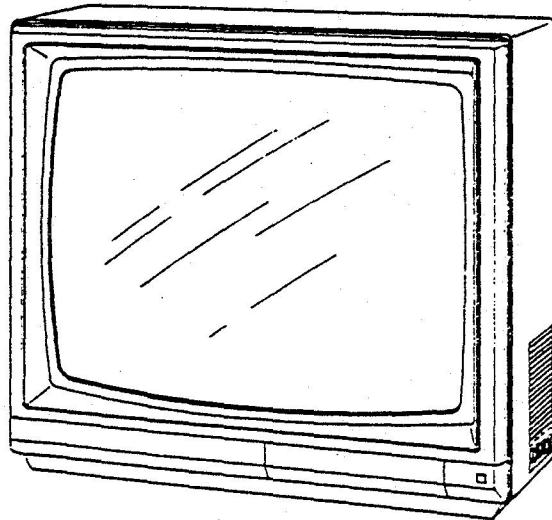


SERVICE MANUAL

ORION

MODEL **CCM-14**
Color Monitor



ELECTRICAL SPECIFICATIONS

| | |
|----------------------------|---------|
| PICTURE SIZE | 14 inch |
| SYSTEM | PAL |
| MAXIMUM OUTPUT POWER | 1.5 W |
| 10% THD OUTPUT POWER | 1.2 W |
| SPEAKER | 8 ohm |
| POWER SOURCE | AC 220V |
| IC | 9 |
| TRANSISTOR | 15 |
| DIODE | 36 |

VR902-4 VR902-2
VR902-3 VR902-1

VR903
SUB
BRIGHT

L907

VR901

TP2

TP1

TP3

TP4

AN5620

LA7820

SW702

VR802
V.SIZE

TP5 TP6

AN5612

VR804
SUB.H.HOLD

VR803
H.HOLD

F.B.T.

VERTICAL SIZE ADJUSTMENT

Adjust the control (VR802) so that the picture fills the picture opening from top to bottom and is proportionate to the width.

FOCUS ADJUSTMENT

Adjust focus control, on the flyback transformer, for fine picture.

SUB BRIGHT ADJUSTMENT

1. Receive the signal of test pattern.
2. Set bright control to minimum position.
Set contrast control to maximum position.
3. Adjust 75% white of gray scale to dimly appear with VR903.

SUB CONTRAST ADJUSTMENT

1. Receive the signal of test pattern.
2. Set bright control to maximum position.
3. Adjust gray scale to 25% with VR904.

SUB H-HOLD AND H-HOLD ADJUSTMENT

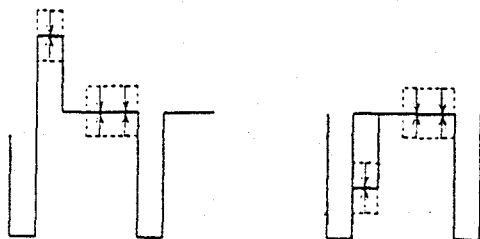
1. Receive the snowy station (free-run).
2. Connect frequency counter to TP7.
3. Rotate H-Hold control fully counter-clockwise.
4. Adjust VR804 to obtain 14300 Hz reading.
5. Receive the signal of test pattern.
6. Adjust H-Hold control (VR803) to obtain 15625 Hz reading.

APC ADJUSTMENT

1. Receive the signal of color bar.
2. Connect voltmeter between TP1 to TP2.
3. Set IC901 to center position.
4. Adjust IC902 to obtain a minimum voltage reading.

HUE DELAY ADJUSTMENT

1. Receive the signal of DEM pattern.
2. Connect dual oscilloscope to TP5 and TP6.
3. Adjust waveform to straight line with L907, VR901 and IC901.



COLOR PURITY ADJUSTMENT

The receiver must have been operating 10 minutes prior to this procedure and the face plate of the CRT must be at room temperature. The following procedure is recommended while using a Dot/Bar Generator.

1. Check for correct location of all neck components.
(Refer to Figure 2.)
2. Rough-in the static convergence at the center of the CRT, as explained in the static convergence.
3. Rotate the contrast control to maximum CCW position and rotate brightness control as for CW as possible without causing the picture to "bloom".
4. Rotate the red bias and blue bias controls to maximum CCW position to produce a green raster.
5. Loosen the deflection yoke clamp screw and pull the deflection yoke toward the rear of the CRT.
6. Begin the following adjustment with the tabs on the round purity magnet rings set together, slowly separate the two tabs while at the same time rotating them to adjust for a uniform green stripe at the center of the CRT screen.
7. Carefully slide the deflection yoke forward to achieve green (uniform green screen).

NOTE: Center purity was obtained by adjusting the tabs on the round purity magnet rings, outer edge purity was obtained by sliding the deflection yoke forward.

8. Check for red and blue field purity by alternately increasing output of red and blue bias controls and touch up adjustments, if required.
9. Tighten deflection yoke clamp screw.

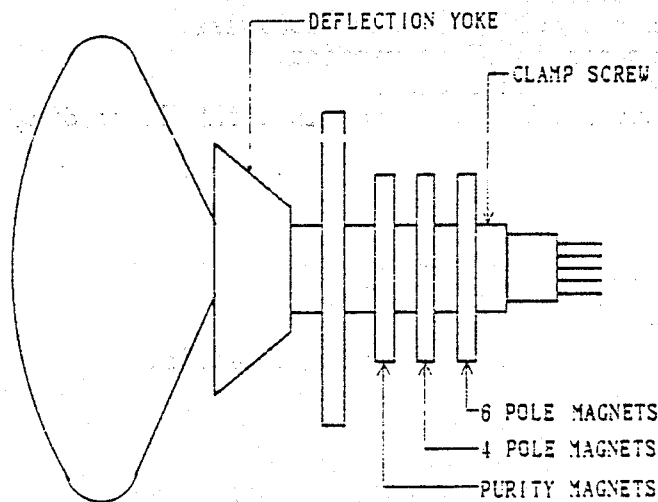


Figure 2. Picture Tube Neck Component Location

BLACK AND WHITE TRACKING

The purpose of this procedure is to adjust the biases applied to the picture tube to obtain good black and white picture production at all brightness levels while, at the same time achieving maximum useable brightness. Proper RF AGC control adjustment have been verified prior to performing this procedure.

1. Rotate the Red and Blue Drive control fully CW and then back CCW center of their rotation ranges.
2. Rotate the Green, Red and Blue Bias controls to the full CCW end of their rotation ranges.
3. Set normal-service switch to service position. Adjust the voltage of test point (collector of green output transistor on CRT PCB) to DC 120V with brightness control. Voltage measurement should be measured with oscilloscope.
4. Rotate the screen control to the full CCW end of its rotation range. Then, rotate it CW until a dim line of one pronounced color (green, red or blue) is obtained.
5. The other two color bias controls must be rotated CW until a dim white line is obtained.
6. Set normal-service switch to normal position.
7. If required, touch-up adjustment of the Red and Blue Drive controls to produce a uniform monochrome picture.
8. Rotate the brightness and contrast controls fully CCW.
9. Rotate the brightness control CW until a dim raster is obtained.
10. If the screen does not display good white uniformity, step 2 through 10 this procedure must be repeated.

STATIC CONVERGENCE ADJUSTMENT

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Connect the output of a Crosshatch Generator to the receiver and, concentrating on the center of the CRT screen, proceed as follows:
 - a. Locate the pair of 4 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue lines. Rotate the pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue lines.
 - b. After completing red and blue center convergence, locate the pair of 6 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue (magenta) and green lines. Rotate the pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue (magenta) and green lines.

DYNAMIC CONVERGENCE ADJUSTMENT

Dynamic convergence (convergence of the three color fields at the edges of the CRT screen) is accomplished by proper insertion and positioning of three rubber wedge between the edge of the deflection yoke and the tunnel of the CRT. This is accomplished in the following manner.

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Apply crosshatch pattern from Dot/Bar Generator to receiver. Observe spacing between lines around edges of CRT screen.
3. Tilt the deflection yoke up or down, and insert tilt adjustment wedges (1) and (2) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 3 (A) has been corrected.
4. Tilt the deflection yoke right and left, and insert tilt adjustment wedge (3) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 3 (B) has been corrected.
5. Alternately change spacing between, and depth of insertion of the three wedges proper dynamic convergence is obtained.
6. Use a strong adhesive tape to firmly secure each of the three wedges to the funnel of the CRT.
7. Check purity and readjust, if necessary.

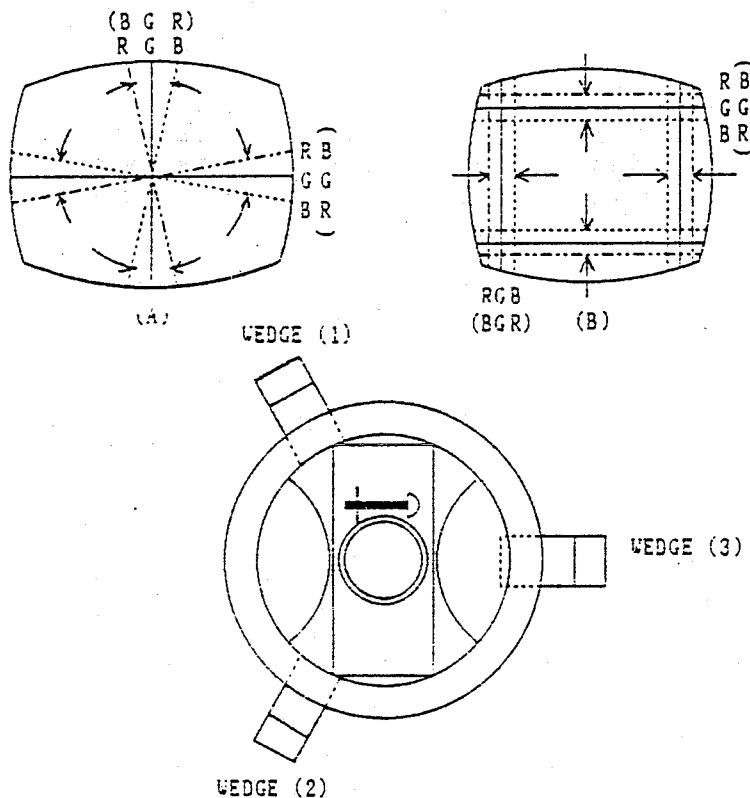
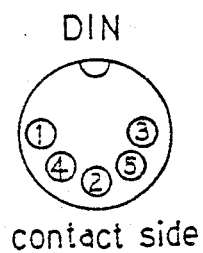
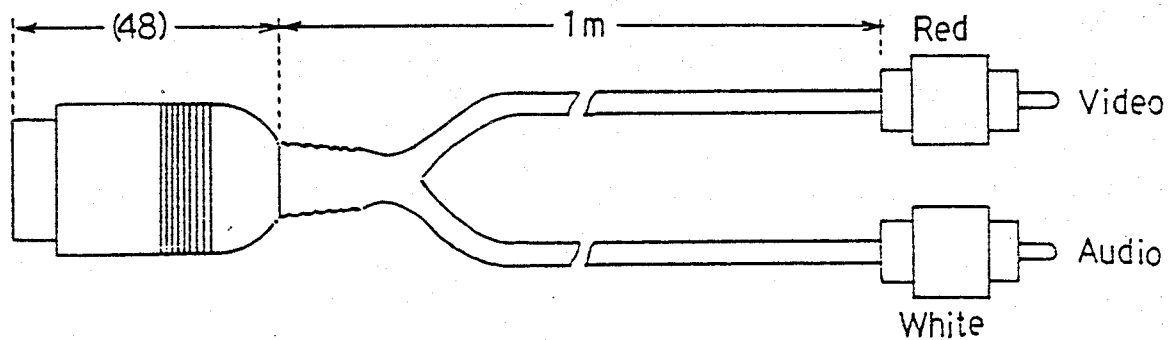


