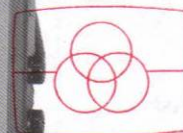


FDL-390BE

SERVICE MANUAL

*AEP Model
UK Model
E Model*



Free service manuals
Gratis schema's

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SPECIFICATIONS

TV standard	CCIR TV standard British TV standard
Colour system	PAL
Channel coverage	CCIR: VHF E2-E12 CCIR: UHF E21-E68 UK: UHF E21-E68
Antenna	VHF/UHF telescopic antenna
Display	TN LCD/TFT active matrix method Total picture-element number: 89,505 Effective picture-element ratio: more than 99.99%
Picture size	3-inch picture measured diagonally
Speaker	77 mm (3 inches) dia.
Input	EXT ANT: minijack, impedance 75 ohms AUDIO/VIDEO IN: tripolar minijack, Impedance Audio 47 kilohms/Video 75 ohms
Output	EAR: minijack, impedance 8-300 ohms
Power requirement	9 V DC, See page 3 "Power sources".
Battery life	See page 3 "Power sources".
Power consumption	5.8 W (9 V DC)
Dimensions	Approx. 208 × 116.5 × 72.5 mm (w/h/d) (8 1/4 × 4 5/8 × 2 7/8 inches) incl. projecting parts
Weight	Approx. 1.1 kg (2 lb 7oz) incl. batteries.

FEATURES

- The LCD (Liquid Crystal Display) provides clear pictures and natural facial colour tones.
- This unit receives either CCIR (VHF/UHF) or British PAL (UHF) TV system.
- This unit is used as an AV (audio/video) monitor.
- The TV signal booster amplifies the radio waves and improves receiving.
- This unit has a powerful sound output of 500mW.
- The voltage synthesizer tuning system allows easy tuning.
- Provides 8 hours of continuous operation using the six LR14 (size C) alkaline batteries.
- An angle-adjustable stand is provided.

Supplied accessory (except for the UK model)

AC power adaptor (1)



Design and specifications are subject to change without notice.



LCD COLOUR TV
SONY®

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. GENERAL			4. DIAGRAMS		
• Power Sources		3	4-1. Semiconductor Lead Layouts		10
• Watching the TV		3	4-2. Printed Wiring Board		11
• Using as a Monitor		3	4-3. Schematic Diagram		15
• Connecting an External Antenna		3			
2. DISASSEMBLY			5. PIN DESCRIPTION		
2-1. Cabinet (rear) Sub Assy		4	5-1. Pin Description		20
2-2. Main Board Assy		4			
2-3. Fluorescent Indicator Tube		5	6. EXPLODED VIEW		
2-4. Liquid Crystal Display Module		5	6-1. Main Section		22
3. ELECTRICAL ADJUSTMENTS		6	7. ELECTRICAL PARTS LIST		23

MODEL IDENTIFICATION

— Model Number Label —

• AEP, UK, E model: 4-032-249-01

SONY[®]

MODEL NO. FDL-390BE

LCD COLOUR TV
DC 9V  (AVERAGE) 5.8W
BATTERY SUPPLY: 1.5V×6 LR14 SIZE C OR EQUIV.
MADE IN TAIWAN R.O.C.

• Italian model: 4-032-252-01

FDL-390BE

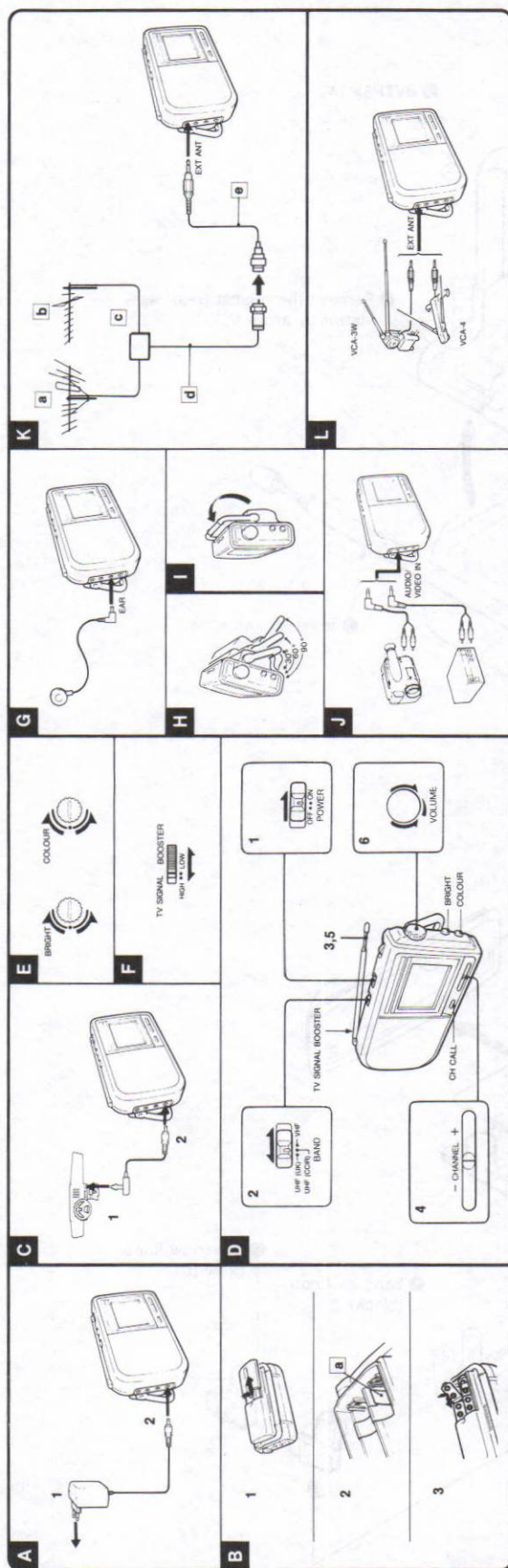
SONY CORPORATION

ALIMENTAZION 9Vc.c.
ASSORBIMENTO 9.5Wh
TV REALIZZATO CON CANALE "C" VHF
SECONDO NORME ITALIANE DEC. MIN. 9-8-1975

FABBRICATO A TAIWAN R.D.C.

SECTION 1 GENERAL

This section is extracted from instruction manual.



When you read this operating instructions, refer to the illustrations indicated in ■.

Power Sources

Using on House Current ■

Use the supplied AC power adaptor.
For the customers in the United Kingdom: Use the Sony AC-E390 AC power adaptor (not supplied).
1 Connect the AC power adaptor to a wall outlet.
2 Connect the AC power adaptor to the DC IN 9V jack of this unit.

After operating this unit with an AC power adaptor, be sure to disconnect the adaptor from the main power.
The power switch on this unit does not turn off the AC power adaptor.

Using on the Alkaline Batteries ■

Insert six LR 14 (size C) batteries (not supplied).
Remove the battery compartment lid at the rear.
1 Lay the ribbon (a) on the battery compartment lid.
2 Insert the batteries with correct polarities.
3 Reinstall the lid.

To remove the batteries
Pull the ribbon. The batteries will come out of the compartment.

Battery Replacement

When the batteries become weak, the unit's protective function will automatically cause the picture to disappear. In this case, replace all the batteries with new ones.

Battery life

You can continuously use for approximately 8 hours on the alkaline batteries, or approximately 2.5 hours on the manganese batteries.
The battery life becomes short in a cold place.

Using on Car Battery ■

You can use the unit only in a 12 V DC car.
You need the Sony DCC-E190L car battery cord (not supplied).
1 Connect the car battery cord to the DC IN 9V jack of this unit.
2 Connect the car battery cord to the DC IN 9V jack of this unit.

Notes

- Use only the supplied or recommended AC power adaptor or DCC-E190L car battery cord. Do not use any other AC power adaptor or car battery cord.
- When the unit is not to be used for a long period of time, remove the batteries to avoid unit damage caused by battery leakage and corrosion.



Watching the TV ■

For your safety, do not watch the TV nor operate the controls while driving.

1 Set the POWER switch to ON.

2 Select the band as follows:

For continental European countries, set to VHF or UHF (CCIR).
For the United Kingdom, set to UHF (UK).
The green line on the screen indicates the VHF channels.
The red line indicates the UHF channels.

3 Pull out the antenna fully.

4 Tune in the desired channel.

5 Adjust the length and direction of the antenna.

For UHF, the receiving may be better with the short antenna.

6 Adjust the volume.

To turn off the TV
Set the POWER switch to OFF, and fold the antenna.

If the channel changes
If the picture is lost because of a mechanical shock, or if the unit has passed through a built-in channel may change. If this happens, tune in the desired channel again with CHANNEL +/-.

Adjusting the Picture ■

For more brightness, turn the BRIGHT (brightness) control clockwise.

For less brightness, turn the BRIGHT control counterclockwise.

For more colour intensity, turn the COLOUR control clockwise.

For less colour intensity, turn the COLOUR control counterclockwise.

To indicate the current channel

Press the CH (channel) CALL button.

The line (green for VHF, red for UHF) appears at the position of the current channel.

To improve the receiving condition ■

Set the TV SIGNAL BOOSTER switch to LOW where the radio wave is strong.

Set the TV SIGNAL BOOSTER switch to HIGH where the radio wave is weak.

To listen with the earphone ■

Connect the Sony ME-L91D earphone (not supplied) to the EAR jack.

How to Use the Stand

To watch the TV ■

You can adjust the stand in three angles.

To carry the unit ■

Using as a Monitor ■

You can use the unit as a colour monitor for your VTR or video camera recorder.
Connect your VTR to the AUDIO/VIDEO IN jack using the Sony AVK-715M AV cord (not supplied). Before connection, turn off the unit and the VTR.

Notes

- If the picture is distorted or noisy, move the unit away from the VTR.
- When watching TV, disconnect the plug from the AUDIO/VIDEO IN jack.

Connecting an External Antenna

Receiving will improve.

Connecting the Outdoor Antenna ■

[a] to [b] indicate the letters in the illustration.

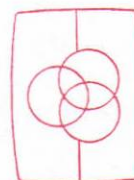
Connect the VHF antenna [a] and/or the UHF antenna [b] to the EXT ANT jack of this unit using the mixer [c], 75-ohm coaxial cable [d], and EAC-6M antenna cable [e] (not supplied).

Connecting the Car Antenna ■

Connect the car antenna (not supplied) to the EXT ANT jack of this unit.

Note

When an external antenna is connected, the TV SIGNAL BOOSTER switch does not function.



