

# AKAI SERVICE CENTER

**RTV servis Horvat**

Kešinci, 31402 Semeljci

031-856-139

031-856-637

098-788-319

[rtv-servis-horvat@os.tel.hr](mailto:rtv-servis-horvat@os.tel.hr)



**VIDEO CASSETTE RECORDER**

## MODEL VS-22 EA/EK/ES/EV /EO(E/V)/EOG

### SPECIFICATIONS

Format EA/ES/EK . . . . .	VHS standard	Recording (line input)	EA/ES/EK . . . . .	PAL
EV/EO/EOH . . . . .	VHS standard (PAL, MESECAM)	EA/ES/EK . . . . .	PAL	
Video recording system . . . . .	Rotary, slant azimuth two-head helical scan system	EV/EO/EOH . . . . .	PAL, SECAM (MESECAM TAPE)	
Rotary heads . . . . .	Two video heads	Playback (line output)	EA/ES/EK . . . . .	PAL
RF input EA . . . . .	System B, G	EA/ES/EK . . . . .	PAL	
	VHF ch 0 - 5, 5A, 6 - 11,	EV/EO/EOH . . . . .	PAL, SECAM (MESECAM TAPE)	
	UHF ch 21 - 69	Video		
EK . . . . .	System I	Line input level . . . . .	0.5 - 2.0 Vp-p/75 ohms, unbalanced	
	UHF ch 21 - 69	Line output level . . . . .	1.0 Vp-p/75 ohms, unbalanced	
EV . . . . .	System B, G (PAL, SECAM)	S/N ratio . . . . .	more than 45 dB	
MIDDLE EAST . . . . .	VHF ch 2 - 12, UHF ch 21 - 69	Horizontal resolution . . . . .	more than 250 lines	
NEW ZEALAND . . . . .	VHF ch 1 - 9, UHF ch 21 - 69	Audio		
EO . . . . .	System B, G (PAL, SECAM)	Line input level . . . . .	-8 dBm/50 K ohms, unbalanced	
	VHF Low ch 2 - 4, S1 - S3	Line output level . . . . .	-6 dBm/ 1 K ohms, unbalanced	
	High ch M1 - M10, 5 - 12,	S/N ratio . . . . .	more than 40 dB	
	U1 - U10	Frequency response . . . . .	70 - 10,000 Hz	
ES . . . . .	System I	Recording/playback time . . . . .	240 min. with E-240 cassette	
	VHF ch A - J (Ireland)	Tape speed . . . . .	23.39 mm/sec.	
	ch 4 - 13 (South Africa)	Quick finder . . . . .	approx. 7 times normal speed	
	UHF ch 21 - 69	FF, REW time . . . . .	approx. 5 min. with E-180 cassette	
EOG . . . . .	VHF Low ch 2 - 4, S1, S2	Timer		
	High ch S3 - S10, 5 - 12,	Program . . . . .	4 program/1 month (EOG: 1 year)	
	S11 - S20	and QUICK TIMER		
	UHF ch 21 - 69	Clock reference . . . . .	Quartz crystal	
RF output EA . . . . .	System B type modulation	Display . . . . .	TV screen & FL (Tape counter, Timer etc.)	
	VHF ch 0, 1 switchable	Power requirements		
	(preset cha 1)	EA/EK . . . . .	240 V AC, 50 Hz	
EO/EOG . . . . .	System G type modulation	EO/EOG . . . . .	220 V AC, 50 Hz	
	UHF ch 30 - 39 adjustable	ES . . . . .	200 - 220 V AC, 50 Hz	
	(preset ch 36)	EV . . . . .	230 V AC, 50 Hz	
ES/EK . . . . .	System I type modulation	Power consumption		
	UHF ch 30 - 39 adjustable	EA/EK . . . . .	20 W	
	(preset ch 36)	ES . . . . .	22 W (at 220 V)	
EV . . . . .	System B type modulation	EO . . . . .	25 W	
MIDDLE EAST . . . . .	VHF ch 3, 4 switchable	EV . . . . .	21 W	
	(preset ch 4)	EOG . . . . .	26 W	
NEW ZEALAND . . . . .	VHF ch 2, 3 switchable	Operating temperature . . . . .	5°C - 40°C	
	(preset ch 3)	Dimensions . . . . .	425 (W) x 84 (H) x 340 (D) mm	
		Weight . . . . .	3.5 Kg (EOG: 5.6 kg)	

\* For improvement purposes, specifications and design are subject to change without notice.

A

B

C

D

E

1

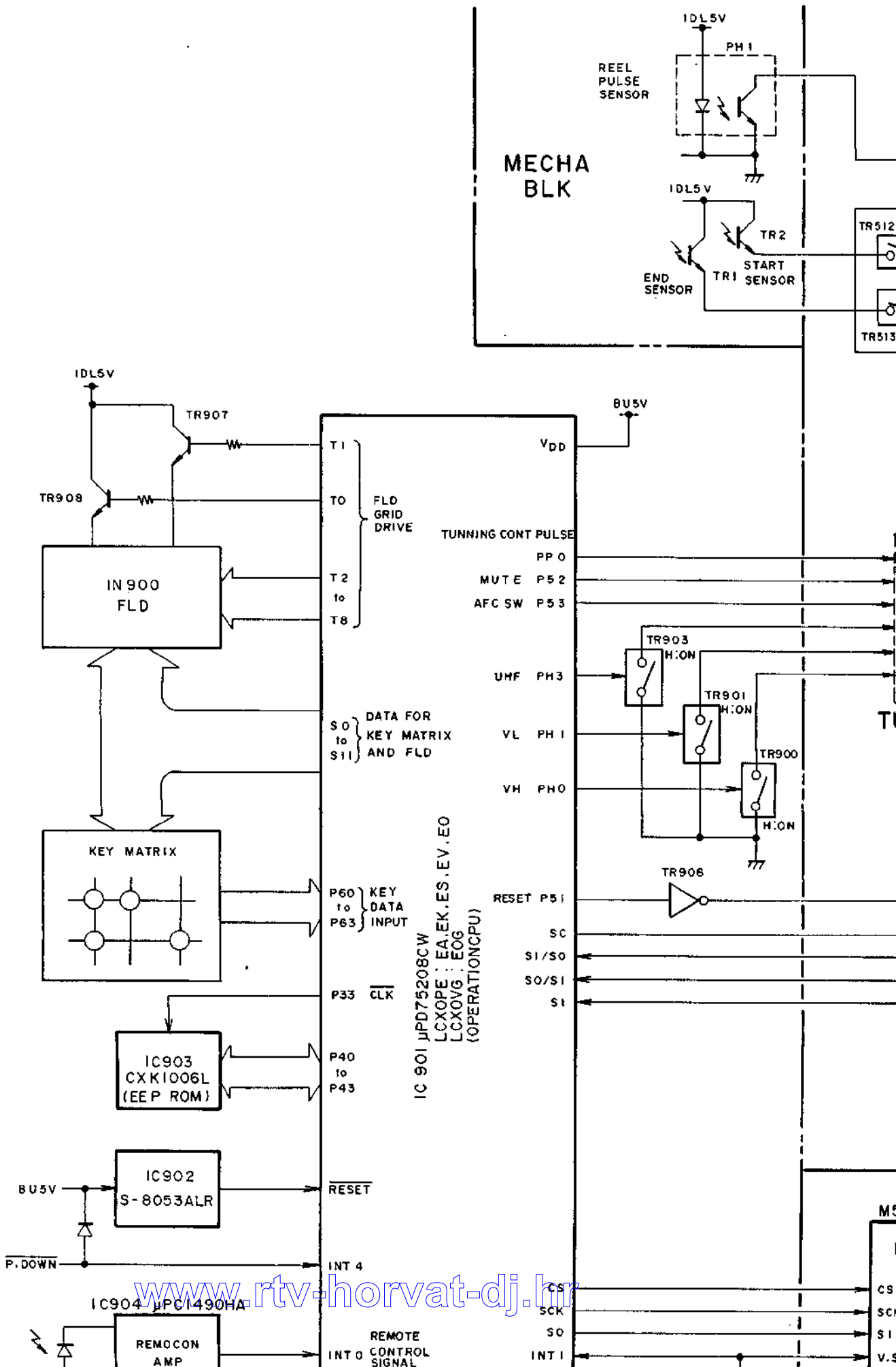
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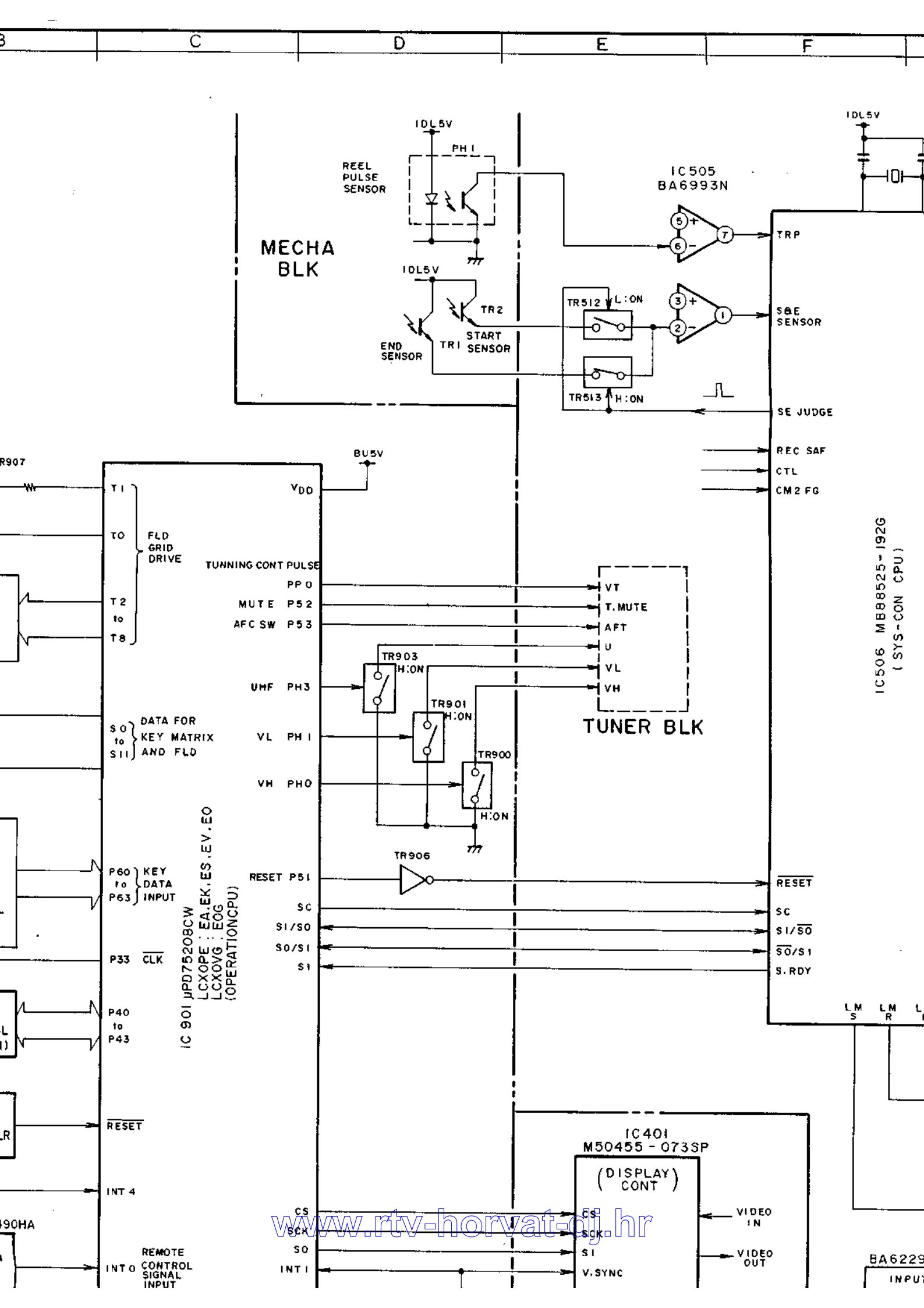
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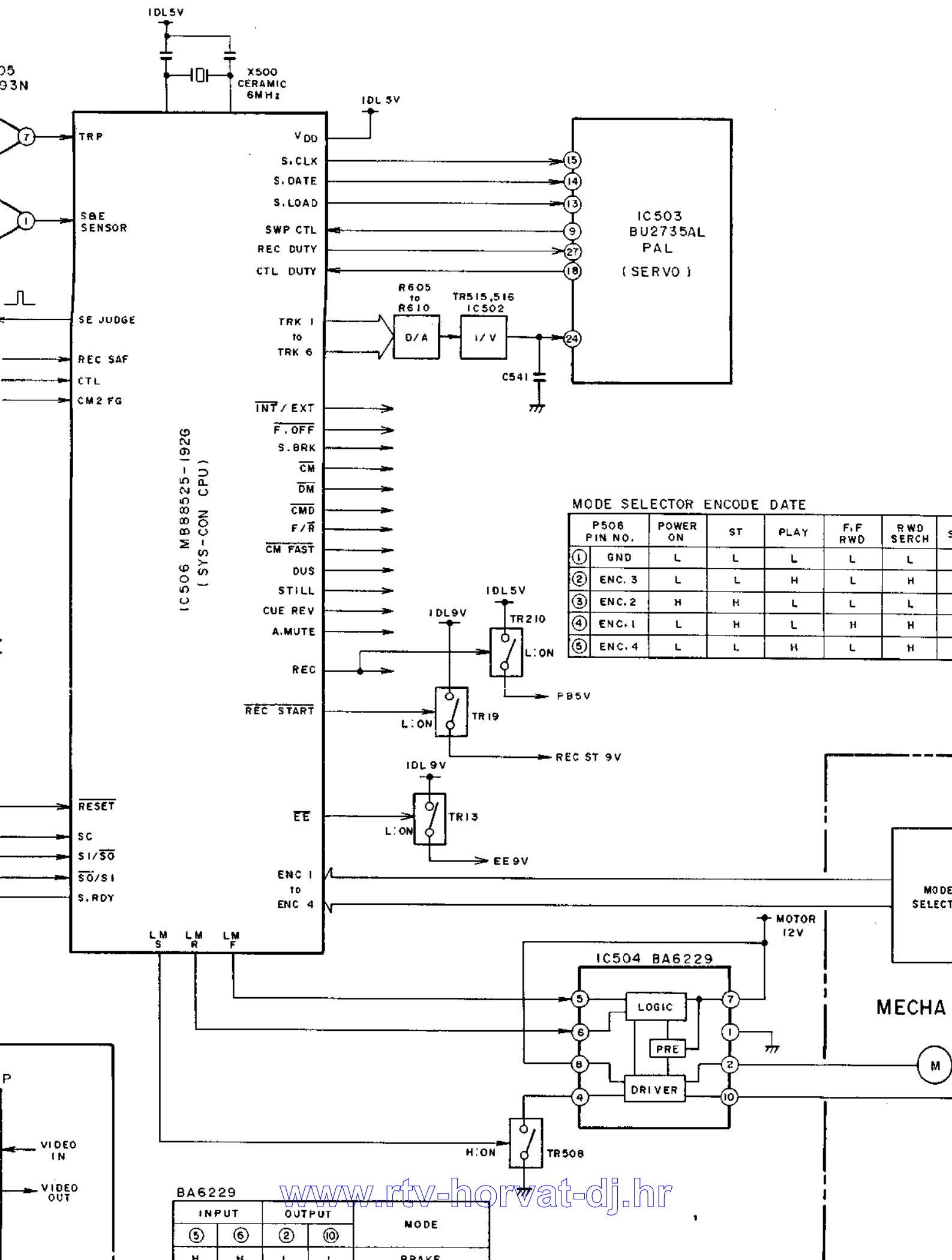
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IC506 MB88525-1926  
(SYS-CON CPU)

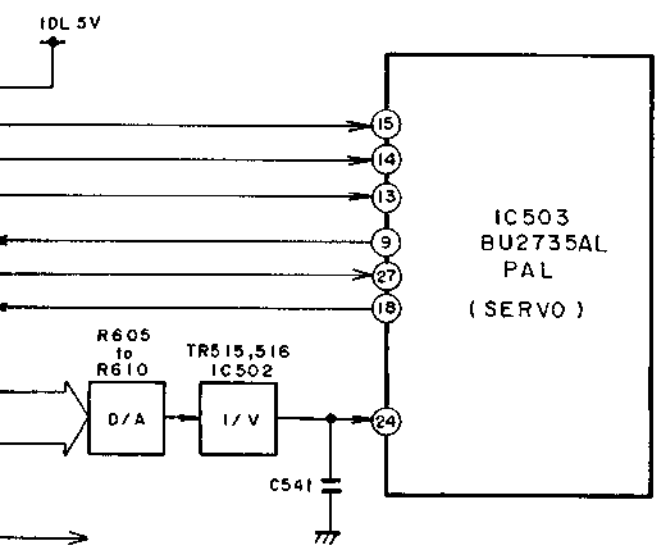
IC503  
BU2735AL  
PAL  
(SERVO)

MODE SELECTOR ENCODE DATE

P506 PIN NO.	POWER ON	ST	PLAY	F.F RWD	RWD SERCH	S
①	GND	L	L	L	L	L
②	ENC. 3	L	L	H	L	H
③	ENC. 2	H	H	L	L	L
④	ENC. 1	L	H	L	H	H
⑤	ENC. 4	L	L	H	L	H

BA6229

INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
M	M	L	L	DRIVE



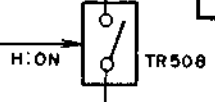
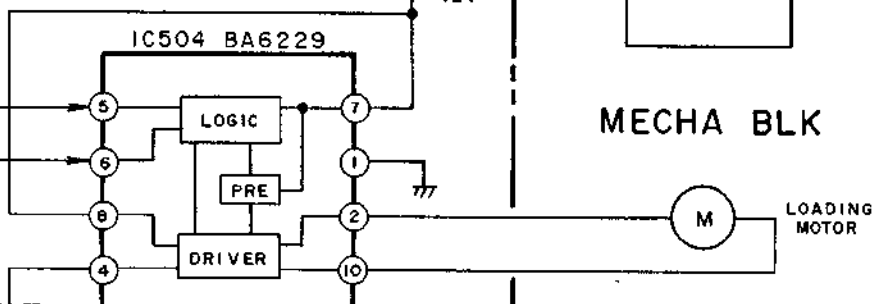
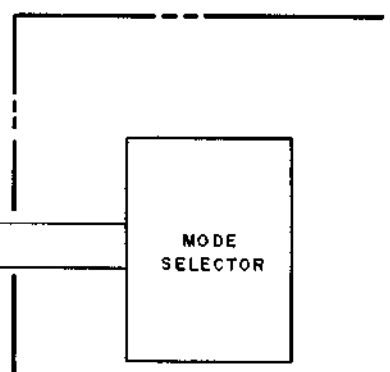
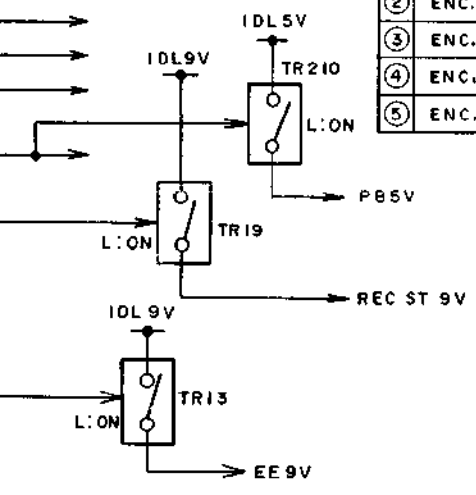
### RTV servis Horvat

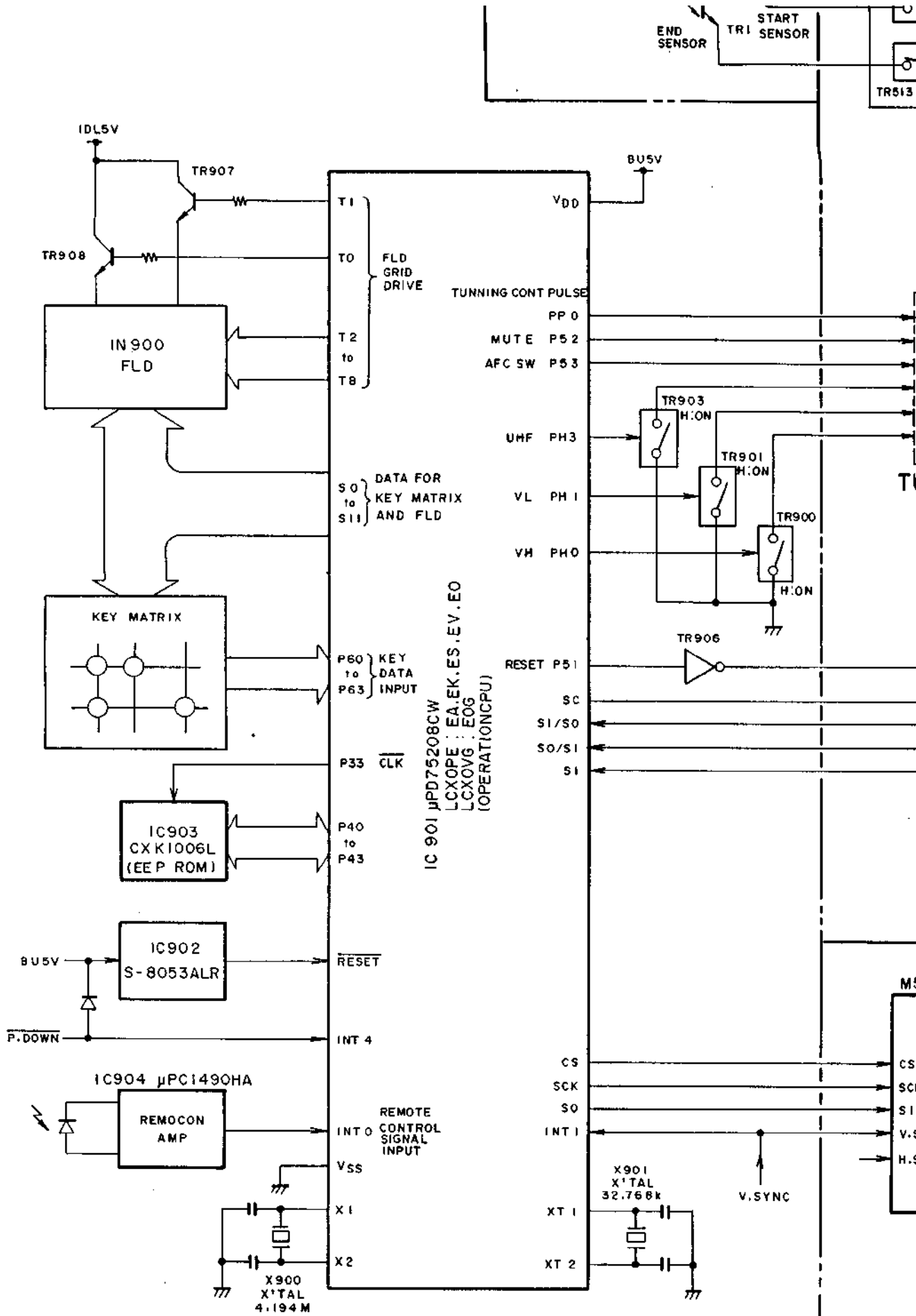
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 031-856-139  
 031-856-637  
 098-788-319

[rtv-servis-horvat@os.tel.hr](mailto:rtv-servis-horvat@os.tel.hr)  
 Croatia

MODE SELECTOR ENCODE DATE

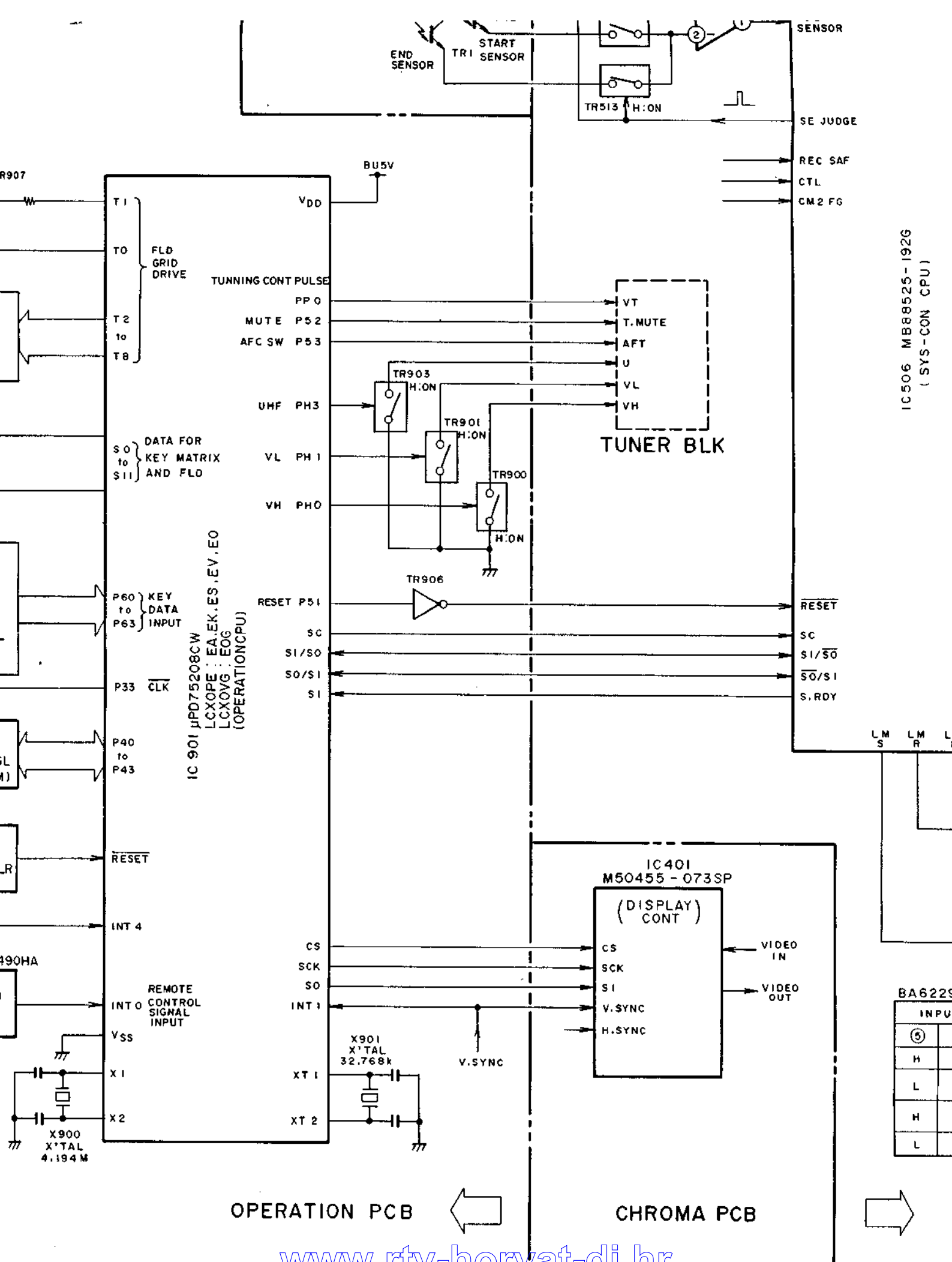
P506 PIN NO.	POWER ON	ST	PLAY	F.F RWD	RWD SERCH	STILL	TAPE LOADING	CASSETTE LOADING
① GND	L	L	L	L	L	L	L	L
② ENC. 3	L	L	H	L	H	L	H	H
③ ENC. 2	H	H	L	L	L	H	H	H
④ ENC. 1	L	H	L	H	H	L	H	L
⑤ ENC. 4	L	L	H	L	H	H	L	L

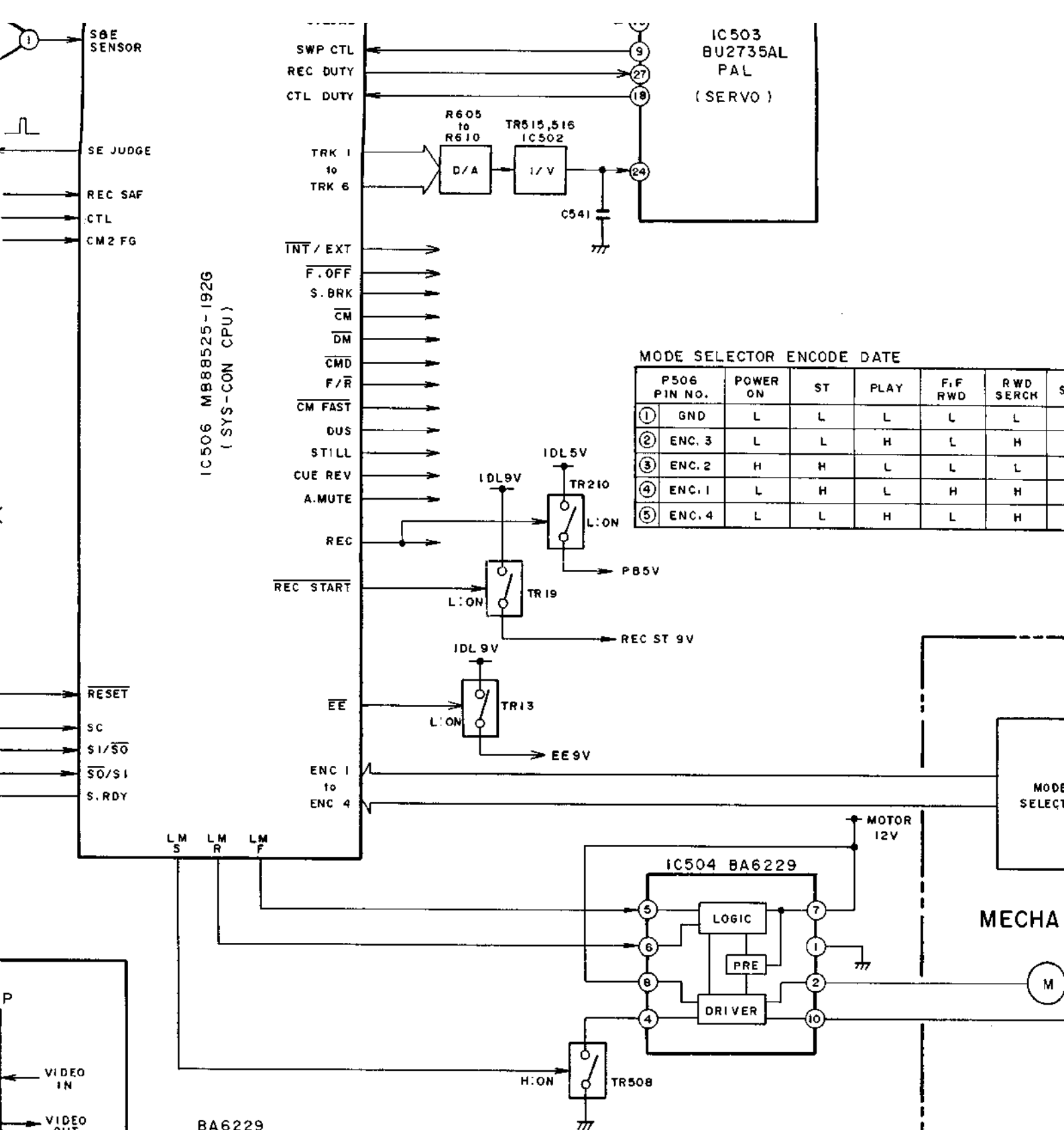




OPERATION PCB





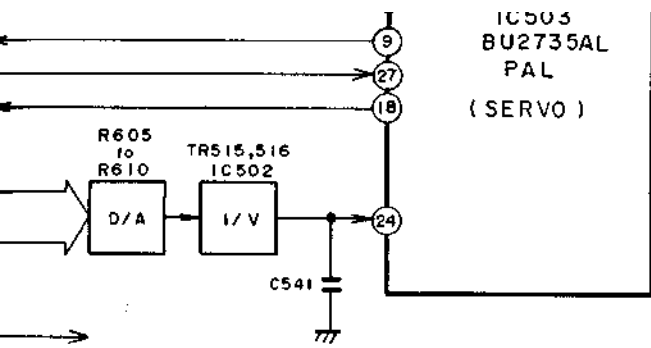


MAIN PCB

[www.rtv-horvat-dj.hr](http://www.rtv-horvat-dj.hr)

