

Service Manual



Colour Television

TC-21S10R

TC-2105RT

TC-21S1

MX-3 Chassis

SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ
MX-3 CHASSIS BLOCK DIAGRAM\БЛОК-СХЕМА ШАССИ MX-3
SERVICE HINTS\ПРИЕМЫ СЕРВИСНОГО ОБСЛУЖИВАНИЯ
ADJUSTMENTS\НАСТРОЙКИ
BLOCK DIAGRAMS FOR INTEGRATED CIRCUITS\БЛОК-СХЕМЫ
ИНТЕГРАЛЬНЫХ СХЕМ
TEST POINT WAVEFORMS\СИГНАЛЫ В КОНТРОЛЬНЫХ ТОЧКАХ
SCHEMATIC DIAGRAMS\ПРИНЦИПИАЛЬНЫЕ СХЕМЫ
PARTS LOCATION\РАСПОЛОЖЕНИЕ ЧАСТЕЙ
REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

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Panasonic

Specifications

Power Source : AC 110 – 240V, 50/60 Hz

Power Consumption : 82 W

Aerial Impedance : 75 Ω unbalanced ,
Coaxial type

Receiving System : 17 System

Receiving Channels :

| | |
|-----|--------------------------------------|
| VHF | 1 – 11 PAL B (Australia & N.Zealand) |
| | 1 – 12 PAL/SECAM D |
| | 1 – 12 NTSC M JAPAN |
| | 2 – 12 PAL/SECAM B,G |
| | 2 – 13 NTSC M U.S.A. |
| UHF | 21 – 69 PAL G I/SECAM B, G, K1 |
| | 28 – 69 PAL G (Australia) |
| | 13 – 56 PAL D |
| | 13 – 52 NTSC M JAPAN |
| | 14 – 69 NTSC M U.S.A. |

CATV S1 – S41 (Hyper)

Intermediate Frequency :

| | |
|--------|---------------------|
| Video | 38.0 MHz |
| | 31.5 MHz (D, K, K1) |
| | 32.0 MHz (I) |
| | 32.5 MHz (B, G) |
| | 33.5 MHz (M) |
| Sound | 33.57 MHz (PAL) |
| | 33.6 MHz (SECAM) |
| | 33.75 MHz (SECAM) |
| | 34.42 MHz (NTSC) |
| Colour | |
| | |
| | |
| | |

Video / Audio Terminals :

| | | |
|---------------|-----------|--------------------|
| FAV In : | Video In | 1 Vp-p 75 Ω |
| | Audio In | Approx. 400mVrms |
| RAV In : | Video In | 1 Vp-p 75 Ω |
| | Audio In | Approx. 400mVrms |
| Monitor Out : | Video Out | 1 Vp-p 75 Ω |
| | Audio Out | Approx. 400mVrms |

High Voltage : 28.5 kV (+1.2, -1.5)
at zero beam current

Picture Tube : A51JXS95X
54 cm (21 inches)
Measured diagonally,
90° deflection

Audio Output : 3.0 W

Speaker : 9.65 x 5cm, 8 Ω .

Dimensions : Height : 477.0 mm
Width : 518.0 mm
Depth : 478.0 mm

Mass : 21.0 kg (Net Wt.)

Remote Controller : 22 Functions infrared controller

Specifications are subject to change without notice.
Mass and dimensions shown are approximate.

X-Radiation

Warning :

The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.

When using a picture tube test jig for service, ensure that jig is capable of handling 29.7 kV without causing X-Radiation.

Note : It is important to use an accurate periodically calibrated high voltage meter.

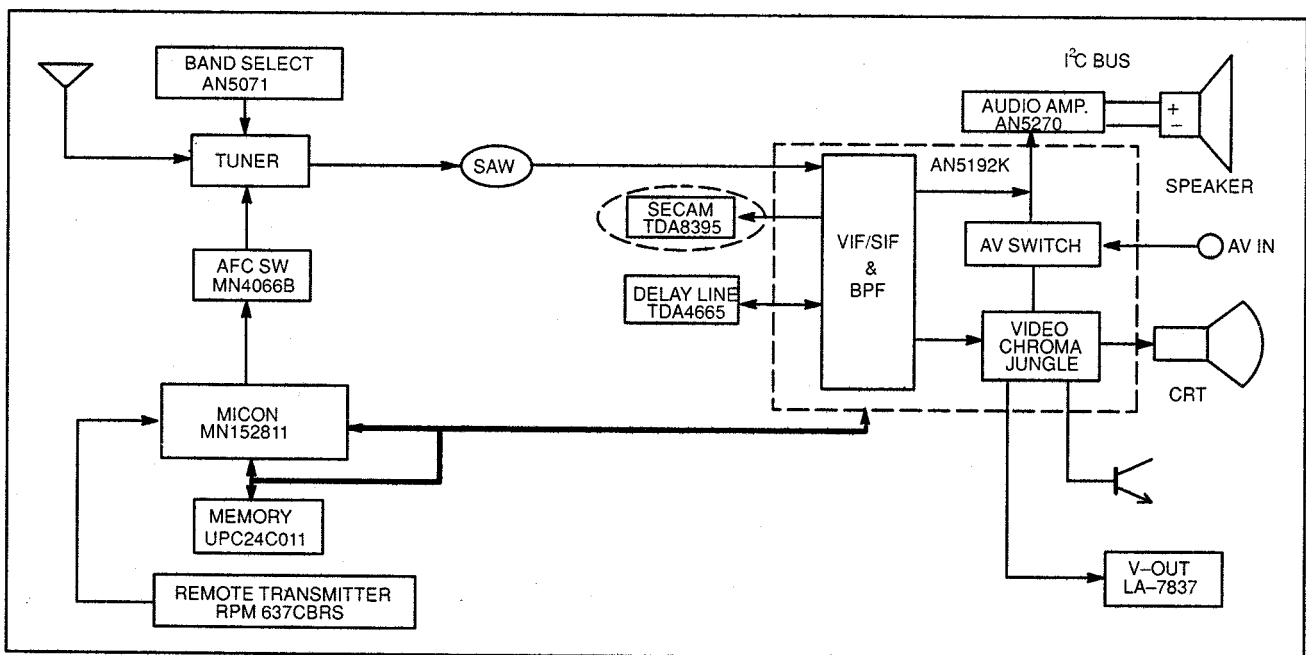
1. Set the brightness to minimum.
2. Set the service switch to the SERVICE position.
3. Measure the EHT. The meter reading should indicate 28.5 (+1.2, -1.5) kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

Shut Down Circuit Test

This test must be made as a final check before the set is returned to the customer.

1. Operates the TV set.
2. Set Controls :
Screen (on FBT) minimum
Contrast minimum
Colour minimum
3. Connect a DC voltmeter to cathode of D523, and confirm that the voltage reading is 24.6 V, or less.
4. Supply 25.72 V DC to cathode of D523 and confirm that the shut down circuit does not operate.
5. Supply 27.94 V DC to cathode of D523, and confirm that the shut down circuit operates.
6. Switch the set off and disconnect the DC supply. Switch the set on and Normalize the contrast and colour.

MX-3 Chassis Block Diagram



The I²C Bus Concept :

A. Features

1. The I²C bus is a 2 – wire serial bus consisting of a clock line (SCL) and a data line (SDA).
2. It allows bi – directional data transfer, between IC's.
3. It consists of a master and one or more slave IC's.
 - The master initiates transfer and generates clock signals.
 - The slave is the IC addressed by a master.

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B. Basic Format of the I²C Data transmission from the microcomputer (IC1101) to the IC601.

1. Transfer Timing

During transmission from the microcomputer to IC601, 12 bytes of each of the following types of information is transferred one at a time:

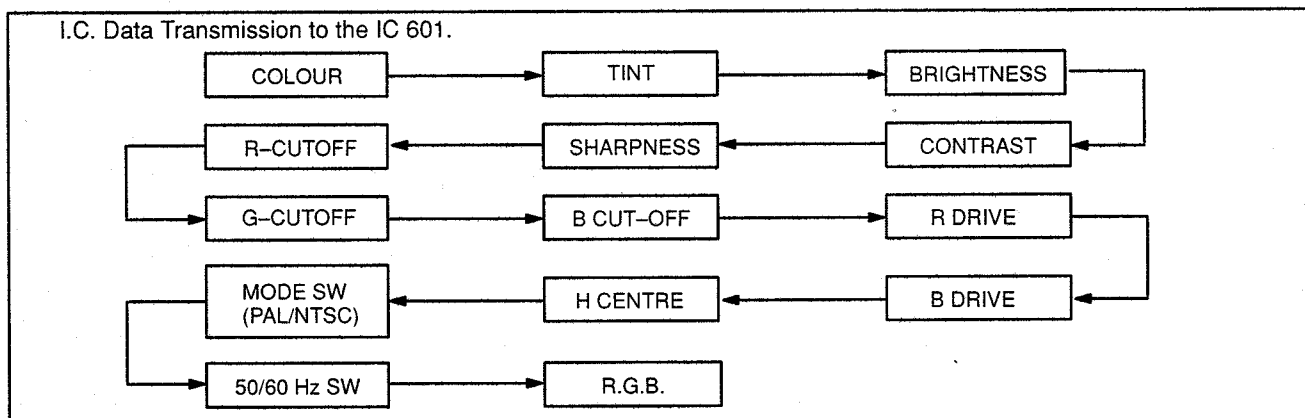


Fig. 4

2. Format

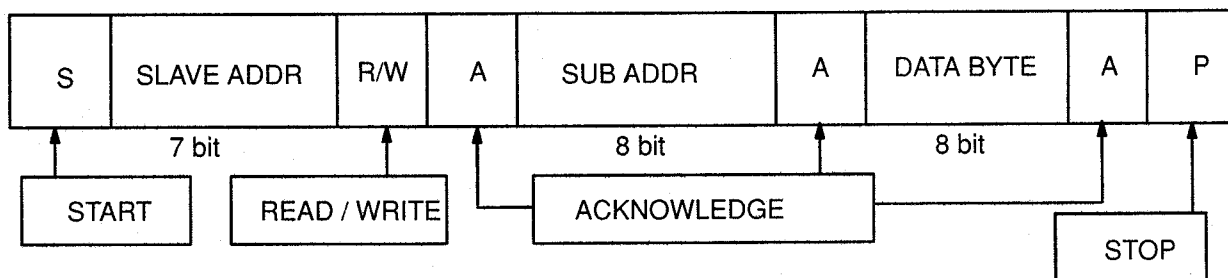


Fig. 5

C. I²C Application in the MX-3 Chassis.

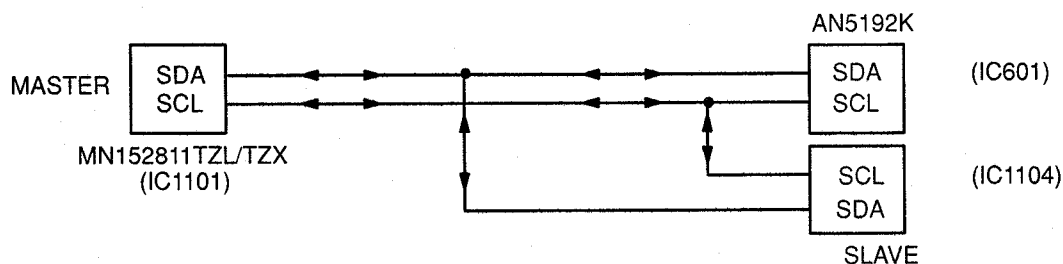


Fig. 6

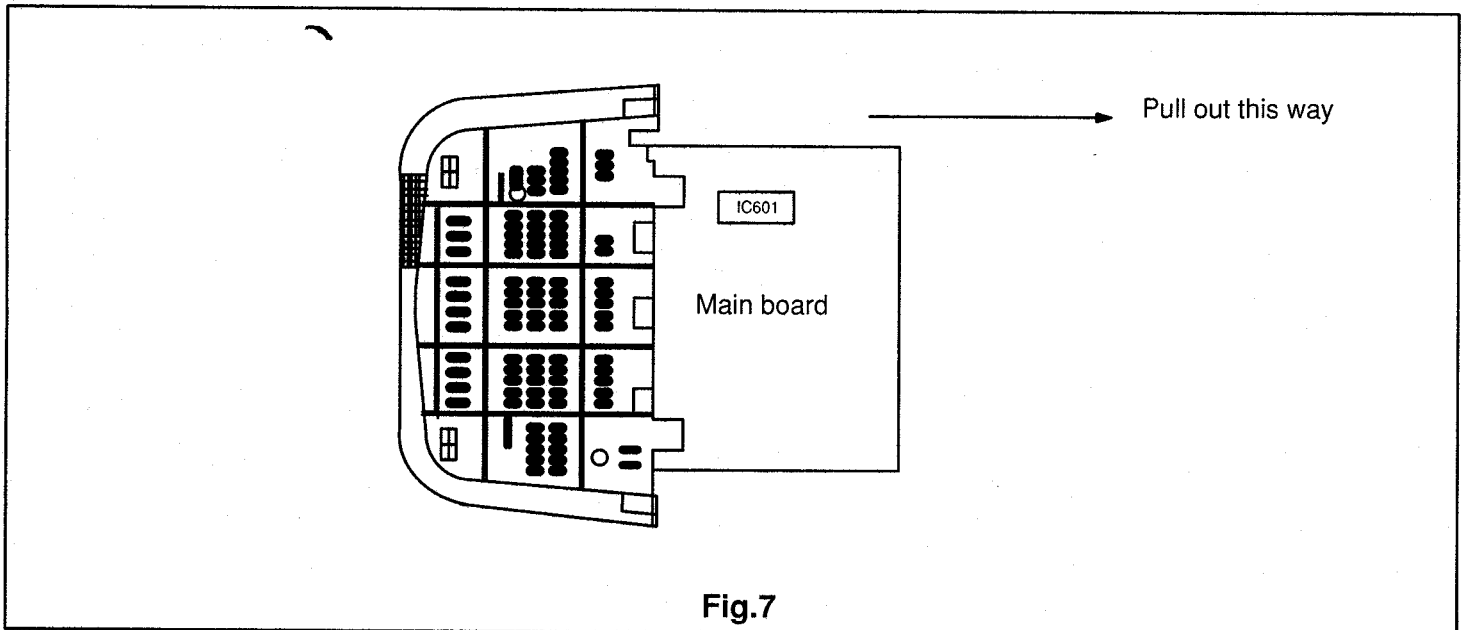
During transfer the microcomputer IC1101 in the TV set is always the master device. IC601 and IC1104 are slave addressed by IC1101.

1. Various control functions are possible via the I²C bus from the microcomputer IC1101 to VCI IC601, as shown in Fig. 4.
2. Data like position, BT voltage, band, AFC, skip, volume, recall, power and off timer setting, service mode setting, colour setting, function etc, are stored and read out from the EEPROM IC1104 via the I²C bus.

Service Hints.

1. Service Position for E-Board.

1. Remove the back cover.
2. Stand the TV set as shown in fig. 7.
3. Remove the E-Board from the TV set by pulling the main board out as shown in figure 7.

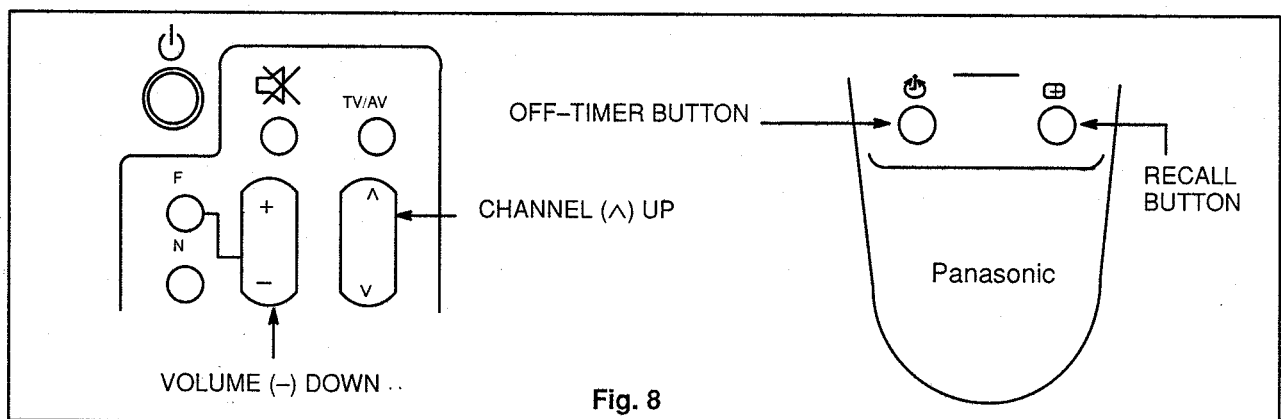


Purpose Of Hotel Mode.

