



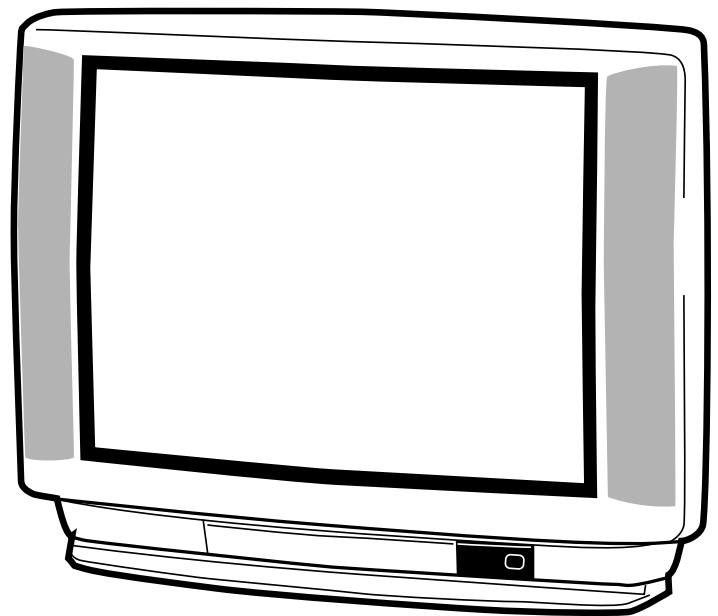
Colour Television Service Manual

CE25B3-C

Model CE25B3-C (W.Europe)

Service Ref. No. CE25B3-C-01

PRODUCT CODE: 111339415
ORIGINAL VERSION: Chassis No. EB4-A



Note

This TV receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the specifications for the design specifications

Give complete "SERVICE REF. NO." for parts order or servicing, it is shown on the rating sheet on the cabinet back of the TV set.

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SAFETY PRECAUTION

- 1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.
- 2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.
- 3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

X-RADIATION PRECAUTION

The primary source of X-RADIATION in the television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage adjustment to maintain the high voltage within the specified limits.

PRODUCT SAFETY NOTICE

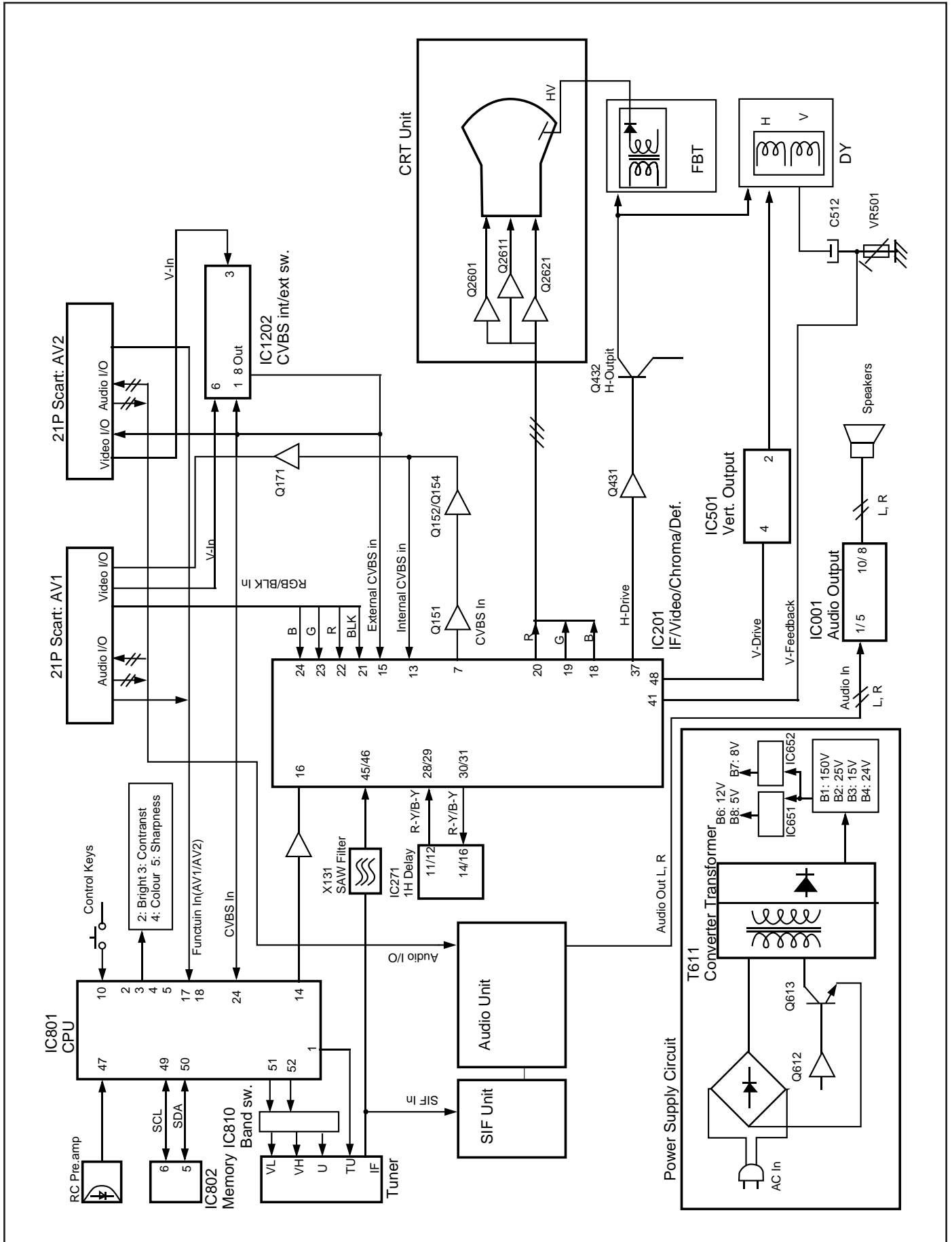
Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark Δ . No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark Δ .

SPECIFICATIONS

Power source	AC 220~240V 50Hz
Television system	System B/G
Colour system	PAL
Receiving channel	VHF: E2-E12 CATV: X, Y, Z, S1-S41 UHF: #21~69
Aerial input impedance	75ohm
AV terminal 21 Pin socket	AV1: CENELEC standard (S-Video Input) AV2: CENELEC standard
Sound output(Music)	9 watts x 2
Picture tube (Visible picture diagonal)	63cm diagonal, 110 degree 59cm
Dimensions (WxHxD)	680 x 543 x 446.5 mm
Weight	26 Kg

BLOCK DIAGRAM

This is a diagram for all models and therefore differs slightly from the actual block diagram.



CIRCUIT DESCRIPTION

1. POWER SUPPLY

The power supply circuit of the EB4-A chassis is composed of a rectifier smoothing circuit, an oscillation circuit, a control circuit and an output rectifier circuit. The AC input voltage is full-wave rectified by the rectifier smoothing circuit, and an unstable DC voltage is generated at both terminals of the smoothing capacitor C607. This voltage is input to the oscillation circuit. The oscillation circuit is provided with a blocking oscillator circuit that switches the switching transistor Q613 ON and OFF, and an oscillation frequency and a duty square wave pulse are generated in the input windings according to operation of the control circuit. A square-wave pulse whose size is dependent on the turn ratio of the input and output windings is obtained in the output winding. This is rectified in the output rectifier circuit, and the desired DC voltage is obtained.

2. IF & DEFLECTION (TDA8361)

The IF output signal from the tuner passes through the SAW filter, and it is input to pin45 and pin46 of IC201. The signal input to the IC passes through the IF amplifier, video detection and video amplifier circuits and is output from pin7 as a composite video signal. And after this signal is converted to impedance at Q151, supplies to the video and chroma amplifier stages. The sync.-separation circuit separates the video signals applied to pin13(internal video signal) or pin15(external video signal) to vertical- and horizontal-sync. signals respectively. The horizontal oscillator requires no external components and is fully integrated. The oscillator is always running when the start-pin36 is supplied with 8V. Horizontal drive signal is output from pin37. VR361 is for adjustment of the horizontal centring. The separated vertical-sync. signal from sync. separation circuit passes through the vertical-separation circuit, and applied to trigger divider circuit. The horizontal oscillation pulse and input vertical sync. pulse are monitored by the trigger divider circuit, and switching 50Hz and 60Hz system, the vertical amplitude automatically adjusted for 50Hz and 60Hz. The output signal from the trigger divider is triggered vertical oscillation circuit consisting of C351, R352 and pin42, and vertical drive pulse is output from pin43. VR501 is for changing the amount of AC feedback applied to pin41 and for adjustment of the vertical amplitude.

3. VIDEO CHROMA & R.G.B. (TDA8361)

The composite video signal output from the pin7 of IC101 passes through Q151-Q154, and it is supplied to pin13. The external video signal output from SCART is supplied to pin15. The video signal input to pin13 or pin15 is separated to luminance (Y) signal and chroma signal in IC201. These pins are used in common with H/V-sync. separation input. The peaking of Y signal is adjusted by DC voltage of pin14. ("SHARPNESS"

control) The chroma signal is divided into R-Y and B-Y chroma signals, demodulated in IC201, and output from pin30 (R-Y) and pin31 (B-Y). These chroma signals pass through the 1H delay line circuit (IC271), and they are input to pin29 (R-Y) and pin28 (B-Y). These R-Y/B-Y signals pass through RGB matrix circuit and RGB selector circuit of IC101. The internal RGB signals are generated in RGB matrix circuit and the RGB selector, consisting linear amplifiers, clamps and selects either the internal RGB signals or the external RGB signals input from pin22(R), pin23(G), pin24(B). Selection is controlled by the voltage at the RGB switch control (pin21) and mixed RGB modes are possible since RGB switching is fast. The RGB switch also functions as a fast blanking pin by blanking the RGB output stages; here internal and external RGB signals are overruled. The colour gain is controlled by DC voltage of pin26. ("COLOUR" control) The contrast control voltage present at pin25, and the brightness control voltage present at pin17 controls DC level of RGB signals. The RGB signals are finally buffered before being available at the RGB output pins [pin20 (R), pin19 (G), pin18 (R)].

