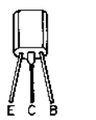
P123 ..... A3
P124 ..... A3
P156 ..... A1
J157 ..... C3
P158 ..... F3
P159 ..... F1
J160 ..... E1
P161 ..... G1
P162 ..... D2
P165 ..... F3
P166 ..... D3
P167 ..... C3
P168 ..... D2
P169 ..... B2
P170 ..... G3
P193 ..... G3
P204 ..... F1

(TP)

TP1 ..... G1
TP2 ..... G2
TP3 ..... E2
TP4 ..... D3
TP5 ..... G1
TP6 ..... D1
TP7 ..... F2
TP8 ..... D2
TP9 ..... F2
TP10 ..... F2

(ADJUSTMENT POINTS)

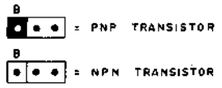
VR	1	EE LEVEL (R)
	2	EE LEVEL (L)
	3	METER (R)
	4	METER (L)
	5	DOC VOLTAGE
	6	CARRIER f(R)
	7	HiFi PB LEVEL (R)
	8	DEVIATION (R)
	9	CARRIER f(L)
	10	HiFi PB LEVEL (L)
	11	DEVIATION (L)
	12	FM REC CURRENT (L)
	13	FM REC CURRENT (R)
	301	LINEAR PB LEVEL
	302	LINEAR REC CURRENT
	303	LINEAR BIAS CURRENT