Figure 3 Dynamic Convergence Adjustment



- 1 : NC
- 2 : GND
- 3 : AUDIO
- 4 : VIDEO
- 5 : GND

COMMODORE G64 FOR ONLY

PARTS LIST FOR MODEL TYPE CCM-14

-CABINET- 1/1

| REF. NO. | PART NO. | DESCRIPTION | Q'TY |
|----------|------------|--------------------------------|------|
| 101 | 701JPD0005 | Cabinet, Front | 1 |
| | 709KPA0004 | Cabinet, Holder | 2 |
| | 7230000682 | Plate, Color | 1 |
| | 7232020091 | Plate, Brand | 1 |
| 102 | 8931364000 | Stopper, Cord | 1 |
| 103 | 761JSA0182 | Frame, Volume P.C.B. | 1 |
| 104 | 735JPA0149 | Button, Push | 1 |
| 105 | 732JPA0036 | Knob, Control | 4 |
| 106 | 763JAA0047 | Heat Sink, Power | 1 |
| 107 | 763JAA0043 | Heat Sink, OS | 1 |
| 108 | 763JAA0027 | Heat Sink, OS | 1 |
| 109 | 761JSA0018 | Angle, P.C.B. (Right) | 1 |
| | 788JEE0001 | Screw, IC | 2 |
| 110 | 761JSA0181 | Frame, Back | 1 |
| | 755JBA0026 | Cover, Jack | 1 |
| 111 | 761JSA0019 | Angle, P.C.B. (Left) | 1 |
| 112 | 899PEC0340 | Cord Clamp | 1 |
| 113 | 702JPA0118 | Cabinet, Back (1/4) | 1 |
| | 7222020159 | Plate, Rating | 1 |
| | 7230000686 | Sheet, Jack | 1 |
| | 800JQ00005 | Sheet 15x200 | 2 |
| | 800JQ00054 | Sheet 15x35x0.5t | 1 |
| 114 | 705KPA0002 | Handle | 1 |
| | 800JR00009 | Sheet, C.R.T. Support | 4 |
| 116 | 741JUA0002 | Spring, C.R.T. Earth | 1 |
| | 769JPA0004 | Holder, Handle | 2 |
| 117 | 769JSA0004 | Washer, C.R.T. | 4 |
| 118 | 761JSA0180 | Frame, F.B.T. | 1 |
| 119 | 800JF00016 | Cushion 30x8x3.5t | 2 |
| 120 | 736JPA0004 | Button, Remote Set | 1 |
| 201 | 8102230601 | Screw, Bind M3x6 | 4 |
| 202 | 8107630804 | Screw, Tap Tite (S) M3x8 | 2 |
| 203 | 8110630A04 | Screw, Tap Tite (P) M3x10 | 2 |
| 204 | 8110630A24 | Screw, Tap Tite (P) M3x12 | 3 |
| 205 | 8117540A61 | Screw, Tapping B Truss M4x16 | 4 |
| 206 | 8119150D05 | Screw, Tapping B1 M5x40 | 4 |
| 207 | 82A50B2161 | Plain Washer M5x22 | 4 |
| 208 | 82B3059074 | Spring Washer 3.1x5.9x0.7 | 2 |
| 209 | 8300230004 | Nut M3 | 2 |
| 210 | 8112330A21 | Screw, Tapping B0 M3x12 | 2 |
| - | 791JHA0013 | Poly Bag | 1 |
| - | 791JHA0016 | Sheet, Lightron | 2 |
| - | 792JHA0063 | Package, Top | 1 |
| - | 792JHA0064 | Package, Bottom | 1 |
| - | 793JCD0713 | Gift Box | 1 |
| - | 899PEC0340 | Cord Clamp No.PEC-0340-0 DIA 3 | 1 |
| - | 899P550000 | Crimping, Sleeve | 3 |
| - | 899SKB2500 | Band, Cord Clamp | 1 |
| - | 8995125000 | Band, Cord Clamp | 2 |
| - | 8995167000 | Band, Cord Clamp | 13 |

AMENDMENT OF PARTS LIST

Model CCM-14

SERVICE MANUAL

| <u>REF. NO.</u> | <u>DISCRIPTION</u> | <u>DISCRIPTION(new)</u> | <u>CODE NO.</u> |
|-----------------|--------------------|-------------------------|-----------------|
| R808 | 100K | 820K | R031T2823J |
| R904 | 220K | 330K | R031T4334J |
| R927 | 6.8K | 1.5K | R031T6152J |
| R960 | 5.6K | 1.8K | R031T6182J |
| C846 | 0.0022uF | 0.0047uF | P122F0472K |
| C847 | | (ADD.) 0.0068uF 50V | P12100682J |
| C902 | 330pF | 470pF | E021F2471M |
| C930 | 1uF 50V | 0.1uF 50V | P121T0104K |
| C932 | 0.22uF 50V | 0.1uF 50V | P121T0104K |
| C939 | 0.22uF 50V | 0.1uF 50V | P121T0104K |
| C940 | 0.22uF 50V | 0.1uF 50V | P121T0104K |
| C947 | | (ADD.) 220pF | C020SL4H2K |
| <u>REF.NO.</u> | <u>CODE NO.</u> | <u>CODE NO. (new)</u> | |
| R837 | R03104101J | R031T4101J | |
| R847 | R031T4562J | R03104562J | |
| C926 | C020SL4U2K | C02TSL4U2K | |
| CP901 | 0694FJ0010 | 0694FK0010 | |
| PS001 | | (ADD.) 126P000001 | |
| PS002 | | (ADD.) 126P000001 | |

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-ELECTRICAL-
PARTS LIST FOR MODEL TYPE CCM-14

| REF.NO | PARTS.NO | DESCRIPTION | Q' TY |
|--------|------------|------------------------|-----------------|
| | | -RESISTORS- | |
| R701 | RO31T6151J | RC RD16ST26-151J | 150 OHM 1/6W 1 |
| R702 | RO31T6822J | RC RD16ST26-822J | 8.2K OHM 1/6W 1 |
| R703 | RO31T6473J | RC RD16ST26-473J | 47K OHM 1/6W 1 |
| R704 | RO31T6152J | RC RD16ST26-152J | 1.5K OHM 1/6W 1 |
| R705 | RO31T6272J | RC RD16ST26-272J | 2.7K OHM 1/6W 1 |
| R706 | RO31T6222J | RC RD16ST26-222J | 2.2K OHM 1/6W 1 |
| R707 | RO31T6561J | RC RD16ST26-561J | 560 OHM 1/6W 1 |
| R708 | RO31T6682J | RC RD16ST26-682J | 6.8K OHM 1/6W 1 |
| R709 | RO31T6822J | RC RD16ST26-822J | 8.2K OHM 1/6W 1 |
| R710 | RO31T6332J | RC RD16ST26-332J | 3.3K OHM 1/6W 1 |
| R711 | RO31T6102J | RC RD16ST26-102J | 1K OHM 1/6W 1 |
| R712 | RO31T6152J | RC RD16ST26-152J | 1.5K OHM 1/6W 1 |
| R713 | RO31T6821J | RC RD16ST26-821J | 820 OHM 1/6W 1 |
| R714 | RO31T6102J | RC RD16ST26-102J | 1K OHM 1/6W 1 |
| R715 | RO31T4681J | RC RD25ST26-681J | 680 OHM 1/4W 1 |
| R716 | RO31T4681J | RC RD25ST26-681J | 680 OHM 1/4W 1 |
| R717 | RO31T4681J | RC RD25ST26-681J | 680 OHM 1/4W 1 |
| R718 | RO31T4332J | RC RD25ST26-332J | 3.3K OHM 1/4W 1 |
| R719 | RO31T4332J | RC RD25ST26-332J | 3.3K OHM 1/4W 1 |
| R720 | RO31T4332J | RC RD25ST26-332J | 3.3K OHM 1/4W 1 |
| R721 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R722 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R723 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R724 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R725 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R726 | RO31T6223J | RC RD16ST26-223J | 22K OHM 1/6W 1 |
| R727 | RO31T6822J | RC RD16ST26-822J | 8.2K OHM 1/6W 1 |
| R728 | RO31T4103J | RC RD25ST26-103J | 10K OHM 1/4W 1 |
| R729 | RO31T4562J | RC RD25ST26-562J | 5.6K OHM 1/4W 1 |
| R730 | RO11T4821J | RC ERD-25TJ821T | 820 OHM 1/4W 1 |
| R731 | RO31T6821J | RC RD16ST26-821J | 820 OHM 1/6W 1 |
| R732 | RO31T6103J | RC RD16ST26-103J | 10K OHM 1/6W 1 |
| R733 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R744 | RO31T6151J | RC RD16ST26-151J | 150 OHM 1/6W 1 |
| R745 | RO31T4472J | RC RD25ST26-472J | 4.7K OHM 1/4W 1 |
| R746 | RO31T4472J | RC RD25ST26-472J | 4.7K OHM 1/4W 1 |
| R747 | RO31T2331J | RC RD50ST26-331J | 330 OHM 1/2W 1 |
| R748 | RO12T2331J | RC ERD-S1TJ331T | 330 OHM 1/2W 1 |
| R749 | RO31T4681J | RC RD25S-681J | 680 OHM 1/4W 1 |
| R750 | RO31T6272J | RC RD16ST26-272J | 2.7K OHM 1/6W 1 |
| R751 | RO31T6103J | RC RD16ST26-103J | 10K OHM 1/6W 1 |
| R752 | RO31T4103J | RC RD25ST26-103J | 10K OHM 1/4W 1 |
| R402 | RO31T4473J | RC RD25ST26-473J | 47K OHM 1/4W 1 |
| R403 | RO31T6274J | RC RD16ST26-274J | 270K OHM 1/6W 1 |
| R404 | RO31T4221J | RC RD25ST26-221J | 220 OHM 1/4W 1 |
| R410 | RO31T6393J | RC RD16ST26-393J | 39K OHM 1/6W 1 |
| R801 | R33101182J | R,METAL OXIDE RSF1B182 | 1.8K OHM 1 W 1 |
| R802 | RO31T4333J | RC RD25ST26-333J | 33K OHM 1/4W 1 |
| R803 | RO12T2681J | RC ERD-S1TJ681T | 680 OHM 1/2W 1 |