4. AUDIO OUTPUT(TDA7263M)

The audio signals output from the audio unit are input to pin1(L) and 5(R) of IC171 and passes through the pre-amplifier circuit and drive circuit, after which it is input to the audio amplifier. The audio amplifier is an SEPP (single-ended, push-pull) OTL type and output to pin8(R) and 10(L) to directly drive the speakers.

5. VERTICAL OUTPUT (LA7832/LA7832)

An IC (LA7832/LA7833) is used for the vertical output circuit in this chassis. The vertical drive pulse from pin43 of IC201 is input to pin4 of IC501. This pulse drives IC501, and vertical scanning is performed. In the first half of scanning a deflecting current is output from pin2 and passes through the following path:

$V_{cc}(B4) \rightarrow D501 \rightarrow \text{pin3} \rightarrow \text{pin2} \rightarrow \text{DY} \rightarrow C512 \rightarrow$

VR501/R509 . An electric charge is then stored in C512.

In the last half of scanning the current path is $C512 \rightarrow \text{DY} \rightarrow \text{pin2} \rightarrow \text{pin1} \rightarrow \text{VR501/R509} \rightarrow C512$. In this way, an amplifying sawtooth waveform current flows directly to DY to perform electron beam deflection. Next, in the first half of the banking period the vertical drive pulse suddenly becomes OFF, and in order to reduce the current flowing to DY, the current path becomes as follows by the inductance of DY:

$\text{DY} \rightarrow \text{pin2} \rightarrow \text{pin1} \rightarrow \text{VR501/R509} \rightarrow C512 \rightarrow \text{DY}$. Also,

when the charge of DY has dissipated, the current path becomes $V_{cc}24V \rightarrow \text{pin6} \rightarrow \text{pin7} \rightarrow C502 \rightarrow \text{pin3} \rightarrow \text{pin2} \rightarrow \text{DY} \rightarrow C512 \rightarrow \text{VR501/R509}$, and when the prescribed current value is reached, the vertical drive pulse becomes ON. This completes one cycle.

6. HORIZONTAL OUTPUT

A horizontal oscillation signal is output from pin37 of IC201 and switches the drive transistor Q431. This switching signal is current amplified by the drive transformer T431 and drives the output transistor Q432. When Q432 becomes ON, an amplifying current flows directly to DY through C441 → DY → Q432 → GND, and deflection is performed in the last half of the scanning period. Next, when Q432 becomes OFF, the charge that had been stored in DY up to that point releases a resonance current to the resonant capacitors C421/C423 and charges them. The current stored in C421/C423 is then flowed back to DY, and an opposite charge is then stored in DY. This opposite charge then switches the dumper diode in Q432 ON, the resonance state is completed, and an amplifying current is then flowed again directly to DY through the dumper diode. By this means, deflection in the first half of the scanning period is performed, and when Q432 becomes ON at the end of the first half of the scanning period, deflection during the last half is begun, thus completing one cycle.

In the PCC circuit consisting of Q461 and Q462, the parabola signal supplied from the vertical circuit is added at the horizontal output stage and pincushion compensation is performed by varying the DC voltage bias. Further, the ABL voltage is feedback to the base of Q462 to compensate for width variations due to variations in the beam current.

7. CPU <System and Teletext Control>

Pin description

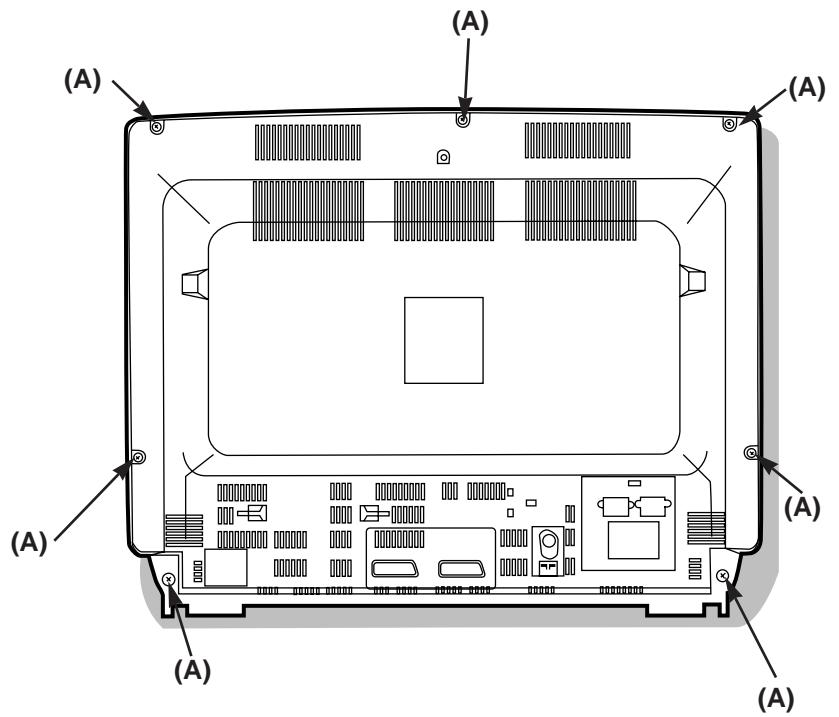
Pin1: Tuning voltage output
Pin2: Brightness control output (6-bit DAC)
Pin3: Contrast control output (6-bit DAC)
Pin4: Colour control output (6-bit DAC)
Pin5: Sharpness control output(6-bit DAC)
Pin6: Not used (GND)
Pin7: Not used (GND)
Pin8: Power ON/OFF output (H:ON)
Pin9: AFT signal input
Pin10: Option SW1 & Keyboard scan input (DC)
Pin11: Option SW2
Pin12: 50/60Hz switch input (50Hz: Hi)
Pin13: GND
Pin14: TV/AV switch output (TV: Hi)
Pin15: S-VHS switch output (S-VHS: Hi)
Pin16: Option SW3 (2AV: Hi)
Pin17: Function signal input for SCART1
Pin18: Function signal input for SCART2
Pin19: Power LED drive output1
Pin20: Option SW4 & Power LED drive output2
Pin21: Ignore output
Pin22: GND
Pin23: CVBS input0 (Internal)
Pin24: CVBS input1 (Internal/External)

Pin25: Black
Pin26: IREF
Pin27: Odd/Even output
Pin28: GND
Pin29: -
Pin30: V-deflection stop output
Pin31: RGB REF
Pin32: Blue output for OSD
Pin33: Green output for OSD
Pin34: Red output for OSD
Pin35: Blanking output for OSD
Pin36: H-sync. input (Horizontal pulse for OSD)
Pin37: V-sync. input (Vertical pulse for OSD)
Pin38~39: Supply (+5V)
Pin40: OSC GND
Pin41: Oscillator input for CPU
Pin42: Oscillator output for CPU
Pin43: Reset input
Pin44: Supply (+5V)
Pin45: Protect signal input (L:Power circuit defects)
Pin46: Ident. signal input
Pin47: R/C signal input
Pin48: Mute output in no picture
Pin49: I²C bus SCL (Serial clock)
Pin50: I²C bus SDA (Serial date)
Pin51: Option SW5 & Band select output1
Pin52: Band select output2

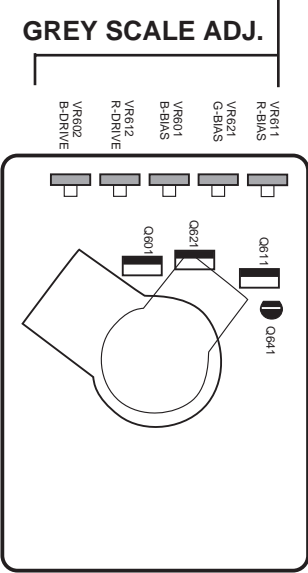
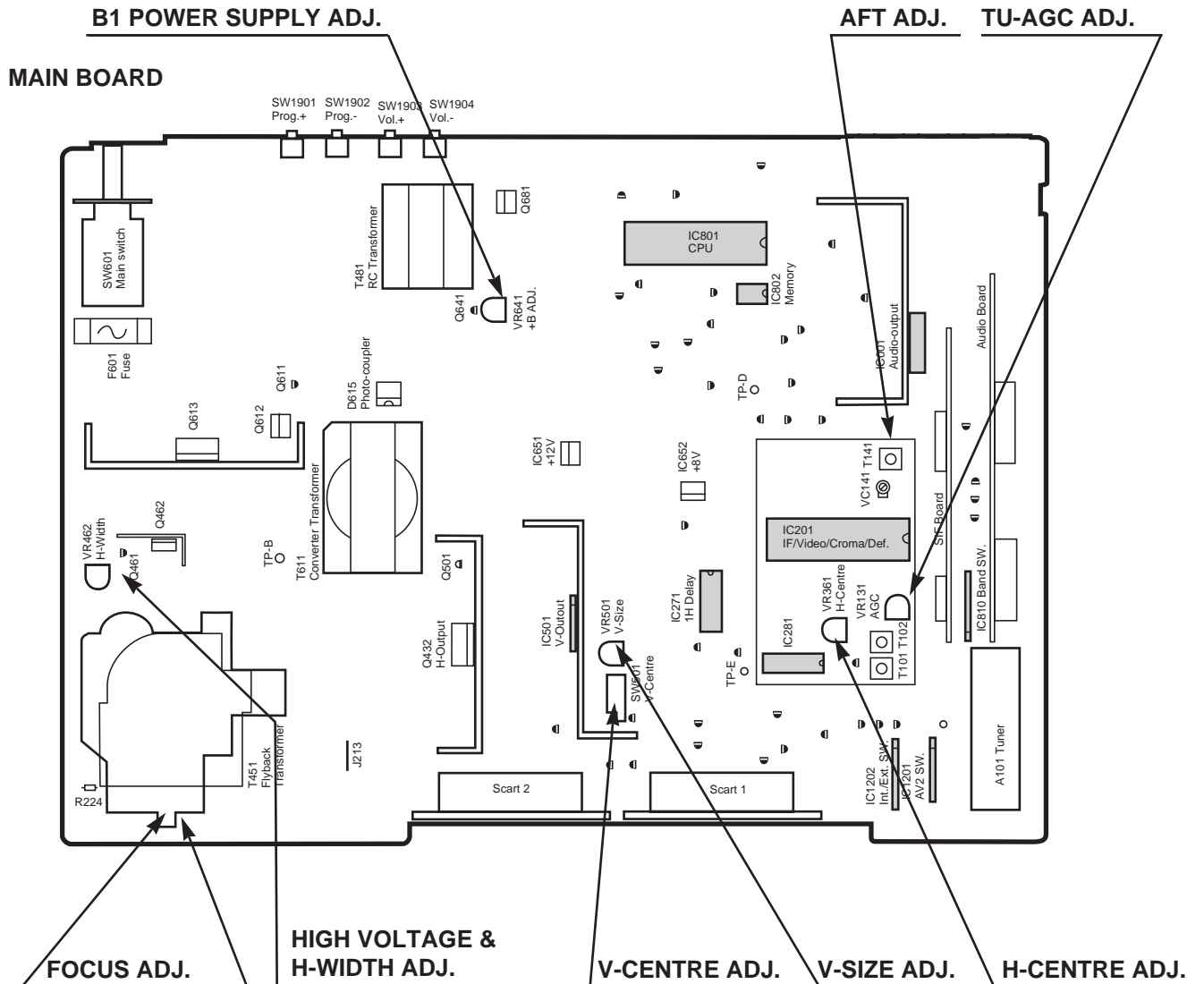
CABINET DISASSEMBLY