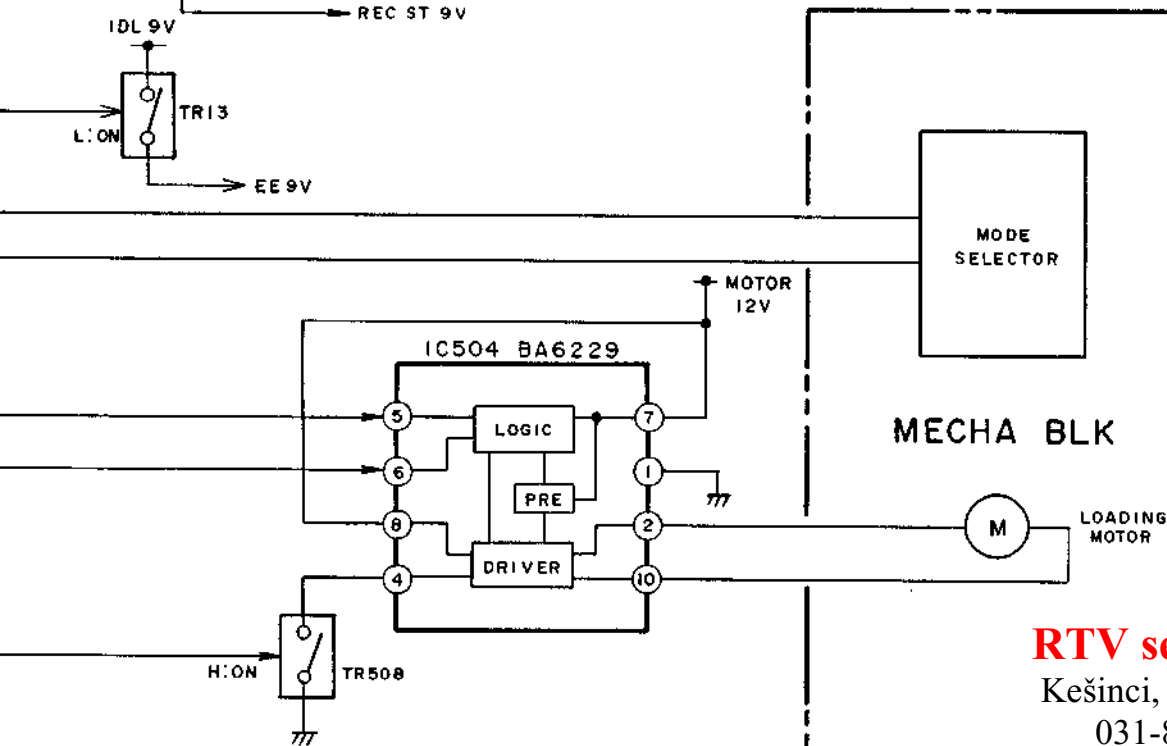
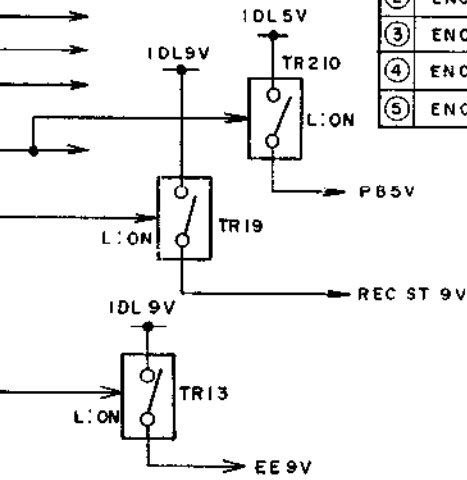
VS-22 EA/EK/  
EO(E/V)  
OPERATION &  
BLOCK DIAG





MODE SELECTOR ENCODE DATE

P506 PIN NO.	POWER ON	ST	PLAY	F.F RWD	RWD SERCH	STILL	TAPE LOADING	CASSETTE LOADING
①	GND	L	L	L	L	L	L	L
②	ENC. 3	L	L	H	L	H	H	H
③	ENC. 2	H	H	L	L	L	H	H
④	ENC. 1	L	H	L	H	H	L	L
⑤	ENC. 4	L	L	H	L	H	L	L



MODE
BRAKE
CASSETTE & TAPE LOADING
CASSETTE & TAPE UNLOADING
STOP

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Croatia

VS - 22 EA/EK/ES/EV  
E0(E/V)/EOG

OPERATION & SYS-CON  
BLOCK DIAGRAM

NO. 4 - 2 870602B

A

B

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1

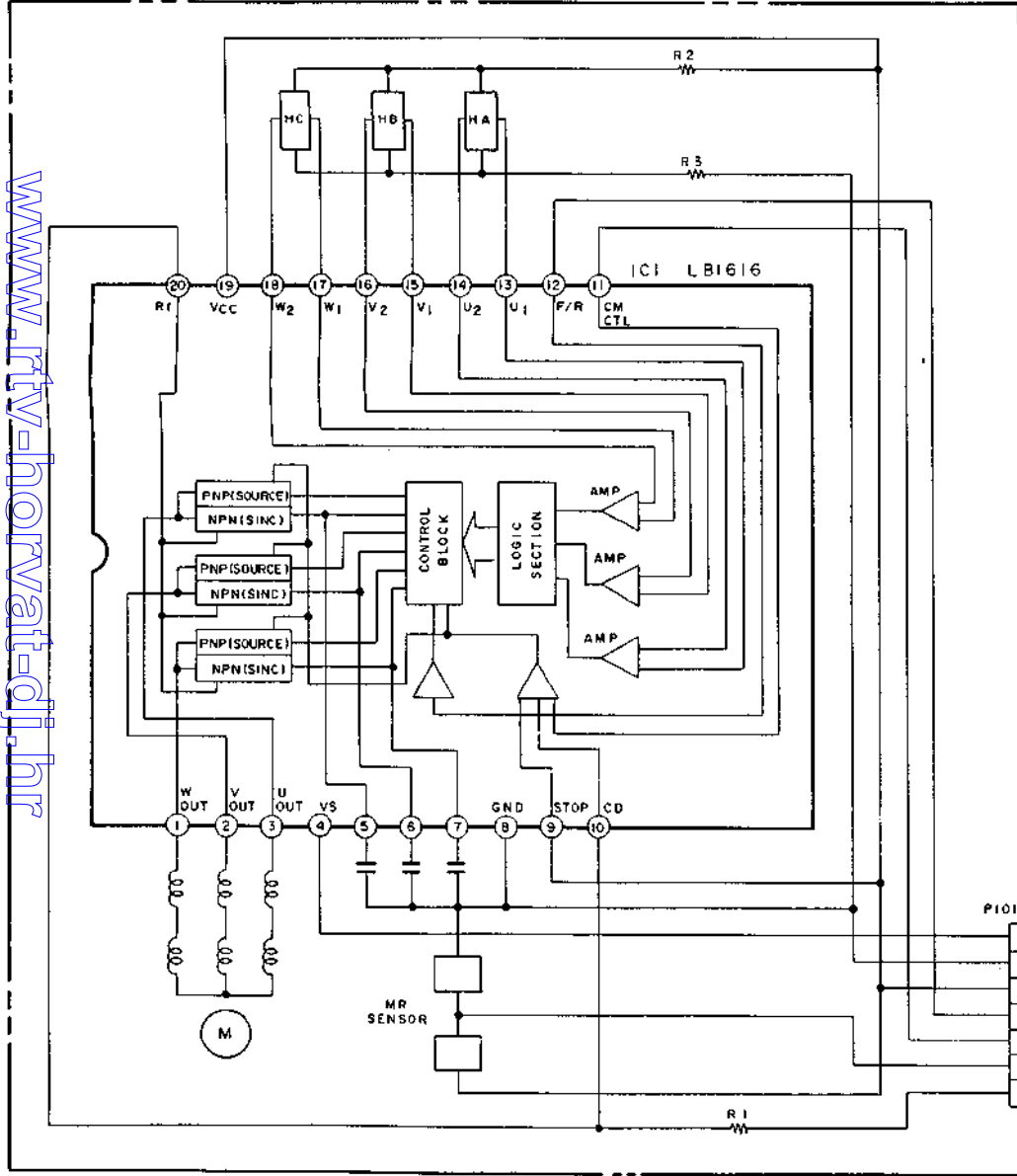
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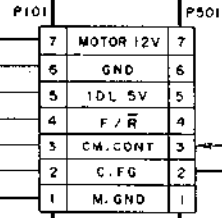
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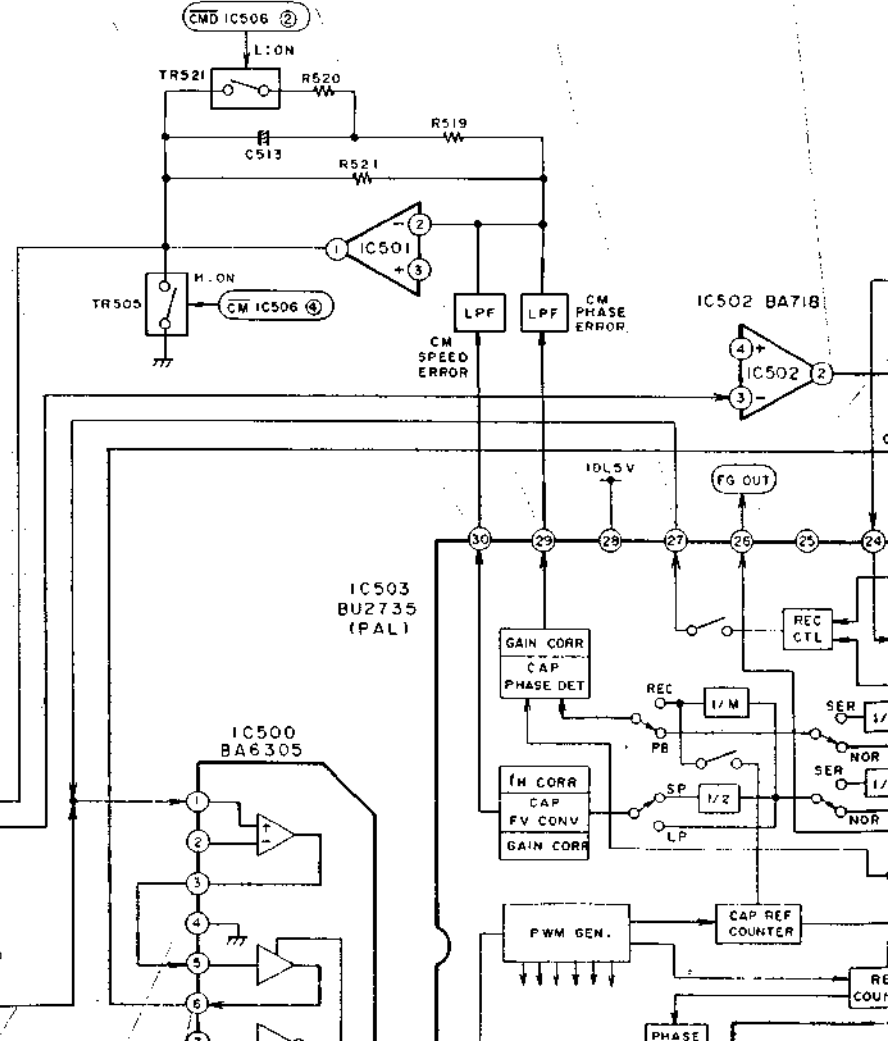
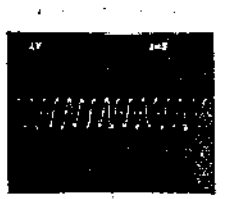
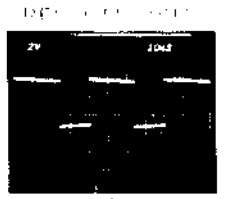
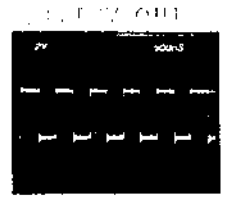
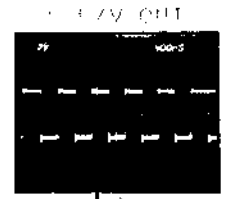
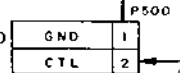
www.rtv-horvat-dj.hr



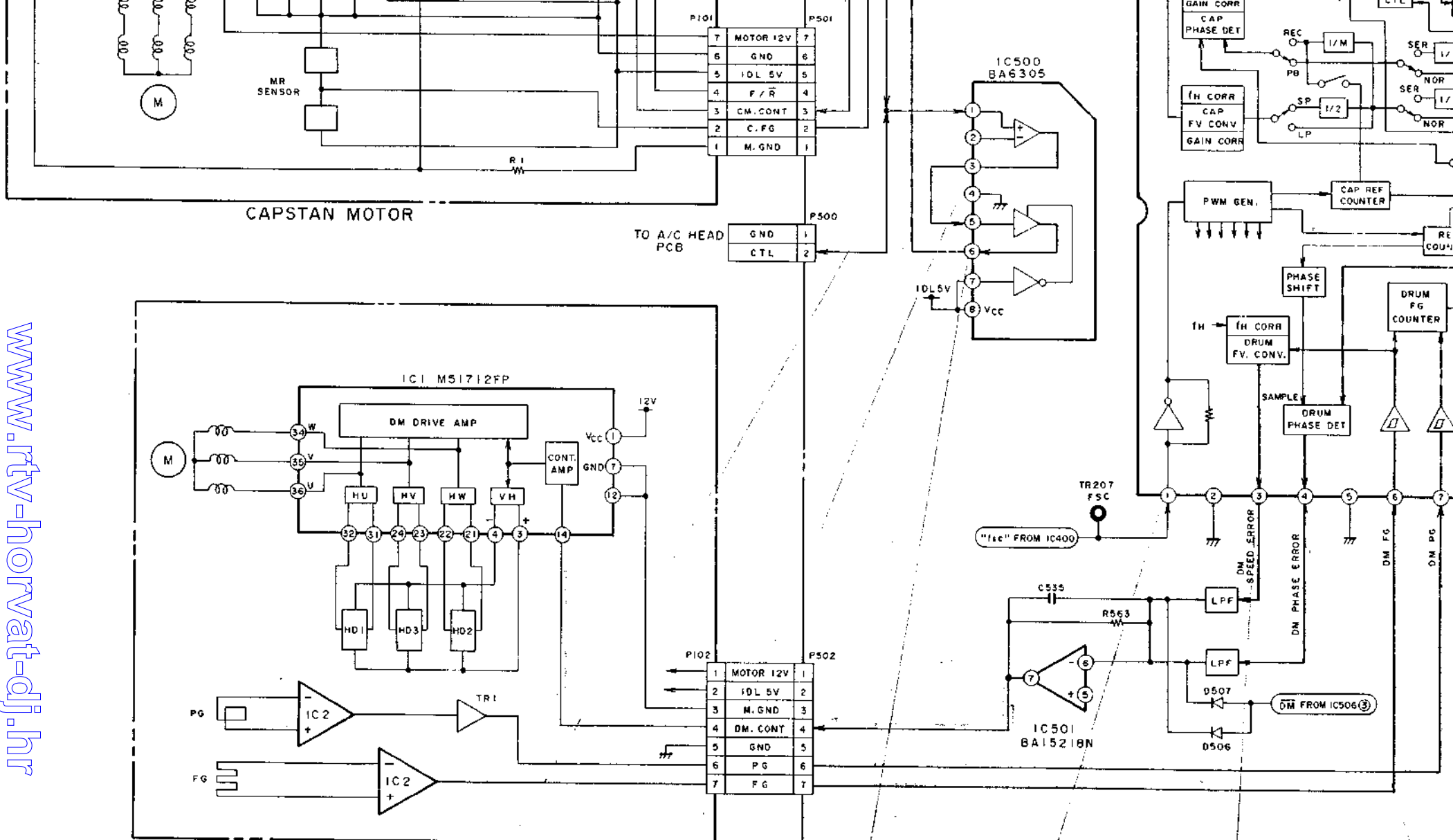
CAPSTAN MOTOR



TO A/C HEAD PCB



CAPSTAN MOTOR

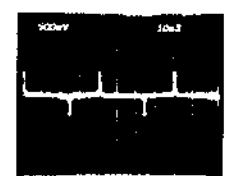


DRUM MOTOR

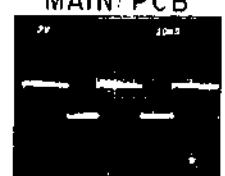
MAIN PCB



REC CTL



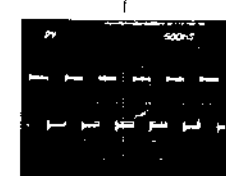
CTL AMP OUT



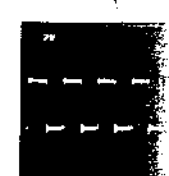
CTL



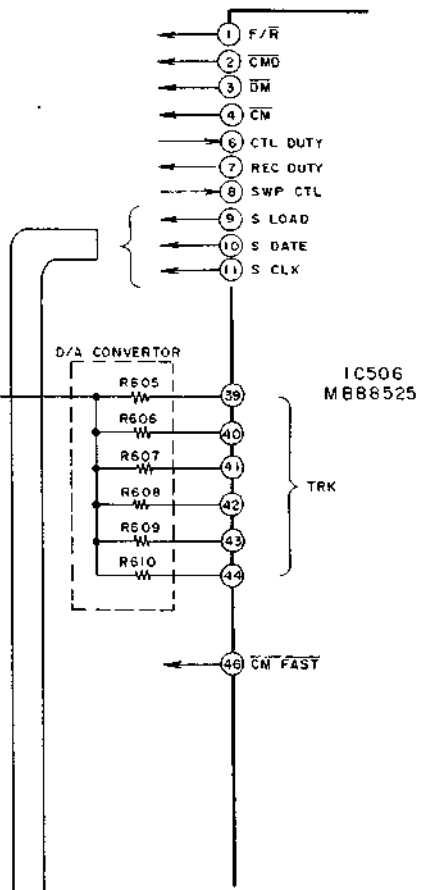
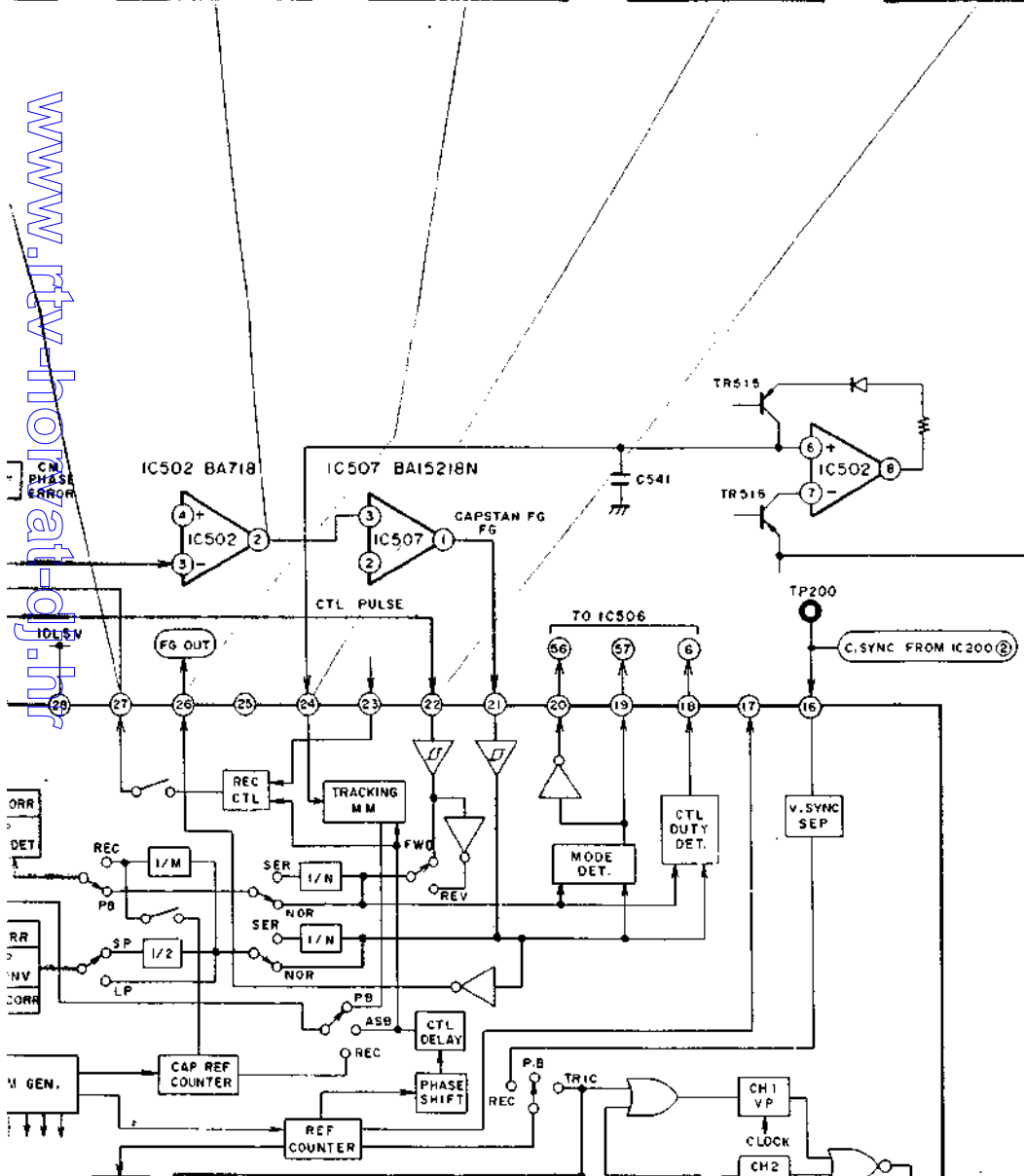
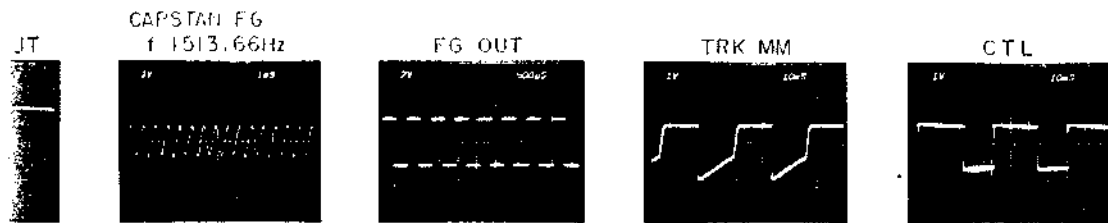
fsc



DM 1/2 GATE

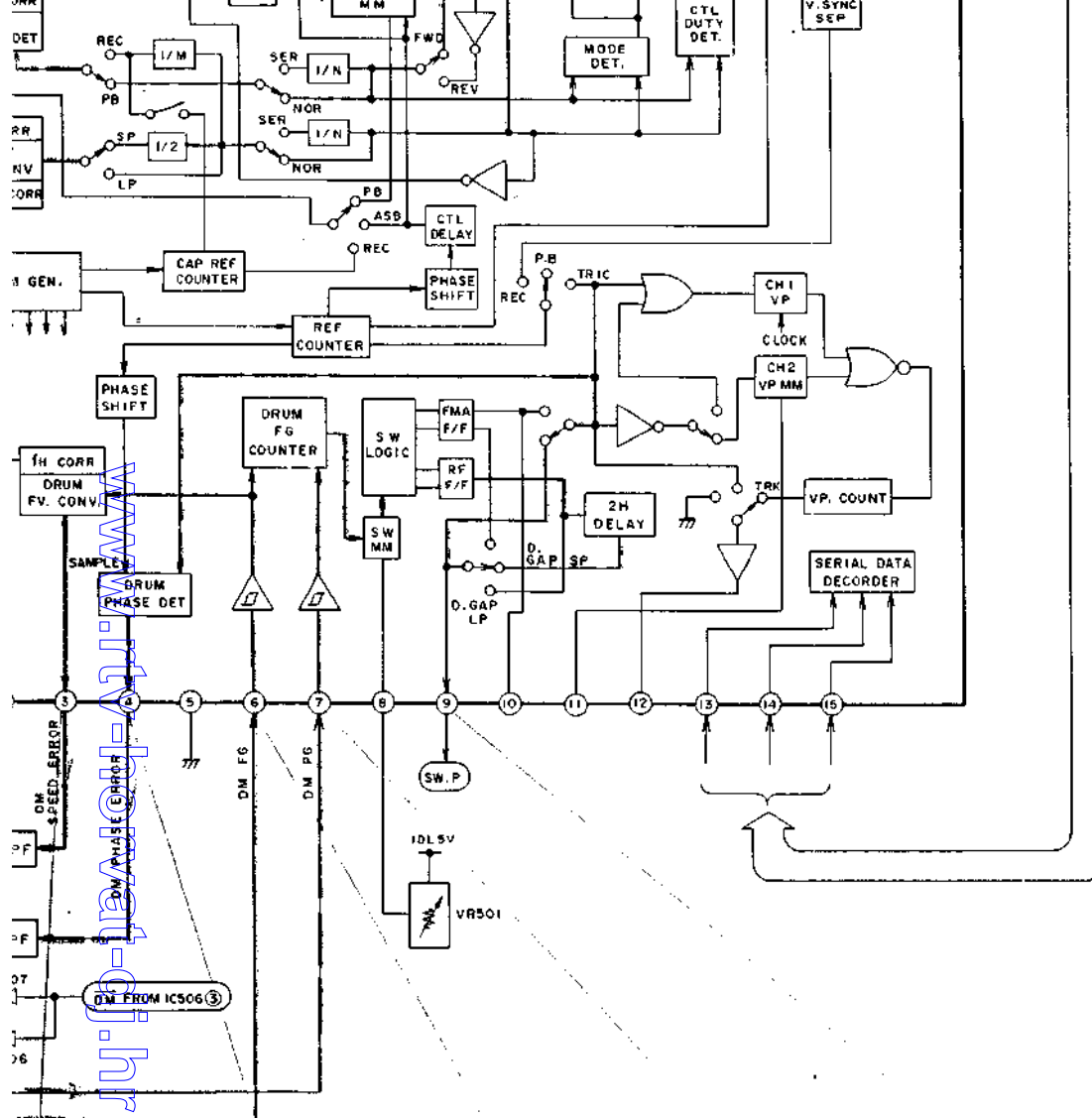


DM P/V G



www.fv-hof.at

1  
2  
3  
4  
5



- ..... CAPSTAN MOTOR SPEED
- ..... CAPSTAN MOTOR PHASE
- ..... DRUM MOTOR SPEED
- ..... DRUM MOTOR PHASE

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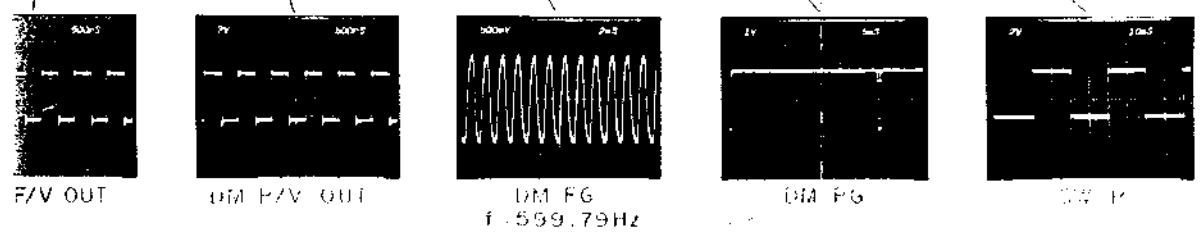
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Croatia

VS-22 EA/EK/ES/EV  
EO(E/V)/EOG

SERVO  
BLOCK DIAGRAM

NO.4-3 870703A



1

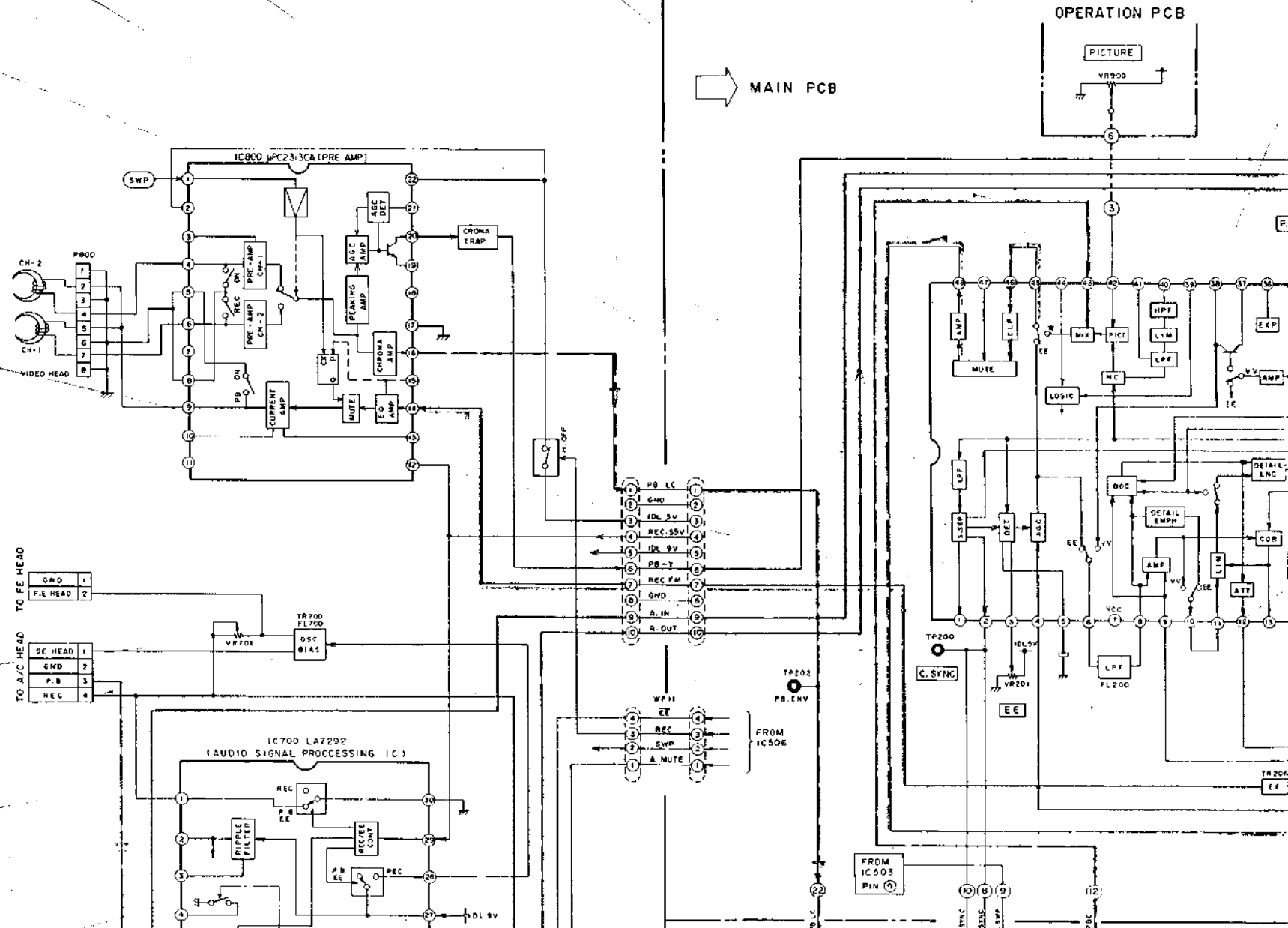
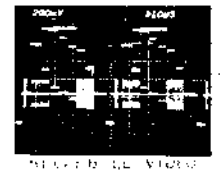
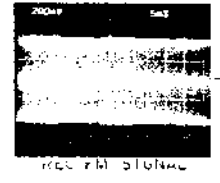
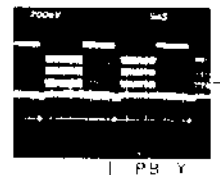
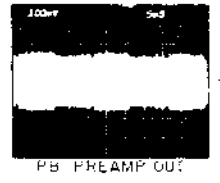
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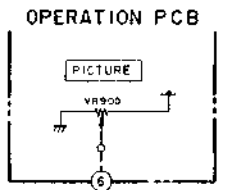
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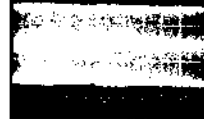
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MAIN PCB



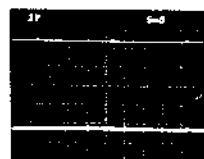
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REC FM SIGNAL



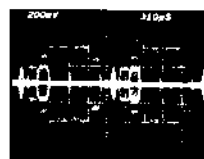
REC P.B. SIGNAL



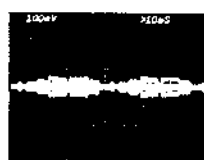
C. SYNC  
EE/REC/PB



H. SYNC  
(C. SYNC)



REC CHROMA SIGNAL



REC AUDIO SIGNAL

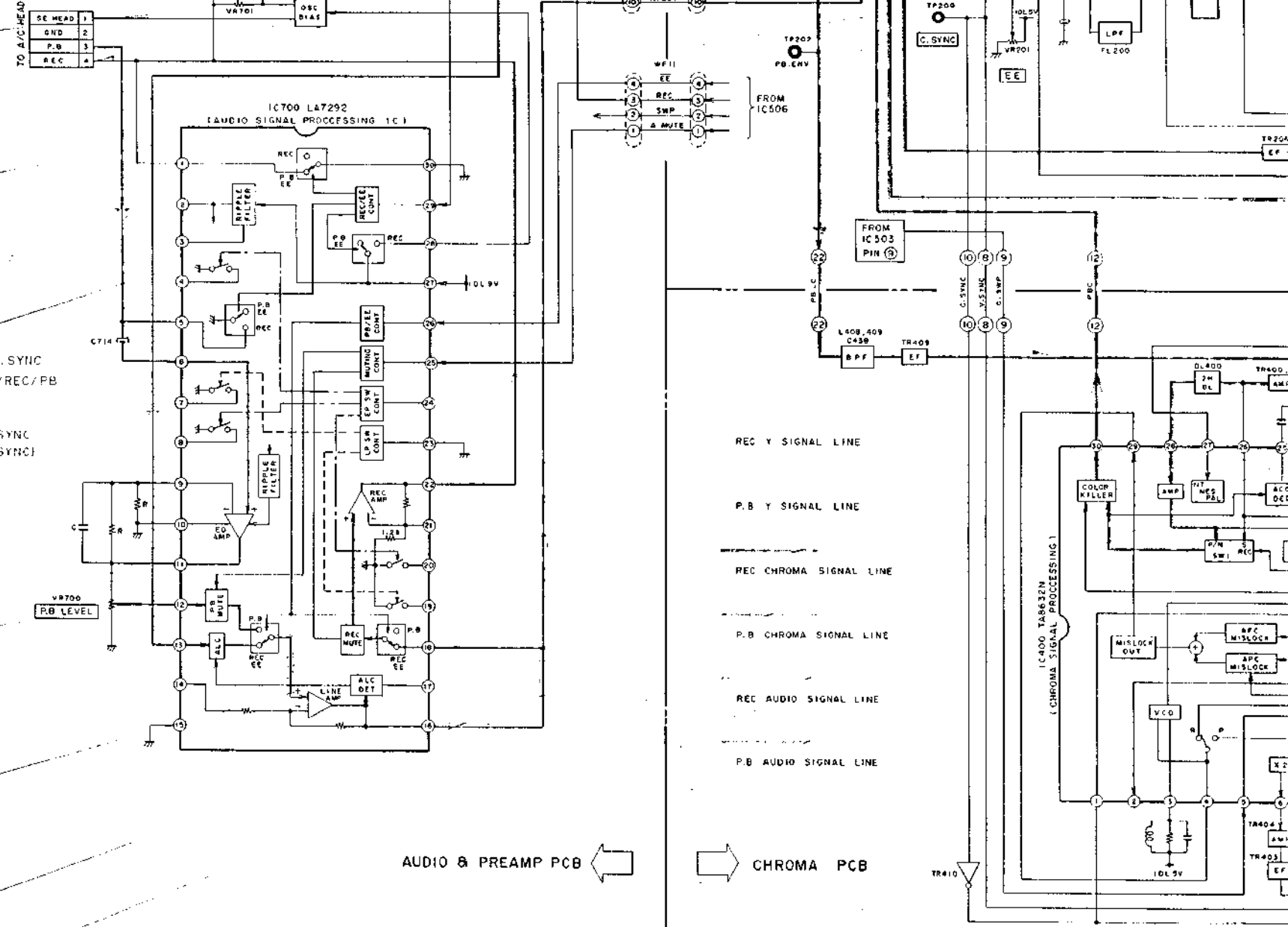
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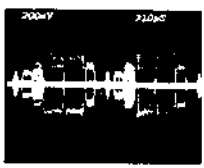
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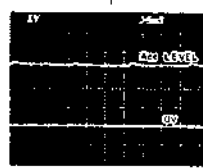
REC Y SIGNAL LINE  
 P.B Y SIGNAL LINE  
 REC CHROMA SIGNAL LINE  
 P.B CHROMA SIGNAL LINE  
 REC AUDIO SIGNAL LINE  
 P.B AUDIO SIGNAL LINE