To limit the level of main functions of TV like Volume, Brightness, Tone, Sharpness, Colour and Contrast for hotel use, in order for hotel guest not to manoeuvre TV programme.

How To Set : To set the hotel mode, press CHANNEL (^) UP on the TV and OFF-TIMER on the remote control simultaneously as shown in figure. 8.

How To Cancel : To cancel the hotel mode, press VOLUME (-) DOWN on the TV and OFF-TIMER on the remote control simultaneously as shown in figure. 8.



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2. How to set the Factory Mode for adjustment.

Follow the Steps shown in the block diagram below to set the Factory Mode for sub-colour; sub-bright; sub-contrast; sub-sharpness; H.Centre Adjustment Mode S1107 to select S1110/S1111 to adjust. When the IC601(VCJ) or IC1104 are replaced, these adjustment must be done as below.

The Sub Adjustment mode.

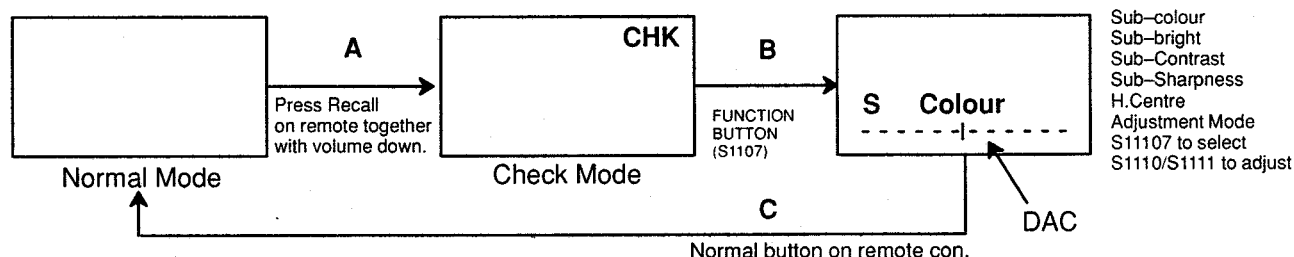


Fig. 9

A: Press the Recall button together with volume down (S1110).

The TV in the Normal mode changes to check mode. "CHK" will appear on the screen as shown in Fig. 9.

B: Press the Function button (S1107) to select the required adjustment to be adjusted as shown in Fig. 9.

Press the Volume "up" or "down" button (S1111 & S1110) to change the DAC level.

C: Press the Normal button on the remote control transmitter twice to return to Normal mode.

The CRT Adjustment mode.

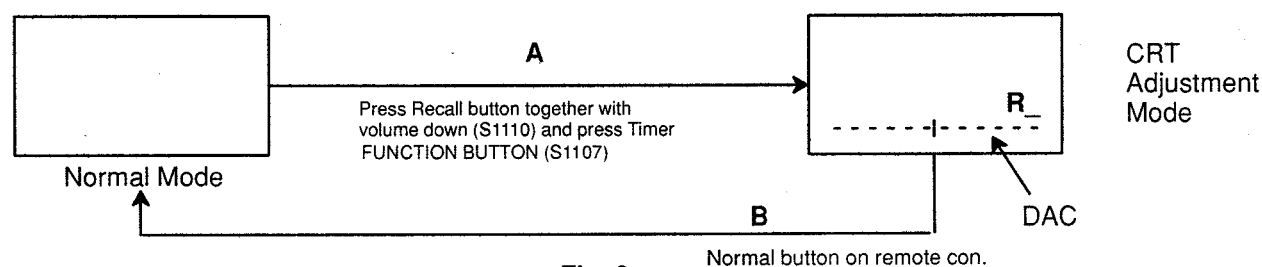


Fig. 9a.

A: Press the Recall button on the remote control together with volume down (S1110) on the TV. Then press "Timer" on the remote control. The TV in the Normal mode changes to the CRT Adjustment mode.

Press the Function button (S1107) to select the required adjustment to be adjusted as shown in Fig. 9a. (Please refer to procedure on page 11).

Press the Volume "up" or "down" button (S1111 & S1110) to change the DAC level.

B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

The White Balance Adjustment mode.

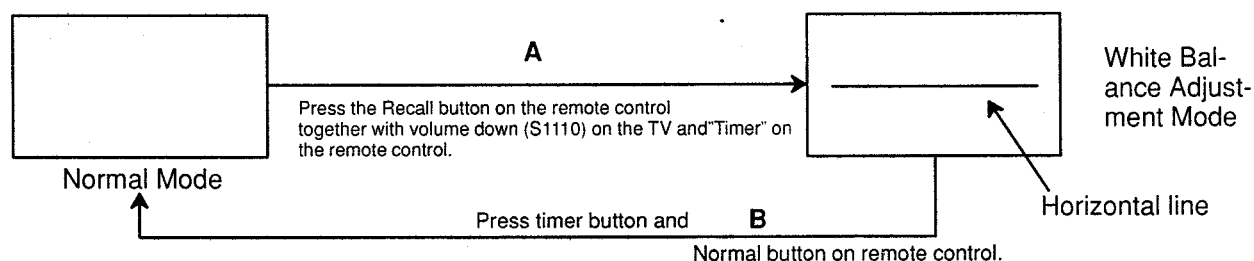


Fig. 9b

A: Press the Recall button on the remote control together with volume down (S1110) on the TV.

Then press the Timer button on the remote control transmitter to enter White Balance Adjustment mode. (Please refer to procedure on page 11).

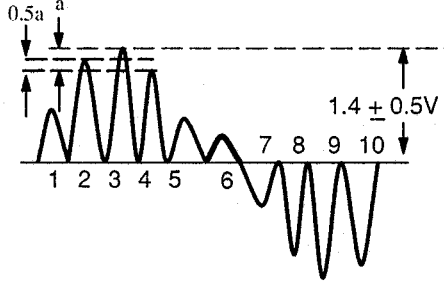
Press the Volume "up" or "down" button (S1111 & S1110) to change the DAC level.

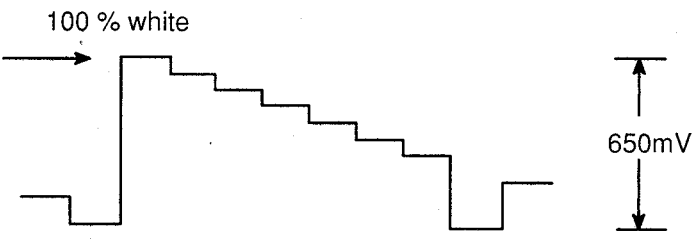
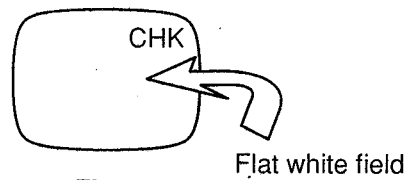
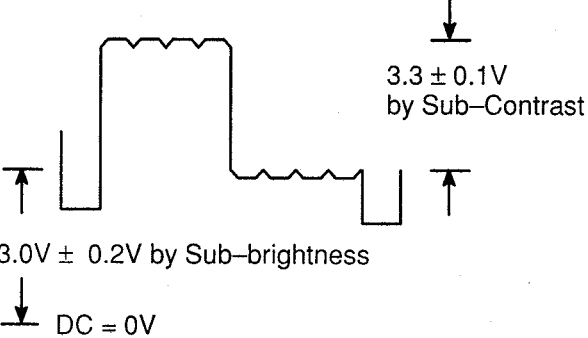
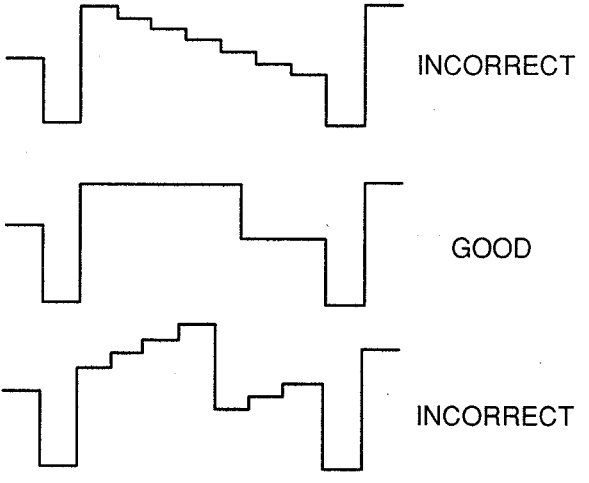
B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

Adjustment Procedure

| Item / Preparation | Adjustment Procedure |
|---|--|
| <u>B Voltage</u> <ol style="list-style-type: none"> Operate the TV set. Set control as follow: Brightness minimum Contrast minimum | <p>Confirm the DC voltages at the indicated test points, as follow:</p> <p>TP1 : 90.0 \pm 2.0 V TPE10 : 5.0 \pm 0.5 V TPE8 : 12.0 \pm 1.0 V D816 Cathode : 22.0 \pm 2.0 V TPE9 : 9.0 \pm 1.0 V D831 Cathode : 42.0 \pm 2.5V E33-1 : 190.0 \pm 15 V</p> |
| <u>RF AGC</u> <u>A. Workshop</u> <ol style="list-style-type: none"> Receive a colour bar signal at an RF level of 61\pm 2dBμV with 75Ω loaded. Connect an oscilloscope to TPE 23, set to DC mode. <u>B. Field</u> <ol style="list-style-type: none"> Receive the television broadcast channel known to have the weakest RF signal strength. | <ol style="list-style-type: none"> Select "RF" indication on screen by using remote control at factory mode. Set RF AGC by using remote control volume (+) or volume (-) button until voltage at TPE 23 starts decreasing or until less than 0.2V from max. Increase RF signal strength by 2dB, confirm that TPE 23 voltage drops more than 1V. |
| <u>High Voltage</u> <ol style="list-style-type: none"> Operate the TV set. Set control as follow: Brightness minimum Contrast minimum | <ol style="list-style-type: none"> Connect a DC voltage meter to Pin 1 of IC801 and confirm the voltage is 90.0 \pm 2.0 V. Connect a high voltage meter to anode of the picture tube. Confirm that the high voltage is within the range of 28.5 (+ 1.2, -1.5) kV. Normalize the brightness and contrast. |

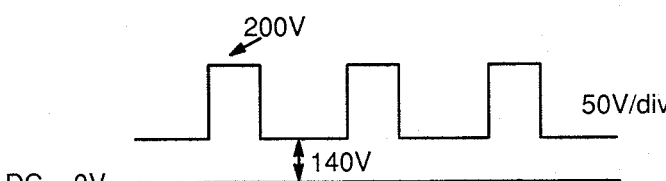
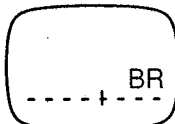
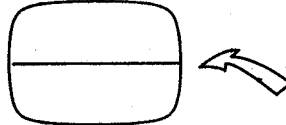
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| Item / Preparation | Adjustment Procedure | Waveform |
|--|--|--|
| <p>M-NTSC Sub-Tint Adjustment</p> <p>Apply NTSC rainbow pattern.</p> <p>Connect an oscilloscope to TPE28.</p> <p>Connect a short jumper between TPE3 and TPE10.</p> <p>Press S1107 (FUNC.) and set System to NTSC 4.43 .</p> <p>ColourNORMAL or CENTRE</p> <p>BrightNORMAL or CENTRE</p> <p>Contrast.NORMAL or MAX.</p> <p>TintNORMAL or CENTRE</p> <p>Press RECALL button on remote control, then press S1110 (VOL. DOWN) to Sub-Tint.</p> <p>Confirm CHK display on screen.</p> | <p>Confirm the amplitude of waveform: $1.4 \pm 0.5V$</p> <ol style="list-style-type: none"> 1. Adjust Sub-Tint so that No.2,3 and 4 becomes level waveform is similar to Fig.10. 2. Confirm TPE 28 (R-out) is $1.4 \pm 0.5V$. Return to user mode. 3. Confirm phase at Tint is changed more than ± 30 by Tnit control. 4. Confirm that colour level is maximum when colour DAC is adjusted to maximum position. <p>Note: Use Remote control only when adjusting User Control.</p> |  <p>The waveform is a periodic signal with 10 horizontal positions marked. Positions 1, 2, 3, and 4 show a rising waveform. Positions 5 and 6 show a flat waveform. Positions 7, 8, 9, and 10 show a falling waveform. A vertical scale bar on the left indicates 0.5a. A vertical scale bar on the right indicates $1.4 \pm 0.5V$.</p> <p>Fig.10</p> |

| Item / Preparation | Waveforms |
|--|---|
| <p>Video-input, Sub-Contrast, Sub-Brightness and Sub-colour</p> <ol style="list-style-type: none"> 1. Input a colour bar signal with white at 100% of peak level. Connection can be made via A/V and this may enable adjustment of the pattern generator video output level to obtain the correct black to white amplitude (at TPH 9). 2. Confirm that the Sync tip to white amplitude is $650\text{mV} \pm 50 \text{ mV}$ at Pin 43 (under IC601) as shown in Fig. 13. 3. Receive a colour bar pattern. Connect an oscilloscope to pin 3 of E-32 on the E-board and chassis earth. 4. Set Colour, Brightness and Contrast to Normal (Colour and Brightness at centre, Contrast at max.) 5. Connect a short jumper between TPE3 and TPE10 (chassis). Note that this step disable the ABL, so avoid operation in this condition for long periods at high beam current. 6. Press the RECALL button on remote control together with volume down button. The screen should then show a flat whitish field, with the OSD message " CHK " possibly visible at the top as shown in Fig. 14. 7. Press the Function button (S1107) to select the required function to be adjusted (in this case " Contrast "). 8. Now press either the Volume " up or down " buttons (S1110 or S1111). " S " and " Contrast " will be displayed on the screen, indicating " Sub " Contrast, and the Sub-Contrast level will be changed. Note that the Volume " up or down " buttons must be pressed while the Function (i.e. Contrast) OSD is still on screen. 9. Press the Function button (S1107) to select Brightness and then the Volume " up or down " buttons (S1110 or S1111) will similarly permit Sub-Brightness to be altered and adjusted. 10. Adjust the Sub-Brightness (first) and Sub-Contrast (second) to produce the waveform shown in Fig. 15. 11. Using the Function button (S1107) and Volume " up and down " buttons (S1110 and S1111). Select Sub-colour and adjust to produce the waveform shown in Fig. 16. 12. Cancel the " CHK " mode by pressing the NORMAL button on remote control transmitter and remove the TPE3 to TPE10 jumper. | <div data-bbox="667 309 1437 645">  <p>Fig. 13</p> </div> <div data-bbox="667 667 1437 925">  <p>Fig. 14</p> </div> <div data-bbox="667 947 1437 1361">  <p>Fig. 15</p> </div> <div data-bbox="667 1384 1437 1944">  <p>Fig. 16</p> </div> |