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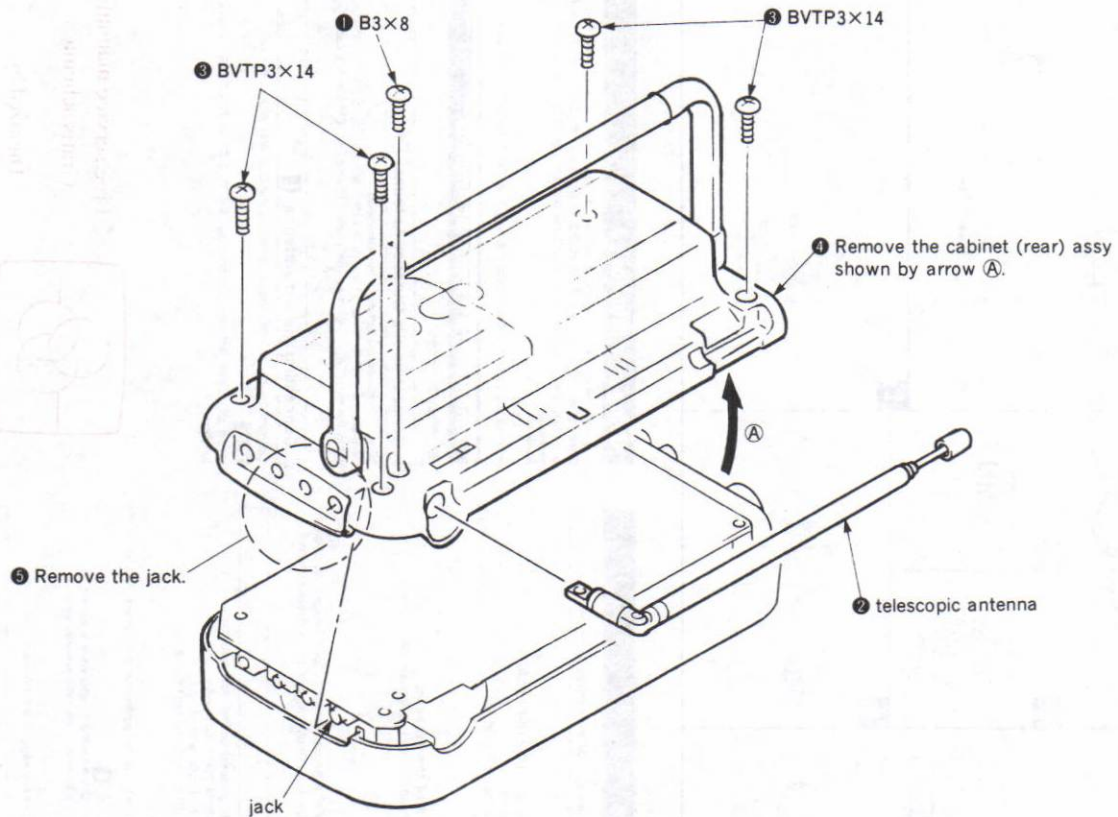
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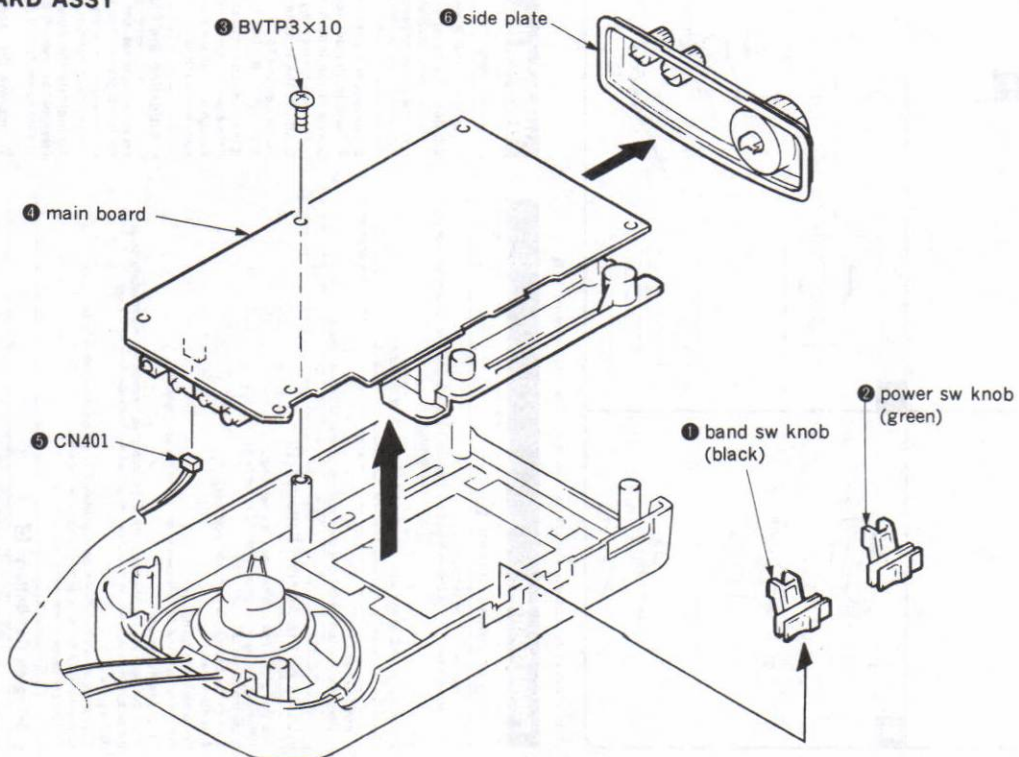
SECTION 2 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

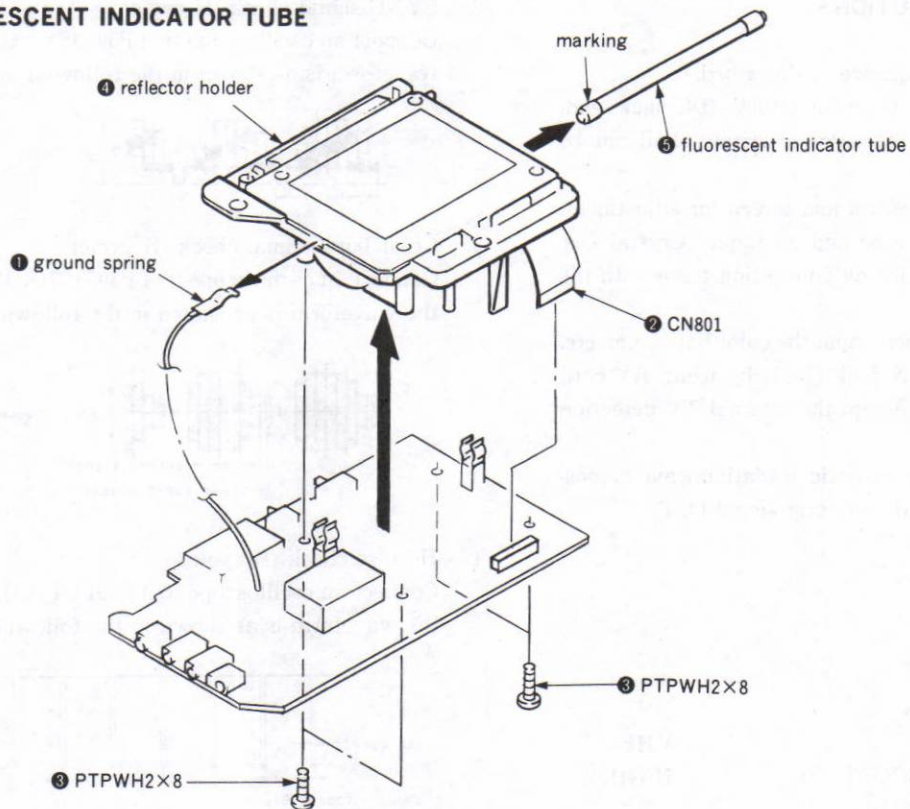
2-1. CABINET (REAR) SUB ASSY



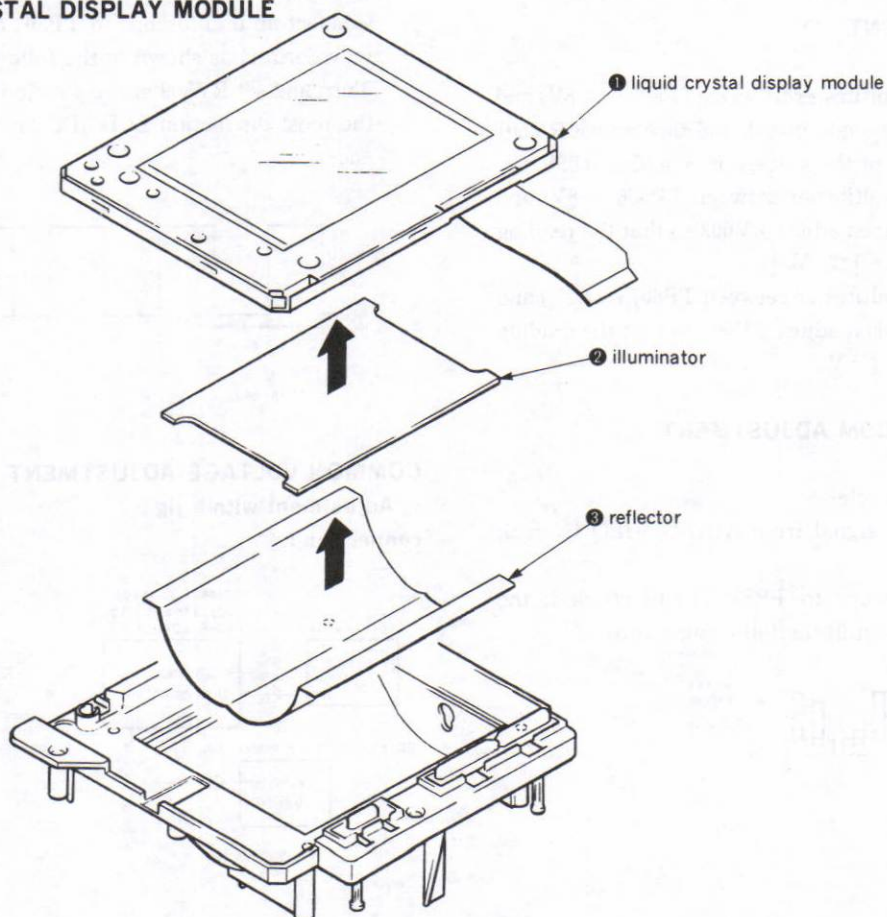
2-2. MAIN BOARD ASSY



2-3. FLUORESCENT INDICATOR TUBE



2-4. LIQUID CRYSTAL DISPLAY MODULE



SECTION 3 ELECTRICAL ADJUSTMENTS

CAUTIONS

1. Make adjustment in sequence as described.
2. Power supply voltage is $+9.0 \pm 0.1V$ (DC jack end) unless otherwise specified. Power supply shall not be input overlapped.
3. Check the error in waveform and screen for adjustment.
4. Measure a fluorescent tube and an Liquid Crystal Display module (LCD) device by connecting them with the main board.
5. Unless otherwise specified, input the color bar signal, etc. from AUDIO/VIDEO IN jack (J501) by using AV-cord (AVK-715M, etc.) to intercept the internal TV detection output.

Also, usually use monochromatic gradation wave monoscope with chroma signal and burst signal OFF.