← AUDIO & PREAMP PCB

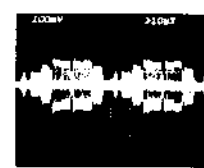
→ CHROMA PCB



PB SW-F IN



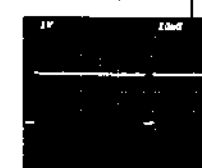
PB ACC DET



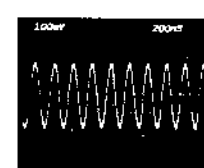
PB LOW FREQ



REC CHROMA SIGNAL



REC AUDIO SIGNAL



VCO



REC CHROMA SIGNAL



REC AUDIO SIGNAL

A

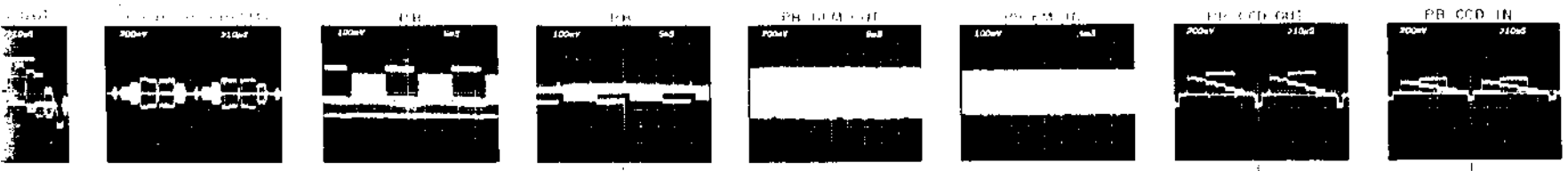
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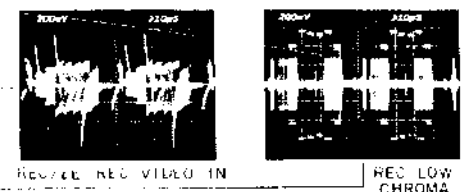
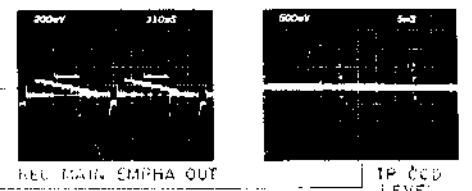
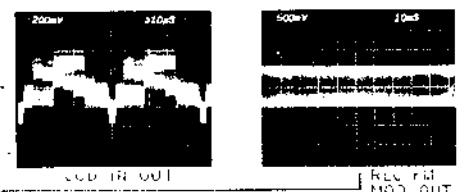
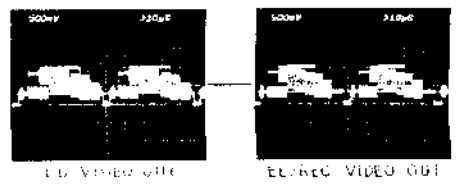
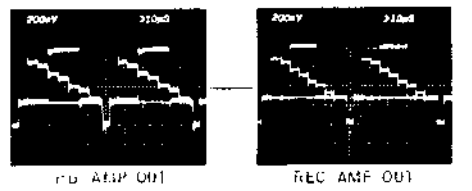
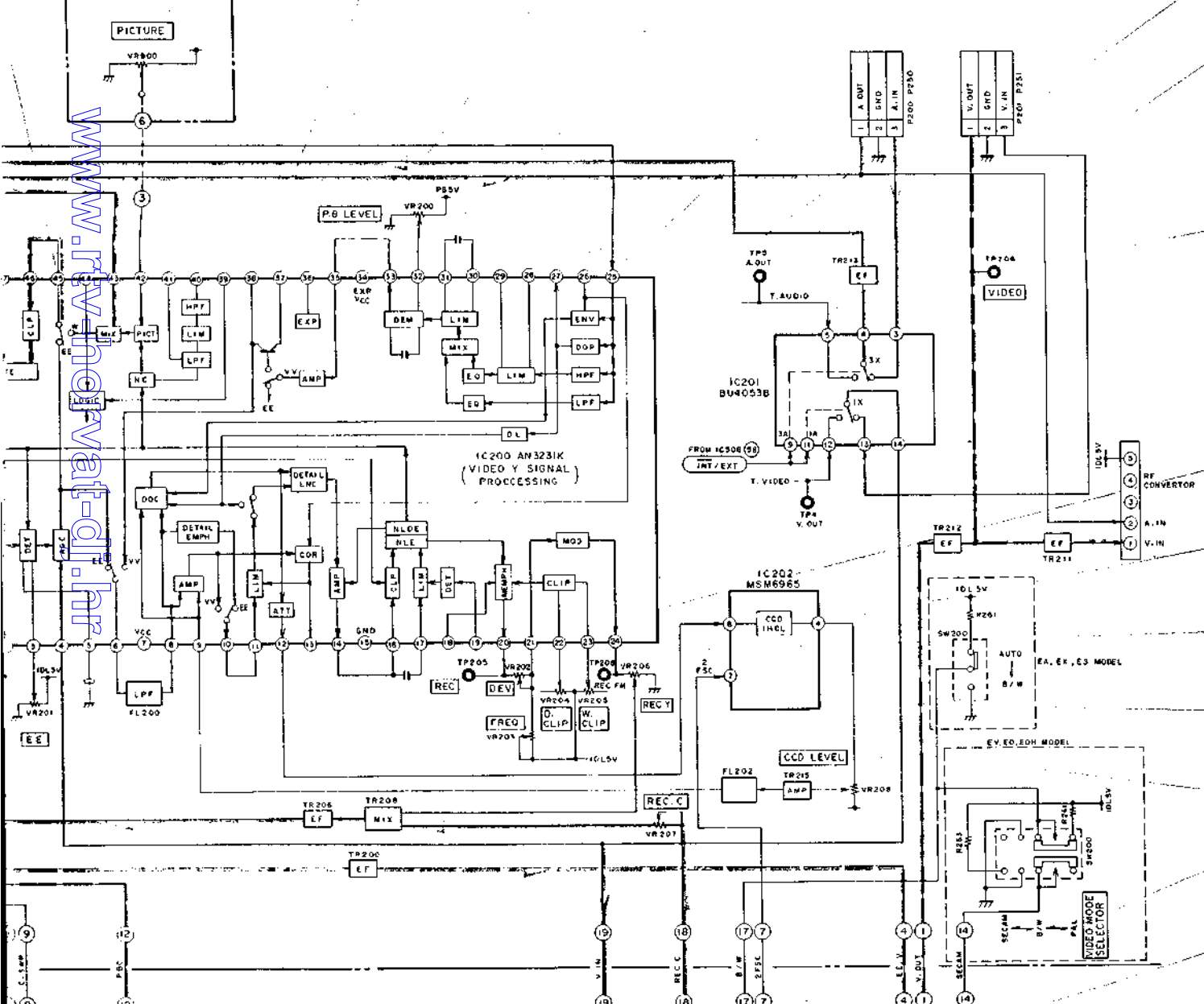
D

E

F



OPERATION PCB

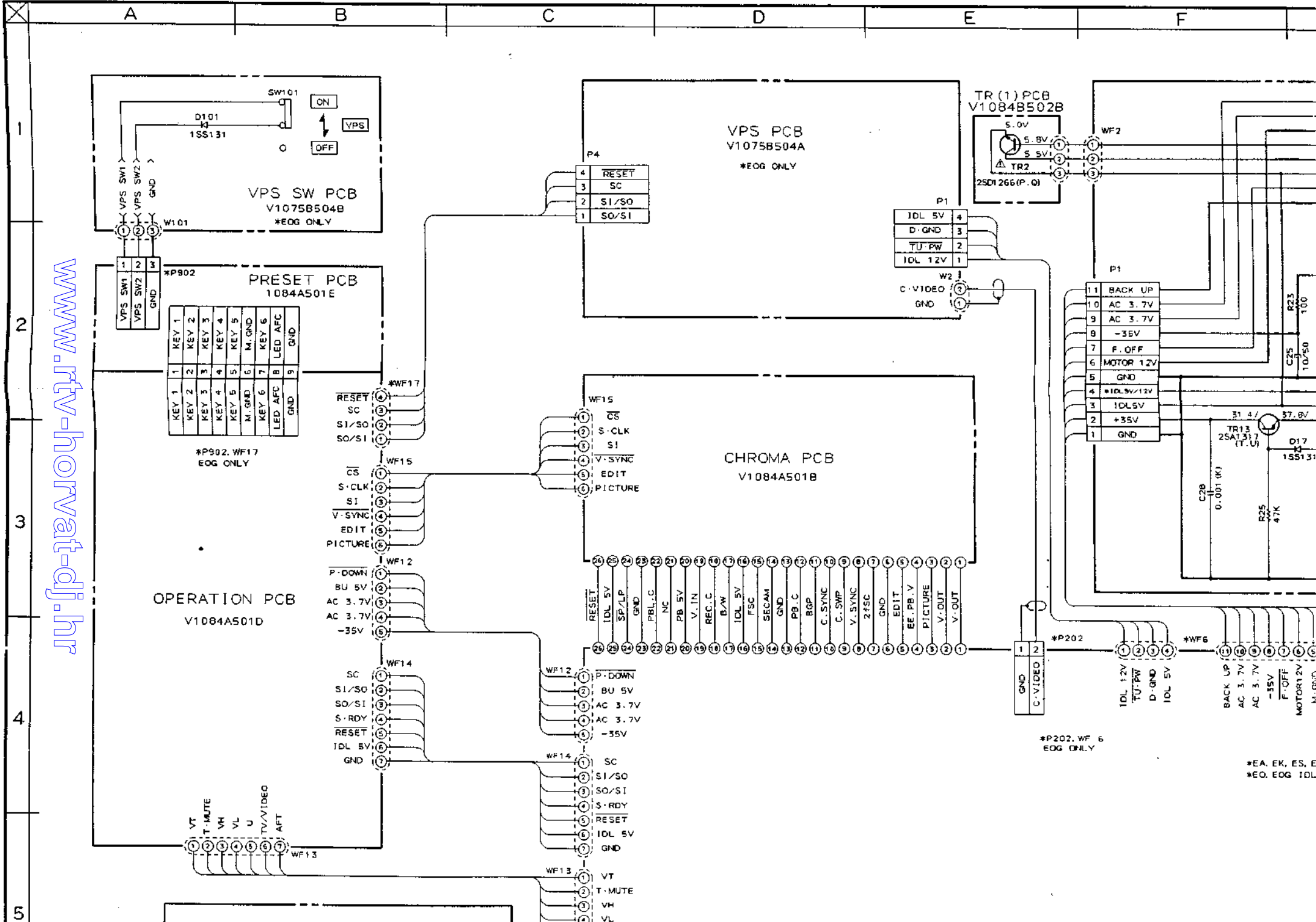


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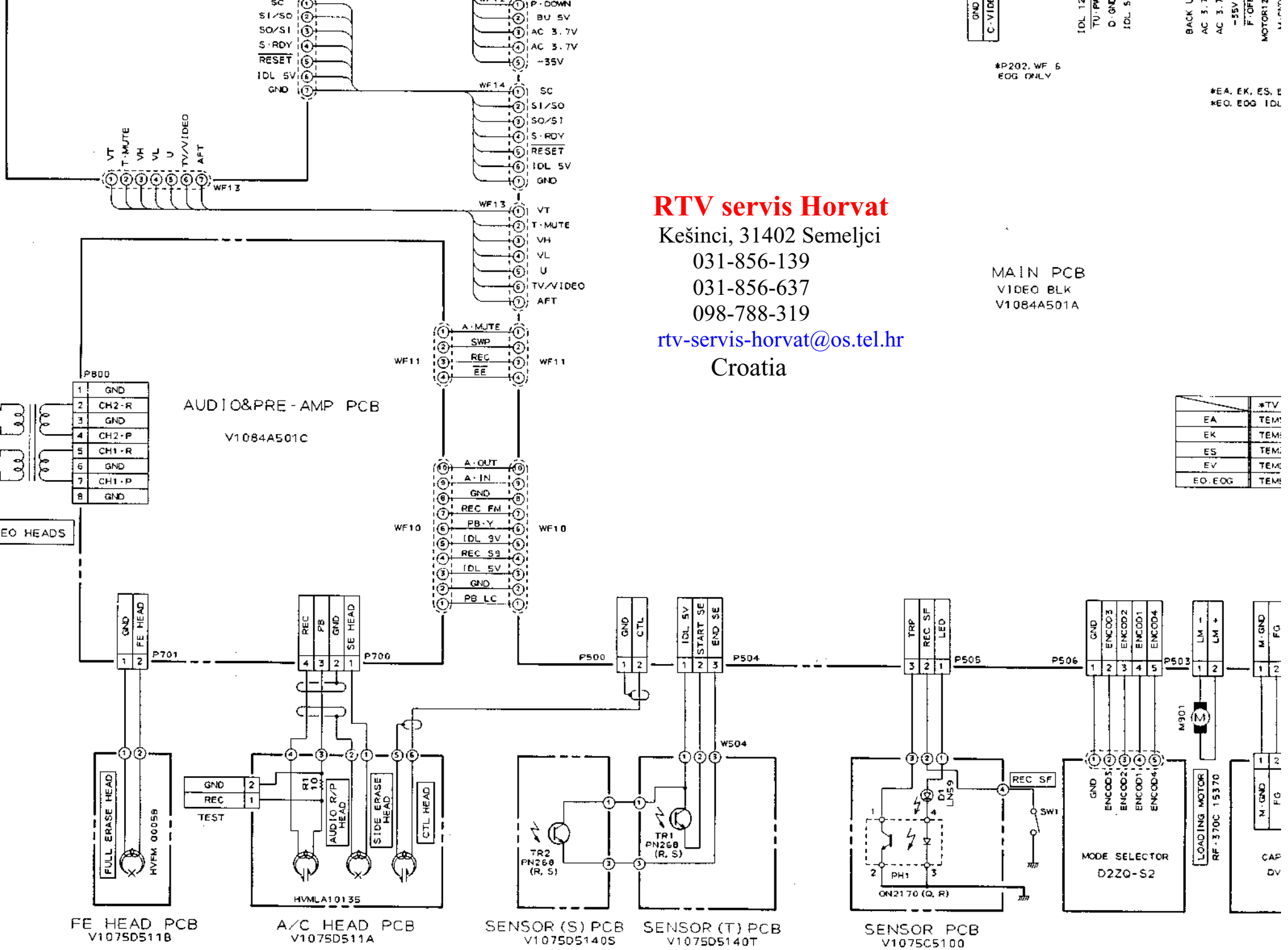
\*P202, WF 6  
EOG ONLY

\*EA, EK, ES, E  
\*EO, EOG TDL

MAIN PCB

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4  
5  
6  
7  
8



## RTV servis Horvat

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031-856-139

031-856-637

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Croatia

MAIN PCB  
VIDEO BLK  
V1084A501A

	*TV
EA	TEMP
EK	TEMP
ES	TEMP
EV	TEMP
EO.EOG	TEMP

\*P202, WF 6  
EOG ONLY

\*EA, EK, ES, E  
\*EO, EOG, IDL

GND  
C-VIDEO

IDL 12V  
TU-PW  
D-GND  
IDL 5V

BACK L  
AC 3.7V  
AC 3.7V  
-55V  
F-LOFF  
MOTOR12

AUDIO & PRE-AMP PCB

V1084A501C

FE HEAD PCB  
V1075D511B

A/C HEAD PCB  
V1075D511A

SENSOR (S) PCB  
V1075D5140S

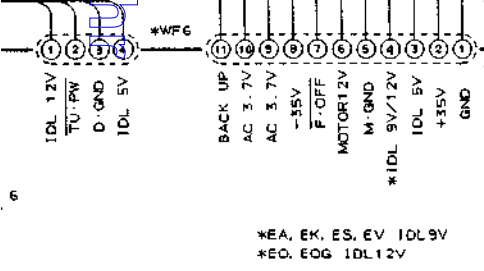
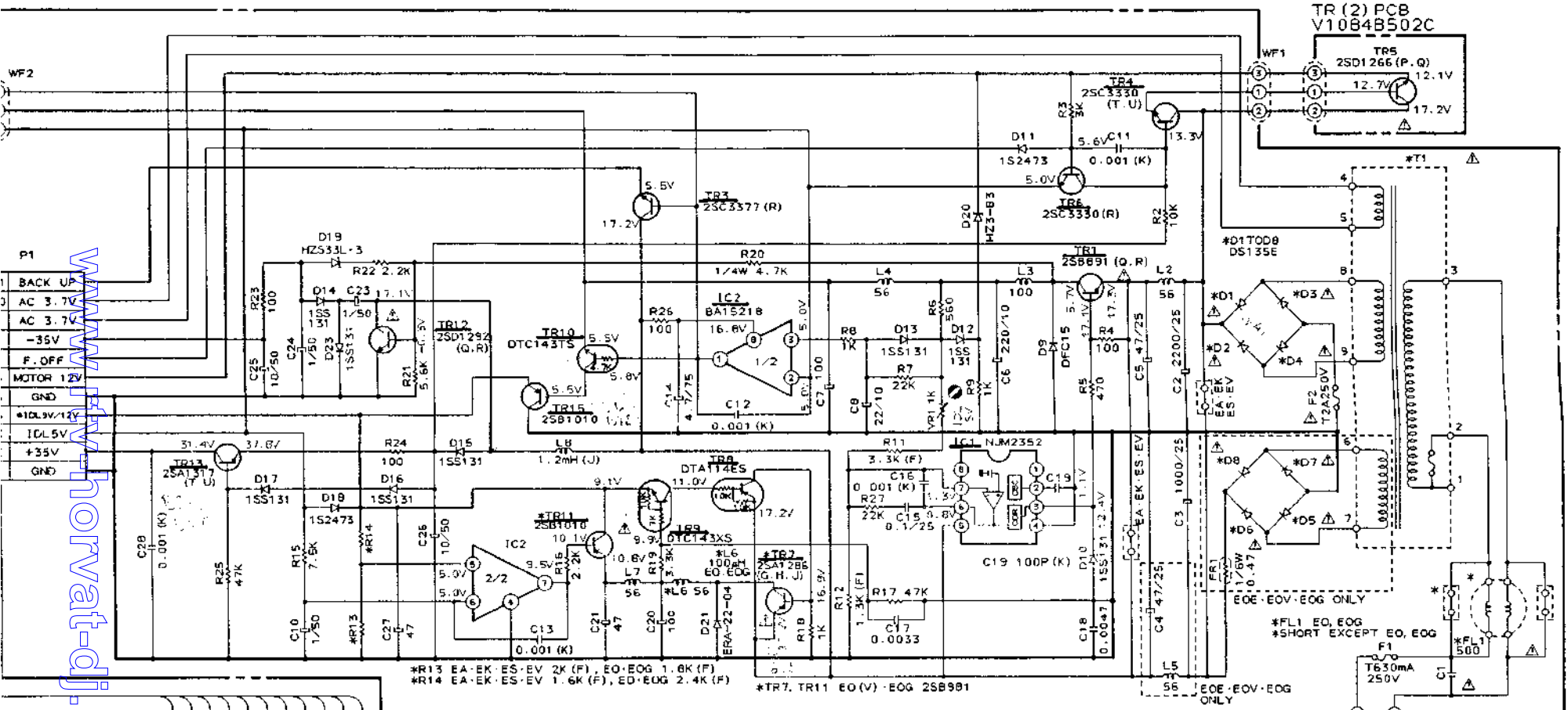
SENSOR (T) PCB  
V1075D5140T

SENSOR PCB  
V1075C5100

MODE SELECTOR  
D2ZQ-S2

LOADING MOTOR  
RF-370C 15370

CAP  
DV

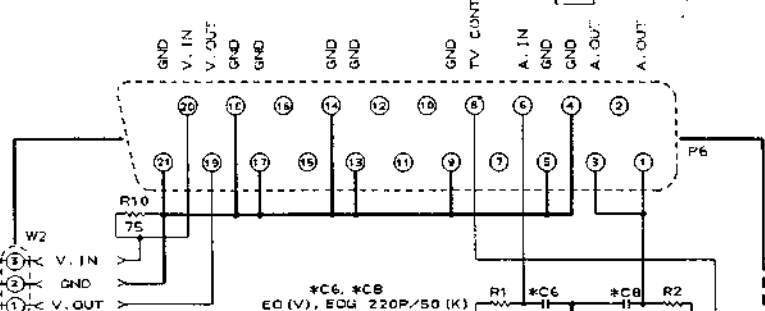
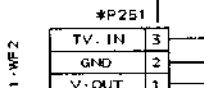
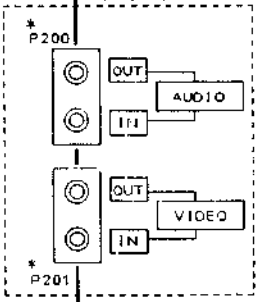


POWER SUPPLY PCB V1084B502A

MODEL	*T1
EA-EK	V1084EK
ES	V1084ES
EV	V1084EV
EO-EOG	V1084EOG

- EA AC240V 50Hz
- ES AC200V TO 220V 50Hz
- EV AC230V 50Hz
- EO EOG AC220V 50Hz

\*EA, EK, ES, EV 10L9V  
\*EO, EOG 10L12V

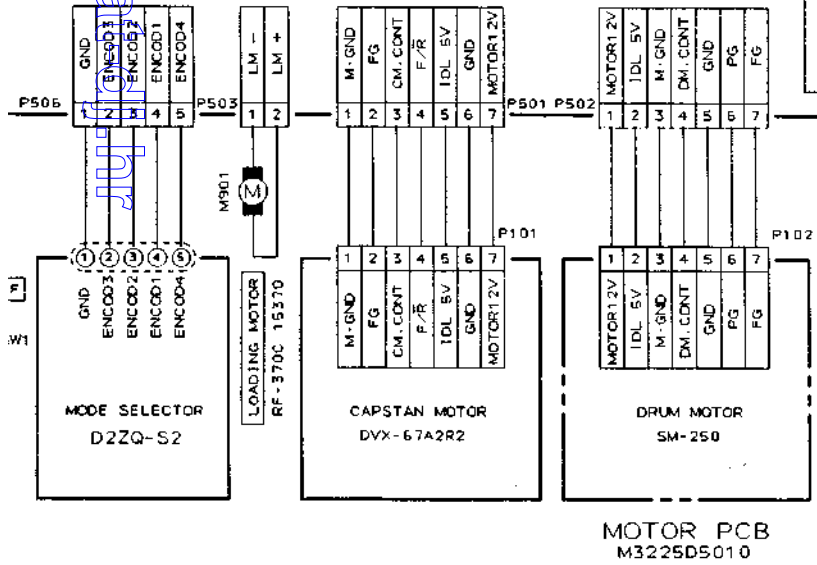


PCB  
BLK  
501A

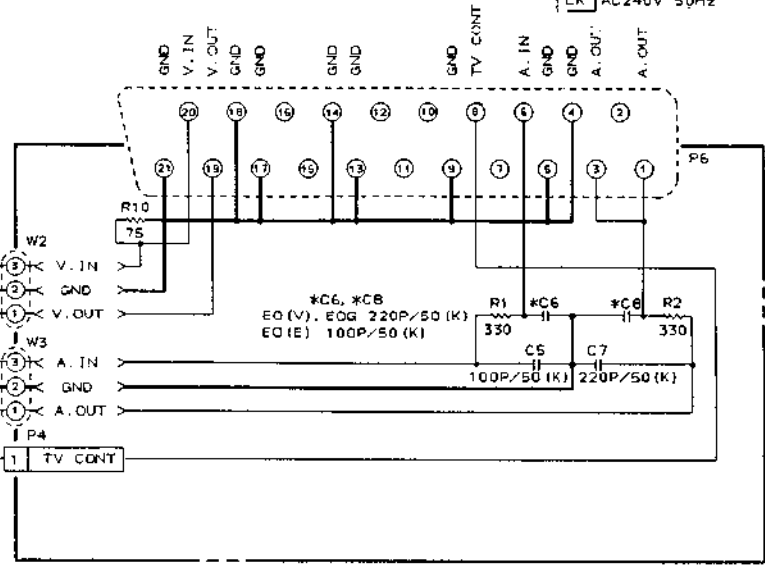
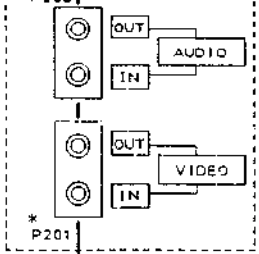
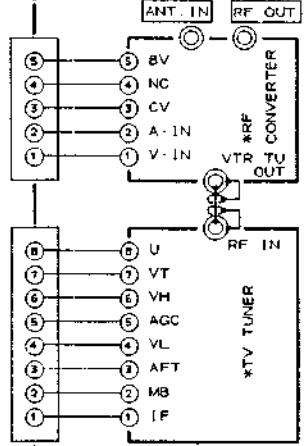
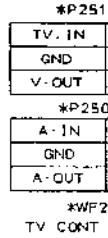
www.rtv-horvat.hr

\*EA, EK, ES, EV 10L9V  
\*EO, EOG 10L12V

	*TV TUNER	*RF CONVERTER
EA	TEM51-005A	MDLK2S100A
EK	TEMB1-013A	MDLK3B063A
ES	TEMZ1-011A	MDLK3B063A
EV	TEMO1-022A	MDLK2D103A
EO EOG	TEME1-006A	MDLK-3D063A



\*P250-P251-WF2  
EO EOG



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

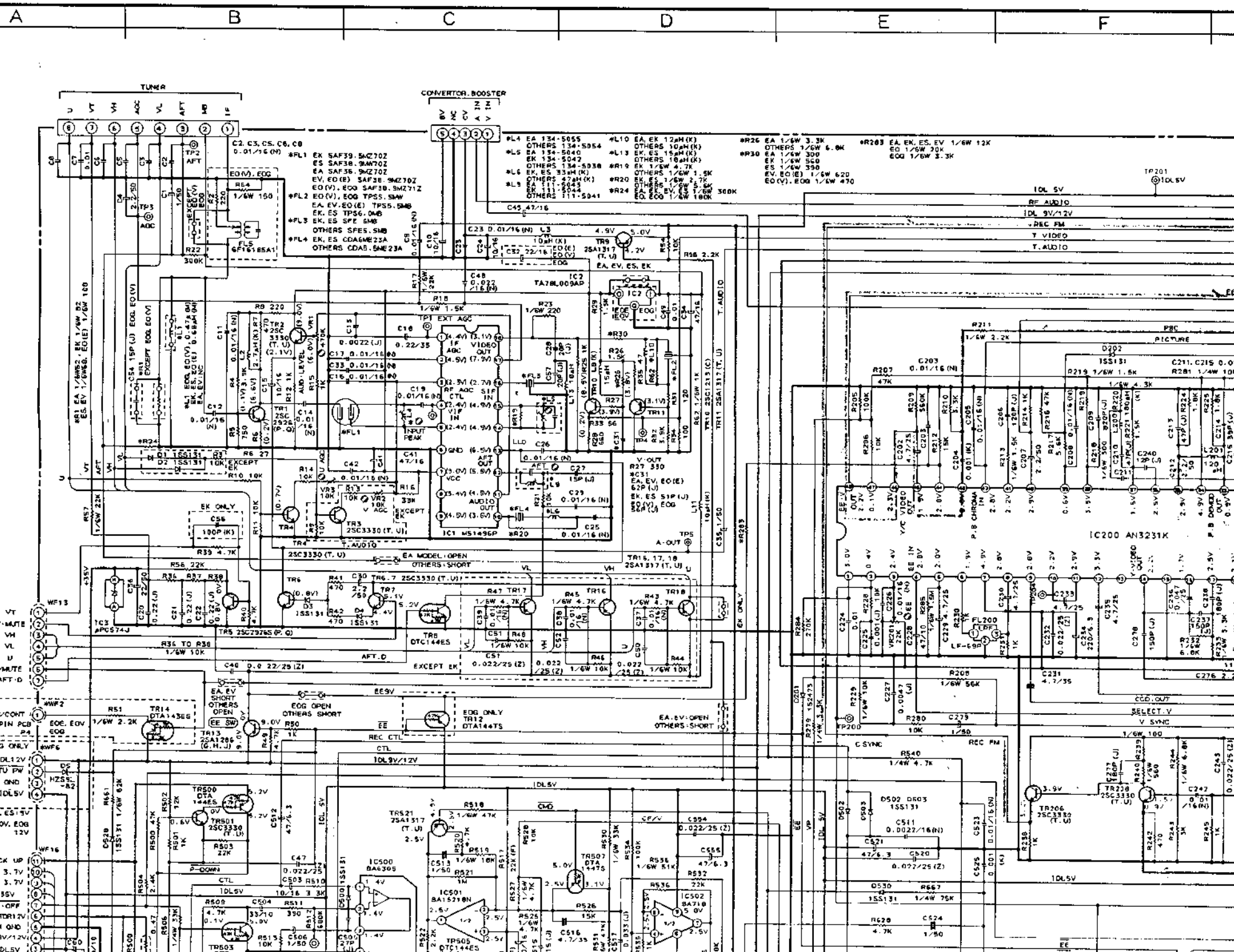
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

INDICATED VOLTAGE MEASURED IN P.B MODE

NOTE  
UNLESS OTHERWISE SPECIFIED:  
ALL RESISTORS IN OHMS 1/6W(J)  
ALL CAPACITORS IN nF 16WV (M)  
ALL INDUCTORS IN μH

VS-22EA·EK·ES·EV  
EO (E/V) ·EOG  
CONNECTION DIAGRAM  
NO.6-1 870803A





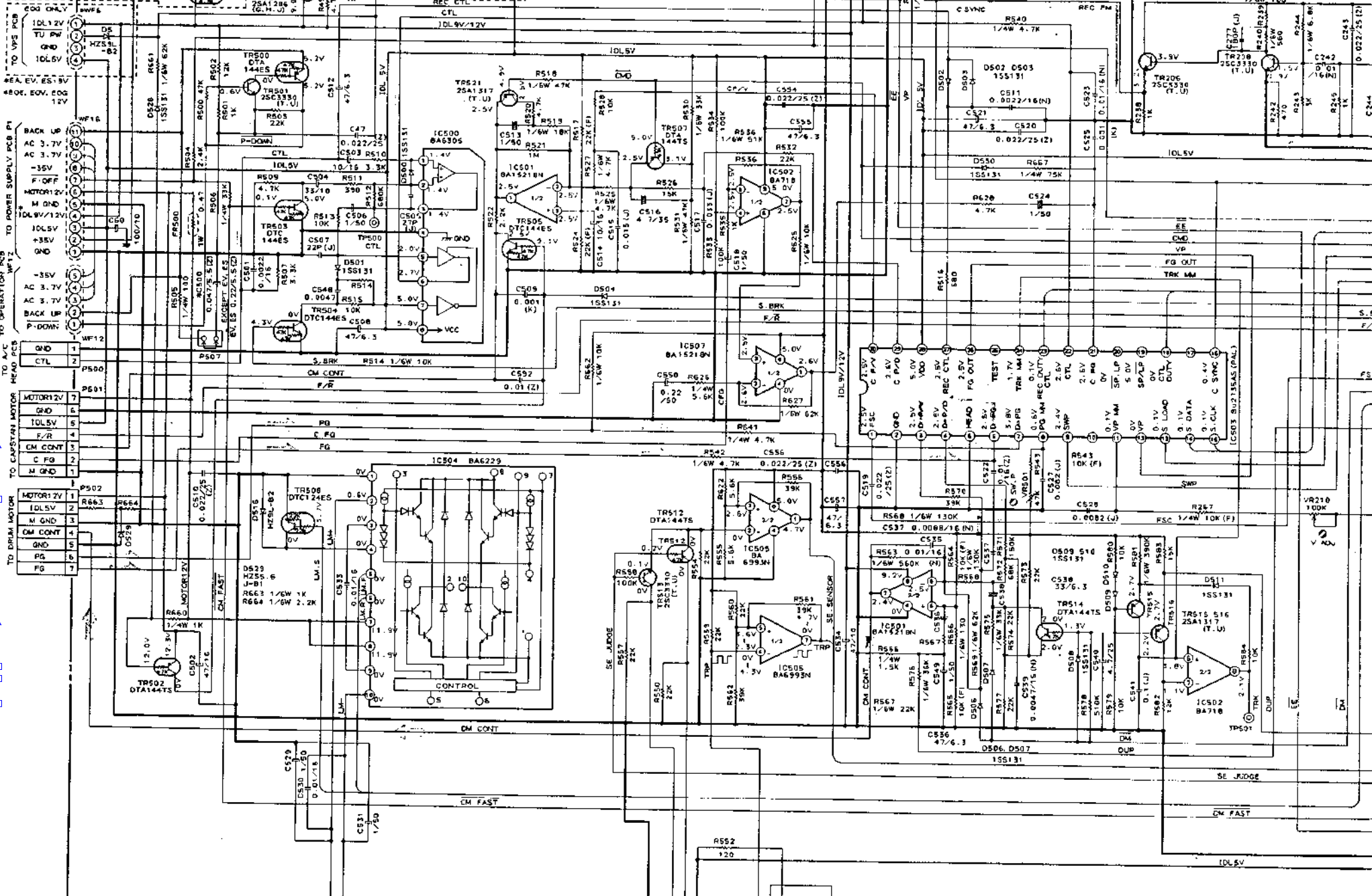
2

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5  
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7  
8



