

# **TOSHIBA**

COLOUR TELEVISION

# **1720RF**



## **SPECIFICATIONS**

<b>Input Power Rating:</b>	60 watts, AC 220 volts, 50 Hz
<b>Aerial Input Impedance:</b>	75 ohm unbalanced type for VHF and UHF
<b>Receiving Channels:</b>	
	<b>SECAM-L Standard:</b>
	VHF ..... channels B to C, 1 to 6, B to Q (70 to 86) UHF ..... channels 21 to 69
	<b>PAL B/G Standard, SECAM B/G Standard:</b>
	VHF ..... channels 2 to 4, 5 to 12 and S1 to S41 UHF ..... channels 21 to 69
	<b>PAL I Standard:</b>
	UHF ..... channels 21 to 68
	<b>PAL, SECAM 50 Hz/60 Hz (For Video Disk playback)</b>
<b>Intermediate Frequencies:</b>	
	Picture I-F carrier frequency: L ..... 38.9 MHz (VH, U) 34.47 MHz (VL) B/G, I ..... 38.9 MHz
	Sound I-F carrier frequency: L ..... 32.4 MHz (VH, U) 40.97 MHz (VL) B/G ..... 33.4 MHz I ..... 32.9 MHz
<b>Picture Tube:</b>	17 inches, A41EAM11X01, 410 mm (measured on diagonal of viewable picture area), 90° deflection
<b>Sound Output:</b>	2 watts (at 10% harmonic distortion)
<b>Speakers:</b>	77 mm round
<b>Aux. Terminals:</b>	Headphone Jack, 21 pin socket (FULL)
<b>Cabinet:</b>	Plastic portable type
<b>Dimensions:</b>	Height 413 mm, Width 450 mm, Depth 398 mm
<b>Weight:</b>	13.4 kg

Specifications are subject to change without notice.

# SAFETY INSTRUCTIONS

**WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.**

## X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 25.5 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.  
For continued safety, replacement component should only be made after referring the Product Safety Notice below.

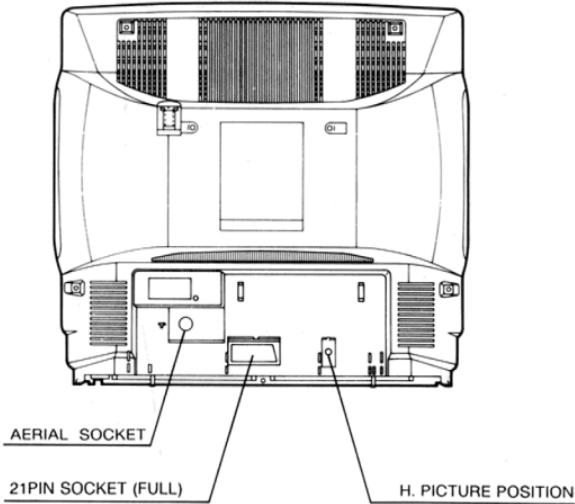
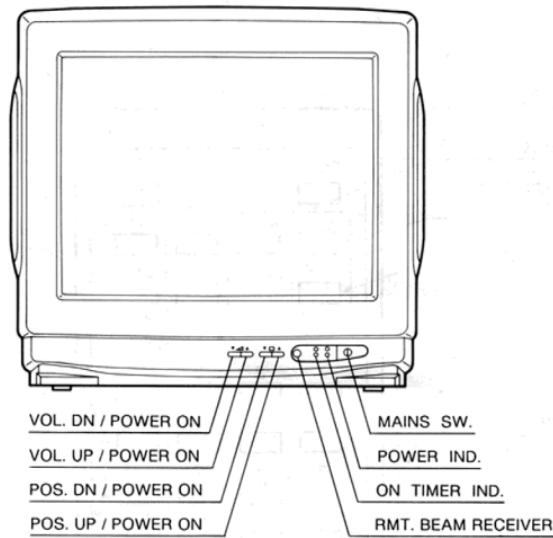
## SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 23.0 kV. Extreme caution should be exercised when working on the receiver with the back removed.  
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.  
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap  
The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.  
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

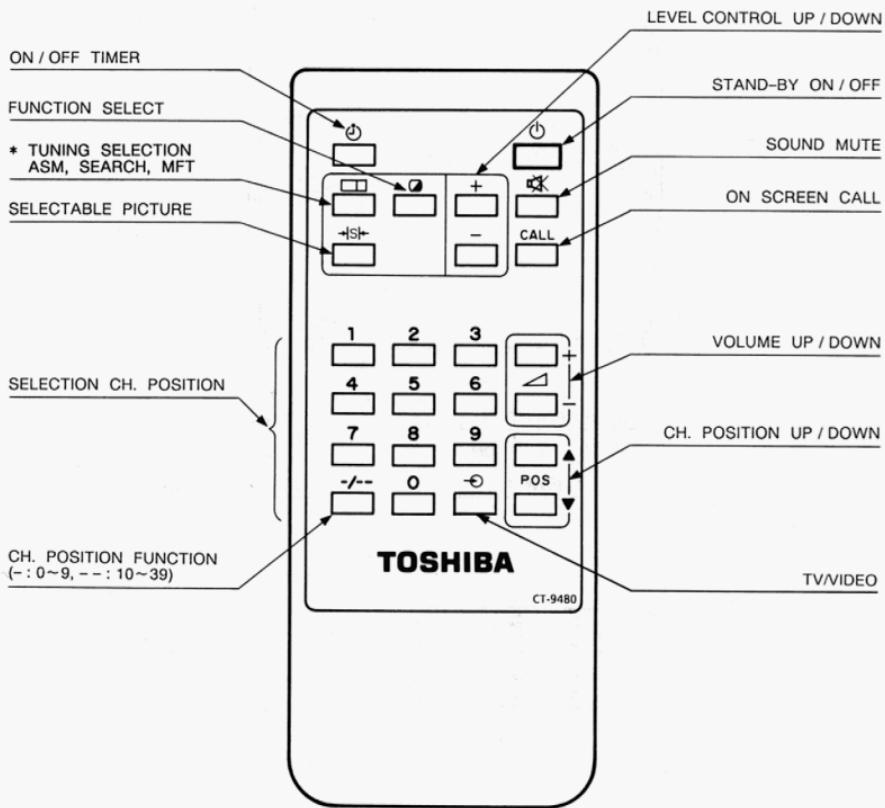
## PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

## FRONT CONTROLS AND REAR VIEWS



# REMOTE HAND HELD UNIT



**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

## INSTALLATION AND SERVICE ADJUSTMENTS

### GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.

Plug the power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

### AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures.

### +112 VOLT POWER SUPPLY ADJUSTMENT (R851)

**CAUTION:** +B voltage closely relates to the high voltage. To prevent hazardous X-RAY RADIATION, the +B voltage must be properly adjusted to +112 volts.

1. Tune in an active channel. Adjust the BRIGHTNESS and CONTRAST Controls for normal picture.
2. Check that the AC power Line voltage is normal. (AC 220 volts, 50 Hz)
3. Connect a digital voltmeter to both leads of C451.
4. Adjust R851 for 112V reading on the meter.
5. Remove the digital voltmeter.

### HIGH VOLTAGE CHECK

**CAUTION:** There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 27.5 kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 27.5 kV under any conditions.

### HEIGHT ADJUSTMENT

1. Receive the WG PHILIPS pattern, and set the contrast and colour to minimum, and the brightness to centre.
2. Change the VERT POSITION SW (S301) so the round shape in the pattern is located in the centre of screen.
3. HEIGHT Control (R351) changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

### HORIZONTAL CENTRE ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to minimum, and the brightness to centre.
3. Adjust H. CENTRE USER Control (R452) to the click (centre) position.
4. Adjust H. CENTRE SUB Control (R451) so the pattern centre can be located at the screen centre.

### FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS.(T461) for well defined scanning lines in the centre area on the screen.

### PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

## BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchronoscope to the terminal pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

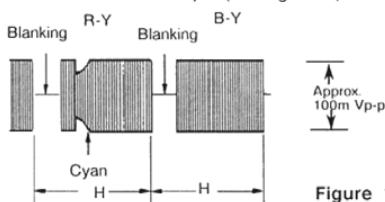


Figure 1.

## IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

## B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchronoscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchronoscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

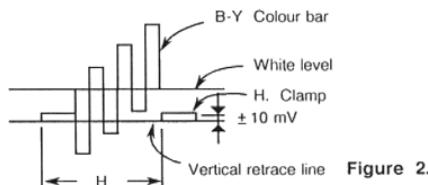


Figure 2.

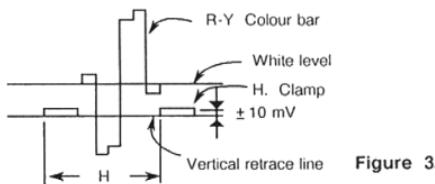


Figure 3.

## RF AGC ADJUSTMENT

1. Tune the set in the strongest station in your area.
2. Turn RF AGC Control (R151) on PIF Board to fully counterclockwise position.
3. Adjust RF AGC Control clockwise until noise (snow) just disappears on the screen.

## CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counterclockwise.
3. Set the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) to the mid position.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the CUT OFF SW. (S202) in the H. line position.
6. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre.
7. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position.
8. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
9. Return the CUT OFF SW. (S202) in the receiving position.
10. Set the BRIGHTNESS Control to the maximum.
11. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
12. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

## SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the minimum.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

## PICTURE I-F TRAP ALIGNMENT

- GENERAL ..... Refer to figure 4 for the equipment connection.  
 PRELIMINARY STEPS ..... 1. Supply +12 volts to the PIF Board.  
 2. Connect pin 12 of P101 to +12V.  
 3. Connect pin 10 of P101 to ground.  
 SWEEP/MARKER GENERATOR ..... Connect to pin 6 of P101 on the PIF Board as shown in figure 4. Set to 30 to 40 MHz sweep with signal level of 75 to 85 dB $\mu$ .  
 OSCILLOSCOPE ..... Connect through the detector (See figure 6.) to the emitter of QN01.

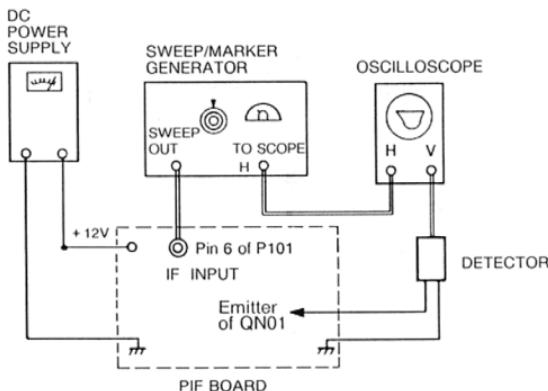


Figure 4.

STEP	SWEEP/MARKER GENERATOR	ADJUST	PROCEDURE
<b>TRAP ALIGNMENT</b>			
Control the sweep output for easy alignment. Set the IF markers for 42.47MHz and 32.97MHz.			
Trap coil (TN01)	42.47MHz Marker "ON"	TN01	Adjust L162 so the 42.47MHz marker point is placed at bottom of response. (See figure 5.)
Trap coil (TN02)	32.97MHz Marker "ON"	TN02	Adjust L163 so the 32.97MHz marker point is placed at bottom of response. (See figure 5.)

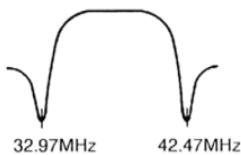


Figure 5. Trap Response

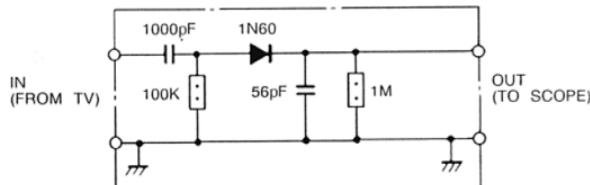


Figure 6. Detector Diagram

## PICTURE I-F TRAP ALIGNMENT

GENERAL ..... Refer to figure 7 for the equipment connection.

PRELIMINARY STEPS ..... 1. Supply + 12 volts to the PIF Board.

2. Connect pin 12 of P101 to + 12V.

3. Connect pin 10 of P101 to + 12V.

SWEEP/MARKER GENERATOR ..... Connect to pin 6 of P101 on the PIF Board as shown in figure 7. Set to 30 to 40 MHz sweep with signal level of 75 to 85 dB $\mu$ .

OSCILLOSCOPE ..... Connect through the detector (See figure 9.) to the emitter of QN01.

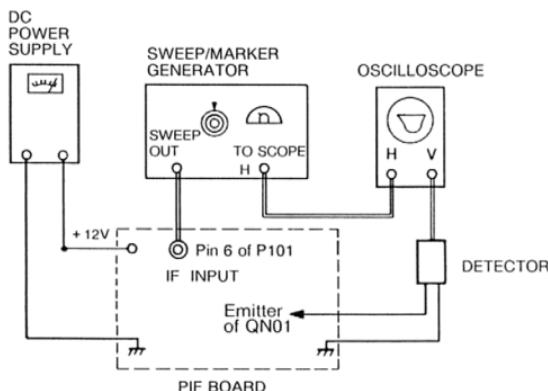


Figure 7.

STEP	SWEEP/MARKER GENERATOR	ADJUST	PROCEDURE
<b>TRAP ALIGNMENT</b>			
Control the sweep output for easy alignment. Set the IF markers for 40.4MHz and 30.9MHz.			
Trap capacitor (CN32)	40.4MHz Marker "ON"	CN32	Adjust CN32 so the 40.4MHz marker point is placed at bottom of response. (See figure 8.)
Trap capacitor (CN46)	30.9MHz Marker "ON"	CN46	Adjust CN46 so the 30.9MHz marker point is placed at bottom of response. (See figure 8.)

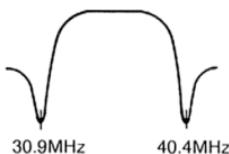


Figure 8. Trap Response

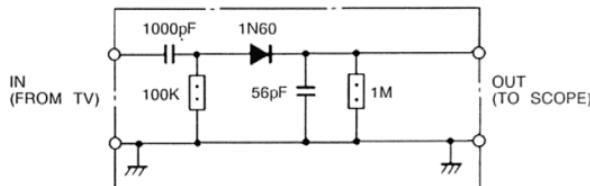


Figure 9. Detector Diagram

# PICTURE I-F SWEEP ALIGNMENT

GENERAL ..... Refer to figure 10 for test equipment connection.

PRELIMINARY STEPS ..... 1. Supply +12 volts to the IF Board.

2. Connect the pin 12 of P101 to +12 V.

3. Connect pin 24 of IC101 to ground through capacitor 10  $\mu$ F.

4. Connect pin 29 of IC101 to ground.

SWEEP/MARKER GENERATOR ..... Connect to the point 6 as shown in figure 10 on the IF Board.

Set to 30 ~ 40 MHz sweep with signal level of 75 ~ 85 dB $\mu$ .

OSCILLOSCOPE ..... Connect to pin 1 of IC101 on the IF Board.