6. Measuring instruments
 - PAL pattern generator
 - Digital multimeter
 - Oscilloscope
7. Modes of SW, VR

S601 (POWER)	ON
S101 (BAND)	VHF
S105 (TV SIGNAL BOOSTER)	HIGH
(AEP, UK, E model)	
RV401 (VOLUME)	MIN.

VOLTAGE ADJUSTMENT

Procedures :

1. Connect a digital multimeter between TP605 (+4.8V) and TP602 (GND) on the main board, and then adjust RV601 so that the reading of the voltage is $+4.85 \pm 0.05V$.
2. Connect a digital multimeter between TP606 (-8V) and TP602 (GND), and then adjust RV602 so that the reading of the voltage is $-8.0 \pm 0.2V$.
3. Connect a digital multimeter between TP607 (+4.2V) and TP602 (GND), and then adjust RV603 so that the reading of voltage is $+4.2 \pm 0.05V$.

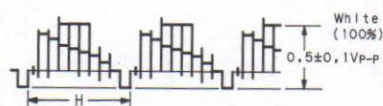
WAVEFORM CHECK/COM ADJUSTMENT

Procedures :

1. Y signal check (H cycle)

Input the color bar signal from AUDIO/VIDEO IN jack (J501).

Connect an oscilloscope to TP303 (Y) to check if the waveform is as shown in the following figure.



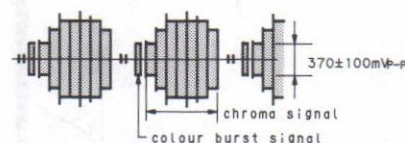
2. SYNC signal check (H cycle)

Connect an oscilloscope to TP304 (SYNC) to check if the waveform is as shown in the following figure.



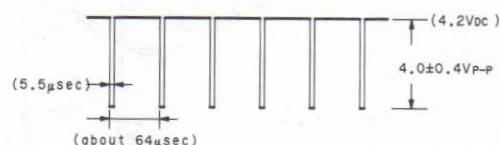
3. Color burst signal check (H cycle)

Connect an oscilloscope to TP305 (CHROMA) to check if the waveform is as shown in the following figure.



4. H pulse check (H cycle)

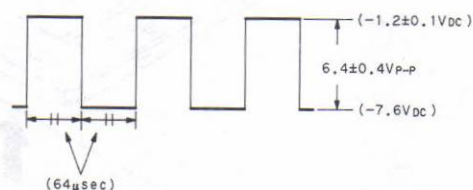
Connect an oscilloscope to TP301 (H PULSE) to check if the waveform is as shown in the following figure.



5. COM signal check/adjustment (2H cycle)

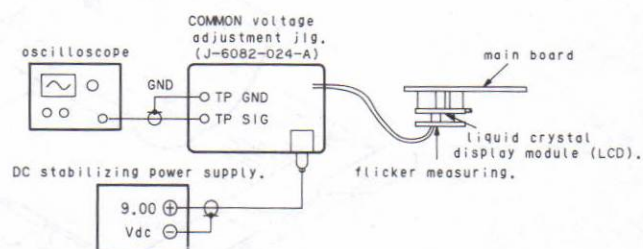
Connect an oscilloscope to TP302 (COM) to check if the waveform is as shown in the following figure.

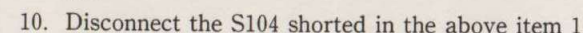
Turn and set RV309 at the position where the contrast is the most distinction LCD. (DC level of figure are reference)



COMMON VOLTAGE ADJUSTMENT

— Adjustment with a jig —
connection :





AN5707NS
28
15
1
14
(TOP VIEW)

M5236ML
V-OUT
G
V-IN
(TOP VIEW)

TA8805F
24
13
1
12
(TOP VIEW)

DTC143XK
25A1162-G
25A1344
25C1623
25C2714-Y
25C3395
25C3398
25C4047

MA152WK
3
2
1
2
3
1
RD10M-B2
RD5.1M-B2
RD5.6M-B2
SB20-03P
1S5153

CX20159
TA7370F
16
9
1
8
(TOP VIEW)

NJM2073D
8
7
6
5
1
2
3
4
(TOP VIEW)

μPC1651G
2
1
3
4
1 VCC
2 INPUT
3 GND
4 OUTPUT

DA204U
1S5226
3
2
1
2
3
1

M52003AFP
40
11
30
10
5
15
MARKING SIDE VIEW

NJM2904M
8
7
6
5
1
2
3
4
(TOP VIEW)

DTB113ZK
2SB798-DL
2SC3647S
2SD999-CLKK
8
7
6
5
1
2
3
4
(TOP VIEW)

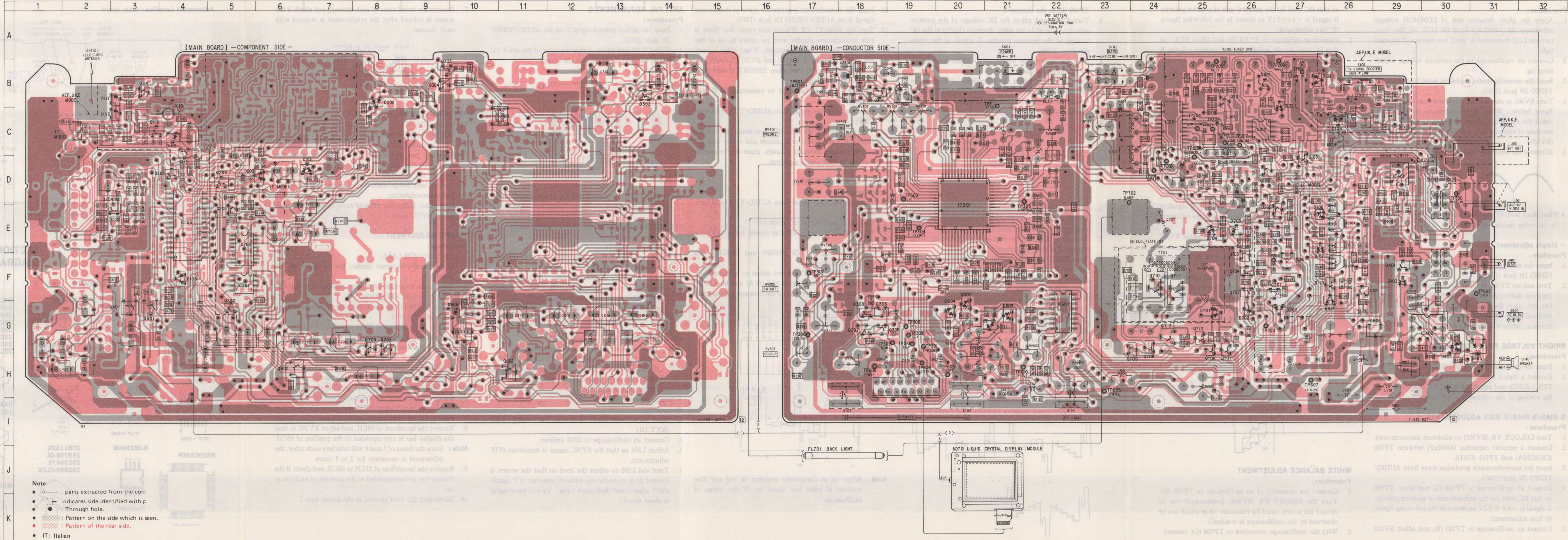
MA152WA
3
2
1
2
3
1

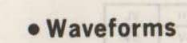
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101(*1)	B-27	Q308	G-18
D102	B-27	Q401	G-3
D103(*2)	C-28	Q404	F-26
D104	G-28	Q601	G-3
D106	E-27	Q602	H-11
D107	E-27	Q603	H-6
D108	F-4	Q701	H-25
D109(*1)	C-4	Q702	G-8
D110(*1)	C-3	Q703	F-26
D111(*1)	B-3	Q704	F-26
D201	D-7	Q705	G-8
D202	B-8	Q706	H-25
D203	D-6	Q707	F-26
D260(*2)	G-27	Q708	H-24
D403	F-29	Q709	H-24
D404	G-30	Q710	F-24
D601	G-21	Q711	F-24
D602	G-20	Q712	G-25
D603	G-21	Q713	G-24
D604	G-20		
D605	G-31		
D606	G-10		
D701	G-25		
D702	G-26		
D703	E-26		
D704	E-25		
IC101(*1)	C-4		
IC102	C-26		
IC103	E-4		
IC201	C-24		
IC261(*2)	F-5		
IC262(*2)	E-5		
IC301	D-20		
IC401	D-29		
IC402	G-30		
IC601	G-22		
IC602	G-29		
Q101	F-28		
Q104	B-26		
Q105	D-27		
Q106	D-26		
Q110	F-28		
Q112(*1)	C-3		
Q113(*1)	C-4		
Q114(*1)	B-3		
Q201	B-25		
Q202	D-4		
Q203	D-5		
Q204	E-3		
Q205(*2)	E-5		
Q260(*2)	E-26		
Q261(*2)	F-26		
Q262(*2)	G-5		
Q301	B-18		
Q302	B-14		
Q303	C-9		
Q304	C-9		
Q305	G-18		
Q306	G-18		
Q307	G-18		

*1: Use on AEP, UK and E model.
*2: Use on Italian model.

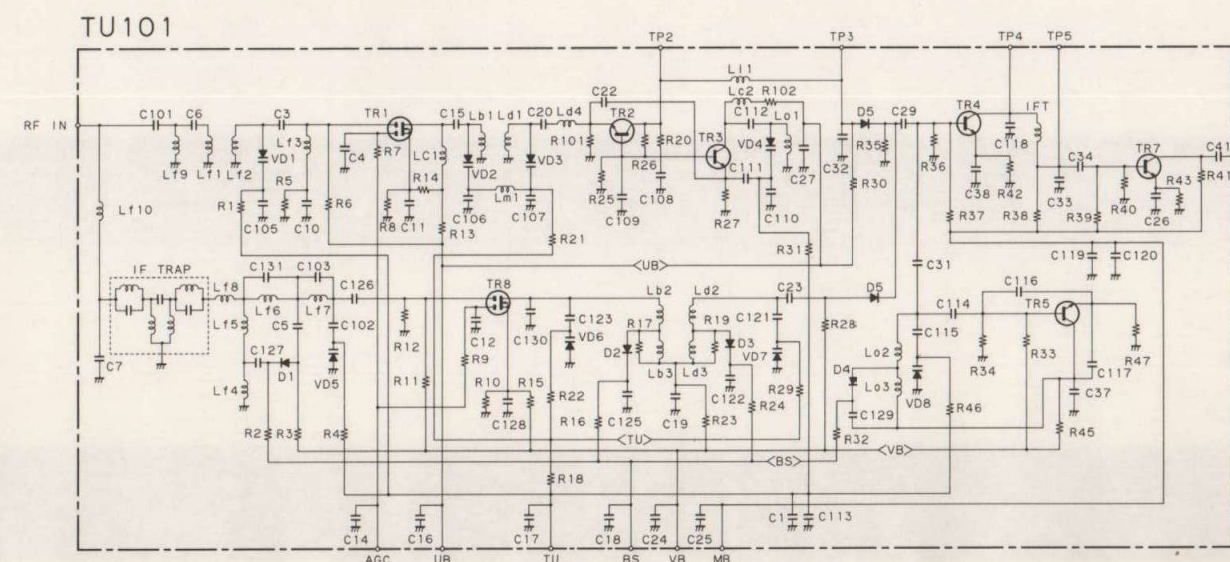
4-2. PRINTED WIRING BOARD ● Refer to page 10 for Semiconductor Lead Layouts.