| REF. NO. | PARTS. NO. | DESCRIPTION | Q'TY |
|----------|------------|-----------------------------------|------|
| R804 | R61584330J | R,FUSE ERQ-14AJ330P 33 OHM 1/4W | 1 |
| R805 | RO31T4822J | RC RD25ST26-822J 8.2K OHM 1/4W | 1 |
| R806 | RO31T4332J | RC RD25ST26-332J 3.3K OHM 1/4W | 1 |
| R807 | RO12T2821J | RC ERD-S1TJ821T 820 OHM 1/2W | 1 |
| R808 | RO31T6104J | RC RD16ST26-104J 100K OHM 1/6W | 1 |
| R809 | RO31T4271J | RC RD25ST26-271J 270 OHM 1/4W | 1 |
| R810 | RO31T6822J | RC RD16ST26-822J 8.2K OHM 1/6W | 1 |
| R811 | RO31T6822J | RC RD16ST26-822J 8.2K OHM 1/6W | 1 |
| R812 | RO31T6103J | RC RD16ST26-103J 10K OHM 1/6W | 1 |
| R813 | RO31T6394J | RC RD16ST26-394J 390K OHM 1/6W | 1 |
| R814 | RO31T6183J | RC RD16ST26-183J 18K OHM 1/6W | 1 |
| R815 | RO31T4104J | RC RD25ST26-104J 100K OHM 1/4W | 1 |
| R816 | RO31T4184J | RC RD25ST26-184J 180K OHM 1/4W | 1 |
| R817 | RO31T4393J | RC RD25ST26-393J 39K OHM 1/4W | 1 |
| R818 | RO31T4563J | RC RD25ST26-563J 56K OHM 1/4W | 1 |
| R819 | RO31T4563J | RC RD25ST26-563J 56K OHM 1/4W | 1 |
| R820 | RO31T4272J | RC RD25ST26-272J 2.7K OHM 1/4W | 1 |
| R821 | RO12T22R2J | RC ERD-S1TJ2R2T 2.2 OHM 1/2W | 1 |
| R822 | RO31T6104J | RC RD16ST26-104J 100K OHM 1/6W | 1 |
| R823 | RO31T6473J | RC RD16ST26-473J 47K OHM 1/6W | 1 |
| R824 | RO31T6153J | RC RD16ST26-153J 15K OHM 1/6W | 1 |
| R825 | RO31T6562J | RC RD16ST26-562J 5.6K OHM 1/6W | 1 |
| R826 | RO31T4272J | RC RD25ST26-272J 2.7K OHM 1/4W | 1 |
| R827 | RO31T6103J | RC RD16ST26-103J 10K OHM 1/6W | 1 |
| R828 | RO31T6822J | RC RD16ST26-822J 8.2K OHM 1/6W | 1 |
| R829 | RO31T4223J | RC RD25ST26-223J 22K OHM 1/4W | 1 |
| R830 | RO1104222G | RC ERD-25TG222 2.2K OHM 1/4W | 1 |
| R831 | RO1104123G | RC ERD-25TG123 12 K OHM 1/4W | 1 |
| R832 | RO1104153G | RC ERD-25TG153 15 K OHM 1/4W | 1 |
| R833 | RO31T6472J | RC RD16ST26-472J 4.7K OHM 1/6W | 1 |
| R834 | RO31T4122J | RC RD25ST26-122J 1.2K OHM 1/4W | 1 |
| R836 | RO31T4102J | RC RD25ST26-102J 1K OHM 1/4W | 1 |
| R837 | RO3104101J | RC RD25S-101J 100 OHM 1/4W | 1 |
| R839 | R512AE120J | R,CEMENT ERF- 7ZXJ120 12 OHM 7W | 1 |
| R840 | R61582151J | R,FUSE ERQ-12AJ151P 150 OHM 1/2W | 1 |
| R841 | R615812R2J | R,FUSE ERQ-1AJ2R2S 2.2 OHM 1W | 1 |
| R842 | R615812R2J | R,FUSE ERQ-1AJ2R2S 2.2 OHM 1W | 1 |
| R843 | R615812R2J | R,FUSE ERQ-1AJ2R2S 2.2 OHM 1W | 1 |
| R844 | R615813R3J | R,FUSE ERQ-1AJ3R3S 3.3 OHM 1W | 1 |
| R845 | RO3104474J | RC RD25S-474J 470K OHM 1/4W | 1 |
| R846 | RO12T2222J | RC ERD-S1TJ222T 2.2K OHM 1/2W | 1 |
| R847 | RO31T4562J | RC RD25ST26-562J 5.6K OHM 1/4W | 1 |
| R848 | R615826R8J | R,FUSE ERQ-12AJ6R8P 6.8 OHM 1/2W | 1 |
| R850 | RO3106104J | RC RD16S-104J 100K OHM 1/6W | 1 |
| R851 | RO12T2102J | RC ERD-S1TJ102T 1K OHM 1/2W | 1 |
| R855 | RO31T4223J | RC RD25ST26-223J 22K OHM 1/4W | 1 |
| R501 | R512AD3R9K | R,CEMENT ERF- 5ZXK3R9 3.9 OHM 5 W | 1 |
| R502 | RO12T2823J | RC ERD-S1TJ823T 82K OHM 1/2W | 1 |
| R503 | RO12T2104J | RC ERD-S1TJ104T 100K OHM 1/2W | 1 |
| R504 | RO12T2101J | RC ERD-S1TJ101T 100 OHM 1/2W | 1 |
| R505 | RO12T2121J | RC ERD-S1TJ121T 120 OHM 1/2W | 1 |
| R506 | R615812R2J | R,FUSE ERQ-1AJ2R2S 2.2 OHM 1W | 1 |
| R507 | RO12T2101J | RC ERD-S1TJ101T 100 OHM 1/2W | 1 |
| R508 | RO12T2101J | RC ERD-S1TJ101T 100 OHM 1/2W | 1 |
| R509 | RO12T2101J | RC ERD-S1TJ101T 100 OHM 1/2W | 1 |
| R510 | RO12T2101J | RC ERD-S1TJ101T 100 OHM 1/2W | 1 |

-ELECTRICAL-
PARTS LIST FOR MODEL TYPE CCM-14

| REF.NO | PARTS.NO | DESCRIPTION | Q'TY |
|-------------|------------|------------------|-----------------|
| -RESISTORS- | | | |
| R901 | RO31T4103J | RC RD25ST26-103J | 10K OHM 1/4W 1 |
| R902 | RO31T4182J | RC RD25ST26-182J | 1.8K OHM 1/4W 1 |
| R903 | RO31T6391J | RC RD16ST26-391J | 390 OHM 1/6W 1 |
| R904 | RO31T4224J | RC RD25ST26-224J | 220K OHM 1/4W 1 |
| R905 | RO31T6681J | RC RD16ST26-681J | 680 OHM 1/6W 1 |
| R906 | RO31T6224J | RC RD16ST26-224J | 220K OHM 1/6W 1 |
| R907 | RO31T6223J | RC RD16ST26-223J | 22K OHM 1/6W 1 |
| R908 | RO31T4272J | RC RD25ST26-272J | 2.7K OHM 1/4W 1 |
| R909 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R910 | RO31T6471J | RC RD16ST26-471J | 470 OHM 1/6W 1 |
| R911 | RO31T6331J | RC RD16ST26-331J | 330 OHM 1/6W 1 |
| R912 | RO31T6392J | RC RD16ST26-392J | 3.9K OHM 1/6W 1 |
| R914 | RO31T6681J | RC RD16ST26-681J | 680 OHM 1/6W 1 |
| R915 | RO31T6182J | RC RD16ST26-182J | 1.8K OHM 1/6W 1 |
| R916 | RO31T6393J | RC RD16ST26-393J | 39K OHM 1/6W 1 |
| R917 | RO31T6683J | RC RD16ST26-683J | 68K OHM 1/6W 1 |
| R918 | RO31T6181J | RC RD16ST26-181J | 180 OHM 1/6W 1 |
| R919 | RO31T6471J | RC RD16ST26-471J | 470 OHM 1/6W 1 |
| R920 | RO31T6391J | RC RD16ST26-391J | 390 OHM 1/6W 1 |
| R921 | RO31T6152J | RC RD16ST26-152J | 1.5K OHM 1/6W 1 |
| R923 | RO31T4272J | RC RD25ST26-272J | 2.7K OHM 1/4W 1 |
| R924 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R925 | RO31T6822J | RC RD16ST26-822J | 8.2K OHM 1/6W 1 |
| R926 | RO31T4103J | RC RD25ST26-103J | 10K OHM 1/4W 1 |
| R927 | RO31T6682J | RC RD16ST26-682J | 6.8K OHM 1/6W 1 |
| R929 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R930 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R931 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R932 | RO31T6103J | RC RD16ST26-103J | 10K OHM 1/6W 1 |
| R934 | RO31T6472J | RC RD16ST26-472J | 4.7K OHM 1/6W 1 |
| R935 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R936 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R937 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R938 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R939 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R940 | RO31T4271J | RC RD25ST26-271J | 270 OHM 1/4W 1 |
| R941 | RO31T4562J | RC RD25ST26-562J | 5.6K OHM 1/4W 1 |
| R942 | RO31T4472J | RC RD25ST26-472J | 4.7K OHM 1/4W 1 |
| R943 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R944 | RO31T6103J | RC RD16ST26-103J | 10K OHM 1/6W 1 |
| R946 | RO31T6183J | RC RD16ST26-183J | 18K OHM 1/6W 1 |
| R947 | RO31T6102J | RC RD16ST26-102J | 1K OHM 1/6W 1 |
| R949 | RO31T6183J | RC RD16ST26-183J | 18K OHM 1/6W 1 |
| R950 | RO31T6102J | RC RD16ST26-102J | 1K OHM 1/6W 1 |
| R951 | RO31T6392J | RC RD16ST26-392J | 3.9K OHM 1/6W 1 |
| R952 | RO31T4472J | RC RD25ST26-472J | 4.7K OHM 1/4W 1 |
| R955 | RO31T6331J | RC RD16ST26-331J | 330 OHM 1/6W 1 |
| R956 | RO31046R8J | RC RD25S-6R8J | 6.8 OHM 1/4W 1 |
| R958 | RO31T4102J | RC RD25ST26-102J | 1K OHM 1/4W 1 |
| R959 | RO31T4272J | RC RD25ST26-272J | 2.7K OHM 1/4W 1 |

| REF. NO. | PARTS. NO. | DESCRIPTION | Q'TY |
|--------------|------------|---------------------------------------|------|
| R960 | RO31T6562J | RC RD16ST26-562J 5.6K OHM 1/6W | 1 |
| R961 | RO3104010J | RC RD25S-010J 1 OHM 1/4W | 1 |
| R601 | RO12T2105J | RC ERD-S1TJ105T 1M OHM 1/2W | 1 |
| R602 | R33181153J | R,METAL OXIDE RSF1BL15-15K 15K OHM 1W | 1 |
| R604 | R33181153J | R,METAL OXIDE RSF1BL15-15K 15K OHM 1W | 1 |
| R606 | R33181153J | R,METAL OXIDE RSF1BL15-15K 15K OHM 1W | 1 |
| R608 | RO3106101J | RC RD16S-101J 100 OHM 1/6W | 1 |
| R610 | RO31T4181J | RC RD25ST26-181J 180 OHM 1/4W | 1 |
| R611 | RO3106272J | RC RD16S-272J 2.7K OHM 1/6W | 1 |
| R612 | RO31T4271J | RC RD25ST26-271J 270 OHM 1/4W | 1 |
| R613 | RO31T4272J | RC RD25ST26-272J 2.7K OHM 1/4W | 1 |
| R614 | RO3106272J | RC RD16S-272J 2.7K OHM 1/6W | 1 |
| R615 | RO31T4272J | RC RD25ST26-272J 2.7K OHM 1/4W | 1 |
| R616 | RO31T4181J | RC RD25ST26-181J 180 OHM 1/4W | 1 |
| R617 | RO3106272J | RC RD16S-272J 2.7K OHM 1/6W | 1 |
| R618 | RO12T2272J | RC ERD-S1TJ272T 2.7K OHM 1/2W | 1 |
| R619 | RO12T2272J | RC ERD-S1TJ272T 2.7K OHM 1/2W | 1 |
| R620 | RO12T2272J | RC ERD-S1TJ272T 2.7K OHM 1/2W | 1 |
| -CAPACITORS- | | | |
| C701 | EO21T2470M | CE 16TWMS470MTA 47 UF 16V | 1 |
| C703 | EO21T2470M | CE 16TWMS470MTA 47 UF 16V | 1 |
| C704 | CO2TSL4K1K | CC RTHE40SJSL270K 27 PF SL | 1 |
| C705 | CO2TSL4U1K | CC RTHE40SJSL680K 68 PF SL | 1 |
| C706 | CO2TSL4U1K | CC RTHE40SJSL680K 68 PF SL | 1 |
| C707 | CO2TSL4U1K | CC RTHE40SJSL680K 68 PF SL | 1 |
| C708 | EO21T2101M | CE 16TWMS101MTA 100 UF 16V | 1 |
| C709 | CO2TF04H4Z | CC RTHE90SJYF223Z 0.022 UF | 1 |
| C710 | EO21T5010M | CE 50TWMS010MTA 1 UF 50V | 1 |
| C711 | EO21T5100M | CE 50TWMS100MTA 10 UF 50V | 1 |
| C712 | EO21T2101M | CE 16TWMS101MTA 100 UF 16V | 1 |
| C713 | CO2TF04H4Z | CC RTHE90SJYF223Z 0.022 UF | 1 |
| C714 | CO2TF04Q4Z | CC RTHE12SJYF473Z 0.047 UF | 1 |
| C715 | CO20F04Q4Z | CC HE12SJYF473Z 0.047 UF F | 1 |
| C716 | CO2TSL4L1K | CC RTHE40SJSL330K 33 PF SL | 1 |
| C401 | EO21T5100M | CE 50TWMS100MTA 10 UF 50V | 1 |
| C402 | P121T0103K | CP 50F2S103K 0.01 UF 50V | 1 |
| C403 | EO21T3101M | CE 25TWMS101MTA 100 UF 25V | 1 |
| C404 | CO2TB0413K | CC RTHE50SJYB102K 0.001 UF B | 1 |
| C405 | EO1203102M | CE ECEA1ESS102 1000 UF 25V | 1 |
| C406 | EO21T3101M | CE 25TWMS101MTA 100 UF 25V | 1 |
| C407 | EO21T5R22M | CE 50TWMSR22MTA 0.22 UF 50V | 1 |
| C408 | EO21T2470M | CE 16TWMS470MTA 47 UF 16V | 1 |
| C409 | EO21T5100M | CE 50TWMS100MTA 10 UF 50V | 1 |
| C801 | P121T0683K | CP 50F2S683K 0.068 UF 50V | 1 |
| C802 | CO20B05L2K | CC HM60SJYB331K 330 PF 500V B | 1 |
| C803 | P121T1683K | CP 100F2S683K 0.068 UF 100V | 1 |
| C804 | CO2TSL413K | CC RTHE12SJSL102K 0.001 UF SL | 1 |
| C805 | EO2103102M | CE 25TWMS102M 1000 UF 25V | 1 |
| C806 | P121T0152K | CP 50F2S152K 0.0015UF 50V | 1 |
| C807 | CO2TSL4W2K | CC RTHE12SJSL821K 820 PF SL | 1 |
| C808 | P121T0183K | CP 50F2S183K 0.018 UF 50V | 1 |
| C809 | P121T0683K | CP 50F2S683K 0.068 UF 50V | 1 |
| C810 | P61300104J | CMPL ECQV05104JB 0.1 UF 50V | 1 |
| C811 | E251T22R2K | CTANTAL DN1C2R2KIS 2.2 UF 16V | 1 |
| C812 | EO27T2221M | CE 16TWSS221MTA 220 UF 16V | 1 |

