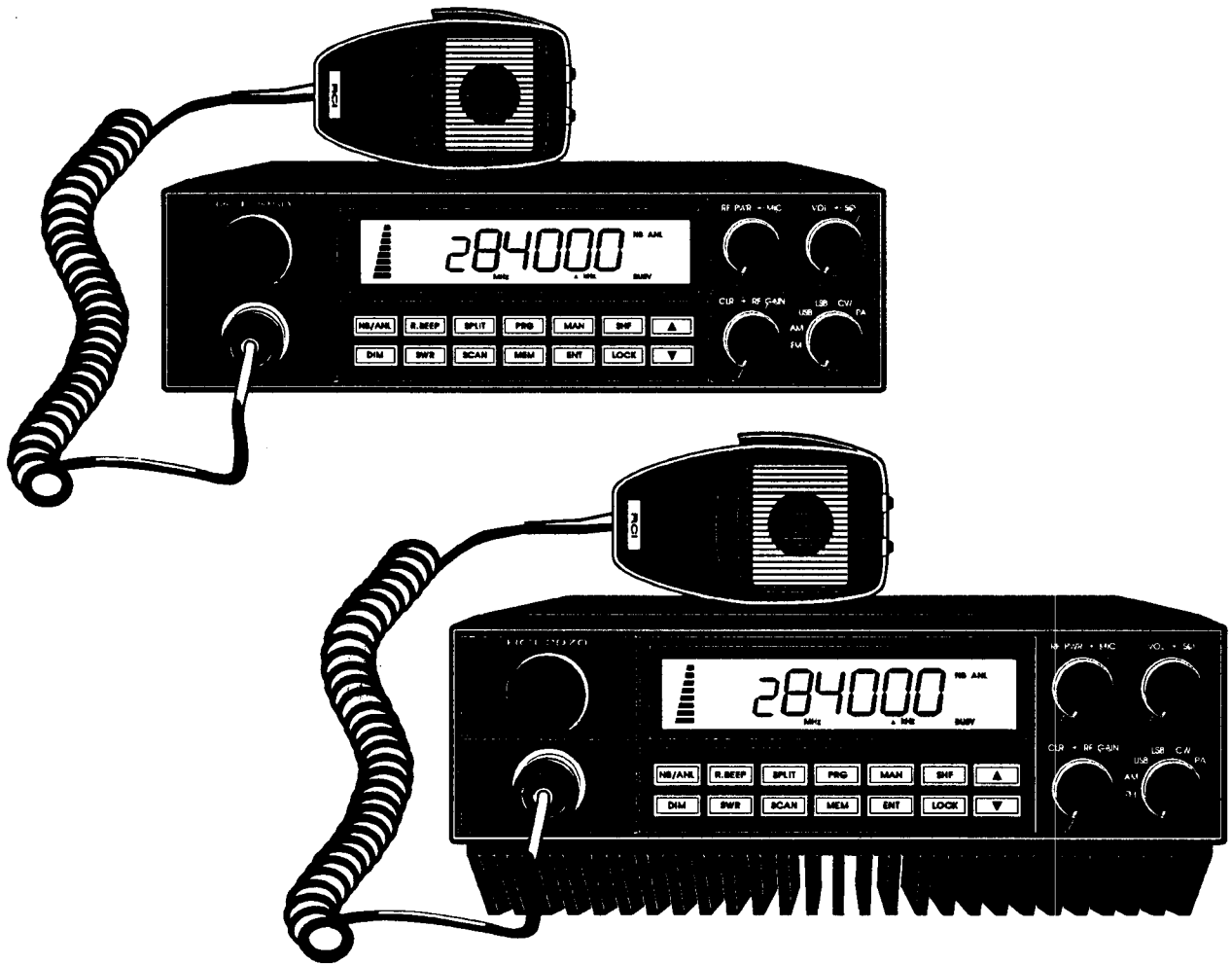


SERVICE MANUAL

AMATEUR 10 METER MOBILE TRANSCEIVER AM/FM/SSB/CW



RCI-2950/2970

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GENERAL

Model	RCI-2950	RCI-2970
Frequency Range	28.0000-29.6999 MHz	28.0000-29.6999 MHz
Tuning Steps	100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz	100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz
Emission Types	USB, LSB(A3J), CW(A1), AM(A3), FM(F3)	USB, LSB(A3J), CW(A1), AM(A3), FM(F3)
Frequency Control	Phase-Locked-Loop Synthesizer	Phase-Locked-Loop Synthesizer
Frequency Tolerance	0.005%	0.005%
Frequency Stability	0.001%	0.001%
Temperature Range	0°C to 40°C	0°C to 40°C
Antenna Impedence	50Ω	50Ω
Microphone	400Ω, Dynamic PTT	400Ω, Dynamic PTT
Meter Function	RF Output, RX Receive Signal Strength Modulation, SWR Calibration, SWR	RF Output, RX Receive Signal Strength Modulation, SWR Calibration, SWR
Input Voltage	13.8 VDC	13.8 VDC
Dimensions	7¾"W x 10¾"L x 2¾"H	7¾"W x 10¾"L x 3⅞"H
Weight	4 lbs. 3 oz.	7 lbs. 6 oz.

TRANSMITTER

RF Power Output	25W: USB/LSB 8W: CW 8W: AM/FM	100W: USB/LSB 50W: CW 50W: AM/FM
RF Transmit Modes	USB, LSB, CW, AM, FM	USB, LSB, CW, AM, FM
Antenna Connector	UHF Type, 50Ω	UHF Type, 50Ω
Modulation	16F3, A3E, J3E, A1A	16F3, A3E, J3E, A1A
Spurious Emissions	-50dB	-50dB
Carrier Suppression	-50dB	-50dB

RECEIVER

Sensitivity for 10dB SINAD	AM/CW: 0.5μV	AM/CW: 0.5μV
Sensitivity for 10dB SINAD	USB/LSB: 0.15μV	USB/LSB: 0.15μV
Sensitivity for 12dB SINAD	FM: 0.25μV	FM: 0.25μV
Image Rejection Ratio	-65dB	-65dB
AGC Figure of Merit	SSB/CW/AM: 80dB for 50mV for 10dB Change in Audio Output	SSB/CW/AM: 80dB for 50mV for 10dB Change in Audio Output
Audio Output Power @10% THD	2.5W	2.5W

*Specifications subject to change without notice.

1.0 INTRODUCTION

The Ranger RCI-2950/2970 is a solid-state, fully synthesized Amateur 10-meter mobile transceiver with full-band coverage from 28.0000 MHz to 29.6999 MHz and all-mode operation, including: FM, AM USB, LSB, CW and PA modes. The 10 most commonly used frequencies can be pre-programmed by the user for easy channel access.

1.1 RCI-2950 FEATURES

- 25 Watts of Output Power
- Full Band Coverage
- All Mode Operation
- Brightness Control
- CTCSS Encoder/Decoder (Optional)
- Repeater/Offset Switch
- Programmable Frequencies
- Built-in Dual VFO
- RIT (RX Incremental Tuning)
- Squelch
- Noise Blanker
- RF Gain Control
- RF Power Output Selector
- External Speaker Connection
- PA Mode
- LCD Display
- Multi-Function LCD Meter

1.2 RCI-2970 FEATURES

- 100 Watts of Output Power
- Full Band Coverage
- All Mode Operation
- Brightness Control
- CTCSS Encoder/Decoder (Optional)
- Repeater/Offset Switch
- Programmable Frequencies
- Built-in Dual VFO
- RIT (RX Incremental Tuning)
- Squelch
- Noise Blanker
- RF Gain Control
- RF Power Output Selector
- External Speaker Connection
- PA Mode
- LCD Display
- Multi-Function LCD Meter

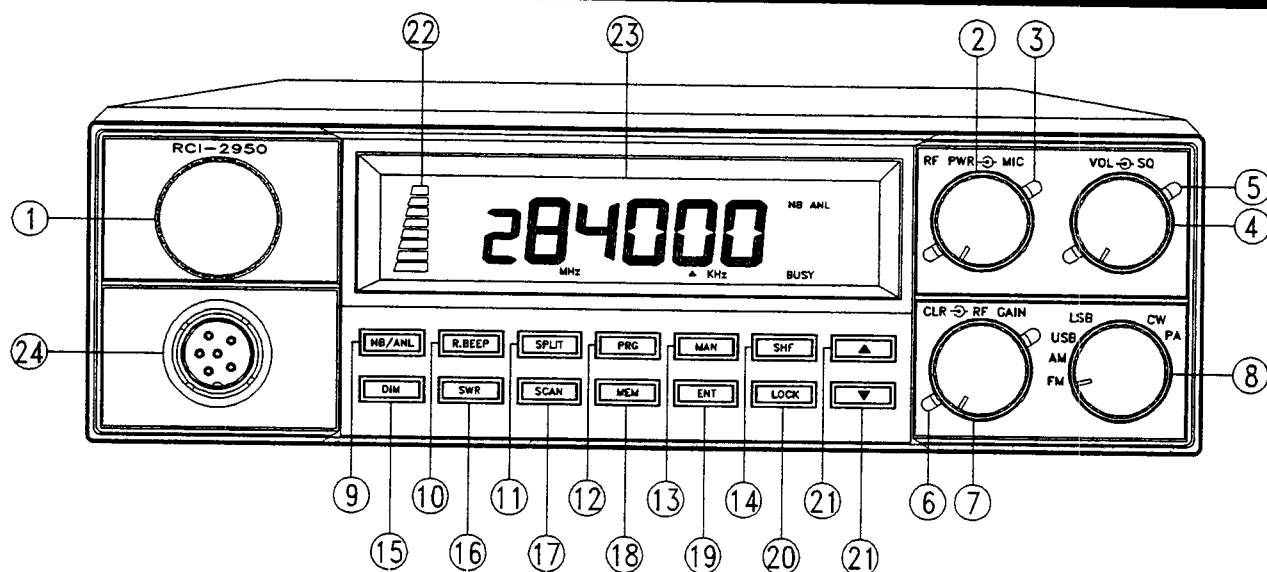


Figure 2.1 RCI-2950/2970 Controls and Connections

2.0 INTRODUCTION

This section explains the basic operating procedures for the RCI-2950/2970 Amateur 10 meter mobile transceiver.

2.1 CONTROLS AND CONNECTIONS

(1) **FREQUENCY SELECTOR:** This control is used to select a desired transmit and receive frequency. It enables you to tune across the entire frequency range of the transceiver.

(2) **RF POWER CONTROL:** This control enables you to adjust RF power continuously over the range of 1 watt through 25 watts (RCI-2970: 10 watts through 100 watts.)

(3) **MIC GAIN CONTROL:** This control adjust the microphone gain in the transmit and PA modes. This feature is designed for use in a high-ambient noise environment or to maximize talk power.

(4) **ON/OFF VOLUME CONTROL:** Turn clockwise to apply power to the radio and to set the desired listening level.

(5) **SQUELCH CONTROL:** This control is used to control or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity, it is desired that the control be adjusted only to the point where the receiver background noise is eliminated. Turn the control fully counterclockwise, then slowly turn clockwise until the receiver noise disappears. Any signal to be received must now be lightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.

(6) **RF GAIN CONTROL:** This control is used to reduce the gain of the RF amplifier under strong receive conditions.

(7) **CLARIFIER CONTROL:** This control is used to fine tune the received signal for the maximum clarity in SSB or CW mode. It can adjust the receive frequency about +/- 500 Hz, but does not affect the transmit frequency or the frequency display.

(8) **MODE SWITCH:** This switch allows you to select one of the six following operating modes: FM, AM, USB, LSB, CW and PA.