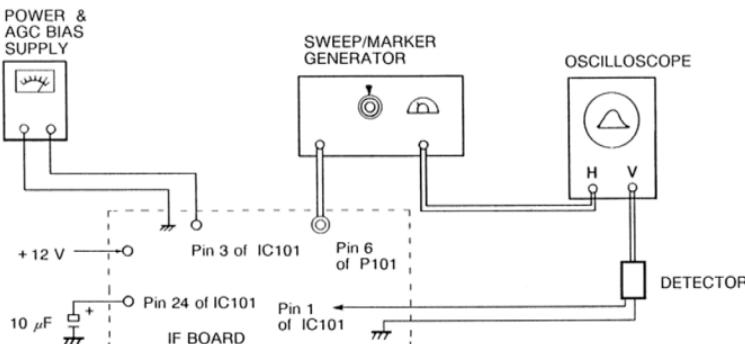


Figure 10. Picture IF Sweep Alignment

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
1. Detector Coil	38.9 MHz Marker "ON"	L151	<ul style="list-style-type: none"> <li>Connect the pin 10 of P101 on the IF Board to +12 V.</li> <li>Supply +2 to +3 volts to pin 3 of IC101 to set the output level for 0.4 Vp-p on the scope.</li> <li>Adjust L151 so that the marker (38.9 MHz) on the response can get zero beat with free-run frequency. (See figure 11.)</li> <li>Remove the short of the pin 10 of P101.</li> <li>After completing CN51 adjustment, repeat this step again.</li> </ul>
2. Detector Capacitor	34.47 MHz Marker "ON"	CN51	<ul style="list-style-type: none"> <li>Connect the pin 10 of P101 on IF Board to ground.</li> <li>Supply +2 to +3 volts to pin 3 of IC101 to set the detection output for 0.4 Vp-p on the scope.</li> <li>Adjust CN51 so that the marker (34.47 MHz) on the response can get zero beat with free-run frequency. (See figure 11.)</li> <li>Remove the short of pin 10 of P101.</li> <li>After completing L151 adjustment, repeat the step again.</li> </ul>

Alter completing the above steps, disconnect the equipment and re-solder the solder links, and adjust the AGC Delay Control (R151) following RF AGC ADJUSTMENTS.

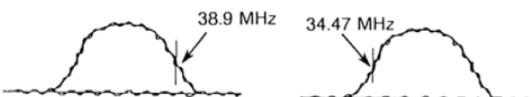


Figure 11. Magnified Response Curve

# AFC ALIGNMENT

- GENERAL ..... Refer to figure 12 for test equipment connection.
- PRELIMINARY STEPS ..... 1. Disconnect the IF Board from the Main Board.  
 2. Disconnect the solder links on the foil side of IF Board.  
 3. Supply +12 volts to the IF Board. (See figure 12.)  
 4. Short pin 29 of IC101 to ground.  
 5. Turn AGC DELAY Control (R151) on the IF Board fully clockwise.  
 6. Connect pin 12 of P101 to +12 V.
- DVM ..... Connect to the resistor R128 (@ in figure 12) and ground.

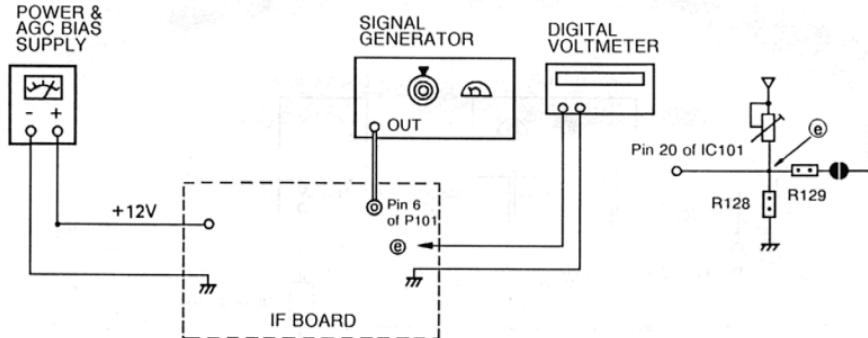


Figure 12. AFC Alignment

STEP	SIGNAL GENERATOR	ADJUST	REMARKS
1. AFC Balance (R153)	NO SIGNAL	R153	<ul style="list-style-type: none"> <li>Short the pin 3 of IC101 to ground.</li> <li>Adjust R153 for 4.5 volts at the point @ in figure 12.</li> </ul>
2. AFC Coil (L153)	38.9 MHz CARRIER WAVE (Level : 75 to 85 dB $\mu$ )	L153	<ul style="list-style-type: none"> <li>Remove the short of pin 3 of IC101.</li> <li>Apply +12 V to pin 10 of P101.</li> <li>Connect IF carrier wave to the pin 6 of P101 in figure 12.</li> <li>Adjust L153 for 4.3 volts on the meter at the point @.</li> <li>After completing L152 adjustment, repeat this step again.</li> </ul>
3. AFC Coil (L152)	34.47 MHz CARRIER WAVE (Level : 75 to 85 dB $\mu$ )	L152	<ul style="list-style-type: none"> <li>Connect pin 10 of P101 to ground.</li> <li>Connect IF carrier wave to pin 6 of P101 in figure 12.</li> <li>Adjust L152 for 4.3 volts on the meter at the point @.</li> <li>After completing L153 adjustment, repeat this step again.</li> </ul>

# SECAM DET-OUT & SOUND IF ALIGNMENT

## L SECAM DET-OUT (R152) ADJUSTMENT

1. Disconnect the IF Board from the Main Board.
2. Supply +12 V to the IF Board.
  - 2-1 Short the base of QN15 to ground.
  - 2-2 Connect pin 12 of P101 to ground.
3. Set AGC to Self AGC condition.
4. Connect synchroscope to the emitter of Q103 through 10:1 probe.
5. Connect the 2-signal generator to IF input, and set up the generator as described below.

IF frequency	:	38.9 MHz
Signal level	:	75 to 85 dB $\mu$
Video modulation		
Positive modulation	:	97%
Video signal fH	:	15.625 kHz
Picture	:	Pattern with 100% white
6. Adjust the AC LEVEL Control (R152) for 2.0Vp-p on the scope.

## I-PAL SIF DET (L652) ADJUSTMENT

1. Supply +12V to pin 11 of P601 on SIF Board.
2. Supply +12V to pin 1 of P601.
3. Connect SIF generator to base of Q602 through 0.01 $\mu$ F capacitor.
4. Connect the oscilloscope to pin 3 of P601.
5. Set up the SIF generator as described below.

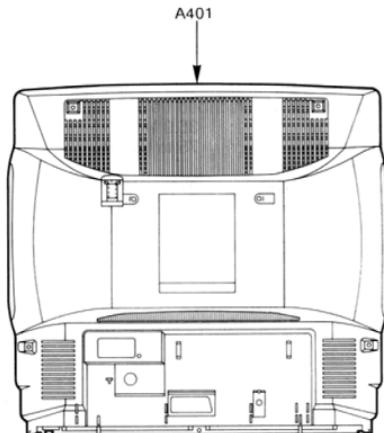
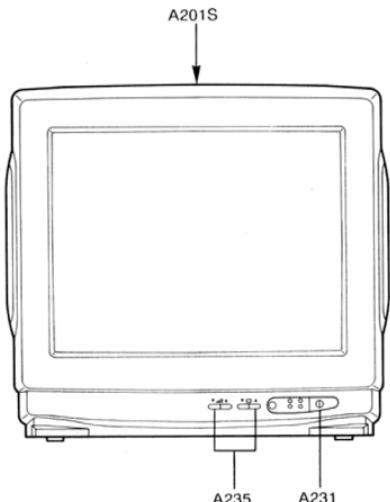
Sound carrier frequency	:	6.0 MHz
Modulation frequency	:	1000 Hz
Frequency deviation	:	$\pm$ 15 kHz
Signal level	:	80 dB $\mu$ (50 ohm load)
6. Adjust L652 for the maximum response of 1000 Hz det-out on scope.

## B/G-PAL SOUND DET (L651) ADJUSTMENT

1. Connect pin 11 of P601 to ground.
2. Supply +12V to pin 1 of P601.
3. Connect the SIF generator to base of Q602 through 0.01 $\mu$ F capacitor.
4. Connect the oscilloscope to pin 3 of P601.
5. Set up the SIF generator as described below.

Sound carrier frequency	:	5.5 MHz
Modulation frequency	:	1000 Hz
Frequency deviation	:	$\pm$ 15 kHz
Signal level	:	80 dB $\mu$ (50 ohm load)
6. Adjust L651 for the maximum response of 1000 Hz det-out on scope.

## CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201S	23419627	Front Cover
A216	23416501	Speaker grille
A231	23443649	Button, POWER
A235	23443653	Button, UP-DOWN
A401	23424847	Back Cover
A411	23568096	Label, Model No., B/C
A701	23524073	Carton Box
A702	23935092	Packing, Bottom
A703	23935093	Packing, Top
A710	23568097	Label, Model No., Carton

# CHASSIS REPLACEMENT PARTS LIST

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

**CAUTION:** The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

**NOTICE:** *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*

## ABBREVIATIONS:

Capacitors.....	CD	: Ceramic Disk	PF	: Plastic Film	EL	: Electrolytic
Resistors.....	CF	: Carbon Film	CC	: Carbon Composition	MF	: Metal Film
	OMF	: Oxide Metal Film	VR	: Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are  $\pm 5\%$ , 50V and all resistors,  $\pm 5\%$ , 1/6W unless otherwise noted.)

**Model: 1720RF**

Location No.	Part No.	Description	Location No.	Part No.	Description
<b>CAPACITORS</b>					
C101	24815102	Chip, 1000pF, $\pm 10\%$	C184	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
C102	24815102	Chip, 1000pF, $\pm 10\%$	C185	24815102	Chip, 1000pF, $\pm 10\%$
C103	24781330	Chip, 33pF	C201	24797100	EL, 10 $\mu$ F, $\pm 20\%$ , 50V
C104	24797220	EL, 22 $\mu$ F, $\pm 20\%$ , 50V	C202	24795101	EL, 100 $\mu$ F, $\pm 20\%$ , 25V
C105	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C203	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C106	24797229	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V	C204	24797220	EL, 22 $\mu$ F, $\pm 20\%$ , 50V
C107	24590473	PF, 0.047 $\mu$ F	C205	24797478	EL, 0.47 $\mu$ F, $\pm 20\%$ , 50V
C108	24797010	EL, 1 $\mu$ F, $\pm 20\%$ , 50V	C208	24212102	CD, 1000pF, $\pm 10\%$
C109	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C209	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C110	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C210	24797100	EL, 10 $\mu$ F, $\pm 20\%$ , 50V
C111	24797229	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V	C211	24474561	CD, 560pF, $\pm 10\%$
C112	24781390	Chip, 39pF	C212	24538224	PF, 0.22 $\mu$ F
C113	24797478	EL, 0.47 $\mu$ F, $\pm 20\%$ , 50V	C213	24590104	PF, 0.1 $\mu$ F
C114	24794470	EL, 47 $\mu$ F, $\pm 20\%$ , 16V	C240	24538474	PF, 0.47 $\mu$ F
C115	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C241	24794100	EL, 10 $\mu$ F, $\pm 20\%$ , 16V
C116	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C301	24085944	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V, Non-Polar
C117	24085939	EL, 4.7 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar	C302	24212152	CD, 1500pF, $\pm 10\%$
C119	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C303	24617912	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C120	24815222	Chip, 2200pF, $\pm 10\%$	C307	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C121	24085988	EL, 1 $\mu$ F, $\pm 20\%$ , 50V, Non-Polar	C312	24590153	PF, 0.015 $\mu$ F
C122	24590153	PF, 0.015 $\mu$ F	C313	24668101	EL, 100 $\mu$ F, $\pm 20\%$ , 35V
C123	24797478	EL, 0.47 $\mu$ F, $\pm 20\%$ , 50V	C314	24796102	EL, 1000pF, $\pm 20\%$ , 35V
C124	24794471	EL, 100 $\mu$ F, $\pm 20\%$ , 16V	C315	24214221	CD, 220pF, $\pm 10\%$ , 500V
C125	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C316	24667332	EL, 3300pF, $\pm 20\%$ , 25V
C126	24815152	Chip, 1500pF, $\pm 10\%$	C317	24617912	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C127	24794471	EL, 470 $\mu$ F, $\pm 20\%$ , 16V	C318	24214332	CD, 3300pF, $\pm 10\%$ , 500V
C160	24285102	Chip, 1000pF, $\pm 10\%$	C319	24693104	PF, 0.1 $\mu$ F, 100V
C162	24815102	Chip, 1000pF, $\pm 10\%$	C321	24214391	CD, 390pF, $\pm 10\%$ , 500V
C163	24285102	Chip, 1000pF, $\pm 10\%$	C328	24082257	PF, 2700pF, 100V
C164	24814103	Chip, 0.01 $\mu$ F, +80%, -20%	C368	24590104	PF, 0.1 $\mu$ F
C165	24815102	Chip, 1000pF, $\pm 10\%$	C402	24353271	CD, 270pF
C166	24436470	CD, 47pF	C403	24797339	EL, 3.3 $\mu$ F, $\pm 20\%$ , 50V
C169	24232103	CD, 0.01 $\mu$ F, +80%, -20%	C405	24590203	PF, 0.02 $\mu$ F
C170	24212102	CD, 1000pF, $\pm 10\%$	C406	24590203	PF, 0.02 $\mu$ F
C180	24815102	Chip, 1000pF, $\pm 10\%$	C407	24590243	PF, 0.024 $\mu$ F
C181	24285102	Chip, 1000pF, $\pm 10\%$	C408	24797100	EL, 10 $\mu$ F, $\pm 20\%$ , 50V
C182	24815102	Chip, 1000pF, $\pm 10\%$	C409	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C183	24815102	Chip, 1000pF, $\pm 10\%$	C412	24590182	PF, 1800pF
			C413	24590182	PF, 1800pF
			C414	24474151	CD, 150pF, $\pm 10\%$

