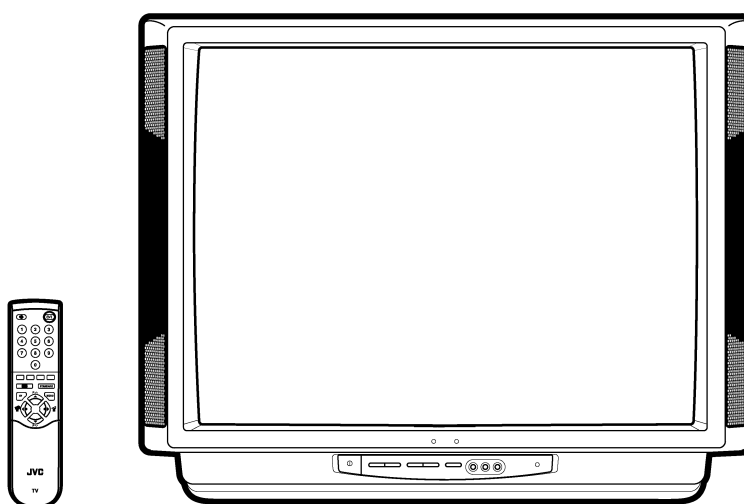


JVC

SERVICE MANUAL

COLOUR TELEVISION

AV28BT5ENS / AV28BT5ENB
AV28BT5EES / AV28BT5EEB



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SPECIFICATIONS

ITEM		Content	
		AV28BT5ENS (Silver) AV28BT5ENB (Black)	AV28BT5EES (Silver) AV28BT5EEB (Black)
Dimensions (WxHxD)		69 x 54 x 47 cm	
Weight		34.6 kg	
TV RF System		B/G	B/G, D/K, K1
Colour System	TV Mode	PAL	PAL / SECAM
	Video Mode	PAL / NTSC 3.58 / NTSC 4.43	PAL / SECAM / NTSC 3.58 / NTSC 4.43
Teletext System		Fastext / Toptext	
Stereo System		A2 / German + NICAM	
Tuning System		Frequency Synthesizer Tuning System	
Number Of CH memory position		100 ch	
Receiving Frequency	VHF (VL)	46.25MHZ ~ 168.25MHz	
	VHF (VH)	175.25MHz ~ 463.25MHz	
	UHF	471.25MHz ~ 863.25MHz	
	CATV	Super (S11-S20) & Hyper (S21-S41) bands receivable	
Intermediate Frequency	VIF Carrier	38.9MHz	
	SIF Carrier	32.4MHz (6.5MHz)	
		32.9MHz (6.0MHz)	
		33.4MHz (5.5MHz)	
Colour Sub Carrier Frequency		PAL (4.43MHz), SECAM (4.43MHz), NTSC (3.58MHz/4.43MHz)	
Aerial Input Terminal		75Ohm Unbalanced	
Power Input		AC 170 ~ 270V	
Power Consumption		126W(Max.)/103W(Avg.) Stand-by<5W	
Picture Tube		28 inch measured diagonally	
High Voltage		28kV (in cut-off service mode)	
Speaker		101 mm round type X 2	
Audio Output		8W + 8W	
Input	Video	1Vp-p, 75 Ohm	
	S/Video	Y: 1Vp-p Positive C: 0.286Vp-p	
	Audio (L/R)	500 mVrms, High Impedance	
Output	Video	1 Vp-p, 75 Ohm	
	Audio (L/R)	500 mVrms, Low Impedance	
Input Terminal	Rear Side	AV1 (Video/Audio/RGB)	
		AV2 (Video/Audio/S-VHS)	
	Front Side	AV3 (Video/Audio)	
Output Terminal	Front Side	Headphone jack (Stereo mini jack 3.5Ø)	
	Rear Side	AV1 (Video/Audio)	
		AV2 (Video/Audio) (Selected TV, AV1 or AV3)	
Remote Control Unit		RM-C85, Battery size:AAA/R03 x 2	

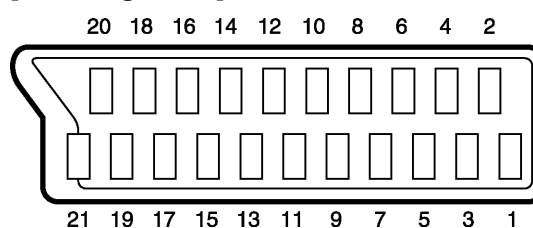
Design & specifications are subject to change without notice.

■ 21-pin Euro connector (SCART socket) : AV-1 / AV-2

(P-P= Peak to Peak, S-W= Sync tip to white peak, B-W= Blanking to white peak)

Pin No.	Signal Designation	Matching Value	AV-1	AV-2
1	AUDIO R output	500mVrms(Nominal),Low impedance	○ (TV OUT)	○ (TV/LINE OUT)
2	AUDIO R input	500mVrms(Nominal),High impedance	○	○
3	AUDIO L output	500mVrms(Nominal),Low impedance	○ (TV OUT)	○ (TV/LINE OUT)
4	AUDIO GND		○	○
5	GND (B)		○	○
6	AUDIO L input	500mVrms(Nominal), High impedance	○	○
7	B input	700mVB-W, 75 Ω	○	NC
8	FUNCTION SW (SLOW SW)	Low : 0-3V, High : 8-12V, High impedance	○	NC
9	GND (G)		○	○
10	-		NC	-
11	G input	700mVB-W, 75 Ω	○	NC
12	-		NC	-
13	GND (R)		○	○
14	GND (YS)		○	NC
15	R / C input	R : 700mVB-W, 75 Ω C : 300mVP-P, 75 Ω	○ (R/C)	○ (only C)
16	Ys input	Low : 0 – 0.4, High : 1 - 3V, 75 Ω	○	NC
17	GND(VIDEO output)		○	○
18	GND(VIDEO input)		○	○
19	VIDEO output	1Vs-W(Negative going sync), 75 Ω	○ (TV)	○ (TV/LINE OUT)
20	VIDEO / Y input	1Vs-W(Negative going sync), 75 Ω	○	○
21	COMMON GND		○	○

[Pin assignment]



SAFETY PRECAUTIONS

1. The design of this product contains special hardware□ many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessary be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the Parts List in the Service Manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may cause shock, fire, or other hazards.
4. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some models power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⌚) side GND and EARTH : (⊕) side GND. Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
If above note will not be kept, a fuse or any parts will be broken.
5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.

8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

9. Isolation Check (Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC(r.m.s.) for a period of one second.

(. . .Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

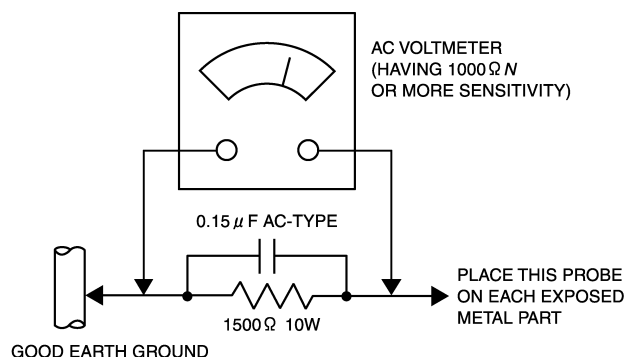
This method of test requires a test equipment not generally found in the service trade.

(2) Leakage Current Check

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC(r.m.s.).

● Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



FEATURES

1. It is a remote controlled color television.
2. 100 programs from VHF, UHF bands or cable channels can be preset.
3. It can tune cable channels.
4. Controlling the TV is very easy by its menu driven system.
5. It has two Euroconnector sockets for external device (such as video recorder, video games, audio set, etc.)
6. Front AV Input available.
7. Stereo sound systems (German + Nicam) are available.
8. Full function Teletext (Fastext, Toptext).
9. It is possible to connect headphone.
10. Direct channel access.
11. APS (Automatic Programming System).
12. All programs can be named.
13. Forward or backward automatic tuning.
14. Automatic sound mute when no transmission.
15. 5 minutes after the broadcasting (closedown), the TV switches itself automatically to stand-by mode.

MAIN DIFFERENCE LIST

MODEL No. Parts Name	AV28BT5ENS (Silver)	AV28BT5ENB (Black)	AV28BT5EES (Silver)	AV28BT5EEB (Black)
MAIN PWB	VE-20073586	←	VE-20073447	←
F CARTON BOX	VE-20074229	VE-20073917	VE-20074101	VE-20074115
INST BOOK	VE-50021021	←	VE-50021020	←
RATING LABEL	VE-20074227	VE-20073915	VE-20074100	VE-20074113
FRONT CABINET	VE-20073707	VE-20003525	VE-20073707	VE-20003525
BACK COVER	VE-20004635	VE-20016402	VE-20004635	VE-20016402

SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Remove the 8 screws marked **A**.
2. Withdraw the rear cover toward you.

REMOVING THE HEADPHONE JACK BOARD ASS'Y

- After removing the rear cover.

 1. Remove the 1 screw marked **B**.
 2. After pulling JACK BOARD back, it shifts rightward.

REMOVING THE SPEAKER

- After removing the rear cover.

 1. Remove the 2 screws marked **C**, and remove the SPEAKER BKT ASS'Y.
 2. Remove the 4 screws marked **D**, and remove the SPEAKER BKT COVER.
 3. Remove the 4 screws marked **E**, and remove the SPEAKER.

REMOVING THE MAIN PWB & PROCEDURE TO DEVELOPMENT

- After removing the rear cover.

 1. Remove the JACK BOARD ASS'Y.
 2. Remove the LEFT SPEAKER BKT ASS'Y.
 3. Remove the POWER SUPPLY TRANSFORMER.
 4. Remove the 2 screws marked **F** attached to the MAIN PWB ASS'Y.

CAUTIONS)

Be careful enough when developing a main chassis. The wire of a POWER TRANSFER does not separate and short-circuit with other parts.

REMOVING THE FRONT CONTROL PWB

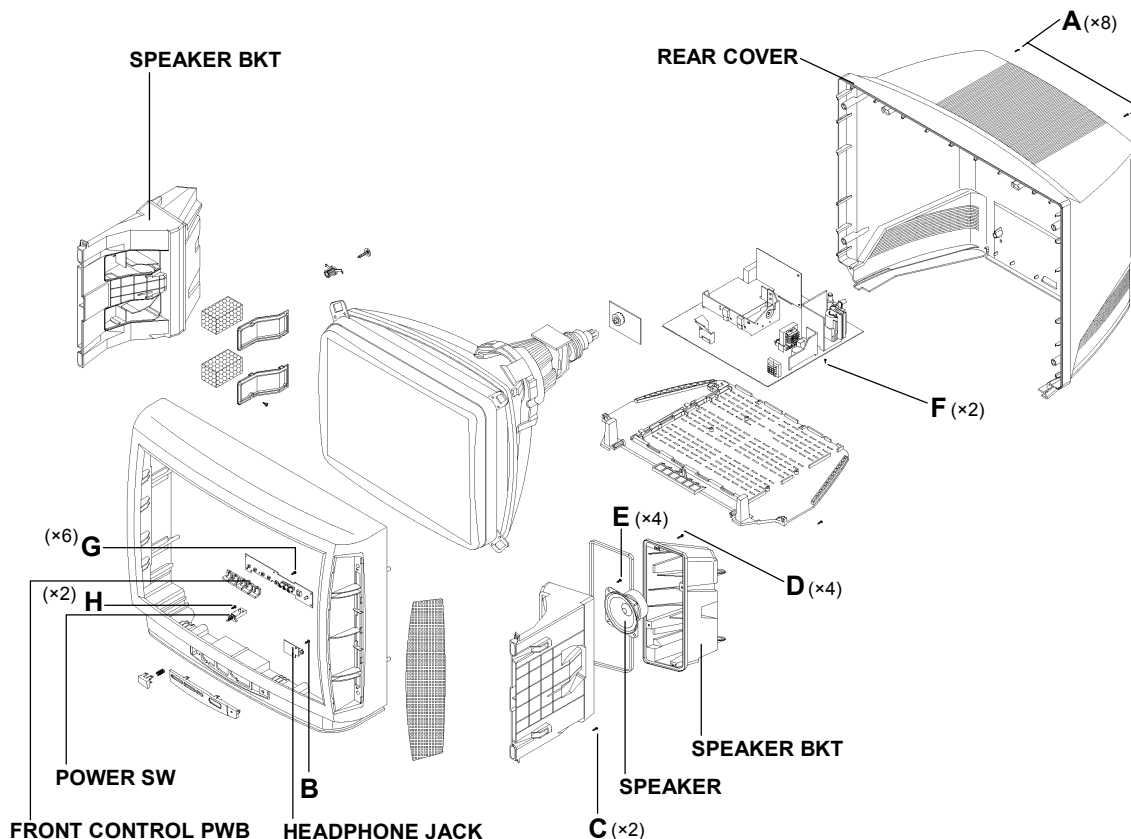
- After removing the rear cover.

 1. Remove the MAIN PWB ASS'Y.
 2. Remove the 6 screws marked **G**, and remove the FRONT CONTROL PWB.

REMOVING THE POWER SW

- After removing the rear cover.

 1. Remove the MAIN PWB ASS'Y.
 2. Remove the 2 screws marked **H**, and remove the POWER SW.



SETTING OF THE LAST MEMORY FOR SHIPMENT

■ USER SETTING VALUES

Setting Item	Setting Value	Setting Item	Setting Value
SOUND MENU		FEATURE MENU	
BASS	CENTER	SLEEP TIMER	OFF
TREBLE	↑	CHILD LOCK	OFF
BALANCE	↑		
EFFECT	OFF		
PICTURE MENU		INSTALL-> TV CONFIG. MENU	
BRIGHTNESS	These adjust are automatically restored when APS bit in Service menu is set.	LANGUAGE	ENGLISH
COLOUR		COUNTRY	?
CONTRAST		AV-2 OUTPUT	TV
SHARPNESS	The procedure for selling APS bit is discribed below.		
HUE (only NTSC)			
PICTURE MODE	AUTO		

■ SETTING APS BIT IN SERVICE MENU

- 1) Enter service menu in TV mode by pressing "INFO" and "MUTING" keys simultaneously. Service Menu will appear.
- 2) Select OPTIONS by pressing Up/Down keys on remote control unit.
- 3) Enter OPTIONS by pressing Left/Right keys on remote control unit.
- 4) Select OPTION 8 by pressing Up/Down keys on remote control unit.
- 5) Selected bit in one OPTION is shown by blinking character. Select B2 by pressing Left/Right keys on remote control unit.
DO NOT CHANGE ANY OTHER BIT.
- 6) Press digit key "1" to set APS bit.
- 7) Press "STANDARD" key on remote control unit to exit service mode.

REPLACEMENT OF CHIP COMPONENT

■ CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

■ SOLDERING IRON

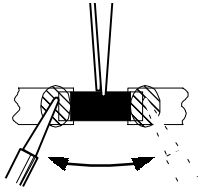
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

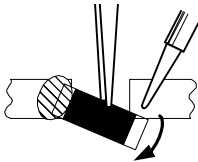
1. How to remove Chip parts

◆ Resistors, capacitors, etc.

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

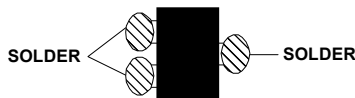


- (2) Shift with tweezers and remove the chip part.

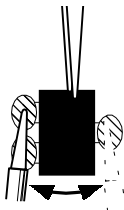


◆ Transistors, diodes, variable resistors, etc.

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

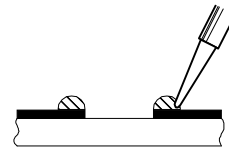


Note : After removing the part, remove remaining solder from the pattern.

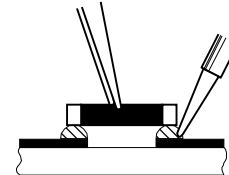
2. How to install Chip parts

◆ Resistors, capacitors, etc.

- (1) Apply solder to the pattern as indicated in the figure.

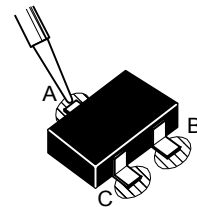


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

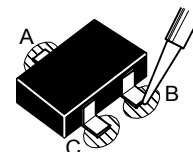


◆ Transistors, diodes, variable resistors, etc.

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION:

1. You can make the necessary adjustments for this unit with either the Remote Control Unit or With the adjustment tools and parts as given below.

2. Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.

3. Make sure that AC power is turned on correctly.

4. Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.

5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. Never touch any adjustment parts which are not specified in the list for this adjustment - variable resistors, transformers, condensers, etc.

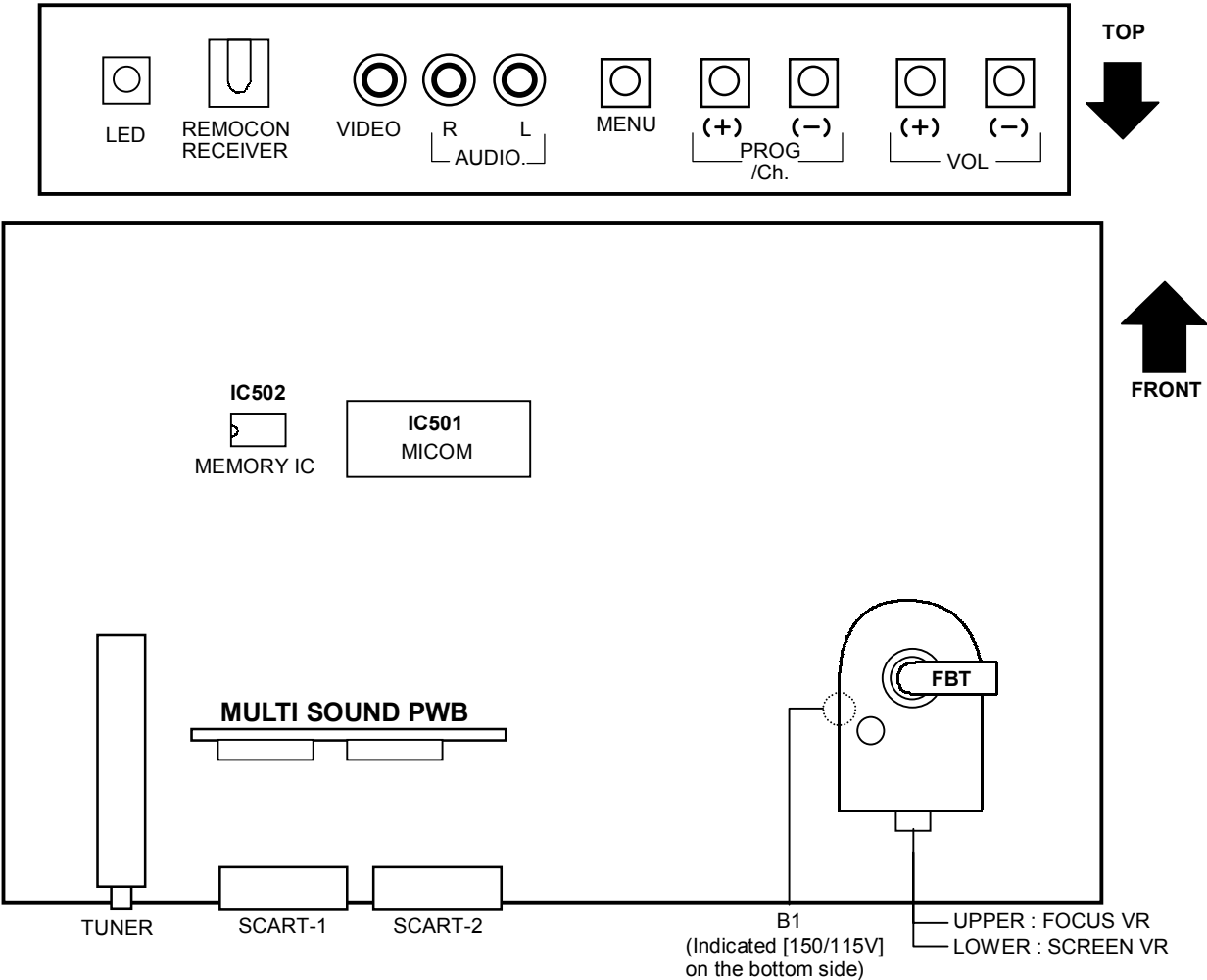
7. Presetting before adjustment.
Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

VIDEO STATUS	STANDARD
TINT/COLOR	
PICTURE/BRIGHT	CENTER
DETAIL	

ADJUSTMENT EQUIPMENT

1. DC voltmeter (or digital voltmeter)
2. Signal generator (Pattern generator) [PAL/SECAM/NTSC]
3. Remote control unit

MAIN PARTS LOCATIONS



BASIC OPERATION SERVICE MENU

■ HOW TO ENTER THE SERVICE MODE

- 1) Press the **INFORMATION** key and **MUTING** key of REMOTE CONTROL UNIT, simultaneously.

■ SELECTION OF ADJUSTMENT ITEMS

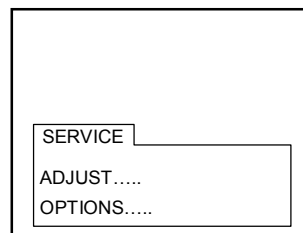
- 1) Press the **UP** (▲) or **DOWN** (▼) key and select the ADJUSTMENT ITEM.
- 2) Press the **RIGHT** (►) or **LEFT** (◄) key and enter ADJUSTMENT SCREEN.
- 3) To change the selected Parameter, use **RIGHT** (►) and **LEFT** (◄) key.

■ HOW TO EXIT SERVICE MODE

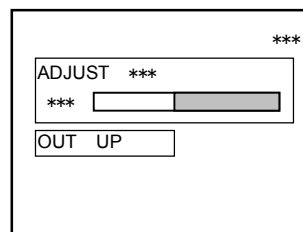
- 1) Press the **STANDARD** Key on REMOTE CONTROL UNIT.