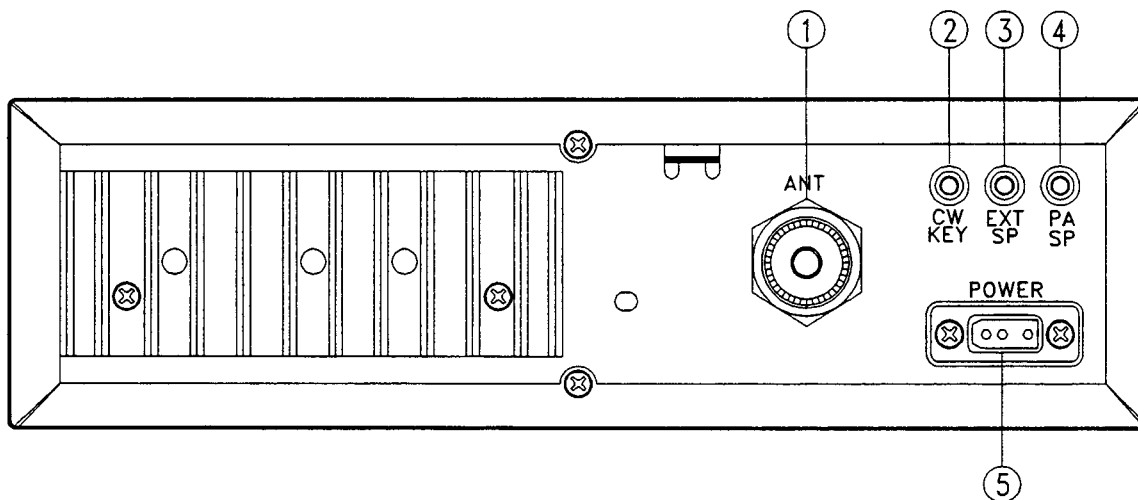


Figure 2.2 RCI-2950/2970 Rear Panel Connectors

(9) **NB/ANL BUTTON (NB/ANL)**: The noise blanker is very effective in eliminating repetitive impulse noise such as ignition interference. In the ANL position, the automatic noise limiter in the audio circuits is activated.

(10) **ROGER BEEP BUTTON (R BEEP)**: This button activates the ROGER BEEP Circuit when its function is selected. The ROGER BEEP is a short beep that is transmitted when the PTT button on the microphone is released. It is used to identify the end of the transmission.

(11) **SPLIT BUTTON (SPLIT)**: This control activates the offset frequency function. It causes the transmit frequency to be offset either above or below the receive frequency by a user programmable amount to allow operation of the RCI-2950/2970 on an FM Repeater.

(12) **PROGRAM BUTTON (PRG)**: This button is used to program operating or scanning frequencies into memory. See the OPERATION section of the manual for further details.

(13) **MANUAL BUTTON (MAN)**: This is used to return the unit to manual mode.

(14) **SHIFT BUTTON (SHF)**: This is used to select 100 Hz, 1 kHz, 10 kHz, 100 kHz or 1 MHz frequency steps.

(15) **DIM BUTTON (DIM)**: This button adjusts the display backlighting in four different steps to best match the environment.

(16) **SWR BUTTON (SWR)**: This control is used to check SWR.

(17) **SCAN BUTTON (SCAN)**: This is used to scan frequencies in each band segment. The OPERATION segment of this manual provides detailed information on using the SCAN control.

(18) **MEMORY BUTTON (MEM)**: This button is used to program memory channels. Detailed information on how to use this control is provided in the OPERATION section of this manual.

(19) **ENTER BUTTON (ENT)**: This is used to program frequencies in memory. See the OPERATION section of this manual for more information on using this control.

(20) **LOCK BUTTON (LOCK)**: This button is used to lock a selected frequency. Press it to activate the switch. In this position, it disables the Frequency Selector Control, up/down buttons on the front control panel and remote up/down buttons on the microphone. Repressing the switch will unlock the frequency.

(21) **UP/DOWN SELECTOR (▲▼)**: These buttons are used in conjunction with the shift key to move the frequency upward or downward to select a desired frequency.

(22) **METER**: This meter indicates received signal strength, transmitter RF output power and SWR level.

(23) **LCD DISPLAY**: The LCD displays the frequency selected, functions and memory channel.

(24) **MIC JACK**: Accepts 6 pin female connector with a type Philmore T616C or Calrad 30445 style connector.

2.2 REAR PANEL CONNECTORS

- (1) **ANTENNA:** This jack accepts 50Ω coaxial cable with a PL259 type plug.
- (2) **CW KEY:** This is used for Morse Code operation. To operate this mode, connect a CW key to this jack, and place the MODE switch in the CW position.
- (3) **EXTERNAL SPEAKER:** This jack accepts a 4 to 8Ω, 5 Watt external speaker. When the external speaker is connected to this jack, the built-in speaker will be disabled.
- (4) **PA SPEAKER:** An 8Ω, 4 Watt PA speaker may be connected to this jack for PA operation. Place the MODE selector switch in the PA position for this operation.
- (5) **POWER:** Accepts 13.8 VDC power cable which is supplied with a built-in fuse.

2.3 MICROPHONE

- (1) **PTT SWITCH:** Use the Push-to-Talk switch to control the transmit and receive function of the radio. Push to transmit and release to receive.
- (2) **REMOTE UP/DOWN SWITCH:** An operating frequency can be incremented or decremented simply by pushing either of these buttons.

2.4 RCI-2950/2970 OPERATION

2.4.1 Channel Selection

Frequency selection for the RCI-2950/2970 is simple. Select a desired operating frequency by rotating the Frequency Selector, or using the (▲) Up and (▼) Down buttons on the front panel or the microphone. Press the LOCK button to lock into the selected frequency. This will disable the Frequency Selector and the up/down buttons on the front panel and the microphone. Repressing the LOCK button unlocks the frequency.

Use the SHF button to step frequency in either 100 Hz, 1 kHz, 10 kHz, 100 kHz or 1 MHz increment when you select a band segment. The frequency step is indicated by a small triangle directly under the corresponding digit on the frequency display.

2.4.2 Mode Selection

To select an operating mode on your RCI-2950/2970, simply rotate the MODE selector and place it in the desired operating mode position.

FM/AM/USB or LSB modes are for your voice communications. In the CW position, you can transmit CW if you have connected an external key to the accessory jack provided on the back of the radio. In the PA position, the radio can be used as a PA. Before operating in PA mode, you must first connect a PA speaker (8Ω, 4 Watt) to the jack provided on the back of the radio.

2.4.3 RF Power Control

This feature allows the adjustment of the RF output power continuously over the range of 1W through 25W (RCI-2970: 10W through 100W).

2.4.4 Receive Scanning

Receive scanning allows you to find active frequencies in the entire band segment. To begin scanning, slowly turn the Squelch control clockwise until the receiver noise disappears. Press the Scan button. The unit should start scanning from the lower to the higher frequencies. Pressing the Scan button again will change the direction of scanning. Each time you press the Scan button, "SCAN+" or "SCAN-" will be displayed on the LCD display. The radio will stop on any active frequency for the entire duration of the transmission. When the transmission stops, the RCI-2950/2970 will wait approximately 2 seconds before it resumes scanning. If you want to deactivate Scan mode while it is scanning, press the MAN (manual) button or turn the Squelch control counterclockwise until you hear the receiver noise. The Manual button will disable Scan function.

2.4.5 Split Function

This function enables you to offset the transmit and receive frequencies for FM repeater operation. The transmitter frequency can offset either higher or lower than the receive frequency. To split frequencies, press the MAN button and the Split button to select either +/- split frequency. If the + split is selected, the transmit frequency will be higher than the receiver frequency. If - split is selected, the transmit frequency will be lower than the receive frequency. Refer to section 4.3 for Split Programming Instructions.

2.4.6 Memory Function

The RCI-2950/2970 can store up to 10 most frequently used frequencies (from 0 to 9). To program a frequency into memory, follow the procedure described below:

- (1) Press the MAN button.
- (2) Press the PRG button.
- (3) Press the MEM button ("MEMORY" and "0" should appear on the left-hand side of the LCD display). Pressing the MEM button will advance the channel number from "0" to "9".
- (4) Select the desired frequency you wish to store in memory.
- (5) Press the ENT button.
- (6) Repeat the same procedure to program other memory channels.

2.4.7 Memory Channel Scanning

You can scan and select any of these 10 preset frequencies by following the procedure described below:

- (1) Press the MAN button.
- (2) Press the MEM button.
- (3) Slowly turn the Squelch knob clockwise until the receiver noise disappears.
- (4) Press the Scan button. The unit will scan from lower to higher frequencies. When you press the button again, it will scan from higher to lower frequencies.
- (5) To stop scanning a certain channel, press the MAN button, or turn the Squelch knob counterclockwise until you hear the receiver noise.

2.4.8 Meter

The meter built into your RCI-2950/2970 on the left hand side of the LCD display provides the following information:

- (1) **S/RF Meter:** In transmit mode, it provides a visual indication of transmit output power, and received signal strength on the receive mode.
- (2) **SWR Meter:** In order to achieve maximum radiated power, it is important that your antenna be in good condition, properly adjusted and matched to your transceiver.

The built-in SWR (Standing Wave Ratio) meter allows you to measure your antenna condition. To operate this function, connect your antenna to the transceiver antenna connector, set the mode switch to AM and adjust the MIC Gain to minimum. Select a frequency near the middle of the band you plan to use most. Activate the SWR function and press the PTT button on the microphone. A bar on the meter is an indication of the antenna matching. If there is no bar, it indicates that your antenna system is perfectly matched. The less bar, the better matched. If several bars appear, your antenna needs adjusting.

2.4.9 CTCSS-Optional

The RCI-2950/2970 can operate with CTCSS frequencies for accessing repeaters, with an optional CTCSS (Continuous Tone Coded Squelch System) encoding device installed. For more information, contact your local dealer or Ranger Communications Customer Service Department.

FIGURE 3.1 RCI-2950/2970 MIC. WIRING

1. GROUND	SHIELD
2. AUDIO	YELLOW
3. TRANSMIT	RED
4. RECEIVE	BLACK
5. CHANNEL UP	WHITE
6. CHANNEL DOWN	BLUE

FIGURE 3.2 TURNER 4-WIRE MIC. WIRING

1. GROUND	SHIELD
2. AUDIO	WHITE
3. TRANSMIT	BLACK
4. RECEIVE	N/C
5. CHANNEL UP	N/C
6. CHANNEL DOWN	N/C

FIGURE 3.3 TURNER 6-WIRE MIC. WIRING

1. GROUND	SHIELD & RED
2. AUDIO	WHITE
3. TRANSMIT	BLUE
4. RECEIVE	N/C
5. CHANNEL UP	N/C
6. CHANNEL DOWN	N/C

FIGURE 3.4 ASTATIC 4-WIRE MIC. WIRING

1. GROUND	SHIELD
2. AUDIO	WHITE
3. TRANSMIT	RED
4. RECEIVE	N/C
5. CHANNEL UP	N/C
6. CHANNEL DOWN	N/C

FIGURE 3.5 ASTATIC 6-WIRE MIC. WIRING

1. GROUND	SHIELD & BLUE
2. AUDIO	WHITE
3. TRANSMIT	RED
4. RECEIVE	N/C
5. CHANNEL UP	N/C
6. CHANNEL DOWN	N/C

FIGURE 3.6 PALOMAR MIC. WIRING

1. GROUND	SHIELD & BLACK
2. AUDIO	RED
3. TRANSMIT	WHITE
4. RECEIVE	N/C
5. CHANNEL UP	N/C
6. CHANNEL DOWN	N/C

FIGURE 3.7 INTERNAL ALIGNMENT POINTS

VR1	AM RECEIVE METER CAL
VR2	SSB RECEIVE METER CAL
VR3	SSB SQUELCH THRESHOLD
VR4	AM SQUELCH THRESHOLD
VR7	CARRIER BALANCE
VR8	TRANSMIT METER CAL
VR11	DRIVER BIAS
VR12	ALC (SSB HIGH POWER)
VR13	AM CARRIER (HIGH POWER)
VR14	AMC
VR15	AM CARRIER (LOW POWER)
VR16	ALC (SSB LOW POWER)
VR21	TX FREQUENCY ADJUSTMENT
VC1	10.240 CRYSTAL TRIMMER (X1)
VC2	10.240 CRYSTAL TRIMMER (X2)
L27	AM FREQUENCY ADJUSTMENT
L28	LSB FREQUENCY ADJUSTMENT
L29	USB FREQUENCY ADJUSTMENT

3.0 INTRODUCTION

The following steps are required to re-align the RCI-2950/2970. **CAUTION:** Alignment should only be attempted by personnel trained in RF product testing and alignment.