-ELECTRICAL-

PARTS LIST FOR MODEL TYPE CCM-14

| REF.NO | PARTS.NO | DESCRIPTION | Q'TY |
|--------------|------------|---------------------|-------------------|
| -CAPACITORS- | | | |
| C813 | P121T0103K | CP 50F2S103K | 0.01 UF 50V 1 |
| C814 | P121T0104K | CP 50F2S104K | 0.1 UF 50V 1 |
| C815 | C02FSL512J | CC HM60SJSL101J | 100 PF 500V SL 1 |
| C816 | P121T0473K | CP 50F2S473K | 0.047 UF 50V 1 |
| C817 | P121T0103K | CP 50F2S103K | 0.01 UF 50V 1 |
| C818 | P541F0562J | CPL DSR-562J-50V | 0.0056UF 50V 1 |
| C819 | E021T52R2M | CE 50TWMS2R2MTA | 2.2 UF 50V 1 |
| C820 | E021T2220M | CE 16TWMS220MTA | 22 UF 16V 1 |
| C821 | E021T2470M | CE 16TWMS470MTA | 47 UF 16V 1 |
| C822 | E021T4220M | CE 35TWMS220MTA | 22 UF 35V 1 |
| C823 | C02TB04W2K | CC RTHE40SJYB821K | 820 PF 16V B 1 |
| C824 | E25202010M | CTANTAL DA1C010M | 1 UF 16V 1 |
| C825 | E25202010M | CTANTAL DA1C010M | 1 UF 16V 1 |
| C826 | C02FSL5H1K | CC HM60SJSL220K | 22 PF 500V SL 1 |
| C827 | P121T1123J | CP 100F2S123J | 0.012 UF100V 1 |
| C828 | E025TB010M | CE 160TWS010M | 1 UF 160V 1 |
| C829 | P441F2564J | CMPP DHS-564J-200V | 0.56 UF 200V 1 |
| C830 | C020B05H3K | CC HM86SJYB222K | 0.0022UF500V B 1 |
| C831 | P442F9103J | CMPP DKR-103J-1600V | 0.01 UF1600V 1 |
| C832 | P441F2564J | CMPP DHS-564J-200V | 0.56 UF 200V 1 |
| C833 | E025TB010M | CE 160TWS010M | 1 UF 160V 1 |
| C834 | E02704222M | CE 35TWSS222M | 2200 UF 35V 1 |
| C835 | E02103102M | CE 25TWMS102M | 1000 UF 25V 1 |
| C836 | E02500100M | CE 250TWS100M | 10 UF 250V 1 |
| C837 | E02ET2100M | CE 16NW100M | 10 UF 16V 1 |
| C838 | P341F2153J | CPP DTW-153J-200V | 0.015 UF 200V 1 |
| C839 | C020B05K2K | CC HM60SJYB271K | 270 PF 500V B 1 |
| C840 | E021T52R2M | CE 50TWMS2R2MTA | 2.2 UF 50V 1 |
| C841 | E027F4101M | CE 35TWSS101MKC | 100 UF 35V 1 |
| C842 | P121T0333K | CP 50F2S333K | 0.033 UF 50V 1 |
| C843 | C02TF04H4Z | CC RTHE90SJYF223Z | 0.022 UF 1 1 |
| C844 | E027F3471M | CE 25TWSS471MKC | 470 UF 25V 1 |
| C846 | C020F04H4Z | CC HE90SJYF223Z | 0.022 UF F 1 |
| C501 | C02FB07H3K | CC HS15SJYB222K | 0.0022 UF 2KV B 1 |
| C502 | C02FB07H3K | CC HS15SJYB222K | 0.0022 UF 2KV B 1 |
| C503 | C02FB07H3K | CC HS15SJYB222K | 0.0022 UF 2KV B 1 |
| C504 | C02FB07H3K | CC HS15SJYB222K | 0.0022 UF 2KV B 1 |
| C505 | E01COH101M | CE ECES2GV101Z | 100 UF 400V 1 |
| C506 | E025FB101M | CE 160TWS101M | 100 UF 160V 1 |
| C507 | P44209332J | CMPP DKR-332J-1600V | 0.0033UF1600V 1 |
| C508 | E021T3101M | CE 25TWMS101MTA | 100 UF 25V 1 |
| C509 | E021T54R7M | CE 50TWMS4R7MTA | 4.7 UF 50V 1 |
| C510 | P4440B474M | CMPP DHP-474M-250V | 0.47 UF 250V 1 |
| C511 | C010B0903M | CC ECK-DGS472MD4 | 4700 PF 4KV 1 |
| C901 | C02TF0414Z | CC RTHE70SJYF103Z | 0.01 UF F 1 |
| C902 | E021F2331M | CE 16TWMS331MCK | 330 UF 16V 1 |
| C903 | CF4TRH4H1J | CC UP125RH220JA | 22 PF 50V 1 |
| C904 | C02FRH401J | CC HE50SJRH470J | 47 PF 1 1 |
| C905 | CF4TX0314M | CC TP125X103MA | 0.01 UF 25V 1 |
| C906 | C02TSL4N1K | CC RTHE40SJSL390K | 39 PF SL 1 |

| REF. NO. | PARTS. NO. | DESCRIPTION | | | | Q'TY |
|------------------|------------|--------------------|----------|----|-------|------|
| C907 | CO2TSL4N1K | CC RTHE40SJSL390K | 39 | PF | SL | 1 |
| C908 | CF4TSL4W1J | CC UP125SL820JA | 82 | PF | 50V | 1 |
| C909 | CO2TF0414Z | CC RTHE70SJYF103Z | 0.01 | UF | F | 1 |
| C910 | EO2EO5010M | CE 50NWO10M | 1 | UF | 50V | 1 |
| C911 | EO21T53R3M | CE 50TWMS3R3MTA | 3.3 | UF | 50V | 1 |
| C912 | P121T0153K | CP 50F2S153K | 0.015 | UF | 50V | 1 |
| C913 | P121T0153K | CP 50F2S153K | 0.015 | UF | 50V | 1 |
| C914 | P121T0103K | CP 50F2S103K | 0.01 | UF | 50V | 1 |
| C915 | CO2TF0414Z | CC RTHE70SJYF103Z | 0.01 | UF | F | 1 |
| C916 | EO21F2471M | CE 16TWMS471MCK | 470 | UF | 16V | 1 |
| C917 | CO2TF04H4Z | CC RTHE90SJYF223Z | 0.022 | UF | | 1 |
| C918 | CO2TF04H4Z | CC RTHE90SJYF223Z | 0.022 | UF | | 1 |
| C919 | EO2ET34R7M | CE 25NW4R7M | 4.7 | UF | 25V | 1 |
| C920 | CO2TSL4N1K | CC RTHE40SJSL390K | 39 | PF | SL | 1 |
| C921 | EO21T5010M | CE 50TWMS010MTA | 1 | UF | 50V | 1 |
| C922 | EO21T5010M | CE 50TWMS010MTA | 1 | UF | 50V | 1 |
| C923 | EO2ET34R7M | CE 25NW4R7M | 4.7 | UF | 25V | 1 |
| C924 | EO21T5010M | CE 50TWMS010MTA | 1 | UF | 50V | 1 |
| C925 | EO21T5100M | CE 50TWMS100MTA | 10 | UF | 50V | 1 |
| C926 | CO2OSL4U2K | CC HE116SJSL681K | 680 | PF | SL | 1 |
| C927 | CO2TSL401K | CC RTHE40SJSL470K | 47 | PF | SL | 1 |
| C928 | EO21T5100M | CE 50TWMS100MTA | 10 | UF | 50V | 1 |
| C929 | CO2OSL4U1K | CC HE40SJSL680K | 68 | PF | SL | 1 |
| C930 | EO21T5010M | CE 50TWMS010MTA | 1 | UF | 50V | 1 |
| C931 | EO21T5010M | CE 50TWMS010MTA | 1 | UF | 50V | 1 |
| C932 | EO21T5R22M | CE 50TWMSR22MTA | 0.22 | UF | 50V | 1 |
| C933 | EO21T50R1M | CE 50TWMS0R1MTA | 0.1 | UF | 50V | 1 |
| C934 | EO21T50R1M | CE 50TWMS0R1MTA | 0.1 | UF | 50V | 1 |
| C935 | EO21T50R1M | CE 50TWMS0R1MTA | 0.1 | UF | 50V | 1 |
| C936 | EO21T2330M | CE 16TWMS330MTA | 33 | UF | 16V | 1 |
| C937 | EO21T5100M | CE 50TWMS100MTA | 10 | UF | 50V | 1 |
| C938 | EO21T5R22M | CE 50TWMSR22MTA | 0.22 | UF | 50V | 1 |
| C939 | EO21T5R22M | CE 50TWMSR22MTA | 0.22 | UF | 50V | 1 |
| C940 | EO21T5R22M | CE 50TWMSR22MTA | 0.22 | UF | 50V | 1 |
| C941 | EO21T2101M | CE 16TWMS101MTA | 100 | UF | 16V | 1 |
| C942 | CO2TF04H4Z | CC RTHE90SJYF223Z | 0.022 | UF | | 1 |
| C943 | EO21T5R47M | CE 50TWMSR47MTA | 0.47 | UF | 50V | 1 |
| C944 | EO21T53R3M | CE 50TWMS3R3MTA | 3.3 | UF | 50V | 1 |
| C945 | CO2TSL4N1K | CC RTHE40SJSL390K | 39 | PF | SL | 1 |
| C946 | EO21T5100M | CE 50TWMS100MTA | 10 | UF | 50V | 1 |
| C601 | CO2OSL4W2K | CC HE12SJSL821K | 820 | PF | SL | 1 |
| C602 | CO2OSL4L2K | CC HE80SJSL331K | 330 | PF | SL | 1 |
| C603 | CO2OSL4W2K | CC HE12SJSL821K | 820 | PF | SL | 1 |
| C604 | CO2OB0713K | CC HS116JYB102K | 0.001 | UF | 2KV B | 1 |
| -SEMICONDUCTORS- | | | | | | |
| IC701 | I6CD0LS040 | INTEGRATED CIRCUIT | SN74LS04 | | | 1 |
| IC702 | I6CD0LS080 | INTEGRATED CIRCUIT | SN74LS08 | | | 1 |
| IC401 | IO20P05752 | INTEGRATED CIRCUIT | UPC575C2 | | | 1 |
| IC801 | IO3D078200 | INTEGRATED CIRCUIT | LA7820 | | | 1 |
| IC802 | IO3S078300 | INTEGRATED CIRCUIT | LA7830 | | | 1 |
| IC501 | I2B3904510 | INTEGRATED CIRCUIT | STR-451 | | | 1 |
| IC901 | IO10S620X0 | INTEGRATED CIRCUIT | AN5620X | | | 1 |
| IC902 | IO10E56120 | INTEGRATED CIRCUIT | AN5612 | | | 1 |
| IC903 | IO20F13970 | INTERATED CIRCUIT | UPC1397C | | | 1 |