■ ADJUSTMENT SERVICE MENU

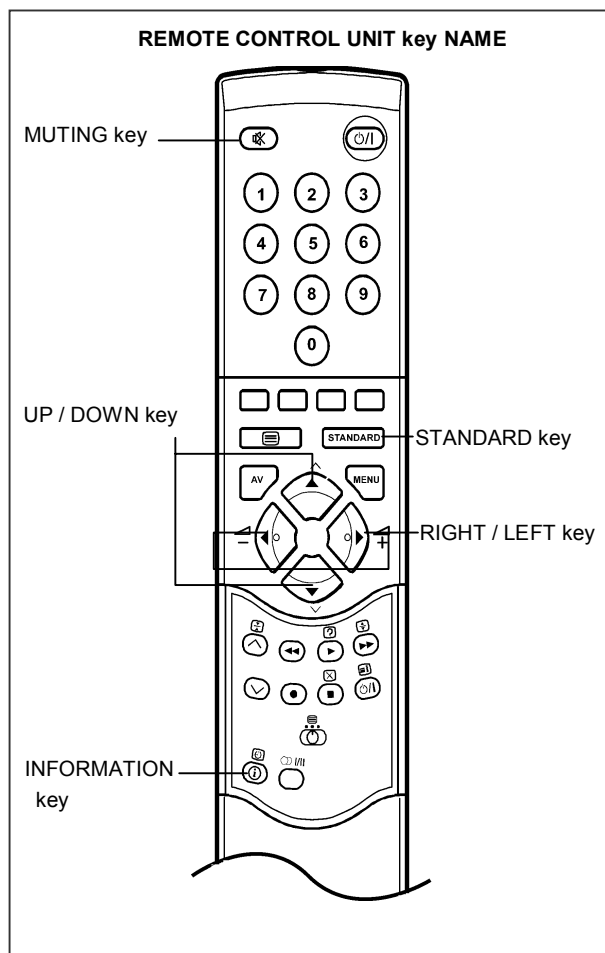
ADJUSTMENT ITEM	ADJUST No.	DISCRIPTION
WHITE BALANCE	00	White Point RED
	01	White Point GREEN
	02	White Point BLUE
AGC	03	AGC
IF-PLL NEGATIVE	04	IF-PLL Negative
IF-PLL POSITIVE	05	IF-PLL Positive
LUMINANCE DELAY	06	Y-Delay PAL
	07	Y-Delay SECAM
	08	Y-Delay NTSC
VERTICAL ZOOM	10	4 : 3 PICTURE MODE
	21	16 : 9 PICTURE MODE
VERTICAL SCROLL	11	4 : 3 PICTURE MODE
	22	16 : 9 PICTURE MODE
4 : 3 HORIZONTAL SHIFT	12	4 : 3 PICTURE MODE
	23	16 : 9 PICTURE MODE
VERTICAL SLOPE	13	4 : 3 PICTURE MODE
	24	16 : 9 PICTURE MODE
VERTICAL AMPLITUD	14	4 : 3 PICTURE MODE
	25	16 : 9 PICTURE MODE
S-CORRECTION	15	4 : 3 PICTURE MODE
	26	16 : 9 PICTURE MODE
VERTICAL SHIFT	16	4 : 3 PICTURE MODE
	27	16 : 9 PICTURE MODE
EW WIDTH	17	4 : 3 PICTURE MODE
	28	16 : 9 PICTURE MODE
EW PARABOLA WIDTH	18	4 : 3 PICTURE MODE
	29	16 : 9 PICTURE MODE
EW CORNER PARABOLA	19	4 : 3 PICTURE MODE
	30	16 : 9 PICTURE MODE
EW TRAPEZIUM	20	4 : 3 PICTURE MODE
	31	16 : 9 PICTURE MODE



SERVICE MENU SCREEN



ADJUSTMENT SCREEN



ADJUSTMENTS

Item	Measuring instrument	Test point	Adjustment part	Description
SCREEN VOLTAGE Adjustment	Signal Generator Remote Control unit		SCREEN VR [FBT] OPTION 02	1. Receive a PAL colour bar. 2. Enter the Option settings in the SERVICE MENU. 3. Press the function ▲ / ▼ key, and Enter Option 02. 4. To change bit 6, come on to it by using function ◀ / ▶ and make it "1" by pressing "1" while bit 2 is blinking. 5. Observe the thin horizontal blue-white line in the middle of the screen, and adjust the lower VR of the FBT, until the line is in its thinnest visible thickness. 6. Then make Option 02 bit 6 "0", by pressing "0" on the remote control unit, although you do not see any picture.
FOCUS Adjustment	Signal generator		FOCUS VR [FBT]	1. Receive a PAL circle pattern. 2. Adjust the upper VR of the FBT, until you get the Optimum focus, the sharpest picture.
B1 VOLTAGE check	DC Voltmeter	Marked [150/115V] on the MAIN PWB		1. Check whether the voltage at the point named and silk screened as "150 / 115V" on the MAIN PWB is 150V DC.

Item	Measuring instruments	Test point	Adjustment part	Description
WHITE BALANCE	Signal generator		ADJUST 00 (White point - RED) ADJUST 01 (White point - GREEN) ADJUST 02 (White point - BLUE)	[LOW LIGHT] 1. Receive a whole black signal. 2. Adjust the <Adjust 00>, <Adjust 01>, <Adjust 02>, in the SERVICE MENU so that the entire screen do not shine black. [HIGH LIGHT] 1. Receive a white and black signal (colour off). 2. Adjust the <Adjust 00>, <Adjust 01>, <Adjust 02>, in the SERVICE MENU so that the whiteness in the screen become sharp.
AGC Adjustment	DC voltmeter		ADJUST 03	1. Receive a any broadcast. 2. Select <ADJUST 03> from SERVICE MENU 3. Connect a DC voltmeter to pin 1 of the tuner. Change the AGC parameter until you see 3.70VDC on voltmeter display.
IF-PLL NEGATIVE Adjustment			ADJUST 04	1. Select <ADJUST 04> from SERVICE MENU. 2. Adjustment value is set to 80 as a default value.
IF-PLL POSITIVE Adjustment			ADJUST 05	1. Select <ADJUST 05> from SERVICE MENU. 2. Adjustment value is set to 80 as a default value.

Item	Measuring instruments	Test point	Adjustment part	Description
LUMINANCE DELAY Adjustment	Signal generator		Adjust 06	[Y-Delay PAL] 1. Receive a PAL colour bar signal. 2. Select <Adjust 06> from SERVICE MENU. 3. Adjust Y-Delay PAL till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is one of the G1965M, J1951M, K2958M, K2962M, G3957M, K6256K, K6259K or M1963M, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.
			Adjust 07	[Y-Delay SECAM] 1. Receive a SECAM colour bar signal. 2. Select <Adjust 07> from SERVICE MENU. 3. Adjust Y-Delay SECAM till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is one of the G1965M, K2958M, K2962M, G3957M, K6256K or K6259K, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.
			Adjust 08	[Y-Delay NTSC] 1. Receive a NTSC colour bar signal. 2. Select <Adjust 08> from SERVICE MENU. 3. Adjust Y-Delay NTSC till the colour transients on the colour bar of the pattern become as sharper and colours between transients do not mix with each other as possible. Note: If the SAW filter is M1963M, there is constant group delay distortion, so for an equal delay of the luminance and chrominance signal the delay must be set at a value of 160nS. This means the adjustment must be set to the maximum value.

Item	Measuring instruments	Test point	Adjustment part	Description
VERTICAL ZOOM Adjustment	Signal generator		Adjust 10 (4 : 3) Adjust 21 (16 : 9)	1. Receive a PAL circle test pattern. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 10 > from SERVICE MENU. 4. Change vertical zoom till you see the upper and olwer limit of the circle as close to the upper and lower limit of the picture tube as possible. 5. Set < 16 : 9 aspect mode >. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SCROLL Adjustment	Signal generator		Adjust 11 (4 : 3) Adjust 22 (16 : 9)	1. Receive a PAL circle test pattern. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 11 > from SERVICE MENU. 4. Change vertical scroll till you see the circle exactly un the middle of the screen. 5. Set < 16 : 9 aspect mode >. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
4 : 3 HORIZONTAL SHIFT Adjustment	Signal generator		Adjust 12 (4 : 3) Adjust 23 (16 : 9)	1. Receive a RED PURITY test pattern. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 12 > from SERVICE MENU. 4. Change horizontal shift till the picture is horizontally centered. Check whether this adjustment is correct after completing Service Mode Adjustment. 5. Set < 16 : 9 aspect mode >. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SLOPE Adjustment	Signal generator		Adjust 13 (4 : 3) Adjust 24 (16 : 9)	1. Receive a CROSS-HATCH signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 13 > from SERVICE MENU. 4. Change vertical slope till the size of squares on both the upper and lower part of test pattern become equal to the squares laying on the vertical centre of the test pattern. 5. Check and readjust VERTICAL SLOPE item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
VERTICAL AMPLITUDE Adjustment	Signal generator		Adjust 14 (4 : 3) Adjust 25 (16 : 9)	1. Receive a PAL test pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 14 > from SERVICE MENU. 4. Change vertical slope till horizontal black lines on both the upper and lower part of the test pattern become very close to the upper and lower horizontal sides of picture tube and nearly about to disappear. 5. Check and readjust VERTICAL AMPLITUDE item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.

Item	Measuring instrument	Test point	Adjustment part	Description
S-CORRECTION Adjustment	Signal generator		Adjust 15 (4 : 3) Adjust 26 (16 : 9)	1. Receive a PAL circle pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 15 > from SERVICE MENU. 4. Change S-correction till the middle part of the circle is round as possible. 5. Set < 16 : 9 aspect mode >. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
VERTICAL SHIFT Adjustment	Signal generator		Adjust 16 (4 : 3) Adjust 27 (16 : 9)	1. Receive a PAL test pattern signal (or the symmetrical signal in the top and the bottom and on either side to find). 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 16 > from SERVICE MENU. 4. Change Vertical Shift till the test pattern is vertically centred, i.e. horizontal line at the centre pattern is in equal distance both to upper and lower side of the picture tube. 5. Check and readjust Vertical Shift item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
EW WIDTH Adjustment	Signal generator		Adjust 17 (4 : 3) Adjust 28 (16 : 9)	1. Receive a PAL test pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 17 > from SERVICE MENU. 4. Change EW Width till the vertical black and white bars on both left and right side of the pattern exactly disappear. 5. Set < 16 : 9 aspect mode >. 6. Adjusts with the step which is the same above from 3 to 4 about the 16 : 9 aspect mode, too.
EW PARABOLA WIDTH Adjustment	Signal generator		Adjust 18 (4 : 3) Adjust 29 (16 : 9)	1. Receive a PAL test pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 18 > from SERVICE MENU. 4. Change EW Parabola Width till vertical lines close to the both sides of the picture frame become parallel to vertical side of picture tube. 5. Check and readjust EW Parabola Width item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.
EW CORNER PARABOLA Adjustment	Signal generator		Adjust 19 (4 : 3) Adjust 30 (16 : 9)	1. Receive a PAL test pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 19 > from SERVICE MENU. 4. Change EW Corner Parabola till vertical lines at the corners of both sides of picture frame become vertical and parallel to vertical corner sides of picture tube. 5. Check and readjust EW Corner Parabola item if the adjustment becomes improper after some other geometric adjustments are done. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.

Item	Measuring instrument	Test point	Adjustment part	Description
EW TRAPEZIUM Adjustment	Signal generator		Adjust 20 (4 : 3) Adjust 31 (16 : 9)	1. Receive a PAL circle pattern signal. 2. Set < 4 : 3 aspect mode >. 3. Select < ADJUST 15 > from SERVICE MENU. 4. Change EW Trapezium till vertical lines, especially lines at the sides of the picture frame became parallel to the both sides of picture tube as possible. 5. Check and readjust EW Trapezium item if the adjustment becomes improper after some other geometric adjustment. 6. Set < 16 : 9 aspect mode >. 7. Adjusts with the step which is the same above from 3 to 5 about the 16 : 9 aspect mode, too.



JVC

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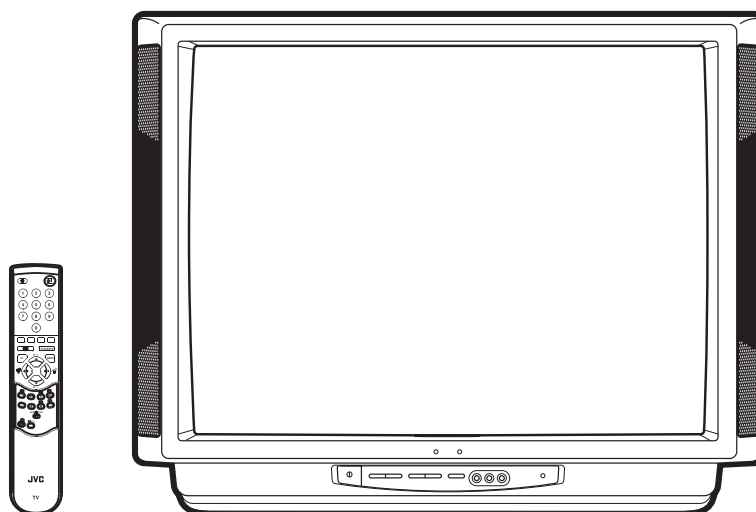
JVC

SCHEMATIC DIAGRAMS

COLOUR TELEVISION

AV28BT5ENS / AV28BT5ENB AV28BT5EES / AV28BT5EEB

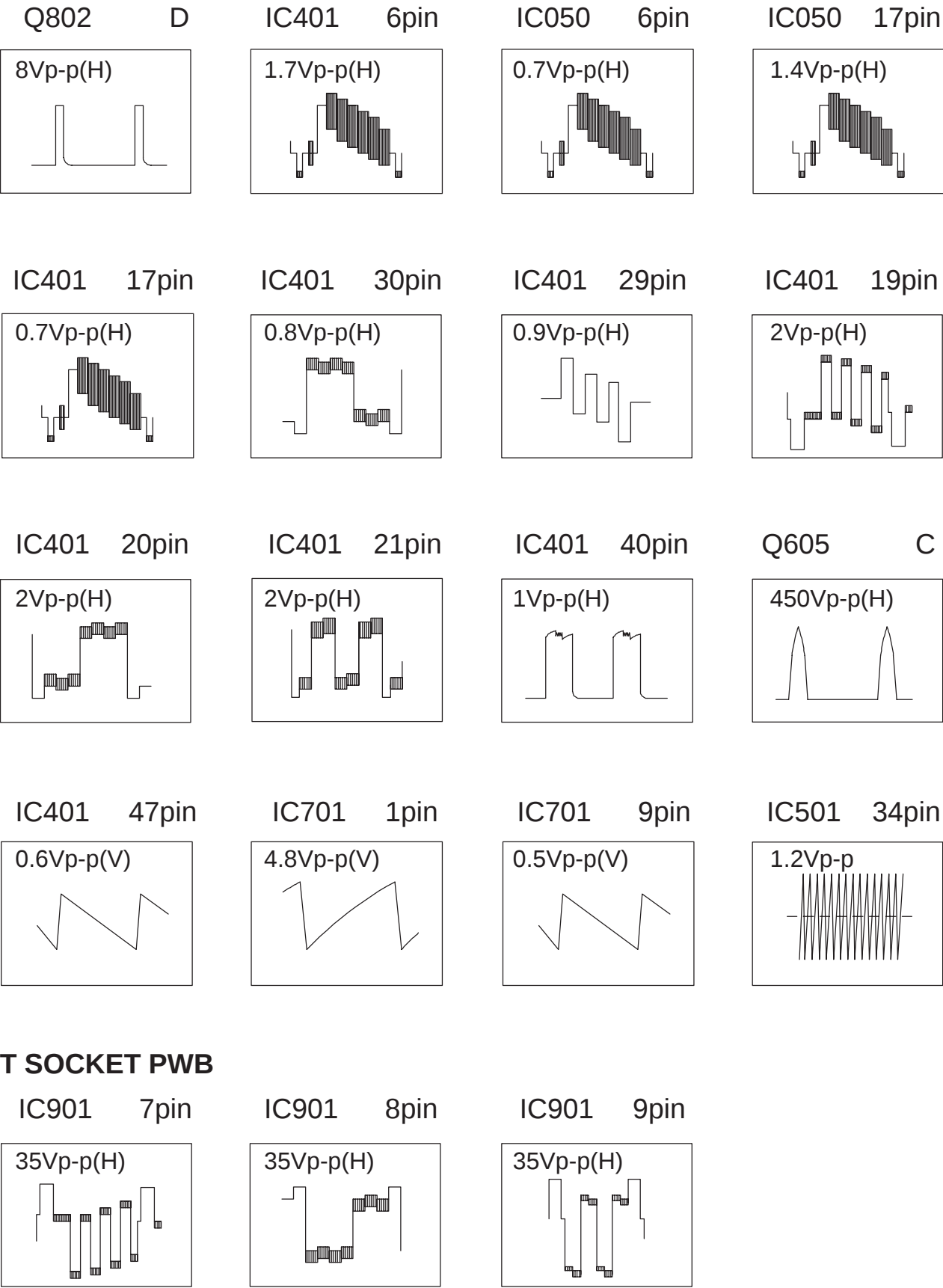
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MAIN PWB



CRT SOCKET PWB

STANDARD CIRCUIT DIAGRAM

NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY
The components identified by the symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES
The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	:DC 20k Ω /V
(4)Oscilloscope sweeping time	:H $\Rightarrow$ 20 μ S/div :V $\Rightarrow$ 5mS/div :Others $\Rightarrow$ Sweeping time is specified
(5)Voltage values	:All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board :R1209 $\rightarrow$ R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	: [Ω]
K	: [K Ω]
M	: [M Ω]

● Rated allowable power

No indication	:1/ 16 [W]
Others	:As specified

● Type

No indication	:Carbon resistor
OMR	:Oxide metal film resistor
MFR	:Metal film resistor
MPR	:Metal plate resistor
UNFR	:Uninflammable resistor
FR	:Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	: [pF]
less than 1	: [μ F]

● Withstand voltage

No indication	:DC50[V]
Others	:DC withstand voltage [V]
AC indicated	:AC withstand voltage [V]

* Electrolytic Capacitors
47/50[Example]:Capacitance value [μ F]/withstand voltage[V]

● Type

No indication	:Ceramic capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

(3)Coils

No unit	: [μ H]
Others	:As specified

(4)Power Supply

	:B1		:B2 (12V)
	:9V		:5V

* Respective voltage values are indicated

(5)Test point

	:Test point		:Only test point display
--	-------------	--	--------------------------

(6)Connecting method

	:Connector		:Wrapping or soldering
	:Receptacle		

(7)Ground symbol

	:LIVE side ground
	:ISOLATED(NEUTRAL) side ground
	:EARTH ground
	:DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : () side GND and the ISOLATED(NEUTRAL) : () side GND.Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

◇ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.
When ordering parts, please use the numbers that appear in the Parts List.