Location No.	Part No.	Description
C416	24214271	CD, 270pF, ±10%, 500V
C423	24814103	Chip, 0.01μF, +80%, -20%
C424	24795470	EL, 47μF, ±20%, 25V
C425	24794101	EL, 100μF, ±20%, 16V
△C440	24095892	PF, 6800pF, ±3%, 1250V
C441	24214221	CD, 220pF, ±10%, 500V
C443	24214221	CD, 220pF, ±10%, 500V
C445	24095903	PF, 0.056μF, ±10%, 250V
C447	24700479	EL, 4.7μF, ±20%, 250V
C448	24795222	EL, 2200μF, ±20%, 25V
C449	24794471	EL, 470μF, ±20%, 16V
C451	24640908	EL, 33μF, ±20%, 160V
△C463	24212222	CD, 2200pF, ±10%
C465	24095949	PF, 0.33μF, 200V
C470	24212102	CD, 1000pF, ±10%
C502	24797100	EL, 10μF, ±20%, 50V
C503	24474101	CD, 100pF, ±10%
C504	24474101	CD, 100pF, ±10%
C505	24590273	PF, 0.027μF
C506	24232103	CD, 0.01μF, +80%, -20%
C507	24590103	PF, 0.01μF
C508	24085944	EL, 2.2μF, ±20%, 50V, Non-Polar
C510	24232103	CD, 0.01μF, +80%, -20%
C511	24232103	CD, 0.01μF, +80%, -20%
C512	24353200	CD, 20pF
C513	24353330	CD, 33pF
C515	24797220	EL, 22μF, ±20%, 50V
C516	24590104	PF, 0.1μF
C517	24590104	PF, 0.1μF
C518	24232103	CD, 0.01μF, +80%, -20%
C519	24232103	CD, 0.01μF, +80%, -20%
C520	24797478	EL, 0.47μF, ±20%, 50V
C521	24538474	PF, 0.47μF
C522	24538474	PF, 0.47μF
C523	24538474	PF, 0.47μF
C524	24232103	CD, 0.01μF, +80%, -20%
C525	24474820	CD, 82pF, ±10%
C526	24474820	CD, 82pF, ±10%
C527	24474820	CD, 82pF, ±10%
C530	24796220	EL, 22μF, ±20%, 35V
C531	24794100	EL, 10μF, ±20%, 16V
C532	24436101	CD, 100pF
C533	24436101	CD, 100pF
C534	24436101	CD, 100pF
C535	24797100	EL, 10μF, ±20%, 50V
C540	24436151	CD, 150pF
C541	24436151	CD, 150pF
C542	24436151	CD, 150pF
C551	24212102	CD, 1000pF, ±10%
C590	24794101	EL, 100μF, ±20%, 16V
C591	24797478	EL, 0.47μF, ±20%, 50V
C601	24815102	Chip, 1000pF, ±10%
C603	24232103	CD, 0.01μF, +80%, -20%
C604	24794470	EL, 47μF, ±20%, 16V
C605	24598911	PF, 910pF
C606	24598821	PF, 820pF
C607	24590104	PF, 0.1μF
C608	24797100	EL, 10μF, ±20%, 50V
C609	24232103	CD, 0.01μF, +80%, -20%
C610	24232103	CD, 0.01μF, +80%, -20%
C611	24232103	CD, 0.01μF, +80%, -20%
C612	24436470	CD, 47pF
C613	24436470	CD, 47pF

Location No.	Part No.	Description
C614	24232103	CD, 0.01μF, +80%, -20%
C615	24590473	PF, 0.047μF
C616	24590473	PF, 0.047μF
C617	24232103	CD, 0.01μF, +80%, -20%
C663	24590183	PF, 0.018μF
C664	24797010	EL, 1μF, ±20%, 50V
C665	24795221	EL, 220μF, ±20%, 25V
C666	24590104	PF, 0.1μF
C667	24474101	CD, 100pF, ±10%
C668	24797478	EL, 0.47μF, ±20%, 50V
C670	24795100	EL, 10μF, ±20%, 25V
C672	24815102	Chip, 1000pF, ±10%
C673	24814103	Chip, 0.01μF, +80%, -20%
C697	24590104	PF, 0.1μF
C699	24795470	EL, 47μF, ±20%, 25V
△C801	24098999	PF, 0.1μF, ±20%, AC250V
C805	24094656	CD, 2200pF, ±20%, AC400V
C806	24094656	CD, 2200pF, ±20%, AC400V
C815	24092281	CD, 4700pF, ±20%, AC250V
C816	24092281	CD, 4700pF, ±20%, AC250V
C817	24092281	CD, 4700pF, ±20%, AC250V
C818	24092281	CD, 4700pF, ±20%, AC250V
C820	24086871	EL, 120μF, ±20%, 400V
C821	24436101	CD, 100pF
C822	24797100	EL, 10μF, ±20%, 50V
C823	24590682	PF, 6800pF
C824	24630747	EL, 22μF, ±20%, 25V
C825	24212102	CD, 1000pF, ±10%
C826	24092339	CD, 330pF, ±10%, 2kV
C827	24232103	CD, 0.01μF, +80%, -20%
C828	24095914	PF, 2200pF, ±3%, 1600V
C829	24797010	EL, 1μF, ±20%, 50V
C830	24797101	EL, 100μF, ±20%, 50V
C831	24436331	CD, 330pF
C832	24590822	PF, 8200pF
C833	24092336	CD, 180pF, ±10%, 2kV
C834	24086953	EL, 220μF, ±20%, 160V
C835	24797220	EL, 22μF, ±20%, 50V
C836	24214331	CD, 330pF, ±10%, 500V
C838	24795102	EL, 1000μF, ±20%, 25V
C840	24794101	EL, 100μF, ±20%, 16V
C901	24700479	EL, 4.7μF, ±20%, 250V
C902	24095923	PF, 4700pF, 1600V
CA01	24474331	CD, 330pF, ±10%
CA07	24212102	CD, 1000pF, ±10%
CA08	24232103	CD, 0.01μF, +80%, -20%
CA09	24794470	EL, 47μF, ±20%, 16V
CA10	24232103	CD, 0.01μF, +80%, -20%
CA11	24212472	CD, 4700pF, ±10%
CA12	24212561	CD, 560pF, ±10%
CA13	24794100	EL, 10μF, ±20%, 16V
CA14	24794470	EL, 47μF, ±20%, 16V
CA15	24232103	CD, 0.01μF, +80%, -20%
CA16	24232103	CD, 0.01μF, +80%, -20%
CA17	24232103	CD, 0.01μF, +80%, -20%
CA18	24232103	CD, 0.01μF, +80%, -20%
CA19	24232103	CD, 0.01μF, +80%, -20%
CA20	24797010	EL, 1μF, ±20%, 50V
CA21	24474391	CD, 390pF, ±10%
CA22	24474221	CD, 220pF, ±10%
CA23	24538224	PF, 0.22μF
CA24	24538334	PF, 0.33μF
CA25	24797229	EL, 2.2μF, ±20%, 50V
CA26	24232103	CD, 0.01μF, +80%, -20%

Location No.	Part No.	Description
CA28	24538334	PF, 0.33µF
CA29	24232103	CD, 0.01µF, +80%, -20%
CA31	24232103	CD, 0.01µF, +80%, -20%
CA32	24794471	EL, 470µF, ±20%, 16V
CA34	24232103	CD, 0.01µF, +80%, -20%
CA35	24590102	PF, 1000pF
CA36	24590104	PF, 0.1µF
CA37	24232103	CD, 0.01µF, +80%, -20%
CA39	24232103	CD, 0.01µF, +80%, -20%
CA40	24232103	CD, 0.01µF, +80%, -20%
CA41	24797479	EL, 4.7µF, ±20%, 50V
CA42	24797479	EL, 4.7µF, ±20%, 50V
CA43	24232103	CD, 0.01µF, +80%, -20%
CH01	24797010	EL, 1µF, ±20%, 50V
CH02	24797010	EL, 1µF, ±20%, 50V
CH03	24797010	EL, 1µF, ±20%, 50V
CH04	24797010	EL, 1µF, ±20%, 50V
CH05	24797010	EL, 1µF, ±20%, 50V
CH06	24797010	EL, 1µF, ±20%, 50V
CH07	24797100	EL, 10µF, ±20%, 50V
CM01	24436221	CD, 220pF
CM02	24436221	CD, 220pF
CM03	24340080	CD, 8pF, ±0.25pF
CM04	24340080	CD, 8pF, ±0.25pF
CM05	24232103	CD, 0.01µF, +80%, -20%
CM06	24357270	CD, 27pF
CM07	24590563	PF, 0.056µF
CM08	24232103	CD, 0.01µF, +80%, -20%
CM09	24357200	CD, 20pF
CM10	24473270	CD, 27pF
CM11	24590822	PF, 8200pF
CM13	24590104	PF, 0.1µF
CM14	24357200	CD, 20pF
CN02	24436150	CD, 15pF
CN07	24473390	CD, 39pF
CN09	24814103	Chip, 0.01µF, +80%, -20%
CN10	24474101	CD, 1000pF, ±10%
CN11	24774080	Chip, 8pF, ±0.5pF
CN12	24774220	Chip, 22pF
CN13	24814103	Chip, 0.01µF, +80%, -20%
CN16	24212102	CD, 1000pF, ±10%
CN17	24212102	CD, 1000pF, ±10%
CN19	24774270	Chip, 27pF
CN20	24232103	CD, 0.01µF, +80%, -20%
CN21	24774270	Chip, 27pF
CN22	24814103	Chip, 0.01µF, +80%, -20%
CN23	24287103	Chip, 0.01µF, +80%, -20%
CN24	24814103	Chip, 0.01µF, +80%, -20%
CN25	24814103	Chip, 0.01µF, +80%, -20%
CN30	24814103	Chip, 0.01µF, +80%, -20%
CN31	24774101	Chip, 100pF
CN32	24094959	Variable Capacitor, 2to 12pF, 50V
CN33	24774100	Chip, 10pF
CN34	24776131	Chip, 130pF
CN35	24814103	Chip, 0.01µF, +80%, -20%
CN36	24814103	Chip, 0.01µF, +80%, -20%
CN37	24814103	Chip, 0.01µF, +80%, -20%
CN38	24814103	Chip, 0.01µF, +80%, -20%
CN41	24814103	Chip, 0.01µF, +80%, -20%
CN42	24814103	Chip, 0.01µF, +80%, -20%
CN43	24814103	Chip, 0.01µF, +80%, -20%
CN44	24774130	Chip, 13pF
CN45	24774101	Chip, 100pF

Location No.	Part No.	Description
CN46	24094959	Variable Capacitor, 2to 12pF, 50V
CN51	24094959	Variable Capacitor, 2to 12pF, 50V
CN52	24776130	Chip, 13pF
CV01	24797100	EL, 10µF, ±20%, 50V
CV02	24797100	EL, 10µF, ±20%, 50V
CV04	24794101	EL, 100µF, ±20%, 16V
CV05	24232103	CD, 0.01µF, +80%, -20%
CV06	24797479	EL, 4.7µF, ±20%, 50V
CV07	24797100	EL, 10µF, ±20%, 50V
CV08	24797010	EL, 1µF, ±20%, 50V
CV09	24794101	EL, 100µF, ±20%, 16V
CV10	24794100	EL, 10µF, ±20%, 16V
CV11	24797229	EL, 2.2µF, ±20%, 50V
CV12	24232103	CD, 0.01µF, +80%, -20%
CV24	24794471	EL, 470µF, ±20%, 16V
CV27	24794100	EL, 10µF, ±20%, 16V
CV29	24085944	EL, 2.2µF, ±20%, 50V, Non-Polar
CX02	24538474	PF, 0.47µF
CX03	24538474	PF, 0.47µF
CX04	24538474	PF, 0.47µF
<b>RESISTORS</b>		
R101	24872222	Chip, 2200 ohm, 1/16W
R102	24872124	Chip, 120k ohm, 1/16W
R103	24872222	Chip, 2200 ohm, 1/16W
R104	24872332	Chip, 3300 ohm, 1/16W
R105	24872103	Chip, 10k ohm, 1/16W
R106	24872473	Chip, 47k ohm, 1/16W
R107	24872103	Chip, 10k ohm, 1/16W
R108	24872102	Chip, 1k ohm, 1/16W
R109	24872822	Chip, 8200 ohm, 1/16W
R110	24872562	Chip, 5600 ohm, 1/16W
R111	24872151	Chip, 150 ohm, 1/16W
R112	24872332	Chip, 3300 ohm, 1/16W
R113	24872112	Chip, 1100 ohm, 1/16W
R114	24872222	Chip, 2200 ohm, 1/16W
R115	24872101	Chip, 100 ohm, 1/16W
R116	24871471	Chip, 470 ohm, 1/8W
R117	24872112	Chip, 1100 ohm, 1/16W
R118	24872470	Chip, 47 ohm, 1/16W
R119	24872472	Chip, 4700 ohm, 1/16W
R120	24872154	Chip, 150k ohm, 1/16W
R121	24872331	Chip, 330 ohm, 1/16W
R122	24872820	Chip, 82 ohm, 1/16W
R123	24872181	Chip, 180 ohm, 1/16W
R124	24872331	Chip, 330 ohm, 1/16W
R125	24872331	Chip, 330 ohm, 1/16W
R126	24872101	Chip, 100 ohm, 1/16W
R127	24552101	OMF, 100 ohm, 1/2W
R128	24872334	Chip, 330k ohm, 1/16W
R129	24871101	Chip, 100 ohm, 1/8W
R130	24871513	Chip, 51k ohm, 1/8W
R131	24872753	Chip, 75k ohm, 1/16W
R132	24872684	Chip, 680k ohm, 1/16W
R133	24872272	Chip, 2700 ohm, 1/16W
R134	24871223	Chip, 22k ohm, 1/8W
R137	24872103	Chip, 10k ohm, 1/16W
R138	24872473	Chip, 47k ohm, 1/16W
R151	24066953	VR, 5k ohm, 1/10W
R152	24066951	VR, 20k ohm, 1/10W
R153	24066946	VR, 1M ohm, 1/10W