-ELECTRICAL-
PARTS LIST FOR MODEL TYPE CCM-14

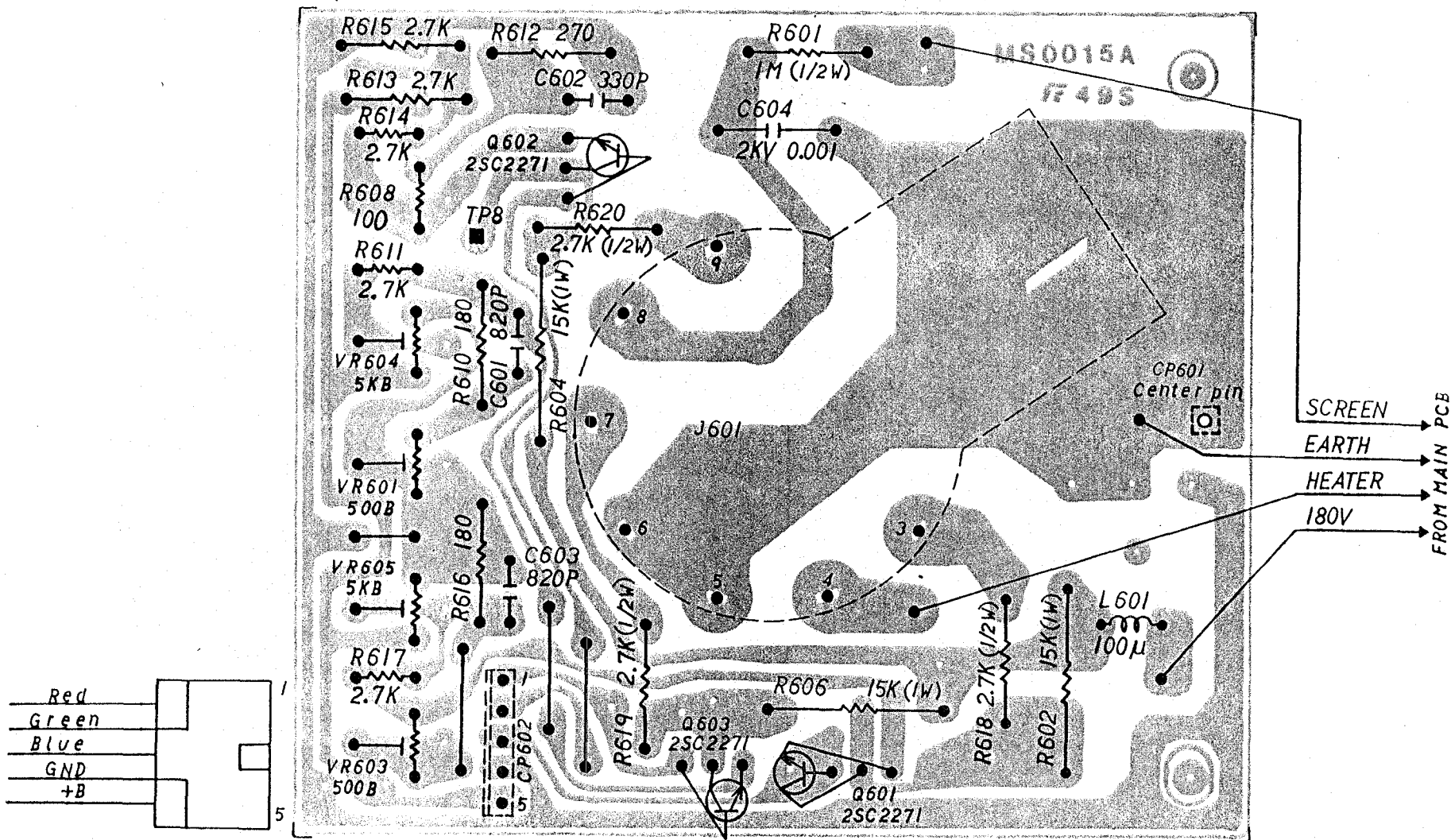
| REF.NO | PARTS.NO | DESCRIPTION | | Q'TY |
|------------------|------------|--------------------|-------------|------|
| -SEMICONDUCTORS- | | | | |
| Q701 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q702 | TA3T0608KO | TRANSISTOR,SILICON | 2SA608KNP-T | 1 |
| Q703 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q704 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q705 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q706 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q707 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q708 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q801 | TC101573NO | TRANSISTOR,SILICON | 2SC1573NC | 1 |
| Q802 | TD50014260 | TRANSISITOR | 2SD1426 | 1 |
| Q901 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q902 | TC3T0536KF | TRANSISTOR,SILICON | 2SC536KNPFT | 1 |
| Q601 | TC101573AO | TRANSISTOR,SILICON | 2SC1573AO | 1 |
| Q602 | TC101573AO | TRANSISTOR,SILICON | 2SC1573AO | 1 |
| Q603 | TC101573AO | TRANSISTOR,SILICON | 2SC1573AO | 1 |
| D701 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D702 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D703 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D704 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D705 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D706 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D707 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D708 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D709 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D710 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D711 | D93T05R10Y | DIODE,ZENER | GZA5.1 Y BT | 1 |
| D712 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |
| D801 | D23TDFD05G | DIODE,RECTIFIER | DFD05G | 1 |
| D802 | D13TGMA010 | DIODE,SILICON | GMA-01-BT | 1 |
| D804 | D9200110B2 | DIODE,ZENER | RD11EB 2 | 1 |
| D805 | D23TDSF10B | DIODE,RECTIFIER | DSF-10B-BT | 1 |
| D806 | D23TDSF10B | DIODE,RECTIFIER | DSF-10B-BT | 1 |
| D807 | D23TDSF10B | DIODE,RECTIFIER | DSF-10B-BT | 1 |
| D808 | D23TDFD05G | DIODE,RECTIFIER | DFD05G | 1 |
| D809 | D23TDFD05G | DIODE,RECTIFIER | DFD05G | 1 |
| D810 | D23TDFD05G | DIODE,RECTIFIER | DFD05G | 1 |
| D811 | D28T010020 | DIODE,RECTIFIER | 100-2 T | 1 |
| D812 | D93001200Y | DIODE,ZENER | GZA12 Y | 1 |
| D813 | D280008B40 | DIODE,RECTIFIER | BB-4 | 1 |
| D814 | D23TDSF10B | DIODE,RECTIFIER | DSF-10B-BT | 1 |
| D501 | D280GP15MO | DIODE,RECTIFIER | GP-15M | 1 |
| D502 | D280GP15MO | DIODE,RECTIFIER | GP-15M | 1 |
| D503 | D280GP15MO | DIODE,RECTIFIER | GP-15M | 1 |
| D504 | D280GP15MO | DIODE,RECTIFIER | GP-15M | 1 |
| D505 | D2BF00RH10 | DIODE,RECTIFIER | RH-1 | 1 |
| D506 | D2BF00RU20 | DIODE,SILICON | RU-2 | 1 |
| D507 | D2BF00RH10 | DIODE,RECTIFIER | RH-1 | 1 |
| D508 | D23TDFD05G | DIODE,RECTIFIER | DFD05G | 1 |
| D509 | D2M000SR2S | DIODE,AVARANSU | SR-2S | 1 |
| D901 | D93006R80Y | DIODE,ZENER | GZA6.8 Y | 1 |
| D902 | D13TDS442X | DIODE,SILICON | DS442X-BT | 1 |