3.1 PLL SYNTHESIZER/OSCILLATOR FREQUENCY ALIGNMENT

Set radio controls as follows:

Frequency:	28.0000 MHz
Mic Gain:	Fully counter clockwise
RF Power:	Fully clockwise
RF Gain:	Fully clockwise
Clarifier:	12 o'clock
Volume On/Off:	On
Squelch:	Fully counter clockwise
Mode Selector:	FM

(1) Connect a digital voltmeter to jumper J13. Adjust L17 for a reading of 2.2 VDC \pm 0.1.

(2) Connect a digital voltmeter to pin 3 of IC7. Adjust L21 for 1.2 VDC \pm 0.1.

(3) Connect a frequency counter to L61 and adjust VC1 for 10.240 MHz \pm 10 Hz.

(4) Connect a 50Ω dummy load to the antenna connector.

(5) Connect a frequency counter to pin 3 of IC14. Ensure that the clarifier is precisely at the 12 o'clock position. Adjust VC2 for 10.240 MHz ±10 Hz. Key the transmitter and adjust VR21 for 10.240 MHz ±10 Hz.

(6) Connect a frequency counter to the cathode of D45. Put mode selector on AM. Key the transmitter and adjust L27 for 10.6950 MHz ±10 Hz.

(7) Adjust VR7 fully clockwise. Leave the frequency counter connected to D45. Put the mode selector on USB. Key the transmitter and adjust L29 for 10.6925 MHz ±10 Hz.

(8) Put the mode selector in LSB. Key the transmitter and adjust L28 for 10.6972 MHz ±10 Hz. Return VR7 to approximately the middle of rotation.

(9) Put the mode selector in AM. Connect X10 probe to pin 13, IC17. Check the frequency counter for 5.930 MHz.

(10) Set the oscilloscope for 50nS (.05μS) per division on the sweep selector and 10mV per division on the vertical input. Connect X10 probe to IC17 pin 13 and very carefully adjust L24 and L25 for the best waveform.

3.2 RECEIVER ALIGNMENT

(1) Put the mode selector on FM, the RF gain fully clockwise, Clarifier at 12 o'clock and the frequency at 28.0300 MHz.

(2) Connect an FM signal generator to the antenna connector. Set the modulation for ±3 kHz, output level at 0.5μV.

(3) Connect a SINAD meter to the external speaker jack, adjust the volume control to approximately 10 o'clock.

(4) Connect an X10 probe to the cathode of D12. Set oscilloscope sweep selector for 1mS per division and vertical input selector for 10mV per division.

(5) Adjust L8 for the best SINAD reading and the least distorted wave form on the scope. Do not try tuning this coil for the maximum, as this will result in degraded receiver performance.

(6) Adjust L9, L11, L12, L13, L14, L4, L3, L5 and L6 for maximum on scope. Reduce generator level if necessary, so as not to exceed vertical height on scope.

(7) Adjust L6 and L5 for best SINAD.

(8) Put the mode selector on LSB. Signal generator to 28.0290 MHz, modulation off, output level at 0.5μV. Tune L15 and L16 for maximum waveform on scope.

3.3 TRANSMITTER ALIGNMENT

· RCI-2970 LEVELS ARE SHOWN IN [] ·

(1) Connect an audio generator to pin 2 and ground (pin 1) of the Mic connector. The Mic gain should be fully counterclockwise. Set generator for 30mV RMS, 1 kHz sinewave.

(2) Adjust VR14 fully counterclockwise.

(3) Adjust VR12 fully counterclockwise.

(4) Connect a wattmeter and 50Ω dummy load to the antenna connector. Set the wattmeter for 30W scales [100W].

(5) Key the transmitter and slowly increase the Mic gain until you obtain approximately 10W. Adjust L19, L48, L47, L46 and L43 for maximum reading on the wattmeter. Reduce Mic gain if necessary to maintain about 10 to 15W on wattmeter [40-50W].

(6) Increase the Mic gain to maximum (fully clockwise). Key transmitter and adjust L34 for maximum power output. Power will typically be 30-35W [100-120W].

(7) With the Mic gain still maximum on LSB, key the transmitter and adjust VR12 for 25W [100W].

(8) Put the mode selector on AM. Key the transmitter with no modulation applied and adjust VR13 for 10W [50W].

(9) With the mode selector still on AM, re-connect 1 kHz audio the generator to radio and key transmitter. With Mic gain at maximum, adjust VR14 for 90% modulation. Use the modulation meter or oscilloscope with RF sampler [85%].

(10) Put the mode selector on FM. Key the transmitter and check for 4 kHz deviation ±0.5 kHz. There is no deviation adjustment provided in this radio. Simply check for sufficient transmit audio. Use the deviation meter or the service monitor.

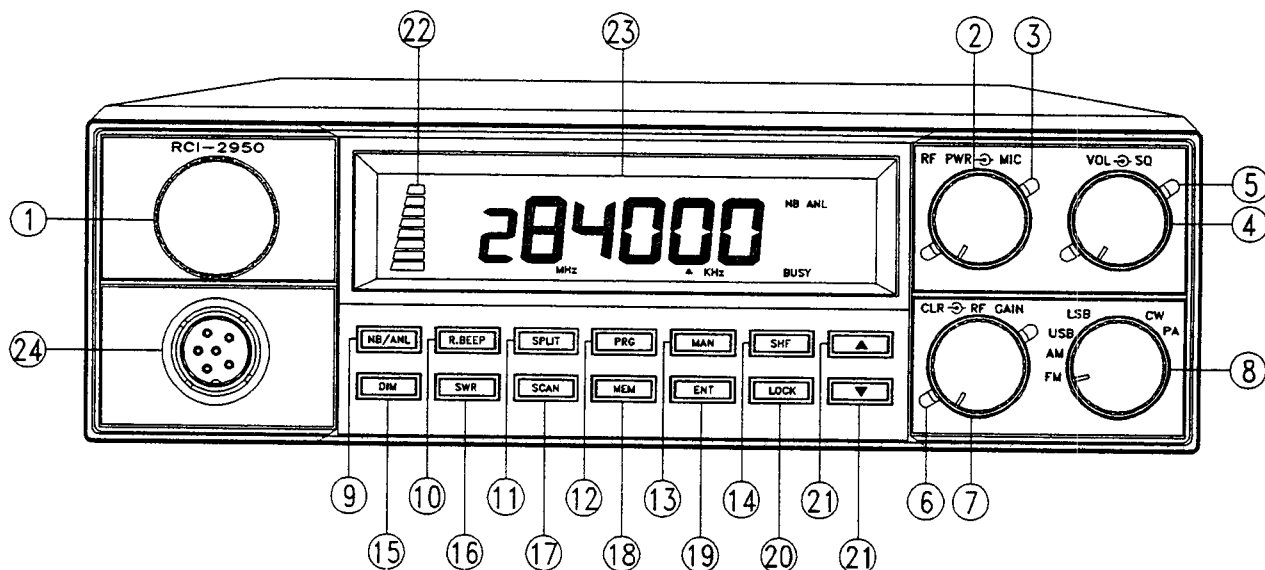


Figure 4.1 RCI-2950/2970 Controls and Connectors

4.0 INTRODUCTION

This section explains the basic programming procedures for the RCI-2950/2970 Amateur 10 meter mobile transceiver.

4.1 FREQUENCY SELECTION

Frequency selection in the RCI-2950/2970 can be accomplished using anyone of the three following methods:

(1) The first method of frequency selection is through the use of the **SHF** (Shift) key and the (▲) Up and (▼) Down arrows. To accomplish this, press the **SHF** button until the cursor arrow is positioned under the digit of the frequency that is to be changed, then use the (▲) Up arrow to increase the number. If a decrease in frequency is desired, press the (▼) Down arrow. Perform the steps described above for each digit of the frequency until the desired frequency is displayed in the LCD display window.

(2) The second method of frequency selection is accomplished using the **SHF** button and the frequency select knob located above the microphone jack. Use the **SHF** button in the manner described above to select the digit to be changed.

Proceed to rotate the frequency select knob clockwise to increase the frequency. Rotate the frequency select knob counterclockwise to decrease the frequency.

(3) The third method of selecting the operating frequency of the radio is through the use of the **SHF** button and the Channel (▲) Up and (▼) Down buttons located on the microphone. Frequency selection by this method is accomplished in the same manner as with the (▲) Up and (▼) Down arrows on the key pad. The only difference is that the Channel Up and Down buttons on the microphone are used.

4.2 FREQUENCY SCANNING

Frequency scanning can be achieved using one of two methods: the first method involves the scanning of pre-programmed memory channels. The second method permits the user to scan all frequencies between a pre-set upper and lower scan limit. Both of the methods of the frequency scanning.

4.2.1 All Frequency Scanning

To allow all Frequency Scanning, One must first program the upper and lower scanning limits. The scan limits are simply the highest and lowest frequencies that will be scanned. To program these limits, perform the following steps:

- (1) Press the **PRG** (Program) key.
- (2) Press the **SCAN** key ("**PRG SCAN+**" should appear in the lower right corner of the display window).
- (3) Using the **SHF** key and the (▲) Up and (▼) Down arrows, select the upper scan limit, then press **ENT**.
- (4) Press the **SCAN** key again ("**SCAN-**" should appear in the display window).
- (5) Using the **SHF** key and (▲) Up and (▼) Down arrows, select the lower scan limit, then press **ENT**.

The upper and lower scan limits have now been programmed. To activate the scan feature, return the radio to manual operation and press the **SCAN** button. If the display shows "**SCAN+**", the radio will scan from the lower limit to the upper limit. If "**SCAN-**" is displayed, the unit will scan from the upper limit to the lower limit. To change from **SCAN+** to **SCAN-** or vice versa, press **SCAN**.

.....
: **NOTE** :
: :
: *When programmed, the upper and lower scan* :
: *limits will also act as the upper and lower* :
: *operating limits of the radio. The radio now* :
: *cannot be programmed to operate above or* :
: *below the scan limits.* :
: :

4.2.2 Memory Scanning

The RCI-2950/2970 has 10 non-volatile (i.e. memory resident) memory locations which can be programmed with any available frequency within the operating band of the radio. The scan function of the unit can be programmed to scan these memory channels. The radio will then scan only those memory channels which have been programmed.

The first step in utilizing the memory scan function is to program the desired frequencies into the radio memory. This can be accomplished by performing the following steps:

- (1) With the radio operating in the manual mode, press the **PRG** (Program) key.

(2) Press the **MEM** (Memory) key. "**PRG**" should be displayed in the lower right-hand corner of the LCD display window. In the upper left portion of the display, "**MEMORY**" should be displayed. Directly below **MEMORY**, a number between 0 and 9 will be displayed. This number represents the memory location currently being displayed. Pressing the **MEM** key will increase the memory counter to the next memory location and the contents of that memory location will be displayed.

(3) Using the **SHF** key and the (▲) Up and (▼) Down arrows, enter the frequency to be stored in the memory location displayed. After the desired frequency has been entered, press **ENT**.

(4) Repeat steps 2 and 3 for all the memory locations to be programmed.

(5) After all desired memory locations have been programmed with frequencies, return the unit to the manual mode of operation by pressing the **MAN** key.

(6) To initiate memory scanning, press **MEM** and then press **SCAN**. As previously discussed, the display will show "**SCAN+**" or "**SCAN-**" to indicate whether the radio is scanning from the lowest or the highest memory location or vice versa.

(7) To return the radio to normal (non-scanning) operation, press the **MAN** key.

4.3 OFFSET FREQUENCY OPERATION

The RCI-2950/2970 has an offset or split frequency feature that will permit the radio to be operated in a half-duplex mode. This will allow the user to talk on FM repeaters operating in the 10 Meter band.

.....
: **NOTE** :
: :
: *The FM repeaters may require a subaudible* :
: *(CTCSS) tone be transmitted to gain access to* :
: *the repeater. The RCI-2950 is not factory-* :
: *equipped with a CTCSS encoder/decoder.* :
: :

The split frequency function offsets the transmitter frequency either above or below the receive frequency by a user programmable amount. In the following example, programming of a 100 kHz offset will be described. Before attempting to program the offset frequency, ensure that the radio is operating in the manual mode by pressing the **MAN** key.

- (1) Press the **PRG** (Program) key.