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ADJUSTMENTS PROCEDURE FOR WHITE BALANCE

| Item / Preparation | Adjustment Procedure | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------------|-----|---------|---|----------------|--------------|---|----------------|----------------|---|----------------|---------------|---|----|----------------|---|----------------|---------------|---|----------------|----------------|
| <p>CRT CUT-OFF</p> <p>1. Input a flat white Field signal, and set Contrast to maximum.</p> <p>2. Connect an oscilloscope to TPY 1 (Green CRT drive) and TPY 2 (Ground). TPY 1 and TPY 2 are located on the Y-PCB (CRT neck panel).</p> <p>3. Push the Volume Down (S1110) together with RECALL button to enter factory mode & press "TIMER" button on the remote control to select CRT ADJUSTMENT Mode (shown in Fig. 9a on page 7). "CHK" will appear on the screen.</p> <p>4. Press the Function button (S1107) FOUR times to select "BR " (meaning " brightness "). Note that repeated pushing of the Function button cycles through the CRT adjustment as shown in Fig. 16.</p> <p>5. WHILE " BR " IS STILL ON SCREEN, set the screen control to minimum by turning it anti-clockwise, and use the Volume " up " or " down " button – (S1110) and S1111) to set the DC=0V to video level at 140V, as shown in Fig. 17.</p> <p>6. Advance the screen control sufficiently to see the OSD. WHILE " BR " IS STILL ON SCREEN, (push the Function button to bring it up again if necessary), push the "TIMER" button on the remote control. This will collapse the vertical scan.</p> <p>7. Slowly adjust the screen control such that one of the R, G or B beams just appears, across the centre of the screen, (Fig. 19). THIS IS THE SETTING POINT FOR THE SCREEN CONTROL. Note which colour appeared, and DO NOT ADJUST THE LOW-LIGHT SETTING FOR THIS PARTICULAR COLOUR IN THE FOLLOWING PROCEDURE.</p> | <table><tr><th>PRESS S1107</th><th>OSD</th><th>MEANING</th></tr><tr><td>①</td><td>R₋</td><td>RED LOWLIGHT</td></tr><tr><td>②</td><td>G₋</td><td>GREEN LOWLIGHT</td></tr><tr><td>③</td><td>B₋</td><td>BLUE LOWLIGHT</td></tr><tr><td>④</td><td>BR</td><td>SUB BRIGHTNESS</td></tr><tr><td>⑤</td><td>R₊</td><td>RED HIGHLIGHT</td></tr><tr><td>⑥</td><td>B₊</td><td>BLUE HIGHLIGHT</td></tr></table> <p>Fig. 16</p> <p><u>Operation of the Function Button (S1107) in CRT Adjustment Mode</u></p>  <p>Fig. 17</p> <p><u>Sub – bright adjustment</u></p>  <p>PUSH "TIMER" BUTTON (S1101) WHILE " BR " IS STILL ON SCREEN TO COLLAPSE THE FRAME SCAN.</p> <p>Fig. 18</p>  <p>Fig. 19</p> <p>ADJUST SCREEN UNTIL ONE COLOUR JUST APPEAR.</p> | PRESS S1107 | OSD | MEANING | ① | R ₋ | RED LOWLIGHT | ② | G ₋ | GREEN LOWLIGHT | ③ | B ₋ | BLUE LOWLIGHT | ④ | BR | SUB BRIGHTNESS | ⑤ | R ₊ | RED HIGHLIGHT | ⑥ | B ₊ | BLUE HIGHLIGHT |
| PRESS S1107 | OSD | MEANING | | | | | | | | | | | | | | | | | | | | |
| ① | R ₋ | RED LOWLIGHT | | | | | | | | | | | | | | | | | | | | |
| ② | G ₋ | GREEN LOWLIGHT | | | | | | | | | | | | | | | | | | | | |
| ③ | B ₋ | BLUE LOWLIGHT | | | | | | | | | | | | | | | | | | | | |
| ④ | BR | SUB BRIGHTNESS | | | | | | | | | | | | | | | | | | | | |
| ⑤ | R ₊ | RED HIGHLIGHT | | | | | | | | | | | | | | | | | | | | |
| ⑥ | B ₊ | BLUE HIGHLIGHT | | | | | | | | | | | | | | | | | | | | |

| Item / Preparation | Adjustment Procedure |
|--|--|
| <p>R, G, B LOW LIGHT ADJUSTMENT</p> <p>8. Complete steps 1 to 7 of the CRT cut-off procedure, and do not adjust the screen control from here on.</p> <p>9. Press the "TIMER" button (S1101) to return to full field scan, and use the Function Switch (S1107) to select the lowlight setting for one of the two colour (R, G or B) that did not appear at step 7. Fig. 16 shows the selection sequence of the Function Switch (S1107).</p> <p>10. With the R_, B_, or G_ OSD still on screen, press the "TIMER" button again to collapse the vertical scan.</p> <p>11. Use the Volume " up " and " down " buttons (S1110 and S1111) to match the levels of the two colours now on screen.</p> <p>12. Repeat Steps 9 to 11 for the remaining colour, to achieve a white line on screen.</p> <p>13. Press the "TIMER" button (S1101) to return to full frame scan.</p> <p>R, B HIGH LIGHT ADJUSTMENT</p> <p>14. Press the Normal Button on the remote control transmitter twice to return to Normal Mode, after completing the preceding CRT cut-off and lowlight adjustments.</p> <p>15. Set Contrast to Normal (max.), and continue using the flat white field input as per Step 1.</p> <p>16. Press the RECALL button together with Volume down button. Then press the "TIMER" button. (S1101) TWICE.</p> <p>17. Use the Function Button (S1107) to select R⁻ (red highlight) and B⁻ (blue highlight) as necessary (refer to Fig. 16 for the Function Button sequence).</p> <p>18. With R⁻ or B⁻ STILL ON SCREEN, press the Volume " up " and " down " buttons (S1110 and S1111) as necessary to achieve a uniform white field.</p> <p>19. Press the Normal Button on the remote control transmitter twice to return to Normal Mode.</p> <p>20. Input a greyscale pattern, and confirm correct lowlight and high-light white balance.</p> | <p>EXAMPLE: If a green line appeared at Step 7.</p> <pre> graph TD Start(()) --> T1[TIMER button (S1110)] T1 --> FS1[FULL SCAN] FS1 --> F1[Function (S1107) to select R_.] FS1 --> F2[Function (S1107) to select B_.] F1 --> D1[Diagram: R_ with dashed line] F2 --> D2[Diagram: B_ with dashed line] D1 --> T2[TIMER button (S1101)] D2 --> T2 T2 --> CS[COLLAPSE SCAN] CS --> V[Volume ▲ or ▼] V --> AL[ADJUST LOWLIGHT] AL --> D3[Diagram: White line on screen] D3 --> T3[TIMER button (S1101)] T3 --> FS2[FULL SCAN] FS2 --> R[Repeat for the remaining colour.] R --> D4[Diagram: Downward arrow] D4 --> R2[Repeat the procedure if necessary to improve white balance of the collapsed field line.] R2 --> D5[Diagram: Downward arrow] D5 --> T4[TIMER button (S1101)] T4 --> FS3[FULL SCAN] FS3 --> D6[Diagram: Downward arrow] D6 --> N[Normal button on remote control transmitter] N --> NM[NORMAL MODE] </pre> |

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Before Colour Purity, Convergence and White Balance adjustments are attempted, V. Height, H. Centre and Focus adjustments must be completed.

Colour Purity

1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 30 minutes.
3. Fully degauss the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.
5. Receive a black and white signal.
6. Set the controls as following :
 Red minimum
 Green maximum
 Blue minimum
 Press the SHIPPING button on the remote control twice to select CRT Adjustment Mode and then the Function button (S1107) as per Fig. 16 to select low lights.
7. Loosen the clamp screw for the deflection yoke A in Fig. 24 and move the deflection yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

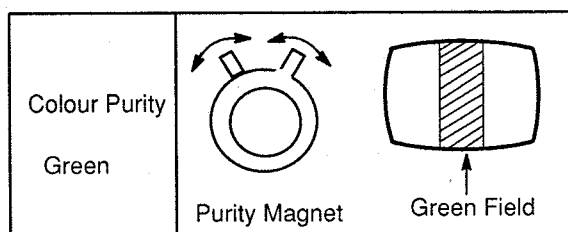


Fig. 20

9. Slowly push the deflection yoke and set it where a uniform green field is obtained.

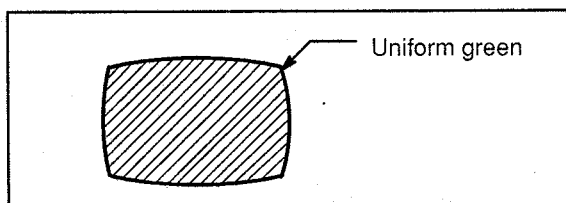


Fig. 21

10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.
11. Tighten the clamp screw A in Fig. 24.

Convergence

1. Apply a crosshatch pattern signal and Normalize Contrast control to the maximum position.
2. Adjust Brightness until the grey portion of the crosshatch pattern just becomes black.
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static convergence magnetic rings.

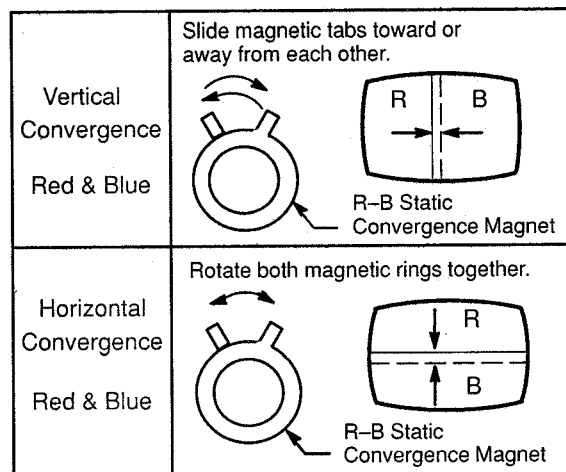


Fig. 22

4. Adjust Red and Blue with the Green line at centre of the screen by rotating (RB) - G static convergence magnetic rings.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the deflection yoke vertically and horizontally to obtain the good overall convergence.

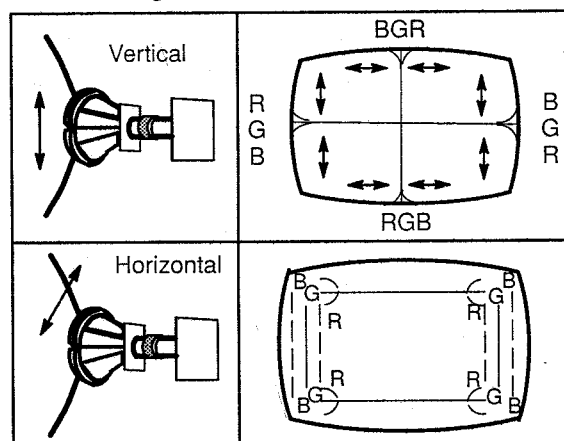


Fig. 23

7. Fix the deflection yoke by re-inserting the DY wedges. Refer to Fig. 24.
8. If purity error is found, repeat "Colour Purity" adjustment.

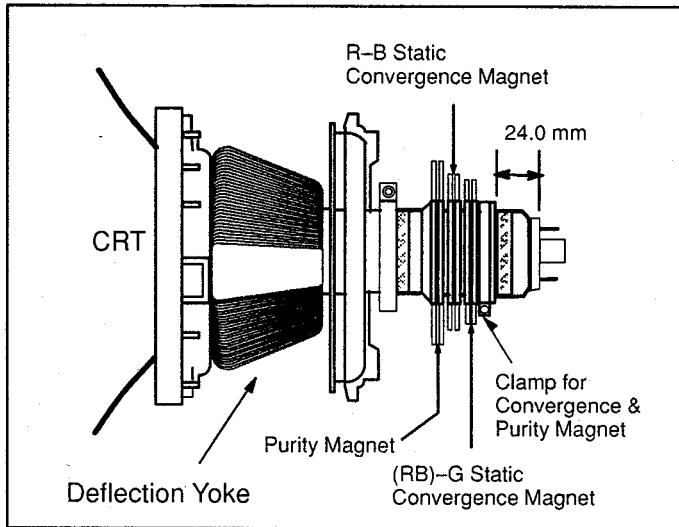


Fig. 24

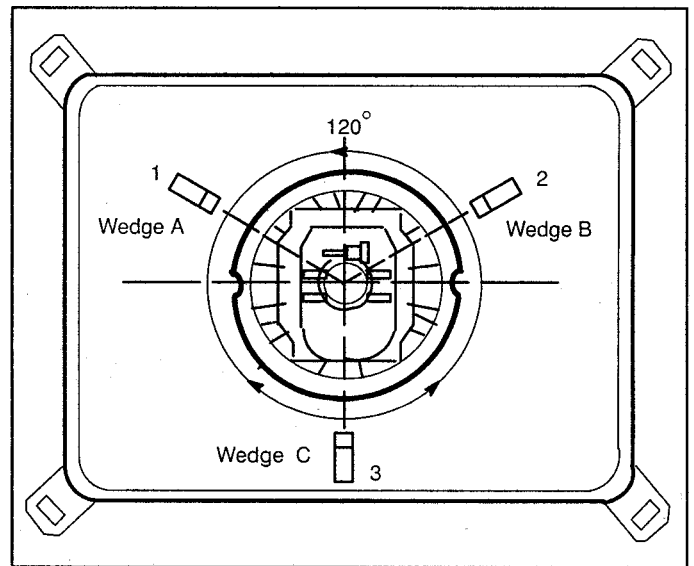


Fig. 25

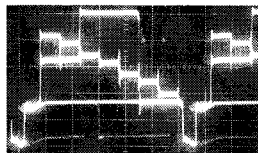
Notes :

1. Wedge A, B, and C should be inserted following the sequence of 1, 2, and 3 shown in Fig. 25.
2. The wedges should be set 120° apart from each other.
3. Be certain that the four wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

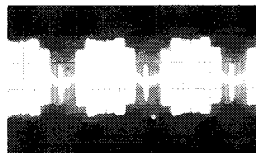
TEST POINT WAVEFORMS



1. IC101 Pin 11 (E-PCB)
Composite Video Signal
4.0V, 20 μ s / Div



2. IC601 Pin 43 (E-PCB)
Y In
0.6V, 20 μ s / Div



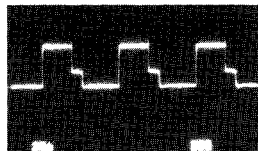
3. IC601 Pin 48 (E-PCB)
Chroma In
0.9V, 20 μ s / Div



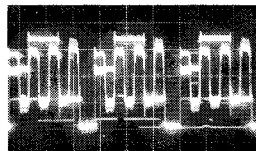
4. IC601 Pin 63 (E-PCB)
B - Y In
1.4V, 20 μ s / Div



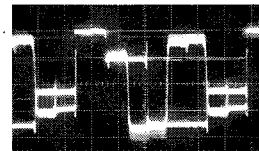
5. IC601 Pin 64 (E-PCB)
R - Y In
1.1V, 20 μ s / Div



6. IC601 Pin 56 (E-PCB)
Horizontal Out
3.9V, 20 μ s / Div



7. TPE 26 (IC601 PIN 17)
(E-PCB)
6.5V, 20 μ s / Div



8. TPE 28 (IC601 PIN 15)
(E-PCB)
6.3V, 20 μ s / Div



9. E-32 (E-PCB)
Green Output From IC601 Pin 16
5.5V, 20 μ s / Div



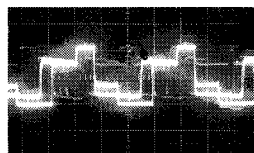
10. FBT Pin 4 (E-PCB)
316V, 50 μ s / Div



11. FBT Pin 6 (E-PCB)
273V, 20 μ s / Div



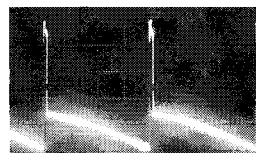
12. Q351 Collector
(Y-PCB)
124V, 20 μ s / Div



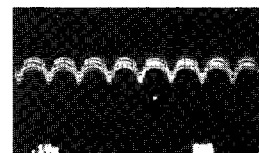
13. Q352 Collector
(Y-PCB)
109V, 20 μ s / Div



14. Q353 Collector
(Y-PCB)
125V, 20 μ s / Div



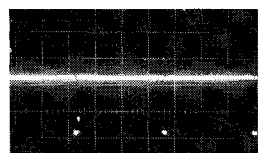
15. IC401 PIN 12 (E-PCB)
Vertical Out
48.2V, 5ms / Div



16. Q566 Base (E-PCB)
Horizontal Out
57V, 50 μ s / Div



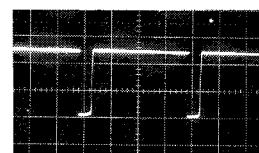
17. Q566 Collector (E-PCB)
Horizontal Out
800V, 50 μ s / Div



18. IC601 Pin 58 (E-PCB)
Vertical Out
4.4V, 5ms / Div



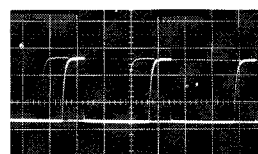
19. TPH 10 (E-PCB)
Video Output Terminal
3.88V, 20 μ s / Div



20. IC601 Pin 57 (E-PCB)
50Hz / 60Hz
0.1V, 5ms / Div



21. IC601 Pin 21 (E-PCB)
S D A
4.8V, 20 μ s / Div



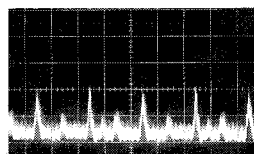
22. IC601 Pin 22 (E-PCB)
S C L
5.0V, 20 μ s / Div



23. IC601 Pin 45 (E-PCB)
Vertical Separator
2.0V, 20 μ s / Div



24. IC1101 Pin 12 (E-PCB)
Band 1
0.5V, 1 μ s / Div



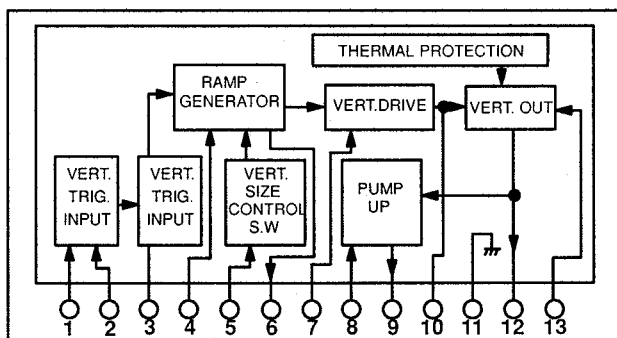
25. IC1101 Pin 10 (E-PCB)
Band 2
0.4V, 1 μ s / Div