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SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR

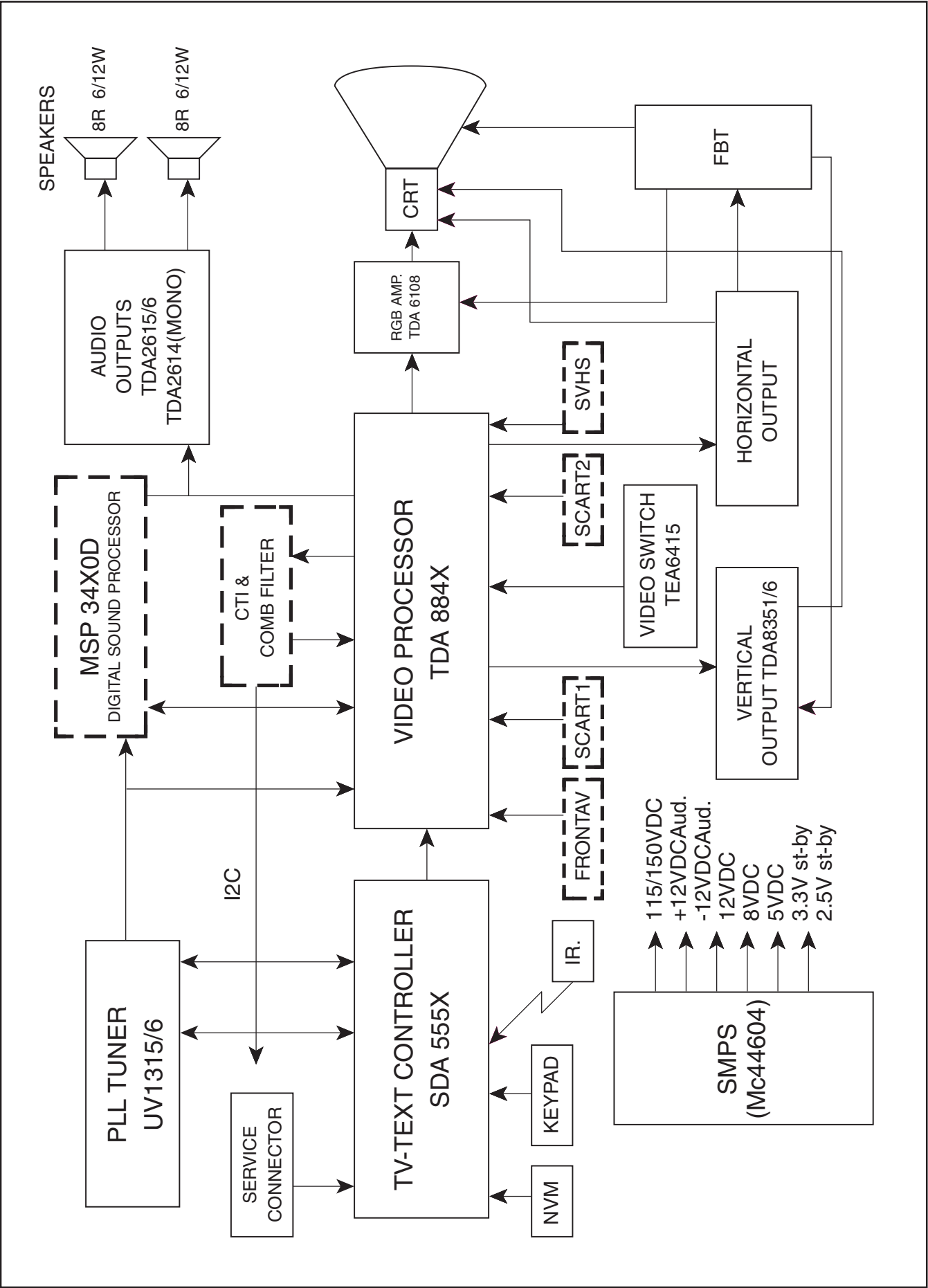
IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW

CHIP IC

TOP VIEW	

BLOCK DIAGRAM

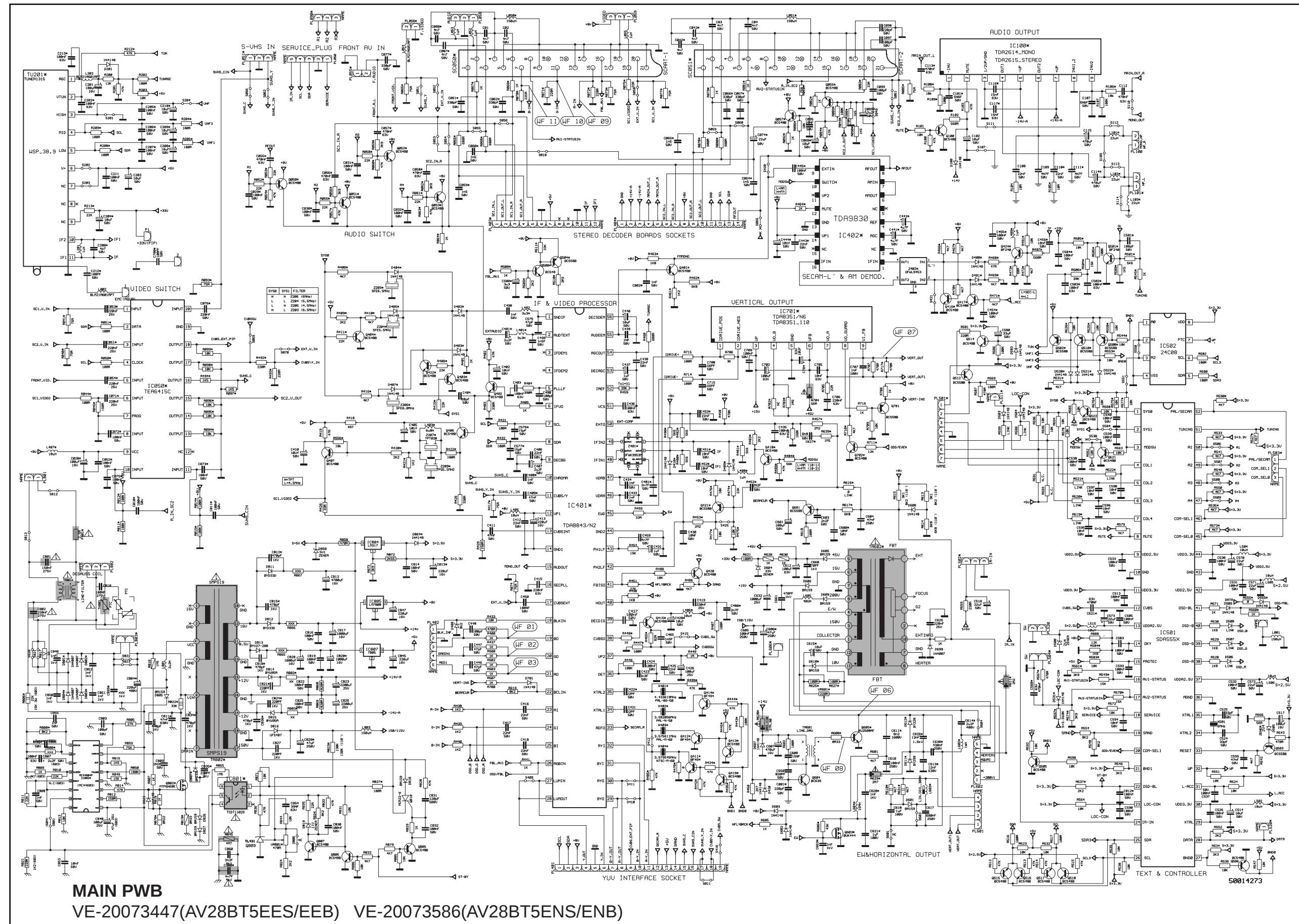


CIRCUIT DIAGRAMS

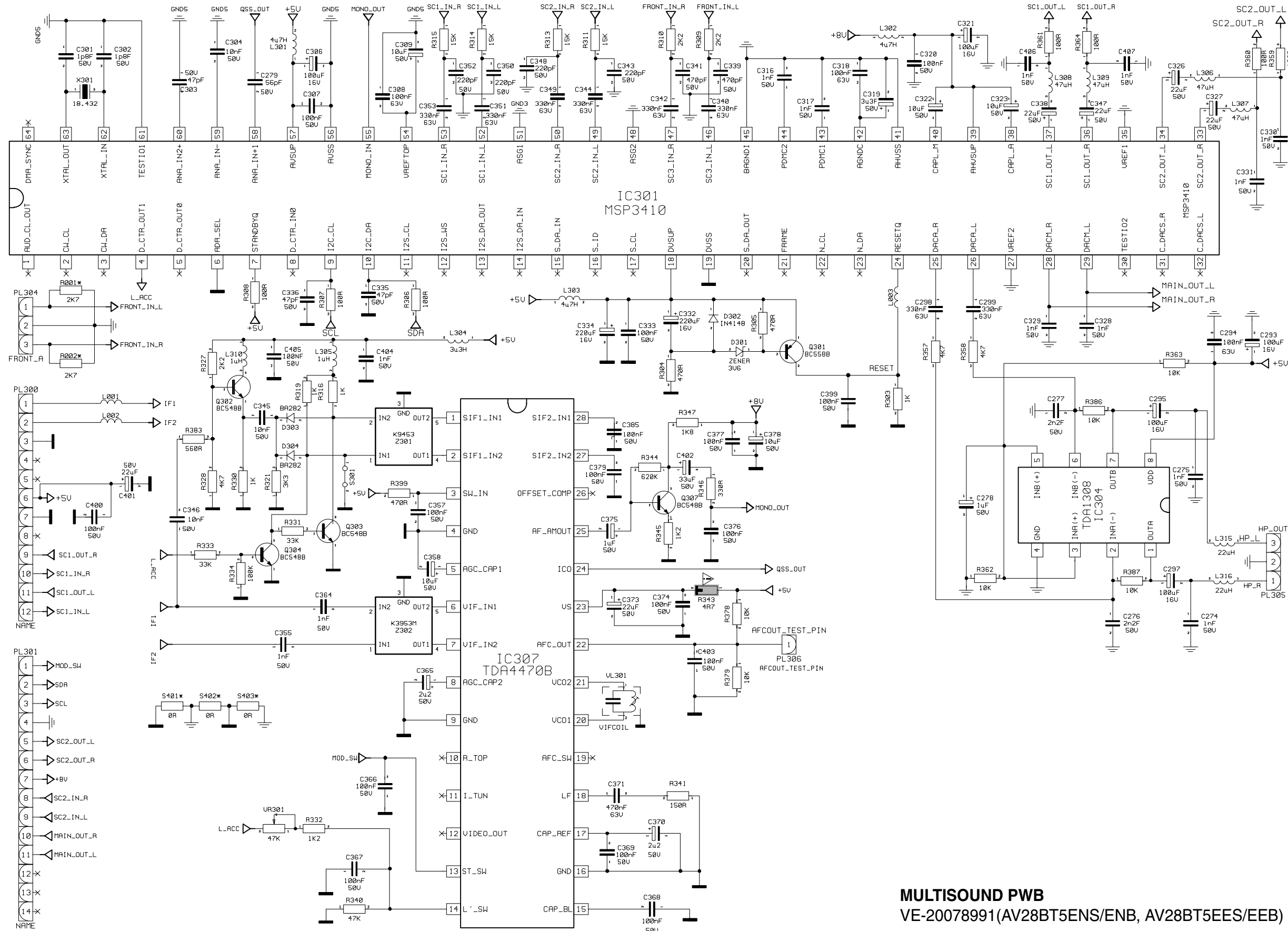
MAIN PWB CIRCUIT DIAGRAM

AV28BT5ENS / AV28BT5ENB
AV28BT5EES / AV28BT5EEB

AV28BT5ENS / AV28BT5ENB
AV28BT5EES / AV28BT5EEB



MULTISOUND PWB
VE-20078991(AV28BT5ENS/ENB, AV28BT5EES/EEB)



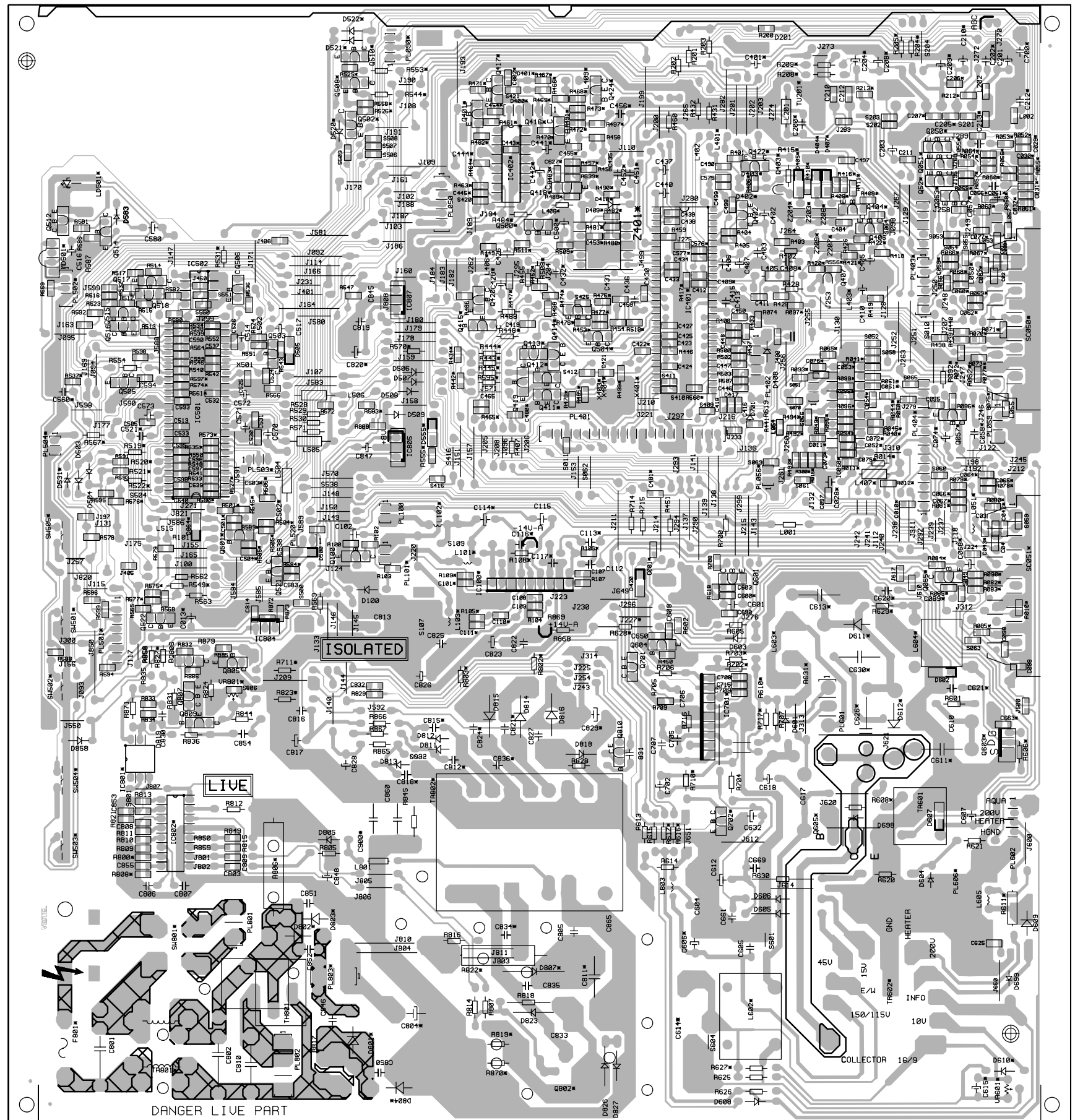
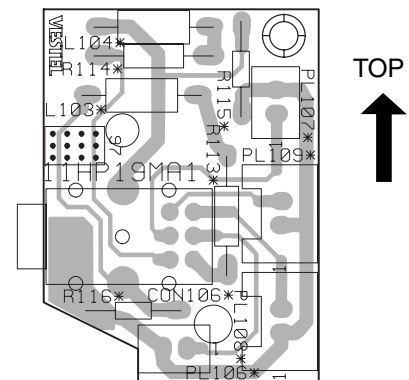
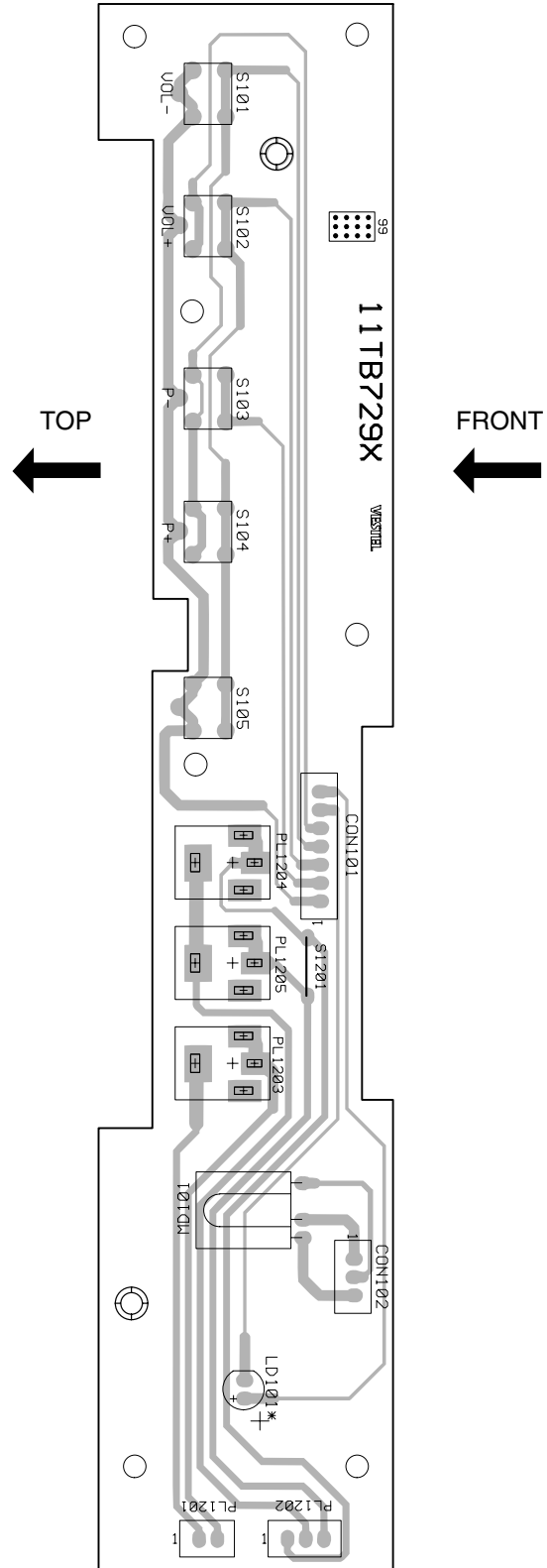
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PATTERN DIAGRAMS

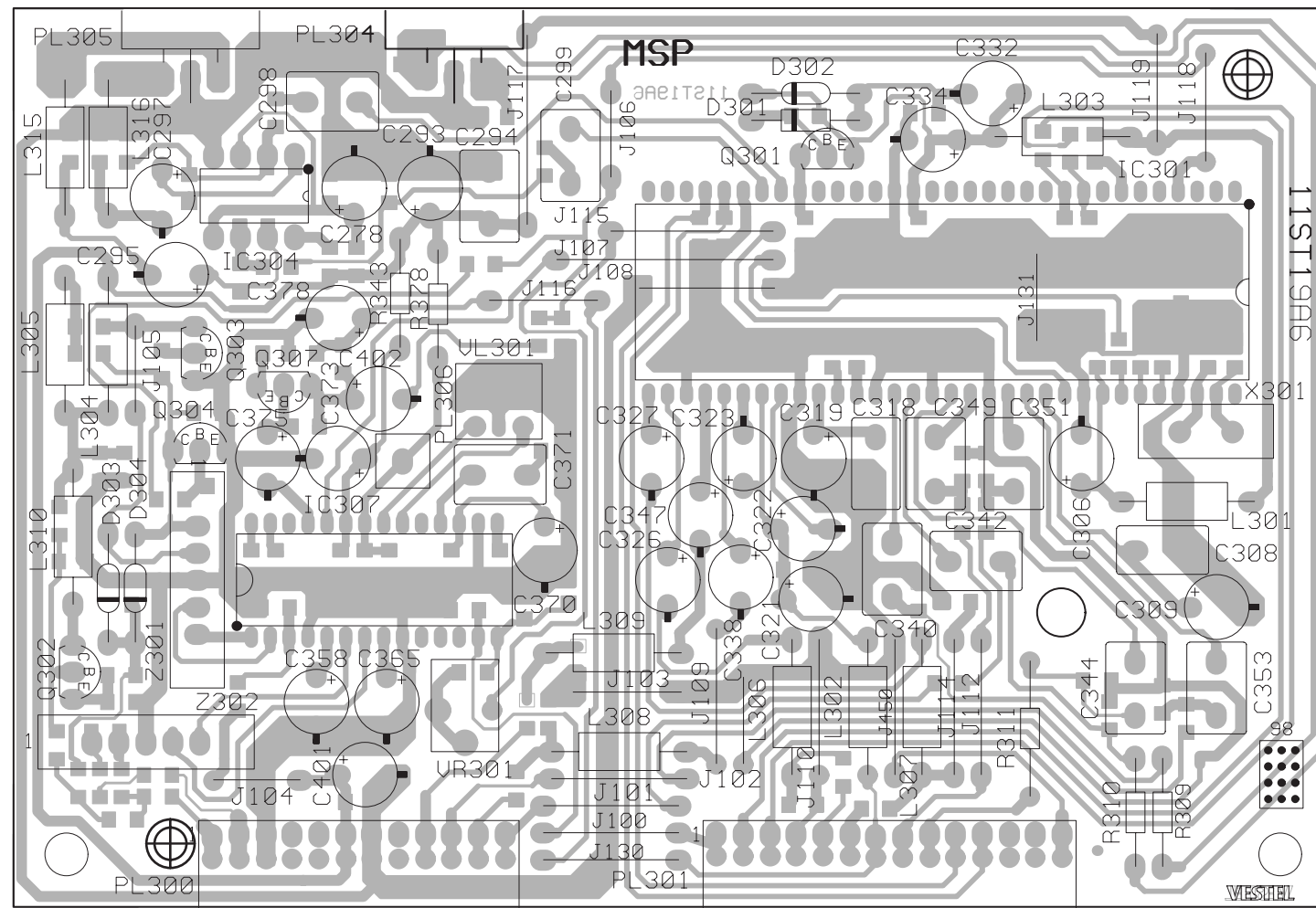
FRONT CONTROL PWB PATTERN

MAIN PWB PATTERN

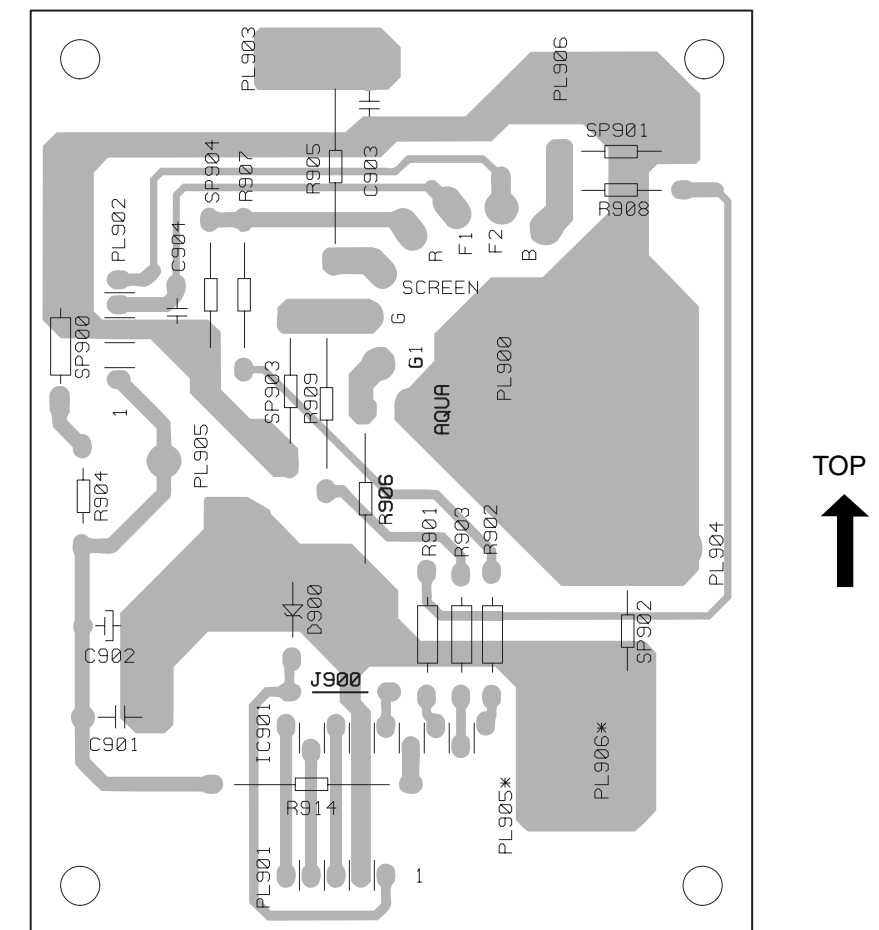
AV28BT5ENS / AV28BT5ENB
AV28BT5EES / AV28BT5EEB