(2) Press the **SPLIT** key. The LCD display window will display "00000" with "PRG" and "SPLIT" being displayed in the lower left hand corner.

(3) Using the **SHF** key and the (▲) Up and (▼) Down arrows as described earlier, program the display to read "010000".

(4) Press **ENT**. A 100 kHz offset has now been programmed into the radio.

(5) Return the radio to manual operation by pressing the **MAN** key.

(6) Using the **SHF** key and the (▲) Up and (▼) Down arrows as described previously, set the radio for the desired receive frequency.

(7) Press **SPLIT**. In the lower right corner of the display, either "SPLIT+" or "SPLIT-" will be displayed. If **SPLIT+** is displayed, the transmitter will be offset 100 kHz above the receive frequency when keyed. If **SPLIT-** is displayed, the transmitter will be offset 100 kHz below the receive frequency.

.....
: **NOTE** :
: *When the transmitter is keyed, the frequency* :
: *display will change to show the frequency* :
: *being transmitted.* :
: :

(8) To return the radio to simplex operation (i.e., same transmit and receive frequency), Press the **MAN** key.

5.0 INTRODUCTION

(Refer to block diagram RCI-2950/2970 behind Section 5).

This section explains the description of the Block Diagram of the RCI-2950/2970. The Ranger RCI-2950/2970 is a solid-state, fully synthesized Amateur 10-meter mobile transceiver with full-band coverage from 28.0000 MHz to 29.6999 MHz and all-mode operation including: FM, AM, USB, LSB, CW and PA modes.

5.1 RECEIVER DESCRIPTION

The RF enters the receiver through the antenna, proceeds through a filter and into the first RF amplifier, Q18. The amplified signal then goes through a band pass filter and into the first mixer, Q19.

The RX signal is mixed with the first local oscillator (VCO1) at Q19. The output is the first IF of 10.6950 MHz for AM/FM, 10.6925 MHz +AF for USB, and 10.6975 MHz -AF for LSB. The signal is then filtered by L12, L13 and L14. At this point, the signal goes in one of two directions depending on the mode setting of the unit. The AM/FM signal gets filtered by FL2 and enters Q8 which mixes the 10.6950 MHz signal with the 10.240 MHz. This yields the second IF of 455 kHz which is filtered by FL1. The 455 kHz signal is filtered and amplified by Q9, L5, Q10, Q11 and L6.

The AM signal goes to the AM detector consisting of D34 and D35. The FM signal enters the FM detector, IC2. The SSB (Single Sideband) signal is filtered by a crystal filter (FL3). The signal is amplified by Q20, Q21, Q22 and Q23.

The sideband signal is mixed with a 10.6925 MHz signal for USB (Upper Sideband) and a 10.6975 MHz signal for LSB (Lower Sideband). The signals are mixed by Q16 resulting in an audio wave form.

The AGC amplifier (IC1) controls the squelch (Q17), Q8 (AM/FM mixer), Q20 (SSB IF), and the gain of Q18 (RF AMP). IC1 is quad op amplifier. The inputs come from Q23 (SSB IF), Q11 (AM/FM IF) and the squelch potentiometer (VR501).

5.2 PLL DESCRIPTION

The PLL (Phase-locked Loop) consists of two VCO's. The primary VCO (VCO1) is the reference local oscillator (LO) for the Transmit and Receiver sections. The secondary VCO (VCO2) is the reference as well as the 2.5 kHz offsets for USB (Upper Sideband) and LSB (Lower sideband). The primary VCO controls Frequency steps of 10 kHz, 100 kHz and 1 MHz.

5.2.1 VCO1 Description

VCO1 is controlled by IC17, which receives its data from the microprocessor on the logic board. IC17 samples the frequency from IC10, divides the signal and outputs the resulting waveform to a phase comparator (IC5). The signal is compared to a 10 kHz reference from IC11. The output of IC5 sends a control signal to D43 in the oscillator circuit, controlling the frequency of VCO1. The output signal of VCO1 is mixed at IC10 with a modified signal from VCO2. The output signal of IC10 is sent to IC17.

5.2.2 VCO2 Description

VCO2 controls frequency steps of 100 Hz and 1 kHz. When the unit is in USB or LSB, VCO2 shifts the LO +2.5 kHz and -2.5 kHz respectively. VCO2 consists of a loop much like VCO1 with the oscillator, amplifier and mixer combined into one IC (IC8). VCO2 mixes with 10.240 MHz in IC8 and outputs to IC17. IC17 divides this frequency and outputs into a phase comparator (IC7), where the signal is compared to a 10 kHz (X1, IC11) reference from IC11. The output of IC7 controls VCO2. VCO1 at the mixer (IC10). VCO2 changes by 100 kHz and 10 kHz steps at IC10. The output signal of VCO2 goes through a divide by 10 (IC12) and mixed with a 10.24 MHz (X2) reference. The signal is divided by 10 (IC13) once more and mixed with a 10.24 MHz (X2) reference. The output is the reference to VCO1 at the mixer (IC10).

5.3 TRANSMITTER DESCRIPTION

The Transmit signal is produced by mixing 10.6950 MHz for AM/FM (10.6975 MHz for LSB and 10.6925 MHz for USB) with the local oscillator (LO) at the transmitter mixer (IC20). This signal is filtered and amplified by Q50 to Q59 and Q49 into the driver Q48. Q48 drives the finals Q46 and Q47. The finals are a direct coupled push-pull configuration. The signal is filtered before entering the antenna jack.

FM modulation is accomplished by amplifying the signal from the mic audio amplifier and using this signal to frequency modulate the reference oscillator X3 (10.6950 MHz), via the two varactor diodes in parallel with the crystal load. The crystal (X3) will shift its frequency by changing the voltage across the varactors (D8 and D111). This is accomplished thru the MIC Audio.

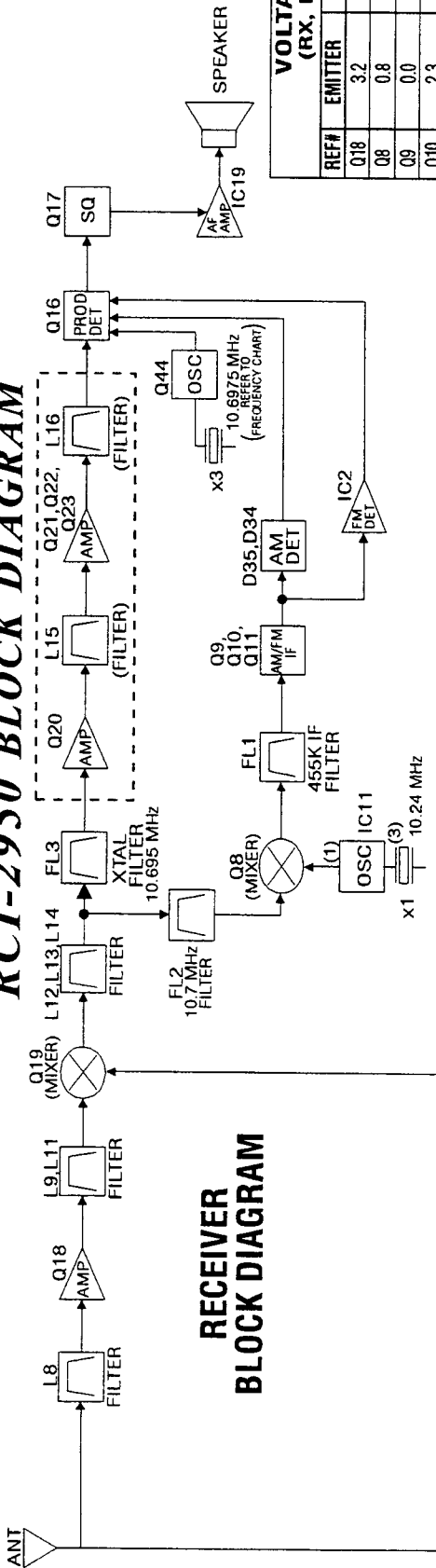
AM modulation is accomplished by changing the voltage supplied to the driver (Q48) and the finals (Q46, Q47). The power control circuit elements are Q51, Q52 and Q53. Q51 supplies the voltage, where Q52 and Q53 controls Q51. The Mic audio signal is amplified by IC16 and the output goes to Q52. Q52 and Q53 changes the bias of Q51; therefore, the TX output changes amplitude. When the unit is in the SSB (Single Sideband) mode, Q53 is biased to allow Q51 to pass full supply voltage.

SSB modulation is accomplished by mixing the Mic audio signal from IC16 with the reference frequency from X3 (10.6975 MHz for LSB and 10.6925 MHz USB) at the balanced modulator, IC3. The mixed signal is filtered by the crystal filter, (X3), and mixed with the LO at the mixer (IC20).

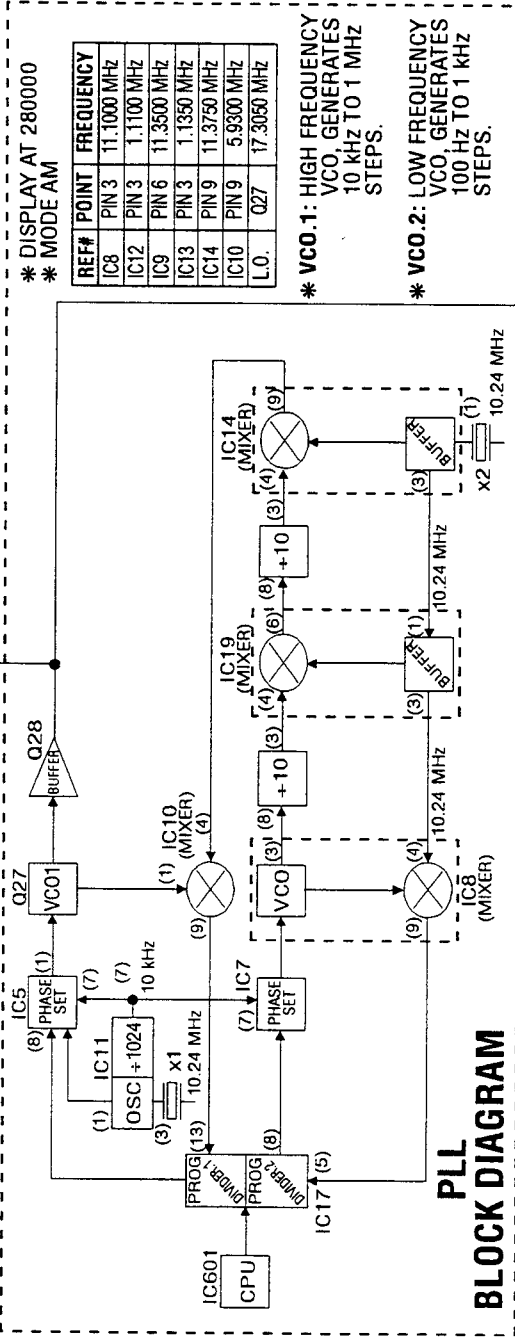
The primary elements for AM/FM/CW power control are Q51, Q52 and Q53, where Q51 supplies voltage to the finals and Q52-Q53 control the bias of Q51. The SSB power control circuit uses the AGC in the Mic amplifier circuit. The SSB power is fed back through Q43. The output of Q43 dictates the bias of Q31. The output from Q31 goes to the AGC control for MIC AMP (Q32). The limiting of AM modulation is also accomplished by Q32.

On the RCI-2970, Q46 is removed and a power amplifier is connected to the main PCB antenna port. The power amplifier is a class A push-pull configuration using a pair of 2SC2290 bipolar transistors. A relay is used to connect the antenna path directly to the main PCB in receive mode and the amplifier output in transmit mode.