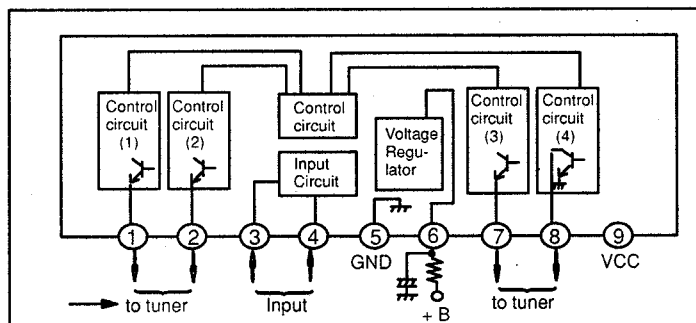
26. IC401 Pin 2 (E-PCB)
Vertical Trigger Input
4.3V, 5ms / Div

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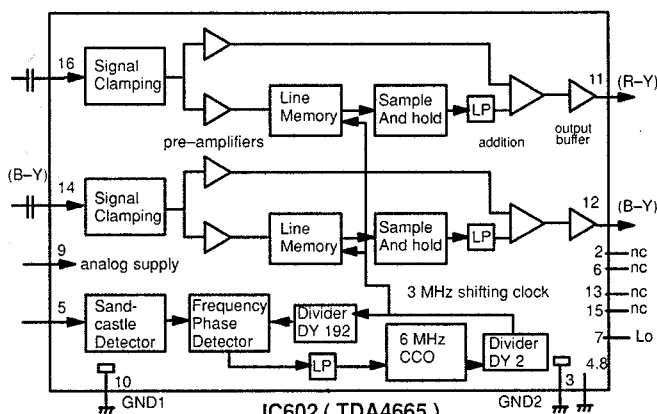
Block Diagram for Integrated Circuits



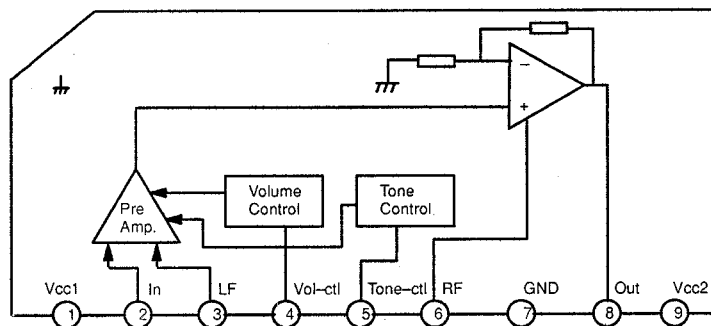
IC401 (LA 7837)



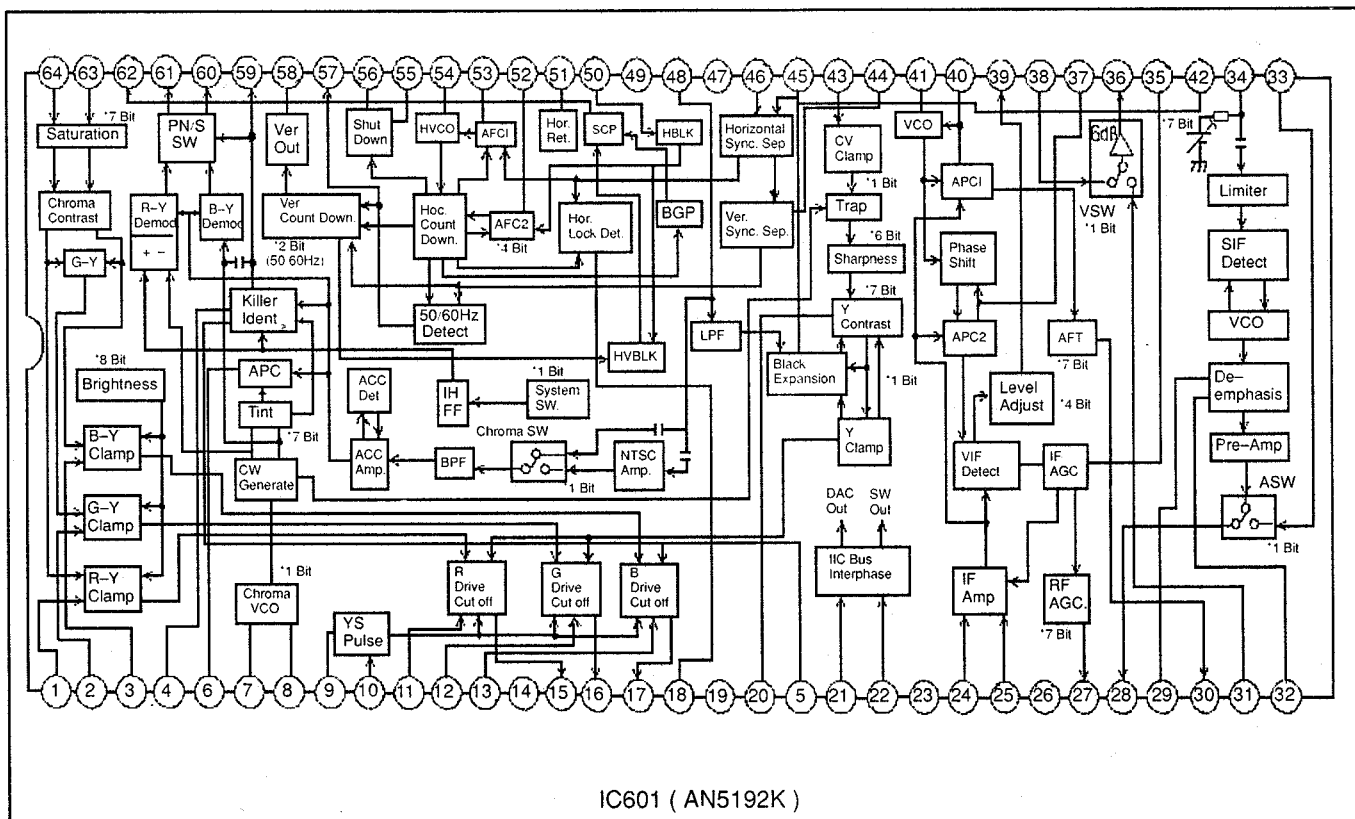
IC1103 (AN5071)



IC602 (TDA4665)

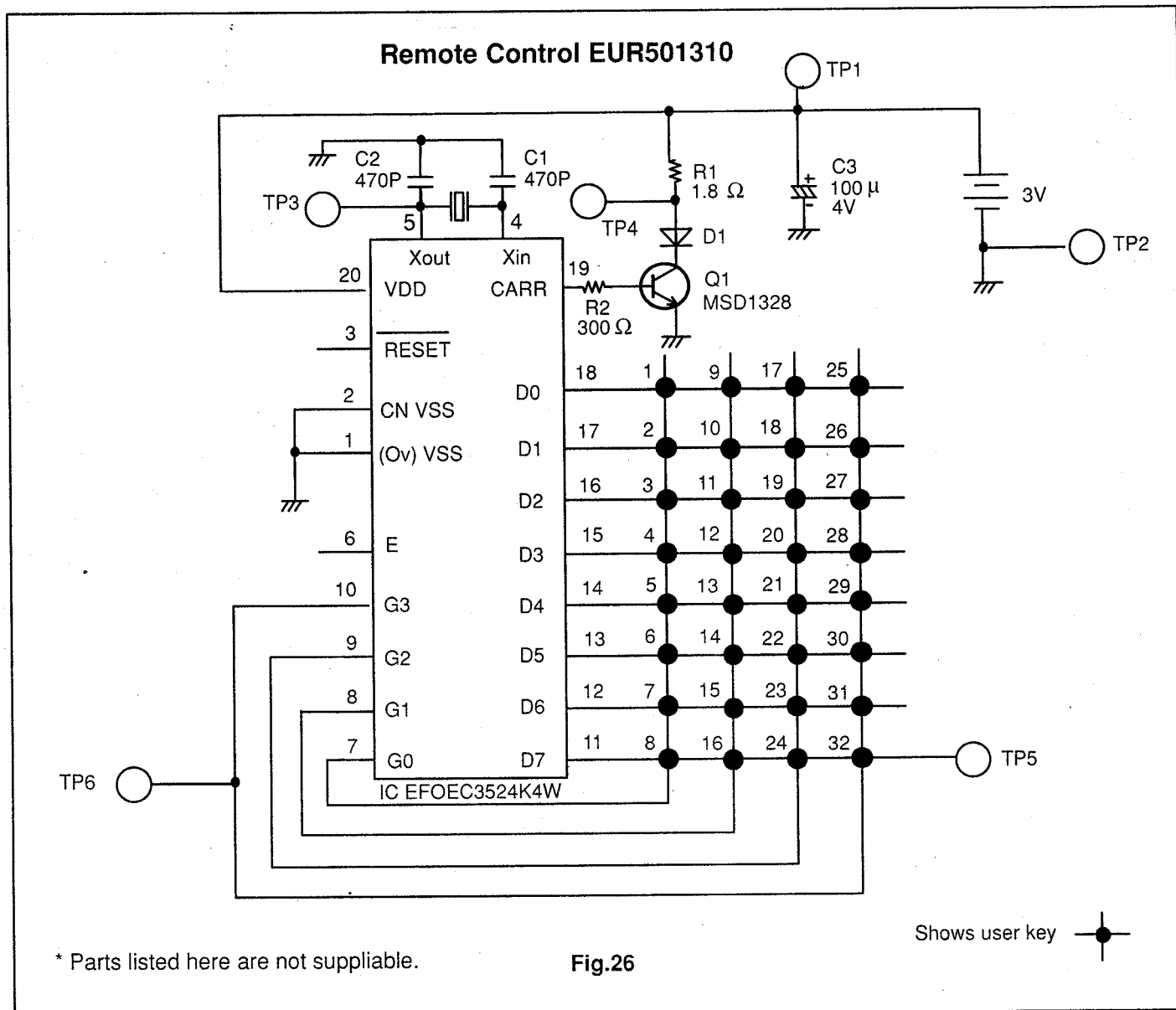


IC2301 (AN5270)

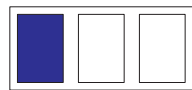
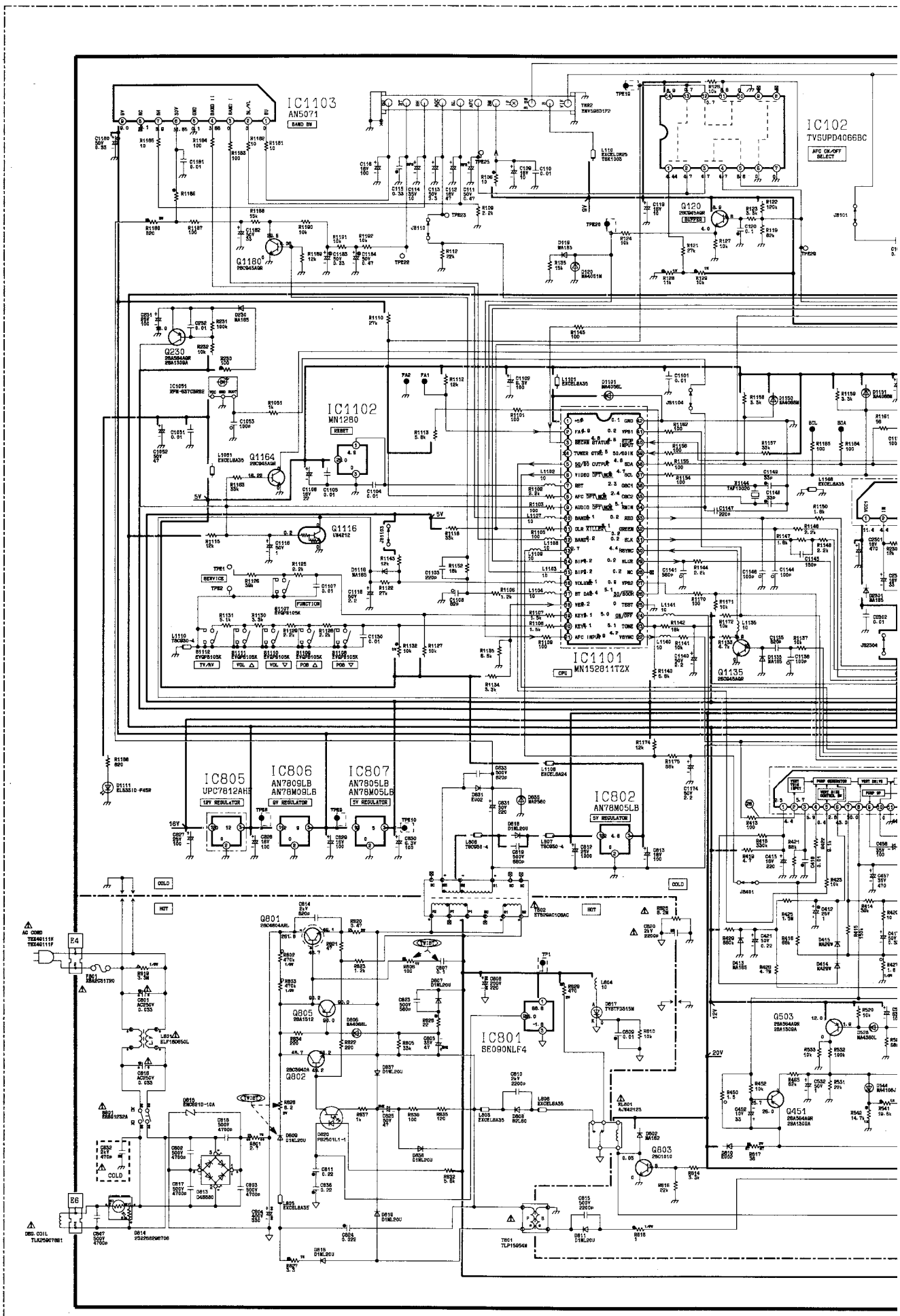


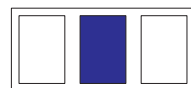
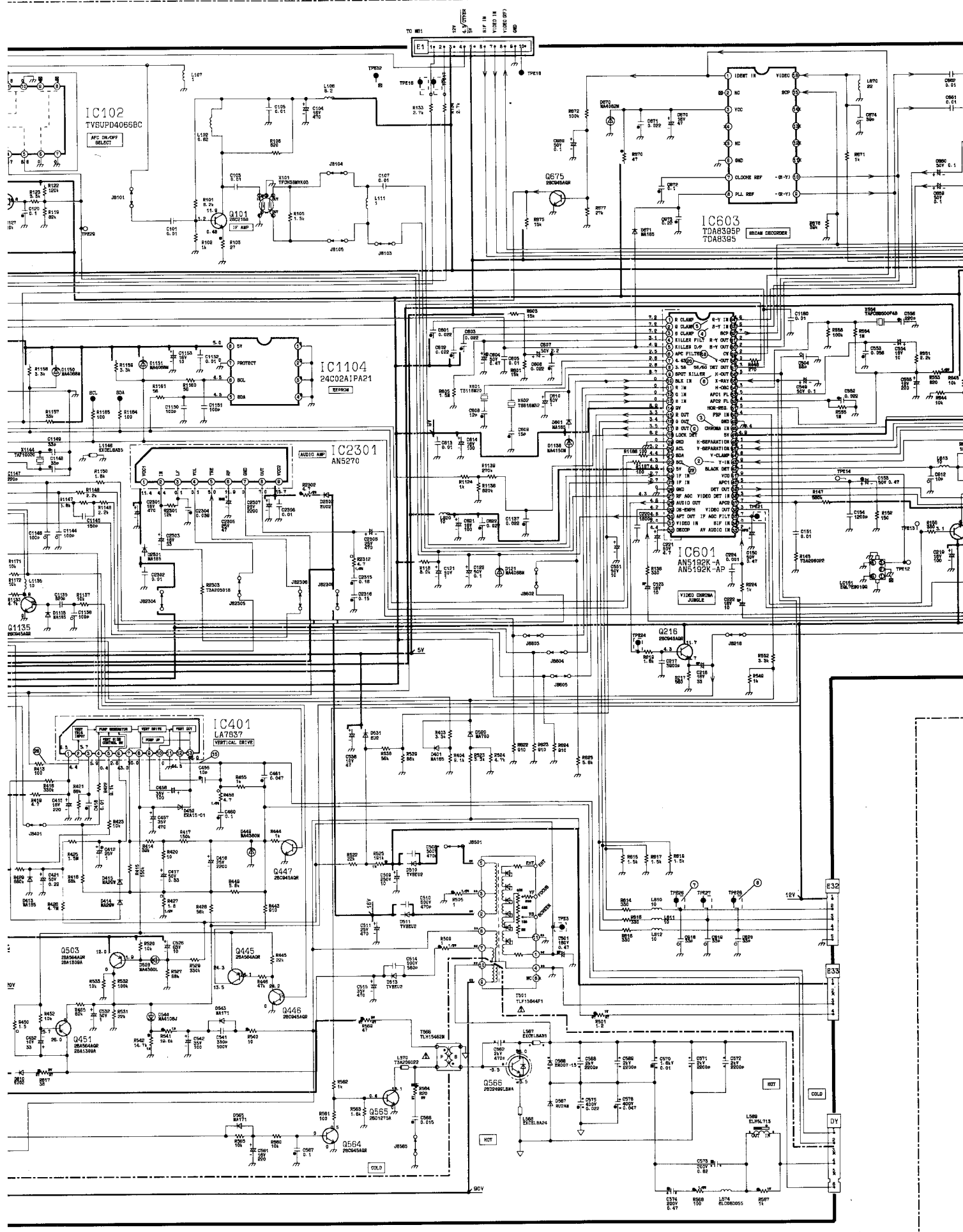
IC601 (AN5192K)