2SD863 - V8

2SA1115
2SC2603
2SD1012-V
DTA124ES
DTC144ES

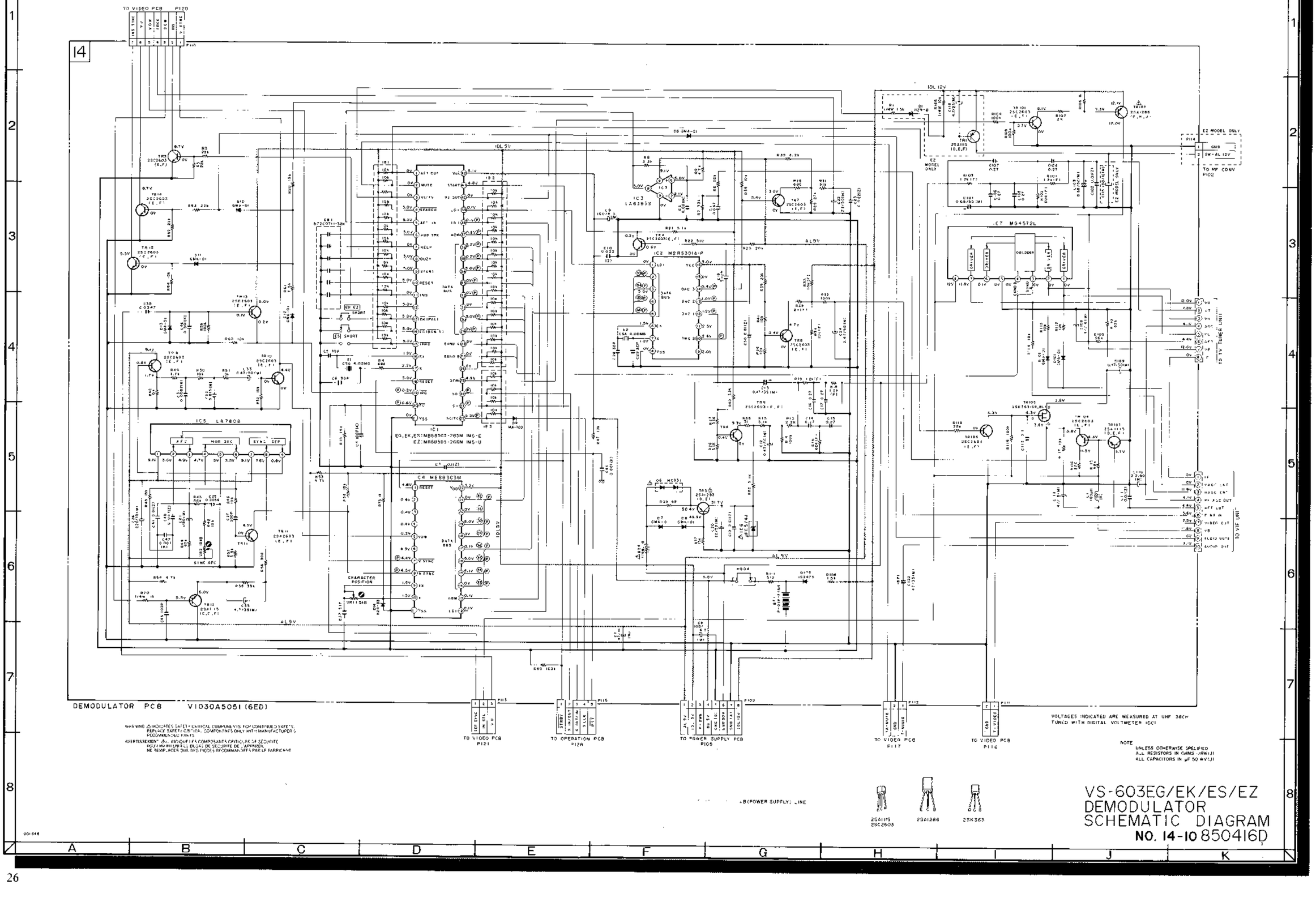
2SA1391

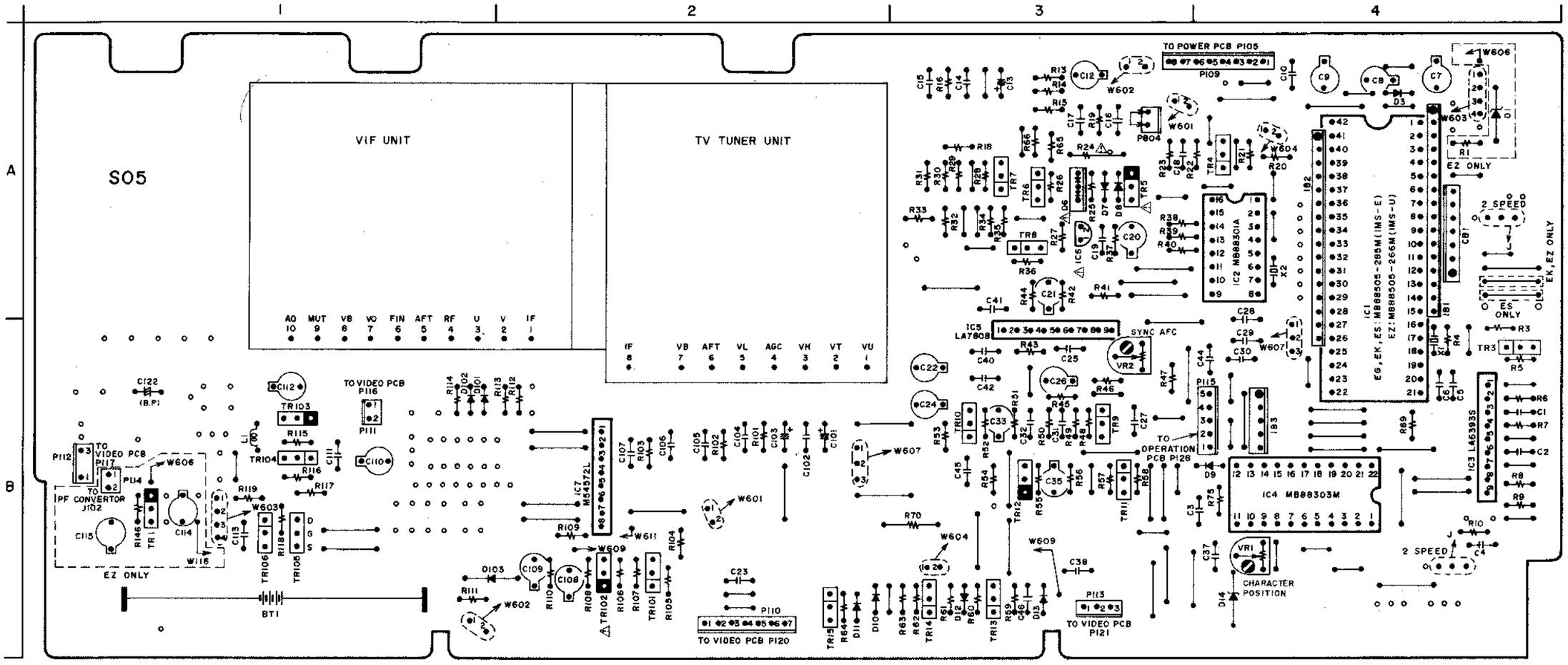


TR1, 8, 9 ---------- 2SD863-V8(F)
TR2, 3, 5, 6, 20, 21 ---- 2SC3383(S,T)
TR4 ---------- 2SA1115(E,F,G)
TR7, 13 to 16, 28, 30, 302 ----- DTC144ES
TR12, 17, 23, 24, 301 ---- 2SC2603(G)
TR25 to 27 ---------- 2SD1012-V(H)
TR29 ---------- DTA124ES

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT


14
DEMODULATOR PCB V1030A5051 (6ED)
TO VIDEO PCB P120
IC1 EG,EK,ES:MB88502-285M IM6-E EZ:MB88505-266M IM6-U
IC2 MB88301A-P
IC3 LA6395S
IC4 ME8803M
IC5 LA7808
IC6 M64572L
IC7 M64572L
IC8 MB88303M
IC9 MA-700
IDL 5V
IDL 12V
AL 8V
EZ MODEL ONLY
TO RF CONV P102
TO TV TUNER UNIT
TO VIF UNIT
CHARACTER POSITION
SYNC AFC
TO VIDEO PCB P121
TO OPERATION PCB P126
TO POWER SUPPLY PCB P105
TO VIDEO PCB P117
TO VIDEO PCB P116
VOLTAGES INDICATED ARE MEASURED AT UHF 38CH TUNED WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS (1/4W)(J)
ALL CAPACITORS IN μF 50 WV(J)
+B(POWER SUPPLY) LINE
2SA1115 2SC2603
2SA1286
2SK363
VS-603EG/EK/ES/EZ
DEMODULATOR
SCHEMATIC DIAGRAM
NO. 14-10 850416D