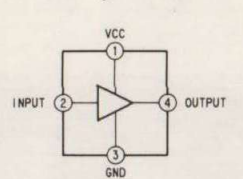


-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : VHF
() : UHF
- Voltages are taken with a VOM (input Impedance $> 10M \Omega$)
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- IT : Italian

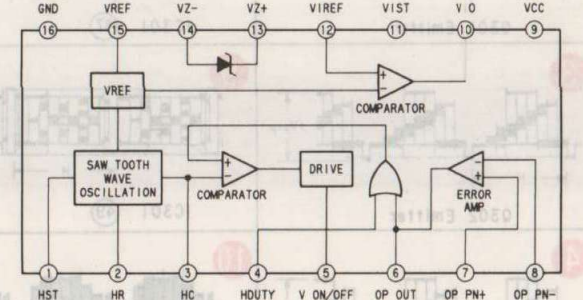
• Tuner Schematic Diagram (Reference)



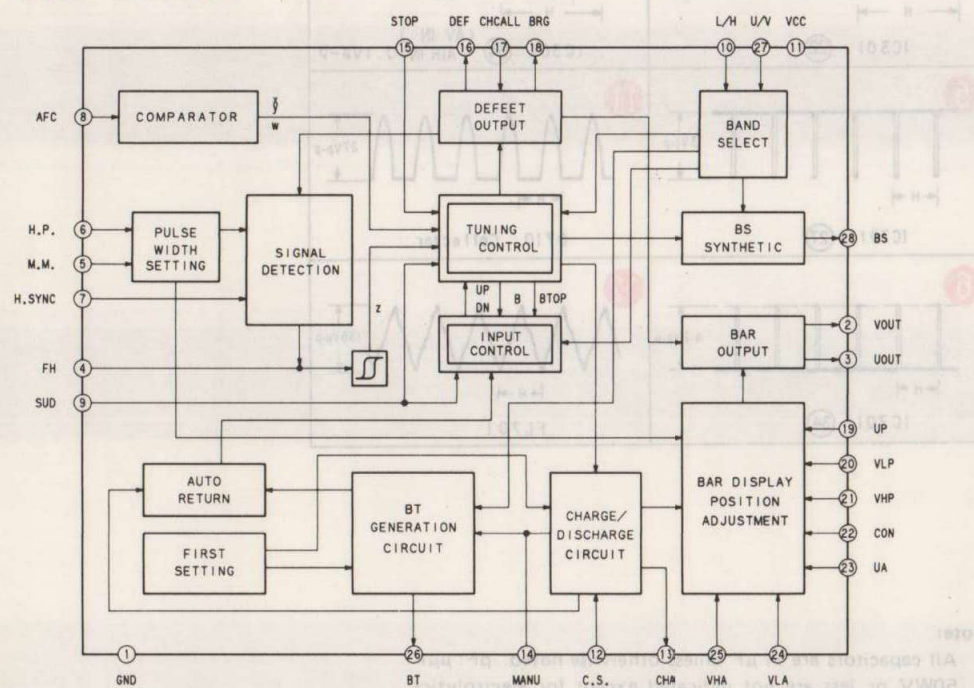
• IC Block Diagrams

IC101 μ PC1651G

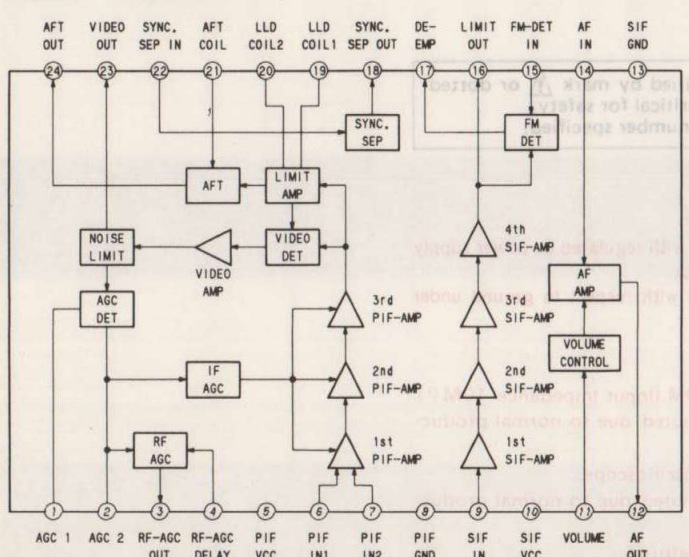
IC601 CX20159



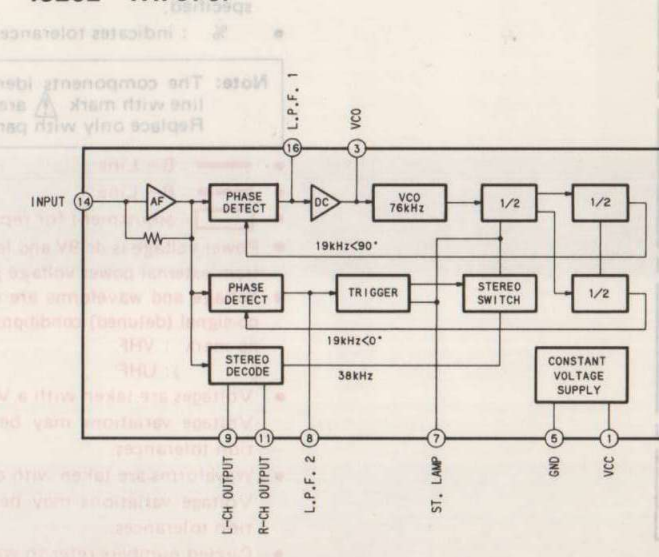
IC103 AN5707NS



IC201 TA8805F



IC262 TA7370F

SECTION 5
PIN DESCRIPTION5-1. PIN DESCRIPTION
• IC301 M52003AFP

Pin No.	Pin Name	Pin Description
1	NC	
2	APC FILTER	This pin determines the APC time constant of VCXO.
3	VCXO-OUT	Output of VCXO oscillator.
4	VCXO-MONI	This pin provides monitor output of VCXO oscillator. This is open emitter output.
5	VCXO-IN-1	Feedback input to VCXO generator.
6	VCXO-IN-2	Phase Delayed input of the signal from Pin ⑤.
7	CHROMA DEMODULATION INPUT	Input pin for the color difference demodulator for B-Y signal.
8	CHROMA DEMODULATION INPUT	Input pin for the color difference demodulator for R-Y signal.
9	SECAM-IN	This pin receives output of the color difference decoder for SECAM B-Y. When the color killer is activated, the internal switch will select the SECAM signal side.
10	SECAM-IN	This pin receives output of the color difference decoder for SECAM R-Y.
11	PICTURE QUALITY ADJUSTMENT V	Picture Quality Adjustment pin. Increase the voltage to have sharper picture. Decrease it to have more soft picture.
12	CLAMP VOLUME	Used to adjust so that the internal signal is matched with the external RGB signal in the clamp level.
13	EXTERNAL B INPUT	External B Signal input. This input is 0.8V _{P-P} standard.
14	GAIN-B	Used to adjust the gain of B signal to ensure white balance. This input is 3.5V standard. Increase the voltage to reduce the gain.
15	EXTERNAL G INPUT	External G Signal input.
16	EXTERNAL R INPUT	External R Signal input.
17	CONT. -ADJ.	Used to adjust the contrast of the internal signal. Increase the voltage to have higher contrast. Decrease it to have lower contrast.
18	GAIN-R	Used to adjust the gain of R signal to ensure white balance.
19	AGC-LEV.	Used to set the point at which AGC operates.
20	AGC-FIL.-1	AGC Filter pin.
21	AGC-FIL.-2	AGC Filter pin.
22	Y-IN	Luminance Signal Input pin. Pedestal clamp is applied. This input is 0.5V _{P-P} standard and comes in as synchronized negatively.
23	-V _{EE}	Connection pin for -7.5V power.
24	AGC-LEV.-OUT	This pin outputs the point at which AGC operates. When AGC operates, the voltage will be reduced.
25	V _{CC}	Connection pin for +4.5V power for the interface unit.
26	INTERNAL/EXTERNAL SELECT	Used to switch between the internal and external signals. Set this pin "High" to select external signal. Set it to "Low" to select internal signal.
27	H/P-IN	Input pin for Synchronizing signal from an external source. When used simultaneously with synchronous separation output, this signal must rise earlier than output.
28	REVERSE	Used to control the reverse polarity of output. Set this pin "High" to have normal white. Set it "Low" to have normal black.
29	SYNCHRO SEPARATE INPUT	Synchronous Separation input. This input is 1V _{P-P} video signal as synchronized negatively.
30	ON BURST CONSTANT	Time Constant which determines the width of the burst gate. The burst gate pulse having the time determined by this constant is generated at the trailing edge of synchronous separation output.

Pin No.	Pin Name	Pin Description
31	REVERSE INPUT	Output Reversing Pulse input. This reverses common and RGB outputs at the same time. The polarity of RGB output depends on reverse polarity control.
32	COM. OUT	Common Electrode Drive Output pin.
33	COM. DRIVE	Used to set the amplitude of common electrode drive output.
34	SYNCHRO SEPARATE OUTPUT	Synchronous Separation Output pin. This is open collector output and is synchronized positively. A load resistor should be connected to use this output.
35	B. CLAMP	Connection pin for B signal clamp capacitance.
36	G. CLAMP	Connection pin for G signal clamp capacitance.
37	R. CLAMP	Connection pin for R signal clamp capacitance.
38	BRIGHT-ADJ.	Brightness Adjustment pin. Increase the voltage to have whiter picture.
39	γ -ADJ.	Used to set the gamma amount of the gamma amplifier. Connect this pin to the power when gamma amplifier is not required.
40	GND	Grounding pin. This pin should be connected to GND.
41	R. -SUB BIAS	Used to set the bias amount of R signal.
42	G. -SUB BIAS	Used to set the bias amount of G signal.
43	B. -SUB BIAS	Used to set the bias amount of B signal.
44	R. -F. B. -IN	Pin for DC Feedback of R output. R output is integrated and then input to this pin. This pin should be connected to -V _{EE} when not used.
45	R. SIG. -OUT	R Signal Output pin. The inverted signal is output.
46	G. -F. B. -IN	Pin for DC Feedback of G output.
47	G. SIG. -OUT	G Signal Output pin.
48	B. -F. B. -IN	Pin for DC Feedback of B output.
49	B. SIG. -OUT	B Signal Output pin.
50	F. B. CENTER LEVEL	Output Feedback Reference Voltage pin. When this voltage is varied, the center voltage of output is varied. This pin should be grounded with the capacitance for stabilization.
51	H. D. -IN	This pin inputs the HD signal which drives the flip flop for line pulse generation. The F/F changes at the rising edge of HD.
52	KILLER OUT	Killer Signal output. When the killer is activated, this output will be High.
53	-V _{EE}	Connect this pin to -7.5V power. It has the same potential with Pin ②.
54	CHROMA IN	Chroma Signal Input pin. This input is burst 100mV _{P-P} standard.
55	KILLER FILTER	Killer Filter Connecting pin.
56	ACC FILTER	Used to set the ACC time constant.
57	COLOR-CONTROL	Used to control the color level. Increase the voltage to increase the color saturation.
58	ACC-OUT	This pin outputs chroma signal under ACC. This output is sent through 1H delay line and then input into the demodulator. Burst removed signal is output.
59	BURST CLEANING	Connecting pin for the burst cleaning coil. The demodulation angle is adjusted by adjusting this coil.
60	V _{CC}	This pin is connected to +4.5V power. Video Chroma System Power pin.