CABINET BACK DISASSEMBLY

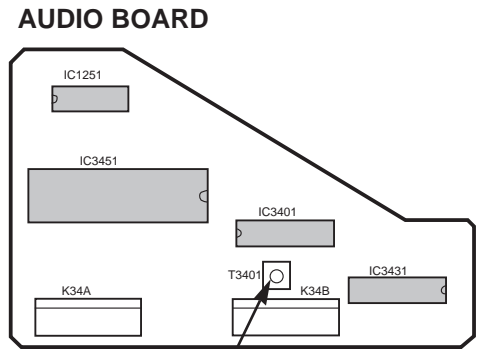
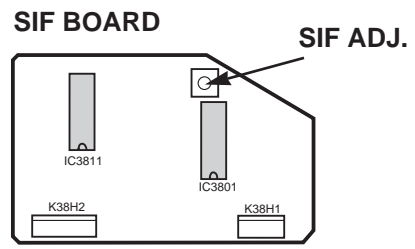
1. Remove 7 screws(A).
2. Pull out the cabinet back.



SERVICE CONTROL ADJUSTMENT



CRT BOARD



PILOT ADJ.

B1 POWER SUPPLY ADJUSTMENT

1. Set VR641 to be mechanically centre before pressing the mains ON/OFF switch.
2. Tune the receiver to a PAL circular pattern.
3. Set the brightness and contrast controls to normal.
4. Connect a digital V-meter to test point "TP-B".
5. Using VR641, adjust the voltage to $150 \pm 0.5V$.

AFT ADJUSTMENT

1. Tune the receiver to the clearest station.
2. Using T141, adjust the AFT to obtain the best picture.



AGC ADJUSTMENT

NOTE: Do not attempt this adjustment with a weak signal.



1. Tune the receiver to the clearest station.
2. Set AGC VR(VR131) in direction which causes snow noise just to appear, then in the opposite direction until the snow noise just disappears.

GREY SCALE ADJUSTMENT

[SCREEN VR ADJUSTMENT]

1. Tune the receiver to the white pattern.
2. Set the brightness and contrast controls to normal.
3. Set VR2602 and VR2612 to their mechanical centres.
4. Turn VR2601, VR2611 and VR2621 fully counter-clockwise (anti-clockwise).
5. Set the TV into service mode by pressing the Function button **F**  on the Remote control and the Prog + on the TV front panel. Press the Function button **F**  on the Remote control until "SCREEN" is highlighted. This sets up a horizontal scanning line.
6. Set screen VR so that one colour is just visible.

[BIAS VR ADJUSTMENT]

7. By using VR2601, VR2611 or VR2621, adjust the line until it becomes white.
8. Set screen mode OFF, by pressing the Recall button   on the Remote control.

[DRIVE VR ADJUSTMENT]

9. Using VR2602 and VR2612, adjust white balance.

HIGH VOLTAGE & WIDTH ADJUSTMENT

[HIGH VOLTAGE ADJUSTMENT]

1. Tune the receiver to the circular pattern.
2. Set the brightness and contrast controls to **maximum**.
3. Connect a digital V-meter to both terminals of R224, and a high voltage meter to the CRT anode.
4. Confirm high voltage to be 26.0 ± 1 KV at beam current 1.3mA, and less than 29.0 KV at 0 beam current.

[H-WIDTH ADJUSTMENT]

5. Adjust VR462 to obtain proper H- width.
6. Reconfirm high voltage.

H-CENTRE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust H-centre by using VR361.

V-CENTRE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust V-centre by using SW501.

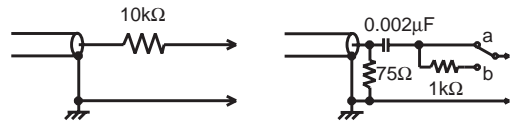
V-SIZE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust V-size by using VR501.

FOCUS ADJUSTMENT

By using FOCUS VR, adjust focus control for good scanning lines.

CIRCUIT ALIGNMENT



VIF alignment

Input probe

Output probe

SETTING		Adjustment	Waveform
DC 15.5V AGC voltage (4.3-4.5V) Output probe Input probe Marker frequency Sweep ATT 0dB=176mVrms/75	C644 + IC201-pin48 IC201-pin45 (Side b) IC201-pin7	By using T141, adjust "P" to be maximum amplitude.	

SIF alignment

SETTING		Adjustment	Waveform
DC 12V AGC voltage Output probe Input probe Sweep ATT Marker Frequency	IC3801-pin11 IC3801-pin3 IC3801-pin1 (Side b) IC3801-pin12 10dB 38.9MHz	1. Adjust AGC voltage to be "A" = 0.5Vp-p. 2. By using T3801, adjust "P" to be equal centre line.	

Pilot alignment

SETTING		Adjustment	Waveform
Oscilloscope Input sound signal source TV system Deviation Mode	IC3401-pin5 System B/G 27kHz Stereo	By using T3401, adjust amplitude to be maximum.	

INITIALISATION (Important Notice)

When you replace a memory IC (IC802), it is necessary to initialise the IC as following step.

A. Initialisation

Press and hold the **normalisation button** →•← on the remote control handset and press the **programme + button P▲** on the TV set.

The IC will be initialised automatically to set the following data.

User control data

Colour : Centre
Brightness : Centre
Contrast : Maximum
Sharpness : Centre
Text. Bright : Centre
Bass : Centre
Treble : Centre
Balance : Centre
Volume : Step 12

Service data

K1	: +000	->	+001
K2	: +000	->	-001
ST ID	: +000		
ATT	: +004		
MAX	: -096	->	-050
MIN	: +010	->	-075

Manual set data

The initialised service data of items K1, K2, MAX and MIN should be modified to the manual set data shown above.

For how to modify, refer to next step.

B. Service Mode

1. To enter the service mode, press and hold the **Function button F** on the remote control handset and press the **programme + button P▲** on the TV set.

The following OSD appears on the screen.

ADJUST	DATA
K1	+000
K2	-006
ST ID	+000
ATT	+004
MAX	-050
MIN	-075
SCREEN	VOL
CPU Ver	1.0

2. Select the desired service item by using the **Function button F** on the remote control handset.
3. Change the data by using the **Level + or - button** - ▲ + .
4. To return to TV mode press the **Recall button** [] [Y] on the remote control handset.

Service mode description

K1, K2 : For adjustment of stereo separation

ST ID : Mode setting for A2 stereo judgement

+000 : Fast mode

+001: Normal mode

+002: Fast -> normal mode

ATT : Attenuation of FM sound

To equalise sound levels between FM and Nicam.

MAX : Setting of sensitivity for switching Nicam to FM mode

MIN : Setting of sensitivity for switching FM to Nicam mode.

SCREEN: For screen adjustment

To make one horizontal scanning line.

NOTE:

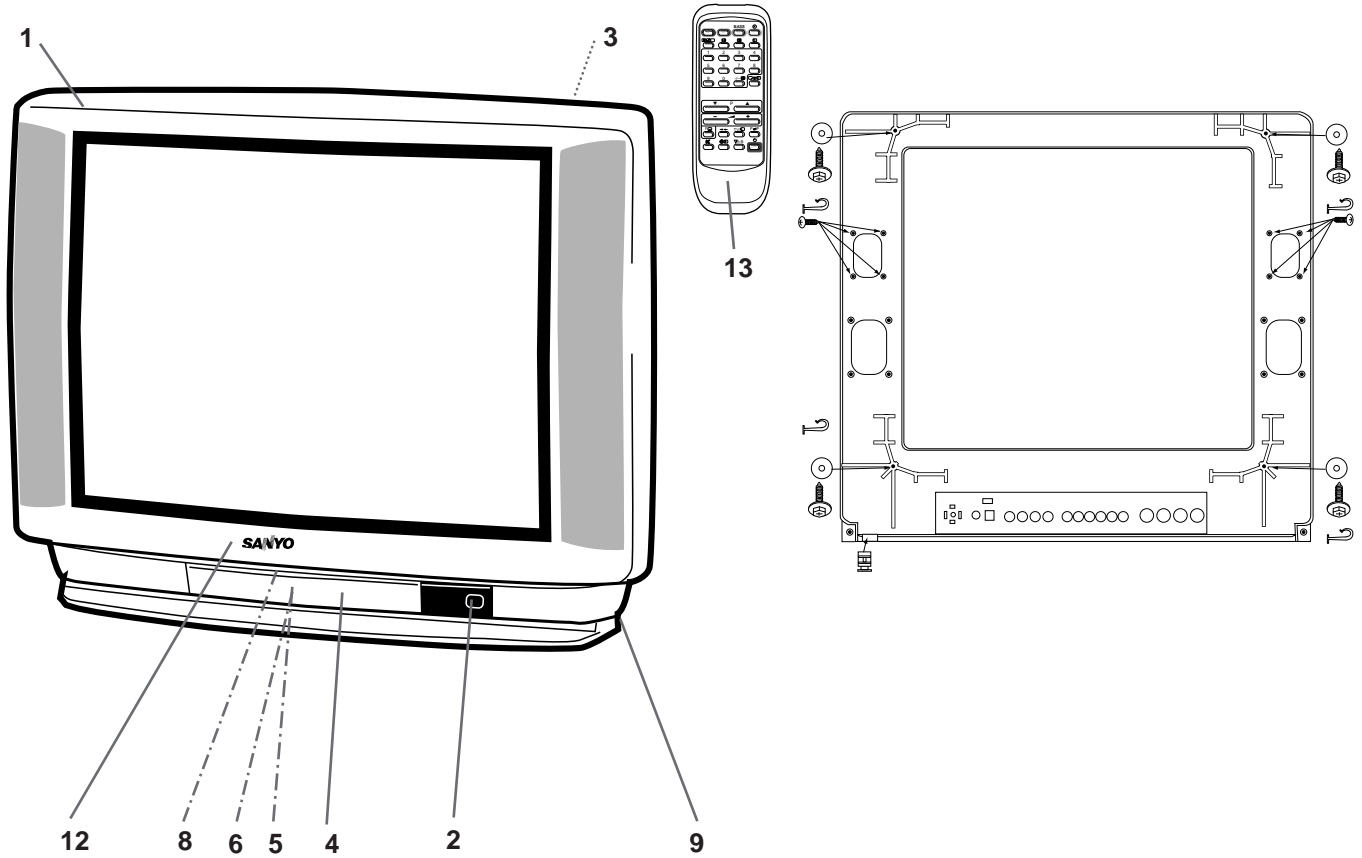
The items K1, K2, ST ID and ATT are invalid adjustments for a model which does not have an A2 stereo decoder.

The items MAX and MIN are invalid adjustments for a model which does not have a Nicam decoder.

These items allow modifications to the set data, but there is no effect in performance.

CABINET PARTS LIST FOR MODELS CE28B3-C-01

Note: Parts order must contain Service Ref. No., Part No., and descriptions.



Ref. No.	Part No.	Description
CABINET PARTS		
1	610 270 5911	ASSY,CABINET FR-F3PKM
2	610 261 6057	BUTTON POWER-F3SCM
3	610 272 2093	CABINET BACK A-F3PAM
4	610 275 0218	DOOR-F3SPV
5	610 261 6132	DEC BOARD-F3SCM
6	1AA2DES0271AC	DEC CONTROL SHEET
7	610 224 5721	CRT CUSHION-B3MY-UK
8	645 019 2449	LATCH PUSH,7.9X6.9BK
9	610 253 2449	AC CORD HOLDER-U-D4VA
10	610 260 0148	HOLDER RC GBR-BLFA
11	610 265 4202	HOLDER DC GBR-F3SC
12	645 023 4316	BADGE,SANYO*46.2X13.5L45
ACCESSORIES		
13	JXZB	RC TRANSMITTER
	645 027 6927	BATTERY
	SKP10172	INST MANUAL - F7S
	SKP10173	INST MANUAL - F7S

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
IC501	409 192 5709	IC LA7833	C146	403 010 8507	CERAMIC 12P J 50V
IC501-1	610 251 5909	V HEAT SINK E7LC	C151	403 024 2112	CERAMIC 39P J 50V
IC501-2	411 036 3208	SCR PAN+SW+W 3X10	C162	403 068 2512	CERAMIC 0.22U Z 25V
IC501-3	411 004 4404	NUT HEX 3	C171	403 237 8057	MT-COMPO 0.1U J 50V
IC501-4	610 077 7613	SILICONE GREASE G-746	C1901	403 069 1712	CERAMIC 1000P K 50V
IC501-5	610 252 0057	WIRE HOLDING HOOK-U-FWA	C200	403 068 0419	CERAMIC 0.1U Z 25V
IC651	409 365 2900	IC BA178M12T	C2001	403 068 0419	CERAMIC 0.1U Z 25V
IC652	409 365 2801	IC BA178M08T	C2002	403 068 0419	CERAMIC 0.1U Z 25V
IC654	409 367 2809	IC BA178M09T	C2003	403 068 0419	CERAMIC 0.1U Z 25V
IC801	410 323 9206	IC SAA5290PS/116	C201	403 014 3409	CERAMIC 18P J 50V
IC802	409 333 3700	IC 24LC02B/P	C202	403 237 8057	MT-COMPO 0.1U J 50V
IC810	409 019 6209	IC LA7910	C203	403 073 9117	CERAMIC 4700P K 50V
CAPACITOR			C204	403 068 0419	CERAMIC 0.1U Z 25V
C001A	403 068 0419	CERAMIC 0.1U Z 25V	C205	403 068 0419	CERAMIC 0.1U Z 25V
C002	403 070 9813	CHIP CERAMIC 0.015U K 50V	C206	403 068 0419	CERAMIC 0.1U Z 25V
C003A	403 068 0419	CERAMIC 0.1U Z 25V	C207	403 068 0419	CERAMIC 0.1U Z 25V
C004	403 070 9813	CHIP CERAMIC 0.015U K 50V	C208	403 068 0419	CERAMIC 0.1U Z 25V
C005	403 046 3507	ELECT 33U M 25V	C209	403 069 1712	CERAMIC 1000P K 50V
C006	403 046 3507	ELECT 33U M 25V	C212	403 049 9803	ELECT 2.2U M 50V
C007	403 237 7941	MT-COMPO 0.22U J 50V	C215	403 067 7895	MT-COMPO 0.47 J 50V
C008	403 237 7941	MT-COMPO 0.22U J 50V	C222	404 045 6605	NP-ELECT 2.2U M 50V
C009	403 237 7941	MT-COMPO 0.22U J 50V	C226	403 138 1602	ELECT 1U M 100V
C010	403 237 7941	MT-COMPO 0.22U J 50V	C231	403 068 0419	CERAMIC 0.1U Z 25V
C011	403 045 1504	ELECT 1000U M 25V	C232	403 014 9213	CERAMIC 180P J 50V
C012	403 045 1504	ELECT 1000U M 25V	C233	403 068 0419	CERAMIC 0.1U Z 25V
C015	403 047 3100	ELECT 47U M 25V	C234	403 013 3004	CERAMIC 150P J 50V
C018	403 069 9510	CERAMIC CHIP 0.01Z 50V	C235	403 008 7416	CERAMIC 10P D 50V
C021	403 154 1907	ELECT 1000U M 35V	C271	403 069 1712	CERAMIC 1000P K 50V
C100	403 248 1618	ELECT 47U M 16V	C272	403 069 1712	CERAMIC 1000P K 50V
C1001	403 069 1712	CERAMIC 1000P K 50V	C273	403 069 9510	CERAMIC CHIP 0.01Z 50V
C1002	403 049 4204	ELECT 10U M 50V	C274	403 049 4204	ELECT 10U M 50V
C1003	403 009 5718	CERAMIC 100P J 50V	C351	403 237 8057	MT-COMPO 0.1U J 50V
C1004	403 130 3119	CERAMIC 0.047U K 50V	C352	403 179 1015	POLYESTER 0.047U J 50V
C1005	403 069 1712	CERAMIC 1000P K 50V	C353	403 073 9117	CERAMIC 4700P K 50V
C1006	403 049 4204	ELECT 10U M 50V	C354	403 049 0008	ELECT 1U M 50V
C1007	403 009 5718	CERAMIC 100P J 50V	C361	403 072 5615	CERAMIC 2700P K 50V
C1008	403 130 3119	CERAMIC 0.047U K 50V	C362	403 069 9510	CERAMIC CHIP 0.01Z 50V
C1009	403 049 4204	ELECT 10U M 50V	C363	403 195 8804	ELECT 100U M 16V
C101	403 194 4609	ELECT 470U M 16V	C421	404 046 8806	MT-POLYPRO 6200P J 1.5K
C102	403 248 1618	ELECT 47U M 16V	C422	403 299 3210	POLYPRO 0.027U J 400V
C1021	403 069 1712	CERAMIC 1000P K 50V	C423	404 061 0601	MT-POLYPRO 5100P J 1.5K
C1022	403 049 4204	ELECT 10U M 50V	C424	403 299 3111	POLYPRO 0.022U J 400V
C1023	403 009 5718	CERAMIC 100P J 50V	C430	403 075 7101	CERAMIC 1000P K 500V
C1024	403 041 9405	ELECT 10U M 16V	C431	403 068 5612	CERAMIC 0.056U Z 25V
C1025	403 069 1712	CERAMIC 1000P K 50V	C432	403 075 7101	CERAMIC 1000P K 500V
C1026	403 049 4204	ELECT 10U M 50V	C433	403 076 3102	CERAMIC 3900P K 500V
C1027	403 009 5718	CERAMIC 100P J 50V	C434	403 229 1217	ELECT 47U M 35V
C1028	403 041 9405	ELECT 10U M 16V	C437	403 066 6106	MT-POLYEST 0.47U J 250V
C1029	403 049 4204	ELECT 10U M 50V	C438	403 178 9319	POLYESTER 0.01U J 50V
C103A	403 069 1712	CERAMIC 1000P K 50V	C441	403 083 5106	POLYPRO 0.27U J 400V
C1031	403 014 9213	CERAMIC 180P J 50V	C445	403 049 4204	ELECT 10U M 50V
C104	403 248 1618	ELECT 47U M 16V	C462	403 049 0008	ELECT 1U M 50V
C1041	403 049 4204	ELECT 10U M 50V	C463	403 237 8057	MT-COMPO 0.1U J 50V
C106	403 049 0008	ELECT 1U M 50V	C464	403 255 8934	MT-COMPO 0.39U J 50V
C106B	403 069 9510	CERAMIC CHIP 0.01Z 50V	C465	403 066 0104	MT-POLYEST 2.2U K 100V
C107B	403 069 9510	CERAMIC CHIP 0.01Z 50V	C467	403 241 3817	ELECT 220U M 10V
C108	403 027 1211	CERAMIC 5P J 50V	C468	403 217 1103	ELECT 22U M 50V
C109	403 027 1211	CERAMIC 5P J 50V	C470	403 069 8305	CERAMIC 0.01U Z 50V
C110	403 033 4510	CERAMIC 82P J 50V	C481	403 076 1405	CERAMIC 2700P K 500V
C114	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	C482	403 159 7409	MT-POLYEST 0.1U K 250V
C117	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	C501	403 054 1502	ELECT 470U M 35V
C1201	403 049 4204	ELECT 10U M 50V	C502	403 053 2104	ELECT 220U M 35V
C1203	403 069 8305	CERAMIC 0.01U Z 50V	C503	403 024 2112	CERAMIC 39P J 50V
C1205	403 009 5718	CERAMIC 100P J 50V	C504	403 069 9510	CERAMIC CHIP 0.01Z 50V
C121	403 068 0419	CERAMIC 0.1U Z 25V	C505	403 075 7101	CERAMIC 1000P K 500V
C131	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	C506	403 183 7901	MT-POLYEST 0.1U K 100V
C132	403 069 1712	CERAMIC 1000P K 50V	C511	403 183 7901	MT-POLYEST 0.1U K 100V
C133	403 069 9510	CERAMIC CHIP 0.01Z 50V	C512	403 148 0701	ELECT 2200U M 25V
C134	403 050 6600	ELECT 3.3U M 50V	C513	403 049 4204	ELECT 10U M 50V
C135	403 068 0419	CERAMIC 0.1U Z 25V	C514	403 049 4204	ELECT 10U M 50V
C136	403 194 4609	ELECT 470U M 16V	C600	403 076 4000	CERAMIC 4700P K 500V
C137	403 068 0419	CERAMIC 0.1U Z 25V	△ C601	404 060 7205	MT-POLYEST 0.1U M 250V
C138	403 069 9510	CERAMIC CHIP 0.01Z 50V	△ C602	404 060 7205	MT-POLYEST 0.1U M 250V
C141	403 028 4419	CERAMIC 56P J 50V	C603	403 076 7130	CERAMIC 1000P M 1K
C142	403 068 0419	CERAMIC 0.1U Z 25V	C604	403 076 7130	CERAMIC 1000P M 1K
C143	403 027 1211	CERAMIC 5P J 50V	C605	403 076 7130	CERAMIC 1000P M 1K
			C606	403 076 7130	CERAMIC 1000P M 1K