DEMODULATOR PCB V1030A5051 (6ED)

LOCATION OF COMPONENTS

TRs

TR1.....B1	IC1.....A4	
TR3.....B4	IC2.....A4	
TR4.....A4	IC3.....B4	
TR5 to 8...A3	IC4.....B4	
TR9 to 15..B3	IC5.....A3	
TR101.....B2	IC6.....A3	
TR102.....B2	IC7.....B2	
TR103.....B1		
TR104.....B1		
TR105.....B1		
TR106.....B1		

TR3,4,6 to 11,13 14,15,101,104,106 -- 2SC2603
TR5 ---------- 2SA1283
TR1,12,103 ------- 2SA1115
TR102 --------- 2SA1286
TR105 --------- 2SK363

B = NPN TRANSISTOR

B = PNP TRANSISTOR

2SA1115
2SC2603

2SA1286
2SA1283

2SK363

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

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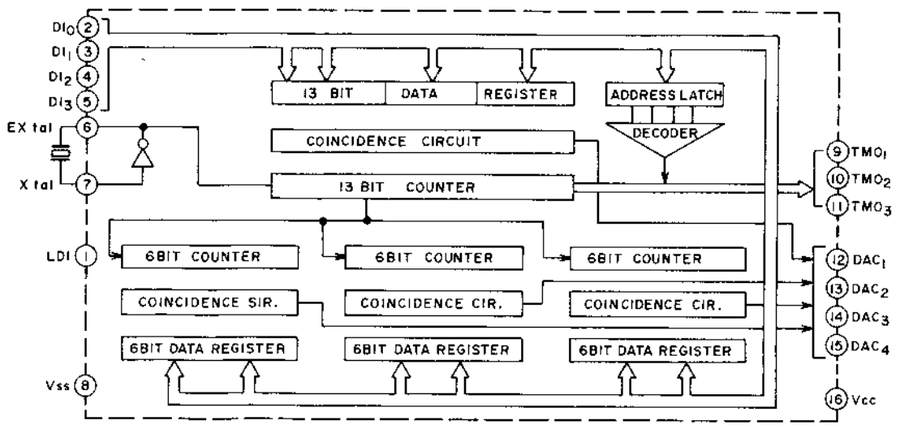
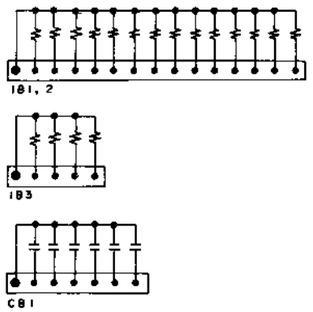
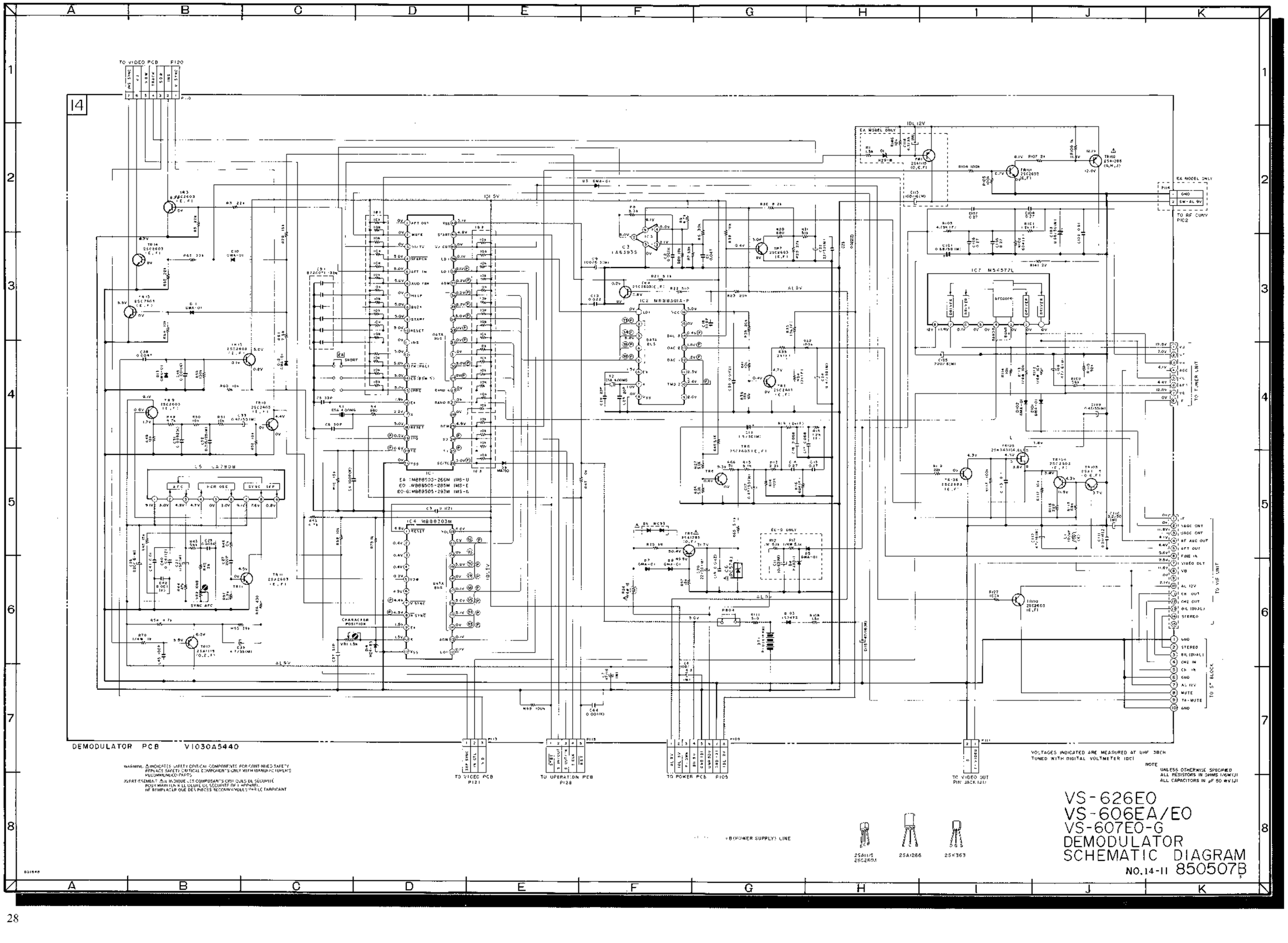
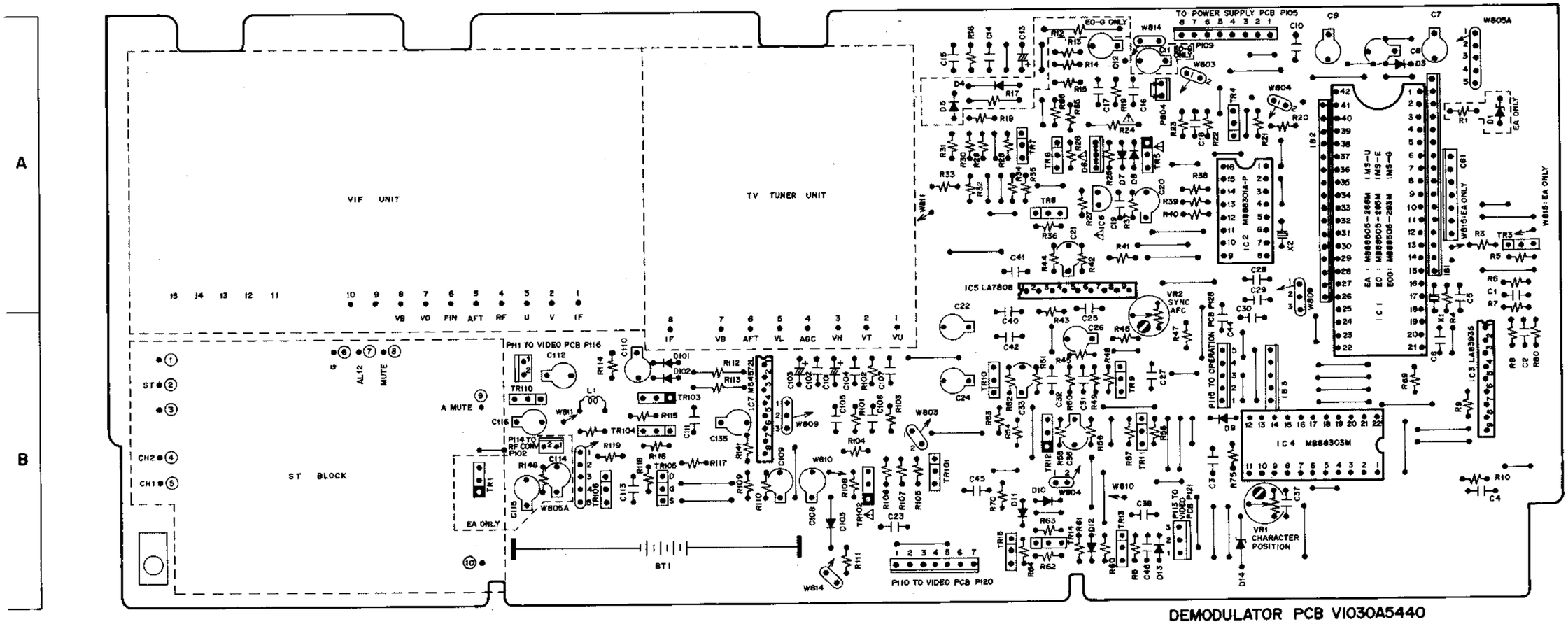
M88301A-P (D/A CONVERTER)