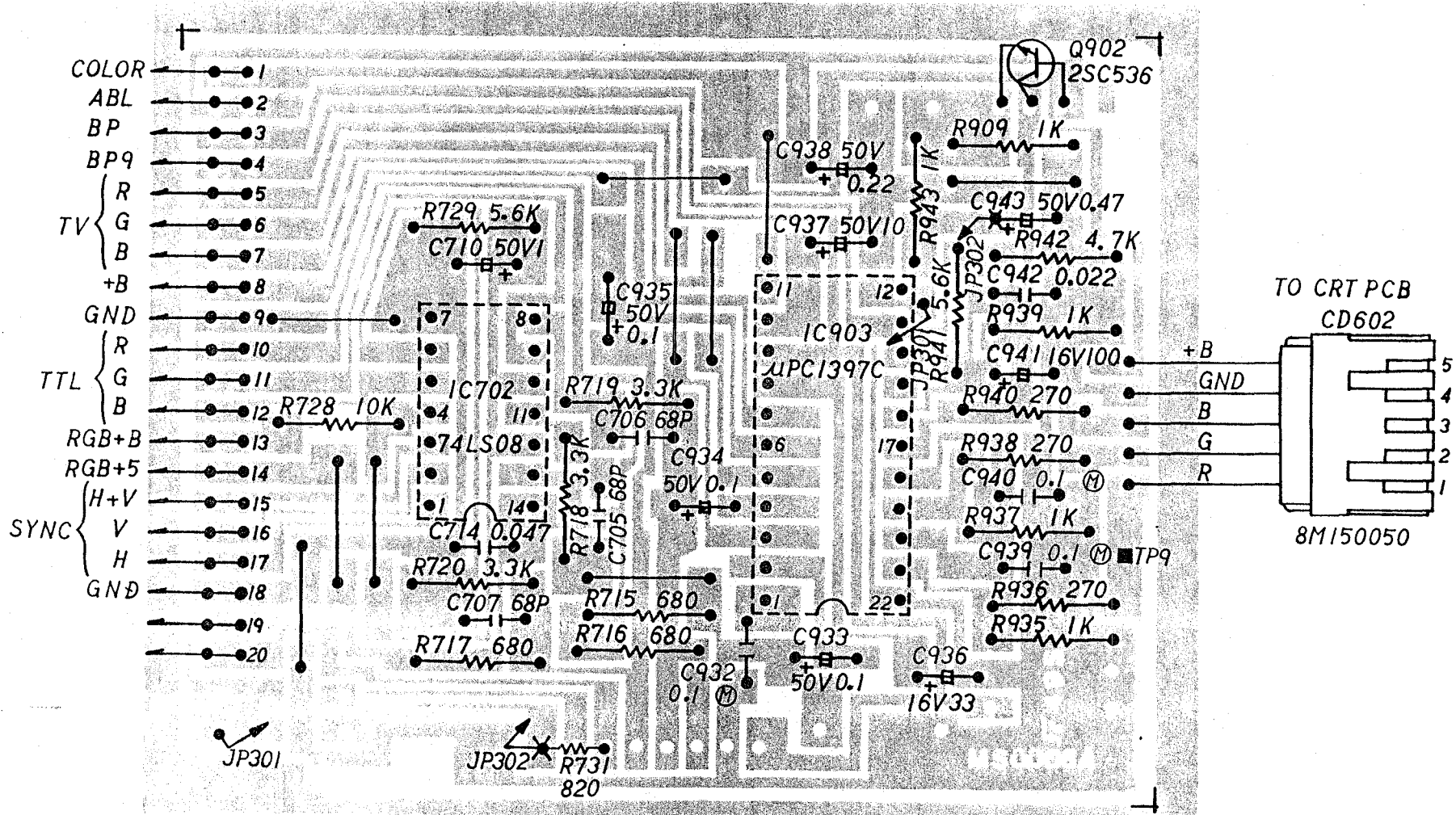
| REF. NO. | PARTS. NO. | DESCRIPTION | Q'TY |
|-------------------------|------------|---|------|
| - COILS & TRANSFORMERS- | | | |
| L701 | 021673330K | COIL ELO606RA-330K 33 UH | 1 |
| L801 | 021804472K | COIL RX-9P-472K 4.7 MH | 1 |
| L802 | 0221000007 | COIL, LINEARITY 21000007 | 1 |
| L501 | 0298000002 | COIL LINE FILTER 98000002 | 1 |
| L502 | 0280140007 | COIL DEGAUS 80140007 | 1 |
| L901 | 10312R5001 | DELAY ELT-10Z456 | 1 |
| L902 | 021673470K | COIL ELO606RA-470K 47 UH | 1 |
| L903 | 0216734R7K | COIL ELO606RA-4R7K 4.7 UH | 1 |
| L904 | 021606221K | COIL FS0810-221K 220 UH | 1 |
| L905 | 021606221K | COIL FS0810-221K 220 UH | 1 |
| L906 | 0216735R6K | COIL ELO606RA-5R6K 5.6 UH | 1 |
| L907 | 03353A0018 | COIL, MATCHING 353A001 16034SU | 1 |
| L908 | 021673390K | COIL ELO606RA-390K 39 UH | 1 |
| L909 | 021673680K | COIL ELO606RA-680K 68 UH | 1 |
| L601 | 021663101K | COIL ELO606SKI-101K 100 UH | 1 |
| T801 | 0450280014 | TRANS, HORIZONTAL DRIYE 50280014 | 1 |
| T501 | 0481330045 | TRANSFORMER, SWITCHING 81330045 | 1 |
| - JACK & CONNECTORS- | | | |
| J601 | 0662120001 | SOCKET, CATHOD, RAY, TUBE HPS-0139-01-170 | 1 |
| J701 | 0602421001 | JACK, RCA PIN JPJ0556-010-020 | 1 |
| J702 | 0602421002 | JACK, RCA PIN JPJ0556-010-030 | 1 |
| J703 | 0622760001 | JACK, DIN TCS4460-01-1011 | 1 |
| - SWITCHES- | | | |
| SW501 | 0530103001 | SWITCH, PUSH ESB-90197S | 1 |
| SW701 | 0500101008 | SWITCH, PUSH ESB-62531 | 1 |
| SW702 | 0510422001 | SWITCH, SLIDE SS-009-7H | 1 |
| SW703 | 0510422003 | SWITCH, SLIDE SS121-B | 1 |
| - SEMI-FIXED RESISTORS- | | | |
| VR801 | V023025B02 | VOLUME, ROTARY | 1 |
| VR802 | V115352B02 | VOLUME, SEMI FIXED EVN-52JA00B52 | 1 |
| VR803 | V114053B01 | VOLUME, SEMI FIXED EVL-VOAA00B53 | 1 |
| VR804 | V115323B02 | VOLUME, SEMI FIXED EVN-52JA00B23 | 1 |
| VR901 | V115323B02 | VOLUME, SEMI FIXED EVN-52JA00B23 | 1 |
| VR902 | V019400002 | VOLUME, ROTARY EVJ2XAF25122 | 1 |
| VR903 | V114214B04 | VOLUME, SEMI FIXED EVL-SOAA00B14 | 1 |
| VR904 | V115354B02 | VOLUME, SEMI FIXED EVN-52JA00B54 | 1 |
| VR601 | V145052B01 | VOLUME, SEMI FIXED TM8K H1-1S8500 | 1 |
| VR603 | V145052B01 | VOLUME, SEMI FIXED TM8K H1-1S8500 | 1 |
| VR604 | V145053B01 | VOLUME, SEMI FIXED TM8K H1-1S85K | 1 |
| VR605 | V145053B01 | VOLUME, SEMI FIXED TM8K H1-1S85K | 1 |
| - P.C. BOARDS- | | | |
| PCB001 | 13MM0003A3 | PCB MM0003A | 1 |
| PCB002 | 13MS0015A3 | PCB MS0015A | 1 |
| PCB003 | 13MS0006A3 | PCB MS0006A | 1 |
| PCB004 | 13MS0007A3 | PCB MS0007A | 1 |
| PCB005 | 13TE0156A3 | PCB TE0156A | 1 |
| - MISCELLANEOUS- | | | |
| SP401 | 0701031002 | SPEAKER EAS-8P75SX | 1 |
| DY801 | 0271051406 | DY KY10024S | 1 |

-ELECTRICAL-

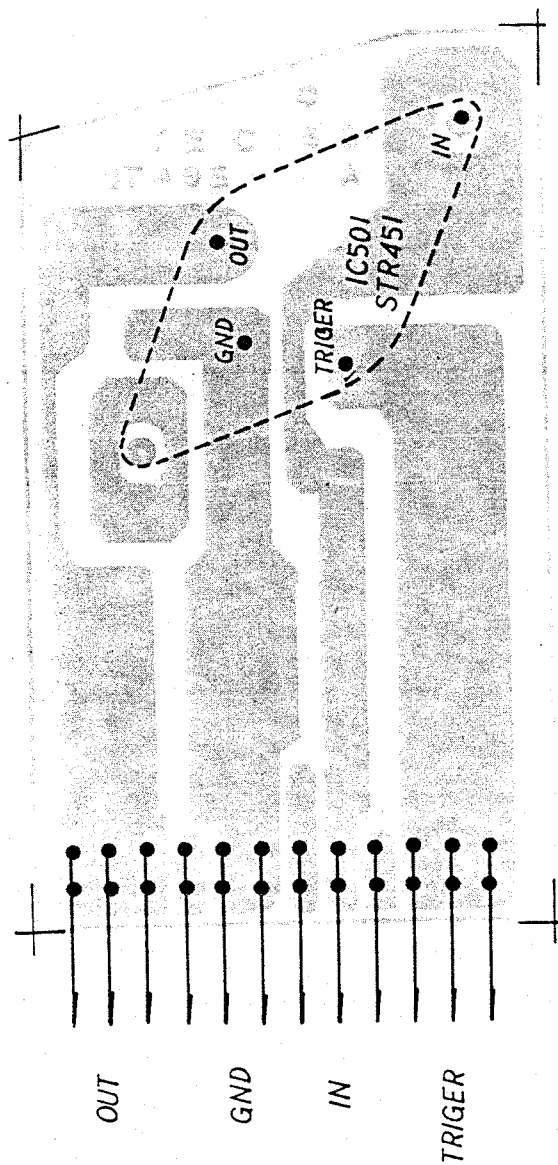
 PARTS LIST FOR MODEL TYPE CCM-14

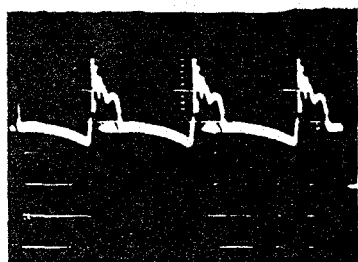
| REF.NO | PARTS.NO | DESCRIPTION | Q'TY |
|-----------------|------------|-----------------------|------|
| -MISCELLANEOUS- | | | |
| FB801 | 0437140051 | TRANSFORMER, FLYBACK | 1 |
| V801 | 092F140404 | TUBE, CATHODE RAY | 1 |
| FH501 | 067H000001 | HOLDER, FUSE | 1 |
| FH502 | 067H000001 | HOLDER, FUSE | 1 |
| F501 | 0802T2R501 | FUSE | 1 |
| TH501 | 0810M180H0 | DEGAUSS ELEMENT | 1 |
| DL901 | 104114R431 | DELAY LINE GLASS | 1 |
| PF901 | 1144144601 | FILTER, BAND PASS | 1 |
| TC901 | 0100514001 | C, CERAMIC TRIMMER | 1 |
| TC902 | 0100514001 | C, CERAMIC TRIMMER | 1 |
| X901 | 10064R4301 | CRYSTAL | 1 |
| JC601 | 0662120003 | SOCKET, COVER, CRT | 1 |
| CD701 | 0682MOA001 | CORD EIS CONNECTOR | 1 |
| CD401 | 068312086A | CORD EIS CONNECTOR | 1 |
| CD402 | 122B052701 | CORD JUMPER | 1 |
| CD501 | 120L450001 | CORD AC | 1 |
| CD503 | 068332015A | CORD CONNECTOR | 1 |
| CD601 | 068301002A | CORD CONNECTOR | 1 |
| CD602 | 068M150050 | CORD EIS CONNECTOR | 1 |
| CP401 | 0694120019 | CONNECTOR PCB SIDE | 1 |
| CP502 | 0693320029 | CONNECTOR PCB SIDE | 1 |
| CP503 | 0693320018 | CONNECTOR PCB SIDE | 1 |
| CP504 | 0694FC0010 | F-CHIP | 1 |
| CP601 | 0693010010 | CONNECTOR, PIN CENTER | 1 |
| CP602 | 0694150019 | CONNECTOR PCB SIDE | 1 |
| CP802 | 0693340029 | CONNECTOR PCB SIDE | 1 |
| CP901 | 0694FJ0010 | F-CHIP | 1 |
| K001 | 129T000004 | WEDGE | 1 |
| K002 | 129T000004 | WEDGE | 1 |
| K003 | 129T000004 | WEDGE | 1 |
| S001 | 128F100002 | SPACER | 1 |
| S002 | 128F100002 | SPACER | 1 |
| TP1 | 126V000003 | TERMINAL PIN | 1 |
| TP10 | 126V000002 | TERMINAL PIN | 1 |
| TP2 | 126V000003 | TERMINAL PIN | 1 |
| TP3 | 126V000003 | TERMINAL PIN | 1 |
| TP4 | 126V000003 | TERMINAL PIN | 1 |
| TP5 | 126V000003 | TERMINAL PIN | 1 |
| TP6 | 126V000003 | TERMINAL PIN | 1 |
| TP7 | 126V000003 | TERMINAL PIN | 1 |
| TP8 | 126V000002 | TERMINAL PIN | 1 |
| TP9 | 126V000002 | TERMINAL PIN | 1 |
| | | DS-M 4.433619MHZ | |
| | | HPS0110-05-010 | |
| | | 82MOA001 | |
| | | 8312086A | |
| | | 2B052701 | |
| | | 7FEET | |
| | | HANAI | |
| | | 8332015A | |
| | | 8301002A | |
| | | G-633 | |
| | | 8M150050 | |
| | | 171825-2 | |
| | | TV-50P-02-V1 | |
| | | RTB-2.36-2TV | |
| | | 1-163740-1 | |
| | | RT-01N-2.3A | |
| | | 171825-5 | |
| | | RTB-2.36-5TV-A | |
| | | 1-163740-8 | |
| | | TRI-26 | |
| | | TRI-26 | |
| | | TRI-26 | |
| | | BUSH-H | |
| | | BUSH-H | |
| | | ITS-2035 | |
| | | ITS-2034 | |
| | | ITS-2035 | |
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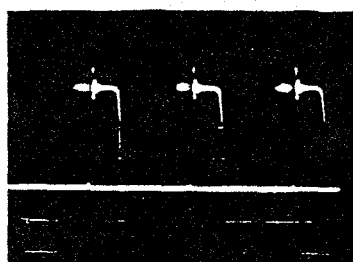