MULTISOUND PWB PATTERN



CRT SOCKET PATTERN



VOLTAGE TABLE

■ MAIN PWB

IC050			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.8	11	3.0
2	4.5	12	0
3	2.9	13	4.0
4	4.8	14	2.8
5	2.9	15	4.0
6	3.2	16	4.0
7	0	17	4.0
8	2.9	18	4.0
9	7.9	19	0
10	4.0	20	3.7

IC401			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0.3	29	2.4
2	3.7	30	2.4
3	0	31	2.4
4	0	32	2.4
5	2.5	33	0.3
6	3.0	34	2.5
7	4.5	35	2.5
8	4.5	36	4.7
9	6.7	37	7.8
10	0.1	38	2.8
11	3.7	39	5.0
12	7.8	40	0.1
13	4.0	41	0.9
14	0	42	3.1
15	3.0	43	4.0
16	0	44	0
17	3.7	45	3.0
18	5.4	46	2.3
19	3.5	47	2.3
20	3.1	48	4.6
21	3.4	49	4.6
22	2.1	50	2.0
23	3.5	51	3.8
24	3.5	52	3.8
25	3.5	53	4.3
26	0.1	54	2.3
27	3.0	55	2.9
28	3.0	56	3.3

IC801			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	12.5	4	2.6
2	11.5	5	12.4
3	0	6	0.1

IC802			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	12.4	9	0.8
2	12.1	10	2.6
3	0.1	11	2.3
4	0	12	0.2
5	0.9	13	3.0
6	0.1	14	2.4
7	0.2	15	2.6
8	0.2	16	2.4

IC804	
PIN NO.	VOLTAGE
1	2.1
2	12.5
3	3.3

IC805	
PIN NO.	VOLTAGE
1	12.4
2	0
3	7.9

IC807	
PIN NO.	VOLTAGE
1	9.1
2	0
3	5

IC701			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.3	6	45.2
2	2.3	7	7.7
3	15	8	0
4	7.5	9	7.5
5	0		

IC100			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	6	0
2	12.7	7	12.6
3	0	8	0
4	0	9	0
5	-12.6		

IC501			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	27	0
2	0	28	0
3	0	29	0
4	3.3	30	3.3
5	3.3	31	3.3
6	3.3	32	3.3
7	3.3	33	3.3
8	0	34	0.5
9	2.4	35	0.5
10	0	36	0
11	3.3	37	2.4
12	0.9	38	0.3
13	2.4	39	0.2
14	0	40	0.3
15	0.1	41	0
16	0	42	2.4
17	0	43	0
18	2.4	44	3.3
19	0.3	45	0
20	0.1	46	3.3
21	0	47	3.3
22	2.1	48	3.3
23	3.3	49	3.3
24	3.5	50	3.3
25	3.1	51	3.3
26	3.1	52	3.3

IC502			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0	5	0.1
2	0	6	0.1
3	0	7	3.3
4	0	8	3.3

Note)
Although the symbol numbers of the level drive transistor and level output transistor are indicated as Q604 and Q606 on the wiring diagram, the numbers are indicated as Q601 and Q605 on the substrate, respectively. The following table shows the silk-printed symbol numbers on the substrate.

	E(D)	C(S)	B(G)
Q055	2.4	7.8	3.0
Q100	0	12.6	0
Q501	11.9	0	0
Q503	3.3	3.3	2.5
Q512	5.4	3.4	4.8
Q514	0	4.8	0
Q515	4.8	3.2	2.4
Q516	3.2	4.8	2.4
Q517	4.5	3.2	2.4
Q518	3.2	4.8	2.4
Q601	0	0	0.1
Q603	15.2	0	3.1
Q605	0	---	0
Q701	0.1	0	0.4
Q702	0	0	0.6
Q802	167	0	0.1
Q805	0	0	0.6
Q806	0	0	0.6
Q807	0	11.5	0

Q809
Cathode:11.3V
Anode:0V
Control terminal:2.4V

■ IF PWB

IC301			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.5	33	3.7
2	0	34	3.7
3	0	35	0
4	4.9	36	3.7
5	0	37	3.7
6	0	38	6.8
7	4.9	39	7.8
8	0	40	6.5
9	4.5	41	0
10	4.5	42	3.6
11	2.4	43	3.7
12	2.4	44	3.7
13	2.4	45	0
14	0.1	46	3.7
15	0.1	47	3.7
16	0.1	48	0
17	0	49	3.7
18	4.8	50	3.7
19	0	51	0
20	0	52	3.7
21	0	53	3.7
22	0	54	2.6
23	0	55	3.7
24	4.9	56	0
25	0.1	57	4.9
26	0.1	58	0.1
27	0	59	0.1
28	0	60	0.1
29	0	61	0
30	0	62	2.3
31	0	63	2.3
32	0	64	0

IC304			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.4	5	4.9
2	2.4	6	2.4
3	2.4	7	2.4
4	0	8	2.4

IC307			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.2	15	0.1
2	3.2	16	0
3	4.9	17	4.3
4	0	18	3.0
5	0.1	19	3.5
6	2.4	20	3.3
7	2.4	21	3.3
8	2.2	22	3.3
9	0	23	3.5
10	2.7	24	4.5
11	0	25	0
12	2.1	26	3.4
13	5.0	27	0.1
14	0	28	0.1

	E(D)	C(S)	B(G)
Q301	4.8	4.8	4.1

■ CRT SOCKET PWB

IC901			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	3.2	6	0.1
2	2.9	7	0.1
3	3.2	8	0.1
4	0	9	0.1
5	6.0		



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PARTS LIST

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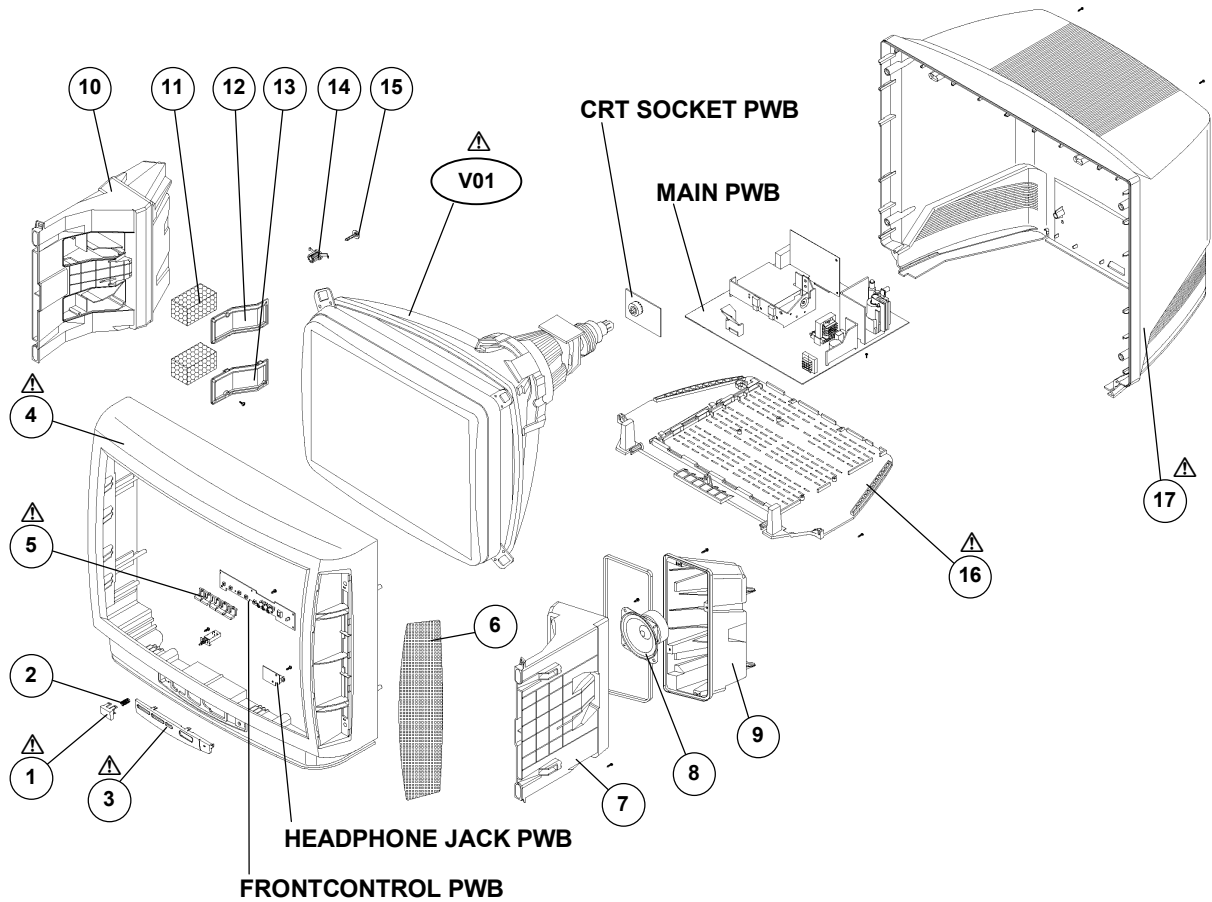
[AV28BT5EES / AV28BT5EEB]

● MAIN PW BOARD ASS'Y	26
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USING PW BOARD & REMOTE CONTROL UNIT

Model PWB ASS'Y	AV28BT5ENS AV28BT5ENB	AV28BT5EES AV28BT5EEB
MAIN PWB	VE-20073586	VE-20073447
MULTI SOUND PWB	VE-20078991	←
CRT SOCKET PWB	VE-20074437	←
FRONT CONTROL PWB	VE-20079113	←
HEAD PHONE JACK PWB	VE-20075472	←
REMOTE CONTROL UNIT	RM-C85	←

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

[SILVER model : AV28BT5ENS, AV28BT5EES]			
Ref.No.	Part No.	Part Name	Description
△ V01	VE-30002751	PICTURE TUBE (ITC)	
△ 1	VE-20074065	POWER KNOB	
2	VE-35000013	SPRING	
△ 3	VE-20056445	FRONT PANEL	
△ 4	VE-20073707	FRONT CABINET	
△ 5	VE-20074065	BUTTON ASS'Y	
6	VE-35004351	SPEAKER GRILL	(X2)
7	VE-20004585	SPEAKER BRACKET	(X2)
8	VE-30001943	SPEAKER	(X2)
9	VE-20004584	SPEAKER BRACKET COVER	(X2)
10	VE-20000587	SPEAKER BRACKET ASS'Y	(X2)
11	VE-40000144	SPONGE ACOUSTIC	(X4)
12	VE-40004203	LEFT LID	(X2)
13	VE-20004202	RIGHT LID	(X2)
14	VE-40000108	ADJUSTABLE BOSS CRT	(X4)
15	VE-35000235	SCREW	(X4)
△ 16	VE-20004163	BASE	
△ 17	VE-20004635	BACK COVER	

[BLACK model : AV28BT5ENB, AV28BT5EEB]			
Ref.No.	Part No.	Part Name	Description
△ V01	VE-30002751	PICTURE TUBE (ITC)	
△ 1	VE-20074065	POWER KNOB	
2	VE-35000013	SPRING	
△ 3	VE-20056445	FRONT PANEL	
△ 4	VE-20003525	FRONT CABINET	
△ 5	VE-20015255	BUTTON ASS'Y	
6	VE-35000072	SPEAKER GRILL	(X2)
7	VE-20004585	SPEAKER BRACKET	(X2)
8	VE-30001943	SPEAKER	(X2)
9	VE-20004584	SPEAKER BRACKET COVER	(X2)
10	VE-20000587	SPEAKER BRACKET ASS'Y	(X2)
11	VE-40000144	SPONGE ACOUSTIC	(X4)
12	VE-40004203	LEFT LID	(X2)
13	VE-20004202	RIGHT LID	(X2)
14	VE-40000108	ADJUSTABLE BOSS CRT	(X4)
15	VE-35000235	SCREW	(X4)
△ 16	VE-20004163	BASE	
△ 17	VE-20016402	BACK COVER	

PRINTED WIRING BOARD PARTS LIST

[AV28BT5ENS / AV28BT5ENB]

MAIN P.W. BOARD ASS'Y (VE-20073586)

△ Symbol No.	Part No.	Part Name	Description	△ Symbol No.	Part No.	Part Name	Description
RESISTOR				RESISTOR			
R001	VE-30000471	CF RES.	1/4W 10K J	R361	VE-30000464	SMD RES.	1/10W 100R J
R001	VE-30000631	SMD RES.	1/10W 2.7K J	R364	VE-30000464	SMD RES.	1/10W 100R J
R002	VE-30000471	CF RES.	1/4W 10K J	R378	VE-30000471	CF RES.	1/4W 10K J
R002	VE-30000631	SMD RES.	1/10W 2.7K J	R379	VE-30000475	SMD RES.	1/10W 10K J
R003	VE-30000770	CF RES.	1/4W 680R J	R399	VE-30000717	SMD RES.	1/10W 470R J
R010	VE-30000797	SMD RES.	1/10W 75R J	R400	VE-30000717	SMD RES.	1/10W 470R J
R011	VE-30000480	SMD RES.	1/10W 100K J	R402	VE-30000706	CF RES.	1/4W 47R J
R012	VE-30000480	SMD RES.	1/10W 100K J	R403	VE-30000659	SMD RES.	1/10W 330R J
R014	VE-30000477	CF RES.	1/4W 100K J	R404	VE-30000688	SMD RES.	1/10W 390R J
R015	VE-30000480	SMD RES.	1/10W 100K J	R405	VE-30000469	SMD RES.	1/10W 1K J
R040	VE-30000797	SMD RES.	1/10W 75R J	R407	VE-30000459	CF RES.	1/4W 100R J
R041	VE-30000797	SMD RES.	1/10W 75R J	R418	VE-30000735	SMD RES.	1/10W 4.7K J
R044	VE-30000459	CF RES.	1/4W 100R J	R419	VE-30000710	SMD RES.	1/10W 47R J
R045	VE-30000524	SMD RES.	1/10W 150R J	R420	VE-30000593	SMD RES.	1/10W 2.2K J
R049	VE-30000717	SMD RES.	1/10W 470R J	R421	VE-30000499	SMD RES.	1/10W 1.2K J
R050	VE-30000464	SMD RES.	1/10W 100R J	R422	VE-30000558	SMD RES.	1/10W 180R J
R051	VE-30000464	SMD RES.	1/10W 100R J	R426	VE-30000659	SMD RES.	1/10W 330R J
R065	VE-30000797	SMD RES.	1/10W 75R J	R428	VE-30000650	CF RES.	1/4W 33R J
R066	VE-30000774	SMD RES.	1/10W 680R J	R429	VE-30000524	SMD RES.	1/10W 150R J
R067	VE-30000469	SMD RES.	1/10W 1K J	R431	VE-30000459	CF RES.	1/4W 100R J
R068	VE-30000774	SMD RES.	1/10W 680R J	R432	VE-30000459	CF RES.	1/4W 100R J
R069	VE-30000469	SMD RES.	1/10W 1K J	R433	VE-30000475	SMD RES.	1/10W 10K J
R070	VE-30000588	SMD RES.	1/10W 220R J	R437	VE-30000469	SMD RES.	1/10W 1K J
R071	VE-30000588	SMD RES.	1/10W 220R J	R438	VE-30000499	SMD RES.	1/10W 1.2K J
R072	VE-30000588	SMD RES.	1/10W 220R J	R439	VE-30000499	SMD RES.	1/10W 1.2K J
R073	VE-30000797	SMD RES.	1/10W 75R J	R440	VE-30000499	SMD RES.	1/10W 1.2K J
R075	VE-30000653	SMD RES.	1/10W 33R J	R446	VE-30000480	SMD RES.	1/10W 100K J
R078	VE-30000774	SMD RES.	1/10W 680R J	R447	VE-30000464	SMD RES.	1/10W 100R J
R079	VE-30000469	SMD RES.	1/10W 1K J	R448	VE-30000466	CF RES.	1/4W 1K J
R080	VE-30000774	SMD RES.	1/10W 680R J	R449	VE-30000489	SMD RES.	1/10W 1R J
R081	VE-30000469	SMD RES.	1/10W 1K J	R450	VE-30000631	SMD RES.	1/10W 2.7K J
R082	VE-30000469	SMD RES.	1/10W 1K J	R451	VE-30000633	CF RES.	1/4W 27K J
R083	VE-30000653	SMD RES.	1/10W 33R J	R452	VE-30000309	SMD CAP.	2.2NF 50V K R
R084	VE-30000710	SMD RES.	1/10W 47R J	R453	VE-30000606	SMD RES.	1/10W 2.2K J
R094	VE-30000475	SMD RES.	1/10W 10K J	R454	VE-30000534	SMD RES.	1/10W 15K J
R095	VE-30000475	SMD RES.	1/10W 10K J	R455	VE-30000650	CF RES.	1/4W 33R J
R096	VE-30000475	SMD RES.	1/10W 10K J	R456	VE-30000550	SMD RES.	1/10W 160K J
R097	VE-30000529	SMD RES.	1/10W 1.5K J	R457	VE-30000606	SMD RES.	1/10W 2.2K J
R098	VE-30000475	SMD RES.	1/10W 10K J	R458	VE-30000732	SMD RES.	1/10W 470K J
R099	VE-30000475	SMD RES.	1/10W 10K J	R459	VE-30000697	SMD RES.	1/10W 39K G
R100	VE-30000727	SMD RES.	1/10W 47K J	R460	VE-30000770	CF RES.	1/4W 680R J
R101	VE-30000471	CF RES.	1/4W 10K J	R465	VE-30000658	SMD RES.	1/10W 82R J
R102	VE-30000747	SMD RES.	1/10W 560R J	R474	VE-30000597	SMD RES.	1/10W 22K J
R103	VE-30000710	SMD RES.	1/10W 47R J	R475	VE-30000475	SMD RES.	1/10W 10K J
R104	VE-30000457	SMD RES.	1/10W 10R J	R486	VE-30000721	SMD RES.	1/10W 4.7K J
R105	VE-30000457	SMD RES.	1/10W 10R J	R488	VE-30000471	CF RES.	1/4W 10K J
R106	VE-30000567	SMD RES.	1/10W 18K J	R492	VE-30000588	SMD RES.	1/10W 220R J
R108	VE-30000564	CF RES.	1/4W 18K J	R493	VE-30000588	SMD RES.	1/10W 220R J
R200	VE-30000503	SMD RES.	1/10W 12K J	R494	VE-30000526	CF RES.	1/4W 1.5K J
R201	VE-30000723	CF RES.	1/4W 47K J	R498	VE-30000563	SMD RES.	1/10W 1.8K J
R202	VE-30000459	CF RES.	1/4W 100R J	R500	VE-30000469	SMD RES.	1/10W 1K J
R203	VE-30000471	CF RES.	1/4W 10K J	R502	VE-30000469	SMD RES.	1/10W 1K J
R208	VE-30000459	CF RES.	1/4W 100R J	R503	VE-30000469	SMD RES.	1/10W 1K J
R209	VE-30000459	CF RES.	1/4W 100R J	R507	VE-30000469	SMD RES.	1/10W 1K J
R213	VE-30000597	SMD RES.	1/10W 22K J	R512	VE-30000727	SMD RES.	1/10W 47K J
R300	VE-30000529	SMD RES.	1/10W 1.5K J	R513	VE-30000727	SMD RES.	1/10W 47K J
R303	VE-30000469	SMD RES.	1/10W 1K J	R514	VE-30000727	SMD RES.	1/10W 47K J
R304	VE-30000717	SMD RES.	1/10W 470R J	R515	VE-30000727	SMD RES.	1/10W 47K J
R305	VE-30000717	SMD RES.	1/10W 470R J	R516	VE-30000464	SMD RES.	1/10W 100R J
R306	VE-30000464	SMD RES.	1/10W 100R J	R517	VE-30000464	SMD RES.	1/10W 100R J
R307	VE-30000464	SMD RES.	1/10W 100R J	R523	VE-30000475	SMD RES.	1/10W 10K J
R308	VE-30000464	SMD RES.	1/10W 100R J	R524	VE-30000475	SMD RES.	1/10W 10K J
R309	VE-30000660	CF RES.	1/4W 3.3K J	R527	VE-30000721	SMD RES.	1/10W 4.7K J
R310	VE-30000660	CF RES.	1/4W 3.3K J	R528	VE-30000560	CF RES.	1/4W 1.8K J
R311	VE-30000531	CF RES.	1/4W 15K J	R529	VE-30000560	CF RES.	1/4W 1.8K J
R313	VE-30000534	SMD RES.	1/10W 15K J	R530	VE-30000560	CF RES.	1/4W 1.8K J
R314	VE-30000534	SMD RES.	1/10W 15K J	R532	VE-30000475	SMD RES.	1/10W 10K J
R315	VE-30000534	SMD RES.	1/10W 15K J	R533	VE-30000721	SMD RES.	1/10W 4.7K J
R341	VE-30000524	SMD RES.	1/10W 150R J	R535	VE-30000721	SMD RES.	1/10W 4.7K J
R343	VE-30001248	FUSE RES.	1/4W 4.7R J	R537	VE-30000593	SMD RES.	1/10W 2.2K J
R359	VE-30000464	SMD RES.	1/10W 100R J	R538	VE-30000475	SMD RES.	1/10W 10K J
R360	VE-30000464	SMD RES.	1/10W 100R J	R539	VE-30000475	SMD RES.	1/10W 10K J

[AV28BT5ENS / AV28BT5ENB]

△ Symbol No.	Part No.	Part Name	Description
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RESISTOR