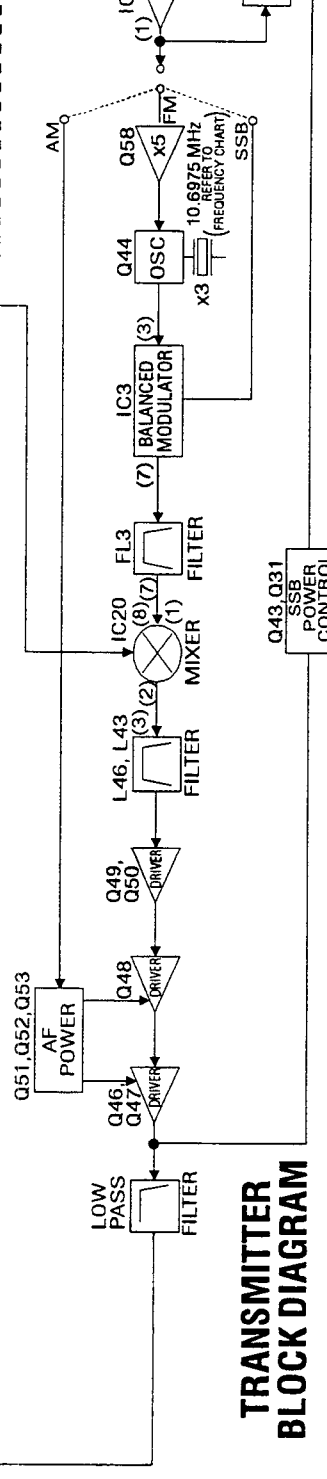
RCI-2950 BLOCK DIAGRAM



RECEIVER BLOCK DIAGRAM



PLL BLOCK DIAGRAM

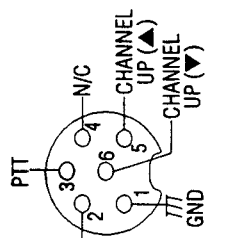


TRANSMITTER BLOCK DIAGRAM

REF#	EMITTER	BASE	COLLECTOR
Q18	3.2	4.0	7.2
Q8	0.8	1.2	7.5
Q9	0.0	0.7	3.0
Q10	2.3	3.0	5.6
Q11	1.5	2.2	6.3
Q19	GATE = 0	VDC DRAIN = 7.8 VDC	SOURCE = 2.5 VDC

MODE	FREQUENCY
AM/FM	10.6950 MHz
USB	10.6925 MHz
LSB	10.6975 MHz

REF#	EMITTER	BASE	COLLECTOR
Q50	0.8	1.5	7.8
Q49	0.8	1.3	6.0
Q48	0.1	0.8	6.0
Q47	0.1	0.6	6.0
Q46	0.1	0.6	6.0





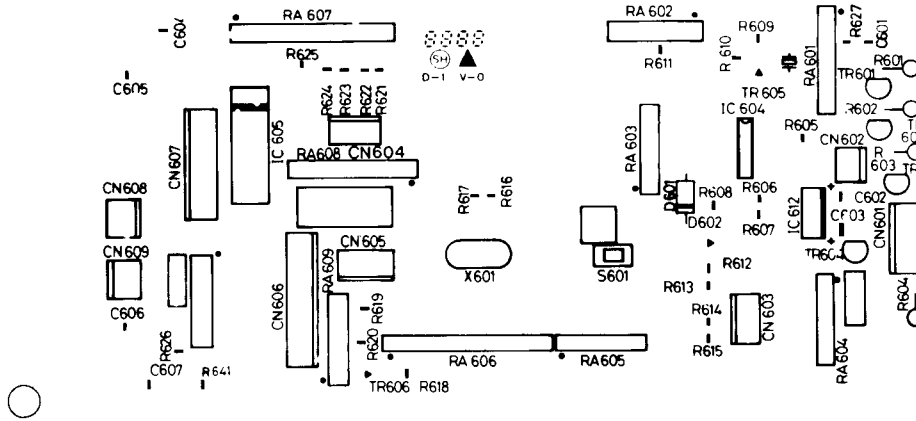
**SECTION 6
SCHEMATICS/
BOARD LAYOUTS**



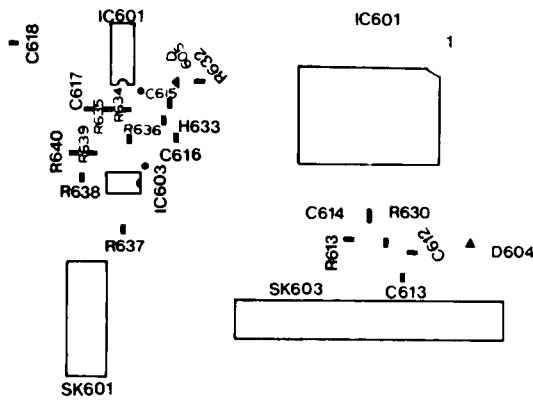
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RCI-2950/2970 MICROPROCESSOR CONTROL BOARD

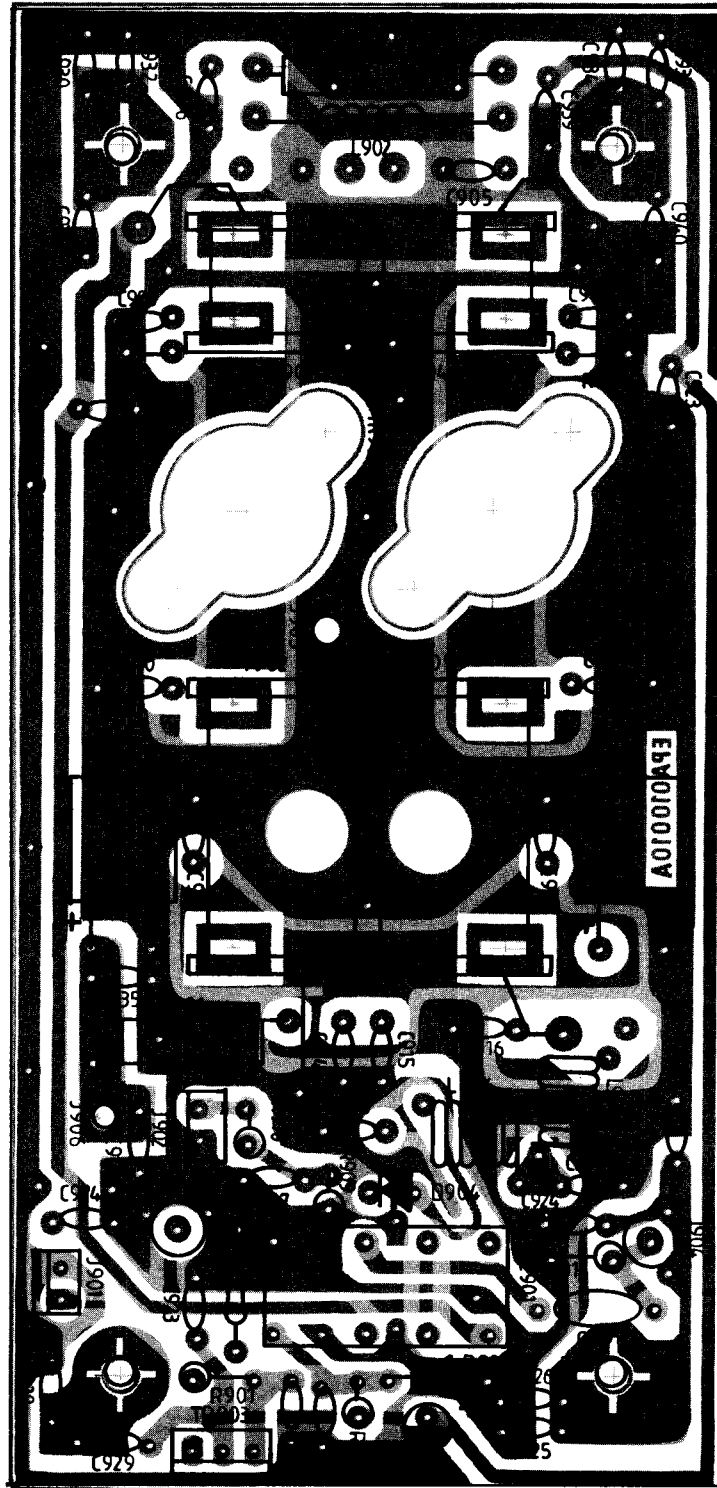
• PRE-MARCH 1995 (THROUGH HOLE VERSION) ONLY •
(TOP VIEW)

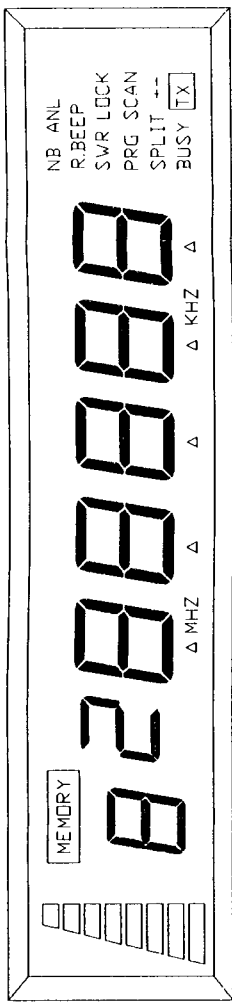


(BOTTOM VIEW)