MAIN PCB  
V1084A501A

TO MOTOR

TO SENSOR (T) PCB

TO SENSOR PCB

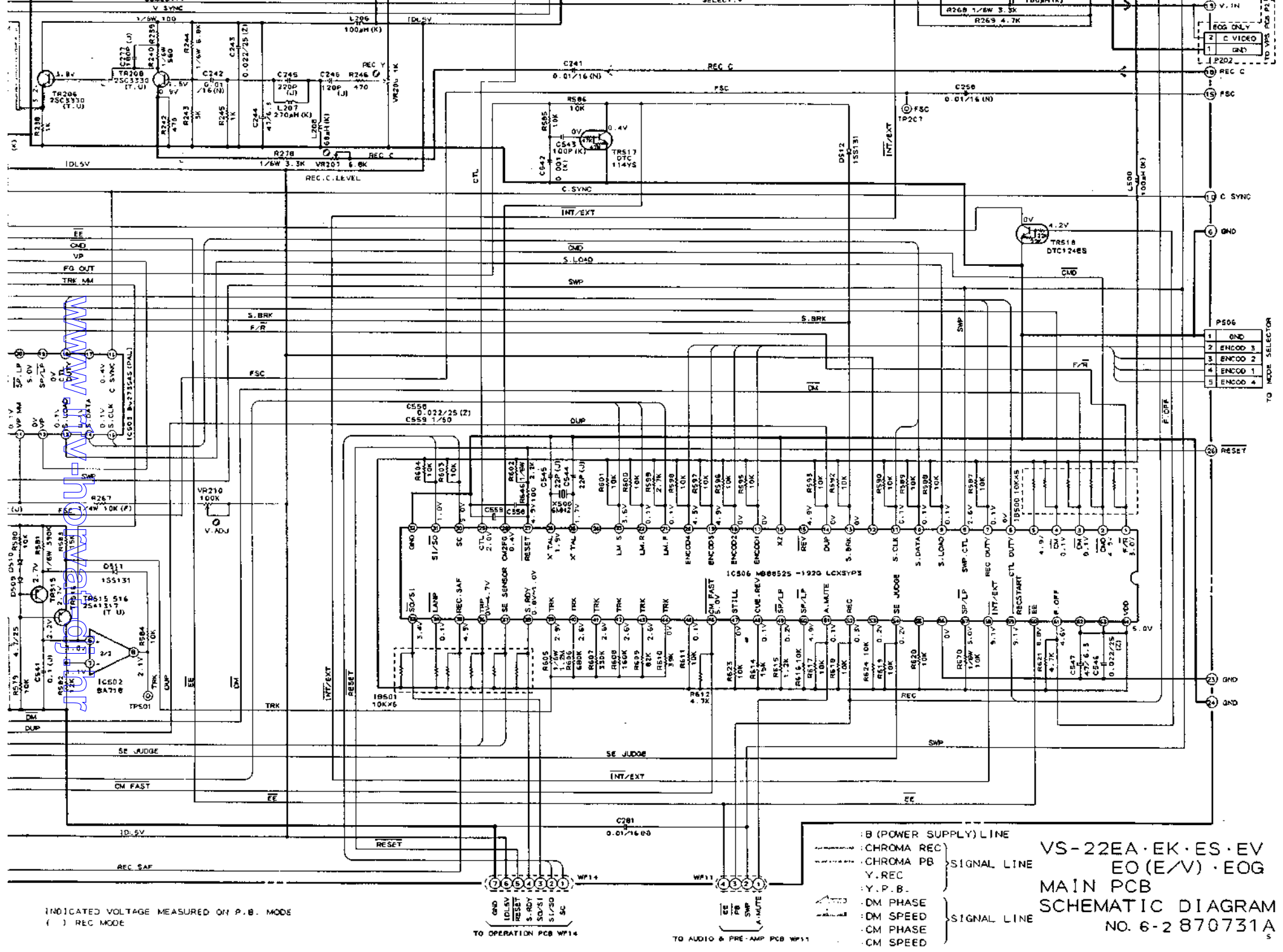
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/8W (J)  
ALL CAPACITORS IN  $\mu$ F 50WV (M)

INDICATED VOLTAGE MEASURED ON P.B.  
( ) : REC MODE

A B C D E F







INDICATED VOLTAGE MEASURED ON P.B. MODE  
( ) REC MODE

TO OPERATION PCB WF14

TO AUDIO & PRE-AMP PCB WF11

- (POWER SUPPLY) LINE
- CHROMA REC
- CHROMA PB
- Y.REC
- Y.P.B.
- DM PHASE
- DM SPEED
- CM PHASE
- CM SPEED

VS-22EA·EK·ES·EV  
EO(E/V)·EOG  
MAIN PCB  
SCHEMATIC DIAGRAM  
NO. 6-2 870731A

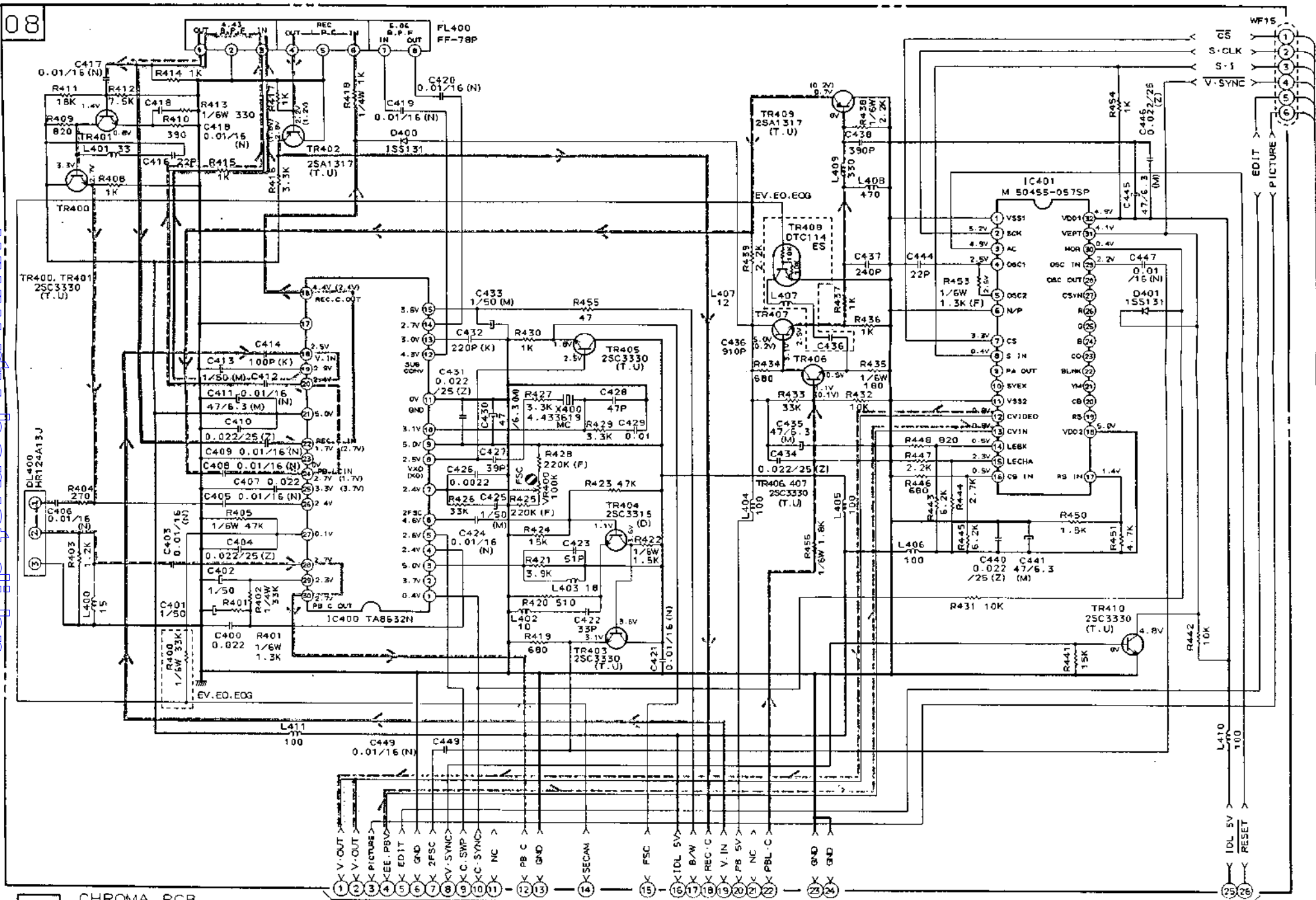
www.tvtv.com

4  
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F G H I J K

08

www.rtv-horvat-dj.hr



10 CHROMA PCB V1084A501B

TO MAIN PCB

TO MAIN PCB WF14

TO VPS PCB P4

WF14

WF17

WF15

2

3

4

5

CS  
S-CLK  
S-I  
V-SYNC

EDIT  
PICTURE

IDL 5V  
RESET

WF15

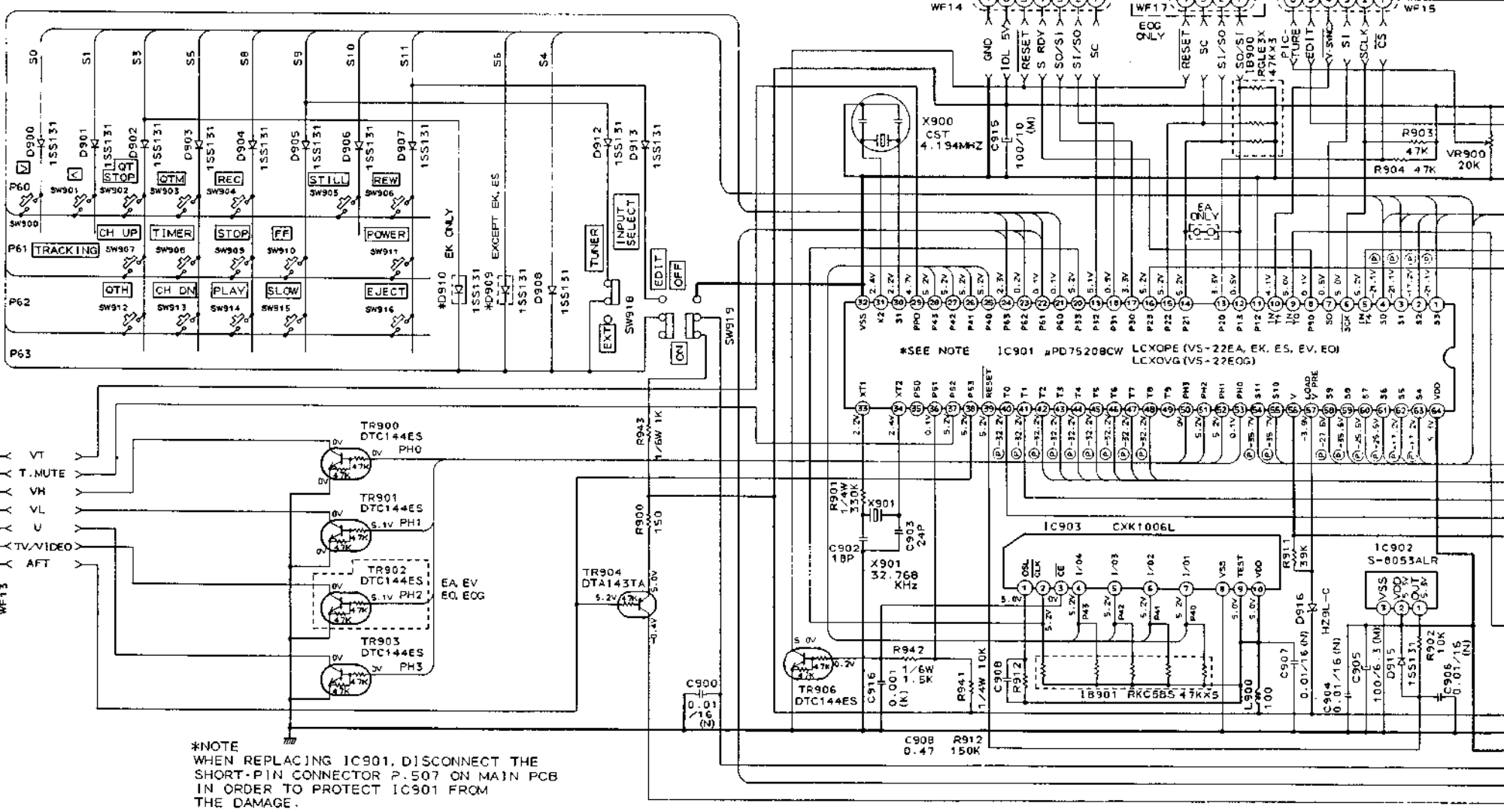
www.rtv-horvat-ot.hr

CHROMA PCB  
V1084A501B

TO MAIN PCB

TO MAIN PCB WF14

TO VPS PCB P4

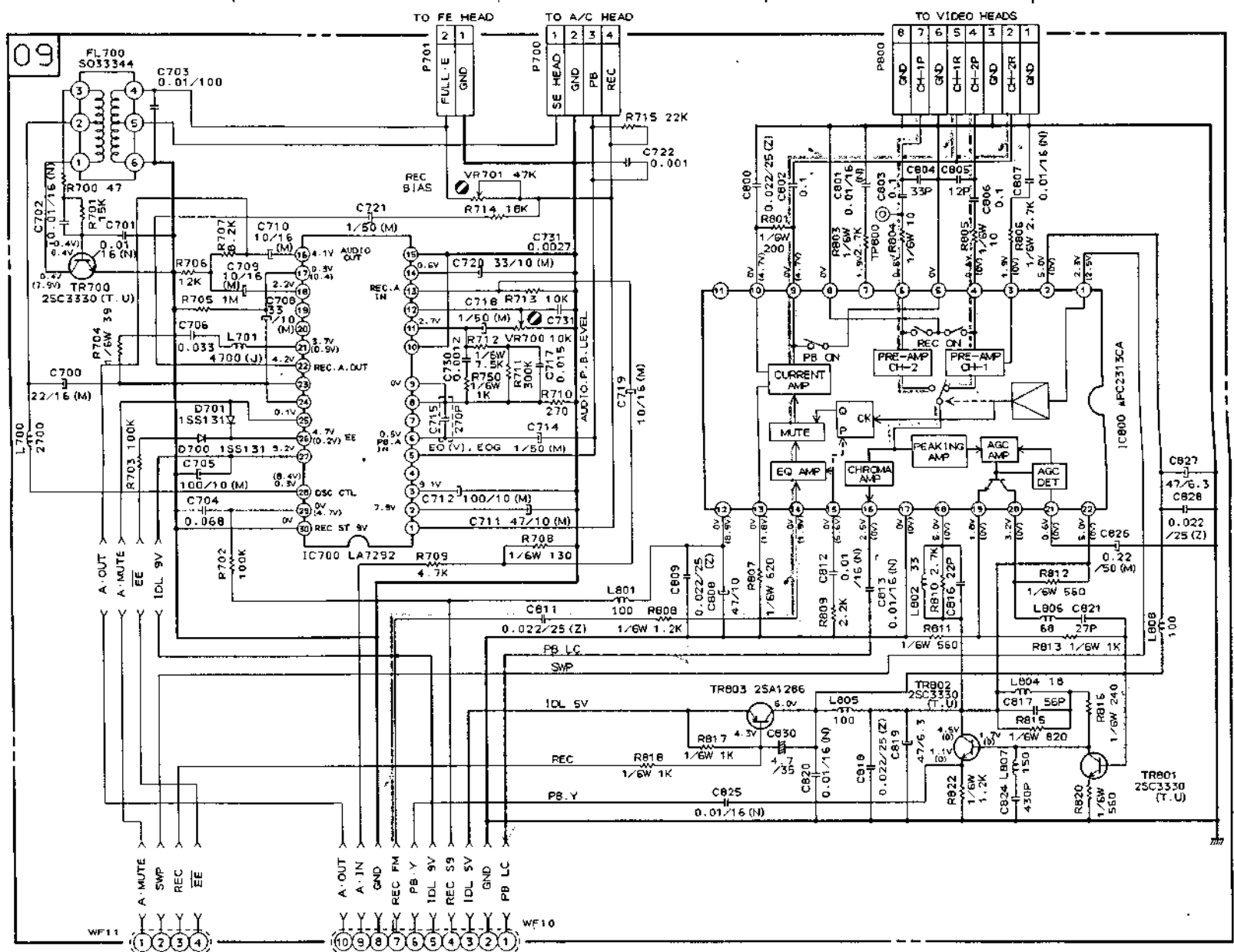
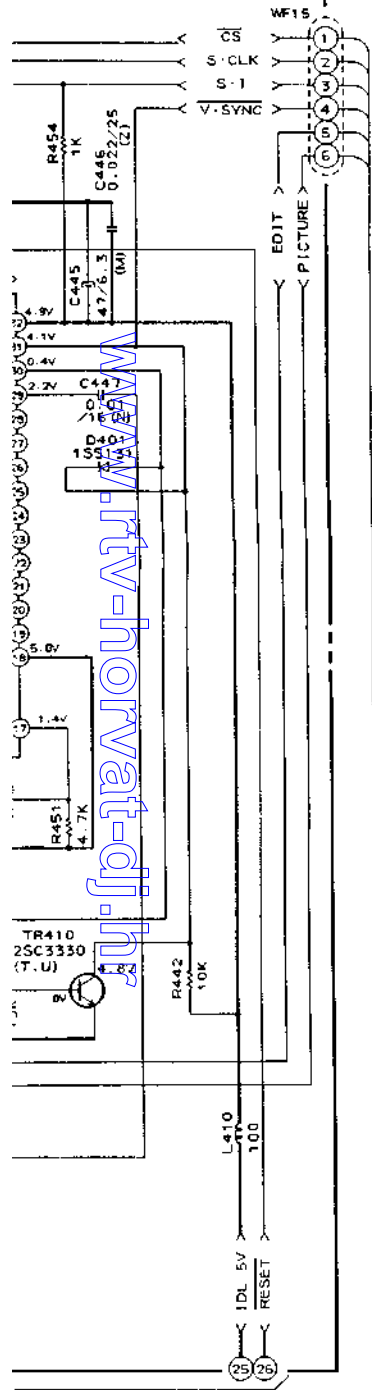


\*NOTE  
WHEN REPLACING IC901, DISCONNECT THE  
SHORT-PIN CONNECTOR P.507 ON MAIN PCB  
IN ORDER TO PROTECT IC901 FROM  
THE DAMAGE.

OPERATION PCB V1084A501D

A B C D E F

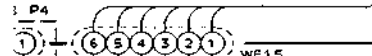
4  
5  
6  
7  
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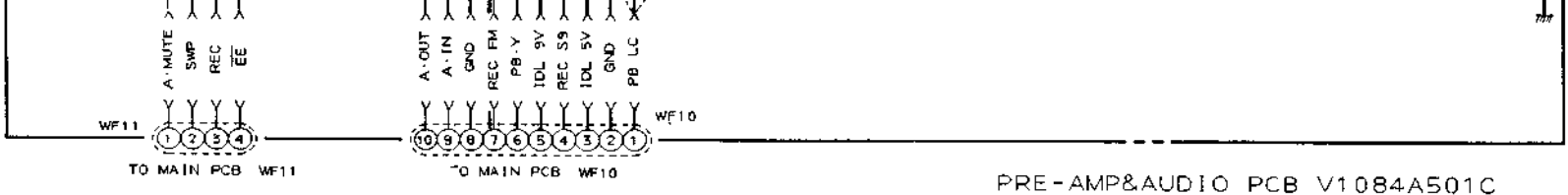
PRE-AMP & AUDIO PCB V1084A501C

INDICATED VOLTAGE MEASURED ON P.B. MODE  
 ( ) REC MODE

- B (POWER SUPPLY) LINE
- REC CHROMA SIGNAL
- P.B. CHROMA SIGNAL
- REC Y SIGNAL
- P.B. Y SIGNAL



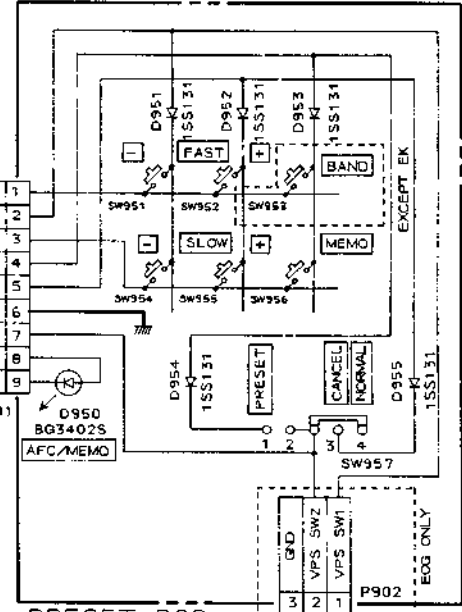
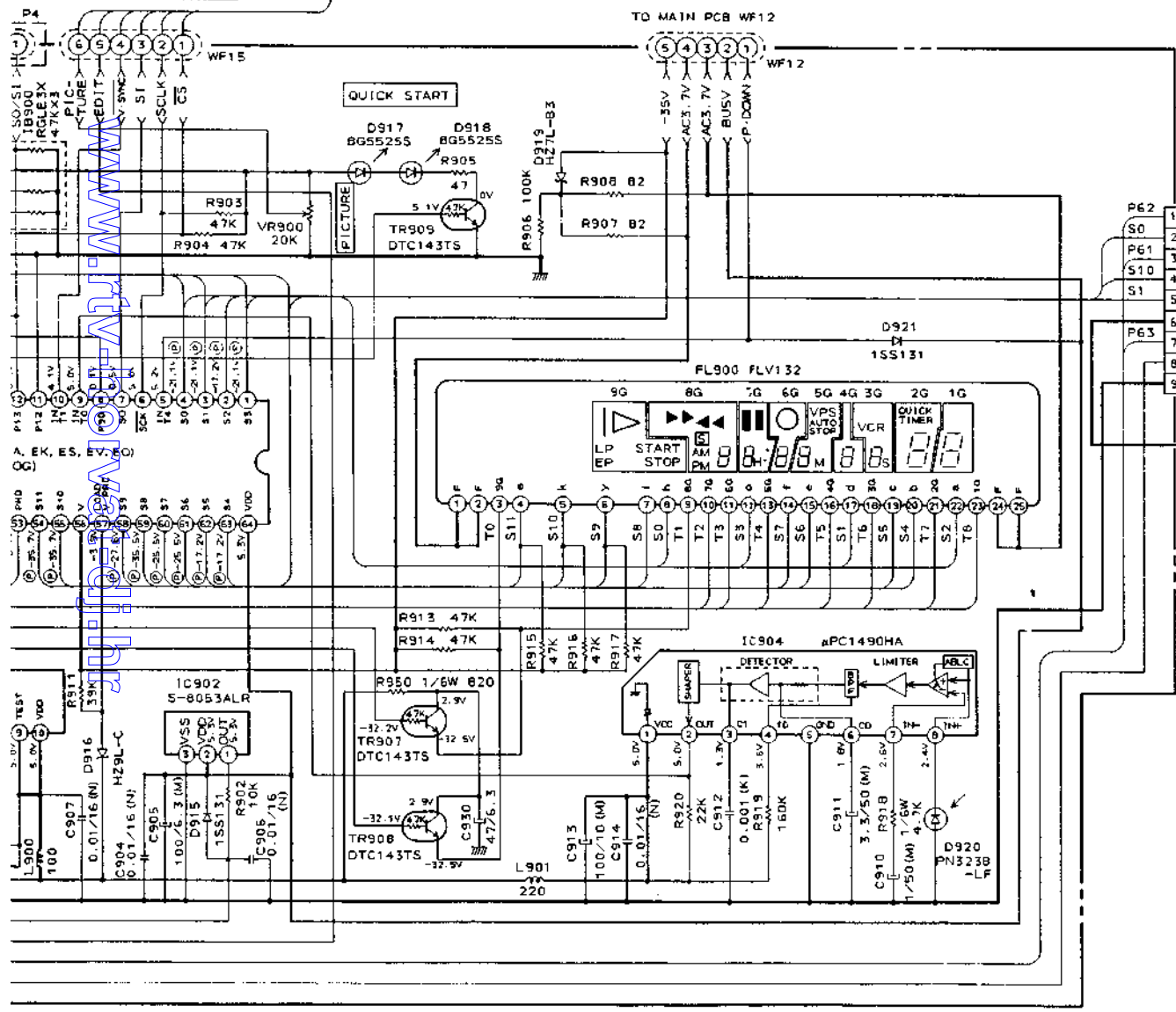
TO MAIN PCB WF12



PRE-AMP&AUDIO PCB V1084A501C

INDICATED VOLTAGE MEASURED ON P.B.MODE  
( ) : REC MODE

- (B (POWER SUPPLY) LINE
- - - - - REC CHROMA SIGNAL
- · · · · P.B. CHROMA SIGNAL
- · · · · REC Y SIGNAL
- · · · · P.B. Y SIGNAL



PRESET PCB V1084A501E TO VPS SW PCB W101

NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/8W (J)  
ALL CAPACITORS IN µF 50WV (J)  
ALL INDUCTORS IN µH (K)

VS-22EA·EK·ES·EV  
EO (E/V) ·EOG  
CHROMA PREAMP&AUDIO  
OPERATION PCB  
SCHEMATIC DIAGRAM  
No. 6-3 870805A



# RTV servis Horvat

Kešinci, 31402 Semeljci

031-856-139

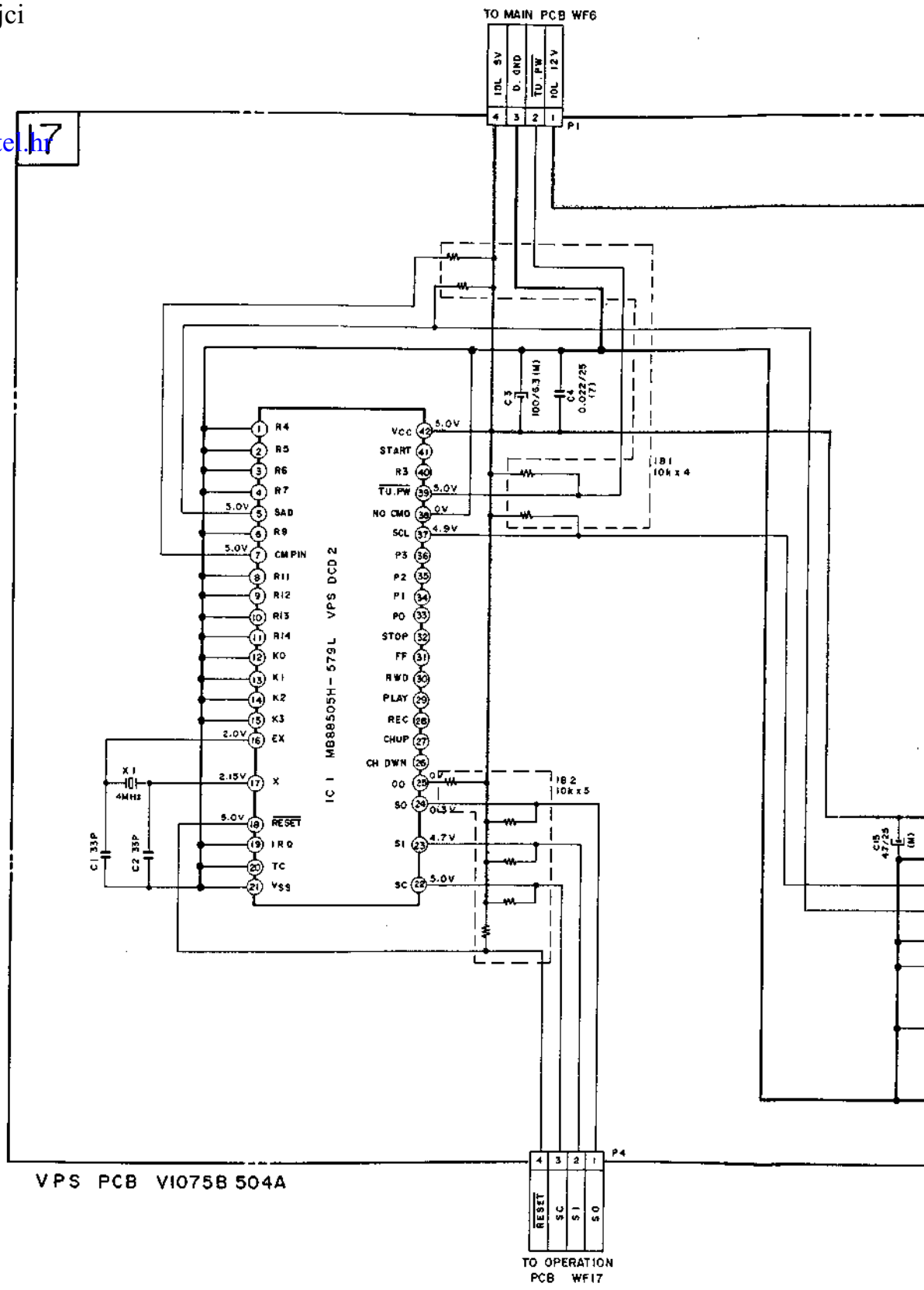
031-856-637

098-788-319

[rtv-servis-horvat@os.tel.hr](mailto:rtv-servis-horvat@os.tel.hr)