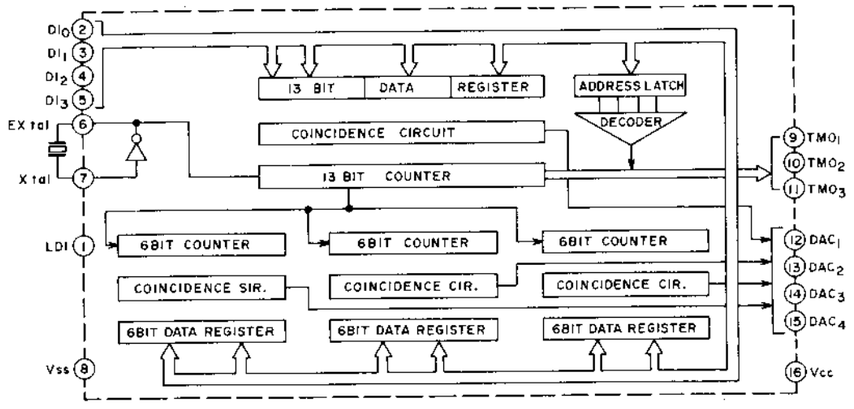



14
DEMODULATOR PCB V1030A5440
VS-626EO
VS-606EA/EO
VS-607EO-G
DEMODULATOR
SCHEMATIC DIAGRAM
NO.14-11 850507B
TO VIDEO PCB P120
TO VIDEO PCB P121
TO OPERATION PCB P128
TO POWER PCB P105
TO VIDEO OUT PIN JACK (J2)
TO RF CONV PIC2
TO TUNER UNIT
TO VIF UNIT
TO S* BLOCK
EA MODEL ONLY
IDL 12V
AL 8V
IDL 5V
AL 5V
IC1 M88850-266M IMS-U
EO M88850-285M IMS-E
EO-G M88850-293M IMS-G
IC4 M88203M
IC2 MB88303A-P
IC7 M54577L
VOLTAGES INDICATED ARE MEASURED AT UHF 38CH TUNED WITH DIGITAL VOLTMETER (DC)
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN µF 50 WV(J)
+B(POWER SUPPLY) LINE
2SA1115
2SC2603
2SA1266
2SK363



DEMODULATOR PCB VI030A5440

M88301A-P (D/A CONVERTER)



LOCATION OF COMPONENTS

(IC)		(TR)		(TERMINAL)	
IC1	A4	TR1	B1	P109	A4
IC2	A4	TR3,4	A4	P110	B3
IC3	B4	TR5 to 8	A3	P111	B1
IC4	B4	TR9 to 15	B3	P113	B3
IC5	B3	TR101	B3	P114	B2
IC6	A3	TR102 to 106	B2	P115	B4
IC7	B2	TR110	B1		

TR1, 3, 4, 6 to 11, 13 to 15, 101, 104 106, 110	2SC2603 (E,F)
TR5	2SA1283 (D,E)
TR12, 103	2SA1115 (D,E,F)
TR102	2SA1286 (G,H,J)
TR105	2SK363 (GR,BL)

= PNP TRANSISTOR

= NPN TRANSISTOR

2SD1302

2SA1115
2SC2603

2SC3401
2SC3402

2SA1286

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

Notes: Compatible Transistors and Diodes

1. TC1 AJ14P
2. Q1 2SD1380,2SC454 or equivalent
3. Q21, 22 2SC3605,2SC3356 or equivalent
4. Q51 2SC3016,2SC2470 or equivalent
5. D1 1SS133,1SS83 or equivalent
6. D2, 3 1SS270,1SS99 or equivalent
7. D21, 22 1SS244,1SS83 or equivalent

UNIT- 1 Resistor Ω
2. Capacitor F
3. Inductor H

	UHF	VHF1	VHF2
M8	12V	+2V	12V
U8	2V	OPEN	OPEN
M9	OPEN	12V	OPEN
L9	OPEN	OPEN	12V

AGC 1 to 6V
3PT 4.5 to 6V

MODULATOR MOLL65023A
(ANT BOOSTER / RF CONVERTER)