Location No.	Part No.	Description	Location No.	Part No.	Description
R160	24872680	Chip, 68 ohm, 1/16W	R306	24366471	CF, 470 ohm
R161	24872680	Chip, 68 ohm, 1/16W	R309	24366102	CF, 1k ohm
R163	24872682	Chip, 6800 ohm, 1/16W	R311	24366242	CF, 2400 ohm
R164	24872162	Chip, 1600 ohm, 1/16W	R316	24552821	OMF, 820 ohm, 1/2W
R165	24872562	Chip, 5600 ohm, 1/16W	△ R317	24383391	OMF, 390 ohm, 2W
R166	24872360	Chip, 36 ohm, 1/16W	R318	24366153	CF, 15k ohm
R167	24552471	OMF, 470 ohm, 1/2W	R321	24366153	CF, 15k ohm
R168	24366680	CF, 68 ohm	R322	24366244	CF, 240k ohm
R169	24366682	CF, 6800 ohm	R323	24322169	OMF, 1.6 ohm, 1W
R170	24366102	CF, 1k ohm	R325	24552122	OMF, 1200 ohm, 1/2W
R171	24366561	CF, 560 ohm	△ R327	24000192	FR, 6.8 ohm, 1W
R172	24366101	CF, 100 ohm	R329	24552472	OMF, 4700 ohm, 1/2W
R173	24552101	OMF, 100 ohm, 1/2W	R333	24366102	CF, 1k ohm
R181	24872103	Chip, 10k ohm, 1/16W	R351	24066602	VR, 50k ohm, 1/10W
R182	24872473	Chip, 47k ohm, 1/16W	R377	24366184	CF, 180k ohm
R183	24872682	Chip, 6800 ohm, 1/16W	R378	24366824	CF, 820k ohm
R184	24872162	Chip, 1600 ohm, 1/16W	R380	24366153	CF, 15k ohm
R185	24872562	Chip, 5600 ohm, 1/16W	R402	24366273	CF, 27k ohm
R186	24872360	Chip, 36 ohm, 1/16W	R403	24366302	CF, 3k ohm
R187	24552471	OMF, 470 ohm, 1/2W	R404	24552432	OMF, 4300 ohm, 1/2W
R201	24872271	Chip, 270 ohm, 1/16W	R405	24366511	CF, 510 ohm
R203	24366182	CF, 1800 ohm	R407	24366201	CF, 200 ohm
R204	24366152	CF, 1500 ohm	R408	24366682	CF, 6800 ohm
R205	24366182	CF, 1800 ohm	R411	24366391	CF, 390 ohm
R208	24366101	CF, 100 ohm	R412	24366121	CF, 120 ohm
R209	24366103	CF, 10k ohm	△ R416	24510182	Cement, 1800 ohm, 5W
R210	24366203	CF, 20k ohm	R419	24366510	CF, 51 ohm
R211	24366622	CF, 6200 ohm	R420	24009951	OMF, 1k ohm, 1W
R212	24366103	CF, 10k ohm	R421	24366105	CF, 1M ohm
R213	24366101	CF, 100 ohm	R423	24552221	OMF, 220 ohm, 1/2W
R214	24366182	CF, 1800 ohm	R440	24376333	CF, 33k ohm, 1/2W
R215	24366152	CF, 1500 ohm	R441	24376333	CF, 33k ohm, 1/2W
R216	24366333	CF, 33k ohm	R442	24382751	OMF, 750 ohm, 1W
R217	24366101	CF, 100 ohm	R444	24569479	Cement, 4.7 ohm, 10W
R218	24366472	CF, 4700 ohm	△ R448	24322129	OMF, 1.2 ohm, 1W
R219	24366472	CF, 4700 ohm	R451	24066601	VR, 20k ohm, 1/10W
R220	24366753	CF, 75k ohm	R452	24069547	VR, 5k ohm, 0.08W, CC
R221	24366564	CF, 560k ohm	R501	24366821	CF, 820 ohm
R222	24366751	CF, 750 ohm	R502	24366334	CF, 330k ohm
R223	24366103	CF, 10k ohm	R503	24366202	CF, 2k ohm
R224	24366333	CF, 33k ohm	R504	24366391	CF, 390 ohm
R225	24366152	CF, 1500 ohm	R505	24366822	CF, 8200 ohm
R226	24366104	CF, 100k ohm	R507	24366822	CF, 8200 ohm
R227	24366105	CF, 1M ohm	R508	24366821	CF, 820 ohm
R228	24366104	CF, 100k ohm	R509	24366223	CF, 22k ohm
R229	24366303	CF, 30k ohm	R510	24366101	CF, 100 ohm
R230	24366102	CF, 1k ohm	R511	24366682	CF, 6800 ohm
R232	24366473	CF, 47k ohm	R512	24366152	CF, 1500 ohm
R233	24366102	CF, 1k ohm	R513	24366152	CF, 1500 ohm
R234	24366223	CF, 22k ohm	R515	24366221	CF, 220 ohm
R235	24366473	CF, 47k ohm	R516	24366221	CF, 220 ohm
R241	24366101	CF, 100 ohm	R517	24366221	CF, 220 ohm
R242	24366223	CF, 22k ohm	R521	24366562	CF, 5600 ohm
R243	24366223	CF, 22k ohm	R522	24366185	CF, 1.8M ohm
R244	24366103	CF, 10k ohm	R523	24366102	CF, 1k ohm
R245	24366103	CF, 10k ohm	R524	24366103	CF, 10k ohm
R252	24066597	VR, 1k ohm, 1/10W	R525	24366103	CF, 10k ohm
R253	24066597	VR, 1k ohm, 1/10W	R526	24366122	CF, 1200 ohm
R255	24066601	VR, 20k ohm, 1/10W	R527	24366122	CF, 1200 ohm
R301	24366201	CF, 200 ohm	△ R529	24510562	Cement, 5600 ohm, 5W
R302	24366244	CF, 240k ohm	R533	24366332	CF, 3300 ohm
R303	24366273	CF, 27k ohm	R535	24366681	CF, 680 ohm
R304	24366102	CF, 1k ohm	R537	24366332	CF, 3300 ohm
R305	24366161	CF, 160 ohm	R538	24366681	CF, 680 ohm

Location No.	Part No.	Description
R539	24366332	CF, 3300 ohm
R541	24366821	CF, 820 ohm
R542	24366241	CF, 240 ohm
R543	24366103	CF, 10k ohm
R547	24366102	CF, 1k ohm
R548	24366102	CF, 1k ohm
R549	24366102	CF, 1k ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24066600	VR, 10k ohm, 1/10W
R558	24066600	VR, 10k ohm, 1/10W
R559	24066600	VR, 10k ohm, 1/10W
R565	24366560	CF, 56 ohm
R566	24366560	CF, 56 ohm
R567	24366560	CF, 56 ohm
R568	24366102	CF, 1k ohm
R570	24366272	CF, 2700 ohm
R571	24366272	CF, 2700 ohm
R572	24366272	CF, 2700 ohm
R580	24366181	CF, 180 ohm
R581	24366681	CF, 680 ohm
△R591	24383153	OMF, 15k ohm, 2W
△R592	24383153	OMF, 15k ohm, 2W
△R593	24383153	OMF, 15k ohm, 2W
R596	24366101	CF, 100 ohm
R601	24366222	CF, 2200 ohm
R602	24366561	CF, 560 ohm
R603	24872222	Chip, 2200 ohm, 1/16W
R604	24366563	CF, 56k ohm
R605	24366563	CF, 56k ohm
R606	24366102	CF, 1k ohm
R607	24366102	CF, 1k ohm
R609	24366911	CF, 910 ohm
R610	24366102	CF, 1k ohm
R611	24366102	CF, 1k ohm
R615	24366102	CF, 1k ohm
R625	24366102	CF, 1k ohm
R626	24366102	CF, 1k ohm
R627	24366103	CF, 10k ohm
R628	24366473	CF, 47k ohm
R629	24366105	CF, 1M ohm
R630	24366105	CF, 1M ohm
R631	24366562	CF, 5600 ohm
R632	24366223	CF, 22k ohm
R633	24366472	CF, 4700 ohm
R634	24366682	CF, 6800 ohm
R635	24366103	CF, 10k ohm
R637	24366102	CF, 1k ohm
R638	24366102	CF, 1k ohm
R660	24366101	CF, 100 ohm
R661	24366333	CF, 33k ohm
R662	24323279	OMF, 2.7 ohm, 2W
R663	24366223	CF, 22k ohm
R664	24366104	CF, 100k ohm
R666	24366152	CF, 1500 ohm
R667	24366152	CF, 1500 ohm
R668	24366133	CF, 13k ohm
R670	24872183	Chip, 18k ohm, 1/16W
R671	24872562	Chip, 5600 ohm, 1/16W
R672	24872561	Chip, 560 ohm, 1/16W
R673	24872271	Chip, 270 ohm, 1/16W
R675	24872821	Chip, 820 ohm, 1/16W
R690	24366273	CF, 27k ohm
R695	24366339	CF, 3.3 ohm
R696	24366223	CF, 22k ohm

Location No.	Part No.	Description
R697	24366224	CF, 220k ohm
R698	24366472	CF, 4700 ohm
R699	24366332	CF, 3300 ohm
R801	24004914	CC, 5.6M ohm, 1/2W
△R802	24569689	Cement, 6.8 ohm, 10W
R810	24377334	CF, 330k ohm, 1W
R813	24556109	FR, 1 ohm, ±10%, 1/2W
R814	24366823	CF, 82k ohm
R815	24366221	CF, 220 ohm
R816	24367122	CF, 1200 ohm, ±2%
R817	24321398	OMF, 0.39 ohm, 1/2W
△R818	24510103	Cement, 10k ohm, 5W
R819	24366689	CF, 6.8 ohm
R820	24366102	CF, 1k ohm
△R821	24568181	Cement, 180 ohm, 7W
R823	24367562	CF, 5600 ohm, ±2%
R824	24366123	CF, 12k ohm
△R825	24382620	OMF, 62 ohm, 1W
△R826	24510822	Cement, 8200 ohm, 5W
R828	24367102	CF, 1k ohm, ±2%
R829	24382473	OMF, 47k ohm, 1W
R830	24366272	CF, 2700 ohm
R831	24366103	CF, 10k ohm
△R832	24383331	OMF, 330 ohm, 2W
△R837	24322758	OMF, 0.75 ohm, 1W
R838	24366392	CF, 3900 ohm
R840	24366101	CF, 100 ohm
R841	24366103	CF, 10k ohm
R842	24376154	CF, 150k ohm, 1/2W
R843	24366392	CF, 3900 ohm
R851	24066954	VR, 2k ohm, 1/10W
△R890	24000630	PTC Thermistor, Dual
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
R903	24946272	CC, 2700 ohm, ±10%, 1/2W
△R920	24000890	FR, 1.6 ohm, 1W
RA01	24366102	CF, 1k ohm
RA02	24366102	CF, 1k ohm
RA05	24366102	CF, 1k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366103	CF, 10k ohm
RA10	24366102	CF, 1k ohm
RA11	24366472	CF, 4700 ohm
RA12	24366102	CF, 1k ohm
RA13	24366472	CF, 4700 ohm
RA14	24366102	CF, 1k ohm
RA15	24366102	CF, 1k ohm
RA17	24366102	CF, 1k ohm
RA19	24366103	CF, 10k ohm
RA20	24366102	CF, 1k ohm
RA21	24366102	CF, 1k ohm
RA22	24366332	CF, 3300 ohm
RA23	24366471	CF, 470 ohm
RA24	24366102	CF, 1k ohm
RA25	24366103	CF, 10k ohm
RA27	24366392	CF, 3900 ohm
RA28	24366471	CF, 470 ohm
RA30	24366331	CF, 330 ohm
RA31	24366102	CF, 1k ohm
RA33	24366103	CF, 10k ohm
RA35	24366103	CF, 10k ohm
RA36	24366102	CF, 1k ohm
RA38	24366103	CF, 10k ohm

Location No.	Part No.	Description
RA39	24366153	CF, 15k ohm
RA40	24366473	CF, 47k ohm
RA41	24366103	CF, 10k ohm
RA42	24366473	CF, 47k ohm
RA43	24366153	CF, 15k ohm
RA44	24366102	CF, 1k ohm
RA45	24366223	CF, 22k ohm
RA46	24000245	MF, 33k ohm, ±1%, 1/4W
RA48	24000637	MF, 15k ohm, ±1%, 1/4W
RA49	24366103	CF, 10k ohm
RA60	24366103	CF, 10k ohm
RA61	24366225	CF, 2.2M ohm
RA62	24366223	CF, 22k ohm
RA64	24946226	CC, 22M ohm, ±10%, 1/2W
RA67	24366152	CF, 1500 ohm
RA68	24366223	CF, 22k ohm
RA69	24366563	CF, 56k ohm
RA70	24366393	CF, 39k ohm
RA73	24366223	CF, 22k ohm
RA74	24366223	CF, 22k ohm
RA75	24366102	CF, 1k ohm
RA78	24366103	CF, 10k ohm
RA86	24366392	CF, 3900 ohm
RA97	24383103	OMF, 10k ohm, 2W
RB01	24366333	CF, 33k ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366473	CF, 47k ohm
RC06	24366222	CF, 2200 ohm
RC08	24366222	CF, 2200 ohm
RH01	24366102	CF, 1k ohm
RH02	24366152	CF, 1500 ohm
RH03	24366102	CF, 1k ohm
RH04	24366182	CF, 1800 ohm
RH05	24366102	CF, 1k ohm
RH07	24366102	CF, 1k ohm
RH09	24366102	CF, 1k ohm
RH11	24366101	CF, 100 ohm
RH32	24366332	CF, 3300 ohm
RJ01	24000576	Chip Jumper, 3216 type
RJ02	24000576	Chip Jumper, 3216 type
RJ03	24000824	Chip Jumper, 2125 type
RJ04	24000824	Chip Jumper, 2125 type
RJ05	24000576	Chip Jumper, 3216 type
RJ06	24000824	Chip Jumper, 2125 type
RJ07	24000824	Chip Jumper, 2125 type
RJ08	24000824	Chip Jumper, 2125 type
RJ09	24000824	Chip Jumper, 2125 type
RJ10	24000576	Chip Jumper, 3216 type
RM03	24366272	CF, 2700 ohm
RM04	24366432	CF, 4300 ohm
RM05	24366221	CF, 220 ohm
RM06	24366471	CF, 470 ohm
RM07	24366475	CF, 4.7M ohm
RN02	24366102	CF, 1k ohm
RN05	24366392	CF, 3900 ohm
RN08	24366103	CF, 10k ohm
RN10	24872472	Chip, 4700 ohm, 1/16W
RN16	24872103	Chip, 10k ohm, 1/16W
RN17	24872473	Chip, 47k ohm, 1/16W
RN19	24872473	Chip, 47k ohm, 1/16W
RN20	24871821	Chip, 820 ohm, 1/8W
RN21	24872103	Chip, 10k ohm, 1/16W

Location No.	Part No.	Description
RN22	24871152	Chip, 1500 ohm, 1/8W
RN23	24872512	Chip, 5100 ohm, 1/16W
RN24	24871152	Chip, 1500 ohm, 1/8W
RN26	24872512	Chip, 5100 ohm, 1/16W
RN27	24872153	Chip, 15k ohm, 1/16W
RN28	24872332	Chip, 3300 ohm, 1/16W
RN30(U101)	24872101	Chip, 100 ohm, 1/16W
RN30(U902)	24366202	CF, 2k ohm
RN31	24871331	Chip, 330 ohm, 1/8W
RN32	24872105	Chip, 1M ohm, 1/16W
RN34	24872272	Chip, 2700 ohm, 1/16W
RN35	24872272	Chip, 2700 ohm, 1/16W
RN36	24366103	CF, 10k ohm
RN37	24366473	CF, 47k ohm
RN38	24366562	CF, 5600 ohm
RN39	24366562	CF, 5600 ohm
RN40	24366562	CF, 5600 ohm
RN41	24366152	CF, 1500 ohm
RN44	24872272	Chip, 2700 ohm, 1/16W
RN45	24872473	Chip, 47k ohm, 1/16W
RN46	24872103	Chip, 10k ohm, 1/16W
RN47	24366473	CF, 47k ohm
RN48	24366103	CF, 10k ohm
RN51	24872101	Chip, 100 ohm, 1/16W
RN52	24872101	Chip, 100 ohm, 1/16W
RN53	24872152	Chip, 1500 ohm, 1/16W
RN54	24871472	Chip, 4700 ohm, 1/8W
RN55	24872472	Chip, 4700 ohm, 1/16W
RN56	24871102	Chip, 1k ohm, 1/8W
RN57	24872102	Chip, 1k ohm, 1/16W
RN58	24872223	Chip, 22k ohm, 1/16W
RN59	24872102	Chip, 1k ohm, 1/16W
RN66	24871331	Chip, 330 ohm, 1/8W
RN67	24552181	OMF, 180 ohm, 1/2W
RN69	24872473	Chip, 47k ohm, 1/16W
RN70	24872103	Chip, 10k ohm, 1/16W
RN71	24872473	Chip, 47k ohm, 1/16W
RN72	24872103	Chip, 10k ohm, 1/16W
RN73	24872562	Chip, 5600 ohm, 1/16W
RN74	24872223	Chip, 22k ohm, 1/16W
RN75	24872333	Chip, 33k ohm, 1/16W
RN76	24872473	Chip, 47k ohm, 1/16W
RN77	24872103	Chip, 10k ohm, 1/16W
RN79	24872103	Chip, 10k ohm, 1/16W
RN80	24872682	Chip, 6800 ohm, 1/16W
RR01	24366102	CF, 1k ohm
RR06	24366391	CF, 390 ohm
RV01	24366821	CF, 820 ohm
RV02	24366102	CF, 1k ohm
RV03	24366472	CF, 4700 ohm
RV04	24366473	CF, 47k ohm
RV07	24552750	OMF, 75 ohm, 1/2W
RV08	24366331	CF, 330 ohm
RV09	24366393	CF, 39k ohm
RV10	24366472	CF, 4700 ohm
RV11	24366392	CF, 3900 ohm
RV12	24366101	CF, 100 ohm
RV13	24366223	CF, 22k ohm
RV14	24366104	CF, 100k ohm
RV15	24366821	CF, 820 ohm
RV16	24366101	CF, 100 ohm
RV17	24366104	CF, 100k ohm
RV18	24366223	CF, 22k ohm
RV19	24366271	CF, 270 ohm