R540	VE-30000818	SMD RES.	1/10W 8.2K J
R541	VE-30000721	SMD RES.	1/10W 4.7K J
R542	VE-30000721	SMD RES.	1/10W 4.7K J
R543	VE-30000717	SMD RES.	1/10W 470R J
R548	VE-30000721	SMD RES.	1/10W 4.7K J
R549	VE-30000531	CF RES.	1/4W 15K J
R550	VE-30000721	SMD RES.	1/10W 4.7K J
R551	VE-30000475	SMD RES.	1/10W 10K J

R552	VE-30000593	SMD RES.	1/10W 2.2K J
R554	VE-30000815	CF RES.	1/4W 8.2K J
R556	VE-30000567	SMD RES.	1/10W 18K J
R559	VE-30000588	SMD RES.	1/10W 220R J
R560	VE-30000469	SMD RES.	1/10W 1K J
R561	VE-30000692	SMD RES.	1/10W 3.9K J
R562	VE-30000471	CF RES.	1/4W 10K J
R563	VE-30000471	CF RES.	1/4W 10K J

R564	VE-30000475	SMD RES.	1/10W 10K J
R565	VE-30000475	SMD RES.	1/10W 10K J
R566	VE-30010167	SMD RES.	1/10W 56R J
R568	VE-30000475	SMD RES.	1/10W 10K J
R569	VE-30000459	CF RES.	1/4W 100R J
R570	VE-30000531	CF RES.	1/4W 15K J
R571	VE-30000466	CF RES.	1/4W 1K J
R572	VE-30000475	SMD RES.	1/10W 10K J

R573	VE-30000721	SMD RES.	1/10W 4.7K J
R574	VE-30000692	SMD RES.	1/10W 3.9K J
R578	VE-30000475	SMD RES.	1/10W 10K J
R579	VE-30000721	SMD RES.	1/10W 4.7K J
R580	VE-30000464	SMD RES.	1/10W 100R J
R581	VE-30000588	SMD RES.	1/10W 220R J
R582	VE-30000464	SMD RES.	1/10W 100R J

R583	VE-30000475	SMD RES.	1/10W 10K J
R584	VE-30000563	SMD RES.	1/10W 1.8K J
R586	VE-30000480	SMD RES.	1/10W 100K J
R587	VE-30000712	CF RES.	1/4W 470R J
R590	VE-30000721	SMD RES.	1/10W 4.7K J
R594	VE-30000475	SMD RES.	1/10W 10K J
R595	VE-30000475	SMD RES.	1/10W 10K J
R596	VE-30000475	SMD RES.	1/10W 10K J

R601	VE-30000718	CF RES.	1/4W 4.7K J
R602	VE-30000464	SMD RES.	1/10W 100R J
R605	VE-30000466	CF RES.	1/4W 1K J
R606	VE-30000704	CF RES.	1/4W 43K J
R608	VE-30001235	FUSE RES.	1/2W 0.33R J
R610	VE-30001171	MO RES.	2W 4.7K J
R611	VE-30001215	FUSE RES.	1W 1R J
R613	VE-30000815	CF RES.	1/4W 8.2K J

R614	VE-30000775	CF RES.	1/4W 6.8K J
R615	VE-30000815	CF RES.	1/4W 8.2K J
R617	VE-30000775	CF RES.	1/4W 6.8K J
R618	VE-30000464	SMD RES.	1/10W 100R J
R619	VE-30000815	CF RES.	1/4W 8.2K J
R620	VE-30001082	MO RES.	1/2W 1K J
R621	VE-30000459	CF RES.	1/4W 100R J
R626	VE-30000466	CF RES.	1/4W 1K J

△ R628	VE-30001228	FUSE RES.	1/2W 2.2R J
△ R629	VE-30001232	FUSE RES.	1/4W 2.7R J
R630	VE-30001082	MO RES.	1/2W 1K J
R631	VE-30001171	MO RES.	2W 4.7K J
R639	VE-30000542	SMD RES.	1/10W 1.5M J
R700	VE-30000466	CF RES.	1/4W 1K J
R703	VE-30000860	MF RES.	1/4W 1R F
△ R704	VE-30001251	FUSE RES.	1/2W 56R J

R705	VE-30000580	CF RES.	1/4W 22R J
R706	VE-30000949	MF RES.	1/4W 3K G
R707	VE-30000712	CF RES.	1/4W 470R J
R708	VE-30000469	SMD RES.	1/10W 1K J
R709	VE-30000475	SMD RES.	1/10W 10K J
R710	VE-30000718	CF RES.	1/4W 4.7K J
R711	VE-30000500	CF RES.	1/4W 12K J
R714	VE-30000459	CF RES.	1/4W 100R J

R715	VE-30000459	CF RES.	1/4W 100R J
R716	VE-30000466	CF RES.	1/4W 1K J
R717	VE-30000712	CF RES.	1/4W 470R J
R805	VE-30000633	CF RES.	1/4W 27K J
R806	VE-30001129	MO RES.	3W 22K J

△ Symbol No.	Part No.	Part Name	Description
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RESISTOR

R807	VE-30000466	CF RES.	1/4W 1K J
R808	VE-30000818	SMD RES.	1/10W 8.2K J
R809	VE-30000469	SMD RES.	1/10W 1K J
R810	VE-30000597	SMD RES.	1/10W 22K J
R811	VE-30000597	SMD RES.	1/10W 22K J
R812	VE-30000519	CF RES.	1/4W 150R J
R813	VE-30000475	SMD RES.	1/10W 10K J
R814	VE-30000706	CF RES.	1/4W 47R J

R816	VE-30000540	CF RES.	1/2W 1.5M J (400V)
R818	VE-30000466	CF RES.	1/4W 1K J
R821	VE-30000602	SMD RES.	1/10W 220K J
R822	VE-30001156	MO RES.	5W 33K J
R823	VE-30000513	CF RES.	1/4W 130K J
R824	VE-30000572	CF RES.	1/4W 2K J
R828	VE-30007759	CF RES.	1W 47K J
R829	VE-30000469	SMD RES.	1/10W 1K J

R831	VE-30000471	CF RES.	1/4W 10K J
R832	VE-30000721	SMD RES.	1/10W 4.7K J
R833	VE-30000710	SMD RES.	1/10W 47R J
R834	VE-30000818	SMD RES.	1/10W 8.2K J
R835	VE-30000580	CF RES.	1/4W 22R J
R836	VE-30000706	CF RES.	1/4W 47R J
R844	VE-30000471	CF RES.	1/4W 10K J
△ R845	VE-30001257	RES MG	1/2W 4.7M J

R849	VE-30000534	SMD RES.	1/10W 15K J
R850	VE-30000569	CF RES.	1/4W 180K J
R858	VE-30000712	CF RES.	1/4W 470R J
R868	VE-30000810	CF RES.	1/4W 820R J
R869	VE-30000810	CF RES.	1/4W 820R J
R870	VE-30001131	MO RES.	1W 0.22R J
R871	VE-30000471	CF RES.	1/4W 10K J

R872	VE-30007786	SMD RES.	1/10W 2.55K F
R873	VE-30012852	SMD RES.	1/10W 3.9K F
R879	VE-30000718	CF RES.	1/4W 4.7K J
R885	VE-30000475	SMD RES.	1/10W 10K J
R886	VE-30000475	SMD RES.	1/10W 10K J
R888	VE-30000503	SMD RES.	1/10W 12K J
R890	VE-30001089	MO RES.	2W 1R J
R891	VE-30000466	CF RES.	1/4W 1K J

R892	VE-30000531	CF RES.	1/4W 15K J
R893	VE-30000477	CF RES.	1/4W 100K J
R894	VE-30000660	CF RES.	1/4W 3.3K J
R895	VE-30000638	CF RES.	1/4W 270K J

CAPACITOR

C001	VE-30000375	EL CAP.	220UF 16V M
C01	VE-30000332	SMD CAP.	4.7NF 50V K
C010	VE-30000294	SMD CAP.	100NF 50V K
C011	VE-30000294	SMD CAP.	100NF 50V K
C012	VE-30000294	SMD CAP.	100NF 50V K
C013	VE-30000375	EL CAP.	220UF 16V M
C02	VE-30000332	SMD CAP.	4.7NF 50V K
C028	VE-30000352	EL CAP.	100UF 16V M

C029	VE-30000294	SMD CAP.	100NF 50V K
C03	VE-30000332	SMD CAP.	4.7NF 50V K
C030	VE-30000294	SMD CAP.	100NF 50V K
C031	VE-30000294	SMD CAP.	100NF 50V K
C032	VE-30000294	SMD CAP.	100NF 50V K
C04	VE-30000332	SMD CAP.	4.7NF 50V K
C051	VE-30000315	SMD CAP.	220NF 25V Z
C052	VE-30000294	SMD CAP.	100NF 50V K

C053	VE-30000315	SMD CAP.	220NF 25V Z
C054	VE-30000315	SMD CAP.	220NF 25V Z
C059	VE-30000300	SMD CAP.	1.5NF 50V K
C060	VE-30000300	SMD CAP.	1.5NF 50V K
C061	VE-30000242	SMD CAP.	330PF 50V J
C062	VE-30000242	SMD CAP.	330PF 50V J
C064	VE-30000300	SMD CAP.	1.5NF 50V K
C065	VE-30000300	SMD CAP.	1.5NF 50V K

C066	VE-30000242	SMD CAP.	330PF 50V J
C067	VE-30000242	SMD CAP.	330PF 50V J
C068	VE-30000345	EL CAP.	10UF 50V M
C071	VE-30000315	SMD CAP.	220NF 25V Z
C072	VE-30000294	SMD CAP.	100NF 50V K

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△ Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C073	VE-30000294	SMD CAP.	100NF 50V K
C095	VE-30000289	SMD CAP.	10NF 50V K R
C097	VE-30000189	SMD CAP.	100PF 50V J
C098	VE-30000224	SMD CAP.	220PF 50V J
C099	VE-30000189	SMD CAP.	100PF 50V J
C101	VE-30000336	SMD CAP.	5.6NF 50V K
C102	VE-30000345	EL CAP.	10UF 50V M
C107	VE-30000336	SMD CAP.	5.6NF 50V K
C108	VE-30000312	SMD CAP.	22NF 50V K
C109	VE-30000332	SMD CAP.	4.7NF 50V K
C110	VE-30000312	SMD CAP.	22NF 50V K
C111	VE-30000332	SMD CAP.	4.7NF 50V K
C112	VE-30000109	MKT CAP.	470NF 63V J
C113	VE-30000109	MKT CAP.	470NF 63V J
C116	VE-30000082	MKT CAP.	15NF 63V J
C117	VE-30000082	MKT CAP.	15NF 63V J
C201	VE-30000352	EL CAP.	100UF 16V M
C203	VE-30000345	EL CAP.	10UF 50V M
C204	VE-30000345	EL CAP.	10UF 50V M
C211	VE-30000294	SMD CAP.	100NF 50V K
C212	VE-30000190	CER CAP.	100PF 50V J CH
C279	VE-30000263	SMD CAP.	56PF 50V J CH
C301	VE-30000216	SMD CAP.	1.8PF 50V J CH
C302	VE-30000216	SMD CAP.	1.8PF 50V J CH
C304	VE-30000289	SMD CAP.	10NF 50V K R
C306	VE-30000345	EL CAP.	10UF 50V M
C307	VE-30000294	SMD CAP.	100NF 50V K
C308	VE-30000074	MKT CAP.	100NF 63V J
C309	VE-30000345	EL CAP.	10UF 50V M
C316	VE-30000284	SMD CAP.	1NF 50V K R
C317	VE-30000284	SMD CAP.	1NF 50V K R
C318	VE-30000074	MKT CAP.	100NF 63V J
C319	VE-30000393	EL CAP.	3.3UF 50V M
C320	VE-30000294	SMD CAP.	100NF 50V K
C321	VE-30000345	EL CAP.	10UF 50V M
C322	VE-30000345	EL CAP.	10UF 50V M
C323	VE-30000345	EL CAP.	10UF 50V M
C326	VE-30000371	EL CAP.	22UF 50V M
C327	VE-30000371	EL CAP.	22UF 50V M
C328	VE-30000284	SMD CAP.	1NF 50V K R
C329	VE-30000284	SMD CAP.	1NF 50V K R
C330	VE-30000284	SMD CAP.	1NF 50V K R
C331	VE-30000284	SMD CAP.	1NF 50V K R
C332	VE-30000417	EL CAP.	6.8UF 50V M
C333	VE-30000294	SMD CAP.	100NF 50V K
C334	VE-30000345	EL CAP.	10UF 50V M
C335	VE-30000252	SMD CAP.	47PF 50V J
C336	VE-30000252	SMD CAP.	47PF 50V J
C338	VE-30000371	EL CAP.	22UF 50V M
C339	VE-30000256	SMD CAP.	470PF 50V J
C340	VE-30000100	MKT CAP.	330NF 63V J
C341	VE-30000256	SMD CAP.	470PF 50V J
C342	VE-30000100	MKT CAP.	330NF 63V J
C343	VE-30000224	SMD CAP.	220PF 50V J
C344	VE-30000100	MKT CAP.	330NF 63V J
C346	VE-30000224	SMD CAP.	220PF 50V J
C347	VE-30000371	EL CAP.	22UF 50V M
C348	VE-30000224	SMD CAP.	220PF 50V J
C349	VE-30000100	MKT CAP.	330NF 63V J
C350	VE-30000224	SMD CAP.	220PF 50V J
C351	VE-30000100	MKT CAP.	330NF 63V J
C352	VE-30000224	SMD CAP.	220PF 50V J
C353	VE-30000100	MKT CAP.	330NF 63V J
C355	VE-30000284	SMD CAP.	1NF 50V K R
C357	VE-30000294	SMD CAP.	100NF 50V K
C358	VE-30000345	EL CAP.	10UF 50V M
C364	VE-30000284	SMD CAP.	1NF 50V K R
C365	VE-30000384	EL CAP.	2.2UF 50V M
C366	VE-30000294	SMD CAP.	100NF 50V K
C368	VE-30000294	SMD CAP.	100NF 50V K
C369	VE-30000294	SMD CAP.	100NF 50V K
C370	VE-30000384	EL CAP.	2.2UF 50V M
C371	VE-30000109	MKT CAP.	470NF 63V J
C373	VE-30000371	EL CAP.	22UF 50V M
C374	VE-30000294	SMD CAP.	100NF 50V K
C379	VE-30000294	SMD CAP.	100NF 50V K
C385	VE-30000294	SMD CAP.	100NF 50V K

△ Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C400	VE-30000294	SMD CAP.	100NF 50V K
C401	VE-30000371	EL CAP.	22UF 50V M
C402	VE-30000345	EL CAP.	10UF 50V M
C403	VE-30000074	MKT CAP.	100NF 63V J
C403	VE-30000294	SMD CAP.	100NF 50V K
C404	VE-30000284	SMD CAP.	1NF 50V K R
C405	VE-30000345	EL CAP.	10UF 50V M
C405	VE-30000294	SMD CAP.	100NF 50V K
C406	VE-30000284	SMD CAP.	1NF 50V K R
C407	VE-30000384	EL CAP.	2.2UF 50V M
C407	VE-30000284	SMD CAP.	1NF 50V K R
C408	VE-30000283	CER CAP.	1NF 50V K B
C409	VE-30000334	SMD CAP.	47NF 50V K
C410	VE-30000345	EL CAP.	10UF 50V M
C411	VE-30000334	SMD CAP.	47NF 50V K
C412	VE-30000312	SMD CAP.	22NF 50V K
C413	VE-30000375	EL CAP.	220UF 16V M
C416	VE-30000312	SMD CAP.	22NF 50V K
C417	VE-30000312	SMD CAP.	22NF 50V K
C418	VE-30000312	SMD CAP.	22NF 50V K
C419	VE-30000315	SMD CAP.	220NF 25V Z
C421	VE-30000220	SMD CAP.	22PF 50V J
C422	VE-30000220	SMD CAP.	22PF 50V J
C423	VE-30000322	SMD CAP.	3.3NF 50V K
C424	VE-30000294	SMD CAP.	100NF 50V K
C425	VE-30000312	SMD CAP.	22NF 50V K
C426	VE-30000353	EL CAP.	100UF 25V M
C427	VE-30000294	SMD CAP.	100NF 50V K
C428	VE-30000345	EL CAP.	10UF 50V M
C430	VE-30000289	SMD CAP.	10NF 50V K R
C431	VE-30000362	EL CAP.	1UF 50V M
C433	VE-30000284	SMD CAP.	1NF 50V K R
C434	VE-30000284	SMD CAP.	1NF 50V K R
C435	VE-30000074	MKT CAP.	100NF 63V J
C436	VE-30000074	MKT CAP.	100NF 63V J
C437	VE-30000362	EL CAP.	1UF 50V M
C438	VE-30000312	SMD CAP.	22NF 50V K
C439	VE-30000284	SMD CAP.	1NF 50V K R
C440	VE-30000345	EL CAP.	10UF 50V M
C446	VE-30000252	SMD CAP.	47PF 50V J
C447	VE-30000252	SMD CAP.	47PF 50V J
C448	VE-30000189	SMD CAP.	100PF 50V J
C450	VE-30000294	SMD CAP.	100NF 50V K
C459	VE-30000332	SMD CAP.	4.7NF 50V K
C465	VE-30000300	SMD CAP.	1.5NF 50V K
C490	VE-30000284	SMD CAP.	1NF 50V K R
C497	VE-30000300	SMD CAP.	1.5NF 50V K
C498	VE-30000189	SMD CAP.	100PF 50V J
C499	VE-30000300	SMD CAP.	1.5NF 50V K
C505	VE-30000294	SMD CAP.	100NF 50V K
C513	VE-30000294	SMD CAP.	100NF 50V K
C514	VE-30000345	EL CAP.	10UF 50V M
C516	VE-30000371	EL CAP.	22UF 50V M
C517	VE-30000352	EL CAP.	100UF 16V M
C521	VE-30000109	MKT CAP.	470NF 63V J
C524	VE-30000237	SMD CAP.	33PF 50V J
C525	VE-30000237	SMD CAP.	33PF 50V J
C526	VE-30000294	SMD CAP.	100NF 50V K
C530	VE-30000294	SMD CAP.	100NF 50V K
C531	VE-30000294	SMD CAP.	100NF 50V K
C532	VE-30000294	SMD CAP.	100NF 50V K
C533	VE-30000294	SMD CAP.	100NF 50V K
C537	VE-30000294	SMD CAP.	100NF 50V K
C538	VE-30000294	SMD CAP.	100NF 50V K
C570	VE-30000371	EL CAP.	22UF 50V M
C571	VE-30000371	EL CAP.	22UF 50V M
C572	VE-30000371	EL CAP.	22UF 50V M
C573	VE-30000371	EL CAP.	22UF 50V M
C576	VE-30000201	SMD CAP.	15PF 50V J
C577	VE-30000201	SMD CAP.	15PF 50V J
C580	VE-30000387	EL CAP.	33UF 50V M
C583	VE-30000294	SMD CAP.	100NF 50V K
C590	VE-30000294	SMD CAP.	100NF 50V K
C596	VE-30000289	SMD CAP.	10NF 50V K R
C597	VE-30000289	SMD CAP.	10NF 50V K R
C598	VE-30000289	SMD CAP.	10NF 50V K R

[AV28BT5ENS / AV28BT5ENB]

Symbol No.	Part No.	Part Name	Description
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CAPACITOR

C599	VE-30000334	SMD CAP.	47NF 50V K
C600	VE-30000289	SMD CAP.	10NF 50V K R
C601	VE-30000355	EL CAP.	100UF 50V M
C603	VE-30000309	SMD CAP.	2.2NF 50V K R
C604	VE-30000107	MKT CAP.	47NF 250V J
C605	VE-30000075	MKT CAP.	100NF 250V K (DC)
C606	VE-30000406	EL CAP.	47UF 250V M (HR)
C607	VE-30000407	EL CAP.	470UF 16V M
C608	VE-30009206	SMD CAP.	15NF 50V K R
C610	VE-30000123	PP CAP.	33NF 630V K
C611	VE-30000143	MKT CAP.	2.2NF 2KV 3.5
C612	VE-30000356	EL CAP.	100UF 63V M
C613	VE-30000121	CAP KP	27NF 630V J
C617	VE-30000172	MKT CAP.	680NF 250V J (P=15)
C618	VE-30000078	MKT CAP.	1UF 100V M
C620	VE-30000433	CER CAP.	1NF 1KV M B
C621	VE-30000078	MKT CAP.	1UF 100V M
C625	VE-30000315	SMD CAP.	220NF 25V Z
C626	VE-30000180	MKT CAP.	9.1NF 2000V 3.5
C627	VE-30000340	SMD CAP.	6.8NF 50V K
C630	VE-30000156	MKT CAP.	430NF 250V J
C632	VE-30016086	EL CAP.	1000UF 25V 105°
C650	VE-30000280	SMD CAP.	820PF 50V J
C660	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
C661	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
C700	VE-30000190	CER CAP.	100PF 50V J CH
C702	VE-30000356	EL CAP.	100UF 63V M
C704	VE-30016085	EL CAP.	10UF 63V 105°
C705	VE-30000071	MKT CAP.	10NF 63V J
C706	VE-30000092	MKT CAP.	220NF 63V J
C707	VE-30000069	MKT CAP.	1NF 100V J
C708	VE-30000189	SMD CAP.	100PF 50V J
C709	VE-30000294	SMD CAP.	100NF 50V K
C715	VE-30000189	SMD CAP.	100PF 50V J
C801	VE-30000084	MKT CAP.	150NF 275V M AC P=15
C802	VE-30000084	MKT CAP.	150NF 275V M AC P=15
C803	VE-30000189	SMD CAP.	100PF 50V J
C804	VE-30000421	EL CAP.	220UF 400V M (FOR 28'')
C806	VE-30000342	CER CAP.	820PF 50V K B
C807	VE-30000074	MKT CAP.	100NF 63V J
C808	VE-30000284	SMD CAP.	1NF 50V K R
C809	VE-30000309	SMD CAP.	2.2NF 50V K R
C810	VE-30000076	MKT CAP.	100NF 275V M AC
C811	VE-30000161	MKT CAP.	47NF 630V J
C813	VE-30000411	EL CAP.	4700UF 16V M
C814	VE-30000294	SMD CAP.	100NF 50V K
C816	VE-30000295	CER CAP.	100NF 50V Z F
C817	VE-30000359	EL CAP.	1000UF 16V M
C819	VE-30000295	CER CAP.	100NF 50V Z F
C821	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C822	VE-30000295	CER CAP.	100NF 50V Z F
C823	VE-30000383	EL CAP.	2200UF 25V M
C824	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C825	VE-30000295	CER CAP.	100NF 50V Z F
C826	VE-30000383	EL CAP.	2200UF 25V M
C827	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C828	VE-30000359	EL CAP.	1000UF 16V M
C829	VE-30000406	EL CAP.	47UF 250V M (HR)
C830	VE-30000295	CER CAP.	100NF 50V Z F
C831	VE-30000198	CER CAP.	120PF 500V J SL
C832	VE-30000294	SMD CAP.	100NF 50V K
C835	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C845	VE-30000375	EL CAP.	220UF 16V M
C846	VE-30000433	CER CAP.	1NF 1KV M B
C847	VE-30000375	EL CAP.	220UF 16V M
C848	VE-30000353	EL CAP.	100UF 25V M
C850	VE-30000433	CER CAP.	1NF 1KV M B
C851	VE-30000433	CER CAP.	1NF 1KV M B
C852	VE-30000433	CER CAP.	1NF 1KV M B
C853	VE-30000289	SMD CAP.	10NF 50V K R
C854	VE-30008805	MKT CAP.	39NF 63V J
C855	VE-30000284	SMD CAP.	1NF 50V K R
C860	VE-30000440	CER CAP.	2.2NF 4KV M
C865	VE-30000440	CER CAP.	2.2NF 4KV M
C890	VE-30000396	EL CAP.	47UF 16V M
C891	VE-30000335	CER CAP.	47NF 50V Z F
C892	VE-30000295	CER CAP.	100NF 50V Z F