SECTION 6
EXPLODED VIEWS

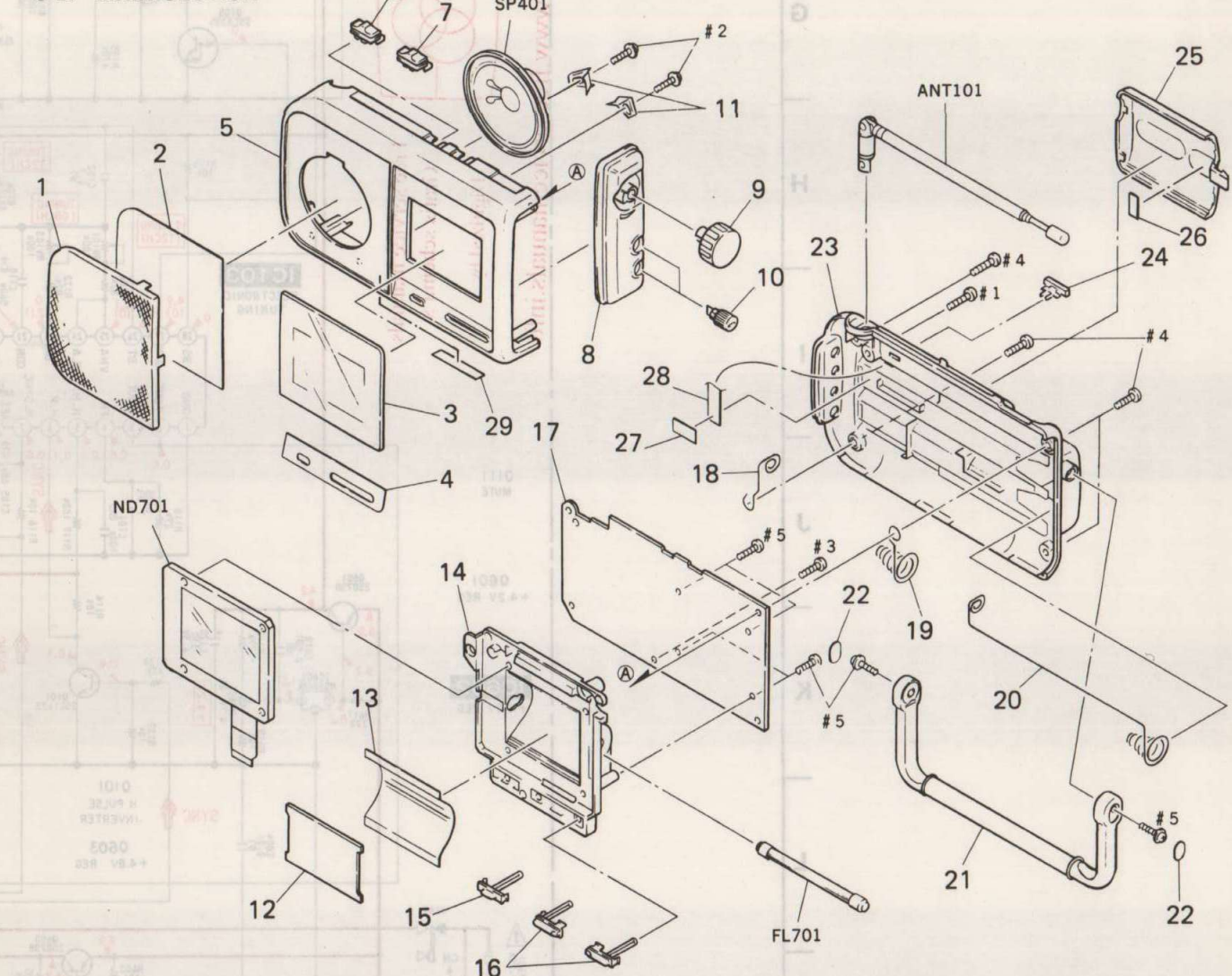
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE)...(RED)

- Hardware (# mark) list is given in the last of this parts list.
- IT: Italian model

6-1. MAIN SECTION



Ref. No.	Part No.	Description	Remark
1	4-032-250-01	GRILLE, SPEAKER	
2	4-030-634-01	NET, SP	
3	4-031-772-01	FILTER	
4	4-030-630-01	PLATE, CONTROL (AEP, UK, E)	
4	4-032-251-01	PLATE, CONTROL (IT)	
5	4-031-773-11	CABINET (FRONT) (AEP, UK, E)	
5	4-032-254-01	CABINET (FRONT) (IT)	
6	4-030-831-01	KNOB, BAND SW	
7	4-030-831-11	KNOB, POWER SW	
8	4-031-773-01	PLATE, SIDE (AEP, UK, E)	
8	4-031-773-11	PLATE, SIDE (IT)	
9	4-030-640-01	KNOB, VOLUME	
10	4-030-641-01	KNOB, BRIGHT/COLOUR	
11	3-840-975-00	CLAW, SPEAKER	
12	* 4-030-646-01	ILLUMINATOR	
13	* 4-030-644-01	REFLECTOR	
14	* 4-030-651-01	HOLDER, REFLECTOR	
15	4-030-638-01	BUTTON, CH CALL	
16	4-030-639-01	BUTTON, CHANNEL +/-	
17	* A-3016-090-A	MAIN BOARD, COMPLETE (UK, E)	

Ref. No.	Part No.	Description	Remark
17	* A-3016-103-A	MAIN BOARD, COMPLETE (IT)	
17	* A-3016-121-A	MAIN BOARD, COMPLETE (AEP)	
18	4-030-636-01	TERMINAL, BATTERY PLUS	
19	4-030-635-01	SPRING, BATTERY COIL	
20	4-030-642-01	TERMINAL, BATTERY	
21	X-4029-349-01	HANDLE ASSY	
22	4-030-632-01	LABEL, HANDLE	
23	X-4029-382-1	CABINET (REAR) SUB ASSY (AEP, UK, E)	
23	X-4029-714-1	CABINET (REAR) SUB ASSY (IT)	
24	3-336-158-01	KNOB, TV SIGNAL BOOSTER (AEP, UK, E)	
25	4-030-647-01	LID, BATTERY CASE (AEP, UK, E)	
25	4-030-647-11	LID, BATTERY CASE (IT)	
26	9-911-837-XX	CUSHION, BATTERY	
27	3-831-441-XX	CUSHION (A)	
28	4-031-060-01	RIBBON, BATTERY	
29	* 4-032-252-01	LABEL, MODEL NUMBER (IT)	
ANT101	1-501-494-11	ANTENNA, TELESCOPIC	
FL701	1-519-563-11	INDICATOR TUBE, FLUORESCENT	
ND701	1-808-658-11	DISPLAY MODULE, LIQUID CRYSTAL	
SP401	1-544-548-11	SPEAKER (8CM)	

SECTION 7 ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- CAPACITORS
uF: μ F

- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD...

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• IT: Italian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* A-3016-090-A	MAIN BOARD, COMPLETE (UK, E)		C128	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V (AEP, UK, E)
	* A-3016-103-A	MAIN BOARD, COMPLETE (IT)		C129	1-164-232-11	CERAMIC CHIP 0.01uF	50V (AEP, UK, E)
	* A-3016-121-A	MAIN BOARD, COMPLETE (AEP)		C130	1-164-232-11	CERAMIC CHIP 0.01uF	50V
	*****			C131	1-164-346-11	CERAMIC CHIP 1uF	16V
	4-030-645-01	SPRING, HOLDER		C201	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
	< CAPACITOR >			C202	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C101	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C203	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C204	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C103	1-164-346-11	CERAMIC CHIP 1uF	16V	C205	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C206	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C105	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C207	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C106	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	C208	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C107	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C209	1-164-346-11	CERAMIC CHIP 1uF	16V
C108	1-126-395-11	ELECT 22uF	20% 16V	C210	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C109	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C211	1-126-603-11	ELECT CHIP 4.7uF	20% 35V
C110	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	C212	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C111	1-126-603-11	ELECT CHIP 4.7uF	20% 35V	C213	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C112	1-163-113-00	CERAMIC CHIP 68PF	5% 50V (AEP, UK, E)	C214	1-163-085-00	CERAMIC CHIP 2PF	50V
C113	1-163-113-00	CERAMIC CHIP 68PF	5% 50V (AEP, UK, E)	C215	1-124-779-00	ELECT CHIP 10uF	20% 16V
C114	1-164-232-11	CERAMIC CHIP 0.01uF	50V (AEP, UK, E)	C216	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C115	1-164-232-11	CERAMIC CHIP 0.01uF	50V (AEP, UK, E)	C217	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C116	1-164-232-11	CERAMIC CHIP 0.01uF	50V (AEP, UK, E)	C218	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C117	1-163-113-00	CERAMIC CHIP 68PF	5% 50V (AEP, UK, E)	C219	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C118	1-163-106-00	CERAMIC CHIP 36PF	5% 50V (AEP, UK, E)	C220	1-164-346-11	CERAMIC CHIP 1uF	16V
C119	1-163-113-00	CERAMIC CHIP 68PF	5% 50V (AEP, UK, E)	C222	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
C120	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V (AEP, UK, E)	C223	1-124-778-00	ELECT CHIP 22uF	20% 6.3V (IT)
C121	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C224	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C122	1-126-603-11	ELECT CHIP 4.7uF	20% 35V	C225	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C123	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V (AEP, UK, E)	C226	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C124	1-124-779-00	ELECT CHIP 10uF	20% 16V (AEP, UK, E)	C228	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
C125	1-163-088-00	CERAMIC CHIP 5PF	50V (AEP, UK, E)	C229	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C126	1-163-088-00	CERAMIC CHIP 5PF	50V (AEP, UK, E)	C240	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C127	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V (AEP, UK, E)	C241	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
				C244	1-126-603-11	ELECT CHIP 4.7uF	20% 35V (IT)