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C607	404 047 1608	ELECT 270U M 385V	R1017	401 024 7430	CARBON 10K JA 1/6W
C613	403 179 1213	POLYESTER 4700P J 50V	R1018	401 038 3514	MT-GLAZE 330 JA 1/10W
C614	403 237 8057	MT-COMPO 0.1U J 50V	R1021	401 038 7611	MT-GLAZE 560 JA 1/10W
C615	403 179 3217	POLYESTER 0.015U J 50V	R1022	401 038 0711	MT-GLAZE 2.2K JA 1/10W
C616	403 246 8708	CERAMIC 1000P K 2K	R1023	401 038 7611	MT-GLAZE 560 JA 1/10W
C617	403 179 2418	POLYESTER 0.022U K 50V	R1024	401 038 0711	MT-GLAZE 2.2K JA 1/10W
Δ C631	404 060 6505	CERAMIC 2200P M 400V	R1025	401 038 5310	MT-GLAZE 39K JA 1/10W
Δ C632	404 044 2806	CERAMIC 470P K 400V	R1026	401 038 3712	MT-GLAZE 33K JA 1/10W
C640	403 069 8305	CERAMIC 0.01U Z 50V	R1027	401 027 6628	CARBON 75 JA 1/6W
C641	403 165 9335	CERAMIC 680P K 1K	R1028	401 027 6628	CARBON 75 JA 1/6W
C642	404 055 9801	ELECT 220U M 200V	R1029	401 014 2933	CARBON 150 JA 1/4W
C643	403 148 2002	ELECT 470U M 35V	R1031	401 038 0612	MT-GLAZE 220 JA 1/10W
C644	403 148 0701	ELECT 2200U M 25V	R1032	401 038 0612	MT-GLAZE 220 JA 1/10W
C645	403 158 1309	ELECT 2200U M 35V	R1033	401 038 0612	MT-GLAZE 220 JA 1/10W
C651	403 148 0305	ELECT 470U M 16V	R1041	401 038 2210	MT-GLAZE 27K JA 1/10W
C652	403 069 9510	CERAMIC CHIP 0.01Z 50V	R1042	401 037 5618	MT-GLAZE 10K JA 1/10W
C653	403 248 1618	ELECT 47U M 16V	R1043	401 039 0314	MT-GLAZE 820 JA 1/10W
C655	403 126 4400	ELECT 100U M 10V	R1044	401 039 0314	MT-GLAZE 820 JA 1/10W
C661	403 233 1507	ELECT 4.7U M	R1045	401 037 5410	MT-GLAZE 1K JA 1/10W
C681	403 190 4702	ELECT 1000U M 25V	R1046	401 038 0711	MT-GLAZE 2.2K JA 1/10W
C682	403 069 9510	CERAMIC CHIP 0.01Z 50V	R1047	401 037 6714	MT-GLAZE 1.2K JA 1/10W
C683	403 147 9606	ELECT 1000U M 10V	R1051	401 037 8114	MT-GLAZE 150K JA 1/10W
C684	403 050 6600	ELECT 3.3U M 50V	R1052	401 037 5717	MT-GLAZE 100K JA 1/10W
C802	403 237 8057	MT-COMPO 0.1U J 50V	R1053	401 037 6714	MT-GLAZE 1.2K JA 1/10W
C812	403 049 0008	ELECT 1U M 50V	R1054	401 037 8114	MT-GLAZE 150K JA 1/10W
C814	403 049 0008	ELECT 1U M 50V	R1055	401 037 5717	MT-GLAZE 100K JA 1/10W
C816	403 051 0607	ELECT 4.7U M 50V	R1056	401 037 6714	MT-GLAZE 1.2K JA 1/10W
C818	403 051 0607	ELECT 4.7U M 50V	R108	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C841	403 069 9510	CERAMIC CHIP 0.01Z 50V	R110	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C861	403 179 0810	POLYESTER 0.0056U J 5	R1200	401 022 1935	CARBON 680 JA 1/4W
C871	403 068 0419	CERAMIC 0.1U Z 25V	R1201	401 038 6515	MT-GLAZE 47K JA 1/10W
C872	403 248 1618	ELECT 47U M 16V	R1203	401 037 5618	MT-GLAZE 10K JA 1/10W
C873	403 018 0503	CERAMIC 22P J 50V	R1204	401 038 2210	MT-GLAZE 27K JA 1/10W
C874	403 018 0503	CERAMIC 22P J 50V	R1205	401 038 2210	MT-GLAZE 27K JA 1/10W
C875	403 068 0419	CERAMIC 0.1U Z 25V	R1206	401 038 6515	MT-GLAZE 47K JA 1/10W
C878	403 073 9117	CERAMIC 4700P K 50V	R1207	401 012 7049	CARBON 10K JA 1/4W
C879	403 068 0419	CERAMIC 0.1U Z 25V	R121	401 020 2944	CARBON 47K JA 1/4W
C881	403 069 9510	CERAMIC CHIP 0.01Z 50V	R133	401 037 9111	MT-GLAZE 180 JA 1/10W
C882	403 049 4204	ELECT 10U M 50V	R134	401 038 9219	MT-GLAZE 6.8K JA 1/10W
C883	403 018 0503	CERAMIC 22P J 50V	R135	401 038 6515	MT-GLAZE 47K JA 1/10W
C884	403 018 0503	CERAMIC 22P J 50V	R137	401 037 5212	MT-GLAZE 100 JA 1/10W
C892	403 069 9510	CERAMIC CHIP 0.01Z 50V	R138	401 038 7710	MT-GLAZE 5.6K JA 1/10W
			R141	401 038 9219	MT-GLAZE 6.8K JA 1/10W
			R150	401 024 7024	CARBON 1K JA 1/6W
			R151	401 022 1935	CARBON 680 JA 1/4W
			R152	401 025 3827	CARBON 180 JA 1/6W
			R153	401 037 5410	MT-GLAZE 1K JA 1/10W
			R154	401 038 7611	MT-GLAZE 560 JA 1/10W
			R155	401 037 5410	MT-GLAZE 1K JA 1/10W
			R156	401 037 5410	MT-GLAZE 1K JA 1/10W
			R157	401 039 0918	MT-GLAZE 910 JA 1/10W
			R158	401 037 5410	MT-GLAZE 1K JA 1/10W
			R159	401 022 1935	CARBON 680 JA 1/4W
			R163	401 038 6515	MT-GLAZE 47K JA 1/10W
			R171	401 038 6317	MT-GLAZE 470 JA 1/10W
			R172	401 016 2644	CARBON 220 JA 1/4W
			R173	401 025 7429	CARBON 220 JA 1/6W
			R1900	401 038 7819	MT-GLAZE 56K JA 1/10W
			R1901	401 037 8015	MT-GLAZE 15K JA 1/10W
			R1901A	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
			R1902	401 039 0413	MT-GLAZE 8.2K JA 1/10W
			R1902A	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
			R1903	401 038 6416	MT-GLAZE 4.7K JA 1/10W
			R1903A	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
			R1904	401 038 2111	MT-GLAZE 2.7K JA 1/10W
			R1905	401 038 0711	MT-GLAZE 2.2K JA 1/10W
			R1906	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
			R1907	401 037 5618	MT-GLAZE 10K JA 1/10W
			R1908	401 038 3514	MT-GLAZE 330 JA 1/10W
			R1909	401 037 7919	MT-GLAZE 1.5K JA 1/10W
			R1911	401 038 6317	MT-GLAZE 470 JA 1/10W
			R1921	401 037 6615	MT-GLAZE 120 JA 1/10W
			R1922	401 038 5013	MT-GLAZE 390 JA 1/10W
			R1924	401 022 3147	CARBON 6K8 JA 1/4W
			R2001	401 038 2210	MT-GLAZE 27K JA 1/10W
			R2002	401 037 5618	MT-GLAZE 10K JA 1/10W
			R2004	401 037 7810	MT-GLAZE 150 JA 1/10W
RESISTOR					
R001	401 037 5410	MT-GLAZE 1K JA 1/10W			
R002	401 037 9210	MT-GLAZE 1.8K JA 1/10W			
R003	401 037 5410	MT-GLAZE 1K JA 1/10W			
R004	401 037 9210	MT-GLAZE 1.8K JA 1/10W			
R005	401 019 9640	CARBON 47 JA 1/4W			
R006	401 014 4145	CARBON 1K5 JA 1/4W			
R007	401 019 9640	CARBON 47 JA 1/4W			
R008	401 014 4145	CARBON 1K5 JA 1/4W			
R009	401 010 1514	CARBON 4.7 JA 1/2W			
R010	401 010 1514	CARBON 4.7 JA 1/2W			
R013	401 037 6714	MT-GLAZE 1.2K JA 1/10W			
R014	401 016 2644	CARBON 220 JA 1/4W			
R015	401 037 5410	MT-GLAZE 1K JA 1/10W			
R016	401 038 6515	MT-GLAZE 47K JA 1/10W			
R017	401 037 5618	MT-GLAZE 10K JA 1/10W			
R100	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			
R1001	401 038 7611	MT-GLAZE 560 JA 1/10W			
R1002	401 038 0711	MT-GLAZE 2.2K JA 1/10W			
R1003	401 038 7611	MT-GLAZE 560 JA 1/10W			
R1004	401 038 0711	MT-GLAZE 2.2K JA 1/10W			
R1005	401 027 6628	CARBON 75 JA 1/6W			
R1006	401 038 5310	MT-GLAZE 39K JA 1/10W			