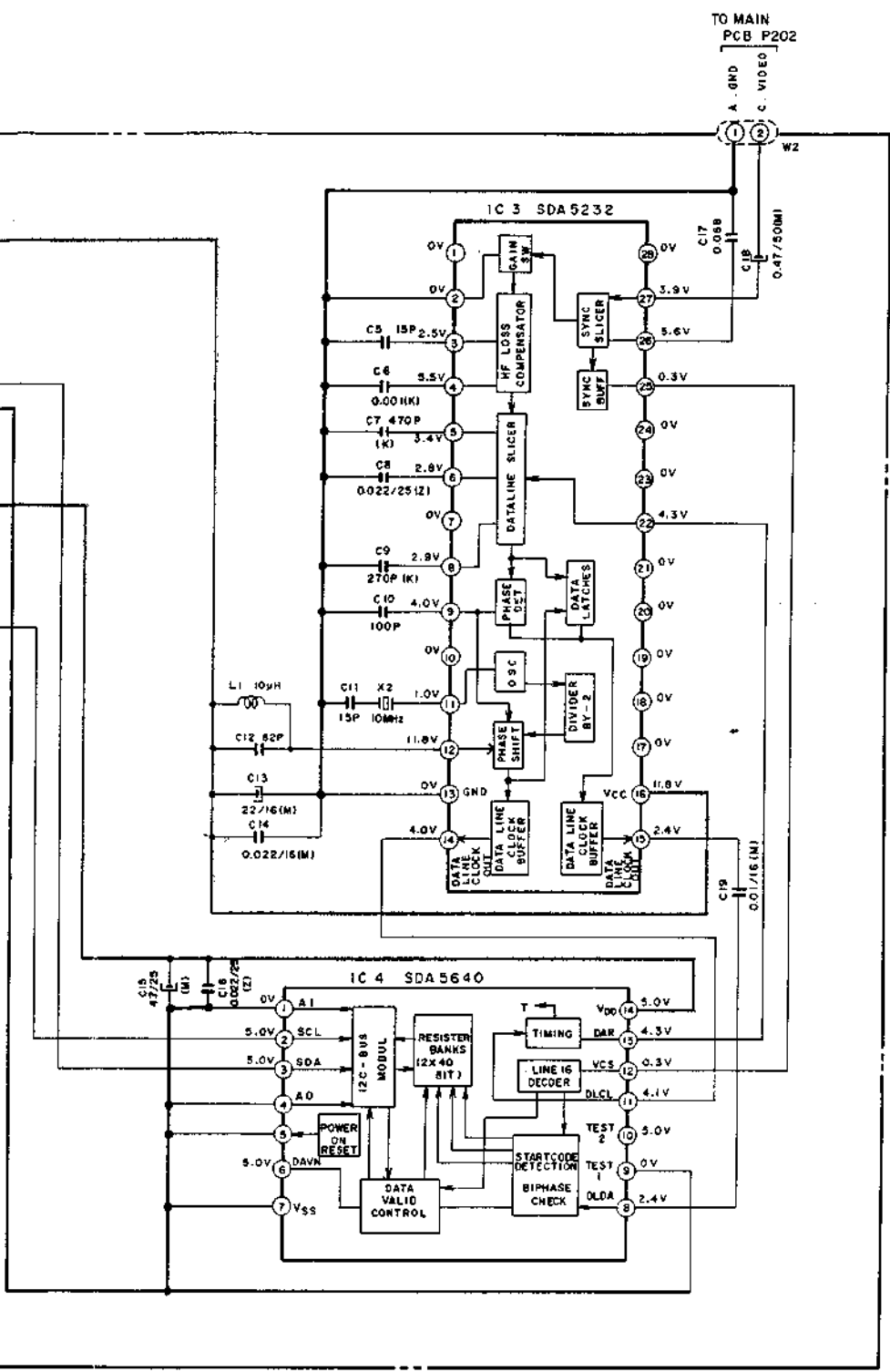
Croatia

17



WF6

TO MAIN PCB P202

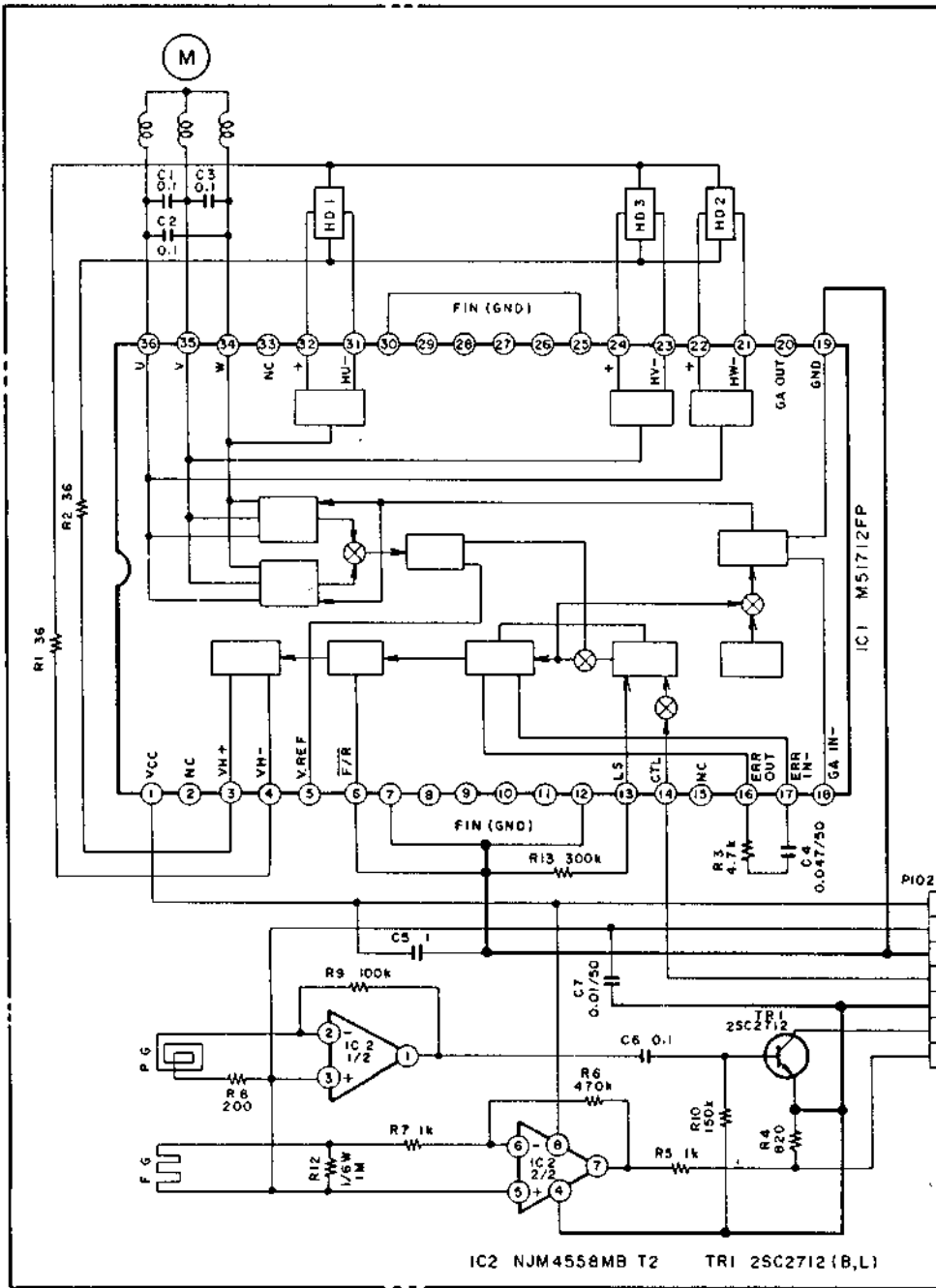


VS - 22 EA/EK/ES/EV  
EO(E/V)/EOG

VPS  
SCHEMATIC DIAGRAM

NO. 6-4 870806A (A2)

NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/6W(J)  
ALL CAPACITORS IN  $\mu$ F 50 WV(J)



MOTOR PCB M3225D5010

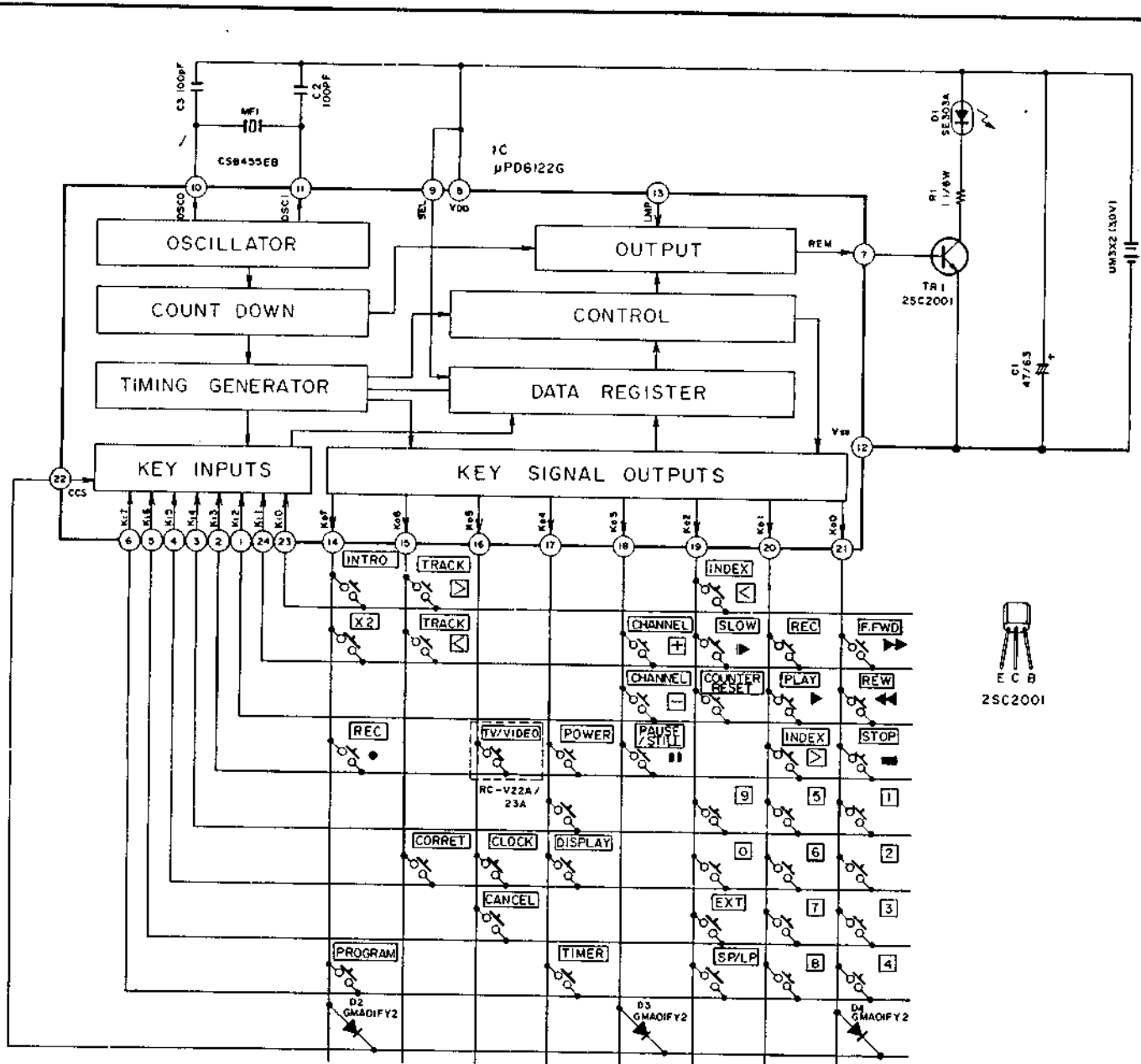
IC2 NJM4558MB T2 TRI 25C2712 (B,L)

NOTE

UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/4WYJ  
ALL CAPACITORS IN  $\mu$ F 16 WV1J

VS - 22 EA/EK/ES/EV  
E0(E/V)/EOG  
SCHEMATIC DIAGRAM  
NO. 6-5 870606A





RC-V22 A/B, V23A  
 REMOTE CONTROL UNIT  
 SCHEMATIC DIAGRAM

NO.6 - 6 870609B (A3)

# VI. ELECTRICAL ADJUSTMENT

## Precautionary items prior to adjustments

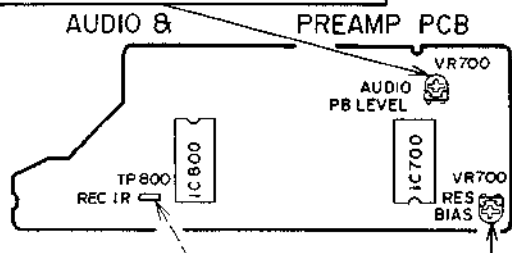
1. The color bar generator output should be 1.0 Vp-p.
2. Video output terminal should be terminated with 75 ohms (dummy or load).

Required following Test tapes.

Test tape	Parts No.
TF-527BL	AT-751880
TF-530RFS	AT-751775
TF-532CBS	AT-751360

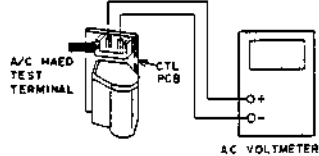
### 3 AUDIO PB LEVEL

1. "PB" Test Tape TF-527BL
2. Audio Out & VR700
3. • Connect AC Voltmeter to Audio out.
  - $-4.0 \pm 0.5$  dBs



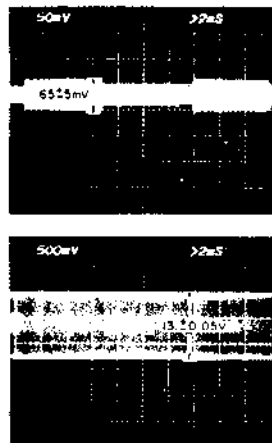
### 4 AUDIO REC BIAS

1. "REC" (no signal input)
2. Test terminal on the A/C lead & VR701.
3. • Connect AC Voltmeter to test terminal.
  - $3.4 \pm 0.1$  mV



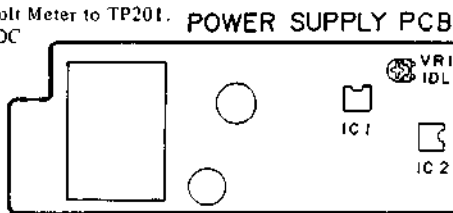
### 9 VIDEO REC CURRENT

1. "REC" PAL color bar signal.
2. TP800 (REC I.R.) & VR207 (CHROMA), VR206 (Y).
3. • Connect Oscilloscope to TP800 (REC I.R.)
  - Turn the VR206 (Y) fully counterclockwise.
  - Adjust VR207 (CHROMA) so that chroma REC current becomes  $65 \pm 5$  mVp-p.
  - Adjust VR206 (Y) so that Y REC current becomes  $1.3 \pm 0.05$  Vp-p.



### 1 IDL 5V

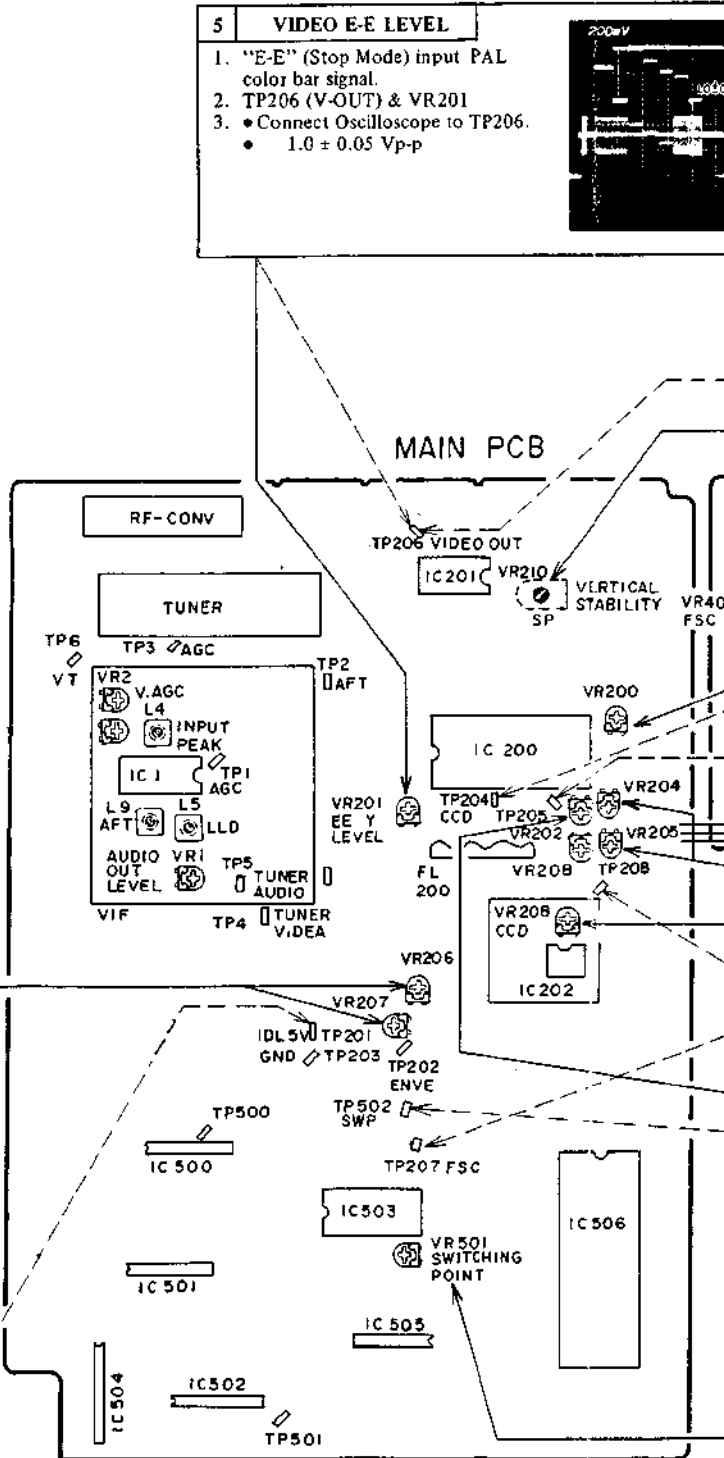
1. STOP MODE
2. TP201 & VR1
3. • Connect DC Volt Meter to TP201.
  - $5 \pm 0.05$  V DC



STEP	ADJUSTMENT ITEM	ADJ. part	Test point
1.	MODE and INPUT SIGNAL/TEST TAPE		
2.	TEST POINT and ADJ. part		
3.	RESULT & REMARKS		

### 5 VIDEO E-E LEVEL

1. "E-E" (Stop Mode) input PAL color bar signal.
2. TP206 (V-OUT) & VR201
3. • Connect Oscilloscope to TP206.
  - $1.0 \pm 0.05$  Vp-p



### 13 TRACKING PRESET

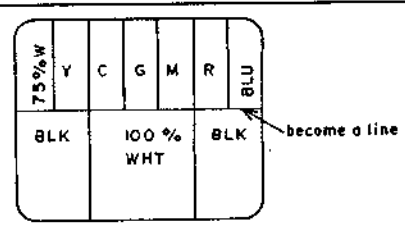
Tracking preset data can be adjusted as following.

1. Plug in the AC Power Cord with the Power, Eject and REW buttons depressed steadily at the same time.
2. In an SP play mode. Tracking data 0 to 3F which will be displayed in the FLD CH. No. window may be set to 1F or 20 with the Tracking buttons. At this time, Tracking MM waveform, IC 503 pin 24, should be within  $19 \pm 1$  ms.
3. Depress the Band selector button to memorize the Tracking preset data.
4. Confirm that the maximum Envelope TP202 on the Main P.C.B. should be obtained on Rec/P.B mode and Tracking marker "T" is in the center on the monitor screen.

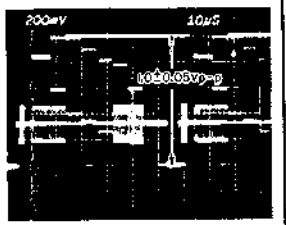
ADJUSTMENT ITEM
MODE and INPUT SIGNAL/TEST TAPE
TEST POINT and ADJ. part
RESULT & REMARKS

ADJ. part →  
Test point →

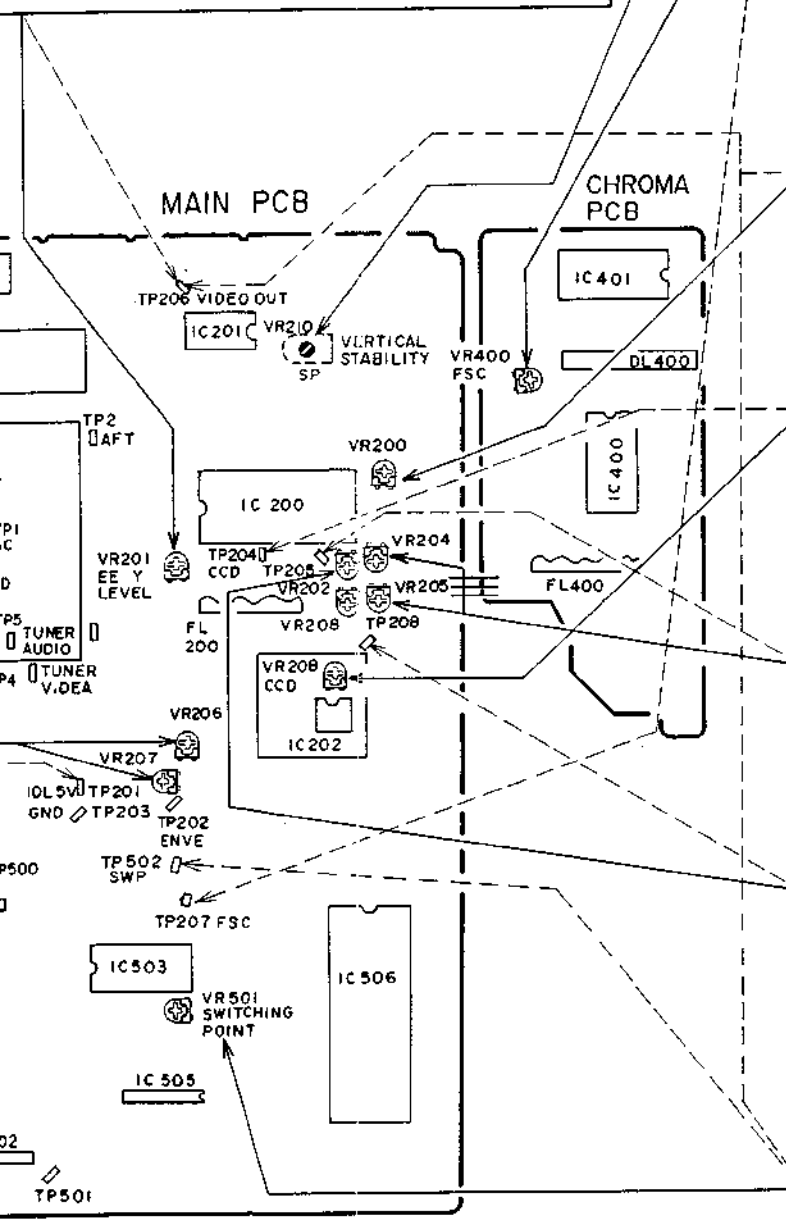
12	<b>SP STILL VERTICAL STABILITY</b>
1. "PB" → "PAUSE/STILL" (Test tape TF-532CBS) 2. TV screen & VR210 3. In the PB/STILL mode, Observe the TV screen and adjust VR210 until no picture vibration.	



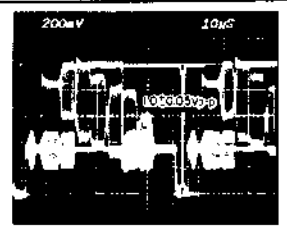
<b>VIDEO E-E LEVEL</b>
"E-E" (Stop Mode) input PAL color bar signal. TP206 (V-OUT) & VR201 • Connect Oscilloscope to TP206. • $1.0 \pm 0.05$ Vp-p



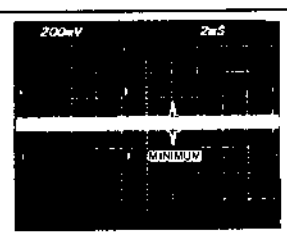
6	<b>FSC</b>
1. "E-E (Stop Mode) input PAL color bar signal. 2. TP207 (FSC) & VR400 3. • Connect FRQ counter to TP207 (FSC) • $4.33619$ MHz $\pm$ 10 Hz	



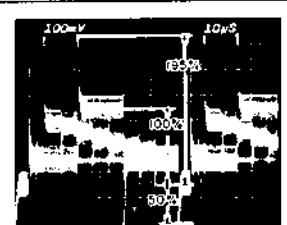
10	<b>REC/PB VIDEO LEVEL</b>
1. "REC" → "PB" PAL color bar signal. 2. TP206 (V-OUT) & VR200 (PB LEVEL) 3. • Connect Oscilloscope to TP206 (V-OUT) • $1.0 \pm 0.05$ Vp-p	



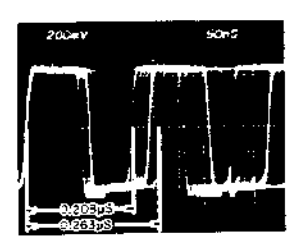
11	<b>CCD</b>
1. "PB" Test tape TF-532CBS 2. TP204 (CCD) & VR208 (CCD) 3. • Connect Oscilloscope to TP204 (CCD). • Adjust VR208 so that CCD level becomes minimum.	



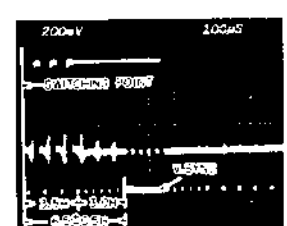
8	<b>WHITE &amp; DARK CLIP</b>
1. "REC" PAL color signal. 2. TP205 (W/D CLIP) & VR205 (W. CLIP), VR204 (D. CLIP) 3. • Connect Oscilloscope to TP205 (W/D CLIP) • VR205 (WHITE CLIP) . . . . . 195% • VR204 (DARK CLIP) . . . . . 50%	



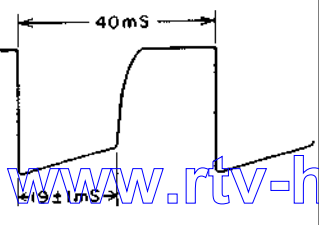
7	<b>CARRIER SET &amp; DEVIATION</b>
1. "REC" PAL color bar signal. 2. TP208 (REC FM) & VR203 (CARRIER), VR202 (DEVIATION) 3. • Connect Oscilloscope to TP208 (REC FM) • VR203 (CARRIER) . . . . . 0.263µs (3.8MHz) • VR202 (DEVIATION) . . . . . 0.208µs (4.8MHz)	



2	<b>PB SWITCHING POINT</b>
1. "PB" Test Tape TF-530RFS 2. TP502 (SWP), TP206 (V-OUT) & VR501 3. • Connect Oscilloscope to TP502 (SWP) for trigger signal and connect to TP206 (V-OUT). • Adjust VR501 so that switching point becomes $6.5 \pm 0.5$ H from the V-SYNC.	



adjusted as following.  
 with the Power, Eject and REW buttons depressed  
 ing data 0 to 3F which will be displayed in the FLD  
 et to 1F or 20 with the Tracking buttons. At this  
 form, IC 503 pin 24, should be within  $19 \pm 1$  ms.  
 button to memorize the Tracking preset data.  
 n Envelope TP202 on the Main P.C.B. should be  
 e and Tracking marker "T" is in the center on the



# 1. RECOMMENDED SPARE PARTS

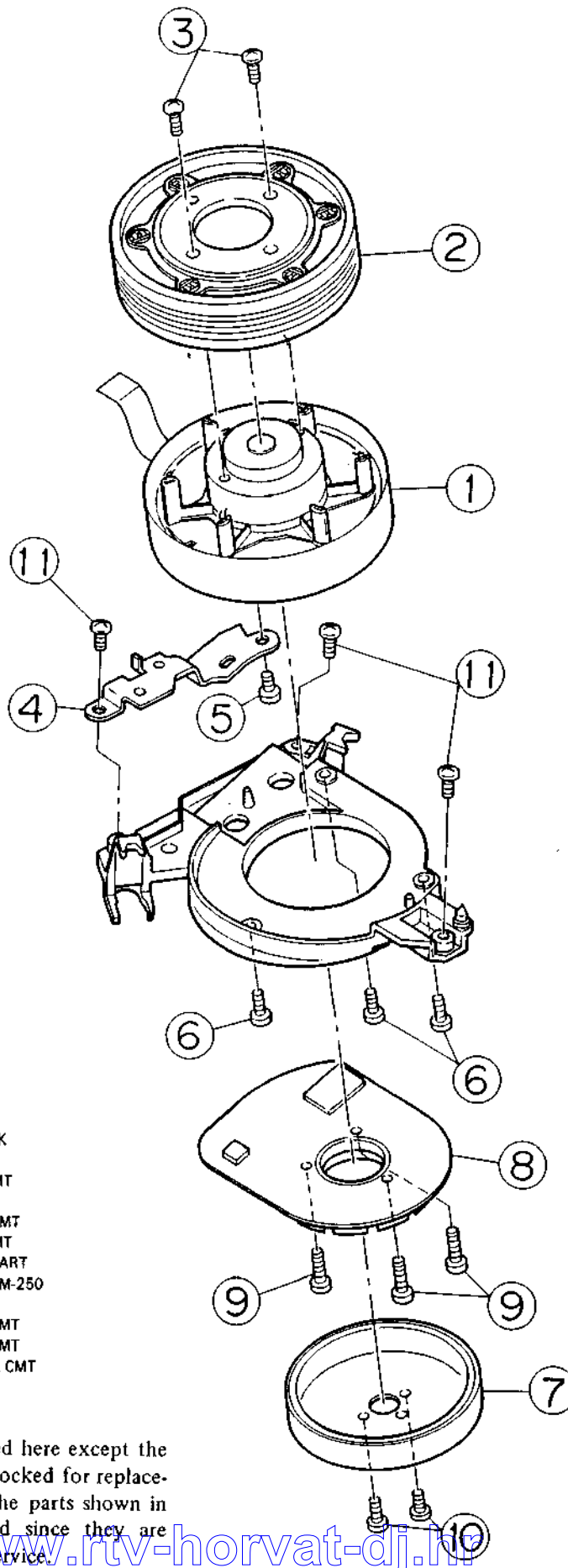
We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	BD-V1075A205C	TW EJECTOR (2) BLK 9272/TW [INCL. 1 TO 34]
2	BL-V1075A130A	PINCH ROLLER BLK VS-35EA
3	BM-373098	MOTOR DVX-67A2R2 [CAPSTAN MOTOR]
4	BM-367631	MOTOR PART [LOADING MOTOR][M901]
5	BM-M3225A020A	PC MOTOR BLK SM-250 [DRUM MOTOR]
6	BR-367618	DISK(S)PART
7	BR-367619	DISK(T)PART
8	BV-V1075A410C	LOWER DRUM BLK
9	BV-373938	RF CONVERTER MDLK-3D063A EO [EO(E),EO(V),EOG]
10	BV-373936	RF CONVERTER MDLK8063A EK,ES [EK,ES]
11	BV-373939	RF CONVERTER MDLK2D103A EV [EV]
12	BV-373935	RF CONVERTER MDLK2S100A EA [EA]
13	BV-V1075A070A	S.LOADING LEADER BLK VS-35EA
14	BV-V1075A080A	T.U LOADING LEADER BLK VS-35EA
15	BV-V1075A420G	UPPER DRUM BLK
16	EC-368118	C DBL LAYER EECS5R5H 224Z5.5DC [ES,EV]
17	EC-368823	C DBL LAYER EECS5R5H 473Z5.5DC [EA,EK,EO(E),EO(V),EOG]
18	ED-368826	D LED BG3402S GREEN
19	ED-356424	D LED BG5525S GREEN
20	ED-373101	D LED LN59AK INFRARED [SENSOR PCB D1]
21	ED-360409	D PHOTO PN323B
22	ED-307572	D SILICON H 1S131
23	ED-624903	D SILICON H 1S2473
24	ED-365699	D ZENER H HZS5.6J B1 F05
25	ED-351419	D ZENER H HZ7L B3
26	ED-346541	D ZENER H HZ9L B2
27	ED-346543	D ZENER H HZ9L C1
28	ED-346546	D ZENER H HZ9L C3 [EO(E),EO(V),EOG]
29	EE-373928	TV TUNER TEMB1-013A EK [EK]
30	EE-373929	TV TUNER TEMD1-010A EM [EV]
31	EE-373930	TV TUNER TEME1-006A EO [EO(E),EO(V),EOG]
32	EE-373927	TV TUNER TEMS1-005A EA [EA]
33	EE-373932	TV TUNER TEMZ1-011A [ES]
34	EH-378541J	COMP R RGL3X 473J
35	EH-378540J	COMP R RGL5X 103J
36	EH-374010	COMP R RKC5BS 473J
37	EH-374012	COMP R RKC6BS 103J
38	EH-371021	DL EFD-HR124A13J
39	EH-379367	FILTER CE CDA5.5ME23A [EA,EV,EO(E),EO(V),EOG]
40	EH-379368	FILTER CE CDA6.0ME23A [EK,ES]
41	EH-373916	FILTER CE SAF36.9M270Z [EA]
42	EH-376120	FILTER CE SAF38.9MW70Z [ES]
43	EH-376119	FILTER CE SAF38.9MZH71Z [EO(V),EOG]
44	EH-373914	FILTER CE SAF38.9M270Z [EV,EO(E)]
45	EH-373920	FILTER CE SFE6.5MB [EA,EV,EO(E),EO(V),EOG]

Ref. No.	Part No.	Description
46	EH-373921	FILTER CE SFE6.0MB [EK,ES]
47	EH-373918	FILTER CE TPS5.5MB [EA,EV,EO(E)]
48	EH-368948	FILTER CE TPS5.5MW [EO(V),EOG]
49	EH-373919	FILTER CE TPS6.0MB [EK,ES]
50	EH-360339	FILTER LC AP AF-25P [EA,EV,EO(E),EO(V),EOG]
51	EH-364045	FILTER LC FF-78P
52	EH-373144	FILTER LC LP LF-69P-02 5P
53	EH-368821	FILTER LC LP MYV-23R
54	EH-368136	FILTER LC TPS 134-5052-04 [EO(V),EOG]
55	EI-380085J	IC AN3231K
56	EI-373980	IC BA15218N
57	EI-353421	IC BA6229
58	EI-360316	IC BA6305
59	EI-373981	IC BA6993N
60	EI-354095	IC BA718
61	EI-380086J	IC BU2735AS CUSTOM
62	EI-373954	IC CXK1006L
63	EI-373946	IC LA7292
64	EI-379019	IC MB88505H-579L VPSDCD2 [EOG]
65	EI-378177	IC MB88525-192G LCXSY3P CUSTOM
66	EI-373966	IC MSM6965-3RS
67	EI-379020	IC MS0455-073SP
68	EI-368809	IC M51496P
69	EI-373999	IC SDA5232 [EOG]
70	EI-373955	IC S8053ALR
71	EI-330986	IC TA78L009AP [EO(E),EO(V),EOG]
72	EI-373023	IC TA8632N
73	EI-200573	IC TC4053BP
74	EI-367271	IC UPC1490HA
75	EI-380084J	IC UPC2313CA
76	EI-337530	IC UPC574J
77	EI-375472	IC UPD75208CW-105 LCXOPE3 [EA,EK,ES,EV,EO(E),EO(V)]
78	EI-347991	OSC CE CSA6.00MS 6MHZ
79	EI-373957	OSC CE CST4.19MG 4.194 MHZ
80	EI-368825	OSC X'TAL MX-38T 32.768KHZ
81	EI-309878	OSC X'TAL 4.433619MHZ
82	EJ-372242	SOCKET HXC 1521-01-010 21P [EO(E),EO(V),EOG]
83	EM-373956	IND FL FV132 DOUBLE
84	EO-375471	COIL OSC 1 S033344
85	*ER-378414	R OMF H S12 FS 1W R47J
86	ES-373099	SW LEAF MTS10110MPC1 [REC SAFTY SW][SW1]
87	ES-381310J	SW MODE SELECTOR D2ZQ-S2-2 [MODE SELECTOR]
88	ES-380117J	SW SLIDE ESD-1111352 2-01-03N [PRE-SET]
89	ES-380115J	SW SLIDE ESD-1132252 2-02-02N [EOG] [VPS ON/OFF]
90	ES-373973	SW SLIDE HSW0810-010 1-01-02S [EA,EK,ES][PAL-B./W-MESECAM]
91	ES-373974	SW SLIDE HSW0811-020 2-02-03S [EV,EO(E),EO(V)]
92	ES-349474	SW TACT SKHHAM004A
93	ET-361463	DETECTOR ON2170 Q.R [SENSOR PCB PH1]
94	ET-360646	TR DTA143ES [EO(E),EO(V),EOG]
95	ET-368836	TR DTA143TA
96	ET-354415	TR DTA144ES
97	ET-373985	TR DTA144TS [EOG]
98	ET-353897	TR DTC114ES [EV,EO(E),EO(V),EOG]
99	ET-354365	TR DTC114YS
100	ET-354371	TR DTC124ES
101	ET-354364	TR DTC143TS
102	ET-354414	TR DTC144ES