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C260	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V (IT)		C341	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C261	1-124-778-00	ELECT CHIP 22uF 20% 6.3V (IT)		C342	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C262	1-124-779-00	ELECT CHIP 10uF 20% 16V (IT)		C343	1-126-207-11	ELECT CHIP 33uF 20% 4V	
C263	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V (IT)		C344	1-126-204-11	ELECT CHIP 47uF 20% 16V	
C264	1-163-131-00	CERAMIC CHIP 390PF 5% 50V (IT)		C345	1-126-176-11	ELECT 220uF 20% 10V	
C265	1-164-346-11	CERAMIC CHIP 1uF 16V (IT)		C347	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C266	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V (IT)		C348	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C267	1-126-176-11	ELECT 220uF 20% 10V (IT)		C349	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C298	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C352	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C299	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V		C353	1-163-245-11	CERAMIC CHIP 56PF 5% 50V	
C301	1-126-205-11	ELECT CHIP 47uF 20% 6.3V		C354	1-163-245-11	CERAMIC CHIP 56PF 5% 50V	
C302	1-163-108-00	CERAMIC CHIP 43PF 5% 50V		C355	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C303	1-164-346-11	CERAMIC CHIP 1uF 16V		C356	1-163-245-11	CERAMIC CHIP 56PF 5% 50V	
C305	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C357	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C306	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V		C361	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C307	1-163-137-00	CERAMIC CHIP 680PF 5% 50V		C402	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C308	1-163-097-00	CERAMIC CHIP 15PF 5% 50V		C403	1-163-022-00	CERAMIC CHIP 0.012uF 10% 50V	
C309	1-163-115-00	CERAMIC CHIP 82PF 5% 50V		C404	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C310	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C405	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C311	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C407	1-124-360-00	ELECT 1000uF 20% 16V	
C312	1-163-105-00	CERAMIC CHIP 33PF 5% 50V		C408	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C313	1-163-245-11	CERAMIC CHIP 56PF 5% 50V		C409	1-126-603-11	ELECT CHIP 4.7uF 20% 35V	
C314	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C410	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C315	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C411	1-164-346-11	CERAMIC CHIP 1uF 16V	
C316	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C412	1-164-346-11	CERAMIC CHIP 1uF 16V	
C317	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C413	1-164-222-11	CERAMIC CHIP 0.22uF 25V	
C318	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C414	1-124-779-00	ELECT CHIP 10uF 20% 16V	
C319	1-163-038-00	CERAMIC CHIP 0.1uF 25V		C415	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C320	1-135-157-21	TANTALUM CHIP 10uF 20% 6.3V		C416	1-163-010-11	CERAMIC CHIP 0.0012uF 10% 50V	
C321	1-163-114-00	CERAMIC CHIP 75PF 5% 50V		C417	1-126-395-11	ELECT 22uF 20% 16V	
C322	1-163-245-11	CERAMIC CHIP 56PF 5% 50V		C418	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C323	1-164-346-11	CERAMIC CHIP 1uF 16V		C419	1-124-120-11	ELECT 220uF 20% 25V	
C324	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C420	1-126-204-11	ELECT CHIP 47uF 20% 16V	
C325	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C424	1-163-022-00	CERAMIC CHIP 0.012uF 10% 50V	
C326	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C425	1-164-346-11	CERAMIC CHIP 1uF 16V	
C327	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C426	1-126-602-11	ELECT CHIP 3.3uF 20% 50V	
C328	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C427	1-124-779-00	ELECT CHIP 10uF 20% 16V	
C329	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C428	1-126-395-11	ELECT 22uF 20% 16V	
C330	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C502	1-164-346-11	CERAMIC CHIP 1uF 16V	
C331	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C601	1-164-346-11	CERAMIC CHIP 1uF 16V	
C332	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C602	1-126-395-11	ELECT 22uF 20% 16V	
C333	1-163-038-00	CERAMIC CHIP 0.1uF 25V		C603	1-126-176-11	ELECT 220uF 20% 10V	
C334	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C604	1-164-182-11	CERAMIC CHIP 0.0033uF 10% 50V	
C335	1-163-038-00	CERAMIC CHIP 0.1uF 25V		C605	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C336	1-135-157-21	TANTALUM CHIP 10uF 20% 6.3V		C607	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C337	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C609	1-124-455-00	ELECT 100uF 20% 16V	
C338	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C611	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C339	1-163-100-00	CERAMIC CHIP 20PF 5% 50V		C612	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C340	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C613	1-126-405-11	ELECT CHIP 10uF 20% 50V	

MAIN

Ref. No.	Part No.	Description	Remark
C614	1-126-405-11	ELECT CHIP 10uF 20% 50V	
C615	1-126-405-11	ELECT CHIP 10uF 20% 50V	
C616	1-126-405-11	ELECT CHIP 10uF 20% 50V	
C617	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C618	1-124-779-00	ELECT CHIP 10uF 20% 16V	
C619	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C620	1-124-442-00	ELECT 330uF 20% 6.3V	
C621	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C622	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C623	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C624	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C625	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C701	1-124-570-11	ELECT 220uF 20% 16V	
C702	1-126-204-11	ELECT CHIP 47uF 20% 16V	
C703	1-126-405-11	ELECT CHIP 10uF 20% 50V	
C704	1-130-771-00	FILM 0.18uF 10% 63V	
C705	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C706	1-126-395-11	ELECT 22uF 20% 16V	
C707	1-164-731-11	CERAMIC 120PF 10% 2KV	
C708	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C801	1-124-147-00	ELECT 47uF 20% 25V	
C802	1-124-455-00	ELECT 100uF 20% 16V	
C803	1-124-147-00	ELECT 47uF 20% 25V	
C804	1-164-232-11	CERAMIC CHIP 0.01uF 50V	

< FILTER >

CF201	1-409-369-00	TRAP, CERAMIC 5.5MHz
CF202	1-579-349-11	FILTER, CERAMIC 6MHz
CF203	1-567-662-11	FILTER, CERAMIC 6MHz
CF204	1-567-567-11	FILTER, CERAMIC 5.5MHz
CF205	1-567-566-11	FILTER, CERAMIC 5.5MHz
CF206	1-567-661-11	FILTER, CERAMIC 6MHz
CF301	1-579-348-11	FILTER, CERAMIC 4.43MHz

< CONNECTOR >

CN401	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P
CN801	1-565-073-11	SOCKET, CONNECTOR 16P

< TRIMMER >

CV302	1-141-298-11	CAP, TRIMMER 30PF
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< DIODE >

D101	8-719-800-76	DIODE 1SS226 (AEP, UK, E)
D102	8-719-941-23	DIODE DA204U
D103	8-719-800-76	DIODE 1SS226 (IT)
D104	8-719-400-18	DIODE MA152WK
D106	8-719-941-23	DIODE DA204U

Ref. No.	Part No.	Description	Remark
D107	8-719-941-23	DIODE DA204U	
D108	8-719-400-18	DIODE MA152WK	
D109	8-719-105-82	DIODE RD5.1M-B2 (AEP, UK, E)	
D110	8-719-108-01	DIODE 1SS153 (AEP, UK, E)	
D111	8-719-108-01	DIODE 1SS153 (AEP, UK, E)	
D201	8-719-400-18	DIODE MA152WK	
D202	8-719-400-18	DIODE MA152WK	
D203	8-719-400-18	DIODE MA152WK	
D260	8-719-400-18	DIODE MA152WK (IT)	
D403	8-719-941-23	DIODE DA204U	
D404	8-719-400-18	DIODE MA152WK	
D601	8-719-400-20	DIODE MA152WA	
D602	8-719-400-20	DIODE MA152WA	
D603	8-719-400-20	DIODE MA152WA	
D604	8-719-400-20	DIODE MA152WA	
D605	8-719-974-51	DIODE SB20-03P	
D606	8-719-106-53	DIODE RD10M-B2	
D701	8-719-400-18	DIODE MA152WK	
D702	8-719-105-82	DIODE RD5.1M-B2	
D703	8-719-105-82	DIODE RD5.1M-B2	
D704	8-719-941-23	DIODE DA204U	

< DELAY LINE >

DL301	1-415-649-11	DELAY LINE, 1H (ULTRASONIC)
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< FUSE >

F601	△ 1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A)
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< IC >

IC101	8-759-107-67	IC uPC1651G (AEP, UK, E)
IC102	8-759-981-69	IC NJM2904M
IC103	8-759-420-88	IC AN5707NS
IC201	8-759-246-18	IC TA8805F
IC261	8-759-981-69	IC NJM2904M (IT)
IC262	8-759-206-91	IC TA7370F (IT)
IC301	8-759-635-37	IC M52003AFP
IC401	8-759-981-69	IC NJM2904M
IC402	8-759-701-54	IC NJM2073D
IC601	8-759-802-39	IC CX20159
IC602	8-759-630-27	IC M5236ML

< JACK >

J101	1-507-974-11	JACK (EXT ANT) (AEP, UK, E)
J401	1-568-593-51	JACK 1P (EAR)
J501	1-568-593-51	JACK 1P (AUDIO/VIDEO IN)
J601	1-569-966-11	JACK, DC (DC IN 9V)

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	Remark
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< JUMPER RESISTOR >

JP1	1-216-295-00	METAL CHIP 0 5% 1/10W	
JP2	1-216-295-00	METAL CHIP 0 5% 1/10W (IT)	
JP3	1-216-295-00	METAL CHIP 0 5% 1/10W	

< COIL >

L102	1-410-730-11	INDUCTOR CHIP 0.12uH (AEP, UK, E)	
L103	1-410-730-11	INDUCTOR CHIP 0.12uH (AEP, UK, E)	
L104	1-410-730-11	INDUCTOR CHIP 0.12uH (AEP, UK, E)	
L105	1-410-386-11	INDUCTOR CHIP 27uH (AEP, UK, E)	
L106	1-410-800-11	INDUCTOR CHIP 0.03uH (AEP, UK, E)	

L201	1-410-373-31	INDUCTOR CHIP 2.2uH	
L202	1-410-373-31	INDUCTOR CHIP 2.2uH	
L204	1-404-633-11	COIL, VIF DETECTOR	
L205	1-404-633-11	COIL, VIF DETECTOR	
L207	1-410-386-11	INDUCTOR CHIP 27uH	

L208	1-410-386-11	INDUCTOR CHIP 27uH	
L209	1-410-383-31	INDUCTOR CHIP 15uH	
L210	1-410-383-31	INDUCTOR CHIP 15uH	
L301	1-410-384-31	INDUCTOR CHIP 18uH	
L302	1-410-385-11	INDUCTOR CHIP 22uH	