R1007	401 038 3712	MT-GLAZE 33K JA 1/10W			
R1008	401 027 6628	CARBON 75 JA 1/6W			
R1009	401 027 6628	CARBON 75 JA 1/6W			
R101	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			
R1010	401 027 6628	CARBON 75 JA 1/6W			
R1011	401 037 5212	MT-GLAZE 100 JA 1/10W			
R1012	401 027 6628	CARBON 75 JA 1/6W			
R1013	401 012 4543	CARBON 100 JA 1/4W			
R1014	401 027 6628	CARBON 75 JA 1/6W			
R1015	401 038 6416	MT-GLAZE 4.7K JA 1/10W			
R1016	401 019 1040	CARBON 390 JA 1/4W			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R2005	401 019 1941	CARBON 3K9 JA 1/4W	Δ R624	401 068 6902	OXIDE-MT 56 JA 2W
R201	401 039 0413	MT-GLAZE 8.2K JA 1/10W	Δ R625	401 065 9609	OXIDE-MT 18 JA 2W
R202	401 037 5717	MT-GLAZE 100K JA 1/10W	R626	401 015 2219	CARBON 1.8K GA 1/4W
R203	401 024 6720	CARBON 100 JA 1/6W	Δ R631	402 000 8602	SOLID 5.6M KA 1/2W
R204	401 024 6720	CARBON 100 JA 1/6W	Δ R632	402 000 8602	SOLID 5.6M KA 1/2W
R205	401 024 6720	CARBON 100 JA 1/6W	R641	401 014 6149	CARBON 150K JA 1/4W
R206	401 037 5212	MT-GLAZE 100 JA 1/10W	R642	401 027 4327	CARBON 6.2K JA 1/6W
R207	401 037 5212	MT-GLAZE 100 JA 1/10W	R643	401 015 4738	CARBON 180K JA 1/4W
R208	401 037 5212	MT-GLAZE 100 JA 1/10W	R644	401 011 2718	CARBON 68K JA 1/2W
R212	401 017 1844	CARBON 2K7 JA 1/4W	R645	401 025 8228	CARBON 22K JA 1/6W
R213	401 038 7710	MT-GLAZE 5.6K JA 1/10W	Δ R646	402 069 9800	WIRE WOUND 2.7 KA 5W
R214	401 037 5212	MT-GLAZE 100 JA 1/10W	Δ R647	402 076 0609	WIRE WOUND 8.2 KA 7W
R215	401 038 3712	MT-GLAZE 33K JA 1/10W	R648	401 026 9927	CARBON 4K7 JA 1/6W
R216	401 016 4836	CARBON 22K JA 1/4W	Δ R651	401 064 3806	OXIDE-MT 1 JA 2W
R217	401 016 4836	CARBON 22K JA 1/4W	Δ R652	401 065 1801	OXIDE-MT 12 JA 2W
R218	401 038 7819	MT-GLAZE 56K JA 1/10W	Δ R653	401 067 8204	OXIDE-MT 39 JA 2W
R223	401 014 0305	CARBON 130K JA 1/4W	Δ R655	401 067 4206	OXIDE-MT 33 JA 2W
R224	401 024 7024	CARBON 1K JA 1/6W	R656	401 026 9620	CARBON 470 JA 1/6W
R226	401 026 7428	CARBON 39K JA 1/6W	Δ R661	401 068 4700	OXIDE-MT 4.7K JA 2W
R227	401 012 7049	CARBON 10K JA 1/4W	Δ R662	401 068 8807	OXIDE-MT 5.6K JA 2W
R231	401 037 7810	MT-GLAZE 150 JA 1/10W	R681	401 008 1628	CARBON 1K8 JA 1/2W
R232	401 037 7810	MT-GLAZE 150 JA 1/10W	Δ R682	401 069 1708	OXIDE-MT 68 JA 2W
R271	401 024 6720	CARBON 100 JA 1/6W	R684	401 023 2842	CARBON 8K2 JA 1/4W
R272	401 024 9028	CARBON 120 JA 1/6W	R685	401 025 8228	CARBON 22K JA 1/6W
R351	401 037 5212	MT-GLAZE 100 JA 1/10W	R800	401 016 3849	CARBON 2.2K JA 1/4W
R352	401 037 5816	MT-GLAZE 1M JA 1/10W	R801	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
R353	401 038 0919	MT-GLAZE 220K JA 1/10W	R802	401 038 0711	MT-GLAZE 2.2K JA 1/10W
R354	401 024 7727	CARBON 100K JA 1/6W	R803	401 037 9418	MT-GLAZE 180K JA 1/10W
R355	401 012 9904	CARBON 10M JA 1/4W	R804	401 024 7430	CARBON 10K JA 1/6W
R356	401 037 5212	MT-GLAZE 100 JA 1/10W	R806	401 024 7430	CARBON 10K JA 1/6W
R357	401 037 5618	MT-GLAZE 10K JA 1/10W	R807	401 024 7430	CARBON 10K JA 1/6W
R361	401 038 5419	MT-GLAZE 390K JA 1/10W	R808	401 019 1941	CARBON 3K9 JA 1/4W
R363	401 038 0810	MT-GLAZE 22K JA 1/10W	R811	401 016 3849	CARBON 2.2K JA 1/4W
R364	401 037 5212	MT-GLAZE 100 JA 1/10W	R812	401 038 5112	MT-GLAZE 3.9K JA 1/10W
R365	401 038 6416	MT-GLAZE 4.7K JA 1/10W	R813	401 018 4933	CARBON 33K JA 1/4W
R431	401 038 3514	MT-GLAZE 330 JA 1/10W	R815	401 012 4543	CARBON 100 JA 1/4W
R432	401 037 5410	MT-GLAZE 1K JA 1/10W	R816	401 037 5618	MT-GLAZE 10K JA 1/10W
R433	401 007 1134	CARBON 1K JA 1/2W	R817	401 021 4145	CARBON 56K JA 1/4W
Δ R434	401 067 9201	OXIDE-MT 390 JA 2W	R818	401 038 9318	MT-GLAZE 68K JA 1/10W
Δ R435	402 075 2307	WIRE WOUND 10 JA 5W	R819	401 016 3849	CARBON 2.2K JA 1/4W
R436	401 012 7049	CARBON 10K JA 1/4W	R820	401 037 5618	MT-GLAZE 10K JA 1/10W
Δ R441	401 058 3706	OXIDE-MT 1K JA 1W	R821	401 038 0810	MT-GLAZE 22K JA 1/10W
R447	401 026 9927	CARBON 4K7 JA 1/6W	R822	401 038 6515	MT-GLAZE 47K JA 1/10W
R448	401 009 5843	CARBON 330 JA 1/2W	R823	401 013 5341	CARBON 1K2 JA 1/4W
Δ R451	401 064 5305	OXIDE-MT 1.5 JA 2W	R824	401 038 5112	MT-GLAZE 3.9K JA 1/10W
R462	401 014 4145	CARBON 1K5 JA 1/4W	R825	401 038 3613	MT-GLAZE 3.3K JA 1/10W
R463	401 025 4220	CARBON 1K8 JA 1/6W	R838	401 037 8015	MT-GLAZE 15K JA 1/10W
R467	401 025 8723	CARBON 220K JA 1/6W	R839	401 018 4933	CARBON 33K JA 1/4W
R468	401 025 4220	CARBON 1K8 JA 1/6W	R840	401 020 0841	CARBON 470 JA 1/4W
R469	401 027 5928	CARBON 68K JA 1/6W	R841	401 038 0810	MT-GLAZE 22K JA 1/10W
R470	401 027 0329	CARBON 47K JA 1/6W	R842	401 020 2053	CARBON 4.7K JA 1/4W
R471	401 025 1625	CARBON 1K5 JA 1/6W	R843	401 037 5618	MT-GLAZE 10K JA 1/10W
R472	401 027 0329	CARBON 47K JA 1/6W	R844	401 038 5112	MT-GLAZE 3.9K JA 1/10W
R473	401 027 5225	CARBON 680 JA 1/6W	R845	401 037 5618	MT-GLAZE 10K JA 1/10W
R474	401 009 0927	CARBON 270 JA 1/2W	R846	401 038 6416	MT-GLAZE 4.7K JA 1/10W
R481	401 015 4738	CARBON 180K JA 1/4W	R847	401 037 5618	MT-GLAZE 10K JA 1/10W
R482	401 027 2620	CARBON 5K6 JA 1/6W	R848	401 038 6416	MT-GLAZE 4.7K JA 1/10W
R501	401 020 2053	CARBON 4.7K JA 1/4W	R851	401 037 5410	MT-GLAZE 1K JA 1/10W
Δ R502	402 002 2004	FUSIBLE RES 4.7 J- 1/2W	R852	401 037 5410	MT-GLAZE 1K JA 1/10W
R504	401 027 3023	CARBON 56K JA 1/6W	R853	401 038 0810	MT-GLAZE 22K JA 1/10W
R505	401 026 7022	CARBON 3K9 JA 1/6W	R861	401 038 2111	MT-GLAZE 2.7K JA 1/10W
R506	401 020 2053	CARBON 4.7K JA 1/4W	R862	401 038 0810	MT-GLAZE 22K JA 1/10W
R507	401 027 5027	CARBON 68 JA 1/6W	R863	401 038 0810	MT-GLAZE 22K JA 1/10W
R508	401 025 7825	CARBON 2K2 JA 1/6W	R864	401 039 0314	MT-GLAZE 820 JA 1/10W
Δ R509	401 057 7507	OXIDE-MT 0.82 JA 1W	R865	401 038 0711	MT-GLAZE 2.2K JA 1/10W
Δ R511	401 061 6404	OXIDE-MT 390 JA 1W	R866	401 038 0711	MT-GLAZE 2.2K JA 1/10W
Δ R513	401 058 3706	OXIDE-MT 1K JA 1W	R867	401 038 0711	MT-GLAZE 2.2K JA 1/10W
Δ R521	402 037 1805	FUSIBLE RES 4.7 J- 1W	R868	401 037 6714	MT-GLAZE 1.2K JA 1/10W
Δ R602	402 072 4403	WIRE WOUND 3.9 KA 7W	R869	401 038 2210	MT-GLAZE 27K JA 1/10W