Ref. No.	Part No.	Description
103	ET-361490	TR PHOTO PN268 R.S
104	ET-356224	TR 2SA1286 G.H.J F05
105	ET-353899	TR 2SA1317 S.T.U
106	ET-321644	TR 2SC1213 C
107	ET-375777	TR 2SC2926S P.Q
108	ET-355669	TR 2SC3246 G.H.J F05 [EQ(E),EO(V),EOG]
109	ET-368084	TR 2SC3315 D
110	ET-360067	TR 2SC3330 T,U F05
111	*ET-371028	TR 2SD1266 P,Q
112	EV-380314J	VR ROTARY RK09K1130 L = ** B203 [PICTURE]
113	HC-374197	HEAD COMBO HVMLA10135 [AUDIO/CONTROL HEAD]
114	HE-361456	HEAD E HVFMD0005B [FULL ERASE HEAD]
115	MB-373080	BELT IDLER
116	MB-373096	BELT LOADING
117	ML-373075	ARM LOADING BRAKE
118	ML-367614	ARM MAIN BRAKE(S)PART
119	ML-367616	ARM MAIN BRAKE(TU)PART
120	ML-367617	ARM REVIEW BRAKE PART
121	ML-373043	CLUTCH BLK
122	ML-500881	LEVER TENSION BAND PART
123	MZ-500717T	GEAR CAM CENTER (TW)
124	MZ-368797T	GEAR CAM JOINT (TW)
125	MZ-500707T	GEAR CAM TENSION (TW)
126	MZ-500715T	GEAR FL DRIVE (TW)
127	MZ-V1075A090A	GEAR TOGGLE (S) BLK VS-35EA
128	MZ-V1075A100A	GEAR TOGGLE (TU) BLK VS-35EA
129	MZ-500716T	GEAR WHEEL (TW)
130	MZ-367628	GEAR WORM PART
131	MZ-368794T	GEAR(S) (TW)
132	MZ-368795T	GEAR(T) (TW)
133	VT-367622	GUIDE ROLLER PART

## HEAD DRUM BLOCK



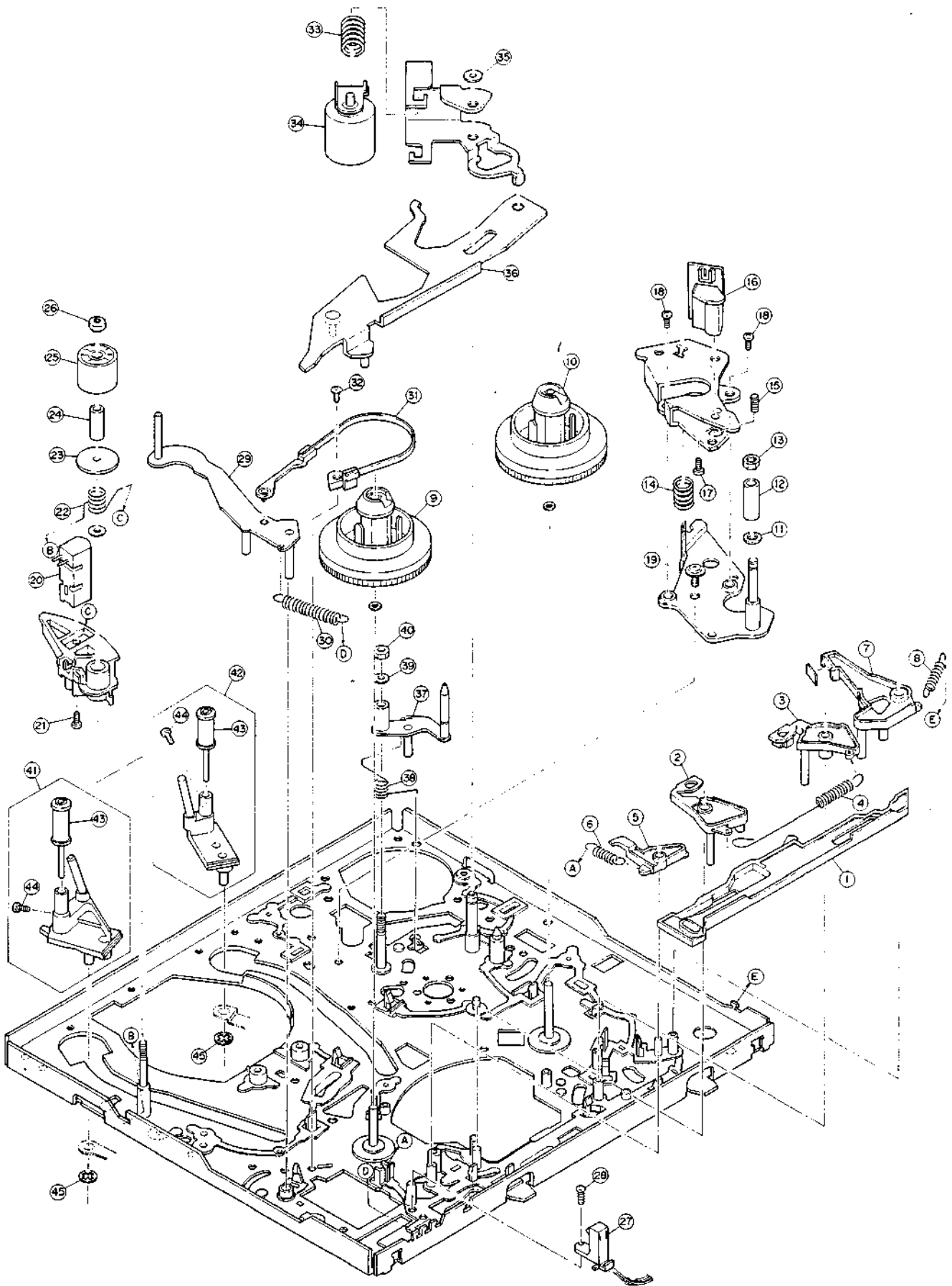
### 2. HEAD DRUM BLOCK

Ref. No.	Part No.	Description
1	BV-V1075A410C	LOWER DRUM BLK
2	BV-V1075A420G	UPPER DRUM BLK
3	ZS-321298	BID30X08STL CMT
4	VT-373884J1	PLATE EARTH
5	ZS-479474	PAN26X05STL CMT
6	ZS-563444	BID26X08STL CMT
7	BV-B373848	YOKE MAGNET PART
8	BM-M3225A020A	PC MOTOR BLK SM-250 (DRUM MOTOR)
9	ZS-467796	PAN26X12STL CMT
10	ZS-479474	PAN26X05STL CMT
11	ZS-370047	DT BID30X12STL CMT

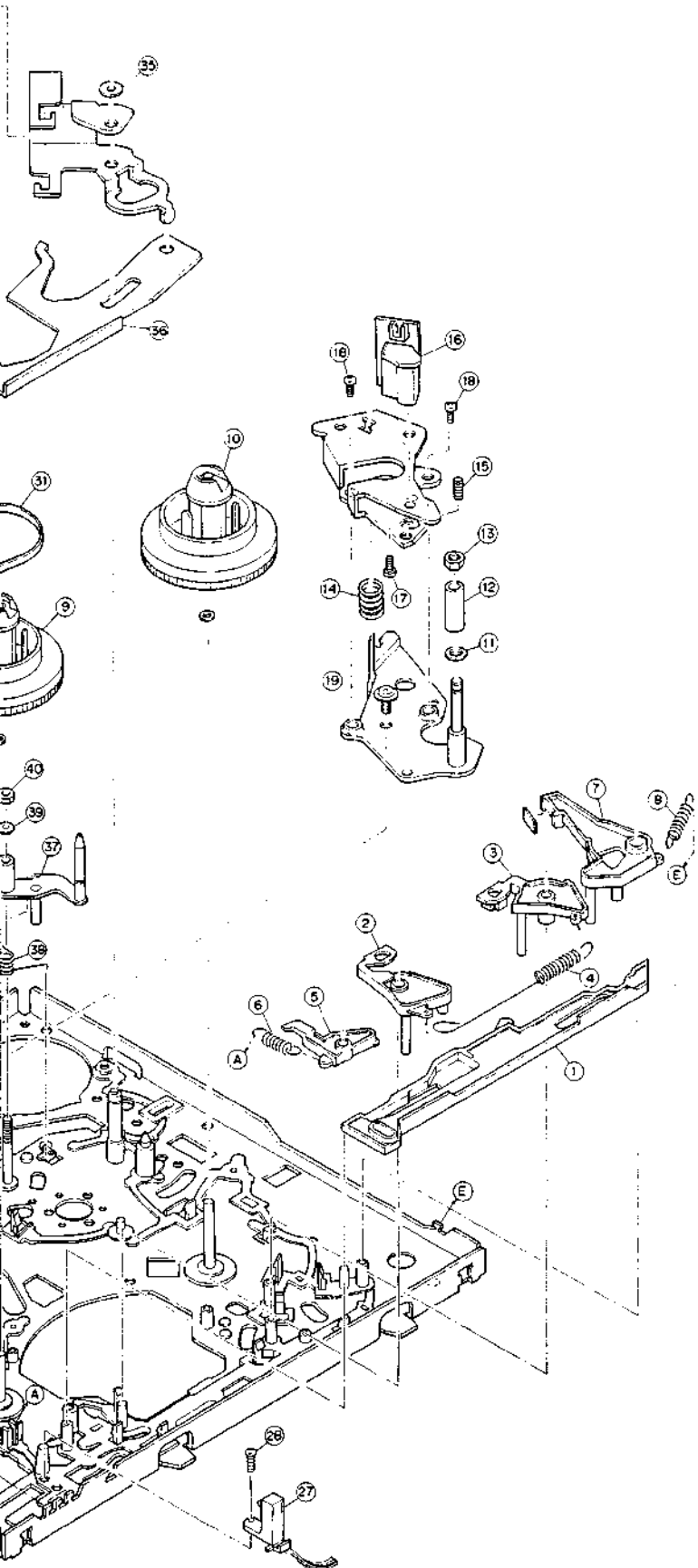
NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.



MECHA BLOCK (1)



### 3. MECHA BLOCK (1)



Ref. No.	Part No.	Description
1	MZ-373079	SLIDER BRAKE
2	ML-367614	ARM MAIN BRAKE(S)PART
3	ML-367616	ARM MAIN BRAKE(T)PART
4	ZG-373548	SP PULL MAIN BRAKE
5	ML-373075	ARM LOADING BRAKE
6	ZG-373534	SP PULL LOAD BRAKE
7	ML-367617	ARM REVIEW BRAKE PART
8	ZG-373535	SP PULL REVW BRAKE
9	BR-367618	DISK(S)PART
10	BR-367619	DISK(T)PART
11	MS-373095	GUIDE TAPE LCX
12	MS-372186	GUIDE TAPE (6)
13	ZW-358045	N30STL CMT 3
14	ZG-500792	SP PUSH A/C
15	ZG-373900	6SET30X080SCM PKR CP
16	HC-374197	HEAD COMBO HVMLA10135 [AUDIO/CONTROL HEAD]
17	ZS-373899	PAN20X2.5STL BDY PS1
18	ZS-321298	BID30X08STL CMT
19	ZS-373896	DT BID30X08STL CMT PW080
20	HE-361456	HEAD E HVFMD0005B [FULL ERASE HEAD]
21	ZS-464703	BID20X04STL CMT
22	ZG-374022	SP TORSION ARM FE
23	ZW-373088	FLANGE Z
24	ZW-373089	SPACER
25	MR-373087	ROLLER Z
26	ZW-350839	N30 NYLON
27	ES-373099	SW LEAF MTS10110MPC1 [REC SAFTY SW][SW1]
28	ZS-364545	DT BID30X08STL CMT
29	BL-367620-A	ARM TENSION PART
30	ZG-373539	SP PULL TENSION
31	ML-500881	LEVER TENSION BAND PART
32	ZS-373532	DT BID30X08STL CMT C080
33	ZG-500794	SP PUSH PINCH ROLLER
34	BL-V1075A130A	PINCH ROLLER BLK VS-35EA
35	ZW-373898	SLIT W31 X070X050PSL
36	BL-500879T	PLATE P SLIDER PART (TW)
37	BL-368475	ARM REVIEW GUIDE PART
38	ZG-373530	SP TORSION REVIEW ARM
39	ZW-324417	PW31X060X050PSL
40	ZW-350839	N30 NYLON
41	BV-V1075A070A	SLOADING LEADER BLK VS-35EA
42	BV-V1075A080A	T.U LOADING LEADER BLK VS-35EA
43	VT-367622	GUIDE ROLLER PART
44	ZS-201464	PAN20X03BRS N13
45	ZW-332843	RETAINING RING GRIP 380STL ACP
46	ZW-287458	PW33X060X030BRS N13

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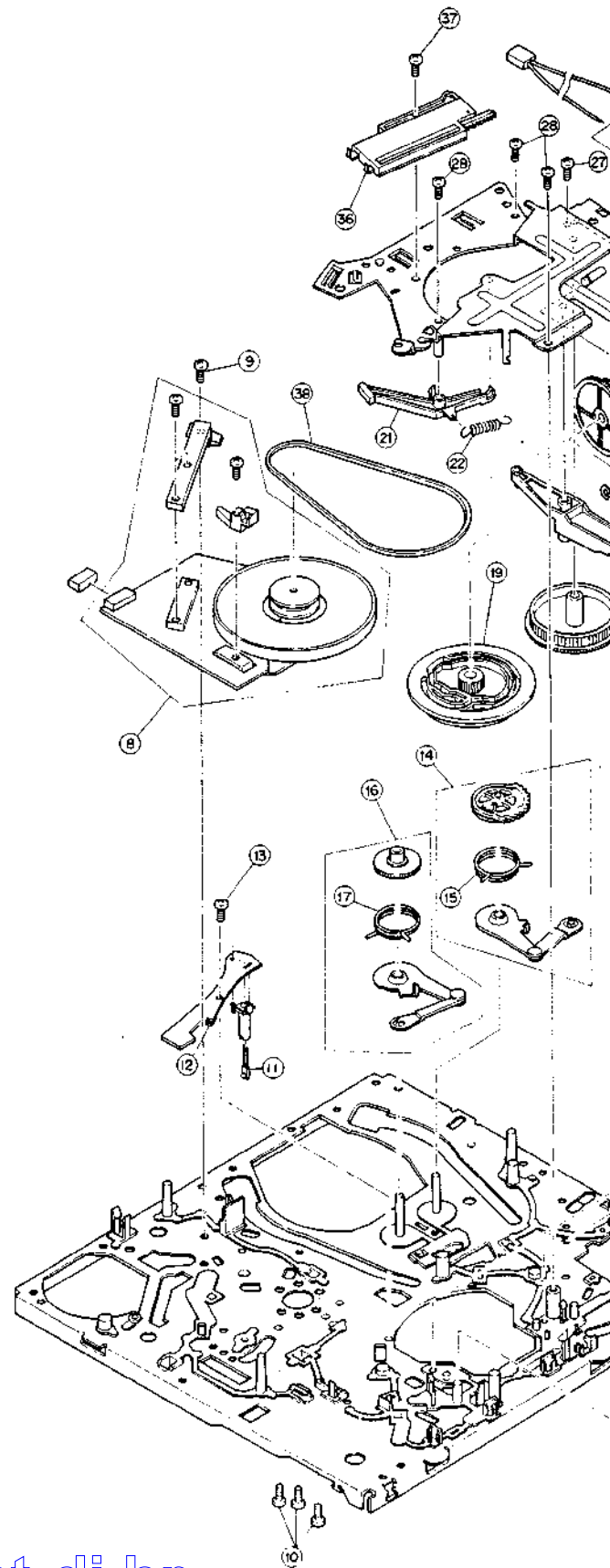


#### 4. MECHA BLOCK (2)

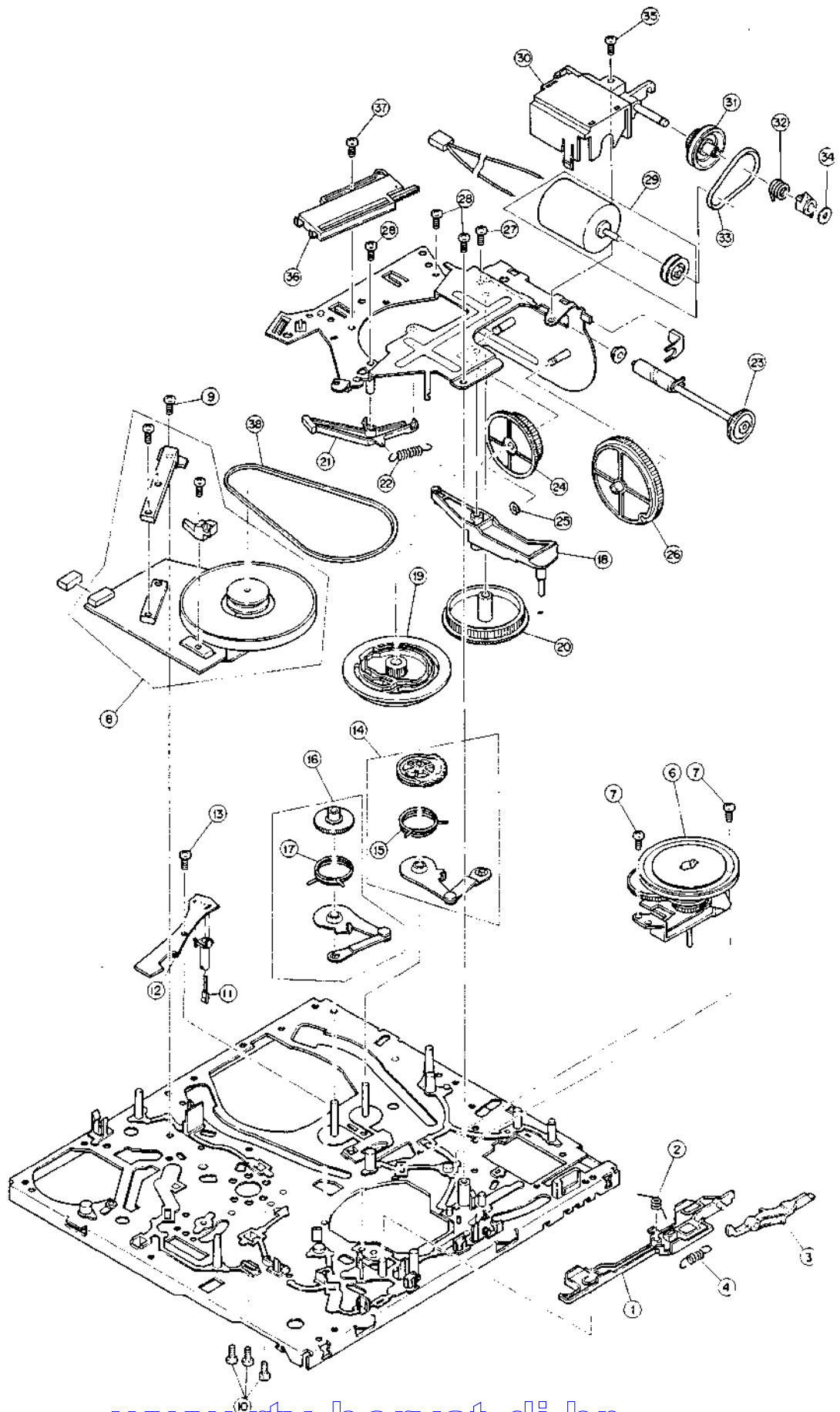
#### MECHA BLOCK (2)

Ref. No.	Part No.	Description
1	ML-373038	SLIDER FR
2	ZG-373894	SP TORSION SLIDER
3	ML-373036	LEVER F/R HOOK
4	ZG-373536	SP PULL HOOK
5	ZW-324417	PW31 X060X050PSL
6	ML-373043	CLUTCH BLK
7	ZS-373895	DT BID26X08STL CMT
8	BM-373098	MOTOR DVX-67A2R2 [CAPSTAN MOTOR]
9	ZS-373895	DT BID26X08STL CMT
10	ZS-419782	BID26X05STL CMT
11	ED-373101	D LED LN59AK INFRARED [SENSOR PCB D1]
12	ET-361463	DETECTOR ON2170 Q.R [SENSOR PCB PH1]
13	ZS-368173	DT BID30X08STL CMT TW
14	MZ-V1075A090A	GEAR TOGGLE (S) BLK VS-35EA
15	ZG-373542	SP TORSION GEAR TOGGLE(S)
16	MZ-V1075A100A	GEAR TOGGLE (TU) BLK VS-35EA
17	ZG-373541	SP TORSION GEAR TOGGLE(TU)
18	ML-367625	LEVER CAM SLIDER PART
19	MZ-500717T	GEAR CAM CENTER (TW)
20	MZ-500707T	GEAR CAM TENSION (TW)
21	BL-367627	ARM FW BRAKE PART
22	ZG-373546	SP PULL FW BRAKE
23	MZ-367628	GEAR WORM PART
24	MZ-500716T	GEAR WHEEL (TW)
25	ZW-373898	SLIT W31X070X050PSL
26	MZ-500715T	GEAR FL DRIVE (TW)
27	ZS-373895	DT BID26X08STL CMT
28	ZS-373897	PLX BID26X10STL CMT
29	BM-367631	MOTOR PART [LOADING MOTOR]M901
30	SP-500887T-A	HOUSING MOTOR PART (TW)
31	MR-373045	PULLY BELT LOADING
32	ZG-373046	SP TORSION TRIGGER
33	MB-373096	BELT LOADING
34	ZW-373901	SLIT W22X060X050PSL
35	ZS-373897	PLX BID26X10STL CMT
36	ES-381310J	SW MODE SELECTOR D22Q-S2-2 [MODE SELECTOR]
37	ZS-373895	DT BID26X08STL CMT
38	MB-373080	BELT IDLER
39	ZW-378366	PW31X054X030PSL

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MECHA BLOCK (2)



SEA  
SI  
35EA  
TU)

TW)  
TW)

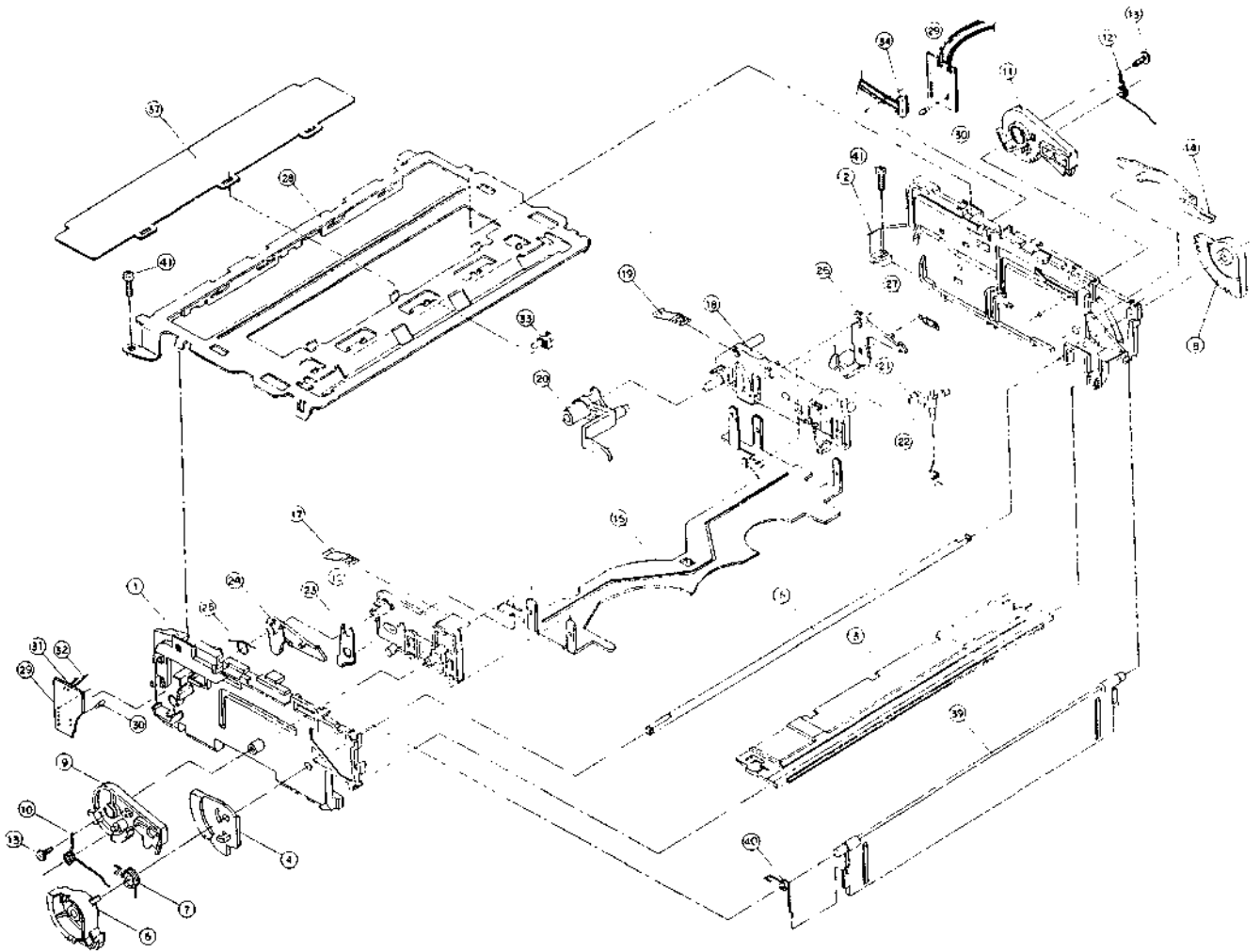
7)  
)

(TW)

S2-2

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or replace-  
shown in  
they are

# EJECTOR BLOCK



## 5. EJECTOR BLOCK

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	MZ-368790T	HOUSING(S) (TW)	39A	SE-380030T	MASK CASSETTE ENGLISH 3 (TW) [EA.EK.ES]
2	MZ-368791T	HOUSING(T) (TW)	39B	SE-500933T	MASK CASSETTE ENGLISH 2 (TW) [EV.EQ[E].EO[V].EOG]
3	SZ-375956T	GUID F (TW)	40	ZG-500767	SP TORSION MASK
4	MZ-368794T	GEAR(S) (TW)	41	ZS-378341	PLX BID30X12STL CMT
5	MS-368798T	SHAFT LOADING (TW)	42	BV-V1075A240A	TW HOLDER CASSETTE BLK .35EA/TW [INCL. 15 TO 27]
6	MZ-368797T	GEAR CAM JOINT (TW)	43	BD-V1075A205C	TW EJECTOR (2) BLK 9272/TW [INCL. 1 TO 34]
7	ZG-375953T	SP TORSION JOINT (TW)			
8	MZ-368795T	GEAR(T) (TW)			
9	ML-368792T	ARM LOADING(S) (TW)			
10	ZG-375954T	SP TORSION LOADING(S) (TW)			
11	ML-368793T	ARM LOADING(T) (TW)			
12	ZG-375955T	SP TORSION LOADING(T) (TW)			
13	ZS-368524	PLX BID26X10STL CMT C072			
14	ML-500730T	ARM LID OPENER (TW)			
17	ZG-500735T	SP GUIDE CASSETTE (TW)			
19	ZG-500735T	SP GUIDE CASSETTE (TW)			
22	ZG-375959T	SP TORSION RELEASE (TW)			
25	ZG-375957T	SP TORSION DAMPER (TW)			
27	ZG-375958T	SP PULL DAMPER (TW)			
28	MA-368799T	CHASSIS UPPER (TW)			
30	ET-361490	TR PHOTO PN268 R.S			

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## 6. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-V1084A600A	PC(≠) MAIN(PAL) BLK VS-22EA [EA]
1B	BA-V1084A600B	PC(≠) MAIN(PAL) BLK VS-22EK [EK]
1C	BA-V1084A600C	PC(≠) MAIN(PAL) BLK VS-22ES [ES]
1D	BA-V1084A600D	PC(≠) MAIN(PAL) BLK VS-22EV [EV]
1E	BA-V1084A600E	PC(≠) MAIN(PAL) BLK VS-22EO(E) [EO(E)]
1F	BA-V1084A600F	PC(≠) MAIN(PAL) BLK VS-22EO(V) [EO(V)]
1G	BA-V1084A600G	PC(≠) MAIN(PAL) BLK VS-22EOG [EOG]

PC (≠) MAIN BLK CONSISTS OF FOLLOWING  
P.C Board.

- MAIN P.C BOARD
- CHROMA P.C BOARD
- AUDIO & PRE-AMP P.C BOARD
- OPERATION P.C BOARD

PC (≠) POWER BLK CONSISTS OF FOLLOWING  
P.C BOARD.

- POWER SUPPLY P.C BOARD
- TR P.C BOARD
- DIODE P.C BOARD

## 7. MAIN P.C BOARD

Ref. No.	Part No.	Description
C13	EC-355728	C COMP V AWS 222J 50DC
C500A	EC-368823	C DBL LAYER ECES5R5H 473Z5.5DC [EA,EK,EO(E),EO(V),EOG]
C500B	EC-368118	C DBL LAYER ECES5R5H 224Z5.5DC [ES,EV]
D1	ED-307572	D SILICON H 1SS131 [EA,ES,EV,EO(E),EO(V),EO]
D2	ED-307572	D SILICON H 1SS131 [EA,ES,EV,EO(E),EO(V),EO]
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-346541	D ZENER H HZ9L B2
D6	ED-346546	D ZENER H HZ9L C3 [EO(E),EO(V),EOG]
D200	ED-307572	D SILICON H 1SS131
D201	ED-624903	D SILICON H 1S2473
D202	ED-307572	D SILICON H 1SS131
D204	ED-307572	D SILICON H 1SS131
D500	ED-307572	D SILICON H 1SS131
D501	ED-307572	D SILICON H 1SS131
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D504	ED-307572	D SILICON H 1SS131
D506	ED-307572	D SILICON H 1SS131
D507	ED-307572	D SILICON H 1SS131
D508	ED-307572	D SILICON H 1SS131
D509	ED-307572	D SILICON H 1SS131
D510	ED-307572	D SILICON H 1SS131
D511	ED-307572	D SILICON H 1SS131
D512	ED-307572	D SILICON H 1SS131
D516	ED-346541	D ZENER H HZ9L B2
D528	ED-307572	D SILICON H 1SS131
D529	ED-365699	D ZENER H HZ55 GJ B1 F05
D530	ED-307572	D SILICON H 1SS131

Ref. No.	Part No.	Description
FL1A	EH-373916	FILTER CE SAF36.9M270Z [EA]
FL1B	EH-373917	FILTER CE SAF39.5M270Z [EK]
FL1C	EH-376120	FILTER CE SAF38.9MW70Z [ES]
FL1D	EH-373914	FILTER CE SAF38.9M270Z [EV,EO(E)]
FL1E	EH-376119	FILTER CE SAF38.9MZH71Z [EO(V),EOG]
FL2A	EH-373918	FILTER CE TPS5.5MB [EA,EV,EO(E)]
FL2B	EH-373919	FILTER CE TPS6.0MB [EK,ES]
FL2C	EH-368948	FILTER CE TPS5.5MW [EO(V),EOG]
FL3A	EH-373920	FILTER CE SFE5.5MB [EA,EV,EO(E),EO(V),EOG]
FL3B	EH-373921	FILTER CE SFE6.0MB [EK,ES]
FL4A	EH-379367	FILTER CE CDA5.5ME23A [EA,EV,EO(E),EO(V),EOG]
FL4B	EH-379368	FILTER CE CDA6.0ME23A [EK,ES]
FL5	EH-368136	FILTER LC TPS 134-5052-04 [EO(V),EOG]
FL200	EH-373144	FILTER LC LP LF-69P-02 5P
FL201	EH-360339	FILTER LC AP AF-25P [EA,EV,EO(E),EO(V),EOG]
FL202	EH-368821	FILTER LC LP MYV-23R
FR500	*ER-378414	R OMF H S12 FS 1W R47J
IB500	EH-378540J	COMP R RGL5X 103J
IB501	EH-374012	COMP R RKC6BS 103J
IC1	EI-368809	IC M51498P
IC2	EI-330986	IC TA78L009AP [EO(E),EO(V),EOG]
IC3	EI-337530	IC UPC574J
IC200	EI-380085J	IC AN3231K
IC201	EI-200573	IC TC4053BP
IC202	EI-373966	IC MSM6965-3RS
IC500	EI-360316	IC BA6305
IC501	EI-373980	IC BA15218N
IC502	EI-354095	IC BA718
IC503	EI-380086J	IC BU2735AS CUSTOM
IC504	EI-353421	IC BA6229
IC505	EI-373981	IC BA6993N
IC506	EI-378177	IC MB88525-192G LCXSY3 CUSTOM
IC507	EI-373980	IC BA15218N
L1A	EO-368179	COIL FIX 1 EL0606SKI R68M [EK,ES,EO(E)]
L1B	EO-368178	COIL FIX 1 EL0606SKI R47M [EO(V),EOG]
L2	EO-345860	COIL FIX 1 EL0606SKI 2R7K
L3	EO-345865	COIL FIX 1 EL0606SKI 100J
L4A	EO-368852	COIL VARI 1 134-5055-04 [EA]
L4B	EO-368810	COIL VARI 1 134-5054-04 [EK,ES,EV,EO(E),EO(V),EO]
L5A	EO-368855	COIL TUN 1 LLD 134-5040-04 [EA]
L5B	EO-368856	COIL TUN 1 LLD 134-5042-04 [EK]
L5C	EO-368812	COIL TUN 1 LLD 134-5038-04 [ES,EV,EO(E),EO(V),EOG]
L6A	EO-345876	COIL FIX 1 EL0606SKI 470J [EA,EV,EO(E),EO(V),EOG]
L6B	EO-345874	COIL FIX 1 EL0606SKI 330J [EK,ES]
L8	EO-345869	COIL FIX 1 EL0606SKI 150J
L9A	EO-368857	COIL TUN 2 AFT 111-5043-14 [EA]
L9B	EO-368858	COIL TUN 2 AFT 111-5044-14 [EK]
L9C	EO-368814	COIL TUN 2 AFT 111-5041-14 [ES,EV,EO(E),EO(V),EOG]
L10A	EO-376601	COIL FIX 1 LF-5.0S F05 120K [EA,EK]
L10B	EO-376599	COIL FIX 1 LF-5.0S F05 100K [ES,EV,EO(E),EO(V),EOG]