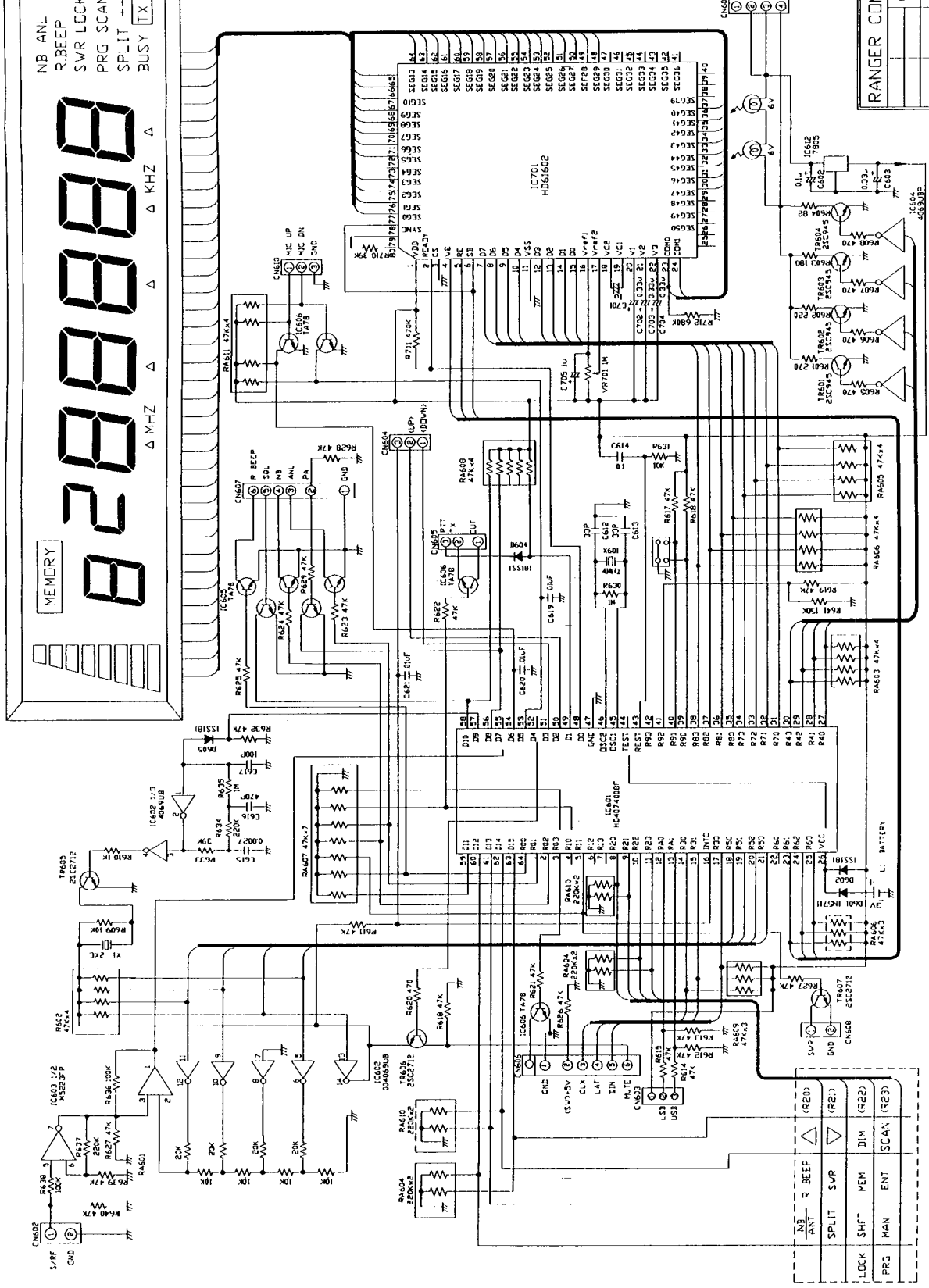


RCI-2970 POWER AMPLIFIER BOARD





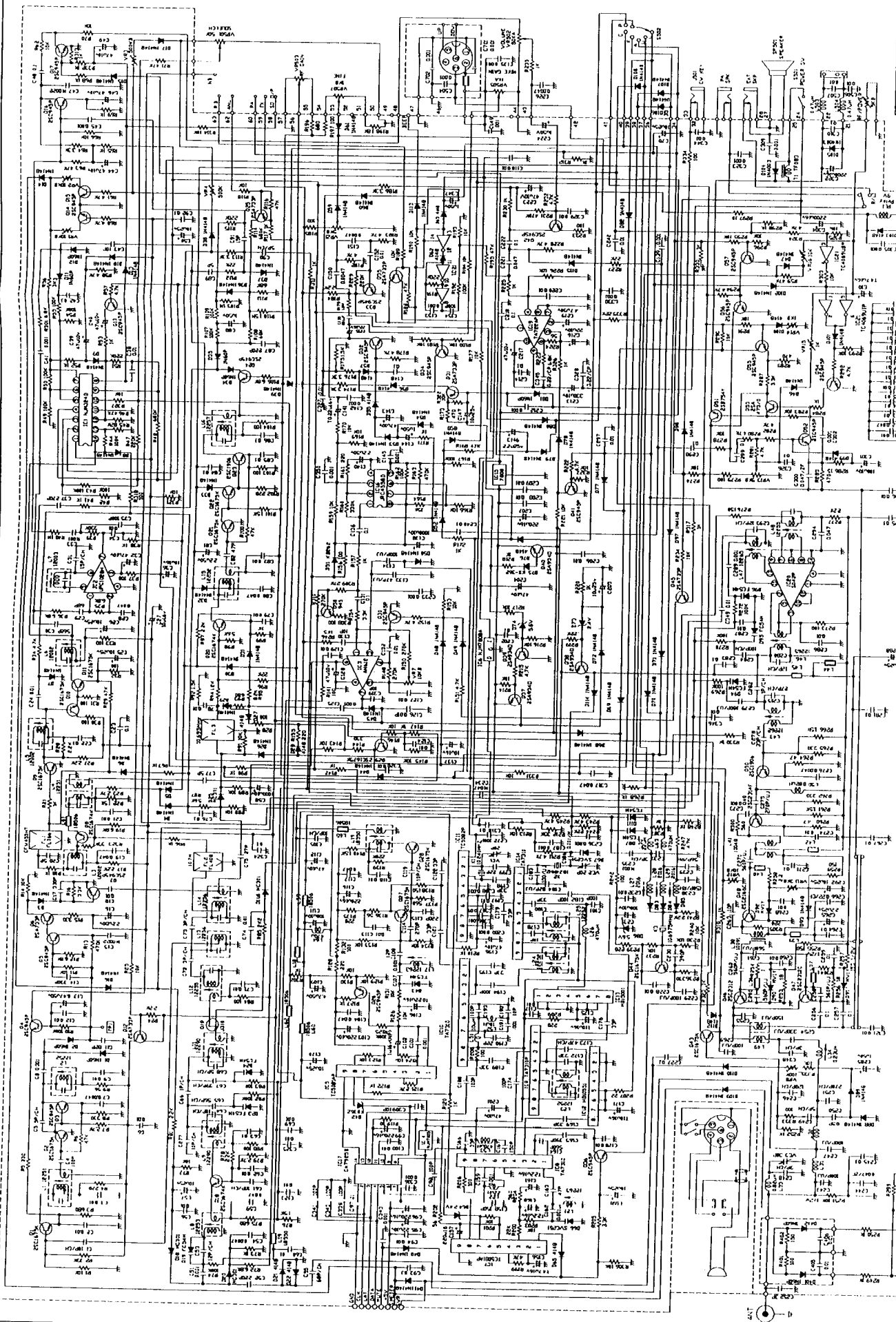
1	7G	7E	CDM1
2	MEMORY	7A	7C
3	7B	7C	7D
4	7E	7F	7G
5	7H	7I	7J
6	7K	7L	7M
7	7N	7O	7P
8	7Q	7R	7S
9	7T	7U	7V
10	7W	7X	7Y
11	7Z	7A	7B
12	7C	7D	7E
13	7F	7G	7H
14	7I	7J	7K
15	7L	7M	7N
16	7O	7P	7Q
17	7R	7S	7T
18	7U	7V	7W
19	7X	7Y	7Z
20	7A	7B	7C
21	7D	7E	7F
22	7G	7H	7I
23	7J	7K	7L
24	7M	7N	7O
25	7P	7Q	7R
26	7S	7T	7U
27	7V	7W	7X
28	7Y	7Z	7A
29	7B	7C	7D
30	7E	7F	7G
31	7H	7I	7J
32	7K	7L	7M
33	7N	7O	7P
34	7Q	7R	7S
35	7T	7U	7V
36	7W	7X	7Y
37	7Z	7A	7B
38	7C	7D	7E
39	7F	7G	7H
40	7I	7J	7K

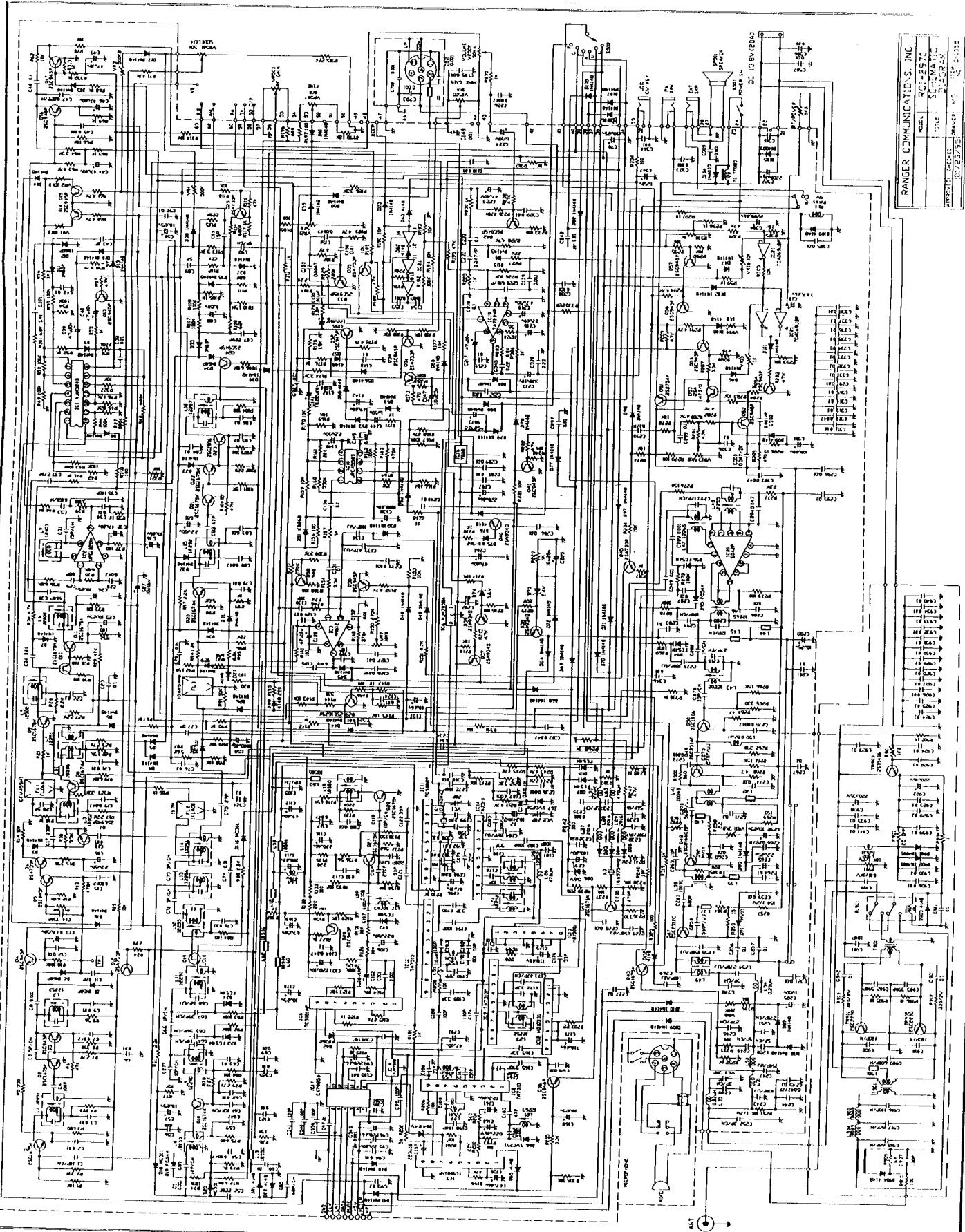


RANGER COMMUNICATIONS, INC.
 MODEL: RCI-2950/2970
 TITLE: SCHEMATIC DIAGRAM
 APPROVED: [Signature]
 CHECKED: [Signature]
 DRAWER: M.C.
 DATE: 10/23/96

NOTES THIS SCHEMATIC COVERS PRE-MARCH, 1995 CPU/CONTROL P.C. BOARDS (THROUGH-HOLE VERSION) ONLY.

RANGER COMMUNICATIONS, INC.
RC-2000
MODEL 14
SCHEMATIC DIAGRAM
CHECKED: 2-13-64 J. BRANTZ, M.E.
APPROVED:
ITEM NO. RC-133





RANGER COMMUNICATIONS, INC.
MODEL RCT-257C
PART NO. RCT-257C-1
REVISION 07/23/75
PAGE 1 OF 1

RANGER
Communications, Inc.

SECTION 7

RCI-2950 PARTS LIST

7.0 MAIN BOARD

REF#	DESCRIPTION	PART#
-----	MAIN PACB	EPT295012Z
-----	DC B+ PCB	EPT120060Z
	CARBON FILM RESISTORS	
R1	10K 1/4W(U) TYPE	RCU141034Z
R2	33K 1/4W(U) TYPE	RCU143334Z
R3	680Ω 1/4W(U) TYPE	RCU146814Z
R4	220Ω 1/4W(U) TYPE	RCU142214Z
R5	330Ω 1/4W(U) TYPE	RCU143314Z
R6	47K 1/4W(U) TYPE	RCU144734Z
R7	2.7K 1/4W(U) TYPE	RCU142724Z
R8	330Ω 1/4W(U) TYPE	RCU143314Z
R9	56Ω 1/4W(U) TYPE	RCU145604Z
R10	100K 1/4W(U) TYPE	RCU141044Z
R11	10K 1/4W(U) TYPE	RCU141034Z
R12	6.8K 1/4W(U) TYPE	RCU146824Z
R13	470K 1/4W(U) TYPE	RCU144744Z
R14	10K 1/4W(U) TYPE	RCU141034Z
R15	330Ω 1/4W(U) TYPE	RCU143314Z
R16	2.7K 1/4W(U) TYPE	RCU142724Z
R17	1.8K 1/4W(U) TYPE	RCU141824Z
R18	1K 1/4W(M) TYPE	RCM141024A
R19	6.8K 1/4W(U) TYPE	RCU146824Z
R20	100Ω 1/4W(M) TYPE	RCU141014A
R21	1K 1/4W(U) TYPE	RCU141024Z
R22	1.5K 1/4W(U) TYPE	RCU141524Z
R23	2.7K 1/4W(U) TYPE	RCU142724Z
R24	1.5K 1/4W(U) TYPE	RCU141524Z
R25	10K 1/4W(M) TYPE	RCM141034A
R27	1.8K 1/4W(U) TYPE	RCU141824Z
R28	1.8K 1/4W(U) TYPE	RCU141824Z
R29	47K 1/4W(M) TYPE	RCM144734A
R30	100Ω 1/4W(M) TYPE	RCM141014A
R31	100Ω 1/4W(U) TYPE	RCU141014Z
R32	100Ω 1/4W(U) TYPE	RCU141014Z
R33	100Ω 1/4W(M) TYPE	RCM141014A
R34	4.7K 1/4W(M) TYPE	RCM144724A
R35	6.8K 1/4W(U) TYPE	RCU146824Z
R36	6.8K 1/4W(M) TYPE	RCM146824A
R37	100Ω 1/4W(U) TYPE	RCU141014Z
R38	1K 1/4W(U) TYPE	RCU141024Z
R39	330K 1/4W(U) TYPE	RCU143344Z
R40	1M 1/4W(U) TYPE	RCU141054Z
R41	6.8K 1/4W(M) TYPE	RCM146824A
R42	100K 1/4W(U) TYPE	RCU141044Z
R43	100K 1/4W(U) TYPE	RCU141044Z
R44	100K 1/4W(U) TYPE	RCU141044Z
R45	82K 1/4W(U) TYPE	RCU148234Z
R46	47K 1/4W(M) TYPE	RCM144734A
R47	220K 1/4W(U) TYPE	RCU142244Z
R48	680K 1/4W(U) TYPE	RCU146844Z
R49	100K 1/4W(M) TYPE	RCM141044A
R50	100K 1/4W(M) TYPE	RCM141044A