R611	401 027 2620	CARBON 5K6 JA 1/6W	R870	401 016 4836	CARBON 22K JA 1/4W
R615	401 025 8228	CARBON 22K JA 1/6W	R870A	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
R617	401 024 9325	CARBON 1K2 JA 1/6W	R871	401 038 6416	MT-GLAZE 4.7K JA 1/10W
R619	401 016 1538	CARBON 22 JA 1/4W	R872	401 038 3712	MT-GLAZE 33K JA 1/10W
R620	401 007 5815	CARBON 120K JA 1/2W	R873	401 038 6416	MT-GLAZE 4.7K JA 1/10W
R621	401 007 5815	CARBON 120K JA 1/2W	R874	401 037 5618	MT-GLAZE 10K JA 1/10W
R622	401 014 5241	CARBON 15K JA 1/4W	R875	401 038 7710	MT-GLAZE 5.6K JA 1/10W
R623	401 026 4328	CARBON 3K3 JA 1/6W	R876	401 037 5618	MT-GLAZE 10K JA 1/10W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R877	401 039 0413	MT-GLAZE 8.2K JA 1/10W	D1021	407 063 8319	ZENER DIODE MTZJ11C
R878	401 037 7919	MT-GLAZE 1.5K JA 1/10W	D1022	407 063 8319	ZENER DIODE MTZJ11C
R879	401 037 5618	MT-GLAZE 10K JA 1/10W	D1023	407 063 8319	ZENER DIODE MTZJ11C
R880	401 038 6515	MT-GLAZE 47K JA 1/10W	D1024	407 063 8319	ZENER DIODE MTZJ11C
R884	401 037 7810	MT-GLAZE 150 JA 1/10W	D1026	407 063 8319	ZENER DIODE MTZJ11C
R885	401 038 5112	MT-GLAZE 3.9K JA 1/10W	D1027	407 063 8319	ZENER DIODE MTZJ11C
R886	401 037 7810	MT-GLAZE 150 JA 1/10W	D1201	407 053 6803	ZENER DIODE MTZ5.6C
R887	401 038 5112	MT-GLAZE 3.9K JA 1/10W	D135	407 063 8319	ZENER DIODE MTZJ11C
R888	401 037 5212	MT-GLAZE 100 JA 1/10W	D1901-1	610 269 4697	HOLDER LED A-E7GC
R889	401 037 5212	MT-GLAZE 100 JA 1/10W	D1901A	407 120 9706	LED LN28RPL
R891	401 038 6416	MT-GLAZE 4.7K JA 1/10W	D1903	407 063 8319	ZENER DIODE MTZJ11C
R892	401 038 6416	MT-GLAZE 4.7K JA 1/10W	D1905	407 012 4416	DIODE 1SS133-T-77
R893	401 037 5410	MT-GLAZE 1K JA 1/10W	D201	407 063 8319	ZENER DIODE MTZJ11C
R894	401 037 5410	MT-GLAZE 1K JA 1/10W	D202	407 063 8319	ZENER DIODE MTZJ11C
R895	401 037 6714	MT-GLAZE 1.2K JA 1/10W	D203	407 063 8319	ZENER DIODE MTZJ11C
R896	401 038 6515	MT-GLAZE 47K JA 1/10W	D210	407 012 4416	DIODE 1SS133-T-77
R897	401 012 5748	CARBON 1K JA 1/4W	D221	407 012 4416	DIODE 1SS133-T-77
R898	401 012 5748	CARBON 1K JA 1/4W	D222	408 007 8607	DIODE 1N4148
VARIABLE RESISTOR			D271	407 053 6407	ZENER DIODE MTZ5.1C
VR131	645 003 5531	VR 10K ALPS	D352	407 057 8308	ZENER DIODE RD8.2EB2
VR361	645 003 5531	VR 10K ALPS	D361	407 075 9925	ZENER DIODE EQA03-11A
VR462	645 003 5616	VR 4.7K ALPS	D431	407 053 8708	ZENER DIODE MTZ9.1A
VR501	645 006 5231	VR 100 ALPS	D432	407 005 7328	DIODE EM01Z
VR641	645 003 5579	VR 2.2K ALPS	Δ D438	407 095 8001	DIODE ERD07-15L
TRANSFORMER			D439	407 006 4128	DIODE ERB44-04V1
T141	610 037 4522	S COIL	D442	408 007 8607	DIODE 1N4148
T431	610 223 1656	DRIVE TRANS	D445	407 012 4416	DIODE 1SS133-T-77
Δ T451	645 021 2741	TRANS,FLYBACK - MEXICO	D446	407 151 9003	ZENER DIODE UZ-7.5BCC
Δ T611	645 038 2093	TRANS,POWER,PULSE	D464	407 053 6605	ZENER DIODE MTZ5.6A
Δ T681	610 033 3758	POWER TRANS	D465	407 012 4416	DIODE 1SS133-T-77
COIL			D466	407 077 9705	ZENER DIODE MTZ20A
L1002	645 002 4511	CORE,PIPE	D469	407 007 7415	DIODE EU1
L1003	645 001 4550	PEAKING COIL 10UHK	D481	407 007 7415	DIODE EU1
L1004	645 001 4550	PEAKING COIL 10UHK	D482	407 012 4416	DIODE 1SS133-T-77
L1005	645 001 4550	PEAKING COIL 10UHK	D501	407 005 7328	DIODE EM01Z
L1006	645 001 4550	PEAKING COIL 10UHK	D502	407 118 2217	ZENER DIODE 1Z75
L101	645 001 4710	PEAKING COIL 10UH J	D603	407 009 6921	DIODE RM11C
L102	645 001 5656	PEAKING COIL 4.7UH K	D604	407 009 6921	DIODE RM11C
L1022	645 002 4511	CORE,PIPE	D605	407 009 6921	DIODE RM11C
L1023	645 001 4550	PEAKING COIL 10UHK	D606	407 009 6921	DIODE RM11C
L1024	645 001 4550	PEAKING COIL 10UHK	D614	408 007 8607	DIODE 1N4148
L1025	645 001 4550	PEAKING COIL 10UHK	Δ D615	408 009 8407	PHOTO COUPLE CNY17GF-3
L1026	645 001 4550	PEAKING COIL 10UHK	D616	408 007 8607	DIODE 1N4148
L1027	645 001 5656	PEAKING COIL 4.7UH K	D617	407 007 6616	DIODE ES1
L141	645 001 4550	PEAKING COIL 10UHK	D618	408 007 8607	DIODE 1N4148
L151	645 002 1534	PEAKING COIL 8.2UHK	D619	407 053 3000	ZENER DIODE MTZ11C
L152	645 002 1459	PEAKING COIL	D641	407 009 8816	DIODE RU3AM
L201	645 001 4710	PEAKING COIL 10UH J	D642	407 007 7613	DIODE EU2
L202	645 001 4710	PEAKING COIL 10UH J	Δ D643	407 166 2303	DIODE ERC-91-02L
L203	645 001 4710	PEAKING COIL 10UH J	Δ D644	407 166 2303	DIODE ERC-91-02L
L231	645 001 5656	PEAKING COIL 4.7UH K	D645	407 053 7206	ZENER DIODE MTZ6.2C
L232	645 003 8518	PEAKING COIL	D647	407 012 4416	DIODE 1SS133-T-77
L431	645 008 5628	INDUCTOR,1U M	D648	407 099 8601	ZENER DIODE MTZJ24A
L432	645 002 4511	CORE,PIPE	D652	407 053 6803	ZENER DIODE MTZ5.6C
L441	610 000 0964	LINEARITY COIL	D654	407 012 4416	DIODE 1SS133-T-77
L442	610 221 3348	COIL	D655	407 012 4416	DIODE 1SS133-T-77
L461	645 005 5645	INDUCTOR 222UH K	D661	409 026 8005	IC L5630
L462	610 000 0261	COIL	D681	407 005 7328	DIODE EM01Z
L501	645 008 5642	INDUCTOR,3.3U K	D682	407 053 6803	ZENER DIODE MTZ5.6C
L601	645 017 1260	ELF 18D431F LINE FILTER	D683	407 005 7328	DIODE EM01Z
L607	610 237 1000	PIPE CORE	D684	408 007 8607	DIODE 1N4148
L608	610 237 1000	PIPE CORE	D685	407 012 4416	DIODE 1SS133-T-77
L641	645 002 4511	CORE,PIPE	D831	408 007 8607	DIODE 1N4148
L642	645 002 4511	CORE,PIPE	D861	407 012 4416	DIODE 1SS133-T-77
L643	645 002 4511	CORE,PIPE	D871	407 012 4416	DIODE 1SS133-T-77
L871	645 008 2962	PEAKING COIL 5.6UH K	D872	407 055 7927	ZENER DIODE RD3.6EL
L881	645 012 8707	PEAKING COIL 1.5UH M	MISCELLANEOUS		
DIODE			A101	645 017 2571	TUNER,HYPER ALPS
D1005	407 063 8319	ZENER DIODE MTZJ11C	A1901	645 007 1546	UNIT,REMOCON RECEIVER
D1007	407 063 8319	ZENER DIODE MTZJ11C	Δ F601	423 022 2102	FUSE 250V 4.0A
D1008	407 063 8319	ZENER DIODE MTZJ11C	F601A	645 000 5077	HOLDER,FUSE
D1010	407 063 8319	ZENER DIODE MTZJ11C	F601B	645 000 5077	HOLDER,FUSE
D1011	407 063 8319	ZENER DIODE MTZJ11C	IC001-1	610 251 4186	AUDIO HEATSINK ASSY E7PC
			IC001-2	411 046 8507	SCR PAN+SW+W 3X10
			IC001-3	411 004 4404	NUT HEX 3
			IC001-4	610 077 7613	SILICONE GREASE G-746