TC-21S10R/2105RT/21S1



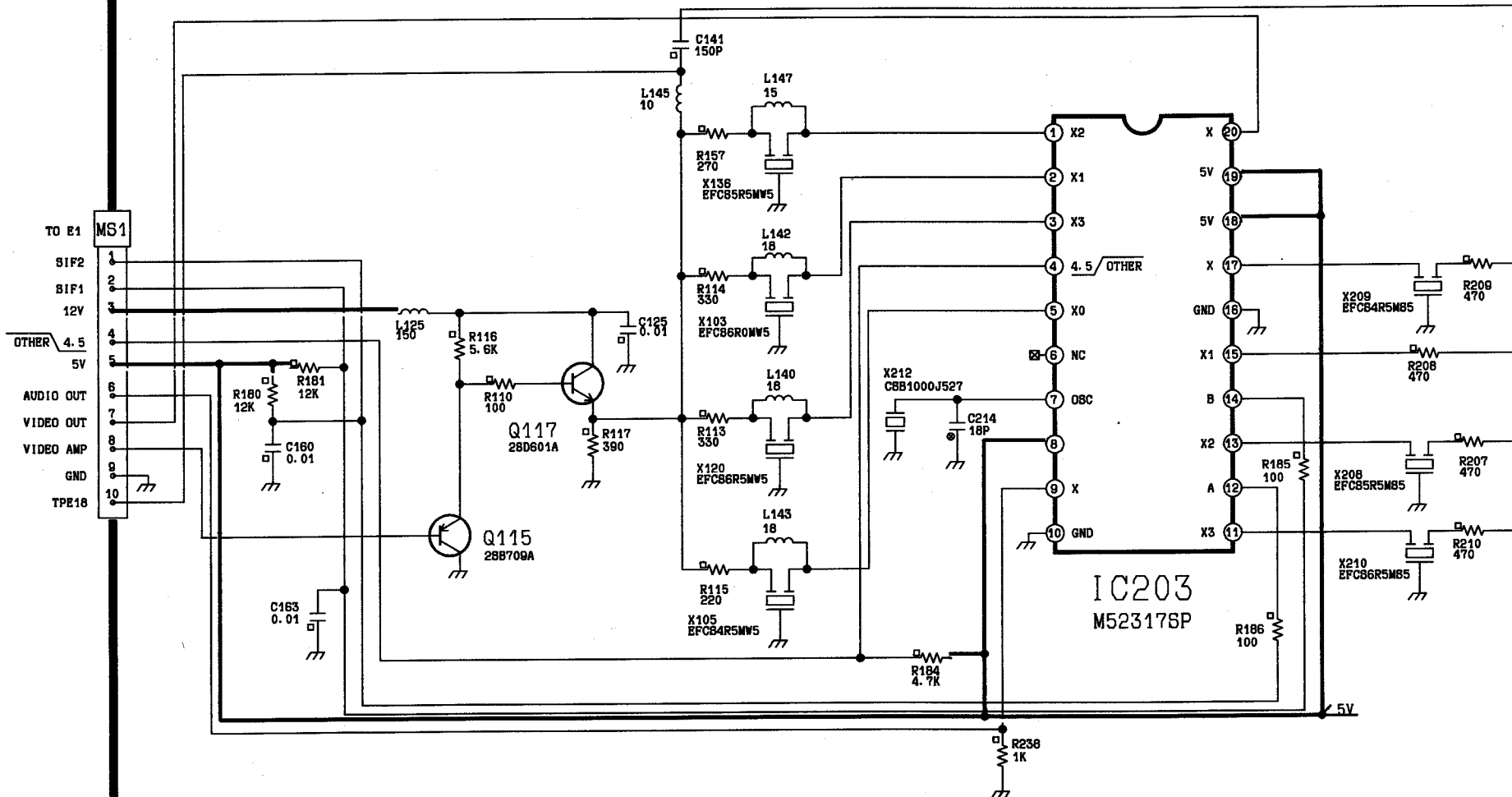
| KEY NO. | FUNCTION | DATA CODE | | KEY NO. | FUNCTION | DATA CODE | |
|---------|-----------|-----------|-----|---------|-------------------|-----------|-----|
| | | ON | OFF | | | ON | OFF |
| 1 | TV/VIDEO | 05 | | 12 | CH 8 | 17 | |
| 2 | FUNCTION | 06 | | 13 | CH 9 | 18 | |
| 3 | NORMAL | 0C | | 14 | CH 0 | 19 | |
| 4 | OFF TIMER | 0F | | 15 | VOLUME UP | 20 | |
| 5 | CH 1 | 10 | | 16 | VOLUME DOWN | 21 | |
| 6 | CH 2 | 11 | | 17 | MUTE | 32 | |
| 7 | CH 3 | 12 | | 18 | CH UP | 34 | |
| 8 | CH 4 | 13 | | 19 | CH DOWN | 35 | |
| 9 | CH 5 | 14 | | 20 | RECALL (STATUS) | 39 | |
| 10 | CH 6 | 15 | | 21 | 2 DIGIT | 3B | |
| 11 | CH 7 | 16 | | 22 | TV POWER | 3D | |

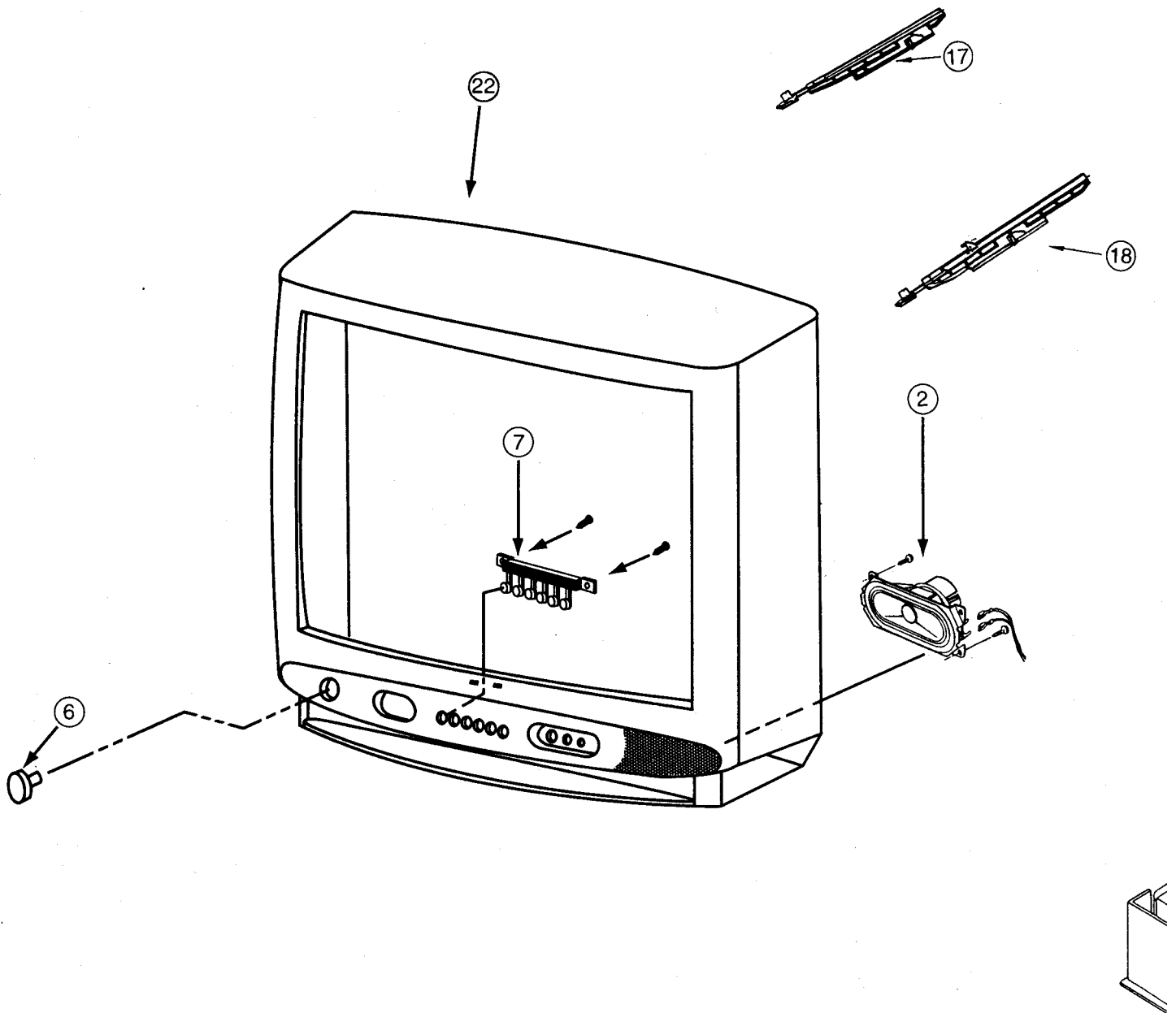






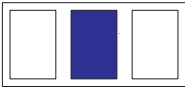
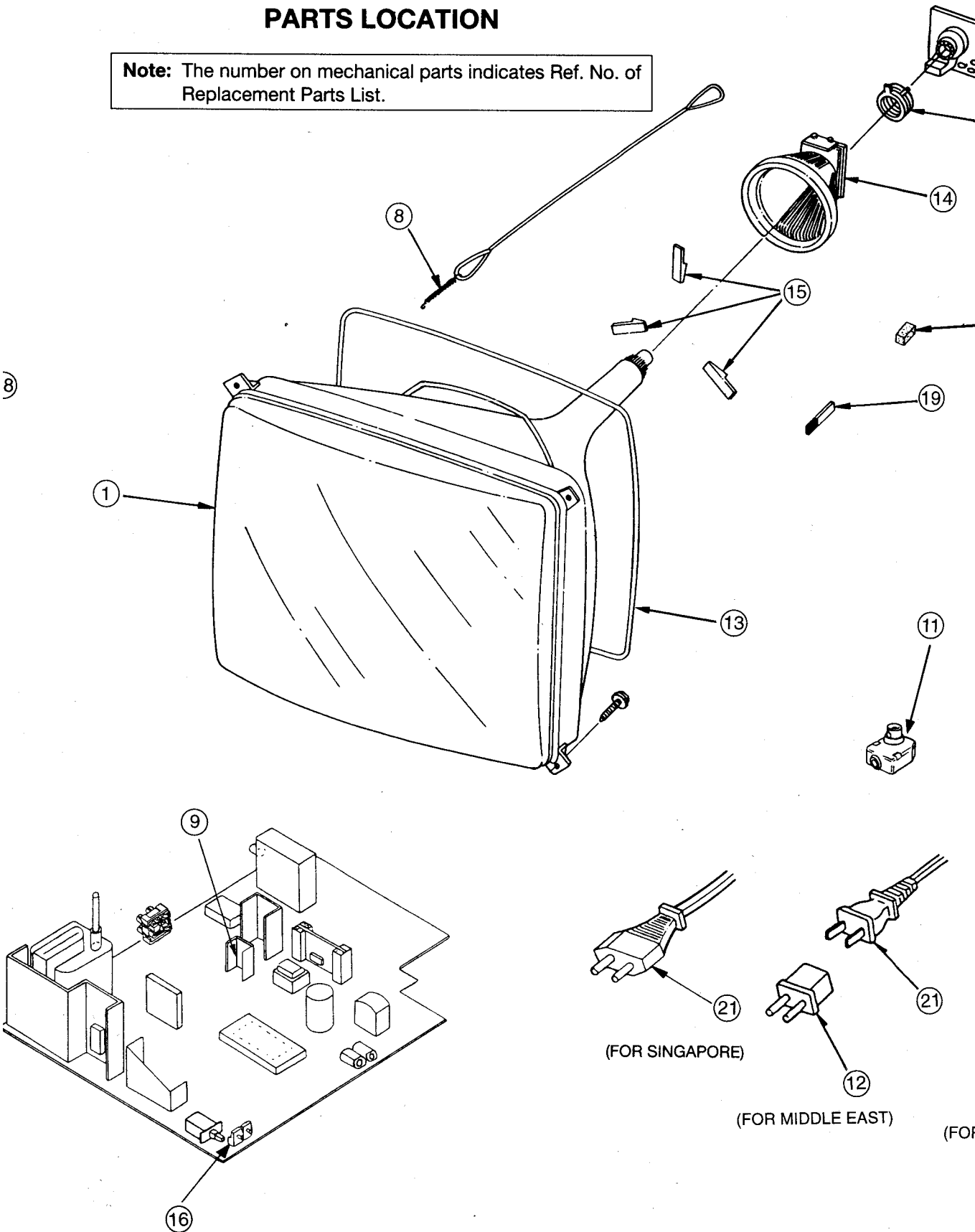
MS TNP4G008AG