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Location No.	Part No.	Description
RV21	24366622	CF, 6200 ohm
RV29	24366472	CF, 4700 ohm
RV30	24366102	CF, 1k ohm
RV33	24366472	CF, 4700 ohm
RV34	24366103	CF, 10k ohm
RV39	24366910	CF, 91 ohm
RV40	24366680	CF, 68 ohm
RV41	24366103	CF, 10k ohm
RV42	24366750	CF, 75 ohm
RV43	24366510	CF, 51 ohm
RV44	24366510	CF, 51 ohm
RV45	24366510	CF, 51 ohm
RV46	24366101	CF, 100 ohm
RV60	24366220	CF, 22 ohm
RV61	24366220	CF, 22 ohm
RV62	24366220	CF, 22 ohm
RV63	24366622	CF, 6200 ohm
RV64	24366622	CF, 6200 ohm
RV65	24366104	CF, 100k ohm
RV68	24366471	CF, 470 ohm
RV69	24366433	CF, 43k ohm
RV70	24366563	CF, 56k ohm
RV71	24366752	CF, 7500 ohm
RV74	24366564	CF, 560k ohm
RX02	24366102	CF, 1k ohm
RX05	24366101	CF, 100 ohm
RX08	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX13	24366102	CF, 1k ohm

## COILS & TRANSFORMERS

L101	23238714	Coil, Peaking, TRF4100AJ
L102	23262819	Coil, PIF, TRF1071D
L103	23238714	Coil, Peaking, TRF4100AJ
L104	23238715	Coil, Peaking, TRF4829AJ
L105	23238719	Coil, Peaking, TRF4399AJ
L107	23238714	Coil, Peaking, TRF4100AJ
L112	23238720	Coil, Peaking, TRF4339AJ
L113	23238720	Coil, Peaking, TRF4339AJ
L151	23262668	Coil, IF, TRF1162T
L152	23262663	Coil, IF, TRF1157T
L153	23262813	Coil, IF, TRF1077D
L161	23201004	Coil, RF Choke, TRF9202B
L162	23261983	Coil, RF Choke, TRF9223
L181	23261985	Coil, RF Choke, TRF9221
L201	23238511	Coil, Peaking, TRF4221AJ
L311	23103901	Coil (Ferrite Bead), TEM2017
L315	23238714	Coil, Peaking, TRF4100AJ
L406	23103859	Coil (Ferrite Bead), TEM2011
L411	23233070	Coil, Linearity, TLN211G
L412	23221968	Coil, Choke, TLN3010
L441	23238934	Coil, Peaking, TRF4109AC
△L462	23227345	Deflection Yoke, AT6050/00
L503	23238714	Coil, Peaking, TRF4100AJ
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L590	23289221	Coil, Peaking, TRF4221AF
L591	23238922	Coil, Peaking, TRF4100AC
L601	23262815	Coil, SIF, TRF1075
L602	23262821	Coil, PIF, TRF1069
L604	23237986	Coil, Peaking, TRF4120AC
L651	23232942	Coil, Variable, TRF3077
L652	23232942	Coil, Variable, TRF3077
L801	23221050	Coil, RF Choke, TLN1015

Location No.	Part No.	Description
L802	23103859	Coil (Ferrite Bead), TEM2011
L803	23221747	Coil, Choke, TRF9253D
L804	23221747	Coil, Choke, TRF9253D
L805	23222694	Coil, Width, TLN2026
L806	23103859	Coil (Ferrite Bead), TEM2011
L807	23222694	Coil, Width, TLN2026
△L901	23200696	Coil, Degaussing, TSB-2293AT
LA01	23238562	Coil, Peaking, TRF4109AJ
LA02	23221685	Coil, Choke, TLN3193
LB01	23262778	Coil, IF, TRF1112
LM01	23262797	Coil, IF, TRF1093D
LM02	23262002	Coil, IF, TRF1167D
LM03	23262002	Coil, IF, TRF1167D
LM04	23262798	Coil, IF, TRF1092D
LN02	23238712	Coil, Peaking, TRF4150AJ
LV01	23238712	Coil, Peaking, TRF4150AJ
△T401	23224983	Transformer, Horiz. Drive, TLN1039
△T461	23236425	Transformer, Flyback, AT2079/17
T801	23211644	Line Filter, TRF3118G
△T803	23217074	Transformer, Converter, 47003593
TN01	23232002	Coil, Variable, TRF3520D
TN02	23262843	Coil, PIF Trap, TRF1457D

## SEMICONDUCTORS

IC101	23318437	IC, $\mu$ PC1820CA
IC303	23119548	IC, AN5515
IC408	23319203	IC, MC7812CT
IC501	B0379470	IC, TA8659N
IC661	23319944	IC, TDA7056A
IC801	23318232	IC, TDA4601
IC807	23318299	IC, L78MR05-FA
ICA01	23319152	IC, M34300-588SP
ICA02	23318482	IC, M6M80011AP
ICA04	23119441	IC, LA7910
ICH01	23119139	IC, AN5862K
ICV01	23319028	IC, NJM2245L
ICV02	70128382	IC, NJM2234S
Q102	A6541137	Transistor, 2SA1162-Y
Q103	A6317440	Transistor, 2SC1815N-Y
Q104	A6335477	Transistor, 2SC2712-Y(R)
Q111	A6335477	Transistor, 2SC2712-Y(R)
Q161	A6357139	Transistor, 2SC3125A-6
Q162	A6708871	Transistor, 2SC388ATM
Q163	A6357139	Transistor, 2SC3125A-6
Q164	A6359860	Transistor, 2SC3326-A
Q201	23114689	Transistor, BC547A
Q202	23114691	Transistor, BC557A
Q203	23114689	Transistor, BC547A
Q204	A6041876	Transistor, 2SK117-GR FA-2
Q206	23114689	Transistor, BC547A
Q208	23114689	Transistor, BC547A
Q363	23114689	Transistor, BC547A
Q402	A6330069	Transistor, 2SC2482FA-1
△Q404	23314375	Transistor, ON4409
Q406	23314229	Transistor, 2SD1378-Q
Q502	23114691	Transistor, BC557A
Q503	23114691	Transistor, BC557A
Q505	A6363200	Transistor, 2SC3619
Q506	23114689	Transistor, BC547A
Q507	A6363200	Transistor, 2SC3619
Q508	23114689	Transistor, BC547A

Location No.	Part No.	Description
Q509	A6363200	Transistor, 2SC3619
Q510	23114689	Transistor, BC547A
Q514	23114688	Transistor, BC327
Q590	23114689	Transistor, BC547A
Q601	23904053	Transistor, TDA4480-D
Q602	23114689	Transistor, BC547A
Q603	23114689	Transistor, BC547A
Q604	A6041876	Transistor, 2SK117-GR FA-2
Q605	A6041876	Transistor, 2SK117-GR FA-2
Q606	23114689	Transistor, BC547A
Q607	23114689	Transistor, BC547A
Q608	23114689	Transistor, BC547A
Q671	A6335477	Transistor, 2SC2712-Y(R)
Q762	A6335477	Transistor, 2SC2712-Y(R)
Q697	23114689	Transistor, BC547A
Q698	A6342206	Transistor, 2SC2878-A
Q699	23114691	Transistor, BC557A
Q802	A6871313	Transistor, 2SD1556(E)
Q803	23314246	Transistor, 2SC2023LF-4
Q804	A6547303	Transistor, 2SA1321
Q805	A6325067	Transistor, 2SC2230A-Y
Q806	23114546	Transistor, BC557B
Q808	A6547250	Transistor, 2SA1320
Q805	23114689	Transistor, BC547A
Q806	23114632	Transistor, BC547B
QA07	23114689	Transistor, BC547A
QA09	23114691	Transistor, BC557A
QA10	23114689	Transistor, BC547A
QA11	23114546	Transistor, BC557B
QB01	23114689	Transistor, BC547A
QB02	23114689	Transistor, BC547A
QH03	23114689	Transistor, BC547A
QH04	23114689	Transistor, BC547A
QH05	23114689	Transistor, BC547A
QN01	A6357139	Transistor, 2SC3125FA-6
QN02	A6335477	Transistor, 2SC2712-Y(R)
QN03	A6335477	Transistor, 2SC2712-Y(R)
QN04	A6335477	Transistor, 2SC2712-Y(R)
QN05	A6335477	Transistor, 2SC2712-Y(R)
QN06	A6357139	Transistor, 2SC3125FA-6
QN08	A6335477	Transistor, 2SC2712-Y(R)
QN09	A6335477	Transistor, 2SC2712-Y(R)
QN10	A6335477	Transistor, 2SC2712-Y(R)
QN11	A6043341	Transistor, 2SK209GR
QN13	23114689	Transistor, BC547A
QN15	A6335477	Transistor, 2SC2712-Y(R)
QN16	23114689	Transistor, BC547A
QV03	23114689	Transistor, BC547A
QV07	23114689	Transistor, BC547A
QV10	23114689	Transistor, BC547A
QV11	A6342206	Transistor, 2SC2878-A
D201	23115599	Diode, 1N4148
D202	23115599	Diode, 1N4148
D241	A7150041	Diode, 1SS104
D302	23118479	Diode, BYD33J
D305	23118479	Diode, BYD33J
D314	23316332	Diode, Zener, UZ12BSA
D315	A7116715	Diode, Zener, 04AZ7.5Y
D367	23115599	Diode, 1N4148
D401	23316325	Diode, Zener, UZ9.1BSC
D402	23316348	Diode, Zener, UZ20BSB
D403	23316333	Diode, Zener, UZ12BSB
D406	23118479	Diode, BYD33J
D408	23118479	Diode, BYD33J

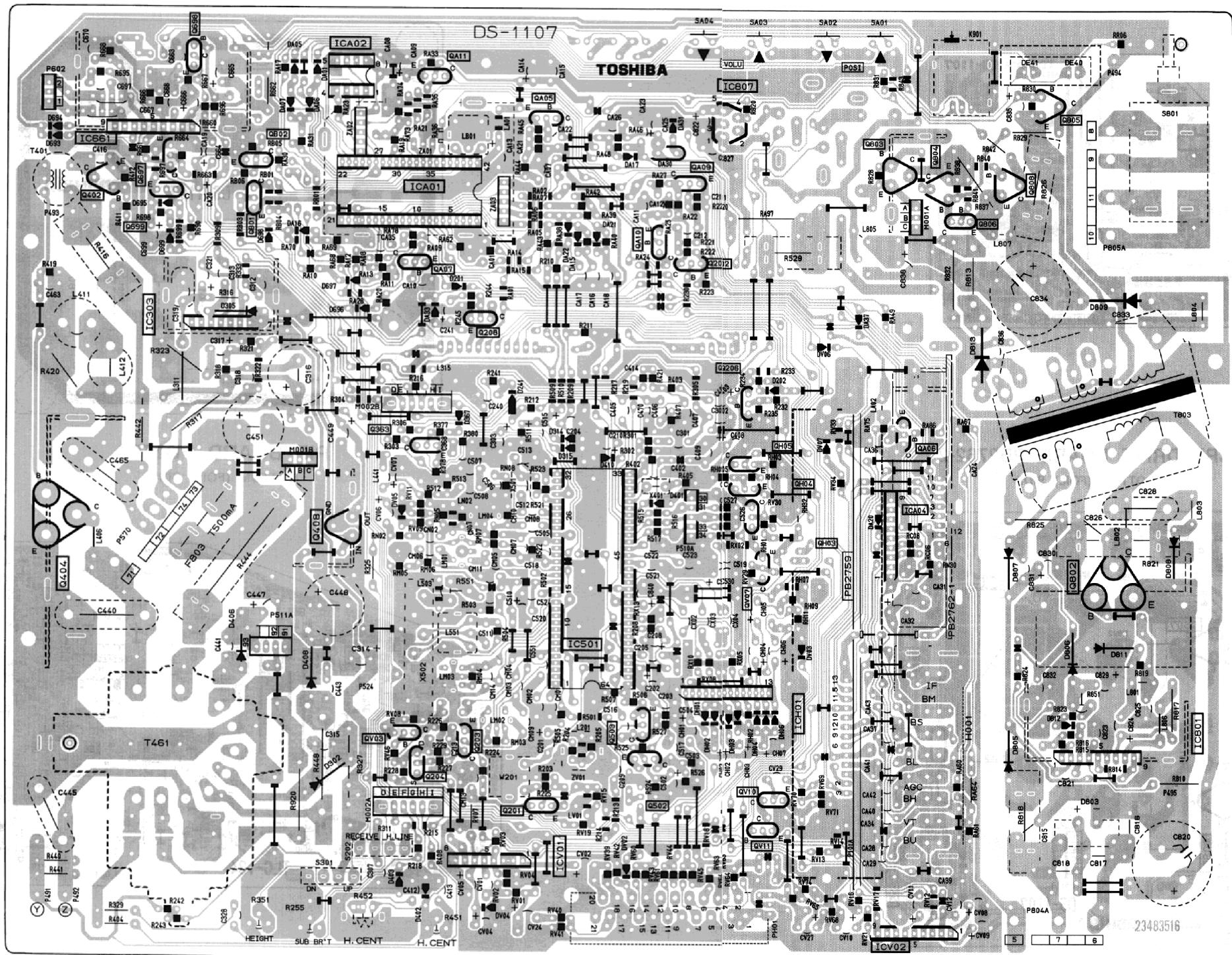
Location No.	Part No.	Description
D410	23316321	Diode, Zener, UZ8.2BSB
D590	23115599	Diode, 1N4148
D594	23115599	Diode, 1N4148
D595	23115599	Diode, 1N4148
D601	23115599	Diode, 1N4148
D693	23115599	Diode, 1N4148
D694	23115599	Diode, 1N4148
D695	23115599	Diode, 1N4148
D696	23115599	Diode, 1N4148
D697	23115599	Diode, 1N4148
D698	23115599	Diode, 1N4148
D699	23115599	Diode, 1N4148
D803	23118124	Diode, LB-156 (LF-B)
D805	23118479	Diode, BYD33J
D806	23118479	Diode, BYD33J
D807	23118479	Diode, BYD33J
D808	23118736	Diode, BYV96E
D809	23118451	Diode, RU4A
D811	23118479	Diode, BYD33J
D812	23316312	Diode, Zener, UZ6.2BSB
D813	23118052	Diode, RU4Z
DA01	23115599	Diode, 1N4148
DA05	23115599	Diode, 1N4148
DA06	23115599	Diode, 1N4148
DA07	23115599	Diode, 1N4148
DA15	23115599	Diode, 1N4148
DA16	23115599	Diode, 1N4148
DA17	23115599	Diode, 1N4148
DA20	23115599	Diode, 1N4148
DA21	23115599	Diode, 1N4148
DA22	23115599	Diode, 1N4148
DA30	23115878	Diode, Zener, $\mu$ PC574J(L)
DA31	23115599	Diode, 1N4148
DA33	23115599	Diode, 1N4148
DA37	23316301	Diode, Zener, UZ4.7BSA
DE40	A8636541	Diode (LED), TLS153, Red
DE41	A8606431	Diode (LED), TLG153, Green
DH01	23115599	Diode, 1N4148
DH02	23115599	Diode, 1N4148
DH03	23115599	Diode, 1N4148
DH04	23115599	Diode, 1N4148
DH05	23115599	Diode, 1N4148
DH06	23115599	Diode, 1N4148
DH07	23316302	Diode, Zener, UZ4.7BSB
DN02	A7150258	Diode, 1SS176
DN04	A7288601	Diode, 1S2186 FA-1
DN05	23316305	Diode, Zener, UZ5.1BSA
DN06	A7288601	Diode, 1S2186 FA-1
DN07	A7288601	Diode, 1S2186 FA-1
DN08	A7288601	Diode, 1S2186 FA-1
DN09	A7288601	Diode, 1S2186 FA-1
DN11	A7288601	Diode, 1S2186 FA-1
DN12	A7288601	Diode, 1S2186 FA-1
DN30	A7288601	Diode, 1S2186 FA-1
DN32	A7288601	Diode, 1S2186 FA-1
DN37	A7288601	Diode, 1S2186 FA-1
DV02	23115599	Diode, 1N4148
DV03	23316302	Diode, Zener, UZ4.7BSB
DV04	23316324	Diode, Zener, UZ9.1BSB
DV05	23115599	Diode, 1N4148
DV06	23115599	Diode, 1N4148
DV07	23115599	Diode, 1N4148
DV11	23316332	Diode, Zener, UZ12BSA