Ref. No.	Part No.	Description
L11	EO-345865	COIL FIX 1 EL0606SKI 100J
L13A	EO-376606	COIL FIX 1 LF-5.0S F05 180K [EA.EV.EO[E].EO[V].EOG]
L13B	EO-376603	COIL FIX 1 LF-5.0S F05 150K [EK.ES]
L14	EO-380093J	COIL FIX 2 C-5294-01 101 [EA.ES.EV.EO[E].EO[V].EO
L200	EO-376607	COIL FIX 1 LF-5.0S F05 181K
L201	EO-376602	COIL FIX 1 LF-5.0S F05 121K
L202	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L203	EO-376609	COIL FIX 1 LF-5.0S F05 270K
L204	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L206	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L207	EO-345887	COIL FIX 1 EL0606SKI 221J
L208	EO-376612	COIL FIX 1 LF-5.0S F05 680K
L209	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L210	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L211	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L212	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L213	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L500	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
P200	EJ-373971	PIN J JPJ0881-010 BLACK 2P [EA.EK.ES.EV.] [AUDIO]
P201	EJ-373970	PIN J JPJ0811-040 YELLOW 2P [EA.EK.ES.EV.] [VIDEO]
SW200A	ES-373973	SW SLIDE HSW0810-010 1-01-02S [EA.EK.ES.] [PAL-B/W-MESECAM]
SW200B	ES-373974	SW SLIDE HSW0811-020 2-02-03S [EV.EO[E].EO[V]]
TR1	ET-375777	TR 2SC2926S P.Q
TR2	ET-360067	TR 2SC3330 T.U F05
TR3	ET-360067	TR 2SC3330 T.U F05 [EA.ES.EV.EO[E].EO[V].EO
TR4	ET-360067	TR 2SC3330 T.U F05
TR5	ET-375777	TR 2SC2926S P.Q
TR6	ET-360067	TR 2SC3330 T.U F05
TR7	ET-360067	TR 2SC3330 T.U F05
TR8	ET-354414	TR DTC144ES
TR9	ET-353899	TR 2SA1317 S.T.U
TR10	ET-321644	TR 2SC1213 C
TR11	ET-353899	TR 2SA1317 S.T.U
TR12	ET-373985	TR DTA144TS [EOG]
TR13	ET-356224	TR 2SA1286 G.H.J F05
TR14	ET-360646	TR DTA143ES [EO[E].EO[V].EOG]
TR15	ET-355669	TR 2SC3246 G.H.J F05 [EO[E].EO[V].EOG]
TR16	ET-353899	TR 2SA1317 S.T.U [EA.ES.EV.EO[E].EO[V].EO
TR17	ET-353899	TR 2SA1317 S.T.U [EA.ES.EV.EO[E].EO[V].EO
TR18	ET-353899	TR 2SA1317 S.T.U [EA.ES.EV.EO[E].EO[V].EO
TR19	ET-356224	TR 2SA1286 G.H.J F05
TR200	ET-353899	TR 2SA1317 S.T.U
TR201	ET-360067	TR 2SC3330 T.U F05
TR204	ET-353899	TR 2SA1317 S.T.U
TR206	ET-360067	TR 2SC3330 T.U F05
TR208	ET-360067	TR 2SC3330 T.U F05
TR210	ET-356224	TR 2SA1286 G.H.J F05
TR211	ET-360067	TR 2SC3330 T.U F05
TR212	ET-353899	TR 2SA1317 S.T.U
TR213	ET-360067	TR 2SC3330 T.U F05
TR215	ET-353899	TR 2SA1317 S.T.U
TR500	ET-354415	TR DTA144ES
TR501	ET-360067	TR 2SC3330 T.U F05
TR502	ET-373985	TR DTA144TS
TR503	ET-354414	TR DTC144ES
TR504	ET-354414	TR DTC144ES
TR505	ET-354414	TR DTC144ES
TR507	ET-373985	TR DTA144TS
TR508	ET-354371	TR DTC124ES
TR512	ET-373985	TR DTA144TS
TR513	ET-360067	TR 2SC3330 T.U F05
TR514	ET-373985	TR DTA144TS
TR515	ET-353899	TR 2SA1317 S.T.U
TR516	ET-353899	TR 2SA1317 S.T.U
TR517	ET-354365	TR DTC114YS

Ref. No.	Part No.	Description
TR518	ET-354371	TR DTC124ES
TR520	ET-354414	TR DTA144ES
TR521	ET-353899	TR 2SA1317 S.T.U
VR1	EV-368135	R S-FIX H KVSF637A 0.01W 474
VR2	EV-356324	R S-FIX H KVSF637A 0.10W 103 [EA.ES.EV.EO[E].EO[V].EO
VR3	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR200	EV-358829	R S-FIX H RH0615C 0.10W 223
VR201	EV-358829	R S-FIX H RH0615C 0.10W 223
VR202	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR203	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR204	EV-358829	R S-FIX H RH0615C 0.10W 223
VR205	EV-358829	R S-FIX H RH0615C 0.10W 223
VR206	EV-356579	R S-FIX H RH0615C 0.10W 102
VR207	EV-356679	R S-FIX H RH0615C 0.10W 682
VR208	EV-356583	R S-FIX H RH0615C 0.10W 332
VR209	EV-374014	R S-FIX EVTK-8C 0.20W 104
VR210	EV-374014	R S-FIX EVTK-8C 0.20W 104
VR501	EV-378325	R S-FIX H KVSF687A 0.30W 473
X500	EI-347991	OSC CE CSA6.00MS 6MHZ
1A	EE-373927	TV TUNER TEMS1-005A EA [EA]
1B	EE-373928	TV TUNER TEMB1-013A EK [EK]
1C	EE-373932	TV TUNER TEMZ1-011A [ES]
1D	EE-373929	TV TUNER TEMD1-010A EM [EV]
1E	EE-373930	TV TUNER TEME1-006A EO [EO[E].EO[V].EOG]
2A	BV-373935	RF CONVERTER MDLK2S100A EA [EA]
2B	BV-373936	RF CONVERTER MDLKB063A EK.ES [EK.ES]
2C	BV-373939	RF CONVERTER MDLK2D103A EV [EV]
2D	BV-373938	RF CONVERTER MDLK-3D063A EO [EO[E].EO[V].EOG]
3A	SP-500947T	PANEL REAR JACK EA (TW) [EA]
3B	SP-500928T	PANEL REAR JACK EK (TW) [EK.ES]
3C	SP-380083T	PANEL REAR JACK EV(Y1) (TW) [EV]
4	ZS-362378	PLX BID30X10STL CMT

## 8. CHROMA P.C BOARD

Ref. No.	Part No.	Description
D400	ED-307572	D SILICON H 1SS131
D401	ED-307572	D SILICON H 1SS131
DL400	EH-371021	DL EPD-HR124A13J
FL400	EH-364045	FILTER LC FF-78P
IC400	EI-373023	IC TA8632N
IC401	EI-379020	IC M50455-073SP
L400	EO-376603	COIL FIX 1 LF-5.0S F05 150K
L401	EO-376610	COIL FIX 1 LF-5.0S F05 330K
L402	EO-376599	COIL FIX 1 LF-5.0S F05 100K
L403	EO-376606	COIL FIX 1 LF-5.0S F05 180K
L404	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L405	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L406	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L407	EO-376601	COIL FIX 1 LF-5.0S F05 120K [EV.EO[E].EO[V].EOG]
L408	EO-345893	COIL FIX 1 EL0606SKI 471J
L409	EO-345889	COIL FIX 1 EL0606SKI 331J
L410	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L411	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
TR400	ET-360067	TR 2SC3330 T.U F05
TR401	ET-360067	TR 2SC3330 T.U F05
TR402	ET-353899	TR 2SA1317 S.T.U
TR403	ET-360067	TR 2SC3330 T.U F05
TR404	ET-368084	TR 2SC3315 D



Ref. No.	Part No.	Description
TR405	ET-360057	TR 2SC3330 T,U F05
TR406	ET-360067	TR 2SC3330 T,U F05
TR407	ET-360057	TR 2SC3330 T,U F05
TR408	ET-353637	TR DTC114ES [EV,EO[E],EO[V],EOG]
TR409	ET-353899	TR 2SA1317 S,T,U
TR410	ET-360057	TR 2SC3330 T,U F05
VR400	EV-36834J	R S-FIX H KVSF687A 0.30W 104
X400	EI-30987S	OSC X'TAL 4.433619MHZ

## 9. AUDIO & PRE-AMP P.C BOARD

Ref. No.	Part No.	Description
D700	ED-307572	D SILICON H 1SS131
D701	ED-307572	D SILICON H 1SS131
FL700	EO-375471	COIL OSC 1 S033344
IC700	EI-373946	IC LA7292
IC800	EI-380084J	IC UPC2313CA
L700	EO-370639	COIL FIX 1 TL-8 272J
L701	EO-361913	COIL FIX 1 TL-8 472J
L801	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L802	EO-376610	COIL FIX 1 LF-5.0S F05 330K
L804	EO-376636	COIL FIX 1 LF-5.0S F05 180K
L805	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L806	EO-376612	COIL FIX 1 LF-5.0S F05 680K
L807	EO-345883	COIL FIX 1 EL0606SKI 151J
L808	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
TR700	ET-360067	TR 2SC3330 T,U F05
TR801	ET-360067	TR 2SC3330 T,U F05
TR802	ET-360067	TR 2SC3330 T,U F05
VR700	EV-356577	R S-FIX H RH0615C 0.10W 103
VR701	EV-356582	R S-FIX H RH0615C 0.10W 473

## 10. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D900	ED-307572	D SILICON H 1SS131
D901	ED-307572	D SILICON H 1SS131
D902	ED-307572	D SILICON H 1SS131
D903	ED-307572	D SILICON H 1SS131
D904	ED-307572	D SILICON H 1SS131
D905	ED-307572	D SILICON H 1SS131
D906	ED-307572	D SILICON H 1SS131
D907	ED-307572	D SILICON H 1SS131
D908	ED-307572	D SILICON H 1SS131
D909	ED-307572	D SILICON H 1SS131 [EA, EV, EO[E], EO[V], EOG]
D910	ED-307572	D SILICON H 1SS131 [EK]
D912	ED-307572	D SILICON H 1SS131
D913	ED-307572	D SILICON H 1SS131
D915	ED-307572	D SILICON H 1SS131
D916	ED-346543	D ZENER H HZ9L C1
D917	ED-356424	D LED BG5525S GREEN
D918	ED-356424	D LED BG5525S GREEN
D919	ED-351419	D ZENER H HZ7L B3
D920	ED-360409	D PHOTO PN323B
D921	ED-307572	D SILICON H 1SS131
FL900	EM-373956	IND FL FV132 DOUBLE
IB900	EH-378541J	COMP R RGL3X 473J
IB901	EH-374010	COMP R RKC5BS 473J
IC901A	EI-375472	IC UPD75208CW-105 LCXOPE3 [EA, EK, ES, EV, EO[E], EO[V]]
IC901B	EI-376280	IC UPD75208CW-133LCXOVG2 [EOG]
IC902	EI-373955	IC S8053ALR
IC903	EI-373954	IC CXK1006L

Ref. No.	Part No.	Description
IC904	EI-367271	IC UPC1490HA
L900	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L901	EO-376616	COIL FIX 1 LF-5.0S F05 221K
SW900	ES-349474	SW TACT SKHHAM004A
SW901	ES-349474	SW TACT SKHHAM004A
SW902	ES-349474	SW TACT SKHHAM004A
SW903	ES-349474	SW TACT SKHHAM004A
SW904	ES-349474	SW TACT SKHHAM004A
SW905	ES-349474	SW TACT SKHHAM004A
SW906	ES-349474	SW TACT SKHHAM004A
SW907	ES-349474	SW TACT SKHHAM004A
SW908	ES-349474	SW TACT SKHHAM004A
SW909	ES-349474	SW TACT SKHHAM004A
SW910	ES-349474	SW TACT SKHHAM004A
SW911	ES-349474	SW TACT SKHHAM004A
SW912	ES-349474	SW TACT SKHHAM004A
SW913	ES-349474	SW TACT SKHHAM004A
SW914	ES-349474	SW TACT SKHHAM004A
SW915	ES-349474	SW TACT SKHHAM004A
SW916	ES-349474	SW TACT SKHHAM004A
SW918	ES-380116J	SW SLIDE ESD-1112252 2-02-02N [INPUT SELECTOR]
SW919	ES-380116J	SW SLIDE ESD-1112252 2-02-02N [EDIT]
TR900	ET-354414	TR DTC144ES
TR901	ET-354414	TR DTC144ES
TR902	ET-354414	TR DTC144ES [EA, EV, EO[E], EO[V], EOG]
TR903	ET-354414	TR DTC144ES
TR904	ET-369836	TR DTA143TA
TR906	ET-354414	TR DTC144ES
TR907	ET-354364	TR DTC143TS
TR908	ET-354364	TR DTC143TS
TR909	ET-354364	TR DTC143TS
VR900	EV-380314J	VR ROTARY RK09K1130 L= ** B203 [PICTURE]
X900	EI-373957	OSC CE CST4.19MG 4.194 MHZ
X901	EI-368825	OSC X'TAL MX-38T 32.768KHZ

## 11. PRE-SET P.C BOARD

Ref. No.	Part No.	Description
D950	ED-368826	D LED BG3402S GREEN
D951	ED-307572	D SILICON H 1SS131
D952	ED-307572	D SILICON H 1SS131
D953	ED-307572	D SILICON H 1SS131
D954	ED-307572	D SILICON H 1SS131
D955	ED-307572	D SILICON H 1SS131
SW951	ES-349474	SW TACT SKHHAM004A
SW952	ES-349474	SW TACT SKHHAM004A
SW953	ES-349474	SW TACT SKHHAM004A
SW954	ES-349474	SW TACT SKHHAM004A
SW955	ES-349474	SW TACT SKHHAM004A
SW956	ES-349474	SW TACT SKHHAM004A
SW957	ES-380117J	SW SLIDE ESD-1111352 2-01-03N [PRE-SET]

## 12. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
C1	*EC-355371	C CE V DNS4722V V 4722 400AC
C2	EC-363491	C EC V CUT SME 222M 25.0DC
C3	EC-366613	C EC V CUT SME 102M 25.0DC
D1	*ED-361055	D SILICON DS135E-UB1
D2	*ED-361055	D SILICON DS135E-UB1
D3	*ED-361055	D SILICON DS135E-UB1
D4	*ED-361055	D SILICON DS135E-UB1

Ref. No.	Part No.	Description
D5	*ED-361055	D SILICON DS135E-UB1 [EO[E].EO[V]]
D6	*ED-361055	D SILICON DS135E-UB1 [EO[E].EO[V]]
D7	*ED-361055	D SILICON DS135E-UB1 [EO[E].EO[V]]
D8	*ED-361055	D SILICON DS135E-UB1 [EO[E].EO[V]]
D9	*ED-380089J	D SILICON DFC15TC-FD1 200/1.5A
D10	ED-307572	D SILICON H 1SS131
D11	ED-307572	D SILICON H 1SS131
D12	ED-307572	D SILICON H 1SS131
D13	ED-307572	D SILICON H 1SS131
D14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-307572	D SILICON H 1SS131
D18	ED-624903	D SILICON H 1S2473
D19	ED-346586	D ZENER H HZ33L 3
D20	ED-346594	D ZENER H HZ3 B3
D21	ED-371512	D SILICON ERA22-04Y F05 400/.5
D23	ED-307572	D SILICON H 1SS131
FL1	*EO-368485	COIL LF LF4N
FR1	*ER-378650J	R FUSE H S10 ERQ16NK 1/6W R47J
IC1	EI-380090J	IC NJM2352D
IC2	ER-367752	R CB V F05 HQ RDS 1/4W 2R4J
L2	EO-380091J	COIL FIX 2 C-5293-01 560
L3	EO-380093J	COIL FIX 2 C-5294-01 101
L4	EO-380091J	COIL FIX 2 C-5293-01 560
L5	EO-380091J	COIL FIX 2 C-5293-01 560 [EO[E].EO[V]]
L6A	EO-380091J	COIL FIX 2 C-5293-01 560 [EA.EK.ES.EV.EOG]
L6B	EO-380093J	COIL FIX 2 C-5294-01 101 [EO[E].EO[V]]
L7	EO-380091J	COIL FIX 2 C-5293-01 560
L8	EO-424866	COIL FIX 1 FLO7H 122J
TR1	*ET-356817	TR 2SB891 Q.R
TR3	ET-372197	TR 2SC3377 R
TR4	ET-360067	TR 2SC3330 T,U F05
TR6	ET-360067	TR 2SC3330 T,U F05
TR7A	*ET-356224	TR 2SA1286 G.H.J F05 [EA.EK.ES.EV.EO[E]]
TR7B	ET-356817	TR 2SB891 Q.R [EO[V].EOG]
TR8	ET-356336	TR DTA114ES
TR9	ET-370311	TR DTC143XS
TR10	ET-354364	TR DTC143TS
TR11A	ET-380630J	TR 2S91010 [EA.EK.ES.EV.EO[E]]
TR11B	ET-356817	TR 2SB891 Q.R [EO[V].EOG]
TR12	*ET-366168	TR 2SD1292 Q.R
TR13	ET-353899	TR 2SA1317 S.T.U
TR15	ET-380830J	TR 2SB1010
VR1	EV-377931	R S-FIX H KV5F687A 0.30W 102
T1A	*BT-380094J	TRANS POW V1084EK [EA.EK]
T1B	*BT-380095J	TRANS POW V1084EV [EV]
T1C	*BT-380097J	TRANS POW V1084ES [ES]
T1D	*BT-380096J	TRANS POW V1084EO [EO[E].EO[V].EOG]
F1A	*EF-601942	FUSE SEMKO T 250V 630MA [EA.ES.EV.EO[E].EO[V].EO
F1B	*EF-358974	FUSE BET T 250V 630MA [EK]
F2A	*EF-601301	FUSE SEMKO T 250V 2.00A [EA.ES.EV.EO[E].EO[V].EO
F2B	*EF-358974	FUSE BET T 250V 630MA [EK]

### 13. TR (1) P.C BOARD

Ref. No.	Part No.	Description
TR2	*ET-371028	TR 2SD1266 P.Q

### 14. TR (2) P.C BOARD

Ref. No.	Part No.	Description
TR5	*ET-371028	TR 2SD1266 P.Q

### 15. 21 PIN P.C BOARD (EO,EOG ONLY)

Ref. No.	Part No.	Description
P6	EJ-372242	SOCKET HXC 1521-01-010 21P [EO[E].EO[V].EOG]
1A	SP-501728T	PANEL REAR JACK EOH (TW) [EO[E].EO[V]]
1B	SP-500950T	PANEL REAR JACK EOG (TW) [EOG]
2	ZS-362378	PLX B030X10STL CMT

### 16. VPS P.C BOARD (EOG ONLY)

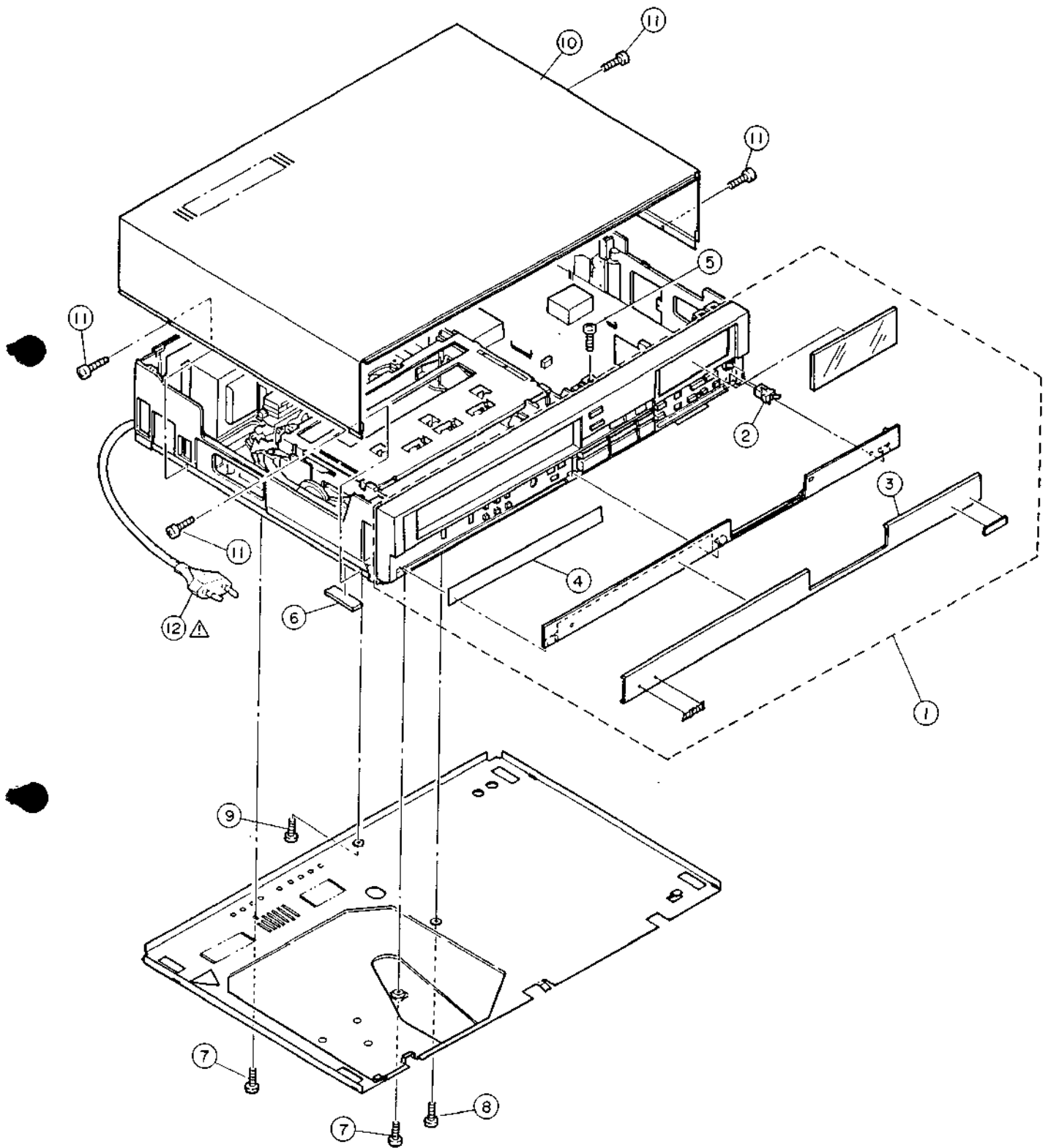
Ref. No.	Part No.	Description
IB1	EH-347743	COMP R RKC1/884 103J [EOG]
IB2	EH-357538	COMP R RKC1/885 103J [EOG]
IC1	EI-379019	IC MB88505H-579L VPSDCD2 [EOG]
IC3	EI-373999	✓ IC SDA5232 [EOG]
IC4	EI-366758	✓ IC SDA5640 [EOG]
L1	EO-376599	COIL FIX 1 LF-5.0S F05 100K [EOG]
X1	EI-318924	OSC CE CSA4M 4MHZ [EOG]
X2	EI-370418	OSC X'TAL NR-18 10.000MHZ [EOG]

### 17. VPS SW P.C BOARD (EOG ONLY)

Ref. No.	Part No.	Description
D101	ED-307572	D SILICON H 1SS131 [EOG]
SW101	ES-380115J	SW SLIDE ESD-1132252 2-02-02N [EOG] [VPS ON/OFF]



**FINAL ASSEMBLY BLOCK**



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PARTS LIST

## 18. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1A	BD-V1084B300A	PANEL FRONT BLK VS-22EA-B [EA] [INCL. 2 TO 3]
1B	BD-V1084B300B	PANEL FRONT BLK VS-22EK-B [EK] [INCL. 2 TO 3]
1C	BD-V1084B300C	PANEL FRONT BLK VS-22ES-B [ES] [INCL. 2 TO 3]
1D	BD-V1084B300D	PANEL FRONT BLK VS-22EV-B [EV] [INCL. 2 TO 3]
1E	BD-V1084B300E	PANEL FRONT BLK VS-22EO-B [EO[E],EO[V]] [INCL. 2 TO 3]
1D	BD-V1084B306A	PANEL FRONT BLK VS-22EOG-B [EOG] [INCL. 2 TO 3]
2	SZ-375320	LATCH DOOR
3	SP-379433J1	DOOR FRONT(A) E B
4A	ZZ-375382J1	LABEL PRESET (L)-P [EA,ES,EV,EO[E],EO[V],EO
4B	ZZ-379432J1	LABEL PRESET(L)-EK [EK]
5	ZS-362378	PLX BID30X10STL CMT
6	SA-353927B	FOOT(2)
7	ZS-364545	DT BID30X08STL CMT
8	ZS-362378	PLX BID30X10STL CMT
9	ZS-368547	PLX BID30X06STL CMT
10A	SP-500772	COVER UPPER B [EA,EK,ES,EV,EO[E]]
10B	SP-501743	COVER UPPER B EOG [EO[V],EOG]
11	ZS-374023	DT BID26X08STL BNI
12A	*EW-380684J	AC CORD 200 0436 LCFL B115 A S [EA]
12B	*EW-364044	AC CORD 2 CORES NRBS,LC2X0.75 [EK]
12C	*EW-371933	AC CORD200 KP419LTCE B100 A EV [ES,EV,EO[E],EO[V],EOG]
12D	EW-380684J	AC CORD 200 0436 LCFL B115 A S [EV] [EV-Y1]

## 19. ACCESSORY

Ref. No.	Part No.	Description
1	EW-348414	CORD PAL
2A	AX-N4003B010A	LLX REMOCON BLK RC-V22A-EB [EA,EV,EO[E],EO[V]]
2B	AX-N4003B010C	LLX REMOCON BLK RC-V22B-EB [EK,ES]
2C	AX-N4003B010D	LLX REMOCON BLK RC-V23A-GB [EOG]

## 20. REMOTE CONTROL UNIT RC-V22

Ref. No.	Part No.	Description
D1	ED-376111	D LED SE303AC INFRARED
D2	ED-344280	D SILICON H GMA-01-FY2 F05
D3	ED-344280	D SILICON H GMA-01-FY2 F05
D4	ED-344280	D SILICON H GMA-01-FY2 F05
IC1	EI-376112	IC UPD6122G
TR1	ET-302502	TR 2SC2001 K
X1	EI-376113	OSC CE CSB455EB
1	SC-375525A	COVER BATTERY(B)

# IV. MAIN COMPONENTS REPLACEMENT

## 4-1. EJECTOR BLOCK

### 4-1-1. REMOVING THE EJECTOR BLOCK

- 1) Depress the POWER button to turn ON the VCR and insert the Cassette tape into the VCR. The unit get to PLAY mode itself.
- 2) Depress the POWER button again to turn OFF the VCR. Disconnect AC power cord after confirm that completely tape is unloaded.
- 3) Take off two screws (A) and disconnect J504 from MAIN P.C. Board.
- 4) Remove the Ejector Block.

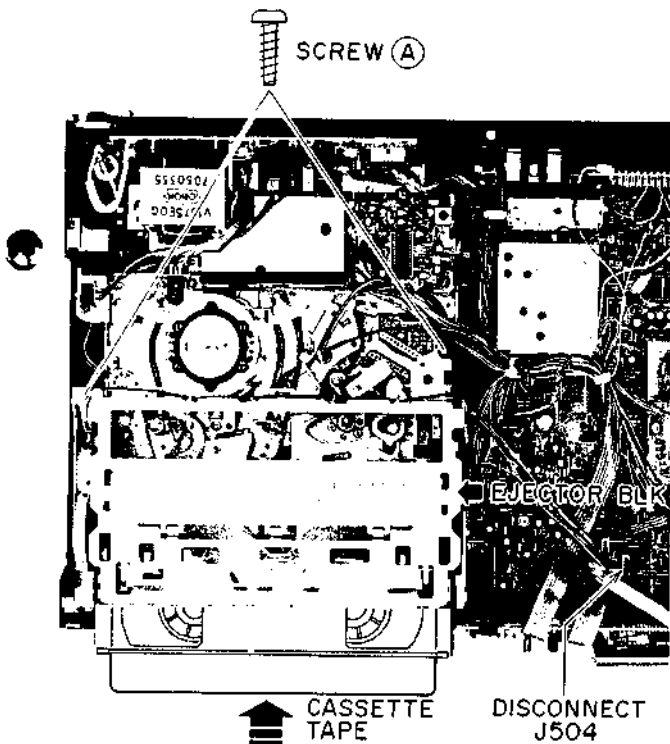


Fig. 4-1

### 4-1-2. INSTALLATION OF THE EJECTOR BLOCK

- 1) Install the Ejector Block on the MECHA. chassis as shown in Fig. 4-2.
- 2) Tighten two screws (A) and connect J504.
- 3) Plug in AC POWER CORD and Depress the POWER button to turn ON the VCR.
- 4) Confirm that unit will function correctly.

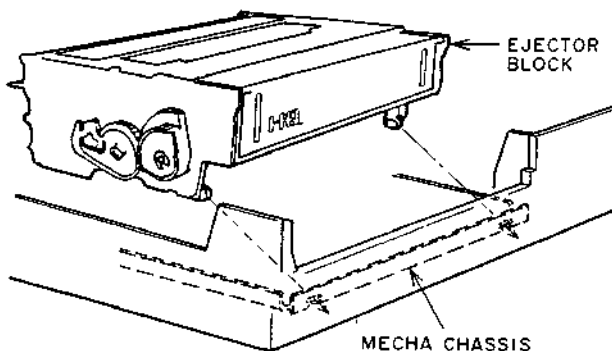


Fig. 4-2

## 4-2. LOADING MECHANISM BLOCK

### 4-2-1. REMOVAL OF MECHANISM BLOCK

- 1) Remove the Ejector Block. (Refer to 4-1-1. EJECTOR REPLACEMENT.)
- 2) Take out two screws (A) and remove the Transistors.
- 3) Disconnect P700, P701 and P800 from the PRE-AMP P.C. Board.
- 4) Take out two screws (B) and remove the PRE-AMP P.C. Board.

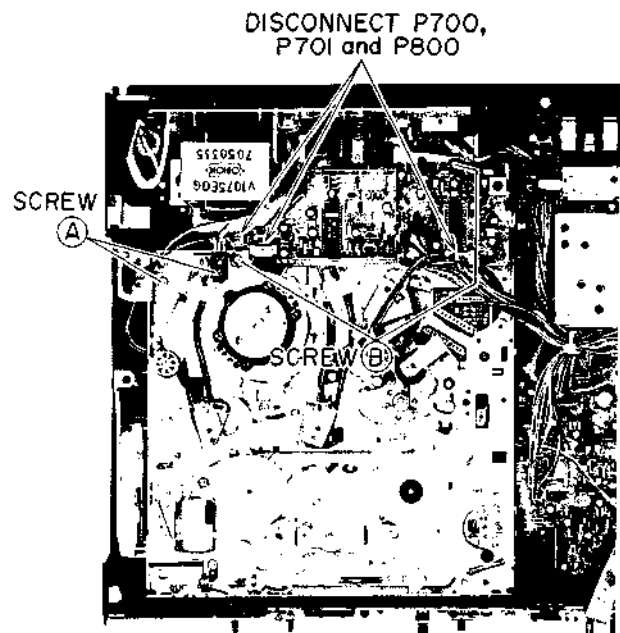


Fig. 4-3

- 5) Disconnect P502 from the DRUM MOTOR P.C. Board on the bottom of VCR.
- 6) Take out three screws (C) and remove the MECHA. BLK.

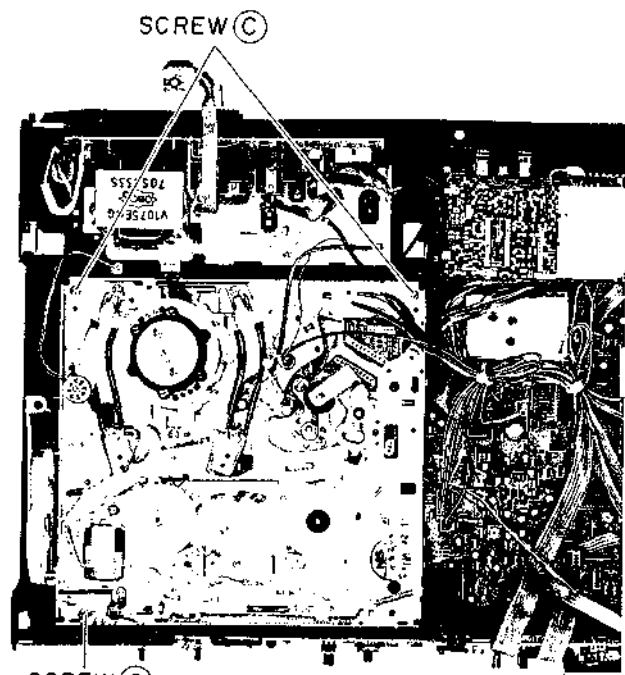


Fig. 4-4

#### 4-2-2. REASSEMBLE OF THE LOADING MECHANISM BLOCK

1) Attach the GEAR FL DRIVE to chassis CAM GEAR PART.

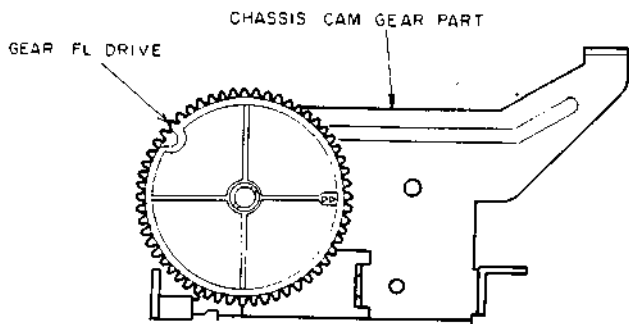


Fig. 4-5

2) Install the GEAR WARM PART as shown in Fig. 4-6.