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
R51	220K 1/4W(M) TYPE	RCM142244A
R52	1K 1/4W(U) TYPE	RCU141024Z
R53	1K 1/4W(U) TYPE	RCU141024Z
R54	100K 1/4W(U) TYPE	RCM141044A
R55	100K 1/4W(U) TYPE	RCM141044A
R56	3.3K 1/4W(U) TYPE	RCU143324Z
R57	3.3K 1/4W(U) TYPE	RCU143324Z
R58	3.3K 1/4W(U) TYPE	RCU143324Z
R59	47K 1/4W(U) TYPE	RCU144734Z
R60	3.3K 1/4W(U) TYPE	RCU143324Z
R61	3.3K 1/4W(U) TYPE	RCU143324Z
R62	10K 1/4W(U) TYPE	RCU141034Z
R63	47K 1/4W(U) TYPE	RCU144734Z
R64	2.7K 1/4W(U) TYPE	RCU142724Z
R65	1K 1/4W(U) TYPE	RCU141024Z
R66	10K 1/4W(U) TYPE	RCU141034Z
R67	1K 1/4W(U) TYPE	RCU474157Z
R68	1K 1/4W(M) TYPE	RCM141024A
R69	1K 1/4W(U) TYPE	RCU141024Z
R70	10K 1/4W(M) TYPE	RCM141034A
R71	47K 1/4W(U) TYPE	RCU144734Z
R72	6.8K 1/4W(M) TYPE	RCM146824A
R73	1K 1/4W(U) TYPE	RCU141024Z
R74	100K 1/4W(P) TYPE	RCP141044Z
R75	680Ω 1/4W(U) TYPE	RCU146814Z
R76	1.5K 1/4W(U) TYPE	RCU141524Z
R77	10K 1/4W(U) TYPE	RCU141034Z
R78	2.2K 1/4W(U) TYPE	RCU142224Z
R79	2.7K 1/4W(U) TYPE	RCU142724Z
R80	100Ω 1/4W(U) TYPE	RCU141014Z
R81	2.2K 1/4W(M) TYPE	RCM142224A
R82	100K 1/4W(U) TYPE	RCU141044Z
R83	10K 1/4W(U) TYPE	RCU141034Z
R84	100Ω 1/4W(U) TYPE	RCU141014Z
R85	2.2K 1/4W(U) TYPE	RCU142224Z
R86	1K 1/4W(U) TYPE	RCU141024Z
R87	5.6K 1/4W(M) TYPE	RCM145624A
R88	10K 1/4W(U) TYPE	RCU141034Z
R89	10K 1/4W(M) TYPE	RCM141034A
R90	1K 1/4W(U) TYPE	RCU141024Z
R91	10K 1/4W(U) TYPE	RCU141034Z
R92	1.5K 1/4W(U) TYPE	RCU141524Z
R93	680Ω 1/4W(M) TYPE	RCM146814B
R94	1.2K 1/4W(U) TYPE	RCU141224Z
R95	8.2K 1/4W(U) TYPE	RCU148224Z
R96	22K 1/4W(M) TYPE	RCM142234B
R97	2.2K 1/4W(U) TYPE	RCU142224Z
R98	5.6K 1/4W(U) TYPE	RCU145624Z
R100	47K 1/4W(M) TYPE	RCM144734A
R101	1.5K 1/4W(U) TYPE	RCU141524Z
R102	220Ω 1/4W(U) TYPE	RCU142214Z
R103	100Ω 1/4W(U) TYPE	RCU141014Z
R104	100Ω 1/4W(M) TYPE	RCM141014A
R105	1M 1/4W(U) TYPE	RCU141054Z

RCI-2950

7.0 MAIN BOARD (Con't)

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
R106	6.8K 1/4W(U) TYPE	RCU146824Z	R169	12K 1/4W(U) TYPE	RCU141234Z
R107	100K 1/4W(U) TYPE	RCU141044Z	R170	10K 1/4W(U) TYPE	RCU141034Z
R108	68K 1/4W(U) TYPE	RCU146834Z	R171	1K 1/4W(U) TYPE	RCU141024Z
R109	100K 1/4W(U) TYPE	RCU141044Z	R172	1K 1/4W(U) TYPE	RCU141024Z
R110	1.5M 1/4W(U) TYPE	RCU141554Z	R173	470Ω 1/4W(U) TYPE	RCU144714Z
R111	68K 1/4W(U) TYPE	RCU146834Z	R174	3.3K 1/4W(M) TYPE	RCM143324A
R112	22K 1/4W(M) TYPE	RCM142234A	R175	1.5K 1/4W(U) TYPE	RCU141524Z
R113	3.3K 1/4W(U) TYPE	RCU143324Z	R176	3.3K 1/4W(U) TYPE	RCU143324Z
R114	680Ω 1/4W(M) TYPE	RCM146814A	R177	10K 1/4W(U) TYPE	RCU141034Z
R115	220K 1/4W(U) TYPE	RCU142244Z	R178	4.7K 1/4W(U) TYPE	RCU144724Z
R116	47K 1/4W(U) TYPE	RCU144734Z	R179	1.5K 1/4W(U) TYPE	RCU141554Z
R117	1K 1/4W(U) TYPE	RCU141024Z	R180	10K 1/4W(P) TYPE	RCP141034Z
R118	10K 1/4W(M) TYPE	RCM141034A	R181	10K 1/4W(U) TYPE	RCU141034Z
R119	10Ω 1/4W(U) TYPE	RCU144794Z	R182	4.7K 1/4W(U) TYPE	RCU144724Z
R120	1K 1/4W(U) TYPE	RCU141024Z	R183	4.7K 1/4W(U) TYPE	RCU144724Z
R121	27K 1/4W(U) TYPE	RCU142734Z	R184	2.2K 1/4W(U) TYPE	RCU142224Z
R122	1K 1/4W(U) TYPE	RCU141024Z	R185	100Ω 1/4W(U) TYPE	RCU141014Z
R123	10K 1/4W(U) TYPE	RCU141034Z	R186	3.3K 1/4W(M) TYPE	RCM143324A
R124	10K 1/4W(U) TYPE	RCU141034Z	R188	47K 1/4W(U) TYPE	RCU144734Z
R125	100K 1/4W(U) TYPE	RCU141044Z	R189	10K 1/4W(M) TYPE	RCM141034B
R126	10K 1/4W(U) TYPE	RCU141034Z	R190	10K 1/4W(U) TYPE	RCU141034Z
R127	1K 1/4W(U) TYPE	RCU141024Z	R191	220K 1/4W(U) TYPE	RCU142244Z
R128	220Ω 1/4(U) TYPE	RCU142214Z	R192	100K 1/4W(M)	RCM141044A
R129	10K 1/4W(U) TYPE	RCU141034Z	R193	10K 1/4W(U) TYPE	RCU141034Z
R130	10K 1/4W(U) TYPE	RCU141034Z	R194	10K 1/4W(U) TYPE	RCU141034Z
R131	10K 1/4W(U) TYPE	RCU141034Z	R195	47K 1/4W(M) TYPE	RCM144734A
R132	100Ω 1/4W(U) TYPE	RCU141014Z	R196	680Ω 1/4W(M) TYPE	RCM146814A
R133	10K 1/4W(U) TYPE	RCU141034Z	R197	100Ω 1/4W(U) TYPE	RCU141014Z
R134	10K 1/4W(U) TYPE	RCU141034Z	R198	1.8K 1/4W(U) TYPE	RCU141824Z
R135	220Ω 1/4W(U) TYPE	RCU142214Z	R199	47K 1/4W(U) TYPE	RCU144734Z
R136	56Ω 1/4W(U) TYPE	RCU145604Z	R200	22K 1/4W(U) TYPE	RCU142234Z
R137	560Ω 1/4W(U) TYPE	RCU145614Z	R201	10K 1/4W(U) TYPE	RCU141034Z
R138	150Ω 1/4W(U) TYPE	RCU141514Z	R202	56Ω 1/4W(M) TYPE	RCM145604A
R139	220K 1/4W(U) TYPE	RCU142244Z	R203	10K 1/4W(U) TYPE	RCU141034Z
R140	1.5K 1/4W(M) TYPE	RCM141524A	R204	560Ω 1/4W(U) TYPE	RCU145614Z
R141	100Ω 1/4W(U) TYPE	RCU141014Z	R205	3.3K 1/4W(U) TYPE	RCU143324Z
R142	1K 1/4W(U) TYPE	RCU141024Z	R206	100Ω 1/4W(U) TYPE	RCU141014Z
R143	10K 1/4W(U) TYPE	RCU141034Z	R207	22Ω 1/4W(M) TYPE	RCM142204A
R144	330Ω 1/4W(U) TYPE	RCU143314Z	R208	100Ω 1/4W(U) TYPE	RCU141014Z
R145	10K 1/4W(U) TYPE	RCU141034Z	R209	22Ω 1/4W (U) TYPE	RCU142204Z
R146	10K 1/4W(U) TYPE	RCU141034Z	R210	1K 1/4W(U) TYPE	RCU141024Z
R147	1K 1/4W(M) TYPE	RCM141024A	R211	4.7K 1/4W(U) TYPE	RCU144724Z
R148	270K 1/4W(M) TYPE	RCM142744A	R212	33K 1/4W(U) TYPE	RCU143334Z
R150	270K 1/4W(U) TYPE	RCU142744Z	R213	10K 1/4W(M) TYPE	RCM141034A
R151	4.7K 1/4W(U) TYPE	RCU144724Z	R214	10K 1/4W(U) TYPE	RCU141034Z
R152	4.7K 1/4W(M) TYPE	RCM144724A	R215	4.7K 1/4W(U) TYPE	RCU144724Z
R153	10K 1/4W(U) TYPE	RCU141034Z	R216	10K 1/4W(U) TYPE	RCU141034Z
R154	3.3K 1/4W(U) TYPE	RCU143324Z	R217	10K 1/4W(M) TYPE	RCM141034A
R155	220Ω 1/4W(M) TYPE	RCM142214A	R218	1K 1/4W(M) TYPE	RCM141024A
R156	100Ω 1/4W(U) TYPE	RCU141014Z	R219	22K 1/4W(U) TYPE	RCU142234Z
R157	1K 1/4W(P) TYPE	RCP141024Z	R220	1K 1/4W(U) TYPE	RCU141024Z
R159	10K 1/4W(U) TYPE	RCU141034Z	R221	10K 1/4W(U) TYPE	RCU141034Z
R160	330K 1/4W(U) TYPE	RCU143344Z	R222	4.7K 1/4W(M) TYPE	RCM144724B
R161	220Ω 1/4W(U) TYPE	RCU142214Z	R223	6.8K 1/4W(M) TYPE	RCM146824A
R162	100K 1/4W(U) TYPE	RCU141044Z	R224	56Ω 1/4W(U) TYPE	RCU145604Z
R163	470K 1/4W(U) TYPE	RCU144744Z	R225	1K 1/4W(M) TYPE	RCM141024A
R164	15K 1/4W(U) TYPE	RCU141534Z	R226	10K 1/4W(M) TYPE	RCM141034A
R166	10K 1/4W(U) TYPE	RCU141034Z	R227	22K 1/4W(U) TYPE	RCU142234Z
R167	100K 1/4W(U) TYPE	RCU141044Z	R228	4.7K 1/4W(U) TYPE	RCU144724Z
R168	47K 1/4W(U) TYPE	RCU144734Z	R229	220K 1/4W(U) TYPE	RCU142244Z