3-1975
 M14

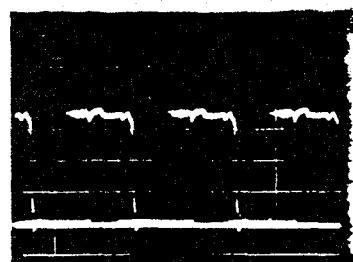




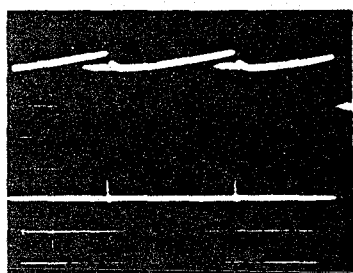
1 1.4V P-P (H)



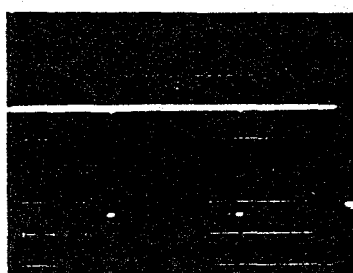
2 400V P-P (H)



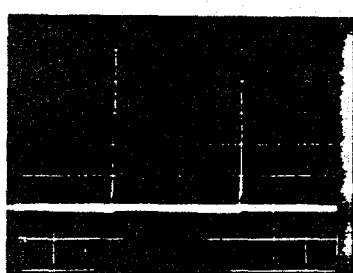
3 460mV P-P (H)



4 960mV P-P (V)



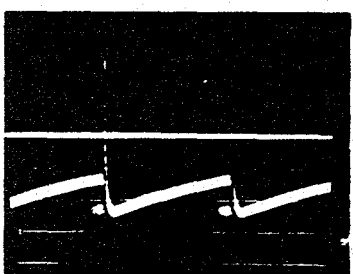
5 3.4V P-P (V)



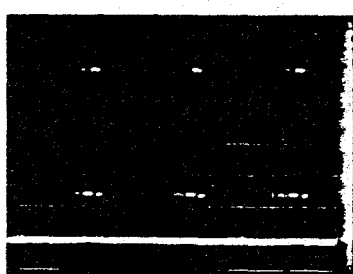
6 5.4V P-P (V)



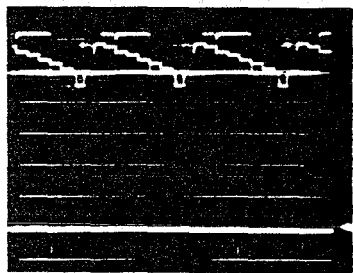
7 4V P-P (V)



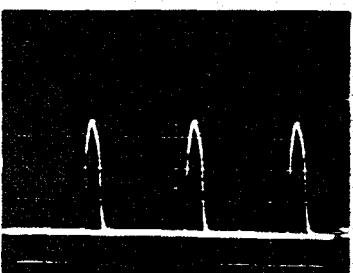
8 2.4V P-P (V)



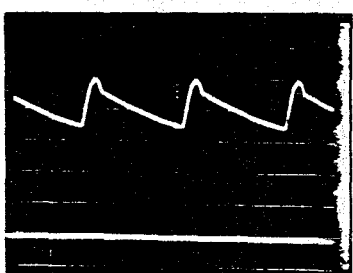
9 8V P-P (H)



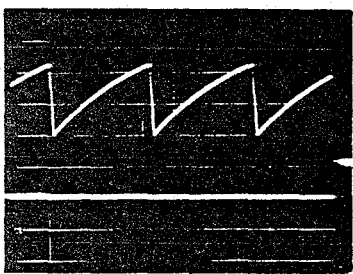
10 2.8V P-P (H)



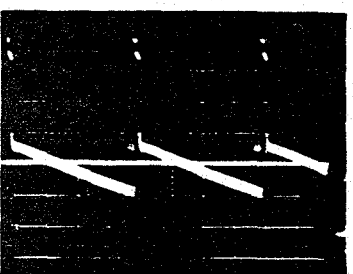
11 15.3V P-P (H)



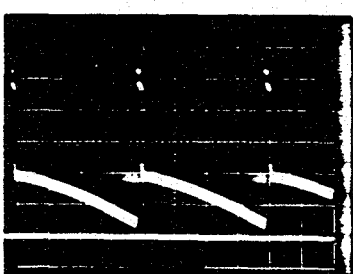
12 1.6V P-P (H)



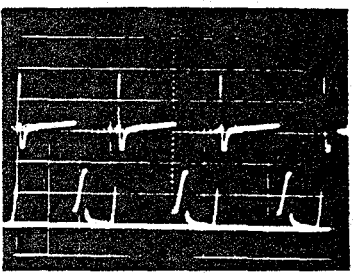
13 4.4V P-P (H)



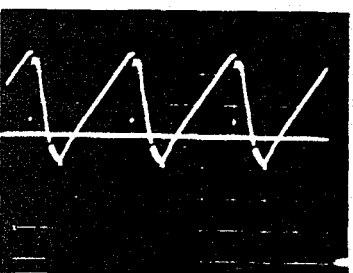
14 20V P-P (V)



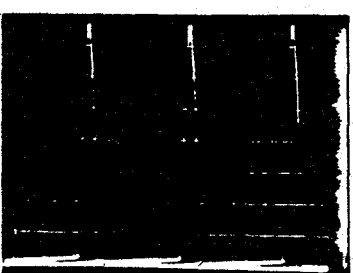
15 20V P-P (V)



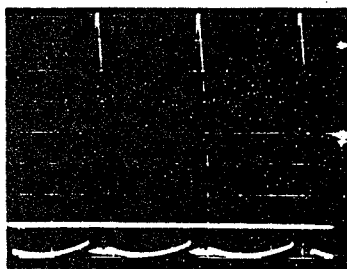
16 52V P-P (H)



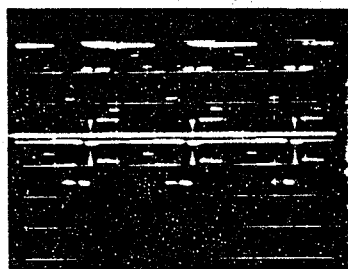
17 5.3V P-P (H)



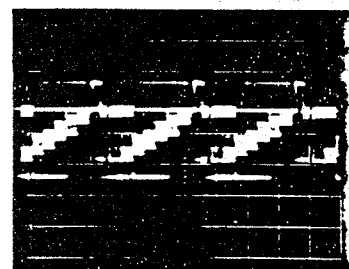
18 760V P-P (H)



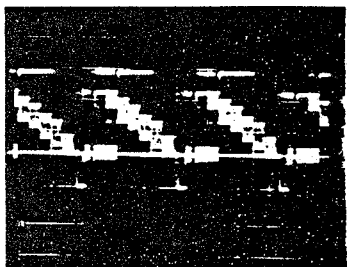
19 780V P-P (H)



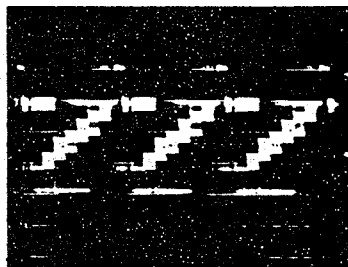
20 480V P-P (H)



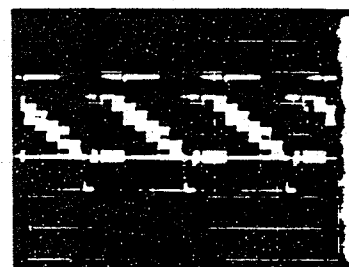
21 1.5V P-P (H)



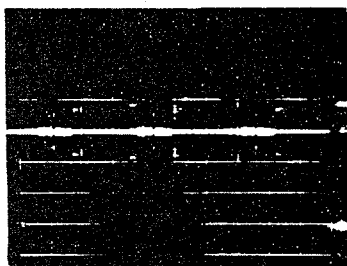
22 3.2V P-P (H)



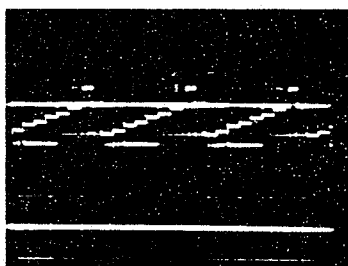
23 2.1V P-P (H)



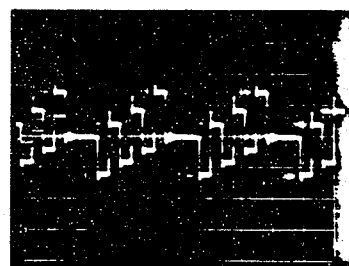
24 3.6V P-P (H)



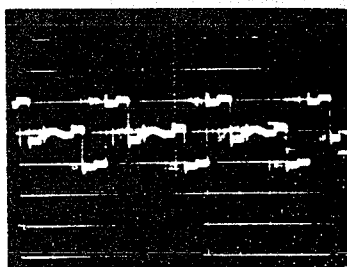
25 130mV P-P (H)



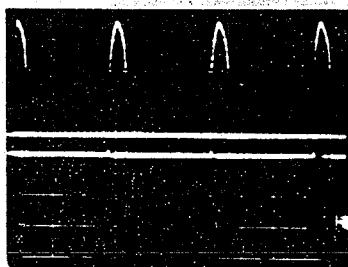
26 1V P-P (H)



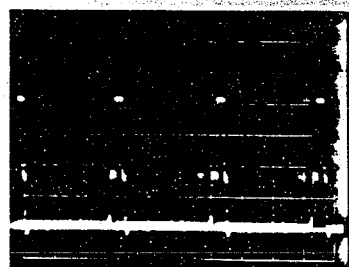
27 1.5V P-P (H)



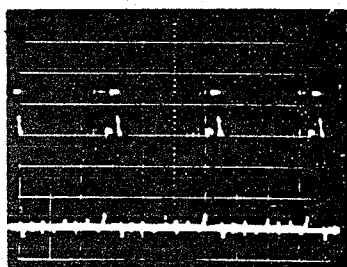
28 1.4V P-P (H)



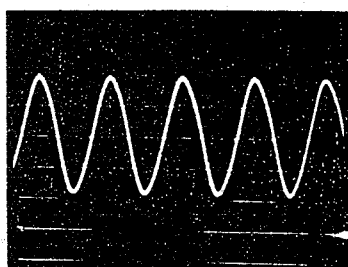
29 4.4V P-P (H)



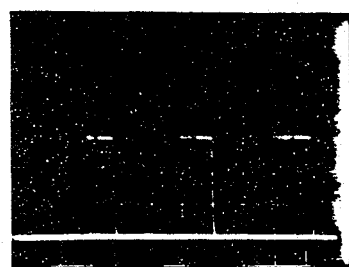
30 840mV P-P (H)



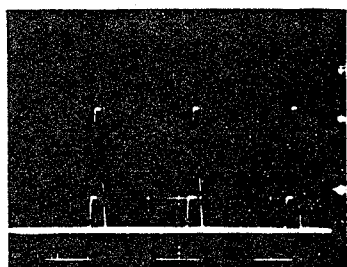
31 920mV P-P (H)