L303	1-410-387-11	INDUCTOR CHIP 33uH	
L304	1-410-383-31	INDUCTOR CHIP 15uH	
L305	1-410-385-11	INDUCTOR CHIP 22uH	
L306	1-410-385-11	INDUCTOR CHIP 22uH	
L601	1-460-032-11	COIL, CHOKE 100uH	

L602	1-424-298-11	COIL, CHOKE 82uH	
L603	1-412-032-11	INDUCTOR, CHIP 100uH	
L604	1-412-032-11	INDUCTOR, CHIP 100uH	
L605	1-412-032-11	INDUCTOR, CHIP 100uH	
L701	1-460-032-11	COIL, CHOKE 100uH	

L702	1-424-298-11	COIL, CHOKE 82uH	
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< TRANSISTOR >

Q101	8-729-100-66	TRANSISTOR 2SC1623	
Q104	8-729-805-94	TRANSISTOR 2SC4047	
Q105	8-729-805-45	TRANSISTOR 2SC3395	
Q106	8-729-100-66	TRANSISTOR 2SC1623	
Q110	8-729-100-66	TRANSISTOR 2SC1623	

Q112	8-729-216-22	TRANSISTOR 2SA1162-G (AEP, UK, E)	
Q113	8-729-100-66	TRANSISTOR 2SC1623 (AEP, UK, E)	
Q114	8-729-805-45	TRANSISTOR 2SC3395 (AEP, UK, E)	
Q201	8-729-200-87	TRANSISTOR 2SC2714-Y	
Q202	8-729-805-45	TRANSISTOR 2SC3395	

Q203	8-729-805-45	TRANSISTOR 2SC3395	
Q204	8-729-100-66	TRANSISTOR 2SC1623	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G (IT)	
Q260	8-729-216-22	TRANSISTOR 2SA1162-G (IT)	

Ref. No.	Part No.	Description	Remark
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Q261	8-729-100-66	TRANSISTOR 2SC1623 (IT)	
Q262	8-729-100-66	TRANSISTOR 2SC1623 (IT)	
Q301	8-729-100-66	TRANSISTOR 2SC1623	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-805-45	TRANSISTOR 2SC3395	

Q304	8-729-805-45	TRANSISTOR 2SC3395	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-100-66	TRANSISTOR 2SC1623	
Q307	8-729-100-66	TRANSISTOR 2SC1623	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	

Q401	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q404	8-729-100-66	TRANSISTOR 2SC1623	
Q601	8-729-101-07	TRANSISTOR 2SB798-DL	
Q602	8-729-821-55	TRANSISTOR 2SC3647S	
Q603	8-729-101-07	TRANSISTOR 2SB798-DL	

Q701	8-729-100-66	TRANSISTOR 2SC1623	
Q702	8-729-904-60	TRANSISTOR DTB113ZK	
Q703	8-729-100-66	TRANSISTOR 2SC1623	
Q704	8-729-216-22	TRANSISTOR 2SA1162-G	
Q705	8-729-805-41	TRANSISTOR 2SC3398	

Q706	8-729-805-65	TRANSISTOR 2SA1344	
Q707	8-729-805-41	TRANSISTOR 2SC3398	
Q708	8-729-805-65	TRANSISTOR 2SA1344	
Q709	8-729-920-34	TRANSISTOR DTC143XK	
Q710	8-729-821-55	TRANSISTOR 2SC3647S	

Q711	8-729-821-55	TRANSISTOR 2SC3647S	
Q712	8-729-100-66	TRANSISTOR 2SC1623	
Q713	8-729-101-07	TRANSISTOR 2SB798-DL	

< RESISTOR >

R101	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R108	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R109	1-216-073-00	METAL CHIP 10K 5% 1/10W	

R110	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R111	1-216-748-11	METAL CHIP 39K 5% 1/10W	
R112	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R114	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R115	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	

R116	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R117	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R118	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R120	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R122	1-216-095-00	METAL CHIP 82K 5% 1/10W	

R124	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R125	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R128	1-216-019-00	METAL CHIP 56 5% 1/10W (AEP, UK, E)	
R129	1-216-047-00	METAL CHIP 820 5% 1/10W (AEP, UK, E)	

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R130	1-216-019-00	METAL CHIP	56	5%	1/10W (AEP, UK, E)	R235	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R132	1-216-089-00	METAL CHIP	47K	5%	1/10W	R236	1-216-073-00	METAL CHIP	10K	5%	1/10W
R134	1-216-105-00	METAL CHIP	220K	5%	1/10W	R238	1-216-037-00	METAL CHIP	330	5%	1/10W
R135	1-216-113-00	METAL CHIP	470K	5%	1/10W	R239	1-216-037-00	METAL CHIP	330	5%	1/10W
R137	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R240	1-216-073-00	METAL CHIP	10K	5%	1/10W
R138	1-216-089-00	METAL CHIP	47K	5%	1/10W	R242	1-216-073-00	METAL CHIP	10K	5%	1/10W
R139	1-216-073-00	METAL CHIP	10K	5%	1/10W	R243	1-216-059-00	METAL CHIP	2.7K	5%	1/10W (IT)
R140	1-216-073-00	METAL CHIP	10K	5%	1/10W	R244	1-216-089-00	METAL CHIP	47K	5%	1/10W (IT)
R141	1-216-105-00	METAL CHIP	220K	5%	1/10W	R245	1-216-311-00	METAL CHIP	6.8	5%	1/10W
R142	1-216-089-00	METAL CHIP	47K	5%	1/10W (AEP, UK, E)	R246	1-216-021-00	METAL CHIP	68	5%	1/10W
R143	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (AEP, UK, E)	R247	1-216-075-00	METAL CHIP	12K	5%	1/10W (IT)
R144	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (AEP, UK, E)	R248	1-216-091-00	METAL CHIP	56K	5%	1/10W (IT)
R145	1-216-063-00	METAL CHIP	3.9K	5%	1/10W (AEP, UK, E)	R249	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (IT)
R146	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R250	1-216-049-00	METAL CHIP	1K	5%	1/10W
R147	1-216-049-00	METAL CHIP	1K	5%	1/10W	R251	1-216-089-00	METAL CHIP	47K	5%	1/10W
R148	1-216-097-00	METAL CHIP	100K	5%	1/10W	R252	1-216-105-00	METAL CHIP	220K	5%	1/10W
R149	1-216-043-00	METAL CHIP	560	5%	1/10W (AEP, UK, E)	R253	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R150	1-216-029-00	METAL CHIP	150	5%	1/10W (AEP, UK, E)	R254	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R151	1-216-044-00	METAL CHIP	620	5%	1/10W (AEP, UK, E)	R257	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R152	1-216-044-00	METAL CHIP	620	5%	1/10W (AEP, UK, E)	R258	1-216-097-00	METAL CHIP	100K	5%	1/10W
R199	1-216-043-00	METAL CHIP	560	5%	1/10W	R260	1-216-089-00	METAL CHIP	47K	5%	1/10W (IT)
R201	1-216-041-00	METAL CHIP	470	5%	1/10W	R261	1-216-073-00	METAL CHIP	10K	5%	1/10W (IT)
R202	1-216-097-00	METAL CHIP	100K	5%	1/10W	R262	1-216-081-00	METAL CHIP	22K	5%	1/10W (IT)
R203	1-216-093-00	METAL CHIP	68K	5%	1/10W	R263	1-216-059-00	METAL CHIP	2.7K	5%	1/10W (IT)
R207	1-216-097-00	METAL CHIP	100K	5%	1/10W	R264	1-216-085-00	METAL CHIP	33K	5%	1/10W (IT)
R209	1-216-045-00	METAL CHIP	680	5%	1/10W	R265	1-216-073-00	METAL CHIP	10K	5%	1/10W (IT)
R210	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R266	1-216-093-00	METAL CHIP	68K	5%	1/10W (IT)
R211	1-216-298-00	METAL CHIP	2.2	5%	1/10W	R267	1-216-097-00	METAL CHIP	100K	5%	1/10W (IT)
R212	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	R268	1-216-073-00	METAL CHIP	10K	5%	1/10W (IT)
R213	1-216-041-00	METAL CHIP	470	5%	1/10W	R269	1-216-085-00	METAL CHIP	33K	5%	1/10W (IT)
R215	1-216-073-00	METAL CHIP	10K	5%	1/10W	R270	1-216-073-00	METAL CHIP	10K	5%	1/10W (IT)
R216	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R271	1-216-037-00	METAL CHIP	330	5%	1/10W (IT)
R218	1-216-079-00	METAL CHIP	18K	5%	1/10W	R272	1-216-085-00	METAL CHIP	33K	5%	1/10W (IT)
R219	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	R273	1-216-073-00	METAL CHIP	10K	5%	1/10W (IT)
R220	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R274	1-216-075-00	METAL CHIP	12K	5%	1/10W (IT)
R221	1-216-045-00	METAL CHIP	680	5%	1/10W	R275	1-216-017-00	METAL CHIP	47	5%	1/10W (IT)
R222	1-216-031-00	METAL CHIP	180	5%	1/10W	R301	1-216-081-00	METAL CHIP	22K	5%	1/10W
R223	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R302	1-216-029-00	METAL CHIP	150	5%	1/10W
R224	1-216-040-00	METAL GLAZE	430	5%	1/10W	R303	1-216-081-00	METAL CHIP	22K	5%	1/10W
R225	1-216-011-00	METAL CHIP	27	5%	1/10W	R304	1-216-043-00	METAL CHIP	560	5%	1/10W
R226	1-216-040-00	METAL GLAZE	430	5%	1/10W	R305	1-216-029-00	METAL CHIP	150	5%	1/10W
R227	1-216-025-00	METAL CHIP	100	5%	1/10W	R306	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R228	1-216-035-00	METAL CHIP	270	5%	1/10W	R308	1-216-027-00	METAL CHIP	120	5%	1/10W
R229	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	R309	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R230	1-216-097-00	METAL CHIP	100K	5%	1/10W	R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R231	1-216-035-00	METAL CHIP	270	5%	1/10W	R311	1-216-073-00	METAL CHIP	10K	5%	1/10W
R232	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	R312	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R233	1-216-097-00	METAL CHIP	100K	5%	1/10W	R313	1-216-075-00	METAL CHIP	12K	5%	1/10W
R234	1-216-035-00	METAL CHIP	270	5%	1/10W	R314	1-216-039-00	METAL CHIP	390	5%	1/10W