Location No.	Part No.	Description
<b>MISCELLANEOUS</b>		
⚠ F801	23144896	Fuse, 2.0A
F801A	23165433	Holder, Fuse
⚠ F803	23144876	Fuse, 0.5A
F803A	23165433	Holder, Fuse
K901	23120303	Remote Sensor, IR-9109-K
P601	23367681	Plug, 8P
⚠ P801	23176697	Power Cord
P803	23164725	Plug, 2P
PH01	23365598	21Pin Connector
S202	23145542	Switch, Lever, 1C3P
S301	23145682	Switch, Lever, 1C3P
⚠ S801	23145434	Switch, Power, 2C2P
SA01	23145430	Switch, Push, 1C1P
SA02	23145430	Switch, Push, 1C1P
SA03	23145430	Switch, Push, 1C1P
SA04	23145430	Switch, Push, 1C1P
⚠ V901A	23902022	Socket, CRT, 8P
W201	23250881	Coil, Delay Line, TRF2082A
W661	23351079	Speaker, SPK-1351, 77x77mm, 16 ohm
X401	23153886	Ceramic Resonator, 503kHz, TCR1012
X501	23153979	Crystal, 4.43MHz
X502	23250950	Coil, 1H-Delay Line, DL711
Z101	A5615249	PIF SAW Filter, F1804D
Z102	23153725	Ceramic Resonator, TCR1043
Z103	23107911	Ceramic Video Trap, 5.5to 6MHz, TCF1019
Z104	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
Z201	23107925	Ceramic Video Trap, 6.5MHz, TCF1013
Z602	A5613025	L-Secam WSSF, F328EM
Z603	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z604	23107855	Ceramic Filter, 5.5MHz, TCF1031
ZA01	23153011	Ceramic Resonator, TCR1050
ZA02	24000766	Resistor Block, 10k ohmx4, 1/8W
ZA03	24094651	Capacitor Block, 100pFx4, 50V
ZV01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032
<b>PC BOARD ASSEMBLIES</b>		
U902A	23369615	Main Board, PB2760
U903A	23369616	SIF Board, PB2762-1
U903B	23369617	CRT Drive Board, PB2762-2
U903C	23369618	Power Board, PB2762-3
Y991Z(U101)	23791027	PIF Board, PB2759
<b>PICTURE TUBE</b>		
⚠ V901	23312213	Picture Tube, A41EAM01X, SVC
<b>TUNER</b>		
H001	23321005	Tuner, VHF/UHF, EG449X1
<b>ACCESSORIES</b>		
K902	23306004	Remote Hand Unit, CT-9480
AT03	23305351	Battery Cover

Location No.	Part No.	Description
Y101	23561655	Owner's Manual
Y130	23568256	Sticker, CATV-Hyper
Y131	23568214	Sticker, Wattage

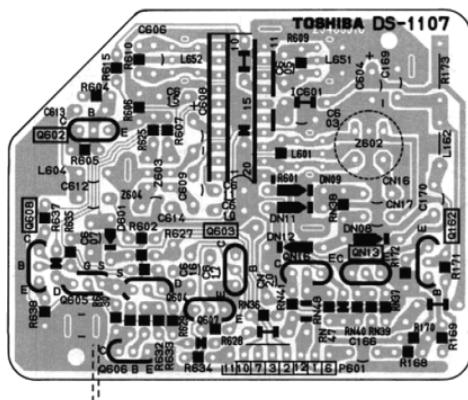
MAIN BOARD PB2760

BOTTOM (FOIL) SIDE



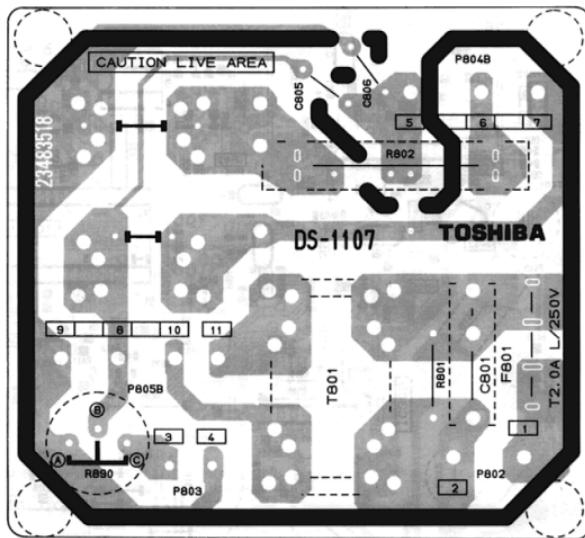
# SIF BOARD PB2762-1

BOTTOM (FOIL) SIDE



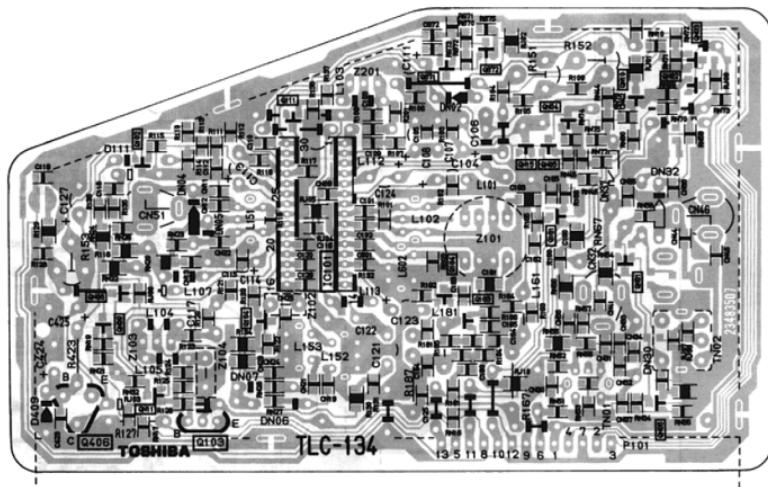
# POWER BOARD PB2762-3

BOTTOM (FOIL) SIDE

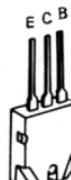
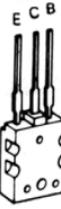


# PIF BOARD PB2759

BOTTOM (FOIL) SIDE

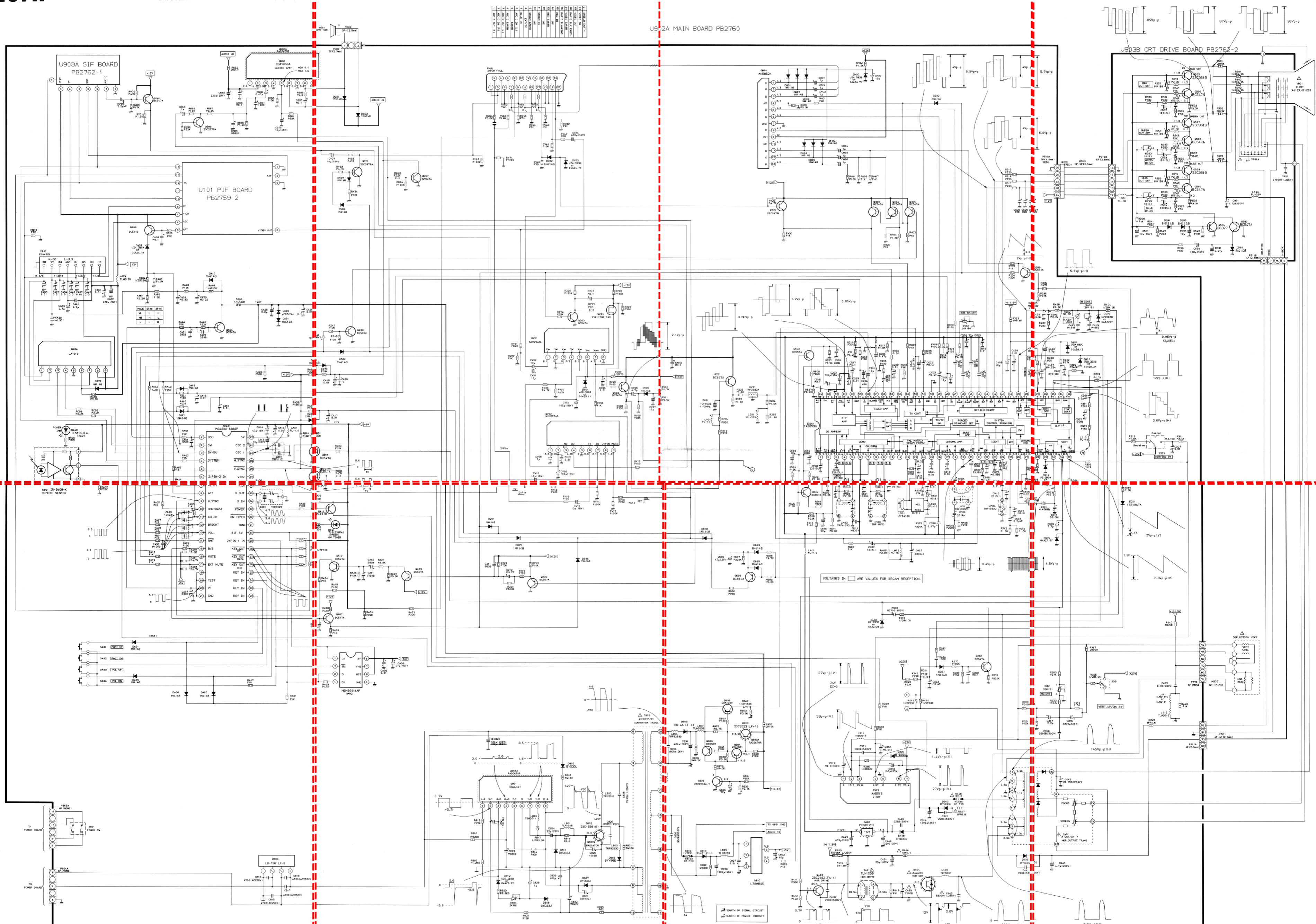


## TERMINAL VIEW OF TRANSISTORS

- |   |  |   |   |   |
|---|--|---|---|---|
| <p>① BC327<br/>BC337<br/>BC547A<br/>BC547B<br/>BC547C<br/>BC557A<br/>BC557B<br/>BC556A</p>  | <p>② 2SK30ATM<br/>2SK117</p>    | <p>③ BD202</p>   | <p>④ BF871<br/>2SD553<br/>2SC1569</p>  | <p>⑤ 2SC3678<br/>2SC3182N</p>  |
| <p>⑥ 2SD1427<br/>2SD1426</p>    | <p>⑦ 2SC2482<br/>2SA1321<br/>2SC2230<br/>2SA1020<br/>2SC2655<br/>2SC752GTM</p>  | <p>⑧ 2SC388ATM<br/>2SA1015<br/>2SC1959<br/>2SA562TM</p>  | <p>⑨ 2SD1548</p>                       | <p>⑩ 2SC2023</p>               |
| <p>⑪ ON4409</p>    |  |   |   |   |

# 1720RF

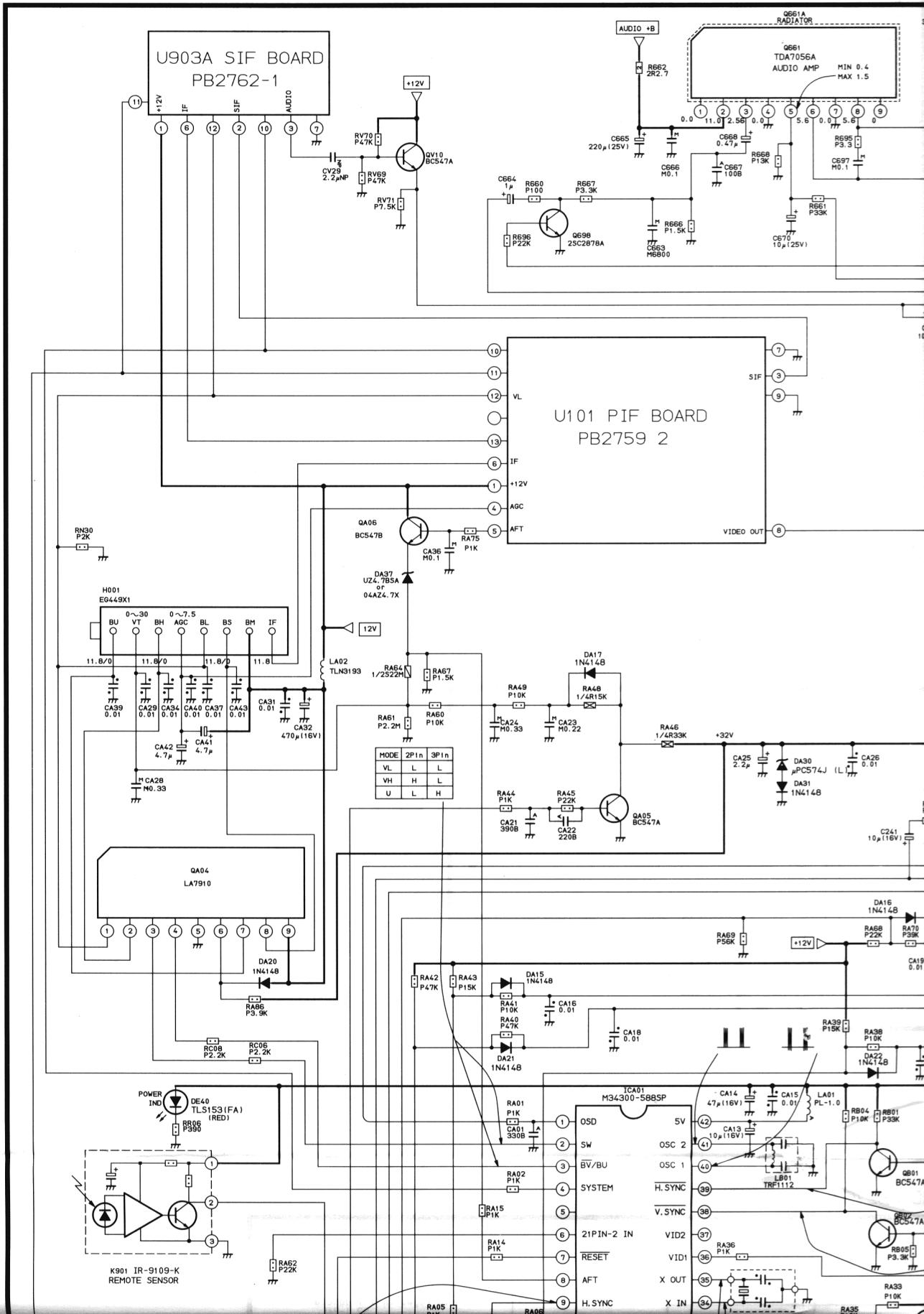
SCHEMATIC DIAGRAM (1/2)