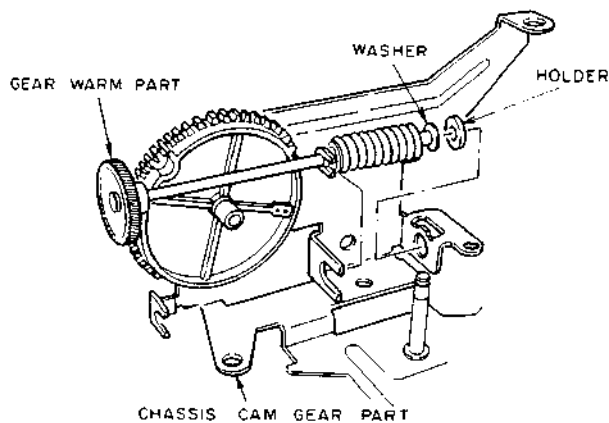


Fig. 4-6

3) Attach the GEAR WHEEL to CHASSIS CAM GEAR PART so that the GEAR FL DRIVE mark (a) meets the GEAR WHEEL mark (b-1), and fasten the GEAR WHEEL with slit washer.

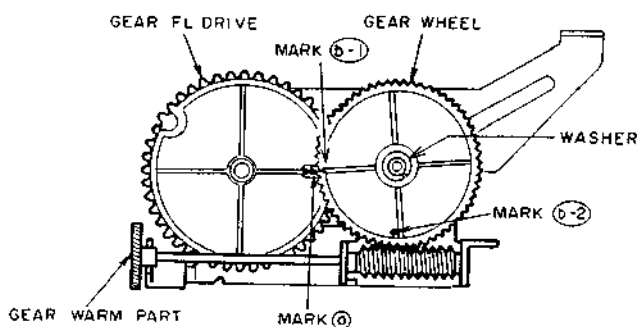


Fig. 4-7

4) Attach the LEVER CAM SLIDER as shown in Fig. 4-8.

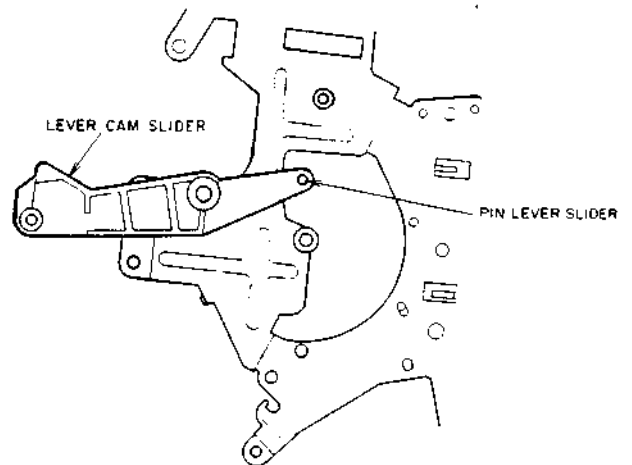


Fig. 4-8

5) Attach the GEAR CAM CENTER so that pin lever slider head is appeared from the hall (A) of the GEAR CAM CENTER.

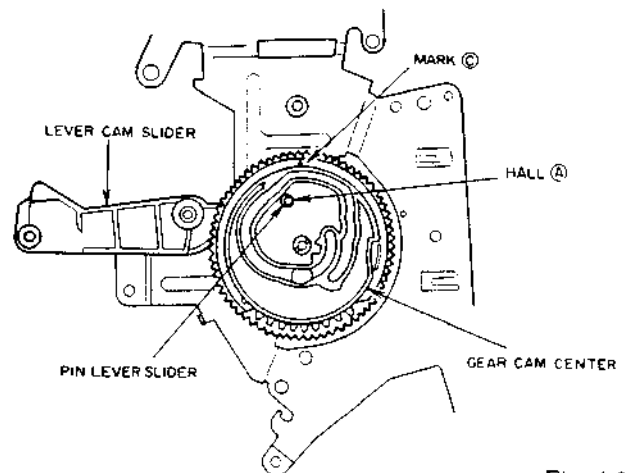


Fig. 4-9

6) Attach the GEAR CAM TENSION so that the GEAR CAM TENSION mark (d-1) meets the GEAR WHEEL mark (b-2), and moreover the GEAR CAM CENTER mark (C) should be located between the marks (d-2) of the GEAR CAM TENSION.

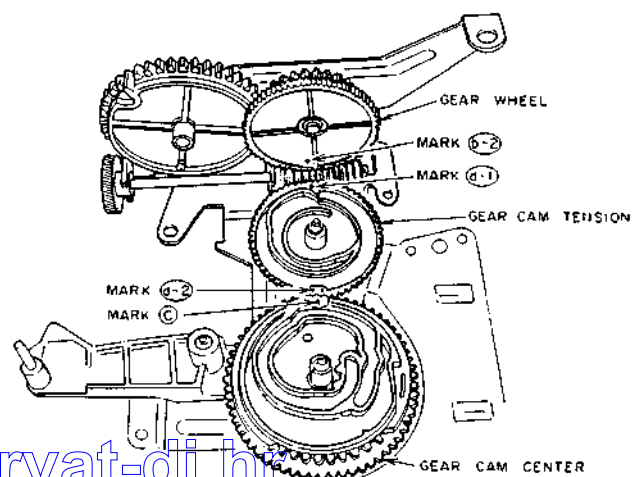


Fig. 4-10

7) Attach the ARM FWD BRAKE and Spring as shown in Fig. 4-11.

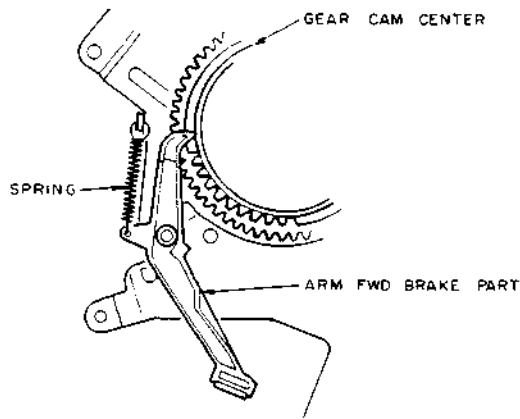


Fig. 4-11

10) Meet the marks of MODE SELECT SW and attach the MODE SELECT SW BLK onto the LOADING MECHA BLK as shown in Fig. 4-14. Tighten the MODE SELECT SW BLK with a screw (C).

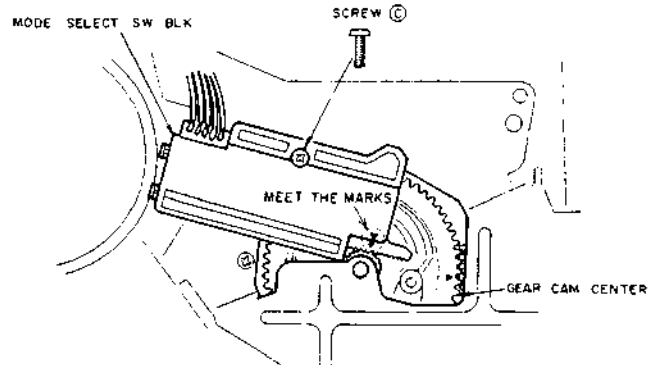


Fig. 4-14

8) Set the GEAR TOGGLE (TU) and (S) to the unloaded position with your fingers. At this time meet the marks of the GEAR TOGGLE (TU) and (S) as shown in Fig. 4-12.

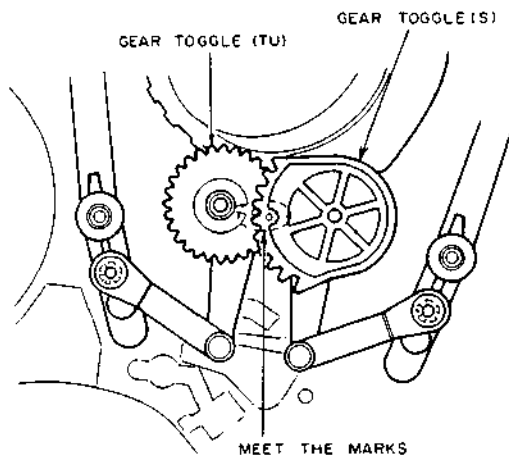


Fig. 4-12

11) Attach the BELT IDLER as shown in Fig. 4-15.

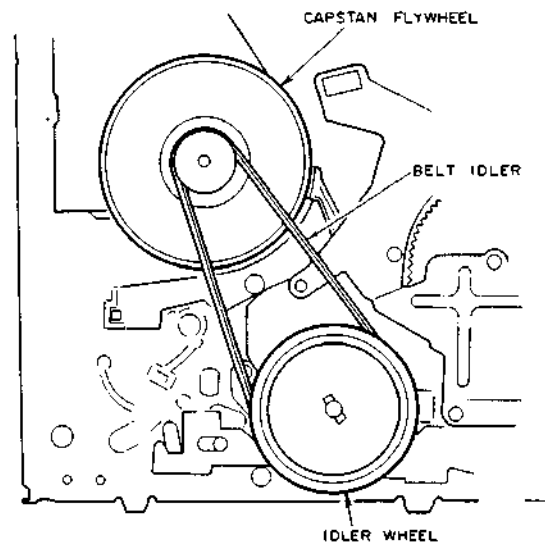


Fig. 4-15

9) Attach the LOADING MECHA. BLK with holding the GEAR TOGGLE (TU) in the direction of the arrow as shown in Fig. 4-13. Tighten the LOADING MECHA BLK with four screws (A) and (B).

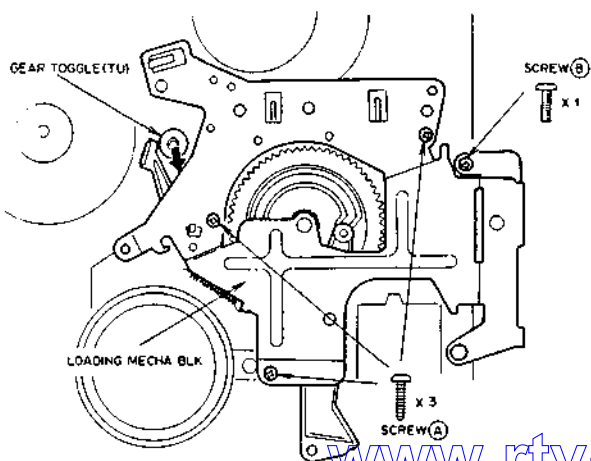


Fig. 4-13

12) Attach the LOADING DRIVE BLK and tighten with a screw (D).

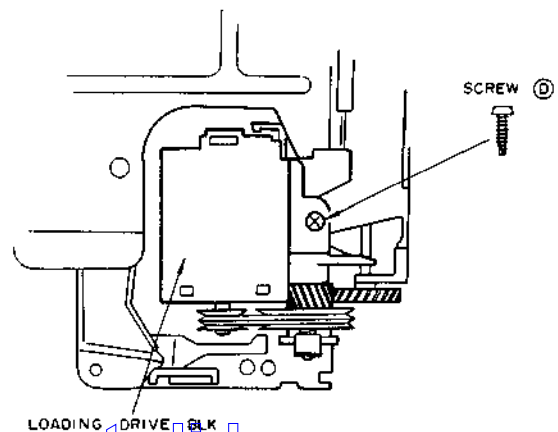


Fig. 4-16

### 4-3. UPPER DRUM (HEAD DRUM REPLACEMENT)

#### 4-3-1. REMOVAL OF UPPER DRUM

- 1) Unsolder the eight relay leads and remove two Upper Drum fixing screws.
- 2) Gently lift and remove the Upper Drum.

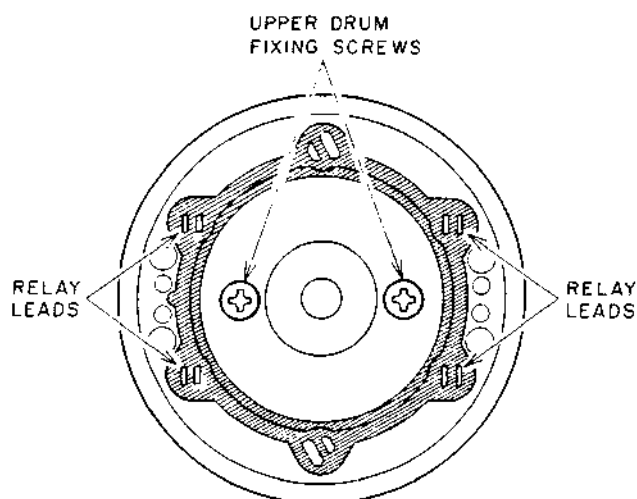


Fig. 4-17

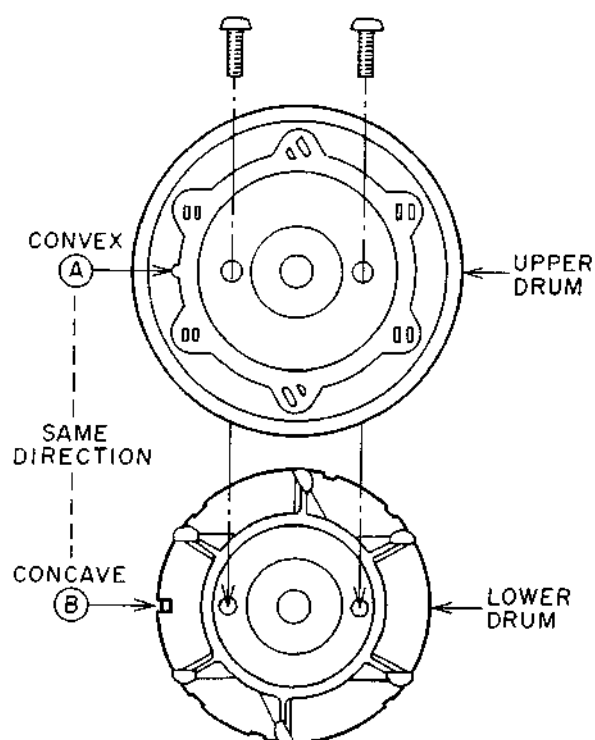


Fig. 4-18

#### 4-3-2. INSTALLATION OF UPPER DRUM

- 1) Install the Upper Drum to the Lower Drum so that Upper Drum convex A and Lower Drum concave B become same direction.

**NOTE:** Height precision is required for the proper performance, and the head tips are fragile, so the following points should be noted when replacing the Upper Drum Block.

- (a) Do not loosen the set screw on the collar pre-load.
- (b) Before fixing, clean both surfaces where the upper drum and the rotary transformer part meet with alcohol.
- (c) When installation of the 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) 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.
- (e) Tighten the two Upper drum fixing screws alternately and gradually. Tighten them at 6kg-cm torque.

#### 4-3-3. AFTER REPLACEMENT

After replacement, the following adjustments are necessary for the proper performance.

- 1) Control head phase adjustment. (Tape transport adj. 5-2.4)
- 2) PB switching point adjustment. (Electrical adj. Step 2)
- 3) Video Rec current adjustment. (Electrical adj. Step 9)

### 4.4. DRUM MOTOR REPLACEMENT

- 1) Disconnect the connector P502 from the Drum Motor P.C. Board.
- 2) Take out two screws (A) and remove the Rotary plate.

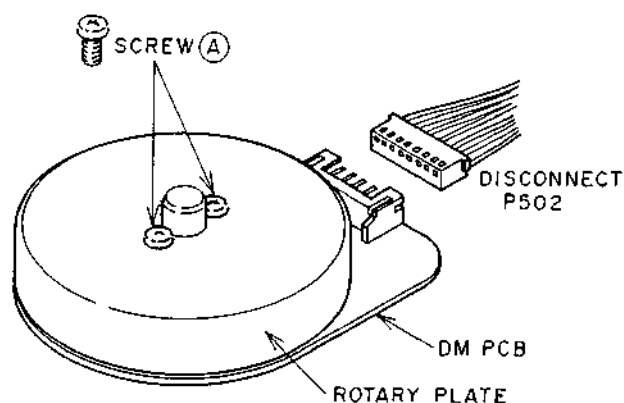


Fig. 4-19



3) Take out three screws (B) and replace the drum Motor.

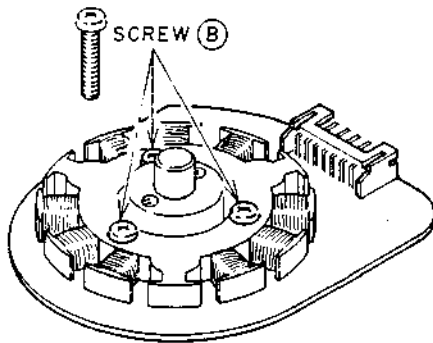


Fig. 4-20

4) Attach the Rotary plate to the Drum Motor so that the Rotary plate hall (a) and Collar preload hall (b) are in a opposite direction.

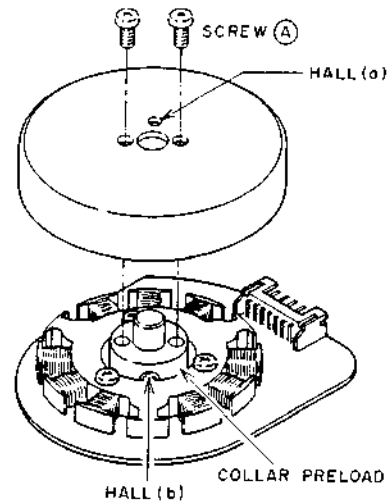


Fig. 4-21

## V. MECHANICAL ADJUSTMENT

### 5-1. BACK TENSION ADJUSTMENT

- 1) Remove the Ejector Block. (Refer to 4-1-1. EJECTOR BLOCK REPLACEMENT.)
- 2) Depress the POWER button to turn ON the VCR. the VCR will get to the tape loaded mode without cassette tape.
- 3) In the Play mode, loosen the screw (A) and set the Tension Arm position to the correct position as shown in Fig. 5-1 by the Tension Band Holder position, then tighten the screw (A).

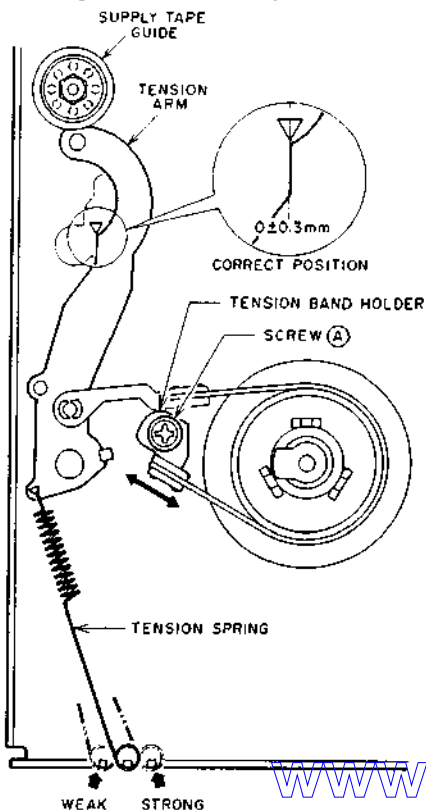


Fig. 5-1

- 4) Depress the Power button to Turn OFF.
- 5) Set the Reference Tape TF-532CBS (AT-751360) and put some weight on the Reference tape as a stabilizer.
- 6) Depress the POWER button and PLAY button.
- 7) Observe the TV screen and adjust V-HOLD for TV so that switching point appears on the TV screen as shown in Fig. 5-2.
- 8) Select the hook position of the Tension spring where the smallest skew should be obtained.

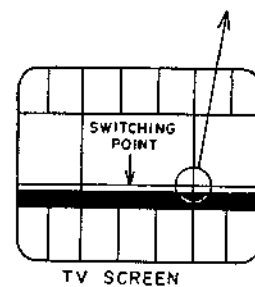
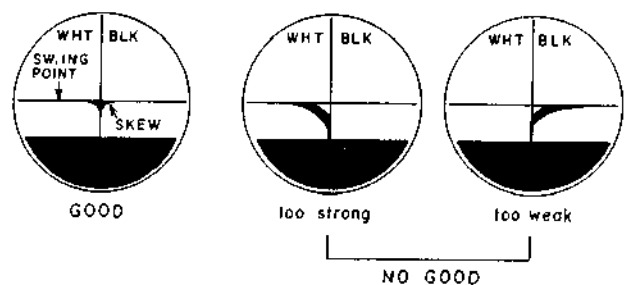


Fig. 5-2



## 5-2. TAPE TRANSPORT ADJUSTMENTS

### 5-2-1. TAPE CURL ADJUSTMENT AT THE TAKE-UP TAPE GUIDE

- 1) Playback the Reference tape TF-530RFS (AT-751775).
- 2) Turn the screw **a** on the A/C Head Blk until the edge of the tape barely touches the lower part of TAKE-UP TAPE GUIDE without any curl or wrinkle.

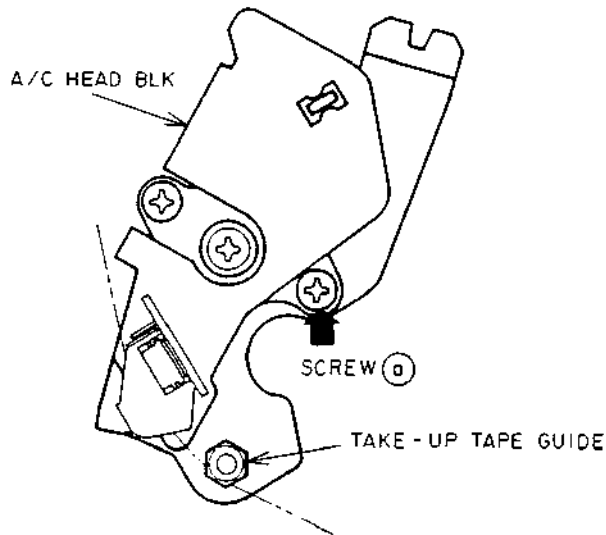


Fig. 5-3

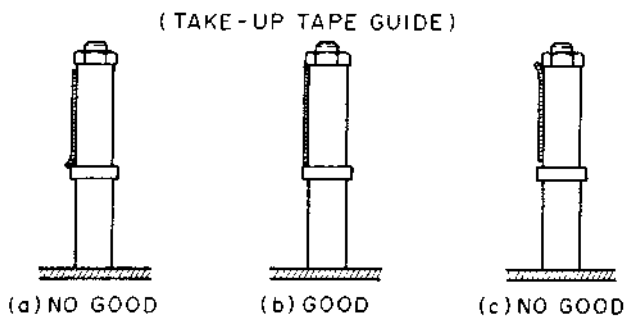


Fig. 5-4

### 5-2-2. CONFIRMATION OF TAPE CURL AT THE SUPPLY TAPE GUIDE

Confirm that the edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE without any curl or wrinkle.



Fig. 5-5

### 5-2-3. AUDIO HEAD AZIMUTH ADJUSTMENT

- 1) Connect an AC volt meter or an oscilloscope to AUDIO OUT jack on the Rear panel.
- 2) Playback the Reference tape TF-530RFS (AT-751775).
- 3) Adjust the screw **b** to obtain the maximum audio output.

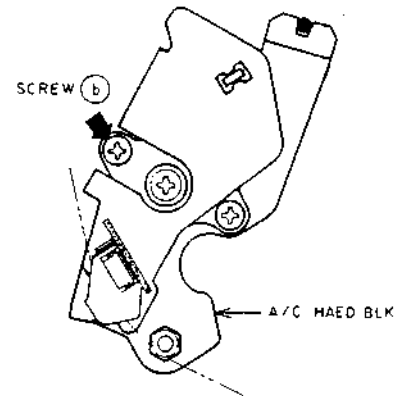


Fig. 5-6

### 5-2-4. CONTROL HEAD PHASE ADJUSTMENT

- 1) Connect an Oscilloscope to TP202 (ENVE) on the MAIN P.C. Board.
- 2) Playback the Reference tape TF-530RFS (AT-751775).
- 3) Depress the TRACKING button  or  on the Front panel until "T" mark can be seen in the center position as shown in Fig. 5-7.
- 4) Insert a sharpness screwdriver into A/C HEAD base and hall **a** as shown in Fig. 5-8.
- 5) Move the A/C HEAD base by moving a screwdriver in the directions of the arrow as shown in Fig. 5-8 to obtain the maximum RF envelope.

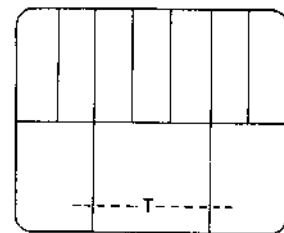


Fig. 5-7 On the TV screen

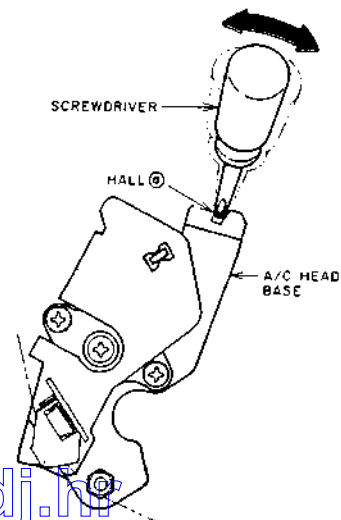


Fig. 5-8

### 5-2-5. ARM REVIEW HEIGHT ADJUSTMENT

- 1) Playback the beginning part of E-180 tape and set the unit in Review mode with depressing REW button.
- 2) Turn the ARM REVIEW height nut (a) so that the edge of the tape barely touches the lower part of TAKE-UP TAPE GUIDE without any curl or wrinkle between TAKE-UP TAPE GUIDE and CAPSTAN SHAFT.

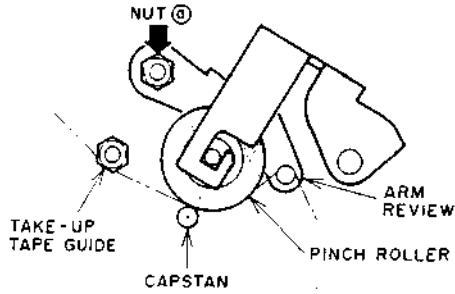


Fig. 5-9

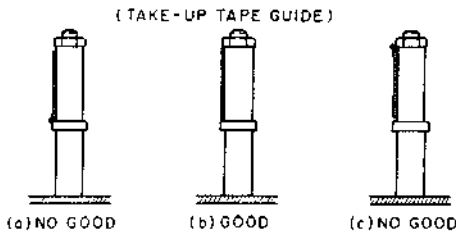


Fig. 5-10

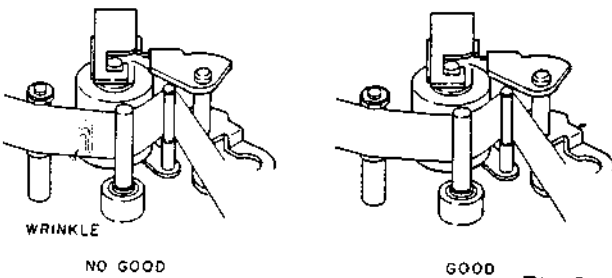


Fig. 5-11

### 5-2-6. LOADING LEADER HEIGHT ADJUSTMENTS

- 1) Slightly loosen the set screw at lower part of the LOADING LEADERS (L), (R) so that LOADING LEADERS can be adjusted with reasonable tightness. (Refer to Fig. 5-12.)
- 2) Playback the Reference tape TF-530RFS (AT-751775).
- 3) Connect an Oscilloscope to TP202 (ENVE) on the MAIN P.C. Board.
- 4) Turn the LOADING LEADER Heads with a screwdriver to obtain flat RF envelope as Ideal Envelope shown in Fig. 5-13.
- 5) After the adjustments, tighten the LOADING LEADER set screws.

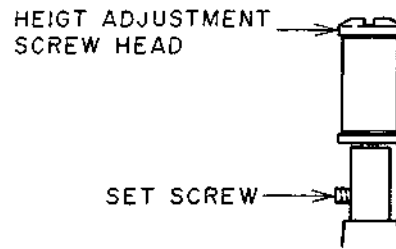


Fig. 5-12

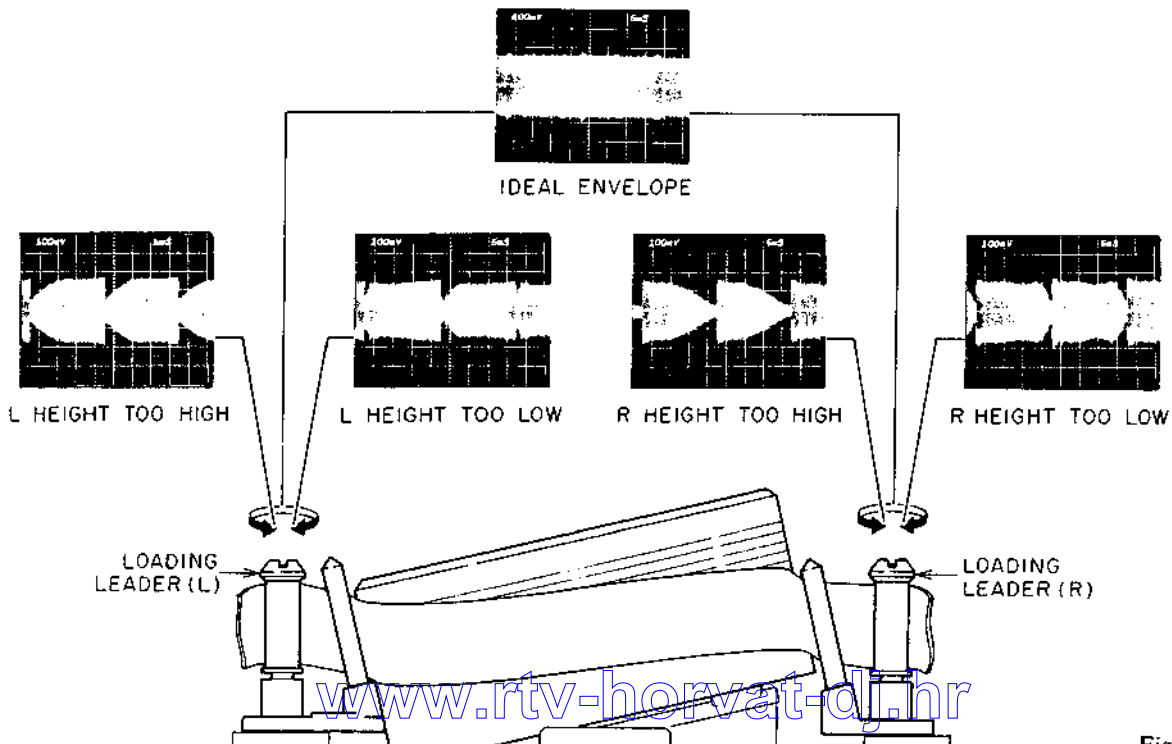


Fig. 5-13

### 5-2-7. A/C HEAD HEIGHT ADJUSTMENTS

- 1) Playback the Test tape TF-526HH (AT-751788).
- 2) Connect the Oscilloscope CH-1 to Audio output and CH2 to TP500.
- 3) Turn the hexagon screw to obtain 1/2 of the output level of either CH1 or CH2 whichever has output signal.

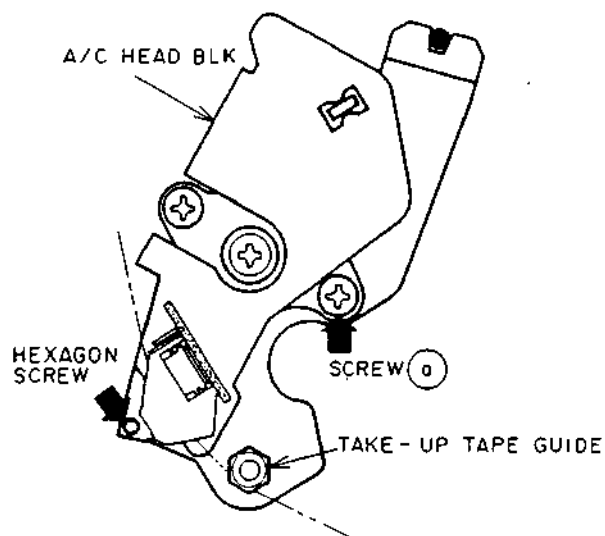


Fig. 5-14

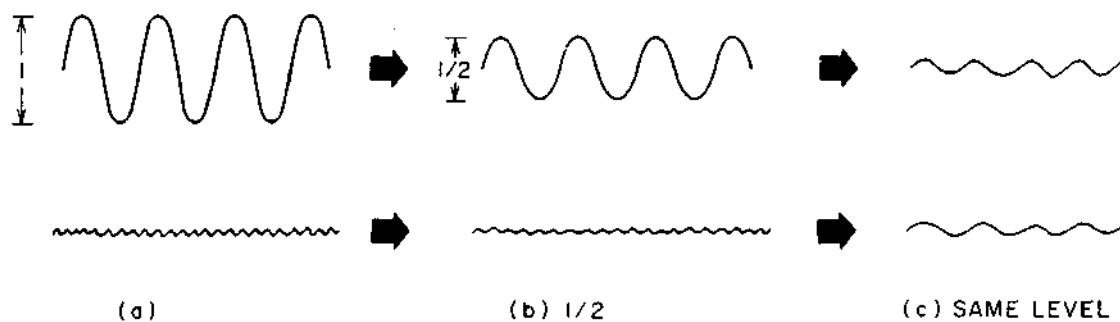


Fig. 5-15

- 4) Slightly turn the screw @ until the tape edge barely touches the lower part of the Take-up Tape Guide without any curl as shown in Fig. 5-4.
- 5) Confirm that both signals of CH1 and CH2 are nearly same level. Repeat the adjustments 3), 4). If it is not nearly same level.

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