MAIN

Ref. No.	Part No.	Description	Remark
R315	1-216-085-00	METAL CHIP	33K 5% 1/10W
R316	1-216-079-00	METAL CHIP	18K 5% 1/10W
R317	1-216-109-00	METAL CHIP	330K 5% 1/10W
R319	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R320	1-216-077-00	METAL CHIP	15K 5% 1/10W
R321	1-216-089-00	METAL CHIP	47K 5% 1/10W
R322	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R323	1-216-091-00	METAL CHIP	56K 5% 1/10W
R324	1-216-077-00	METAL CHIP	15K 5% 1/10W
R325	1-216-035-00	METAL CHIP	270 5% 1/10W
R326	1-216-073-00	METAL CHIP	10K 5% 1/10W
R327	1-216-091-00	METAL CHIP	56K 5% 1/10W
R328	1-216-081-00	METAL CHIP	22K 5% 1/10W
R329	1-216-073-00	METAL CHIP	10K 5% 1/10W
R330	1-216-035-00	METAL CHIP	270 5% 1/10W
R333	1-216-121-00	METAL CHIP	1M 5% 1/10W
R334	1-216-049-00	METAL CHIP	1K 5% 1/10W
R335	1-216-121-00	METAL CHIP	1M 5% 1/10W
R336	1-216-049-00	METAL CHIP	1K 5% 1/10W
R337	1-216-121-00	METAL CHIP	1M 5% 1/10W
R338	1-216-049-00	METAL CHIP	1K 5% 1/10W
R339	1-216-104-00	METAL CHIP	200K 5% 1/10W
R340	1-216-085-00	METAL CHIP	33K 5% 1/10W
R342	1-216-043-00	METAL CHIP	560 5% 1/10W
R343	1-216-043-00	METAL CHIP	560 5% 1/10W
R344	1-216-077-00	METAL CHIP	15K 5% 1/10W
R345	1-216-077-00	METAL CHIP	15K 5% 1/10W
R346	1-216-103-00	METAL CHIP	180K 5% 1/10W
R347	1-216-073-00	METAL CHIP	10K 5% 1/10W
R348	1-216-748-11	METAL CHIP	39K 5% 1/10W
R350	1-216-043-00	METAL CHIP	560 5% 1/10W
R357	1-216-081-00	METAL CHIP	22K 5% 1/10W
R358	1-216-077-00	METAL CHIP	15K 5% 1/10W
R361	1-216-121-00	METAL CHIP	1M 5% 1/10W
R362	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R363	1-216-109-00	METAL CHIP	330K 5% 1/10W
R364	1-216-109-00	METAL CHIP	330K 5% 1/10W
R365	1-216-109-00	METAL CHIP	330K 5% 1/10W
R366	1-216-109-00	METAL CHIP	330K 5% 1/10W
R398	1-216-081-00	METAL CHIP	22K 5% 1/10W
R399	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R402	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R403	1-216-097-00	METAL CHIP	100K 5% 1/10W
R405	1-216-113-00	METAL CHIP	470K 5% 1/10W
R406	1-216-091-00	METAL CHIP	56K 5% 1/10W
R407	1-216-073-00	METAL CHIP	10K 5% 1/10W
R409	1-216-073-00	METAL CHIP	10K 5% 1/10W
R410	1-216-073-00	METAL CHIP	10K 5% 1/10W
R411	1-216-053-00	METAL CHIP	1.5K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R412	1-216-748-11	METAL CHIP	39K 5% 1/10W
R413	1-216-748-11	METAL CHIP	39K 5% 1/10W
R414	1-216-089-00	METAL CHIP	47K 5% 1/10W
R415	1-216-748-11	METAL CHIP	39K 5% 1/10W
R416	1-216-748-11	METAL CHIP	39K 5% 1/10W
R417	1-216-009-00	METAL CHIP	22 5% 1/10W
R418	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R419	1-216-081-00	METAL CHIP	22K 5% 1/10W
R420	1-216-001-00	METAL CHIP	10 5% 1/10W
R421	1-216-001-00	METAL CHIP	10 5% 1/10W
R422	1-216-037-00	METAL CHIP	330 5% 1/10W
R427	1-216-097-00	METAL CHIP	100K 5% 1/10W
R428	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R429	1-216-113-00	METAL CHIP	470K 5% 1/10W
R430	1-216-101-00	METAL CHIP	150K 5% 1/10W
R431	1-216-033-00	METAL CHIP	220 5% 1/10W
R432	1-216-017-00	METAL CHIP	47 5% 1/10W
R506	1-216-073-00	METAL CHIP	10K 5% 1/10W
R601	1-216-025-00	METAL CHIP	100 5% 1/10W
R602	1-216-031-00	METAL CHIP	180 5% 1/10W
R603	1-216-073-00	METAL CHIP	10K 5% 1/10W
R604	1-216-043-00	METAL CHIP	560 5% 1/10W
R605	1-216-083-00	METAL CHIP	27K 5% 1/10W
R606	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R608	1-216-009-00	METAL CHIP	22 5% 1/10W
R609	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R610	1-216-097-00	METAL CHIP	100K 5% 1/10W
R611	1-216-097-00	METAL CHIP	100K 5% 1/10W
R613	1-216-009-00	METAL CHIP	22 5% 1/10W
R614	1-216-075-00	METAL CHIP	12K 5% 1/10W
R615	1-216-045-00	METAL CHIP	680 5% 1/10W
R616	1-216-097-00	METAL CHIP	100K 5% 1/10W
R617	1-216-033-00	METAL CHIP	220 5% 1/10W
R618	1-216-083-00	METAL CHIP	27K 5% 1/10W
R619	1-216-073-00	METAL CHIP	10K 5% 1/10W
R620	1-216-025-00	METAL CHIP	100 5% 1/10W
R621	1-216-001-00	METAL CHIP	10 5% 1/10W
R622	1-216-001-00	METAL CHIP	10 5% 1/10W
R623	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R624	1-216-085-00	METAL CHIP	33K 5% 1/10W
R625	1-216-095-00	METAL CHIP	82K 5% 1/10W
R701	1-216-105-00	METAL CHIP	220K 5% 1/10W
R702	1-216-105-00	METAL CHIP	220K 5% 1/10W
R703	1-216-073-00	METAL CHIP	10K 5% 1/10W
R704	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R705	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R706	1-216-077-00	METAL CHIP	15K 5% 1/10W
R707	1-216-101-00	METAL CHIP	150K 5% 1/10W
R708	1-216-258-00	METAL GLAZE	330K 5% 1/8W

MAIN

Ref. No.	Part No.	Description	Remark
R709	1-216-258-00	METAL GLAZE 330K 5% 1/8W	
R710	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R711	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R712	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R713	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R714	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R715	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R716	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R717	1-216-049-00	METAL CHIP 1K 5% 1/10W	

< VARIABLE RESISTOR >

RV101	1-238-716-11	RES. ADJ. METAL GLAZE 100K	
RV103	1-238-716-11	RES. ADJ. METAL GLAZE 100K	
RV104	1-238-715-11	RES. ADJ. METAL GLAZE 47K	
RV106	1-238-715-11	RES. ADJ. METAL GLAZE 47K	
RV201	1-228-995-00	RES. ADJ. METAL 22K	
RV261	1-238-713-11	RES. ADJ. METAL GLAZE 10K (IT)	
RV301	1-228-996-00	RES. ADJ. METAL 47K	
RV302	1-228-996-00	RES. ADJ. METAL 47K	
RV303	1-228-996-00	RES. ADJ. METAL 47K	
RV305	1-230-498-11	RES. ADJ. CARBON 47K (BRIGHT)	
RV306	1-228-996-00	RES. ADJ. METAL 47K	
RV307	1-230-722-11	RES. ADJ. CARBON 22K (COLOUR)	
RV308	1-228-991-00	RES. ADJ. METAL 2.2K	
RV309	1-228-997-00	RES. ADJ. METAL 100K	
RV310	1-228-996-00	RES. ADJ. METAL 47K	
RV311	1-228-996-00	RES. ADJ. METAL 47K	
RV401	1-241-547-11	RES. VER. CARBON 10K (VOLUME)	
RV601	1-228-993-00	RES. ADJ. METAL 4.7K	
RV602	1-228-993-00	RES. ADJ. METAL 4.7K	
RV603	1-228-993-00	RES. ADJ. METAL 4.7K	

< SWITCH >

S101	1-554-061-00	SWITCH, SLIDE (BAND)	
S102	1-554-303-21	SWITCH, TACTILE (CHANNEL -)	
S103	1-554-303-21	SWITCH, TACTILE (CHANNEL +)	
S104	1-554-303-21	SWITCH, TACTILE (CH CALL)	
S105	1-571-277-31	SWITCH, SLIDE (TV SIGNAL BOOSTER) (AEP, UK, E)	

S601	1-554-061-00	SWITCH, SLIDE (POWER)	
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< SAW FILTER >

SWF201	1-577-604-11	FILTER, SAW 38.9MHz	
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< TRANSFORMER >

T301	1-459-949-11	COIL	
T601	1-450-287-11	TRANSFORMER, DC-DC CONVERTER	
T701	1-450-286-11	TRANSFORMER, DC-AC CONVERTER	

Ref. No.	Part No.	Description	Remark
		< TUNER >	

TU101	1-465-787-11	TUNER UNIT (UK, E, IT)	
TU101	1-465-787-21	TUNER UNIT (AEP)	

< CRYSTAL >

X301	1-567-504-81	OSCILLATOR, CRYSTAL	4.433619MHz
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MISCELLANEOUS

ANT101	1-501-494-11	ANTENNA, TELESCOPIC	
FL701	1-519-563-11	INDICATOR TUBE, FLUORESCENT	
ND701	1-808-658-11	DISPLAY MODULE, LIQUID CRYSTAL	
SP401	1-544-548-11	SPEAKER (8CM)	

ACCESSORIES & PACKING MATERIALS

△	1-465-817-11	ADAPTOR, AC (AC-E702AE) (AEP, E, IT)	
	3-752-845-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, DUTCH, SPANISH) (AEP, UK, E)	
	3-752-845-51	MANUAL, INSTRUCTION (ITALIAN) (IT)	
	3-752-845-61	MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN, ARABIC) (AEP, UK, E)	
*	4-030-767-01	CUSHION (UPPER) (AEP, E, IT)	
*	4-030-768-01	CUSHION (LOWER) (AEP, E, IT)	
*	4-032-930-01	INDIVIDUAL CARTON (UK)	
*	4-032-931-01	CUSHION (UPPER) (UK)	
*	4-032-932-01	CUSHION (LOWER) (UK)	
*	4-032-934-01	INDIVIDUAL CARTON (AEP, E)	
*	4-032-936-01	INDIVIDUAL CARTON (IT)	
	9-910-999-32	BAG, PROTECTION	

HARDWARE LIST

#1	7-682-548-04	SCREW +B 3X8	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
#5	7-685-105-19	SCREW (2X8), + PTPWH	

Note: The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

MIAM

FDL-390BE

SONY SERVICE MANUAL

AEP Model
UK Model
E Model

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT	
	<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
29	RV305	1-230-498-11	RES, ADJ, CARBON 47K	1-230-723-11 	RES, ADJ, CARBON 47K

FDL-390BE

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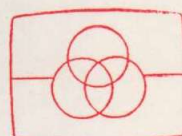
SONY SERVICE MANUAL

AEP Model
UK Model
E Model

SUPPLEMENT-1

File this supplement with the Service Manual.

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