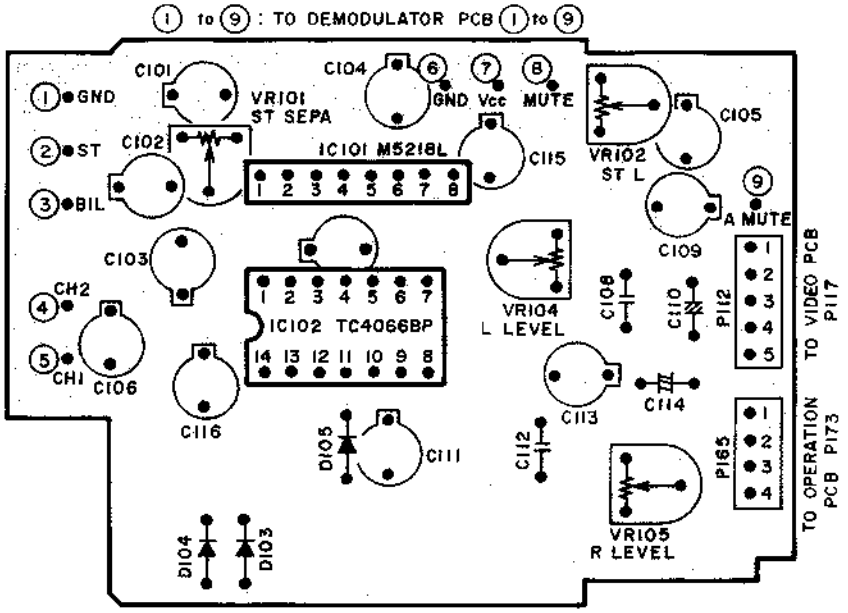
TUNER TEEEI-A07A

ST BLOCK

VIF

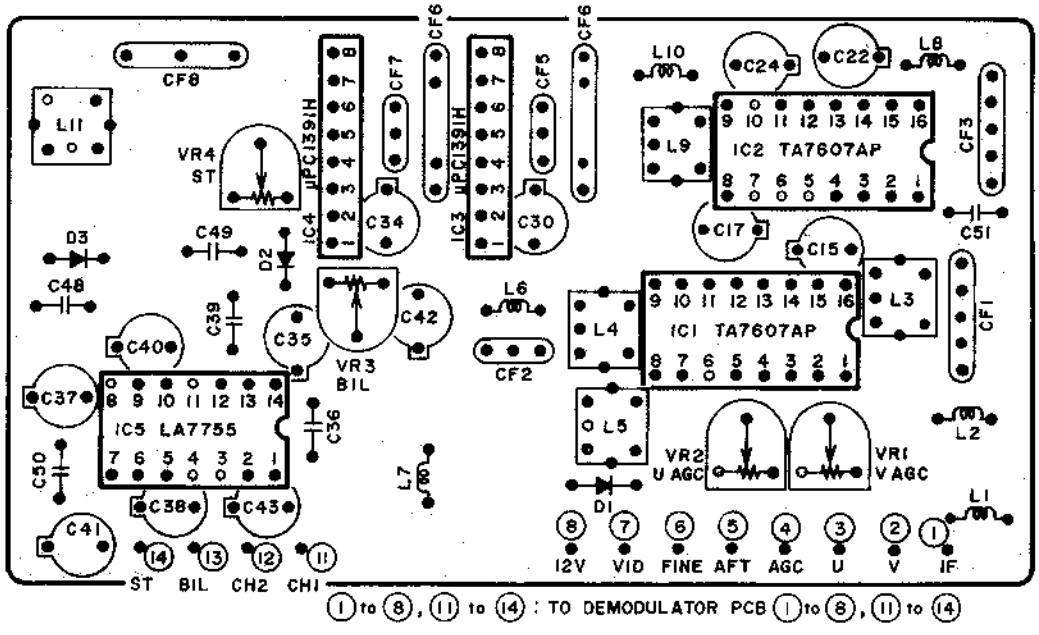
DEMODULATOR
V1030A5440

VS-626E0 VS-606E0
TUNER/VIF UNIT
SCHEMATIC DIAGRAM
NO.14-12 851112A



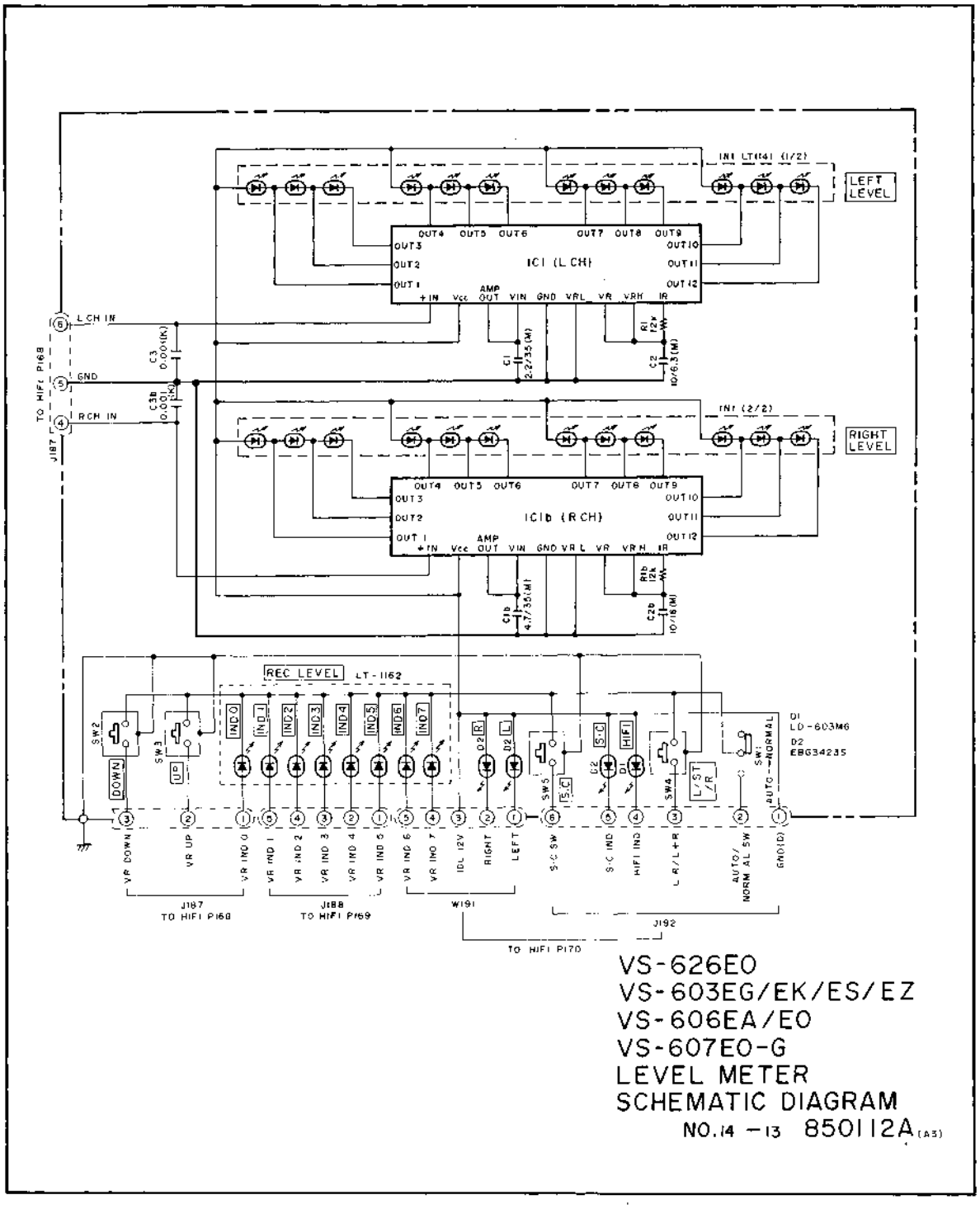
ST BLOCK 6A00151A2