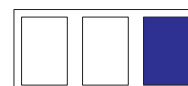
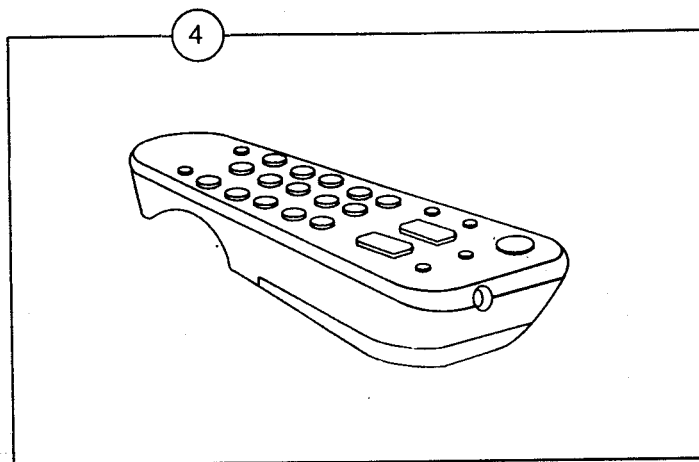
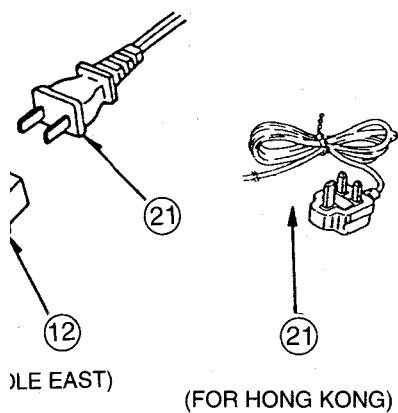
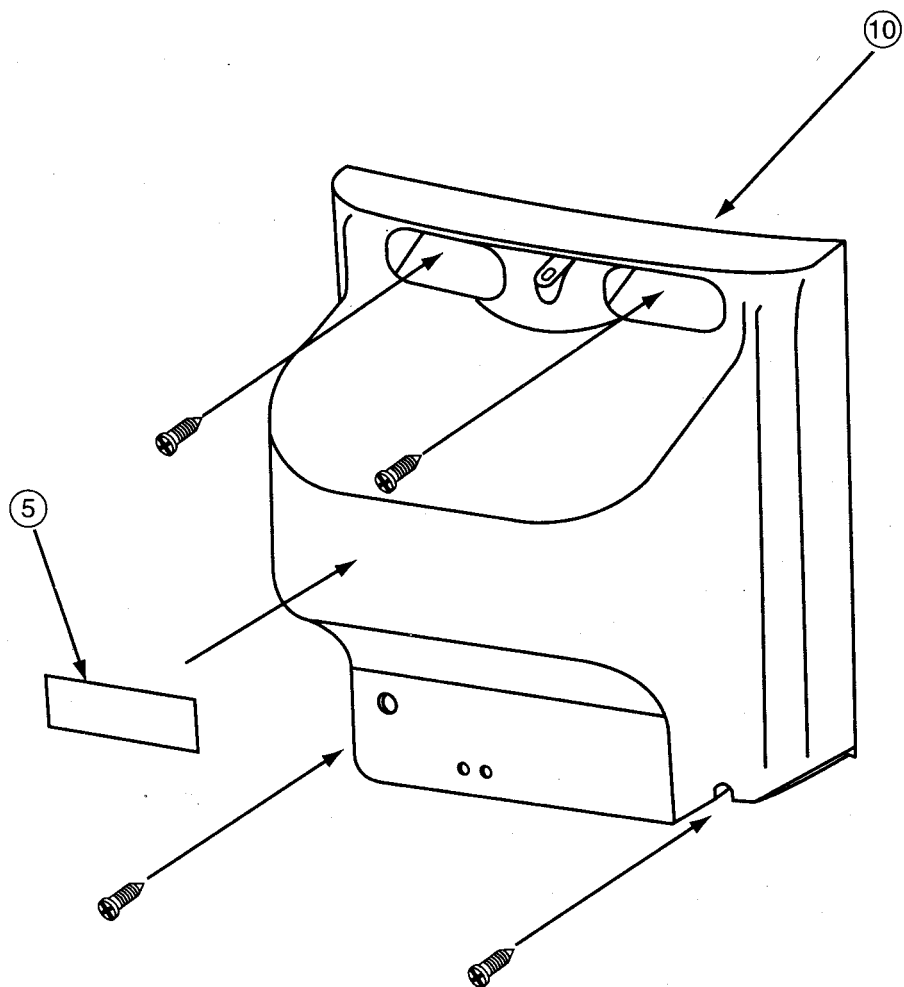
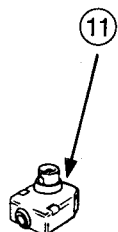
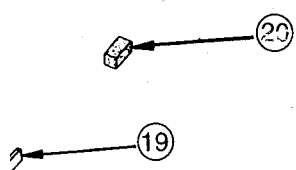
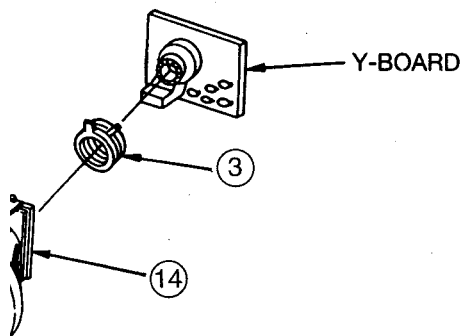




PARTS LOCATION









Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.





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Replacement Parts List

| Ref.No. | Part No. | Description |
|-------------------------|--------------|---|
| MECHANICAL PARTS | | |
| 1 | A51JXS95X | PICTURE TUBE  |
| 2 | EASG12D123H2 | SPEAKER MTV |
| 3 | ETC33X8NA | CONVERGENCE YOKE MTV |
| 4 | EUR501310 | REMOTE CONTROLTRANS. MTV |
| 5 | TBM4G0166 | MODEL NAME PLATE (FOR SINGAPORE ONLY) MTV |
| 5 | TBM4G0167 | MODEL NAME PLATE (FOR MIDDLE EAST ONLY) MTV |
| 5 | TBM4G0168 | MODEL NAME PLATE (FOR CIS ONLY) MTV |
| 5 | TBM4G0169 | MODEL NAME PLATE (FOR HONG KONG ONLY) MTV |
| 6 | TBX2685800 | POWER BUTTON MTV |
| 7 | TBX2685900 | KEY BUTTON MTV |
| 8 | TES4223 | SPRING |
| 9 | TES4537 | SPRING |
| 10 | TKU4G2001 | BACK COVER MTV |
| 11 | TJB1726400 | ADAPTOR MTV |
| 12 | TJS2A8420 | AC PLUG ADAPTOR (FOR MIDDLE EAST ONLY) |
| 13 | TLK259078S1 | DEGAUSSING COIL |
| 14 | TLY4G307F | DEFLECTION YOKE MTV  |
| 15 | TMM27523 | DY WEDGE |
| 16 | TMW15947 | BRACKET |
| 17 | TMZ4G9805 | CHASSIS RAIL (L) MTV |
| 18 | TMZ4G9806 | CHASSIS RAIL (R) MTV |
| NLA | TNP4G008AG | MS BOARD MTV  |
| NLA | TNP4G036AT | E BOARD MTV  |
| NLA | TNP4G037AE | Y BOARD MTV  |
| | TPC4G41111 | CARTON (FOR SINGAPORE ONLY) MTV |
| | TPC4G41112 | CARTON (FOR MIDDLE EAST ONLY) MTV |
| | TPC4G41113 | CARTON (FOR CIS ONLY) MTV |
| | TPC4G41114 | CARTON (FOR HONG KONG ONLY) MTV |
| | TPE4G14002 | SET COVER MTV |
| | TPE4G14003 | LAMI BAG MTV |
| | TQB4G1126 | FAN BAG (FOR KUWAIT & U.A.E. ONLY) MTV |
| | TQB4G1127 | FAN BAG (FOR HONG KONG ONLY) MTV |
| | TQB4G1123 | FAN BAG (FOR S.A.RABIA ONLY) MTV |
| | TQB4G1124 | FAN BAG (FOR CIS ONLY) MTV |
| | TQB4G1132 | FAN BAG (FOR SINGAPORE ONLY) MTV |
| 19 | TSM10032-2 | MAGNET |
| 20 | TSN63115-4 | PURITY MAGNET MTV |
| 21 | TSX4G111H | AC POWER CORD (FOR SINGAPORE & CIS ONLY) MTV  |
| 21 | TSX4G112F | AC POWER CORD (FOR MIDDLE EAST ONLY) MTV  |
| 21 | TSX4G117H | AC POWER CORD (FOR HONG KONG ONLY) MTV  |
| 22 | TXFKY01AH2S | CABINET ASSY (FOR SINGAPORE & H.KONG ONLY) MTV |
| 22 | TXFKY01AH2P | CABINET ASSY (FOR KUWAIT, U.A.E., & S.A.RABIA ONLY) MTV |




| Ref.No. | Part No. | Description |
|------------------|--------------|---|
| 22 | TXFKY01AH4V | CABINET ASSY (FOR CIS ONLY) MTV |
| | TXFPD01AB2S | CUSHION (TOP) MTV |
| | TXFPD02AB2S | CUSHION (BOTTOM) MTV |
| RESISTORS | | |
| R101 | ERDS2TJ822 | C 8.2KOHM. J.1/4W |
| R102 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R103 | ERQ14AJ270P | F 27OHM. J.1/4W  |
| R105 | ERDS2TJ152 | C 1.5KOHM. J.1/4W |
| R106 | ERQ14AJ100P | F 10OHM. J.1/4W  |
| R108 | ERDS2TJ821 | C 820OHM. J.1/4W |
| R109 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R110 | ERJ6GEYJ101 | M 100OHM.J.1/10W |
| R112 | ERDS2TJ223 | C 22KOHM. J.1/4W |
| R113 | ERJ6GEYJ331 | M 330OHM.J.1/10W |
| R114 | ERJ6GEYJ331 | M 330OHM.J.1/10W |
| R115 | ERJ6GEYJ221 | M 220OHM.J.1/10W |
| R116 | ERJ6GEYJ562 | M 5.6KOHM.J.1/10W |
| R117 | ERJ6GEYJ101 | M 100OHM.J.1/10W |
| R118 | ERDS2TJ822 | C 8.2KOHM. J.1/4W |
| R119 | ERDS2TJ823 | C 82KOHM. J.1/4W |
| R121 | ERDS2TJ273 | C 27KOHM. J.1/4W |
| R122 | ERDS2TJ124 | C 120KOHM. J.1/4W |
| R123 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R124 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R126 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R127 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R128 | ER0S2CKF1102 | M 11KOHM. F.1/4W |
| R129 | ER0S2CKF1002 | M 10KOHM. F.1/4W |
| R133 | ERDS2TJ272 | C 2.7KOHM. J.1/4W |
| R134 | ERDS2TJ272 | C 2.7KOHM. J.1/4W |
| R135 | ERDS2TJ153 | C 15KOHM. J.1/4W |
| R136 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R147 | ERDS2TJ564 | C 560KOHM. J.1/4W |
| R150 | ERDS2TJ471 | C 470OHM. J.1/4W |
| R151 | ERDS2TJ471 | C 470OHM. J.1/4W |
| R152 | ERDS2TJ151 | C 150OHM. J.1/4W |
| R153 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R154 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R155 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R156 | ERDS2TJ684 | C 680KOHM. J.1/4W |
| R157 | ERJ6GEYJ271 | M 270OHM.J.1/10W |
| R180 | ERJ6GEYJ123 | M 12KOHM.J.1/10W |
| R181 | ERJ6GEYJ123 | M 12KOHM.J.1/10W |
| R184 | ERJ6GEYJ472 | M 4.7KOHM.J.1/10W |
| R185 | ERJ6GEYJ101 | M 100OHM.J.1/10W |
| R186 | ERJ6GEYJ101 | M 100OHM.J.1/10W |
| R207 | ERJ6GEYJ471 | M 470OHM.J.1/10W |
| R208 | ERJ6GEYJ471 | M 470OHM.J.1/10W |
| R209 | ERJ6GEYJ471 | M 470OHM.J.1/10W |
| R210 | ERJ6GEYJ471 | M 470OHM.J.1/10W |
| R217 | ERDS2TJ561 | C 560OHM. J.1/4W |
| R219 | ERDS2TJ182 | C 1.8KOHM. J.1/4W |
| R220 | ERDS2TJ682 | C 6.8KOHM. J.1/4W |
| R221 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |

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| Ref.No. | Part No. | Description |
|---------|--------------|-------------------|
| R222 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R223 | ERDS2TJ471 | C 470OHM. J.1/4W |
| R224 | ERD25TJ102 | C 1KOHM. J.1/4W |
| R225 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R227 | ERDS2TJ104 | C 100KOHM. J.1/4W |
| R228 | ERDS2TJ750 | C 750OHM. J.1/4W |
| R230 | ERQ14AJ101P | F 100OHM. J.1/4W |
| R231 | ERDS2TJ104 | C 100KOHM. J.1/4W |
| R232 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R238 | ERJ6GEYJ102 | M 1KOHM. J.1/10W |
| R250 | ERDS2TJ221 | C 220OHM. J.1/4W |
| R251 | ERDS2TJ221 | C 220OHM. J.1/4W |
| R351 | ERG2ANJ123 | M 12KOHM. J. 2W |
| R352 | ERG2ANJ123 | M 12KOHM. J. 2W |
| R366 | ERDS2TJ391 | C 390OHM. J.1/4W |
| R367 | ERDS2TJ391 | C 390OHM. J.1/4W |
| R368 | ERDS2TJ391 | C 390OHM. J.1/4W |
| R369 | ERDS2TJ272 | C 2.7KOHM. J.1/4W |
| R370 | ERDS2TJ272 | C 2.7KOHM. J.1/4W |
| R371 | ERDS2TJ272 | C 2.7KOHM. J.1/4W |
| R372 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R373 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R374 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R375 | ERDS1TJ272 | C 2.7KOHM. J.1/2W |
| R376 | ERG2ANJ123 | M 12KOHM. J. 2W |
| R386 | ERDS1TJ272 | C 2.7KOHM. J.1/2W |
| R387 | ERDS1TJ272 | C 2.7KOHM. J.1/2W |
| R403 | ERD25TJ332 | C 3.3KOHM. J.1/4W |
| R404 | ERDS2TJ912 | C 9.1KOHM. J.1/4W |
| R413 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R414 | ERDS2TJ393 | C 39KOHM. J.1/4W |
| R415 | ERDS2TJ154 | C 150KOHM. J.1/4W |
| R416 | ERDS2TJ683 | C 68KOHM. J.1/4W |
| R417 | ERDS2TJ154 | C 150KOHM. J.1/4W |
| R418 | ERDS2TJ334 | C 330KOHM. J.1/4W |
| R419 | ERDS2TJ4R7 | C 4.7OHM. J.1/4W |
| R420 | ERDS2TJ100 | C 10OHM. J.1/4W |
| R421 | ERDS2TJ683 | C 68KOHM. J.1/4W |
| R422 | ERDS2TJ912 | C 9.1KOHM. J.1/4W |
| R423 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R425 | ERDS2TJ155 | C 1.5MOHM. J.1/4W |
| R426 | ERDS2TJ475 | C 4.7MOHM. J.1/4W |
| R427 | ERDS1FJ1R8 | C 1.8OHM. J.1/2W |
| R428 | ERDS2TJ563 | C 56KOHM. J.1/4W |
| R429 | ERDS2TJ684 | C 680KOHM. J.1/4W |
| R430 | ERDS2TJ274 | C 270KOHM. J.1/4W |
| R432 | ERDS2TJ681 | C 680OHM. J.1/4W |
| R443 | ERDS2TJ911 | C 910OHM. J.1/4W |
| R444 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R445 | ERDS2TJ223 | C 22KOHM. J.1/4W |
| R446 | ERDS2TJ473 | C 47KOHM. J.1/4W |
| R448 | ERDS2TJ271 | C 270OHM. J.1/4W |
| R449 | ERDS2TJ562 | C 5.6KOHM. J.1/4W |
| R450 | ERD2FAVJ1R5T | C 1.5OHM. J.1/4W |
| R452 | ERD25TJ103 | C 10KOHM. J.1/4W |
| R455 | ERDS2TJ102 | C 1KOHM. J.1/4W |

| Ref.No. | Part No. | Description |
|---------|--------------|-------------------|
| R456 | ERDS1FJ4R7 | C 4.7OHM. J.1/2W |
| R457 | ERDS2TJ221 | C 220OHM. J.1/4W |
| R458 | ERDS2TJ684 | C 680KOHM. J.1/4W |
| R459 | ERDS2TJ155 | C 1.5MOHM. J.1/4W |
| R465 | ERD25TJ823 | C 82KOHM. J.1/4W |
| R501 | ERQ1CJP1R2S | F 1.2OHM. J. 1W |
| R505 | ERQ12HJ1R0 | F 1OHM. J.1/2W |
| R509 | ERQ12AJ1R0E | F 1OHM. J.1/2W |
| R520 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R522 | ERDS2TJ223 | C 22KOHM. J.1/4W |
| R523 | ERD25TJ332 | C 3.3KOHM. J.1/4W |
| R524 | ERDS2TJ472 | C 4.7KOHM. J.1/4W |
| R525 | ER025CKF1913 | M 191KOHM. F.1/4W |
| R527 | ERDS2TJ683 | C 68KOHM. J.1/4W |
| R529 | ERDS2TJ334 | C 330KOHM. J.1/4W |
| R531 | ERDS2TJ223 | C 22KOHM. J.1/4W |
| R532 | ERDS2TJ104 | C 100KOHM. J.1/4W |
| R533 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R538 | ERDS2TJ563 | C 56KOHM. J.1/4W |
| R539 | ERDS2TJ683 | C 68KOHM. J.1/4W |
| R540 | ERQ14AJ100P | F 100OHM. J.1/4W |
| R541 | ER0S2CKF1962 | M19.6KOHM. F.1/4W |
| R542 | ER0S2CKF1472 | M14.7KOHM. F.1/4W |
| R545 | ERDS2TJ824 | C 820KOHM. J.1/4W |
| R547 | ERDS2TJ561 | C 560OHM. J.1/4W |
| R549 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R551 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R552 | ERD25TJ332 | C 3.3KOHM. J.1/4W |
| R553 | ERDS1TJ821 | C 820OHM. J.1/2W |
| R554 | ERDS2TJ105 | C 1MOHM. J.1/4W |
| R555 | ERDS2TJ105 | C 1MOHM. J.1/4W |
| R558 | ERDS2TJ104 | C 100KOHM. J.1/4W |
| R560 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R561 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R562 | ERD25TJ102 | C 1KOHM. J.1/4W |
| R563 | ERDS2TJ182 | C 1.8KOHM. J.1/4W |
| R564 | ERG2ANJ821 | M 470OHM. J. 2W |
| R565 | ERD25TJ103 | C 10KOHM. J.1/4W |
| R567 | ERQ1CJP102S | F 1KOHM. J. 1W |
| R568 | ERQ12AJ101E | F 100OHM. J.1/2W |
| R569 | ERG3ANJ470H | M 27OHM. J. 2W |
| R601 | ERDS2TJ153 | C 15KOHM. J.1/4W |
| R603 | ERDS2TJ153 | C 15KOHM. J.1/4W |
| R605 | ERDS2TJ155 | C 1.5MOHM. J.1/4W |
| R612 | ERDS2TJ824 | C 820KOHM. J.1/4W |
| R613 | ERDS2TJ184 | C 180KOHM. J.1/4W |
| R614 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R615 | ERDS2TJ152 | C 1.5KOHM. J.1/4W |
| R616 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R617 | ERDS2TJ152 | C 1.5KOHM. J.1/4W |
| R618 | ERDS2TJ331 | C 330OHM. J.1/4W |
| R619 | ERDS2TJ152 | C 1.5KOHM. J.1/4W |
| R622 | ERDS2TJ911 | C 910OHM. J.1/4W |
| R623 | ERDS2TJ911 | C 910OHM. J.1/4W |
| R624 | ERDS2TJ911 | C 910OHM. J.1/4W |
| R625 | ERDS2TJ562 | C 5.6KOHM. J.1/4W |