Symbol No.	Part No.	Part Name	Description
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COIL

L001	VE-30002016	FIXED COIL	150UH Q60 K
L002	VE-30010964	FERRITE BEAT	
L050	VE-30002015	FIXED COIL	150UH Q50 K (RAD)
L051	VE-30002015	FIXED COIL	150UH Q50 K (RAD)
L054	VE-30010964	FERRITE BEAT	
L201	VE-30001979	FIXED COIL	1UH Q45 M-A
L202	VE-30010964	FERRITE BEAT	
L301	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L302	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L303	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L304	VE-30001986	FIXED COIL	3.3UH Q65 K
L306	VE-30002002	FIXED COIL	47UH Q60 K
L307	VE-30002002	FIXED COIL	47UH Q60 K
L308	VE-30002002	FIXED COIL	47UH Q60 K
L309	VE-30002002	FIXED COIL	47UH Q60 K
L402	VE-30001986	FIXED COIL	3.3UH Q65 K
L403	VE-30001990	FIXED COIL	6.8UH Q75 K
L405	VE-30001992	FIXED COIL	10UH Q65 K-A
L406	VE-30001992	FIXED COIL	10UH Q65 K-A
L407	VE-30001992	FIXED COIL	10UH Q65 K-A
L502	VE-30001992	FIXED COIL	10UH Q65 K-A
L504	VE-30001992	FIXED COIL	10UH Q65 K-A
L505	VE-30001992	FIXED COIL	10UH Q65 K-A
L506	VE-30001992	FIXED COIL	10UH Q65 K-A
L515	VE-30001992	FIXED COIL	10UH Q65 K-A
L602	VE-30002026	FIXED COIL	1MH
L603	VE-30002156	LINEARITY COIL	30UH
L604	VE-30002031	FIXED COIL	15MH
L605	VE-30001999	FIXED COIL	40UH
L801	VE-30001984	FIXED COIL	2.2UH
L803	VE-30002011	CHOKE COIL	150UH

DIODE

D001	VE-30001284	DIODE	
D002	VE-30001284	DIODE	
D003	VE-30001284	DIODE	
D004	VE-30001284	DIODE	
D100	VE-30001284	DIODE	
D201	VE-30001284	DIODE	
D301	VE-30001369	DIODE ZENER	
D302	VE-30001284	DIODE	
D408	VE-30001347	DIODE ZENER	
D420	VE-30001285	DIODE	
D500	VE-30012412	DIODE ZENER	
D503	VE-30001284	DIODE	
D504	VE-30001284	DIODE	
D505	VE-30012412	DIODE ZENER	
D509	VE-30001284	DIODE	
D555	VE-30001285	DIODE	
D583	VE-30001284	DIODE	
D601	VE-30001318	DIODE	
D602	VE-30001285	DIODE	
D603	VE-30001284	DIODE	
D604	VE-30001377	DIODE ZENER	
D605	VE-30001318	DIODE	
D606	VE-30001318	DIODE	
D607	VE-30001285	DIODE	
D608	VE-30001284	DIODE	
D609	VE-30001318	DIODE	
D611	VE-30001323	DIODE	
D612	VE-30001320	DIODE	
D698	VE-30001318	DIODE	
D701	VE-30001284	DIODE	
D801	VE-30001329	DIODE	
D802	VE-30001329	DIODE	
D803	VE-30001329	DIODE	
D804	VE-30001329	DIODE	
D805	VE-30001318	DIODE	
D807	VE-30001318	DIODE	
D811	VE-30001315	DIODE	
D812	VE-30001315	DIODE	
D813	VE-30001288	DIODE	
D814	VE-30001307	DIODE	
D815	VE-30001307	DIODE	
D816	VE-30007681	DIODE	

[AV28BT5ENS / AV28BT5ENB]

Symbol No.	Part No.	Part Name	Description
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DIODE

D818	VE-30001318	DIODE	
D819	VE-30001349	DIODE ZENER	
D823	VE-30001284	DIODE	
D826	VE-30001318	DIODE	
D827	VE-30001318	DIODE	
D858	VE-30001371	DIODE ZENER	
D864	VE-30001285	DIODE	
D890	VE-30001284	DIODE	

TRANSISTOR

Q001	VE-30001455	TR	
Q055	VE-30001454	TR	
Q100	VE-30001454	TR	
Q301	VE-30001455	TR	
Q402	VE-30001454	TR	
Q406	VE-30001454	TR	
Q407	VE-30001454	TR	
Q415	VE-30001454	TR	
Q420	VE-30001454	TR	
Q503	VE-30001455	TR	
Q512	VE-30001455	TR	
Q514	VE-30001454	TR	
Q515	VE-30001454	TR	
Q516	VE-30001454	TR	
Q517	VE-30001454	TR	
Q518	VE-30001454	TR	
Q601	VE-30001455	TR	
Q603	VE-20000963	HE.ASY.19-E/W 110°	
Q604	VE-30001435	TR	
Q605	VE-30001441	TR	
Q701	VE-30001455	TR	
Q702	VE-30001454	TR	
Q802	VE-20073672	HE.ASY.19-SMPS 110° 170-270V (PLASTIK)JVC	
Q805	VE-30001454	TR	
Q806	VE-30001454	TR	
Q807	VE-30001454	TR	
Q809	VE-30001506	IC	
Q810	VE-30001384	TR	
Q890	VE-30001428	TR	

IC

IC050	VE-30001619	IC	
IC301	VE-30001664	IC	
IC307	VE-30001495	IC	
IC401	VE-30001577	IC	
IC501	VE-20075294	IC	CPU
IC502	VE-20073442	IC	MEMORY
IC701	VE-30002736	IC	
△ IC801	VE-30007069	IC	
IC802	VE-30001499	IC	
IC804	VE-20058533	IC	
IC805	VE-30001500	IC	
IC807	VE-30001622	IC	

OTHERS

△ F801	VE-20000848	FUSE ASSY	(2.5A)
J129	VE-30001997	FIXED COIL	33UH Q60 J
J314	VE-20058569	MD.ASY.PR19Y-11PR19Y(PROTECT.CIR.)110°	
J500	VE-30010964	FERRITE BEAD	
J616	VE-30006712	FERRITE BEAD	
PL002	VE-30001912	PIN F 5P/2.5MM (11.5MM)	
PL892	VE-30007118	PIN F 2P/7.5MM	
PL893	VE-30007118	PIN F 2P/7.5MM	
TH801	VE-30001268	THERMISTOR 3P	
△ TR601	VE-30002090	LINE DRIVER	
△ TR602	VE-30002054	TRF	
△ TR801	VE-30002103	LINE FILTER	
△ TR802	VE-30002080	TRF SMPS AK19 110° (170-270V)	
TU201	VE-30009637	TUNER	
VL301	VE-30002037	ADJ COIL	VIF 38.9 Q80
VR801	VE-30001064	RES ADJ	470R 0.1W VER (MAN)

Symbol No.	Part No.	Part Name	Description
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OTHERS

X301	VE-30001756	XTAL	
X401	VE-30001748	XTAL	
X404	VE-30001745	XTAL	
X501	VE-30006662	XTAL	
Z209	VE-30001724	FILTER SER	
Z301	VE-30001706	FILTER SAW	
Z302	VE-30001692	FILTER SAW	
Z401	VE-30001692	FILTER SAW	

[AV28BT5ENS / AV28BT5ENB]

MULTI SOUND P.W. BOARD ASS'Y (VE-20078991)

△ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R001	VE-30000631	SMD RES.	1/10W 2.7K J
R002	VE-30000631	SMD RES.	1/10W 2.7K J
R303	VE-30000469	SMD RES.	1/10W 1K J
R304	VE-30000717	SMD RES.	1/10W 470R J
R305	VE-30000717	SMD RES.	1/10W 470R J
R306	VE-30000464	SMD RES.	1/10W 100R J
R307	VE-30000464	SMD RES.	1/10W 100R J
R308	VE-30000464	SMD RES.	1/10W 100R J
R309	VE-30000660	CF RES.	1/4W 3.3K J
R310	VE-30000660	CF RES.	1/4W 3.3K J
R311	VE-30000531	CF RES.	1/4W 15K J
R313	VE-30000534	SMD RES.	1/10W 15K J
R314	VE-30000534	SMD RES.	1/10W 15K J
R315	VE-30000534	SMD RES.	1/10W 15K J
R341	VE-30000524	SMD RES.	1/10W 150R J
R343	VE-30001248	FUSE RES.	1/4W 4.7R J
R359	VE-30000464	SMD RES.	1/10W 100R J
R360	VE-30000464	SMD RES.	1/10W 100R J
R361	VE-30000464	SMD RES.	1/10W 100R J
R364	VE-30000464	SMD RES.	1/10W 100R J
R378	VE-30000471	CF RES.	1/4W 10K J
R379	VE-30000475	SMD RES.	1/10W 10K J
R399	VE-30000717	SMD RES.	1/10W 470R J
CAPACITOR			
C279	VE-30000263	SMD CAP.	56PF 50V J CH
C301	VE-30000216	SMD CAP.	1.8PF 50V J CH
C302	VE-30000216	SMD CAP.	1.8PF 50V J CH
C304	VE-30000289	SMD CAP.	10NF 50V K R
C306	VE-30000345	EL CAP.	10UF 50V M
C307	VE-30000294	SMD CAP.	100NF 50V K
C308	VE-30000074	MKT CAP.	100NF 63V J
C309	VE-30000345	EL CAP.	10UF 50V M
C316	VE-30000284	SMD CAP.	1NF 50V K R
C317	VE-30000284	SMD CAP.	1NF 50V K R
C318	VE-30000074	MKT CAP.	100NF 63V J
C319	VE-30000393	EL CAP.	3.3UF 50V M
C320	VE-30000294	SMD CAP.	100NF 50V K
C321	VE-30000345	EL CAP.	10UF 50V M
C322	VE-30000345	EL CAP.	10UF 50V M
C323	VE-30000345	EL CAP.	10UF 50V M
C326	VE-30000371	EL CAP.	22UF 50V M
C327	VE-30000371	EL CAP.	22UF 50V M
C328	VE-30000284	SMD CAP.	1NF 50V K R
C329	VE-30000284	SMD CAP.	1NF 50V K R
C330	VE-30000284	SMD CAP.	1NF 50V K R
C331	VE-30000284	SMD CAP.	1NF 50V K R
C332	VE-30000417	EL CAP.	6.8UF 50V M
C333	VE-30000294	SMD CAP.	100NF 50V K
C334	VE-30000345	EL CAP.	10UF 50V M
C335	VE-30000252	SMD CAP.	47PF 50V J
C336	VE-30000252	SMD CAP.	47PF 50V J
C338	VE-30000371	EL CAP.	22UF 50V M
C339	VE-30000256	SMD CAP.	470PF 50V J
C340	VE-30000100	MKT CAP.	330NF 63V J
C341	VE-30000256	SMD CAP.	470PF 50V J
C342	VE-30000100	MKT CAP.	330NF 63V J
C343	VE-30000224	SMD CAP.	220PF 50V J
C344	VE-30000100	MKT CAP.	330NF 63V J
C346	VE-30000224	SMD CAP.	220PF 50V J
C347	VE-30000371	EL CAP.	22UF 50V M
C348	VE-30000224	SMD CAP.	220PF 50V J
C349	VE-30000100	MKT CAP.	330NF 63V J
C350	VE-30000224	SMD CAP.	220PF 50V J
C351	VE-30000100	MKT CAP.	330NF 63V J
C352	VE-30000224	SMD CAP.	220PF 50V J
C353	VE-30000100	MKT CAP.	330NF 63V J
C355	VE-30000284	SMD CAP.	1NF 50V K R
C357	VE-30000294	SMD CAP.	100NF 50V K
C358	VE-30000345	EL CAP.	10UF 50V M
C364	VE-30000284	SMD CAP.	1NF 50V K R
C365	VE-30000384	EL CAP.	2.2UF 50V M
C366	VE-30000294	SMD CAP.	100NF 50V K

△ Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C368	VE-30000294	SMD CAP.	100NF 50V K
C369	VE-30000294	SMD CAP.	100NF 50V K
C370	VE-30000384	EL CAP.	2.2UF 50V M
C371	VE-30000109	MKT CAP.	470NF 63V J
C373	VE-30000371	EL CAP.	22UF 50V M
C374	VE-30000294	SMD CAP.	100NF 50V K
C379	VE-30000294	SMD CAP.	100NF 50V K
C385	VE-30000294	SMD CAP.	100NF 50V K
C400	VE-30000294	SMD CAP.	100NF 50V K
C401	VE-30000371	EL CAP.	22UF 50V M
C403	VE-30000294	SMD CAP.	100NF 50V K
C404	VE-30000284	SMD CAP.	1NF 50V K R
C405	VE-30000294	SMD CAP.	100NF 50V K
C406	VE-30000284	SMD CAP.	1NF 50V K R
C407	VE-30000284	SMD CAP.	1NF 50V K R
COIL			
L301	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L302	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L303	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L304	VE-30001986	FIXED COIL	3.3UH Q65 K
L306	VE-30002002	FIXED COIL	47UH Q60 K
L307	VE-30002002	FIXED COIL	47UH Q60 K
L308	VE-30002002	FIXED COIL	47UH Q60 K
L309	VE-30002002	FIXED COIL	47UH Q60 K
DIODE			
D301	VE-30001369	DIODE ZENER	
D302	VE-30001284	DIODE	
TRANSISTOR			
Q301	VE-30001455	TR	
IC			
IC301	VE-30001664	IC	
IC307	VE-30001495	IC	
OTHERS			
VL301	VE-30002037	ADJ COIL	VIF 38.9 Q80
X301	VE-30001756	XTAL	
Z301	VE-30001706	FILTER SAW	
Z302	VE-30001692	FILTER SAW	

[AV28BT5ENS / AV28BT5ENB]**CRT SOCKET P.W. BOARD ASS'Y (VE-20074437)**

△ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R901	VE-30000525	CF RES.	1/2W 1.5K J
R902	VE-30000525	CF RES.	1/2W 1.5K J
R903	VE-30000525	CF RES.	1/2W 1.5K J
R905	VE-30000525	CF RES.	1/2W 1.5K J
R906	VE-30000525	CF RES.	1/2W 1.5K J
R907	VE-30000459	CF RES.	1/4W 100R J
R908	VE-30000459	CF RES.	1/4W 100R J
R909	VE-30000459	CF RES.	1/4W 100R J
R914	VE-30001242	FUSE RES.	1/4W 47R J
CAPACITOR			
C901	VE-30000075	MKT CAP.	100NF 250V K (DC)
C902	VE-30000350	EL CAP.	10UF 250V M
C903	VE-30000434	CER CAP.	1NF 2KV K B
C904	VE-30000319	CER CAP.	2.7NF 500V K B
DIODE			
D900	VE-30001347	DIODE ZENER	8.2V
IC			
IC901	VE-20000954	HE. ASY. 19-CRT BOARD	
OTHERS			
△ PL900	VE-30015752	SOCKET CRT	
SP901	VE-30000428	SPARK GAP 300V	
SP902	VE-30000428	SPARK GAP 300V	
SP903	VE-30000428	SPARK GAP 300V	
SP904	VE-30000428	SPARK GAP 300V	

**FRONT CONTROL P.W. BOARD ASS'Y
(VE-20079113)**

△ Symbol No.	Part No.	Part Name	Description
OTHERS			
LD101	VE-30001279	LED RED/GREEN	
MD101	VE-30001670	PREAMPLIFIER	
PL1203	VE-30001884	RCA JACK 1P YELLOW	
PL1204	VE-30001882	RCA JACK 1P WHITE	
PL1205	VE-30001883	RCA JACK 1P RED	
S101	VE-30002181	SWITCH TACT	
S102	VE-30002181	SWITCH TACT	
S103	VE-30002181	SWITCH TACT	
S104	VE-30002181	SWITCH TACT	
S105	VE-30002181	SWITCH TACT	

HEAD PHONE P.W. BOARD ASS'Y (VE-20075472)

△ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R113	VE-30000743	CF RES	1/2W 560R J
R114	VE-30000743	CF RES	1/2W 560R J
R115	VE-30000712	CF RES	1/4W 470R J
R116	VE-30000712	CF RES	1/4W 470R J
COIL			
L103	VE-30001996	FIXED COIL	22UH Q40 K
L104	VE-30001996	FIXED COIL	22UH Q40 K
OTHERS			
CON106	VE-30001900	JACK HEADPHONE	

PRINTED WIRING BOARD PARTS LIST

[AV28BT5EES / AV28BT5EEB]

MAIN P.W. BOARD ASS'Y (VE-20073447)

△ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R001	VE-30000471	CF RES.	1/4W 10K J
R001	VE-30000631	SMD RES.	1/10W 2.7K J
R002	VE-30000471	CF RES.	1/4W 10K J
R002	VE-30000631	SMD RES.	1/10W 2.7K J
R003	VE-30000770	CF RES.	1/4W 680R J
R010	VE-30000797	SMD RES.	1/10W 75R J
R011	VE-30000480	SMD RES.	1/10W 100K J
R012	VE-30000480	SMD RES.	1/10W 100K J
R014	VE-30000477	CF RES.	1/4W 100K J
R015	VE-30000480	SMD RES.	1/10W 100K J
R040	VE-30000797	SMD RES.	1/10W 75R J
R041	VE-30000797	SMD RES.	1/10W 75R J
R044	VE-30000459	CF RES.	1/4W 100R J
R045	VE-30000524	SMD RES.	1/10W 150R J
R049	VE-30000717	SMD RES.	1/10W 470R J
R050	VE-30000464	SMD RES.	1/10W 100R J
R051	VE-30000464	SMD RES.	1/10W 100R J
R065	VE-30000797	SMD RES.	1/10W 75R J
R066	VE-30000774	SMD RES.	1/10W 680R J
R067	VE-30000469	SMD RES.	1/10W 1K J
R068	VE-30000774	SMD RES.	1/10W 680R J
R069	VE-30000469	SMD RES.	1/10W 1K J
R070	VE-30000588	SMD RES.	1/10W 220R J
R071	VE-30000588	SMD RES.	1/10W 220R J
R072	VE-30000588	SMD RES.	1/10W 220R J
R073	VE-30000797	SMD RES.	1/10W 75R J
R075	VE-30000653	SMD RES.	1/10W 33R J
R078	VE-30000774	SMD RES.	1/10W 680R J
R079	VE-30000469	SMD RES.	1/10W 1K J
R080	VE-30000774	SMD RES.	1/10W 680R J
R081	VE-30000469	SMD RES.	1/10W 1K J
R082	VE-30000469	SMD RES.	1/10W 1K J
R083	VE-30000653	SMD RES.	1/10W 33R J
R084	VE-30000710	SMD RES.	1/10W 47R J
R094	VE-30000475	SMD RES.	1/10W 10K J
R095	VE-30000475	SMD RES.	1/10W 10K J
R096	VE-30000475	SMD RES.	1/10W 10K J
R097	VE-30000529	SMD RES.	1/10W 1.5K J
R098	VE-30000475	SMD RES.	1/10W 10K J
R099	VE-30000475	SMD RES.	1/10W 10K J
R100	VE-30000727	SMD RES.	1/10W 47K J
R101	VE-30000471	CF RES.	1/4W 10K J
R102	VE-30000747	SMD RES.	1/10W 560R J
R103	VE-30000710	SMD RES.	1/10W 47R J
R104	VE-30000457	SMD RES.	1/10W 10R J
R105	VE-30000457	SMD RES.	1/10W 10R J
R106	VE-30000567	SMD RES.	1/10W 18K J
R108	VE-30000564	CF RES.	1/4W 18K J
R200	VE-30000503	SMD RES.	1/10W 12K J
R201	VE-30000723	CF RES.	1/4W 47K J
R202	VE-30000459	CF RES.	1/4W 100R J
R203	VE-30000471	CF RES.	1/4W 10K J
R208	VE-30000459	CF RES.	1/4W 100R J
R209	VE-30000459	CF RES.	1/4W 100R J
R213	VE-30000597	SMD RES.	1/10W 22K J
R300	VE-30000529	SMD RES.	1/10W 1.5K J
R303	VE-30000469	SMD RES.	1/10W 1K J
R304	VE-30000717	SMD RES.	1/10W 470R J
R305	VE-30000717	SMD RES.	1/10W 470R J
R306	VE-30000464	SMD RES.	1/10W 100R J
R307	VE-30000464	SMD RES.	1/10W 100R J
R308	VE-30000464	SMD RES.	1/10W 100R J
R309	VE-30000660	CF RES.	1/4W 3.3K J
R310	VE-30000660	CF RES.	1/4W 3.3K J
R311	VE-30000531	CF RES.	1/4W 15K J
R313	VE-30000534	SMD RES.	1/10W 15K J
R314	VE-30000534	SMD RES.	1/10W 15K J
R315	VE-30000534	SMD RES.	1/10W 15K J
R341	VE-30000524	SMD RES.	1/10W 150R J
R343	VE-30001248	FUSE RES.	1/4W 4.7R J
R359	VE-30000464	SMD RES.	1/10W 100R J
R360	VE-30000464	SMD RES.	1/10W 100R J

△ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R361	VE-30000464	SMD RES.	1/10W 100R J
R364	VE-30000464	SMD RES.	1/10W 100R J
R378	VE-30000471	CF RES.	1/4W 10K J
R379	VE-30000475	SMD RES.	1/10W 10K J
R399	VE-30000717	SMD RES.	1/10W 470R J
R400	VE-30000717	SMD RES.	1/10W 470R J
R402	VE-30000706	CF RES.	1/4W 47R J
R403	VE-30000659	SMD RES.	1/10W 330R J
R404	VE-30000688	SMD RES.	1/10W 390R J
R405	VE-30000469	SMD RES.	1/10W 1K J
R407	VE-30000459	CF RES.	1/4W 100R J
R418	VE-30000735	SMD RES.	1/10W 4.7R J
R419	VE-30000710	SMD RES.	1/10W 47R J
R420	VE-30000593	SMD RES.	1/10W 2.2K J
R421	VE-30000499	SMD RES.	1/10W 1.2K J
R422	VE-30000558	SMD RES.	1/10W 180R J
R426	VE-30000659	SMD RES.	1/10W 330R J
R428	VE-30000650	CF RES.	1/4W 33R J
R429	VE-30000524	SMD RES.	1/10W 150R J
R431	VE-30000459	CF RES.	1/4W 100R J
R432	VE-30000459	CF RES.	1/4W 100R J
R433	VE-30000475	SMD RES.	1/10W 10K J
R437	VE-30000469	SMD RES.	1/10W 1K J
R438	VE-30000499	SMD RES.	1/10W 1.2K J
R439	VE-30000499	SMD RES.	1/10W 1.2K J
R440	VE-30000499	SMD RES.	1/10W 1.2K J
R446	VE-30000480	SMD RES.	1/10W 100K J
R447	VE-30000464	SMD RES.	1/10W 100R J
R448	VE-30000466	CF RES.	1/4W 1K J
R449	VE-30000489	SMD RES.	1/10W 1R J
R450	VE-30000631	SMD RES.	1/10W 2.7K J
R451	VE-30000633	CF RES.	1/4W 27K J
R452	VE-30000309	SMD CAP.	2.2NF 50V K R
R453	VE-30000606	SMD RES.	1/10W 2.2M J
R454	VE-30000534	SMD RES.	1/10W 15K J
R455	VE-30000650	CF RES.	1/4W 33R J
R456	VE-30000550	SMD RES.	1/10W 160K J
R457	VE-30000606	SMD RES.	1/10W 2.2M J
R458	VE-30000732	SMD RES.	1/10W 470K J
R459	VE-30000697	SMD RES.	1/10W 39K G
R460	VE-30000770	CF RES.	1/4W 680R J
R465	VE-30000658	SMD RES.	1/10W 82R J
R474	VE-30000597	SMD RES.	1/10W 22K J
R475	VE-30000475	SMD RES.	1/10W 10K J
R480	VE-30000751	SMD RES.	1/10W 5.6K J
R481	VE-30000751	SMD RES.	1/10W 5.6K J
R482	VE-30000751	SMD RES.	1/10W 5.6K J
R483	VE-30000593	SMD RES.	1/10W 2.2K J
R484	VE-30000752	CF RES.	1/4W 56K J
R486	VE-30000721	SMD RES.	1/10W 4.7K J
R488	VE-30000471	CF RES.	1/4W 10K J
R489	VE-30000727	SMD RES.	1/10W 47K J
R490	VE-30000751	SMD RES.	1/10W 5.6K J
R492	VE-30000588	SMD RES.	1/10W 220R J
R493	VE-30000588	SMD RES.	1/10W 220R J
R494	VE-30000526	CF RES.	1/4W 1.5K J
R498	VE-30000563	SMD RES.	1/10W 1.8K J
R500	VE-30000469	SMD RES.	1/10W 1K J
R502	VE-30000469	SMD RES.	1/10W 1K J
R503	VE-30000469	SMD RES.	1/10W 1K J
R507	VE-30000469	SMD RES.	1/10W 1K J
R512	VE-30000727	SMD RES.	1/10W 47K J
R513	VE-30000727	SMD RES.	1/10W 47K J
R514	VE-30000727	SMD RES.	1/10W 47K J
R515	VE-30000727	SMD RES.	1/10W 47K J
R516	VE-30000464	SMD RES.	1/10W 100R J
R517	VE-30000464	SMD RES.	1/10W 100R J
R523	VE-30000475	SMD RES.	1/10W 10K J
R524	VE-30000475	SMD RES.	1/10W 10K J
R527	VE-30000721	SMD RES.	1/10W 4.7K J
R528	VE-30000560	CF RES.	1/4W 1.8K J
R529	VE-30000560	CF RES.	1/4W 1.8K J

[AV28BT5EES / AV28BT5EEB]

△ Symbol No.	Part No.	Part Name	Description	△ Symbol No.	Part No.	Part Name	Description
RESISTOR				RESISTOR			
R530	VE-30000560	CF RES.	1/4W 1.8K J	R711	VE-30000500	CF RES.	1/4W 12K J
R532	VE-30000475	SMD RES.	1/10W 10K J	R714	VE-30000459	CF RES.	1/4W 100R J
R533	VE-30000721	SMD RES.	1/10W 4.7K J	R715	VE-30000459	CF RES.	1/4W 100R J
R535	VE-30000721	SMD RES.	1/10W 4.7K J	R716	VE-30000466	CF RES.	1/4W 1K J
R537	VE-30000593	SMD RES.	1/10W 2.2K J	R717	VE-30000712	CF RES.	1/4W 470R J
R538	VE-30000475	SMD RES.	1/10W 10K J	R805	VE-30000633	CF RES.	1/4W 27K J
R539	VE-30000475	SMD RES.	1/10W 10K J	R806	VE-30001129	MO RES.	3W 22K J
R540	VE-30000818	SMD RES.	1/10W 8.2K J	R807	VE-30000466	CF RES.	1/4W 1K J
R541	VE-30000721	SMD RES.	1/10W 4.7K J	R808	VE-30000818	SMD RES.	1/10W 8.2K J
R542	VE-30000721	SMD RES.	1/10W 4.7K J	R809	VE-30000469	SMD RES.	1/10W 1K J
R543	VE-30000717	SMD RES.	1/10W 470R J	R810	VE-30000597	SMD RES.	1/10W 22K J
R548	VE-30000721	SMD RES.	1/10W 4.7K J	R811	VE-30000597	SMD RES.	1/10W 22K J
R549	VE-30000531	CF RES.	1/4W 15K J	R812	VE-30000519	CF RES.	1/4W 150R J
R550	VE-30000721	SMD RES.	1/10W 4.7K J	R813	VE-30000475	SMD RES.	1/10W 10K J
R551	VE-30000475	SMD RES.	1/10W 10K J	R814	VE-30000706	CF RES.	1/4W 47R J
R552	VE-30000593	SMD RES.	1/10W 2.2K J	R816	VE-30000540	CF RES.	1/2W 1.5M J (400V)
R554	VE-30000815	CF RES.	1/4W 8.2K J	R818	VE-30000466	CF RES.	1/4W 1K J
R556	VE-30000567	SMD RES.	1/10W 18K J	R821	VE-30000602	SMD RES.	1/10W 220K J
R559	VE-30000588	SMD RES.	1/10W 220R J	R822	VE-30001156	MO RES.	5W 33K J
R560	VE-30000469	SMD RES.	1/10W 1K J	R823	VE-30000513	CF RES.	1/4W 130K J
R561	VE-30000692	SMD RES.	1/10W 3.9K J	R824	VE-30000572	CF RES.	1/4W 2K J
R562	VE-30000471	CF RES.	1/4W 10K J	R827	VE-35000177	EYELET BR 2.5*3.3	
R563	VE-30000471	CF RES.	1/4W 10K J	R828	VE-30007759	CF RES.	1W 47K J
R564	VE-30000475	SMD RES.	1/10W 10K J	R829	VE-30000469	SMD RES.	1/10W 1K J
R565	VE-30000475	SMD RES.	1/10W 10K J	R831	VE-30000471	CF RES.	1/4W 10K J
R566	VE-30010167	SMD RES.	1/10W 56R J	R832	VE-30000721	SMD RES.	1/10W 4.7K J
R568	VE-30000475	SMD RES.	1/10W 10K J	R833	VE-30000710	SMD RES.	1/10W 47R J
R569	VE-30000459	CF RES.	1/4W 100R J	R834	VE-30000818	SMD RES.	1/10W 8.2K J
R570	VE-30000531	CF RES.	1/4W 15K J	R835	VE-30000580	CF RES.	1/4W 22R J
R571	VE-30000466	CF RES.	1/4W 1K J	R836	VE-30000706	CF RES.	1/4W 47R J
R572	VE-30000475	SMD RES.	1/10W 10K J	R844	VE-30000471	CF RES.	1/4W 10K J
R573	VE-30000721	SMD RES.	1/10W 4.7K J	△ R845	VE-30001257	MG RES.	1/2W 4.7H J
R574	VE-30000692	SMD RES.	1/10W 3.9K J	R849	VE-30000534	SMD RES.	1/10W 15K J
R577	VE-30000475	SMD RES.	1/10W 10K J	R850	VE-30000569	CF RES.	1/4W 180K J
R578	VE-30000475	SMD RES.	1/10W 10K J	R858	VE-30000712	CF RES.	1/4W 470R J
R579	VE-30000721	SMD RES.	1/10W 4.7K J	R868	VE-30000810	CF RES.	1/4W 820R J
R580	VE-30000464	SMD RES.	1/10W 100R J	R869	VE-30000810	CF RES.	1/4W 820R J
R581	VE-30000588	SMD RES.	1/10W 220R J	R870	VE-30001131	MO RES.	1W 0.22R J
R582	VE-30000464	SMD RES.	1/10W 100R J	R871	VE-30000471	CF RES.	1/4W 10K J
R583	VE-30000475	SMD RES.	1/10W 10K J	R872	VE-30007786	SMD RES.	1/10W 2.55K F
R584	VE-30000563	SMD RES.	1/10W 1.8K J	R873	VE-30012852	SMD RES.	1/10W 3.9K F
R586	VE-30000480	SMD RES.	1/10W 100K J	R879	VE-30000718	CF RES.	1/4W 4.7K J
R587	VE-30000712	CF RES.	1/4W 470R J	R885	VE-30000475	SMD RES.	1/10W 10K J
R590	VE-30000721	SMD RES.	1/10W 4.7K J	R886	VE-30000475	SMD RES.	1/10W 10K J
R594	VE-30000475	SMD RES.	1/10W 10K J	R888	VE-30000503	SMD RES.	1/10W 12K J
R595	VE-30000475	SMD RES.	1/10W 10K J	R890	VE-30001089	MO RES.	2W 1R J
R596	VE-30000475	SMD RES.	1/10W 10K J	R891	VE-30000466	CF RES.	1/4W 1K J
R601	VE-30000718	CF RES.	1/4W 4.7K J	R892	VE-30000531	CF RES.	1/4W 15K J
R602	VE-30000464	SMD RES.	1/10W 100R J	R893	VE-30000477	CF RES.	1/4W 100K J
R605	VE-30000466	CF RES.	1/4W 1K J	R894	VE-30000660	CF RES.	1/4W 3.3K J
R606	VE-30000704	CF RES.	1/4W 43K J	R895	VE-30000638	CF RES.	1/4W 270K J
R608	VE-30001235	FUSE RES.	1/2W 0.33R J	CAPASITOR			
R610	VE-30001171	MO RES.	2W 4.7K J	C001	VE-30000375	EL CAP.	220UF 16V M
△ R611	VE-30001215	FUSE RES.	1W 1R J	C01	VE-30000332	SMD CAP.	4.7NF 50V K
R613	VE-30000815	CF RES.	1/4W 8.2K J	C010	VE-30000294	SMD CAP.	100NF 50V K
R614	VE-30000775	CF RES.	1/4W 6.8K J	C011	VE-30000294	SMD CAP.	100NF 50V K
R615	VE-30000815	CF RES.	1/4W 8.2K J	C012	VE-30000294	SMD CAP.	100NF 50V K
R616	VE-35000177	EYELET BR 2.5*3.3		C013	VE-30000375	EL CAP.	220UF 16V M
R617	VE-30000775	CF RES.	1/4W 6.8K J	C02	VE-30000332	SMD CAP.	4.7NF 50V K
R618	VE-30000464	SMD RES.	1/10W 100R J	C028	VE-30000352	EL CAP.	100UF 16V M
R619	VE-30000815	CF RES.	1/4W 8.2K J	C029	VE-30000294	SMD CAP.	100NF 50V K
R620	VE-30001082	MO RES.	1/2W 1K J	C03	VE-30000332	SMD CAP.	4.7NF 50V K
R621	VE-30000459	CF RES.	1/4W 100R J	C030	VE-30000294	SMD CAP.	100NF 50V K
R626	VE-30000466	CF RES.	1/4W 1K J	C031	VE-30000294	SMD CAP.	100NF 50V K
△ R628	VE-30001228	FUSE RES.	1/2W 2.2R J	C032	VE-30000294	SMD CAP.	100NF 50V K
△ R629	VE-30001232	FUSE RES.	1/4W 2.7R J	C04	VE-30000332	SMD CAP.	4.7NF 50V K
R630	VE-30001082	MO RES.	1/2W 1K J	C051	VE-30000315	SMD CAP.	220NF 25V Z
R631	VE-30001171	MO RES.	2W 4.7K J	C052	VE-30000294	SMD CAP.	100NF 50V K
R639	VE-30000542	SMD RES.	1/10W 1.5M J	C053	VE-30000315	SMD CAP.	220NF 25V Z
R700	VE-30000466	CF RES.	1/4W 1K J	C054	VE-30000315	SMD CAP.	220NF 25V Z
△ R703	VE-30000860	MF RES.	1/4W 1R F	C059	VE-30000300	SMD CAP.	1.5NF 50V K
△ R704	VE-30001251	FUSE RES.	1/2W 56R J	C060	VE-30000300	SMD CAP.	1.5NF 50V K
R705	VE-30000580	CF RES.	1/4W 22R J	C061	VE-30000242	SMD CAP.	330PF 50V J
R706	VE-30000949	MF RES.	1/4W 3K G	C062	VE-30000242	SMD CAP.	330PF 50V J
R707	VE-30000712	CF RES.	1/4W 470R J	C064	VE-30000300	SMD CAP.	1.5NF 50V K
R708	VE-30000469	SMD RES.	1/10W 1K J				
R709	VE-30000475	SMD RES.	1/10W 10K J				
R710	VE-30000718	CF RES.	1/4W 4.7K J				

[AV28BT5EES / AV28BT5EEB]

Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C065	VE-30000300	SMD CAP.	1.5NF 50V K
C066	VE-30000242	SMD CAP.	330PF 50V J
C067	VE-30000242	SMD CAP.	330PF 50V J
C068	VE-30000345	EL CAP.	10UF 50V M
C071	VE-30000315	SMD CAP.	220NF 25V Z
C072	VE-30000294	SMD CAP.	100NF 50V K
C073	VE-30000294	SMD CAP.	100NF 50V K
C095	VE-30000289	SMD CAP.	10NF 50V K R
C097	VE-30000189	SMD CAP.	100PF 50V J
C098	VE-30000224	SMD CAP.	220PF 50V J
C099	VE-30000189	SMD CAP.	100PF 50V J
C101	VE-30000336	SMD CAP.	5.6NF 50V K
C102	VE-30000345	EL CAP.	10UF 50V M
C107	VE-30000336	SMD CAP.	5.6NF 50V K
C108	VE-30000312	SMD CAP.	22NF 50V K
C109	VE-30000332	SMD CAP.	4.7NF 50V K
C110	VE-30000312	SMD CAP.	22NF 50V K
C111	VE-30000332	SMD CAP.	4.7NF 50V K
C112	VE-30000109	MKT CAP.	470NF 63V J
C113	VE-30000109	MKT CAP.	470NF 63V J
C116	VE-30000082	MKT CAP.	15NF 63V J
C117	VE-30000082	MKT CAP.	15NF 63V J
C201	VE-30000352	EL CAP.	100UF 16V M
C203	VE-30000345	EL CAP.	10UF 50V M
C204	VE-30000345	EL CAP.	10UF 50V M
C211	VE-30000294	SMD CAP.	100NF 50V K
C212	VE-30000190	CER CAP.	100PF 50V J CH
C279	VE-30000263	SMD CAP.	56PF 50V J CH
C301	VE-30000216	SMD CAP.	1.8PF 50V J CH
C302	VE-30000216	SMD CAP.	1.8PF 50V J CH
C304	VE-30000289	SMD CAP.	10NF 50V K R
C306	VE-30000345	EL CAP.	10UF 50V M
C307	VE-30000294	SMD CAP.	100NF 50V K
C308	VE-30000074	MKT CAP.	100NF 63V J
C309	VE-30000345	EL CAP.	10UF 50V M
C316	VE-30000284	SMD CAP.	1NF 50V K R
C317	VE-30000284	SMD CAP.	1NF 50V K R
C318	VE-30000074	MKT CAP.	100NF 63V J
C319	VE-30000393	EL CAP.	3.3UF 50V M
C320	VE-30000294	SMD CAP.	100NF 50V K
C321	VE-30000345	EL CAP.	10UF 50V M
C322	VE-30000345	EL CAP.	10UF 50V M
C323	VE-30000345	EL CAP.	10UF 50V M
C326	VE-30000371	EL CAP.	22UF 50V M
C327	VE-30000371	EL CAP.	22UF 50V M
C328	VE-30000284	SMD CAP.	1NF 50V K R
C329	VE-30000284	SMD CAP.	1NF 50V K R
C330	VE-30000284	SMD CAP.	1NF 50V K R
C331	VE-30000284	SMD CAP.	1NF 50V K R
C332	VE-30000417	EL CAP.	6.8UF 50V M
C333	VE-30000294	SMD CAP.	100NF 50V K
C334	VE-30000345	EL CAP.	10UF 50V M
C335	VE-30000252	SMD CAP.	47PF 50V J
C336	VE-30000252	SMD CAP.	47PF 50V J
C338	VE-30000371	EL CAP.	22UF 50V M
C339	VE-30000256	SMD CAP.	470PF 50V J
C340	VE-30000100	MKT CAP.	330NF 63V J
C341	VE-30000256	SMD CAP.	470PF 50V J
C342	VE-30000100	MKT CAP.	330NF 63V J
C343	VE-30000224	SMD CAP.	220PF 50V J
C344	VE-30000100	MKT CAP.	330NF 63V J
C346	VE-30000224	SMD CAP.	220PF 50V J
C347	VE-30000371	EL CAP.	22UF 50V M
C348	VE-30000224	SMD CAP.	220PF 50V J
C349	VE-30000100	MKT CAP.	330NF 63V J
C350	VE-30000224	SMD CAP.	220PF 50V J
C351	VE-30000100	MKT CAP.	330NF 63V J
C352	VE-30000224	SMD CAP.	220PF 50V J
C353	VE-30000100	MKT CAP.	330NF 63V J
C355	VE-30000284	SMD CAP.	1NF 50V K R
C357	VE-30000294	SMD CAP.	100NF 50V K
C358	VE-30000345	EL CAP.	10UF 50V M
C364	VE-30000284	SMD CAP.	1NF 50V K R
C365	VE-30000384	EL CAP.	2.2UF 50V M
C366	VE-30000294	SMD CAP.	100NF 50V K
C368	VE-30000294	SMD CAP.	100NF 50V K
C369	VE-30000294	SMD CAP.	100NF 50V K
C370	VE-30000384	EL CAP.	2.2UF 50V M

Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C371	VE-30000109	MKT CAP.	470NF 63V J
C373	VE-30000371	EL CAP.	22UF 50V M
C374	VE-30000294	SMD CAP.	100NF 50V K
C379	VE-30000294	SMD CAP.	100NF 50V K
C385	VE-30000294	SMD CAP.	100NF 50V K
C400	VE-30000294	SMD CAP.	100NF 50V K
C401	VE-30000371	EL CAP.	22UF 50V M
C402	VE-30000345	EL CAP.	10UF 50V M
C403	VE-30000074	MKT CAP.	100NF 63V J
C403	VE-30000294	SMD CAP.	100NF 50V K
C404	VE-30000284	SMD CAP.	1NF 50V K R
C405	VE-30000345	EL CAP.	10UF 50V M
C405	VE-30000294	SMD CAP.	100NF 50V K
C406	VE-30000313	CER CAP.	22NF 50V Z F
C406	VE-30000284	SMD CAP.	1NF 50V K R
C407	VE-30000384	EL CAP.	2.2UF 50V M
C407	VE-30000284	SMD CAP.	1NF 50V K R
C408	VE-30000283	CER CAP.	1NF 50V K B
C409	VE-30000334	SMD CAP.	47NF 50V K
C410	VE-30000345	EL CAP.	10UF 50V M
C411	VE-30000334	SMD CAP.	47NF 50V K
C412	VE-30000312	SMD CAP.	22NF 50V K
C413	VE-30000375	EL CAP.	220UF 16V M
C415	VE-30000092	MKT CAP.	220NF 63V J
C416	VE-30000312	SMD CAP.	22NF 50V K
C417	VE-30000312	SMD CAP.	22NF 50V K
C418	VE-30000312	SMD CAP.	22NF 50V K
C419	VE-30000315	SMD CAP.	220NF 25V Z
C421	VE-30000220	SMD CAP.	22PF 50V J
C422	VE-30000220	SMD CAP.	22PF 50V J
C423	VE-30000322	SMD CAP.	3.3NF 50V K
C424	VE-30000294	SMD CAP.	100NF 50V K
C425	VE-30000312	SMD CAP.	22NF 50V K
C426	VE-30000353	EL CAP.	100UF 25V M
C427	VE-30000294	SMD CAP.	100NF 50V K
C428	VE-30000345	EL CAP.	10UF 50V M
C430	VE-30000289	SMD CAP.	10NF 50V K R
C431	VE-30000362	EL CAP.	1UF 50V M
C433	VE-30000284	SMD CAP.	1NF 50V K R
C434	VE-30000284	SMD CAP.	1NF 50V K R
C435	VE-30000074	MKT CAP.	100NF 63V J
C436	VE-30000074	MKT CAP.	100NF 63V J
C437	VE-30000362	EL CAP.	1UF 50V M
C438	VE-30000312	SMD CAP.	22NF 50V K
C439	VE-30000284	SMD CAP.	1NF 50V K R
C440	VE-30000345	EL CAP.	10UF 50V M
C446	VE-30000252	SMD CAP.	47PF 50V J
C447	VE-30000252	SMD CAP.	47PF 50V J
C448	VE-30000189	SMD CAP.	100PF 50V J
C450	VE-30000294	SMD CAP.	100NF 50V K
C451	VE-30000290	CER CAP.	10NF 50V Z F
C452	VE-30000290	CER CAP.	10NF 50V Z F
C453	VE-30000312	SMD CAP.	22NF 50V K
C459	VE-30000332	SMD CAP.	4.7NF 50V K
C465	VE-30000300	SMD CAP.	1.5NF 50V K
C490	VE-30000284	SMD CAP.	1NF 50V K R
C497	VE-30000300	SMD CAP.	1.5NF 50V K
C498	VE-30000189	SMD CAP.	100PF 50V J
C499	VE-30000300	SMD CAP.	1.5NF 50V K
C505	VE-30000294	SMD CAP.	100NF 50V K
C513	VE-30000294	SMD CAP.	100NF 50V K
C514	VE-30000345	EL CAP.	10UF 50V M
C516	VE-30000371	EL CAP.	22UF 50V M
C517	VE-30000352	EL CAP.	100UF 16V M
C521	VE-30000109	MKT CAP.	470NF 63V J
C524	VE-30000237	SMD CAP.	33PF 50V J
C525	VE-30000237	SMD CAP.	33PF 50V J
C526	VE-30000294	SMD CAP.	100NF 50V K
C530	VE-30000294	SMD CAP.	100NF 50V K
C531	VE-30000294	SMD CAP.	100NF 50V K
C532	VE-30000294	SMD CAP.	100NF 50V K
C533	VE-30000294	SMD CAP.	100NF 50V K
C537	VE-30000294	SMD CAP.	100NF 50V K
C538	VE-30000294	SMD CAP.	100NF 50V K
C539	VE-30000294	SMD CAP.	100NF 50V K
C540	VE-30000294	SMD CAP.	100NF 50V K
C570	VE-30000371	EL CAP.	22UF 50V M
C571	VE-30000371	EL CAP.	22UF 50V M

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Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C572	VE-30000371	EL CAP.	22UF 50V M
C573	VE-30000371	EL CAP.	22UF 50V M
C576	VE-30000201	SMD CAP.	15PF 50V J
C577	VE-30000201	SMD CAP.	15PF 50V J
C580	VE-30000387	EL CAP.	33UF 50V M
C583	VE-30000294	SMD CAP.	100NF 50V K
C590	VE-30000294	SMD CAP.	100NF 50V K
C596	VE-30000289	SMD CAP.	10NF 50V K R
C597	VE-30000289	SMD CAP.	10NF 50V K R
C598	VE-30000289	SMD CAP.	10NF 50V K R
C599	VE-30000334	SMD CAP.	47NF 50V K
C600	VE-30000289	SMD CAP.	10NF 50V K R
C601	VE-30000355	EL CAP.	100UF 50V M
C603	VE-30000309	SMD CAP.	2.2NF 50V K R
C604	VE-30000107	MKT CAP.	47NF 250V J
C605	VE-30000075	MKT CAP.	100NF 250V K (DC)
C606	VE-30000406	EL CAP.	47UF 250V M (HR)
C607	VE-30000407	EL CAP.	470UF 16V M
C608	VE-30009206	SMD CAP.	15NF 50V K R
C610	VE-30000123	PP CAP.	33NF 630V K
C611	VE-30000143	MKP CAP.	2.2NF 2KV X3.5
C612	VE-30000356	EL CAP.	100UF 63V M
C613	VE-30000121	KP CAP.	27NF 630V J
C617	VE-30000172	MKP CAP.	680NF 250V J (P=15)
C618	VE-30000078	MKT CAP.	1UF 100V M
C620	VE-30000433	CER CAP.	1NF 1KV M B
C621	VE-30000078	MKT CAP.	1UF 100V M
C625	VE-30000315	SMD CAP.	220NF 25V Z
C626	VE-30000180	MKP CAP.	9.1NF 2000V X3.5
C627	VE-30000340	SMD CAP.	6.8NF 50V K
C630	VE-30000156	MKP CAP.	430NF 250V J
C632	VE-30016086	EL CAP.	1000UF 25V 105°
C650	VE-30000280	SMD CAP.	820PF 50V J
C660	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
C661	VE-30009208	CER CAP.	470PF 1KV K (PULSE)
C700	VE-30000190	CER CAP.	100PF 50V J CH
C702	VE-30000356	EL CAP.	100UF 63V M
C704	VE-30016085	EL CAP.	10UF 63V 105°
C705	VE-30000071	MKT CAP.	10NF 63V J
C706	VE-30000092	MKT CAP.	220NF 63V J
C707	VE-30000069	MKT CAP.	1NF 100V J
C708	VE-30000189	SMD CAP.	100PF 50V J
C709	VE-30000294	SMD CAP.	100NF 50V K
C715	VE-30000189	SMD CAP.	100PF 50V J
△ C801	VE-30000084	MKT CAP.	150NF 275V M AC P=15
△ C802	VE-30000084	MKT CAP.	150NF 275V M AC P=15
C803	VE-30000189	SMD CAP.	100PF 50V J
C804	VE-30000421	EL CAP.	220UF 400V M (FOR 28°)
C806	VE-30000342	CER CAP.	820PF 50V K B
C807	VE-30000074	MKT CAP.	100NF 63V J
C808	VE-30000284	SMD CAP.	1NF 50V K R
C809	VE-30000309	SMD CAP.	2.2NF 50V K R
C810	VE-30000076	MKT CAP.	100NF 275V M AC
C811	VE-30000161	MKP CAP.	47NF 630V J
C812	VE-30000411	EL CAP.	4700UF 16V M
C814	VE-30000294	SMD CAP.	100NF 50V K
C816	VE-30000295	CER CAP.	100NF 50V Z F
C817	VE-30000359	EL CAP.	1000UF 16V M
C819	VE-30000295	CER CAP.	100NF 50V Z F
C821	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C822	VE-30000295	CER CAP.	100NF 50V Z F
C823	VE-30000383	EL CAP.	2200UF 25V M
C824	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C825	VE-30000295	CER CAP.	100NF 50V Z F
C826	VE-30000383	EL CAP.	2200UF 25V M
C827	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C828	VE-30000359	EL CAP.	1000UF 16V M
C829	VE-30000406	EL CAP.	47UF 250V M (HR)
C830	VE-30000295	CER CAP.	100NF 50V Z F
C831	VE-30000198	CER CAP.	120PF 500V J SL
C832	VE-30000294	SMD CAP.	100NF 50V K
C835	VE-30007308	CER CAP.	220PF 1KV K (PULSE)
C845	VE-30000375	EL CAP.	220UF 16V M
C846	VE-30000433	CER CAP.	1NF 1KV M B
C847	VE-30000375	EL CAP.	220UF 16V M

Symbol No.	Part No.	Part Name	Description
CAPACITOR			
C848	VE-30000353	EL CAP.	100UF 25V M
C850	VE-30000433	CER CAP.	1NF 1KV M B
C851	VE-30000433	CER CAP.	1NF 1KV M B
C852	VE-30000433	CER CAP.	1NF 1KV M B
C853	VE-30000289	SMD CAP.	10NF 50V K R
C854	VE-300008805	MKT CAP.	39NF 63V J
C855	VE-30000284	SMD CAP.	1NF 50V K R
C860	VE-30000440	CER CAP.	2.2NF 4KV M
C865	VE-30000440	CER CAP.	2.2NF 4KV M
C890	VE-30000396	EL CAP.	47UF 16V M
C891	VE-30000335	CER CAP.	47NF 50V Z F
C892	VE-30000295	CER CAP.	100NF 50V Z F

COIL

L001	VE-30002016	FIXED COIL	150UH Q60 K
L002	VE-30010964	FERRITE BEAT	
L050	VE-30002015	FIXED COIL	150UH Q50 K (RAD)
L051	VE-30002015	FIXED COIL	150UH Q50 K (RAD)
L054	VE-30010964	FERRITE BEAT	
L201	VE-30001979	FIXED COIL	1UH Q45 M-A
L202	VE-30010964	FERRITE BEAT	
L301	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L302	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L303	VE-30001987	FIXED COIL	4.7UH Q70 K-A
L304	VE-30001986	FIXED COIL	3.3UH Q65 K
L306	VE-30002002	FIXED COIL	47UH Q60 K
L307	VE-30002002	FIXED COIL	47UH Q60 K
L308	VE-30002002	FIXED COIL	47UH Q60 K
L309	VE-30002002	FIXED COIL	47UH Q60 K
L402	VE-30001986	FIXED COIL	3.3UH Q65 K
L403	VE-30001990	FIXED COIL	6.8UH Q75 K
L405	VE-30001992	FIXED COIL	10UH Q65 K-A
L406	VE-30001992	FIXED COIL	10UH Q65 K-A
L407	VE-30001992	FIXED COIL	10UH Q65 K-A
L408	VE-30001979	FIXED COIL	1UH Q45 M-A
L502	VE-30001992	FIXED COIL	10UH Q65 K-A
L504	VE-30001992	FIXED COIL	10UH Q65 K-A
L505	VE-30001992	FIXED COIL	10UH Q65 K-A
L506	VE-30001992	FIXED COIL	10UH Q65 K-A
L515	VE-30001992	FIXED COIL	10UH Q65 K-A
L602	VE-30002026	FIXED COIL	1MH AK19 25/28
L603	VE-30002156	LINEARITY COIL	30UH 110' (AK19)
L604	VE-30002031	FIXED COIL	INJECTION 15MH
L605	VE-30001999	FIXED COIL	40UH (LOSS COIL
L801	VE-30001984	FIXED COIL	2.2UH Q55 M-AX
L803	VE-30002011	CHOKE COIL	150UH 0.82A RAD

DIODE

D001	VE-30001284	DIODE	
D002	VE-30001284	DIODE	
D003	VE-30001284	DIODE	
D004	VE-30001284	DIODE	
D100	VE-30001284	DIODE	
D201	VE-30001284	DIODE	
D301	VE-30001369	DIODE	ZENER
D302	VE-30001284	DIODE	
D408	VE-30001347	DIODE	ZENER
D409	VE-30001284	DIODE	
D410	VE-30001284	DIODE	
D420	VE-30001285	DIODE	
D500	VE-30012412	DIODE	ZENER
D503	VE-30001284	DIODE	
D504	VE-30001284	DIODE	
D505	VE-30012412	DIODE	ZENER
D509	VE-30001284	DIODE	
D555	VE-30001285	DIODE	
D583	VE-30001284	DIODE	
D601	VE-30001318	DIODE	
D602	VE-30001285	DIODE	
D603	VE-30001284	DIODE	
D604	VE-30001377	DIODE	ZENER
D605	VE-30001318	DIODE	
D606	VE-30001318	DIODE	

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Symbol No.	Part No.	Part Name	Description
DIODE			
D607	VE-30001285	DIODE	
D608	VE-30001284	DIODE	
D609	VE-30001318	DIODE	
D611	VE-30001323	DIODE	
D612	VE-30001320	DIODE	
D698	VE-30001318	DIODE	
D701	VE-30001284	DIODE	
D801	VE-30001329	DIODE	
D802	VE-30001329	DIODE	
D803	VE-30001329	DIODE	
D804	VE-30001329	DIODE	
D805	VE-30001318	DIODE	
D807	VE-30001318	DIODE	
D811	VE-30001315	DIODE	
D812	VE-30001315	DIODE	
D813	VE-30001288	DIODE	
D814	VE-30001307	DIODE	
D815	VE-30001307	DIODE	
D816	VE-30007681	DIODE	
D818	VE-30001318	DIODE	
D819	VE-30001349	DIODE ZENER	
D823	VE-30001284	DIODE	
D826	VE-30001318	DIODE	
D827	VE-30001318	DIODE	
D858	VE-30001371	DIODE ZENER	
D864	VE-30001285	DIODE	
D890	VE-30001284	DIODE	

TRANSISTOR

Q001	VE-30001455	TR	
Q055	VE-30001454	TR	
Q100	VE-30001454	TR	
Q301	VE-30001455	TR	
Q402	VE-30001454	TR	
Q406	VE-30001454	TR	
Q407	VE-30001454	TR	
Q415	VE-30001454	TR	
Q418	VE-30001454	TR	
Q420	VE-30001454	TR	
Q503	VE-30001455	TR	
Q512	VE-30001455	TR	
Q514	VE-30001454	TR	
Q515	VE-30001454	TR	
Q516	VE-30001454	TR	
Q517	VE-30001454	TR	
Q518	VE-30001454	TR	
Q521	VE-30001454	TR	
Q522	VE-30001454	TR	
Q601	VE-30001455	TR	
Q603	VE-20000963	HE.ASY.19-E/W 110°	
Q604	VE-30001435	TR	
Q605	VE-30001441	TR	
Q701	VE-30001455	TR	
Q702	VE-30001454	TR	
Q802	VE-20073672	HE.ASY.19-SMPS 110° 170-270V (PLASTIK) JVC	
Q805	VE-30001454	TR	
Q806	VE-30001454	TR	
Q807	VE-30001454	TR	
Q809	VE-30001506	IC	
Q810	VE-30001384	TR	
Q890	VE-30001428	TR	

IC

IC050	VE-30001619	IC	
IC301	VE-30001664	IC	
IC307	VE-30001495	IC	
IC401	VE-30001579	IC	
IC501	VE-20075294	IC	
IC502	VE-20073446	IC	
IC701	VE-30002736	IC	
IC801	VE-30007069	IC	
IC802	VE-30001499	IC	
IC804	VE-20058533	IC	

CPU
MEMORY

Symbol No.	Part No.	Part Name	Description
IC			
IC805	VE-30001500	IC	
IC807	VE-30001622	IC	
OTHERS			
F801	VE-20000848	FUSE ASSY.TK79-A (2.5A)	
J129	VE-30001997	FIXED COIL	33UH Q60 J
J314	VE-20058569	MD.ASY.PR19Y-11PR19Y(PROTECT.CIR.)110°	
J500	VE-30010964	FERRITE BEAD	
J616	VE-30006712	FERRITE BEAD	
PL002	VE-30001912	PIN F 5P/2.5MM (11.5MM)	
PL892	VE-30007118	PIN F 2P/7.5MM	
PL893	VE-30007118	PIN F 2P/7.5MM	
TH801	VE-30001268	THERMISTOR 3P	
TR601	VE-30002090	LINE DRIVER	
TR602	VE-30002054	TRF FBT	
TR801	VE-30002103	LINE FILTER	
TR802	VE-30002080	TRF SMPS	
TU201	VE-30009637	TUNER	
VL301	VE-30002037	ADJ COIL	VIF 38.9 Q80
VR801	VE-30001064	RES ADJ	470R 0.1W VER (MAN)
X301	VE-30001756	XTAL	
X401	VE-30001748	XTAL	
X404	VE-30001745	XTAL	
X501	VE-30006662	XTAL	
Z209	VE-30001728	TRIPLE TRAP	
Z301	VE-30001706	FILTER SAW	
Z302	VE-30001692	FILTER SAW	
Z401	VE-30001695	FILTER SAW	

MULTI SOUND P.W. BOARD ASS'Y (VE-20078991)

Refer to PARTS LIST in page 24 for this P.W. board.

CRT SOCKET P.W. BOARD ASS'Y (VE-20074437)

Refer to PARTS LIST in page 25 for this P.W. board.

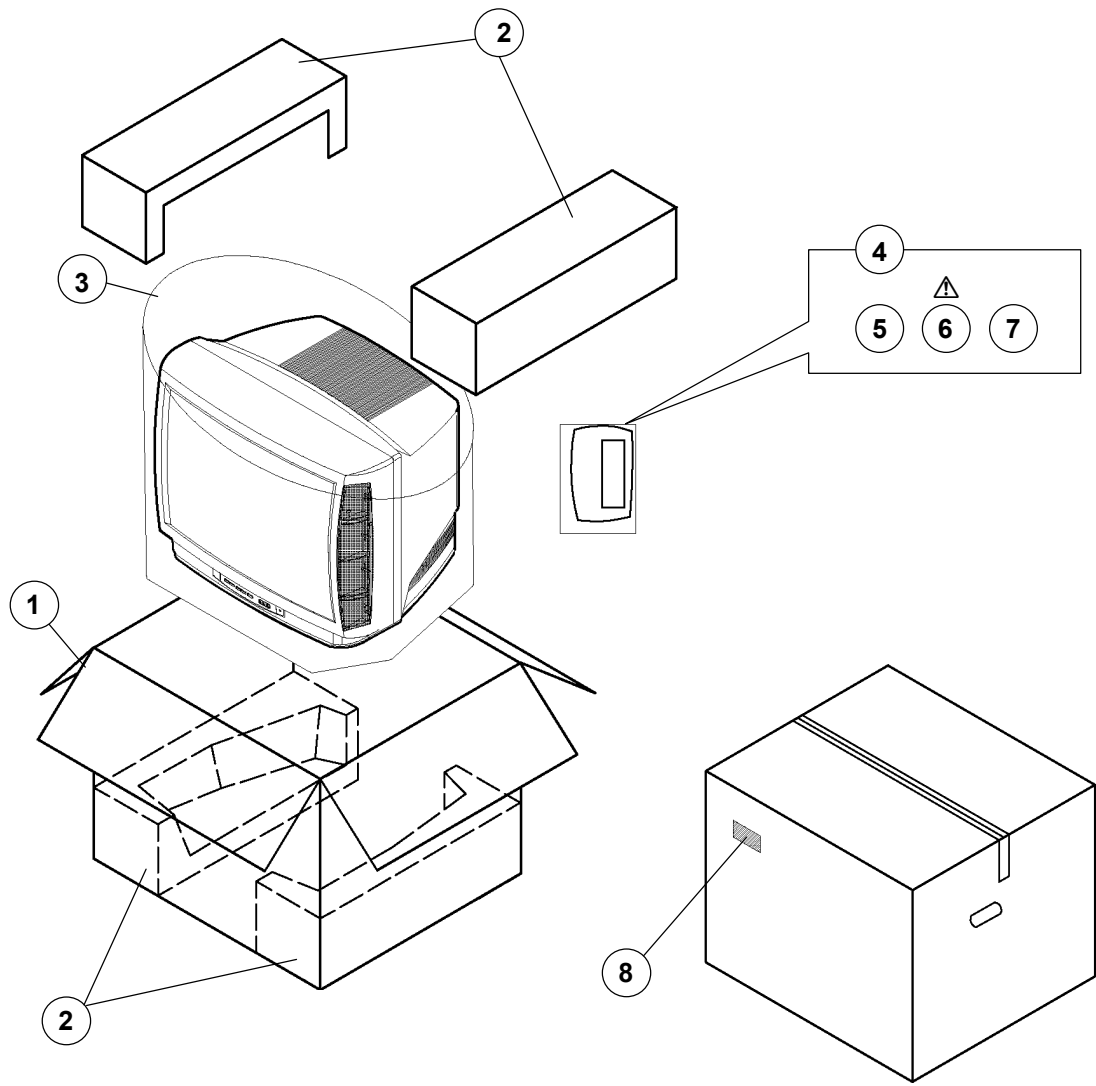
**FRONT CONTROL P.W. BOARD ASS'Y
(VE-20079113)**

Refer to PARTS LIST in page 25 for this P.W. board.

**HEAD PHONE JACK P.W. BOARD ASS'Y
(VE-20075472)**

Refer to PARTS LIST in page 25 for this P.W. board.

PACKING



PACKING PARTS LIST

△ Ref.No.	Part No.	Part Name	Description
1	VE-20074101	F CARTON BOX	(AV28BT5EES)
1	VE-20074229	F CARTON BOX	(AV28BT5ENS)
1	VE-20074115	F CARTON BOX	(AV28BT5EEB)
1	VE-20073917	F CARTON BOX	(AV28BT5ENB)
2	VE-20004267 / 68	CUSHION ASS'Y 72	
3	VE-50020732	POLLY BAG (1400*1000)	
4	VE-70000010	POLLY BAG	
5	RM-C85	REMOTE CONTROL UNIT	
△ 6	VE-50021021	INST BOOK	(AV28BT5ENS/ENB)
△ 6	VE-50021020	INST BOOK	(AV28BT5EES/EEB)
7	BT-54013-2TK	WARRANTY CARD	
8	VE-20074100	LABEL	(AV28BT5EES)
8	VE-20074113	LABEL	(AV28BT5EEB)
8	VE-20074227	LABEL	(AV28BT5ENS)
8	VE-20073915	LABEL	(AV28BT5ENB)