NOTE: CHIP PARTS(C,R) ARE NOT SHOWN ON THESE PATTERNS



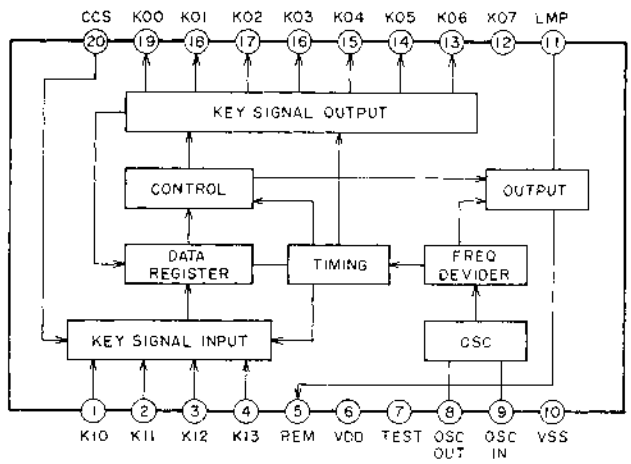
VIF UNIT 6A00138A1

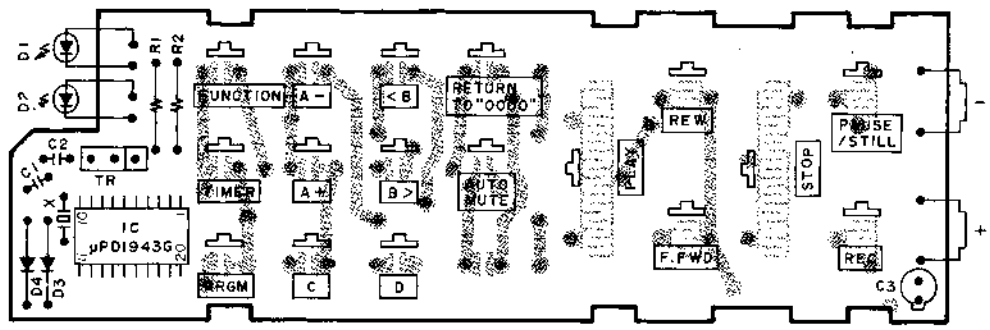
NOTE: CHIP PARTS(C,R) ARE NOT SHOWN ON THESE PATTERNS



VS-626EO
VS-603EG/EK/ES/EZ
VS-606EA/EO
VS-607EO-G
LEVEL METER
SCHEMATIC DIAGRAM
NO.14 -13 850112A(A3)