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| Ref.No. | Part No. | Description |
|---------|-------------|--|
| R637 | ERDS2TJ271 | C 270OHM. J.1/4W |
| R638 | ERD25TJ561 | C 560OHM. J.1/4W |
| R644 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R645 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R652 | ERD25TJ391 | C 390OHM. J.1/4W |
| R653 | ERDS2TJ821 | C 820OHM. J.1/4W |
| R670 | ERQ14AJ470P | F 470OHM. J.1/4W  |
| R671 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R672 | ERD25TJ104 | C 100KOHM. J.1/4W |
| R675 | ERDS2TJ153 | C 15KOHM. J.1/4W |
| R677 | ERDS2TJ273 | C 27KOHM. J.1/4W |
| R678 | ERDS2TJ393 | C 39KOHM. J.1/4W |
| R801 | ERF7ZK2R7 | W 2.7OHM. K. 7W |
| R802 | ERD50FJ474 | C 470KOHM. J.1/2W |
| R803 | ERD50FJ474 | C 470KOHM. J.1/2W |
| R805 | ERDS2TJ333 | C 33KOHM. J.1/4W |
| R806 | ERG1SJ101P | M 100OHM. J. 1W |
| R810 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R814 | ERD25TJ332 | C 3.3KOHM. J.1/4W |
| R816 | ERDS2TJ223 | C 22KOHM. J.1/4W |
| R817 | ERG2ANJ360 | M 360OHM. J. 2W MTV |
| R818 | ERQ12AJ1R0E | F 1OHM. J.1/2W MTV  |
| R819 | ERC12ZGK335 | S 3.3MOHM. K.1/2W |
| R820 | ERW2PKR47 | W 0.47OHM. 2W |
| R821 | ERD25TJ470 | C 470OHM. J.1/4W |
| R822 | ERDS2TJ221 | C 220OHM. J.1/4W |
| R823 | ERDS2TJ122 | C 1.2KOHM. J.1/4W |
| R825 | ERD75TAJ825 | C 8.2MOHM. J.3/4W |
| R826 | ERQ14AJ220P | F 220OHM. J.1/4W  |
| R827 | ERX1SJ3R3P | M 3.3OHM. J. 1W |
| R828 | ERX1SJ6R2E | M 6.2OHM. J. 1W MTV |
| R829 | ERG2ANJ471H | M 470OHM. J. 2W |
| R832 | ERDS2TJ562 | C 5.6KOHM. J.1/4W |
| R834 | ERDS2TJ221 | C 220OHM. J.1/4W |
| R835 | ERDS2TJ121 | C 120OHM. J.1/4W |
| R836 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R837 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R1051 | ERD25TJ102 | C 1KOHM. J.1/4W |
| R1101 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1102 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R1103 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1105 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1106 | ERD25TJ122 | C 1.2KOHM. J.1/4W |
| R1107 | ERD25TJ152 | C 1.5KOHM. J.1/4W |
| R1108 | ERD25TJ152 | C 1.5KOHM. J.1/4W |
| R1109 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1110 | ERDS2TJ273 | C 27KOHM. J.1/4W |
| R1112 | ERDS2TJ123 | C 12KOHM. J.1/4W |
| R1113 | ERDS2TJ562 | C 5.6KOHM. J.1/4W |
| R1115 | ERDS2TJ123 | C 12KOHM. J.1/4W |
| R1116 | ERDS2TJ333 | C 33KOHM. J.1/4W |
| R1122 | ERDS2TJ273 | C 27KOHM. J.1/4W |
| R1124 | ERDS2TJ102 | C 1KOHM. J.1/4W |
| R1125 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R1126 | ERDS2TJ393 | C 39KOHM. J.1/4W |
| R1127 | ERD25TJ103 | C 10KOHM. J.1/4W |

| Ref.No. | Part No. | Description |
|---------|--------------|--|
| R1128 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R1129 | ERDS2TJ222 | C 2.2KOHM. J.1/4W |
| R1130 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R1131 | ERDS2TJ512 | C 5.1KOHM. J.1/4W |
| R1132 | ER025CKF1002 | M 10KOHM. F.1/4W |
| R1133 | ERDS2TJ472 | C 4.7KOHM. J.1/4W |
| R1134 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R1135 | ERDS2TJ682 | C 6.8KOHM. J.1/4W |
| R1135 | ERDS2TJ392 | C 3.9KOHM. J.1/4W (FOR S.ARABIA ONLY) |
| R1136 | ERDS2TJ824 | C 820KOHM. J.1/4W |
| R1137 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1139 | ERDS2TJ274 | C 270KOHM. J.1/4W |
| R1140 | ERDS2TJ562 | C 5.6KOHM. J.1/4W |
| R1141 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1142 | ERDS2TJ183 | C 18KOHM. J.1/4W |
| R1143 | ERDS2TJ123 | C 12KOHM. J.1/4W |
| R1144 | ERD25TJ222 | C 2.2KOHM. J.1/4W |
| R1145 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1146 | ERD25TJ222 | C 2.2KOHM. J.1/4W |
| R1147 | ERDS2TJ182 | C 1.8KOHM. J.1/4W |
| R1148 | ERD25TJ222 | C 2.2KOHM. J.1/4W |
| R1150 | ERD25TJ182 | C 1.8KOHM. J.1/4W |
| R1152 | ERDS2TJ183 | C 18KOHM. J.1/4W |
| R1154 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1155 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1156 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1157 | ERD25TJ333 | C 33KOHM. J.1/4W |
| R1158 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R1159 | ERDS2TJ332 | C 3.3KOHM. J.1/4W |
| R1160 | ERDS2TJ560 | C 560OHM. J.1/4W |
| R1161 | ERDS2TJ560 | C 560OHM. J.1/4W |
| R1162 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1163 | ERDS2TJ333 | C 33KOHM. J.1/4W |
| R1164 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1165 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1166 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1167 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1168 | ERDS2TJ821 | C 820OHM. J.1/4W |
| R1170 | ERD25TJ101 | C 100OHM. J.1/4W |
| R1171 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1172 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1174 | ERD25TJ123 | C 12KOHM. J.1/4W |
| R1175 | ERDS2TJ683 | C 68KOHM. J.1/4W |
| R1180 | ERG3ANJ821H | M 820OHM. J. 3W |
| R1181 | ERDS2TJ100 | C 10OHM. J.1/4W |
| R1182 | ERDS2TJ100 | C 10OHM. J.1/4W |
| R1183 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1184 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1185 | ERDS2TJ100 | C 10OHM. J.1/4W |
| R1186 | ER0S2CKF1800 | M 180OHM. F.1/4W |
| R1187 | ERDS2TJ101 | C 100OHM. J.1/4W |
| R1188 | ERDS2TJ153 | C 15KOHM. J.1/4W |
| R1189 | ERDS2TJ123 | C 12KOHM. J.1/4W |
| R1190 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1191 | ERDS2TJ103 | C 10KOHM. J.1/4W |
| R1192 | ERDS2TJ103 | C 10KOHM. J.1/4W |

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| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|-------------------|--------------|----------------------|---------|--------------|-----------------------|
| R2301 | ERDS2TJ123 | C 12KOHM. J.1/4W | C412 | ECSF1EE105V | T 1UF. 25V MTV |
| R2302 | ERQ12AJ4R7P | F 4.7OHM. J.1/2W | C415 | ECEA1CU221 | E 220UF. 16V |
| R2312 | ERDS1FJ4R7 | C 4.7OHM. J.1/2W | C416 | ECA1EM222G | E 2200UF. 25V |
| R3001 | ERDS2TJ332 | C 3.3KOHM. J.1/4W | C417 | ECEA1HUR33 | E 0.33UF. 50V |
| R3002 | ERDS2TJ101 | C 100OHM. J.1/4W | C418 | ECQB1H103KF | P 0.01UF. K. 50V |
| R3003 | ERDS2TJ123 | C 12KOHM. J.1/4W | C421 | ECEA1HUR22 | E 0.22UF. 50V |
| R3004 | ERDS2TJ391 | C 390OHM. J.1/4W | C430 | ECQV1H334JZ | P 0.33UF. J. 50V |
| R3005 | ERDS2TJ680 | C 68OHM. J.1/4W | C431 | ECKF1H152KB | C 1500PF. K. 50V |
| R3007 | ERDS2TJ103 | C 10KOHM. J.1/4W | C452 | ECEA1AU330 | E 33UF. 10V |
| R3017 | ERDS2TJ101 | C 100OHM. J.1/4W | C455 | ECCF1H100FC | C 10PF. F. 50V MTV |
| R3018 | ERDS2TJ393 | C 39KOHM. J.1/4W | C456 | ECEA1VU101 | E 100UF. 35V |
| CAPACITORS | | | C457 | ECA1VM471G | E 470UF. 35V |
| C101 | ECKF1H103ZF | C 0.01UF. Z. 50V | C459 | ECEA1HU2R2 | E 2.2UF. 50V |
| C103 | ECKF1H103ZF | C 0.01UF. Z. 50V | C460 | ECQV1H104JZ | P 0.1UF. J. 50V |
| C104 | ECA1CM471G | E 470UF. 16V | C461 | ECQB1H473KF | P 0.047UF. K. 50V |
| C105 | ECKF1H103ZF | C 0.01UF. Z. 50V | C501 | ECEA2CNR47S | E 0.47UF. 160V |
| C107 | ECKF1H103ZF | C 0.01UF. Z. 50V | C504 | ECCF1H680J | C 68PF. J. 50V |
| C109 | ECEA1CU100 | E 10UF. 16V | C508 | ECKD2H471KB2 | C 470PF. K.500V |
| C110 | ECKF1H103ZF | C 0.01UF. Z. 50V | C509 | ECEA2EU100 | E 10UF. 250V |
| C111 | ECEA1HFSR47 | E 0.47UF. 50V | C510 | ECKD2H471KB2 | C 470PF. K.500V |
| C112 | ECEA1CU470 | E 47UF. 16V | C511 | ECA1EM471G | E 470UF. 25V |
| C113 | ECEA1HU3R3 | E 3.3UF. 50V | C514 | ECKD2H561KB2 | C 560PF. K.500V |
| C114 | ECEA1VFS100 | E 10UF. 35V | C515 | ECA1VM471G | E 470UF. 35V |
| C115 | ECQV1H334JZ | P 0.33UF. J. 50V | C526 | ECEA1JU100 | E 10UF. 63V |
| C116 | ECEA1CU101 | E 100UF. 16V | C532 | ECEA1HU010 | E 1UF. 50V |
| C119 | ECEA1CU100 | E 10UF. 16V | C538 | ECEA1AU470 | E 47UF. 10V |
| C120 | ECQV1H104JZ | P 0.1UF. J. 50V | C541 | ECKD2H331KB2 | C 330PF. K.500V |
| C121 | ECEA1HU010 | E 1UF. 50V | C542 | ECEA1VU101 | E 100UF. 35V |
| C122 | ECEA1HU0R1 | E 0.1UF. 50V | C545 | ECQB1H223KF | P 0.022UF. K. 50V |
| C123 | ECEA1CN100S | E 10UF. 16V | C546 | ECKF1H681KB | C 680PF. K. 50V |
| C125 | ECUX1H103ZFX | C 0.01UF. Z. 50V MTV | C549 | ECEA1HU0R1 | E 0.1UF. 50V |
| C141 | ECUX1H151JX | C 150PF. J. 50V MTV | C551 | ECEA1HU100 | E 10UF. 50V |
| C150 | ECEA1HFSR47 | E 0.47UF. 50V | C552 | ECQB1H223KF | P 0.022UF. K. 50V |
| C151 | ECKF1H103ZF | C 0.01UF. Z. 50V | C553 | ECQB1H563JF | P 0.056UF. J. 50V |
| C152 | ECEA1CN100S | E 10UF. 16V | C554 | ECEA1CU100 | E 10UF. 16V |
| C153 | ECEA50ZR47 | E 0.47UF. 50V | C555 | ECEA1CU221 | E 220UF. 16V |
| C154 | ECKF1H122KB | C 1200PF. K. 50V | C556 | ECCF1H221JU | C 220PF. J. 50V |
| C160 | ECUX1H103ZFX | C 0.01UF. Z. 50V MTV | C561 | ECEA1CU221 | E 220UF. 16V |
| C163 | ECUX1H103ZFX | C 0.01UF. Z. 50V MTV | C562 | ECKD3D471JBN | C 470PF. J. 2KV |
| C214 | ECCF1H180JC | C 18PF. J. 50V | C564 | ECQB1H153KF | P 0.015UF. K. 50V |
| C216 | ECEA1CN330S | E 33UF. 16V | C566 | ECQB1H153KF | P 0.015UF. K. 50V |
| C217 | ECKF1H392KB | C 3900PF. K. 50V | C567 | ECQV1H104JZ | P 0.1UF. J. 50V |
| C219 | ECEA1CU101 | E 100UF. 16V | C568 | ECKD3D222JBN | C 2200PF. J. 2KV |
| C220 | ECKF1H182KB | C 1800PF. K. 50V | C569 | ECKD3D222JBN | C 2200PF. J. 2KV |
| C221 | ECEA1HU4R7 | E 4.7UF. 50V | C570 | 4R3W103JSF | P 0.01UF. J.1.2KV MTV |
| C222 | ECEA1CN100S | E 10UF. 16V | C571 | ECKD3D222JBN | C 2200PF. J. 2KV |
| C223 | ECKF1H103ZF | C 0.01UF. Z. 50V | C572 | ECKD3D222JBN | C 2200PF. J. 2KV |
| C224 | ECKF1H102KB | C 1000PF. K. 50V | C573 | 7A2D824JSF | P 0.82UF. J.200V MTV |
| C231 | ECEA1EU101 | E 100UF. 25V | C574 | 7A2D474JSF | P 0.47UF. J.200V MTV |
| C232 | ECKF1H103ZF | C 0.01UF. Z. 50V | C575 | ECQM4223JZ | P 0.022UF. J.400V |
| C350 | ECCF1H331J | C 330PF. J. 50V | C576 | ECQM4473JZ | P 0.047UF. J.400V |
| C351 | ECCF1H391J | C 390PF. J. 50V | C601 | ECQB1H223JF | P 0.022UF. J. 50V |
| C352 | ECCF1H331J | C 330PF. J. 50V | C602 | ECQB1H223JF | P 0.022UF. J. 50V |
| C353 | ECCF1H391J | C 390PF. J. 50V | C603 | ECQB1H223JF | P 0.022UF. J. 50V |
| C354 | ECKD3D821KBN | C 820PF. K. 2KV | C604 | ECEA50ZR47 | E 0.47UF. 50V |
| C356 | ECKD2H103PU | C 0.01UF. P.500V | C605 | ECKF1H103ZF | C 0.01UF. Z. 50V |