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUIT			J3432	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
IC1251	409 009 2501	IC HD14052BP	J3467	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
IC3401	409 371 6206	IC TDA9840/V2	J3469	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
IC3431	409 316 4601	IC TDA8424	J3470	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
CAPACITOR			J3477	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C1251	403 233 0817	ELECT 10U M 50V	J3478	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C3401	403 233 0817	ELECT 10U M 50V	J3481	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C3402	403 069 5611	CERAMIC 0.01U K 50V	J3482	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C3403	403 068 0419	CERAMIC 0.1U Z 25V	J3493	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
C3404	403 310 5018	CERAMIC 3300P G 25V	K12A	645 004 2881	PLUG, 2P
C3405	403 233 0312	ELECT 100U M 16V	K12B	645 008 7288	HOUSING PLUG 5P
C3406	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	K34A	645 008 3341	PLUG, 10P
C3407	403 026 2813	CERAMIC 47P J 50V	K34B	645 008 3341	PLUG, 10P
C3408	403 248 2813	ELECT 2.2U M 50V	T3401	645 015 7943	COIL, FERRITE 2.5M
C3409	403 248 2813	ELECT 2.2U M 50V	X3401	645 018 6875	OSC, CRYSTAL 10 MHZ
C3411	403 069 5611	CERAMIC 0.01U K 50V	ASSY, PWB, CRT F3SS 1AA0B10E48900		
C3412	403 069 5611	CERAMIC 0.01U K 50V	TRANSISTOR		
C3421	403 069 9510	CERAMIC CHIP 0.01Z 50V	Q701	405 041 6507	TR 2SC2621-D-RA
C3422	403 233 0817	ELECT 10U M 50V	Q711	405 041 6507	TR 2SC2621-D-RA
C3431	403 248 1410	ELECT 1U M 50V	Q721	405 041 6507	TR 2SC2621-D-RA
C3432	403 233 0312	ELECT 100U M 16V	Q740	406 007 1901	TR JC556A
C3433	403 248 1410	ELECT 1U M 50V	Q751	406 007 1901	TR JC556A
C3434	403 068 0419	CERAMIC 0.1U Z 25V	CAPACITOR		
C3435	403 068 3212	CERAMIC 0.033U K 25V	C701	403 073 2910	CERAMIC 390P K 50V
C3436	403 074 7617	CERAMIC 5600P K 50V	C711	403 073 2910	CERAMIC 390P K 50V
C3437	403 074 7617	CERAMIC 5600P K 50V	C721	403 073 2910	CERAMIC 390P K 50V
C3438	403 068 3212	CERAMIC 0.033U K 25V	C731	403 077 2708	CERAMIC 1000P P 2K
C3485	403 179 4501	NP-ELECT 0.47U M 50V	C735	403 055 8401	ELECT 22U M 250V
C3486	403 179 4501	NP-ELECT 0.47U M 50V	C751	403 201 5001	ELECT 330U M 16V
RESISTOR			RESISTOR		
R1251	401 038 2111	MT-GLAZE 2.7K JA 1/10W	R701	401 018 2800	CARBON 330 JA 1/4W
R1252	401 038 9219	MT-GLAZE 6.8K JA 1/10W	R702	401 019 1901	CARBON 3.9K JA 1/4W
R1253	401 039 0512	MT-GLAZE 82K JA 1/10W	R703	401 012 5708	CARBON 1K JA 1/4W
R1254	401 039 0512	MT-GLAZE 82K JA 1/10W	△ R704	401 065 4604	OXIDE-MT 12K JA 2W
R1256	401 039 0512	MT-GLAZE 82K JA 1/10W	R705	401 009 6602	CARBON 3.3K JA 1/2W
R1257	401 038 6317	MT-GLAZE 470 JA 1/10W	R711	401 018 2800	CARBON 330 JA 1/4W
R1258	401 038 0711	MT-GLAZE 2.2K JA 1/10W	R712	401 019 1901	CARBON 3.9K JA 1/4W
R1262	401 039 0512	MT-GLAZE 82K JA 1/10W	R713	401 016 3809	CARBON 2.2K JA 1/4W
R1263	401 039 0512	MT-GLAZE 82K JA 1/10W	△ R714	401 065 4604	OXIDE-MT 12K JA 2W
R1264	401 039 0512	MT-GLAZE 82K JA 1/10W	R715	401 009 6602	CARBON 3.3K JA 1/2W
R1265	401 038 6317	MT-GLAZE 470 JA 1/10W	R721	401 018 2800	CARBON 330 JA 1/4W
R1266	401 038 0711	MT-GLAZE 2.2K JA 1/10W	R722	401 019 1901	CARBON 3.9K JA 1/4W
R3401	401 037 5212	MT-GLAZE 100 JA 1/10W	R723	401 015 2704	CARBON 1.8K JA 1/4W
R3402	401 037 5212	MT-GLAZE 100 JA 1/10W	△ R724	401 065 4604	OXIDE-MT 12K JA 2W
R3403	401 038 3118	MT-GLAZE 30K JA 1/10W	R725	401 009 6602	CARBON 3.3K JA 1/2W
R3431	401 037 5212	MT-GLAZE 100 JA 1/10W	R727	401 020 0801	CARBON 470 JA 1/4W
R3432	401 037 5212	MT-GLAZE 100 JA 1/10W	R741	401 020 2003	CARBON 4.7K JA 1/4W
R3433	401 037 5212	MT-GLAZE 100 JA 1/10W	R742	401 018 3807	CARBON 3.3K JA 1/4W
R3434	401 037 7919	MT-GLAZE 1.5K JA 1/10W	R744	401 017 0807	CARBON 270 JA 1/4W
R3435	401 037 5212	MT-GLAZE 100 JA 1/10W	R752	401 012 7009	CARBON 10K JA 1/4W
R3436	401 037 7919	MT-GLAZE 1.5K JA 1/10W	R753	401 012 7009	CARBON 10K JA 1/4W
R3477	401 038 0711	MT-GLAZE 2.2K JA 1/10W	VARIABLE RESISTOR		
R3479	401 038 0711	MT-GLAZE 2.2K JA 1/10W	VR701	645 003 5722	"VR, SEMI, 4.7K N"
R3481	401 038 0711	MT-GLAZE 2.2K JA 1/10W	VR702	645 003 5647	"VR, SEMI, 1K N"
R3482	401 038 0711	MT-GLAZE 2.2K JA 1/10W	VR711	645 003 5722	"VR, SEMI, 4.7K N"
TRANSFORMER			VR712	645 003 5647	"VR, SEMI, 1K N"
T3401	645 015 7943	COIL, FERRITE 2.5M	VR721	645 003 5722	"VR, SEMI, 4.7K N"
COIL			COIL		
L3451	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	L701	645 007 9856	PEAKING COIL 220U
MISCELLANEOUS			L711	645 007 9856	PEAKING COIL 220U
J1201	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	L721	645 007 9856	PEAKING COIL 220U
J1203	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	DIODE		
J1204	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	D701	408 007 8607	DIODE 1N4148
J3401	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	D711	408 007 8607	DIODE 1N4148
J3402	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	D721	408 007 8607	DIODE 1N4148
J3403	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	D751	408 007 8607	DIODE 1N4148
J3405	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	MISCELLANEOUS		
J3408	401 037 5014	MT-GLAZE 0.000 ZA 1/10W	K7M	645 008 4058	"TERMINAL, PLUG"
J3412	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			
J3413	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			
J3421	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			
J3431	401 037 5014	MT-GLAZE 0.000 ZA 1/10W			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
K7P	645 004 2911	"PLUG, 5P"			
K7Q	645 004 2898	"PLUG, 3P"			
Δ K701	645 031 7699	CRT SOCKET			
OUT OF CIRCUIT - F7PTV					
PICTURE TUBE					
Δ Q901	414 009 7104	CRT A59EHJ43X38			
COIL					
Δ L901	645 025 6530	25DEG.COIL OREGA 47320234			
MISCELLANEOUS					
SP901	610 232 3986	SPEAKER			
SP901	610 232 3986	SPEAKER			
Δ W901	645 012 7632	EURO PLUG +2P HOUSE @ 2.1			
W902	610 251 5831	GROUNDING CONNECTOR E7LC			
<p>All information in this manual is correct at the start of production. Sanyo reserves the right to modify components and procedures in order to comply with their continuous improvement policy.</p>					



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