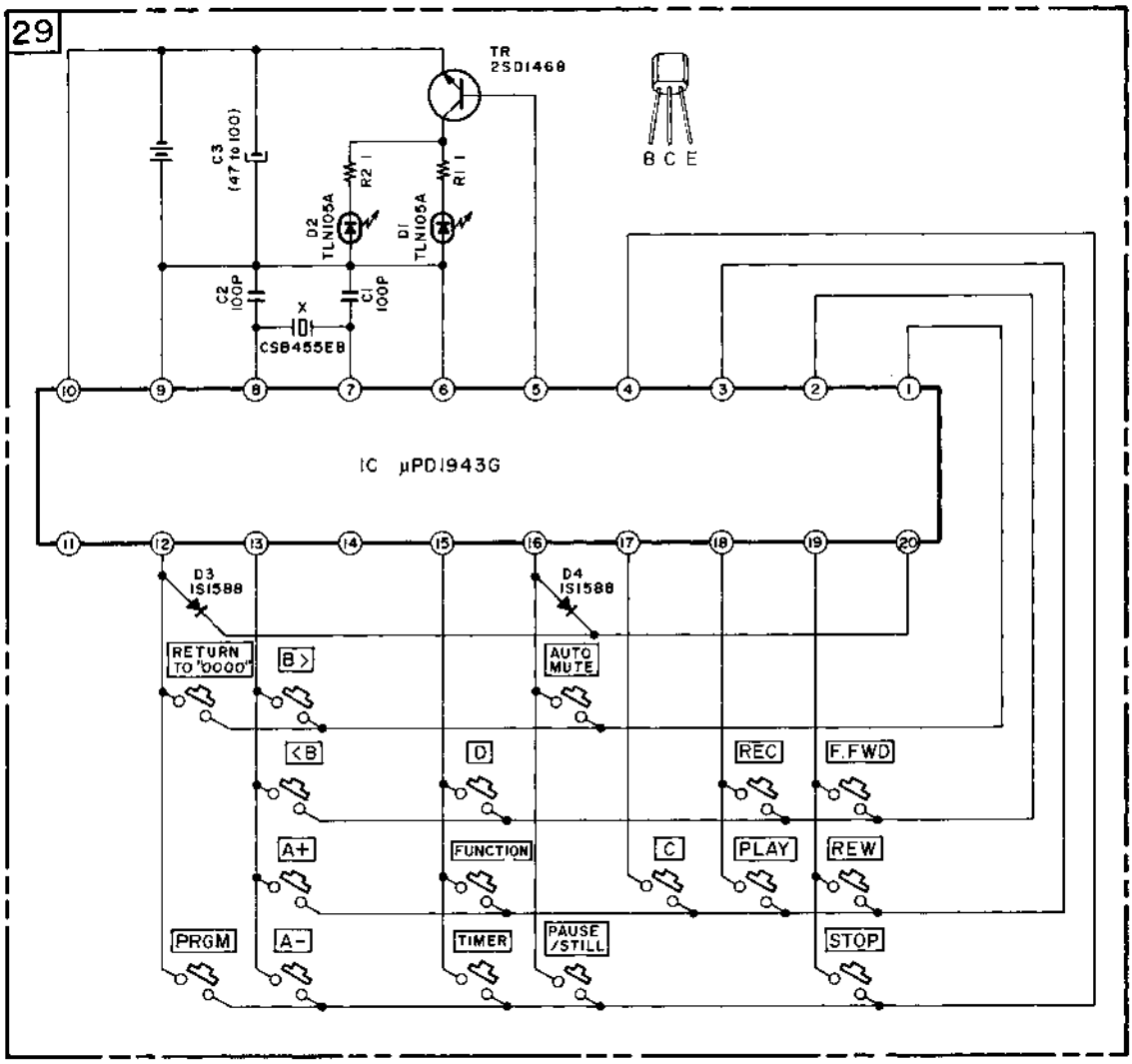
μPD1943G (REMOTE CONTROL TRANSMITTER)





= NPN TRANSISTOR

A+ PRESET SELECT +
A− PRESET SELECT −
<B FINE TUNE/TRACKING
B> FINE TUNE/TRACKING
C DISPLAY SELECT
D COUNTER RESET



A+ CANNEL SELECT +
A− CANNEL SELECT −
B> FINE TUNE/TRACKING
<B FINE TUNE/TRACKING
C DISPLAY SELECT
D COUNTER RESET

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

RC-V603
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO. 14-14 841019C

AKAI ELECTRIC CO., LTD.

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Printed No. 860611-I1-2600 Printed Date: June 25, 1986
950 Printed in Japan