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| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|--------------|-------------------|---------|--------------|-------------------|
| C606 | ECQB1H223JF | P 0.022UF, J. 50V | C830 | ECEA0JU101 | E 100UF, 6.3V |
| C607 | ECEA1HU2R2 | E 2.2UF, 50V | C831 | ECA1HM221G | E 220UF, 50V MTV |
| C608 | ECCF1H120JU | C 12PF, J. 50V | C832 | ECKDNS471MBJ | C 470PF, M. |
| C609 | ECCF1H150JU | C 15PF, J. 50V | C833 | ECKD2H821KB2 | C 820PF, K.500V |
| C610 | ECEA1HU100 | E 10UF, 50V | C838 | ECQV1H224JZ | P 0.22UF, J. 50V |
| C612 | ECCF1H100D | C 10PF, D. 50V | C847 | ECKD2H472PU | C 4700PF, P.500V |
| C613 | ECKF1H103ZF | C 0.01UF, Z. 50V | C1051 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C614 | ECEA1CU101 | E 100UF, 16V | C1052 | ECEA1HU470 | E 47UF, 50V |
| C615 | ECEA1HU4R7 | E 4.7UF, 50V | C1053 | ECCF1H101J | C 100PF, J. 50V |
| C618 | ECCF1H330J | C 33PF, J. 50V | C1101 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C619 | ECCF1H330J | C 33PF, J. 50V | C1102 | ECEA0JU101 | E 100UF, 6.3V |
| C620 | ECCF1H330J | C 33PF, J. 50V | C1103 | ECKF1H221KB | C 220PF, K. 50V |
| C621 | ECEA1CU101 | E 100UF, 16V | C1104 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C622 | ECQB1H223KF | P 0.022UF, K. 50V | C1105 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C639 | ECEA1CN100S | E 10UF, 16V | C1106 | ECEA1CU220 | E 22UF, 16V |
| C646 | ECKF1H101KB | C 100PF, K. 50V | C1107 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C648 | ECEA1CU101 | E 100UF, 16V | C1108 | ECCF1H820J | C 82PF, J. 50V |
| C649 | ECQB1H223KF | P 0.022UF, K. 50V | C1116 | ECEA1HU2R2 | E 2.2UF, 50V |
| C656 | ECQB1H223KF | P 0.022UF, K. 50V | C1118 | ECEA1HU2R2 | E 2.2UF, 50V |
| C657 | ECEA1CU101 | E 100UF, 16V | C1130 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C658 | ECQB1H223KF | P 0.022UF, K. 50V | C1135 | ECKF1H821KB | C 820PF, K. 50V |
| C659 | ECEA1HU0R1 | E 0.1UF, 50V | C1136 | ECCF1H101J | C 100PF, J. 50V |
| C660 | ECEA1HU0R1 | E 0.1UF, 50V | C1137 | ECQB1H223KF | P 0.022UF, K. 50V |
| C661 | ECKF1H103ZF | C 0.01UF, Z. 50V | C1140 | ECEA1HU2R2 | E 2.2UF, 50V |
| C662 | ECKF1H103ZF | C 0.01UF, Z. 50V | C1141 | ECCF1H561J | C 560PF, J. 50V |
| C669 | ECEA1HU0R1 | E 0.1UF, 50V | C1144 | ECCF1H101J | C 100PF, J. 50V |
| C670 | ECEA1CU470 | E 47UF, 16V | C1145 | ECKF1H151KB | C 150PF, K. 50V |
| C671 | ECQB1H223KF | P 0.022UF, K. 50V | C1146 | ECCF1H101J | C 100PF, J. 50V |
| C672 | ECQV1H104JZ | P 0.1UF, J. 50V | C1147 | ECKF1H221KB | C 220PF, K. 50V |
| C673 | ECQV1H224JZ | P 0.22UF, J. 50V | C1148 | ECCF1H330JP | C 33PF, J. 50V |
| C674 | ECCF1H390J | C 39PF, J. 50V | C1149 | ECCF1H330JP | C 33PF, J. 50V |
| C801 | ECQU2A333MN | P 0.033UF, M.250V | C1150 | ECKF1H101KB | C 100PF, K. 50V |
| C802 | ECKD2H472KB2 | C 4700PF, K.500V | C1151 | ECKF1H101KB | C 100PF, K. 50V |
| C803 | ECKD2H472KB2 | C 4700PF, K.500V | C1152 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C804 | ECOS2GP331DB | E 330UF, 400V MTV | C1153 | ECEA1CU100 | E 10UF, 16V |
| C805 | ECEA1VU470 | E 47UF, 35V | C1160 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C807 | ECHS1H104JZ | P 0.1UF, J. 50V | C1174 | ECEA1HU2R2 | E 2.2UF, 50V |
| C808 | ECES2DU221E | E 220UF, 200V | C1180 | ECEA50ZR33 | E 0.33UF, 50V |
| C809 | ECQB1H103JF | P 0.01UF, 50V | C1181 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C810 | ECKD3D222JBN | C 2200PF, J. 2KV | C1182 | ECEA1HU330 | E 33UF, 50V |
| C811 | ECQV1H224JZ | P 0.22UF, J. 50V | C1183 | ECEA50ZR33 | E 0.33UF, 50V |
| C812 | ECA1EM102G | E 1000UF, 25V | C1184 | ECEA50ZR47 | E 0.47UF, 50V |
| C813 | ECEA1CU101 | E 100UF, 16V | C2301 | ECA1CM471G | E 470UF, 16V |
| C814 | ECKD3D821KBP | C 820PF, K. 2KV | C2302 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C815 | ECKD2H222KB2 | C 2200PF, K.500V | C2303 | ECEA1CU330 | E 33UF, 16V |
| C816 | ECQU2A333MN | P 0.033UF, M.250V | C2304 | ECQB1H393JF | P 0.039UF, J. 50V |
| C817 | ECKD2H472KB2 | C 4700PF, K.500V | C2305 | ECEA1EGE470 | E 47UF, 25V |
| C818 | ECKD2H472KB2 | C 4700PF, K.500V | C2306 | ECA1EM471G | E 470UF, 25V |
| C819 | ECKD2H681KB2 | C 680PF, K.500V | C2307 | ECEA1EU222 | E 2200UF, 25V |
| C820 | ECKDNS222MEJ | C 2200PF, M. | C2308 | ECKF1H103ZF | C 0.01UF, Z. 50V |
| C823 | ECKD2H561KB2 | C 560PF, K.500V | C2315 | ECQV1H184JZ | P 0.18UF, J. 50V |
| C824 | ECQB1H223JF | P 0.022UF, J. 50V | C2316 | ECQV1H154JZ | P 0.15UF, J. 50V |
| C825 | ECEA1HU470 | E 47UF, 50V | C3001 | ECEA1CU470 | E 47UF, 16V |
| C827 | ECEA1EU101 | E 100UF, 25V | C3002 | ECKF1H471KB | C 470PF, K. 50V |
| C828 | ECEA1CU101 | E 100UF, 16V | C3003 | ECA1CM471G | E 470UF, 16V |
| C829 | ECEA1CU101 | E 100UF, 16V | | COILS | |

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| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------------------|--------------|-----------------------------|----------------------------|--------------|------------------------|
| L102 | TLACTR82K | PEAKING COIL MTV | D414 | MA29WA | DIODE |
| L106 | TLTACC8R2K | PEAKING COIL 8.2U | D415 | MA29WA | DIODE |
| L107 | TLTACC1R0K | PEAKING COIL | D449 | MA4360M | DIODE |
| L110 | EXCELD25V | CORE | D452 | ERA15-01 | DIODE |
| L111 | TLTACC1R0K | PEAKING COIL | D510 | TVSEU2 | DIODE |
| L125 | TLTACC151K | PEAKING COIL | D511 | TVSEU2 | DIODE |
| L140 | TLTACC180K | PEAKING COIL 18U | D513 | TVSEU2 | DIODE |
| L142 | TLTACC180K | PEAKING COIL 18U | D520 | MA700 | DIODE |
| L143 | TLTACC180K | PEAKING COIL 18U | D528 | MA4360L | DIODE |
| L145 | TLTACC100K | PEAKING COIL 10U | D531 | TVSEU2 | DIODE |
| L147 | TLTACC150K | PEAKING COIL 15U | D543 | MA171 | DIODE |
| L220 | TLTACC151K | PEAKING COIL | D544 | MA4108J | DIODE |
| L567 | EXCELSA35T | BEADS CORE MTV | D565 | MA171 | DIODE |
| L568 | TSK1002 | COIL | D566 | ERD07-15 | DIODE |
| L569 | ELH5L713 | COIL MTV | D567 | TVSRU2AM | DIODE |
| L574 | ELC08D055 | COIL | D601 | MA165 | DIODE |
| L610 | TLUABTA100 | PEAKING COIL MTV | D670 | MA4082M | DIODE |
| L611 | TLUABTA100 | PEAKING COIL MTV | D671 | MA165 | DIODE |
| L612 | TLUABTA100 | PEAKING COIL MTV | D802 | MA162 | DIODE |
| L613 | TLTACC100K | PEAKING COIL 10U | D806 | MA4068L | I.C |
| L620 | TLTACC100K | PEAKING COIL 10U | D807 | D1NL20UV70 | DIODE MTV |
| L670 | TLTACC220K | PEAKING COIL 22U | D808 | S2L60V61 | DIODE MTV |
| L801 | ELF18D650L | LINE FILTER | D809 | D1NL20UV70 | DIODE MTV |
| L803 | EXCELSA35T | BEADS CORE MTV | D810 | EU02 | DIODE |
| L804 | ELEIE100KA | PEAKING COIL | D811 | D1NL20UV70 | DIODE MTV |
| L805 | EXCELSA35T | BEADS CORE MTV | D813 | D45B80Z | DIODE |
| L806 | TSC930-4 | CHOKE COIL | D814 | TRPW5B0N120D | POSISTOR MTV |
| L807 | TSC930-4 | CHOKE COIL | D815 | ENC621D-10A | RESISTOR MODULATOR MTV |
| L808 | EXCELSA35T | BEADS CORE MTV | D816 | D1NL20UV70 | DIODE MTV |
| L1051 | EXCELSA35T | BEADS CORE MTV | D817 | TVSTFD315M | THYRISTOR |
| L1101 | EXCELSA35T | BEADS CORE MTV | D818 | D1NL20UV70 | DIODE MTV |
| L1102 | TLUABTA100 | PEAKING COIL MTV | D819 | D1NL20UV70 | DIODE MTV |
| L1103 | TLUABTA100 | PEAKING COIL MTV | D820 | PS2501-1 | PHOTO COUPLER |
| L1104 | TLUABTA100 | PEAKING COIL MTV | D831 | EU02 | DIODE |
| L1106 | TSK1002 | COIL | D835 | TVSRM25 | DIODE |
| L1107 | TLUABTA100 | PEAKING COIL MTV | D836 | D1NL20UV70 | DIODE MTV |
| L1108 | TLUABTA100 | PEAKING COIL MTV | D837 | D1NL20UV70 | DIODE MTV |
| L1109 | TLUABTA100 | PEAKING COIL MTV | D1101 | MA4056L | DIODE |
| L1110 | TSC930-4 | CHOKE COIL | D1111 | EL333ID-F45R | LED MTV |
| L1135 | TLUABTA100 | PEAKING COIL MTV | D1116 | MA165 | DIODE |
| L1140 | TLUABTA100 | PEAKING COIL MTV | D1135 | MA165 | DIODE |
| L1141 | TLUABTA100 | PEAKING COIL MTV | D1136 | MA4150M | DIODE |
| L1146 | EXCELSA35T | BEADS CORE MTV | D1150 | MA4068M | DIODE |
| LC151 | EQL7EN019P | COIL | D1151 | MA4068M | DIODE |
| TRANSFORMERS | | | D2301 | MA165 | DIODE |
| T501 | TLF15644F1 | FLYBACK TRANSFORMER MTV ⚠ | D2302 | EU02 | DIODE |
| T566 | TLH15462M | COIL | INTEGRATED CIRCUITS | | |
| T801 | TLP15954M | INDUCTOR COIL | IC102 | TVSUPD4066BC | C-MOS LOGIC IC |
| T802 | ETS29AC1C6AC | SWITCHING TRANSFORMER MTV ⚠ | IC203 | M52317SP | LINEAR IC MTV |
| DIODES | | | IC401 | LA7837 | LINEAR IC MTV |
| D119 | MA165 | DIODE | IC601 | AN5192K-A | LINEAR IC MTV |
| D120 | MA4051M | DIODE | IC602 | TDA4665 | LINEAR IC |
| D121 | MA4068M | DIODE | IC603 | TDA8395P | LINEAR IC MTV |
| D230 | MA165 | DIODE | IC801 | SE090N | IC |
| D401 | MA165 | DIODE | IC802 | AN78M05LB | LINEAR IC |
| D413 | MA165 | DIODE | IC805 | UPC7812AHF | IC MTV |

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| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|--------------------|-------------|--------------------------|---------|--------------|--------------------|
| IC806 | AN7809 | LINEAR IC | JK.21 | TJS1A5050 | CRT SOCKET |
| IC807 | AN7805 | LINEAR IC | RL801 | AJW42123 | RELAY MTV |
| IC1051 | RPM-637CBRS | REMOTE CONTROL RECEIVER | S801 | ESB91232A | SWITCH |
| IC1101 | MN152811TZX | IC (MICRO PROCESSOR) MTV | S1107 | EVQPB105K | SWITCH |
| IC1102 | MN1280R | IC (MOS IC) | S1108 | EVQPB105K | SWITCH |
| IC1103 | AN5071 | LINEAR IC | S1109 | EVQPB105K | SWITCH |
| IC1104 | 24C02AIPA21 | IC MTV | S1110 | EVQPB105K | SWITCH |
| IC2301 | AN5270 | LINEAR IC | S1111 | EVQPB105K | SWITCH |
| TRANSISTORS | | | S1112 | EVQPB105K | SWITCH |
| Q101 | 2SC2188 | TRANSISTOR | TNR2 | ENV598D1F2 | TUNER ⚠ |
| Q115 | 2SB709ATX | TRANSISTOR MTV | X101 | TFCH38MVK03 | SAW FILTER ⚠ |
| Q117 | 2SD601ATX | TRANSISTOR MTV | X103 | EFCS6R0MW5 | CERAMIC FILTER |
| Q120 | 2SC945AQR-T | TRANSISTOR MTV | X105 | EFCS4R5MW5 | CERAMIC FILTER |
| Q150 | 2SC945AQR-T | TRANSISTOR MTV | X120 | EFCS6R5MW5 | CERAMIC FILTER |
| Q151 | 2SC945AQR-T | TRANSISTOR MTV | X136 | EFCS5R5MW3 | CERAMIC TRAP |
| Q216 | 2SC945AQR-T | TRANSISTOR MTV | X208 | EFCS5R5MS5 | CERAMIC FILTER |
| Q220 | 2SC945AQR-T | TRANSISTOR MTV | X209 | EFCS4R5MS5 | FILTER |
| Q230 | 2SA564A-R | TRANSISTOR | X210 | EFCS6R5MS5 | CERAMIC FILTER |
| Q351 | 2SC2258 | TRANSISTOR | X212 | CSB1000J527 | CRYSTAL OSC MTV |
| Q352 | 2SC2258 | TRANSISTOR | X221 | SFSH6R0MDB | CERAMIC FILTER MTV |
| Q354 | 2SC2258 | TRANSISTOR | X554 | TAFCSB500F48 | CRYSTAL OSC |
| Q445 | 2SA564A-R | TRANSISTOR | X601 | TS116M20 | CRYSTAL OSC MTV |
| Q446 | 2SC945AQR-T | TRANSISTOR MTV | X602 | TS816M32 | CRYSTAL OSC MTV |
| Q447 | 2SC945AQR-T | TRANSISTOR MTV | X1144 | TAF10020 | CERAMIC FILTER MTV |
| Q451 | 2SA564A-R | TRANSISTOR | | | |
| Q503 | 2SA564A-R | TRANSISTOR | | | |
| Q564 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| Q565 | 2SD1275A | TRANSISTOR | | | |
| Q566 | 2SD2499 | TRANSISTOR MTV | | | |
| Q675 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| Q801 | 2SC4804ARL | TRANSISTOR MTV | | | |
| Q802 | 2SC3940A | TRANSISTOR | | | |
| Q803 | 2SD1010 | TRANSISTOR | | | |
| Q805 | 2SA1512 | TRANSISTOR | | | |
| Q1116 | UN4212 | TRANSISTOR | | | |
| Q1135 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| Q1164 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| Q1180 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| Q3001 | 2SC945AQR-T | TRANSISTOR MTV | | | |
| OTHERS | | | | | |
| E.10 | TJS118600 | 3P CONNECTOR | | | |
| E.11 | TJS118600 | 3P CONNECTOR | | | |
| E.22 | TJS118610 | 4P CONNECTOR | | | |
| E.32 | TJS118620 | 5P CONNECTOR | | | |
| E.33 | TJS118610 | 4P CONNECTOR | | | |
| F801 | XBA2C31TR0 | FUSE 250V 3.15A ⚠ | | | |
| JA.1 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.2 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.3 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.4 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.5 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.6 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.7 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JA.8 | ERJ6GEY0R00 | M 0OHM.J.1/10W | | | |
| JK.1 | TJB4G605 | FRONT AV TERMINAL MTV | | | |
| JK.2 | TJB18637 | AV TERMINAL | | | |