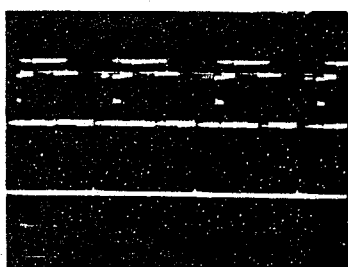
32 6.4V P-P (0.1ms)



33 800mV P-P (H)



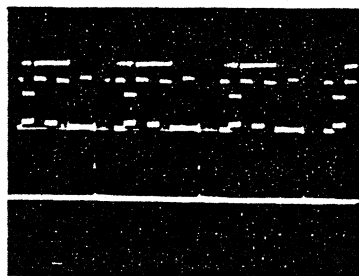
34 5V P-P (H)



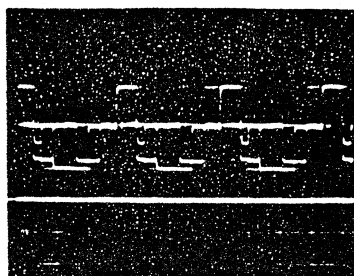
35 5V P-P (H)



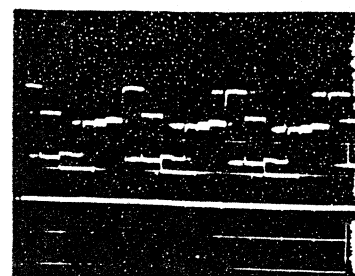
36 5V P-P (H)



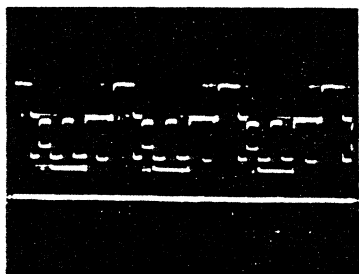
37 5V P-P (H)



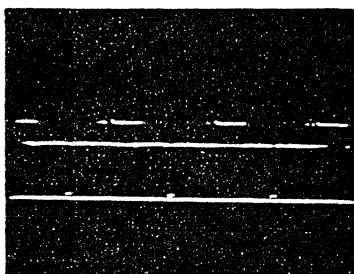
38 180V P-P (H)



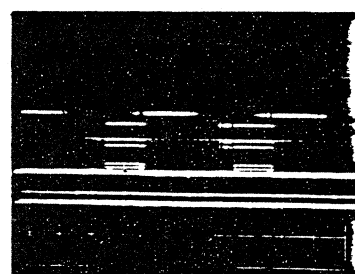
39 180V P-P (H)



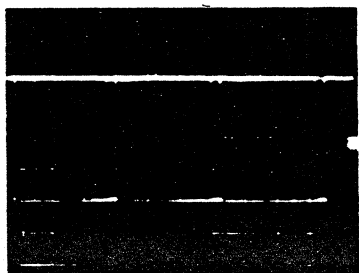
40 180V P-P (H)



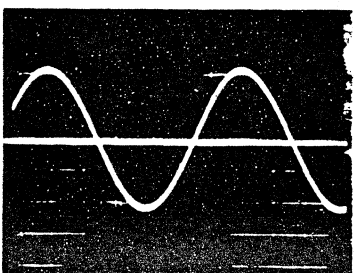
41 5.2V P-P (H)



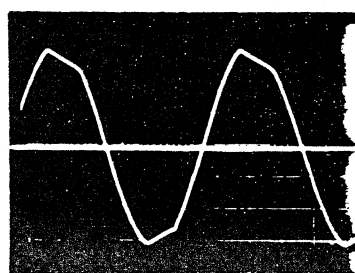
42 2.8V P-P (V)



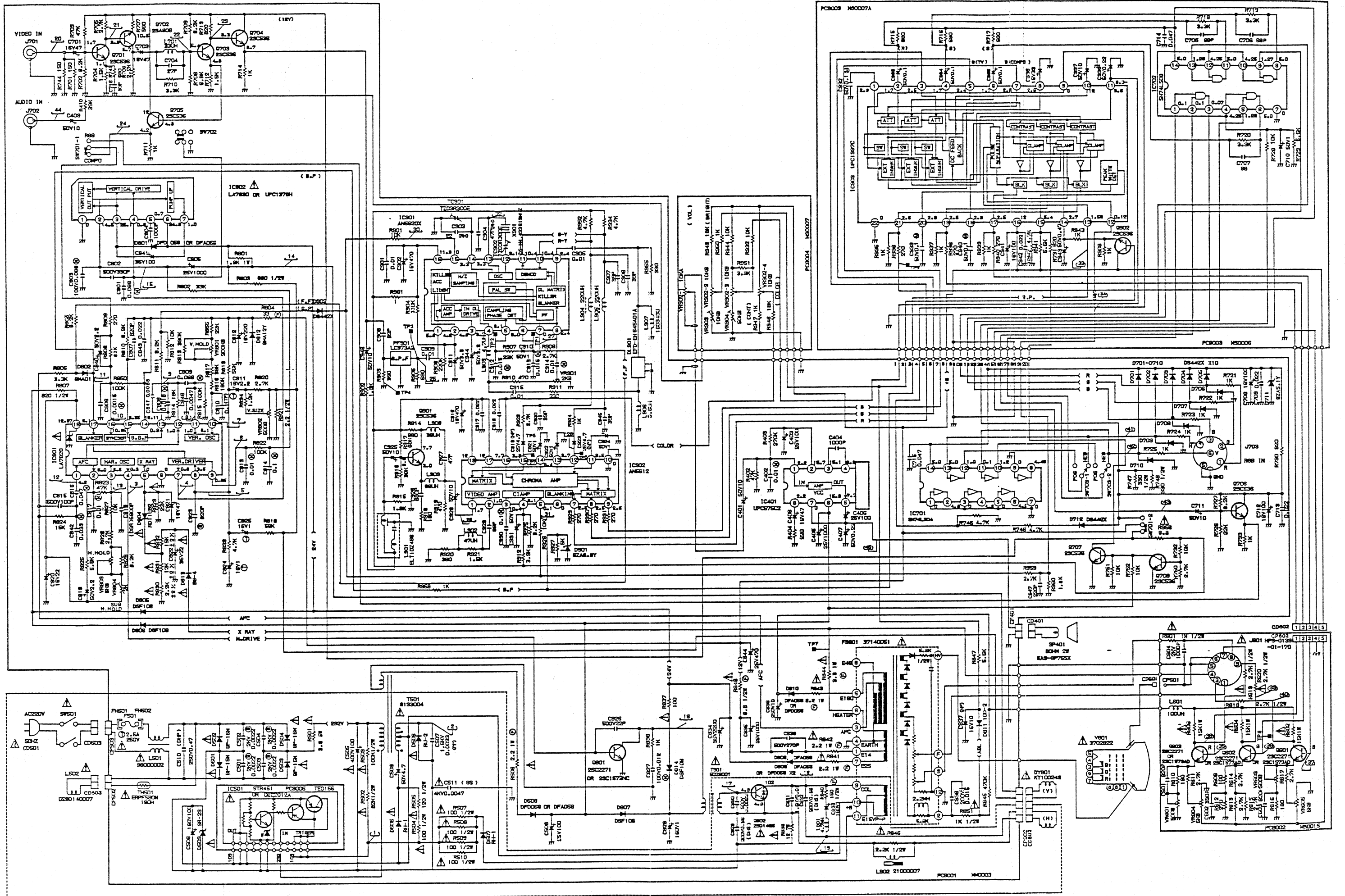
43 3.8V P-P (H)



44 920mV P-P (0.2ms)

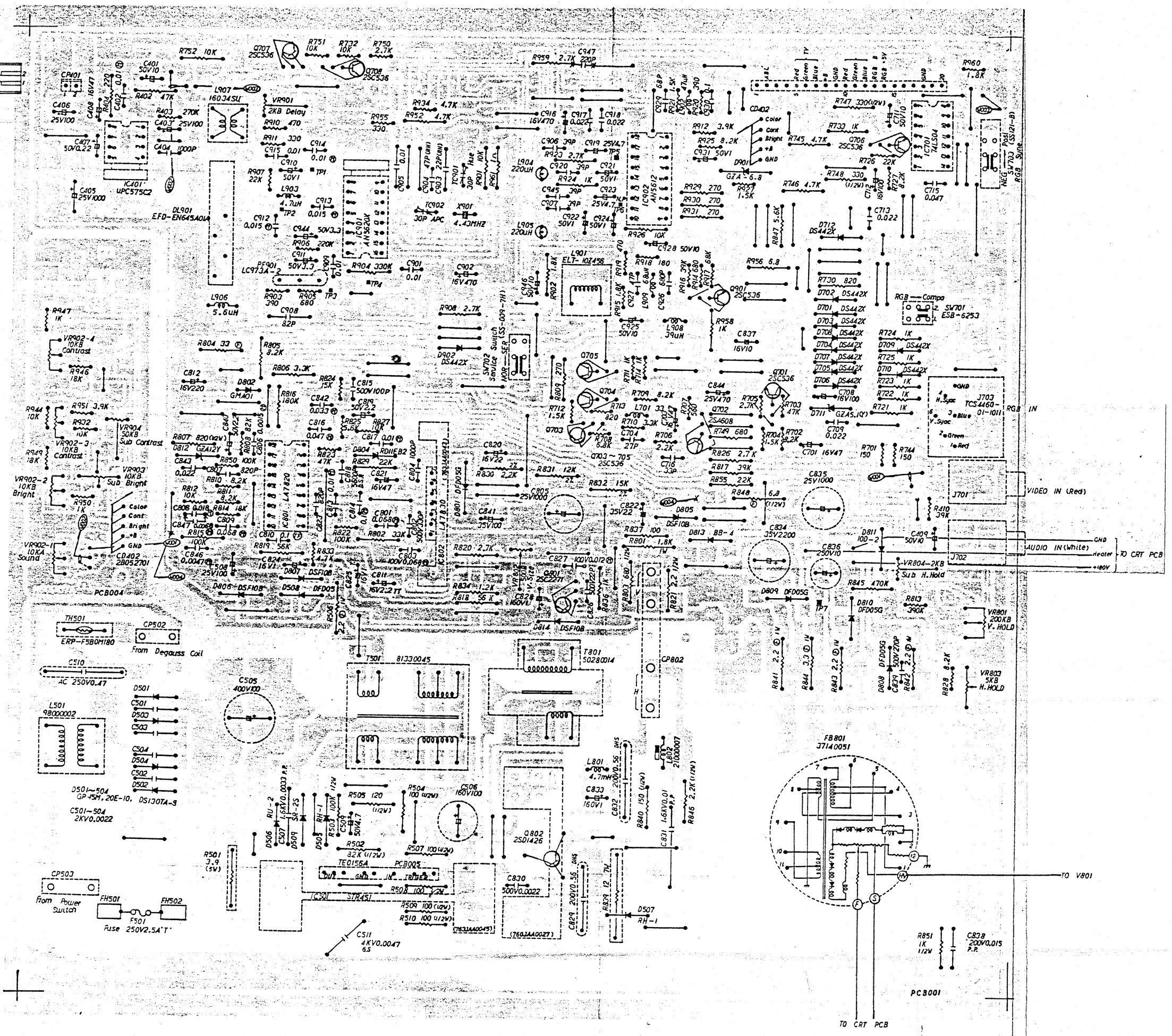
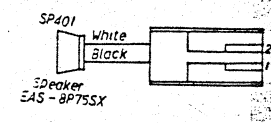


45 12.4V P-P (0.2ms)



CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION: LES PIÈCES REPANÉES PAR UN Δ ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, UTILISER SEULEMENT CELLES DÉCRITES DANS LA NOMÉCLATURE DES PIÈCES.



PC8001

TO CRT PCB