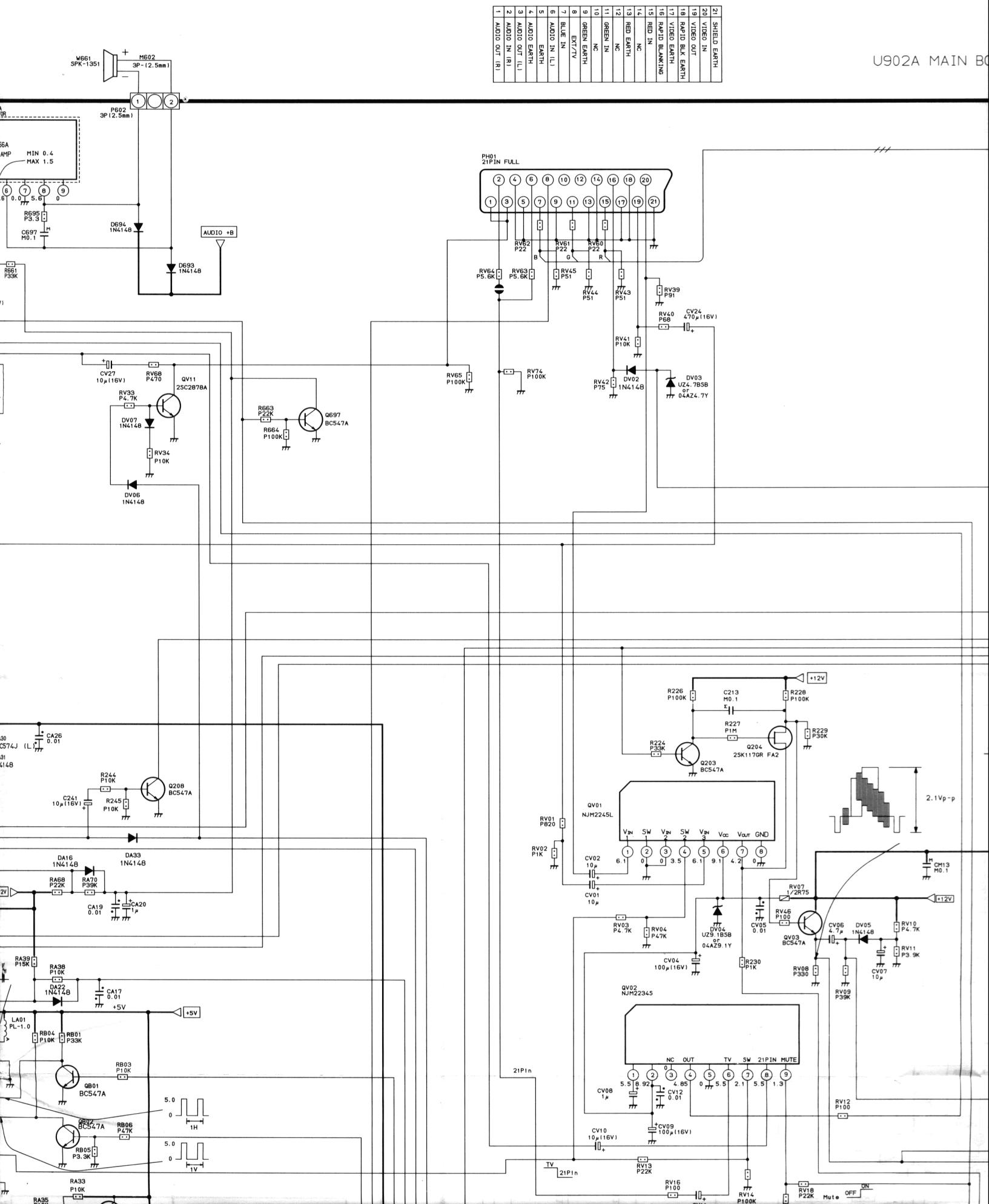
**1720RF**

## **SCHEMATIC DIAGRAM (1/2)**

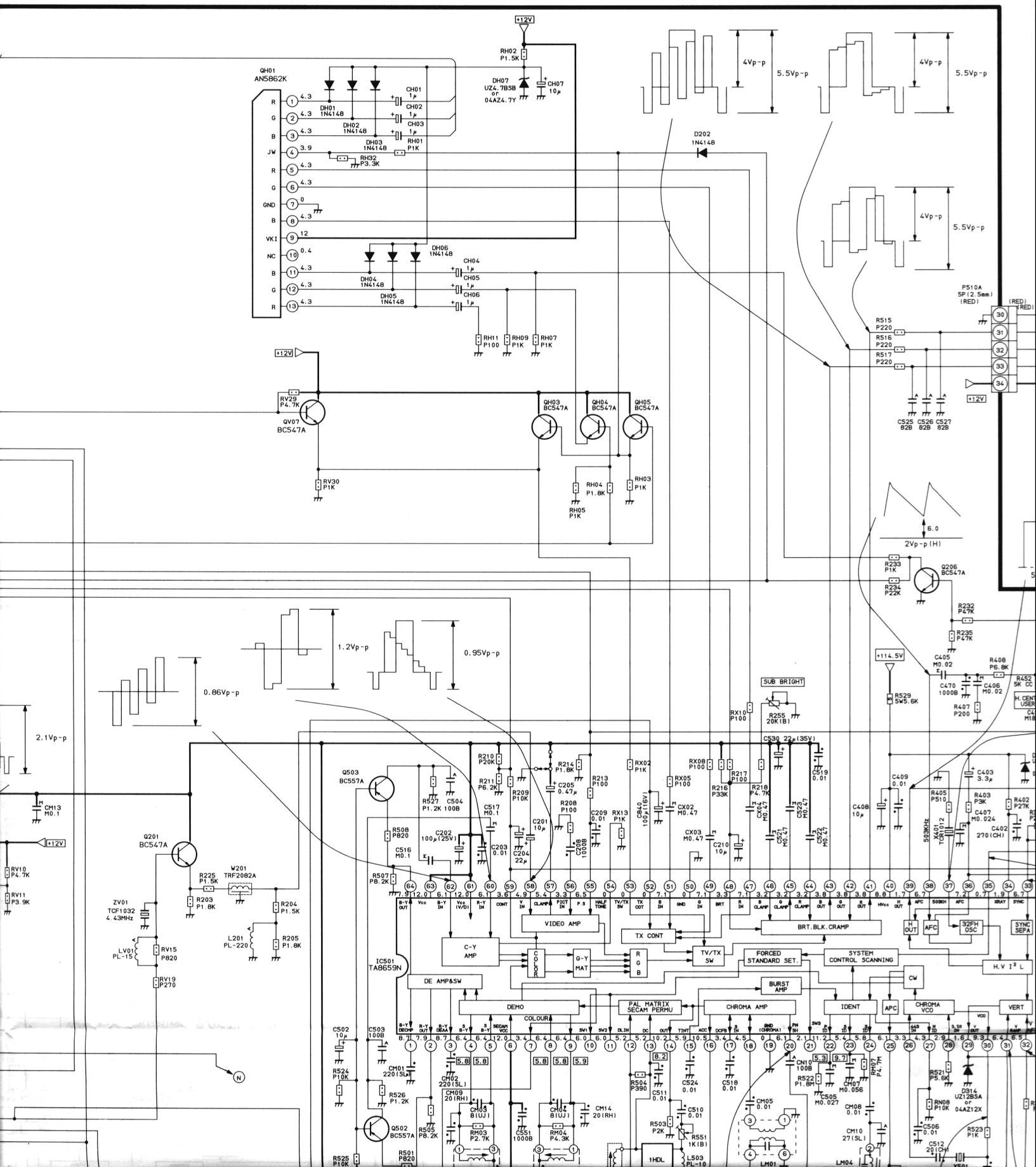
W661  
SPK-1351

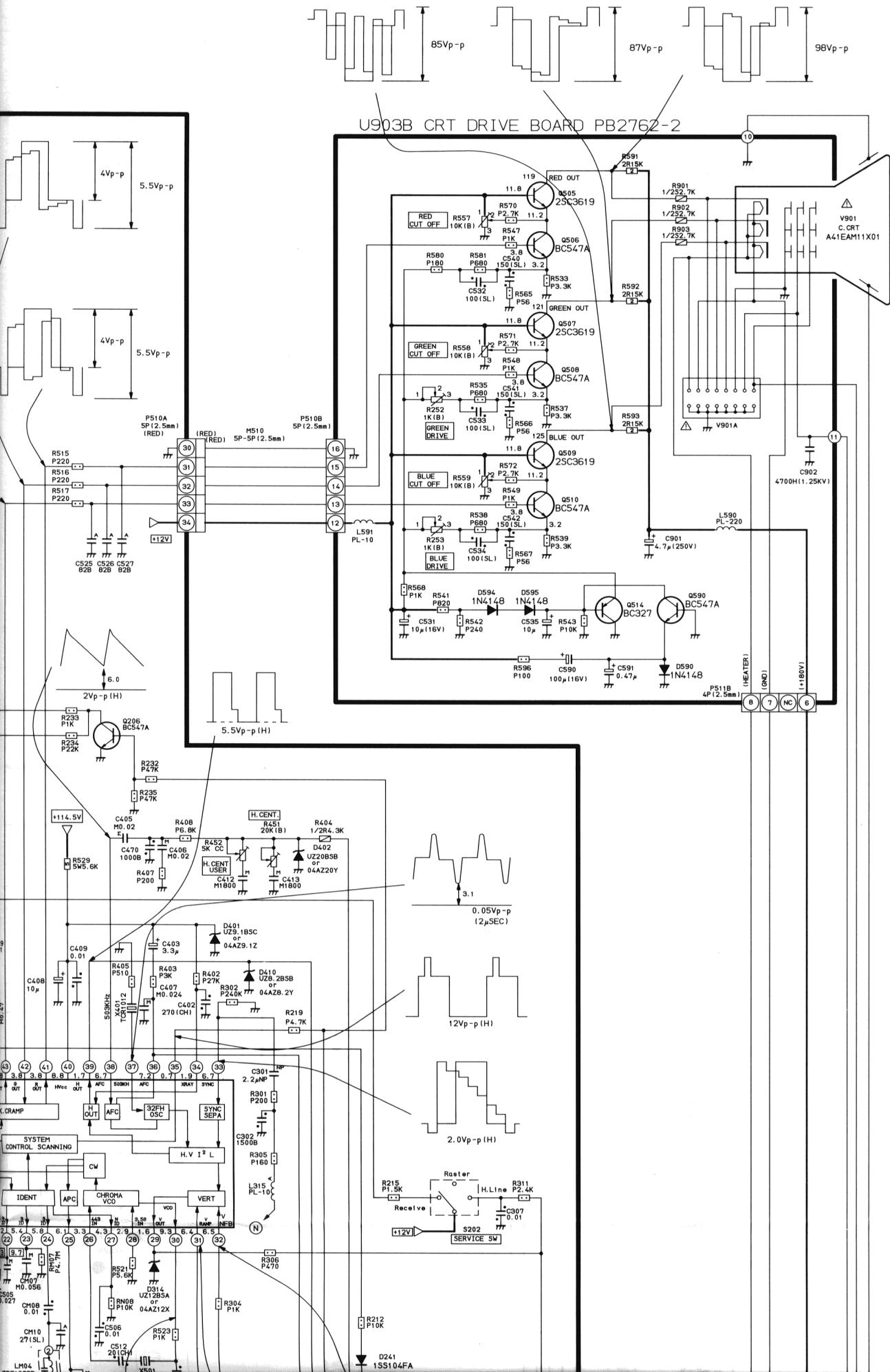


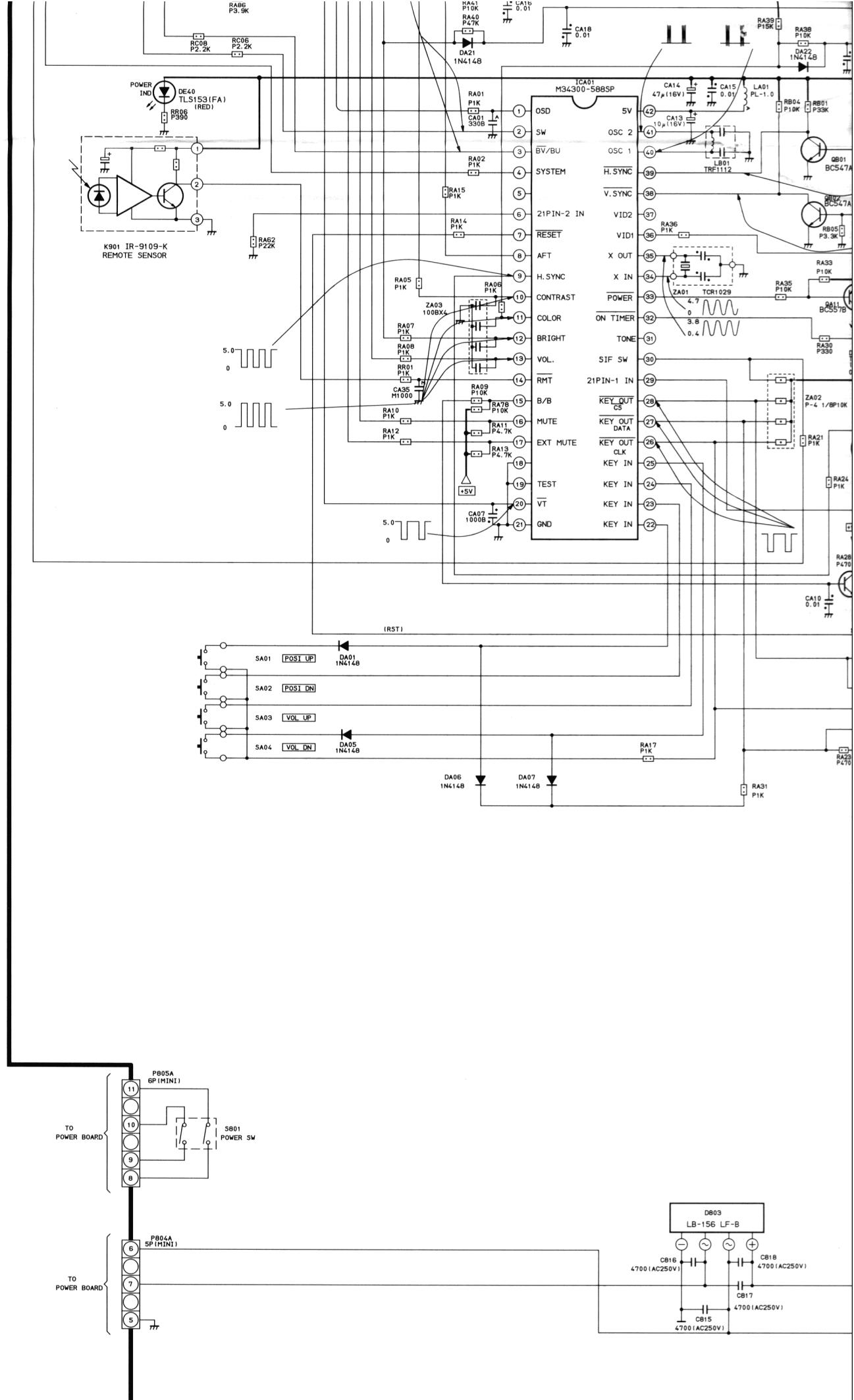
72)

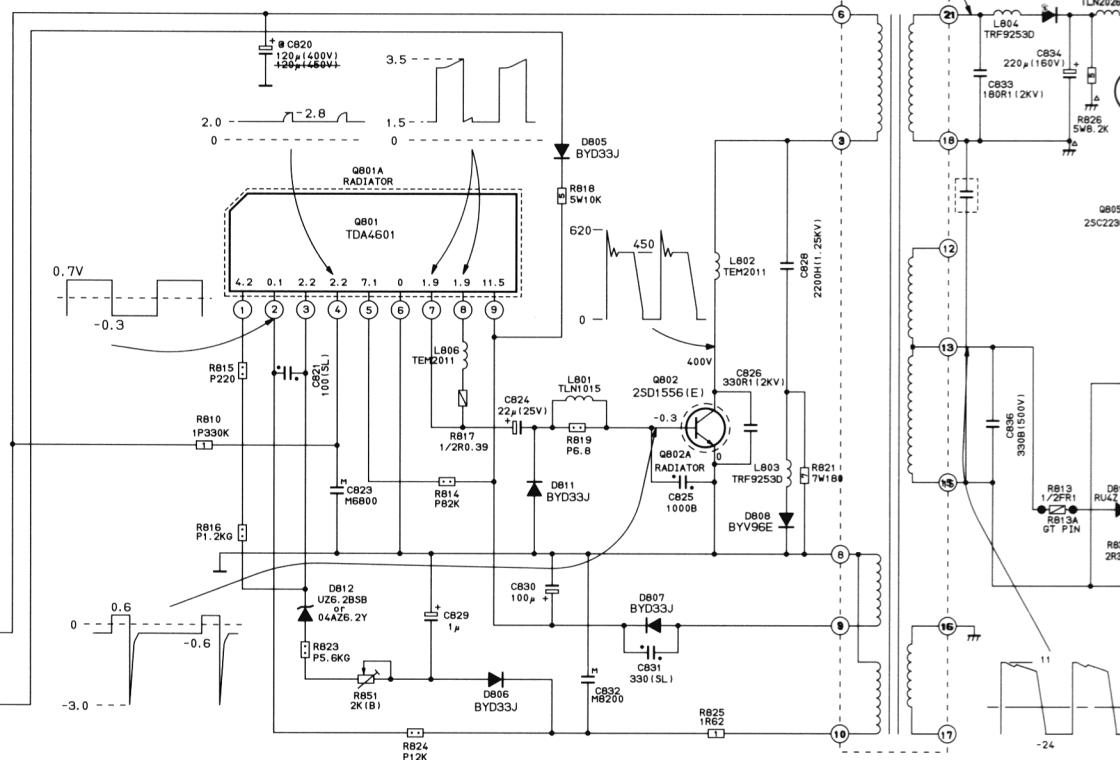
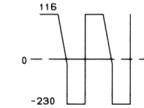
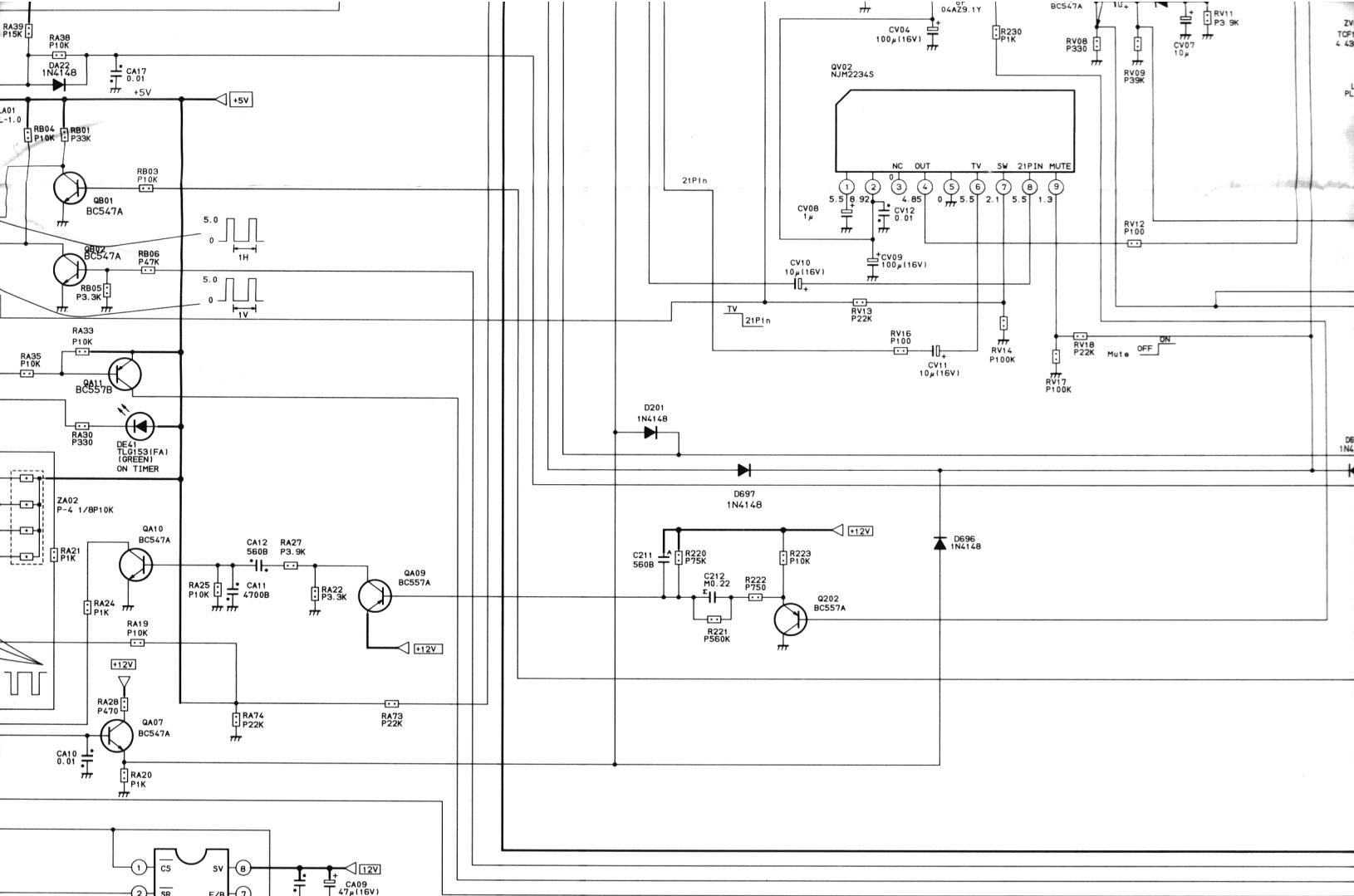


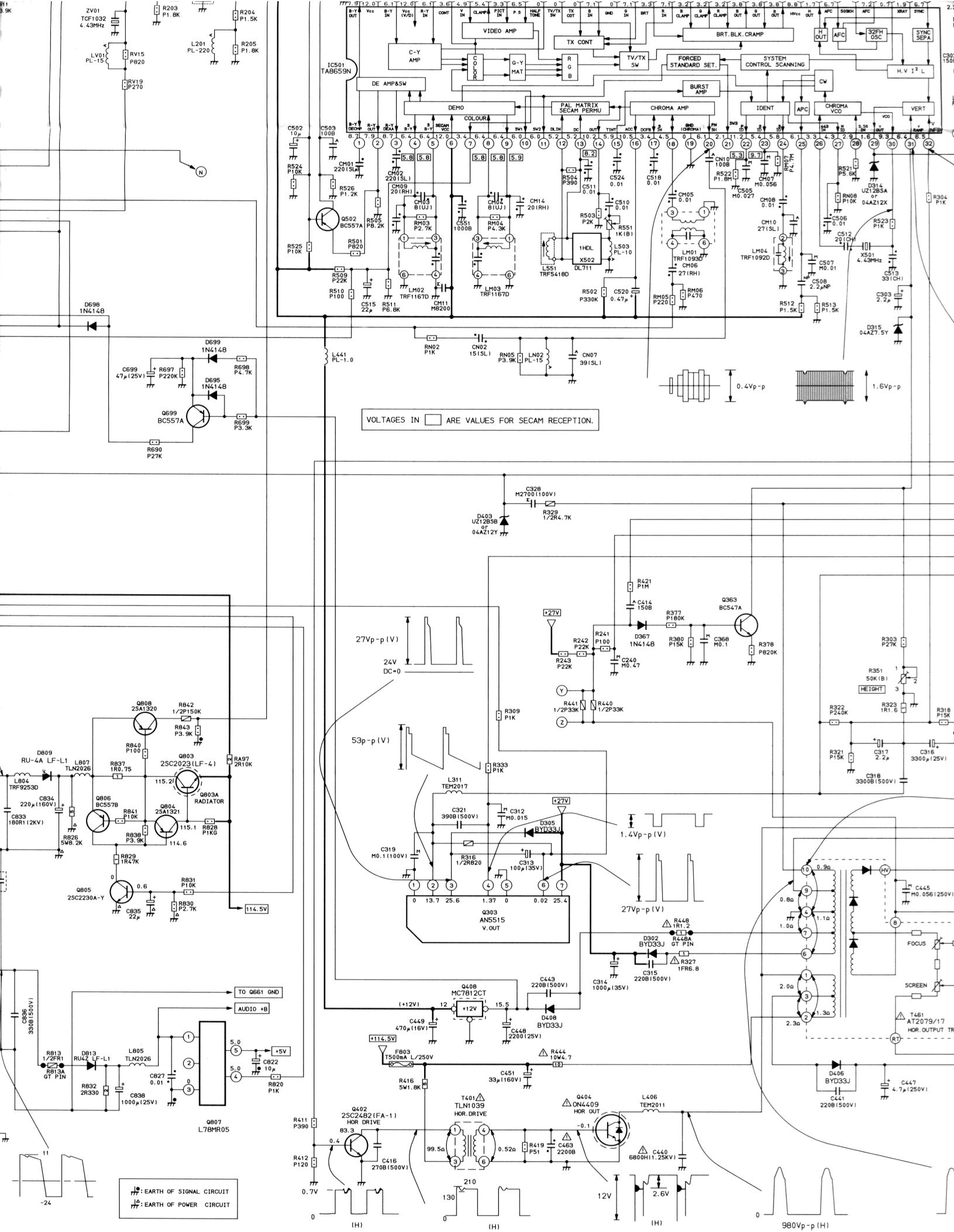
902A MAIN BOARD PB2760

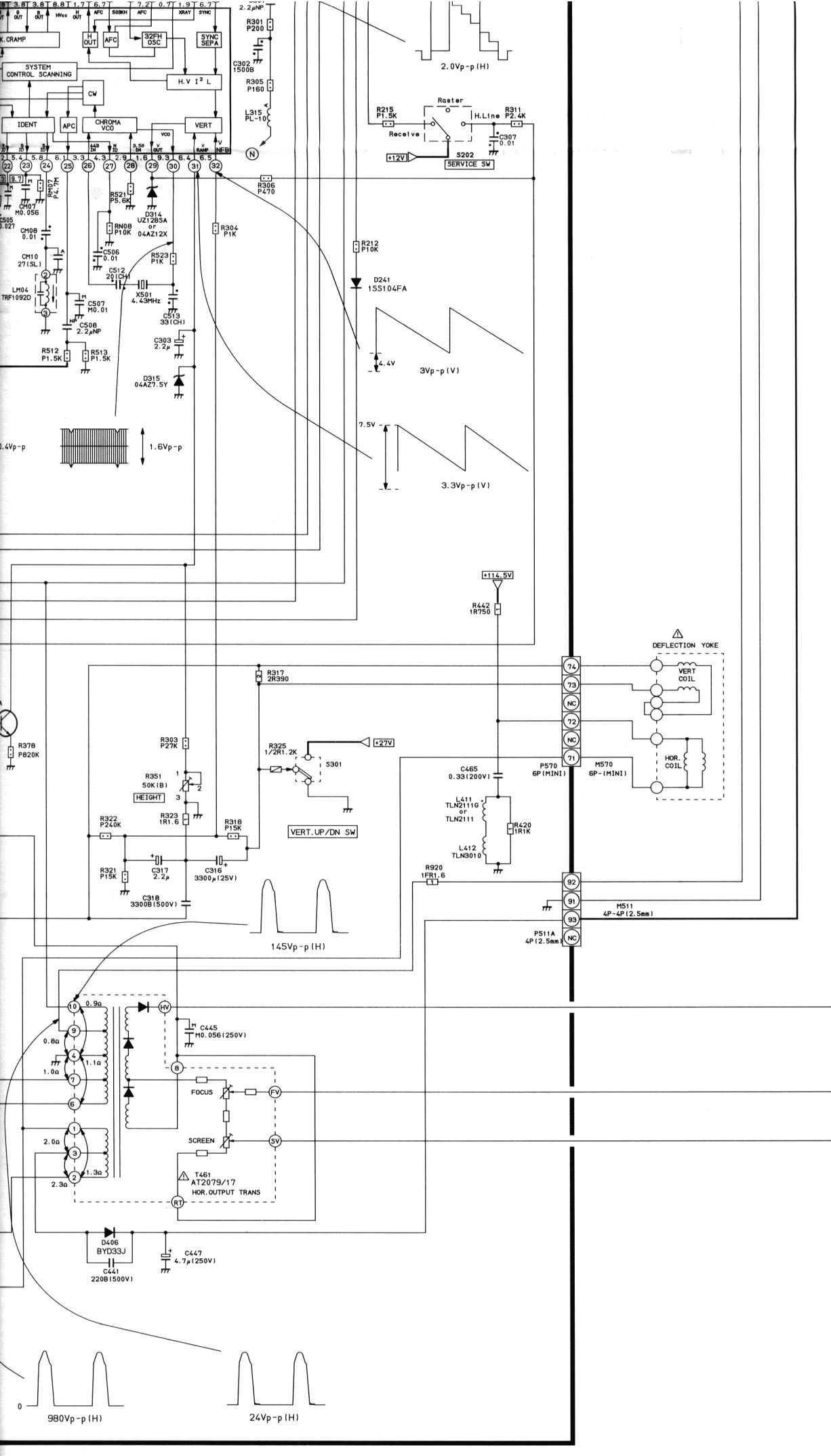












U101 PIF BOARD PB2759 2