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7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
R230	1K ¼W(U) TYPE	RCU141024Z
R231	470K ¼W(U) TYPE	RCU144744Z
R232	4.7K ¼W(P) TYPE	RCP144724Z
R233	100Ω ¼W(U) TYPE	RCU141014Z
R234	10K ¼W(P) TYPE	RCP141034Z
R235	1K ¼W(U) TYPE	RCU141024Z
R236	330Ω ¼W(U) TYPE	RCU143314Z
R237	10K ¼W(U) TYPE	RCU141034Z
R238	10K ¼W(U) TYPE	RCU141034Z
R239	220Ω ¼W(U) TYPE	RCU142214Z
R240	10K ¼W(M) TYPE	RCM141034A
R241	2.2K ¼W(U) TYPE	RCU142224Z
R242	100Ω ¼W(M) TYPE	RCM141014A
R243	47K ¼W(U) TYPE	RCU144734Z
R244	22K ¼W(U) TYPE	RCU142234Z
R245	47K ¼W(U) TYPE	RCU144734Z
R246	1.5K ¼W(U) TYPE	RCU141524Z
R247	4.7K ¼W(U) TYPE	RCU144724Z
R248	1K ¼W(U) TYPE	RCU141024Z
R249	1K ¼W(M) TYPE	RCM141024A
R250	1K ¼W(M) TYPE	RCM141024A
R251	10K ¼W(P) TYPE	RCP121034Z
R252	1K ¼W(M) TYPE	RCM141024A
R253	18Ω ¼W(U) TYPE	RCU141804Z
R254	1Ω ¼W(P) TYPE	RCP141094Z
R255	150Ω ¼W(P) TYPE	RCP121514Z
R256	18Ω ¼W(U) TYPE	RCU141804Z
R257	150Ω ¼W(P) TYPE	RCP121514Z
R258	2.2Ω ¼W(P) TYPE	RCP142294Z
R259	150Ω ¼W(U) TYPE	RCU141514Z
R260	4.7Ω ¼W(U) TYPE	RCU144794Z
R261	1.5K ¼W(U) TYPE	RCU141524Z
R262	330Ω ¼W(U) TYPE	RCU143314Z
R264	47Ω ¼W(U) TYPE	RCU144704Z
R265	330Ω ¼W(U) TYPE	RCU143314Z
R266	1.5K ¼W(U) TYPE	RCU141524Z
R268	1K ¼W(U) TYPE	RCU141024Z
R269	100K ¼W(U) TYPE	RCU141044Z
R270	100K ¼W(U) TYPE	RCU141044Z
R272	100K ¼W(U) TYPE	RCU141044Z
R273	100Ω ¼W(U) TYPE	RCU141014Z
R274	10K ¼W(U) TYPE	RCU141034Z
R276	150Ω ¼W(U) TYPE	RCU141514Z
R277	2.2K ¼W(U) TYPE	RCU142224Z
R278	10K ¼W(U) TYPE	RCU141034Z
R279	100Ω ¼W(M) TYPE	RCM141014A
R280	4.7K ¼W(M) TYPE	RCM144724A
R281	4.7K ¼W(U) TYPE	RCU144724Z
R282	4.7K ¼W(P) TYPE	RCP144724Z
R283	10K ¼W(M) TYPE	RCM141034A
R284	1K ¼W(U) TYPE	RCU141024Z
R285	470Ω ¼W(U) TYPE	RCU144714Z
R286	15Ω ¼W(U) TYPE	RCU141504Z
R287	3.3K ¼W(U) TYPE	RCU143324Z
R289	470Ω ¼W(U) TYPE	RCU144714Z
R290	10K ¼W(U) TYPE	RCU141034Z
R291	10K ¼W(U) TYPE	RCU141034Z
R292	4.7K ¼W(M) TYPE	RCM144724B
R293	10K ¼W(U) TYPE	RCU141034Z
R294	4.7K ¼W(U) TYPE	RCU144724Z

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
R295	10K ¼W(U) TYPE	RCU141034Z
R296	10K ¼W(U) TYPE	RCU141034Z
R297	10Ω ¼W(U) TYPE	RCU141004Z
R298	1K ¼W(U) TYPE	RCU141024Z
R299	10K ¼W(U) TYPE	RCU141034Z
R300	560Ω ¼W(U) TYPE	RCU145614Z
R301	6.8K ¼W(U) TYPE	RCU146824Z
R302	1K ¼W(P) TYPE	RCP141024Z
R303	10K ¼W(U) TYPE	RCU141034Z
R304	1Ω ¼W(P) TYPE	RCP141094Z
R305	220Ω ¼W(M) TYPE	RCM142214A
R306	10K ¼W(U) TYPE	RCU141034Z
R307	1K ¼W(U) TYPE	RCU141024Z
R308	100Ω ¼W(U) TYPE	RCU141014Z
R309	33K ¼W(U) TYPE	RCU143334Z
R310	270K ¼W(U) TYPE	RCU143344Z
R311	1K ¼W(M) TYPE	RCM141024A
R312	1K ¼W(U) TYPE	RCU141024Z
R313	1K ¼W(U) TYPE	RCU141024Z
R314	10K ¼W(U) TYPE	RCU141034Z
R315	22K ¼W(U) TYPE	RCU142234Z
R317	1K ¼W(U) TYPE	RCU141024Z
R318	100Ω ¼W(M) TYPE	RCM141014A
R319	1K ¼W(U) TYPE	RCU141024Z
R320	1K ¼W(U) TYPE	RCU141024Z
R321	10K ¼W(U) TYPE	RCU141034Z
R322	100K ¼W(M) TYPE	RCM141044A
R323	33K ¼W(U) TYPE	RCU143334Z
R234	4.7K ¼W(M) TYPE	RCM144724A
R325	10K ¼W(U) TYPE	RCU141034Z
R326	1K ¼W(M) TYPE	RCM141024A
R327	10K ¼W(U) TYPE	RCU141034Z
R330	1K ¼W(U) TYPE	RCU141024Z
R331	10K ¼W(M) TYPE	RCM141034A
R332	1K ¼W(U) TYPE	RCU141024Z
R333	100Ω ¼W(M) TYPE	RCM141014A
R334	100Ω ¼W(M) TYPE	RCM141014B
R335	22K ¼W(U) TYPE	RCU142234Z
R336	10K ¼W(M) TYPE	RCM141034A
CERAMIC CAPACITORS		
C1	5pF 50WV J CH	CC0501004A
C2	.01uF 50EV Z SL	CC0501037L
C3	.01uF 50EV Z SL	CC0501037L
C4	100pF 50WV K SL	CC0501015L
C5	5pF 50WV C CH	CC0500501A
C6	0.1uF 50EV Z SL	CC0501037L
C7	.047uF 50WV Z SL	CC0501027L
C8	.001pF 50WV Z SL	CC0501027L
C9	.01uF 50EV Z SL	CC0501037L
C11	82pF 50WV J SL	CC0508204L
C12	.01uF 50EV Z SL	CC0501037L
C14	330pF 50WV K SL	CC0503315L
C17	330pF 50WV K SL	CC0503315L
C18	.01uF 50EV Z SL	CC0501037L
C19	.047uF 50WV Z SL	CC0504737L
C20	5pF 50WV C SL	CC0500501L
C21	.01uF 50EV Z SL	CC0501037L
C22	.1uF 50WV Z SL	CC0501047L

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
C23	.1uF 50WV Z SL	CC0501047L	C110	.01uF 50EV Z SL	CC0501037L
C24	.01uF 50EV Z SL	CC0501037L	C113	.01uF 50EV Z SL	CC0501037L
C28	.047uF 50WV Z SL	CC0504737L	C114	270pF 50WV K SL	CC0502715L
C29	68pF 50WV J SL	CC0506804L	C115	270pF 50WV K SL	CC0502715L
C30	560pF 50WV K SL	CC0505615L	C117	.047uF 50WV Z SL	CC0504737L
C31	15pF 50WV J CH	CC0501504A	C118	.01uF 50EV Z SL	CC0501037L
C34	.01uF 50EV Z SL	CC0501037L	C119	5pF 50WV J CH	CC0501004A
C35	100pF 50WV K SL	CC0501015L	C120	.01uF 50EV Z SL	CC0501037L
C37	270pF 50WV K SL	CC0502715L	C121	33pF 50WV J SL	CC0503304L
C38	.01uF 50EV Z SL	CC0501037L	C122	33pF 50WV J SL	CC0503304L
C41	.001pF 50WV Z SL	CC0501027L	C123	.01uF 50EV Z SL	CC0501037L
C42	.1uF 50WV Z SL	CC0501047L	C124	.01uF 50EV Z SL	CC0501037L
C43	10pF 50WV J SL	CC0501004L	C125	.001pF 50WV Z SL	CC0501027L
C45	.001pF 50WV Z SL	CC0501027L	C126	.01uF 50EV Z SL	CC0501037L
C48	.1uF 50WV Z SL	CC0501047L	C127	.01uF 50EV Z SL	CC0501037L
C51	.001pF 50WV K SL	CC0502215L	C129	.01uF 5EV Z SL	CC0501037L
C52	220pF 50WV K SL	CC0502215L	C130	10pF 50WV J SL	CC0501004L
C53	12pF 50WV J CH	CC0501204A	C131	.1uF 50WV Z SL	CC0501047L
C54	.047uF 50WV Z SL	CC0504737L	C132	.01uF 50EV Z SL	CC0501037L
C55	68pF 50WV J CH	CC0506804A	C133	47pF 50WV J UJ	CC0504704G
C56	.01uF 50EV Z SL	CC0501037L	C134	100pF 50WV L UK	CC0501015G
C59	.047uF 50WV Z SL	CC0504737L	C135	.001pF 50WV Z SL	CC0501027L
C60	.01uF 50EV Z SL	CC0501037L	C136	.1uF 50WV Z SL	CC0501047L
C61	5pF 50WV J CH	CC0501004A	C139	.001pF 50WV Z SL	CC0501027L
C63	.1uF 50WV Z SK	CC0501047L	C142	.001pF 50WV Z SL	CC0501027L
C65	56pF 50WV J CH	CC0503304A	C145	.001pF 50WV Z SL	CC0501027L
C66	1pF 50WV C CH	CC0500101A	C148	.1uF 50WV Z SL	CC0501047L
C67	39pF 50WV J CH	CC0503904A	C149	.001pF 50WV Z SL	CC0501027L
C68	5pF 50WV C CH	CC0500501A	C150	.47uF 50WV Z SL	CC0504727L
C69	.01uF 50EV Z SL	CC0501037L	C151	.47uF 50WV Z SL	CC0504727L
C71	.01uF 50EV Z SL	CC0501037L	C152	.01uF 50EV Z SL	CC0501037L
C72	3pF 50WV CH	CC0500301A	C153	.001pF 50WV Z SL	CC0501027L
C73	3pF 50WV C CH	CC0500301A	C154	100pF 50WV K SL	CC0501015L
C74	.01uF 50EV Z SL	CC0501037L	C158	150pF 50WV K SL	CC0501515L
C75	27pF 50WV J SL	CC0502704L	C159	.001pF 50WV Z SL	CC0501027L
C76	.1uF 50WV Z SL	CC0501047L	C162	.001pF 5WV Z SL	CC0501027L
C77	5pF 50WV C SL	CC0500501L	C163	47pF 50WV J SL	CC0504704L
C78	.01uF 50EV Z SL	CC0501037L	C164	560pF 50WV K SL	CC0505615L
C79	.01uF 50EV Z SL	CC0501037L	C165	390pF 50WV K SL	CC0503915L
C80	.047uF 50WV Z SL	CC0504737L	C166	33pF 50WV J SL	CC0503304L
C82	47pF 50WV J SL	CC0504704L	C167	150pF 50WV K SL	CC0501515L
C83	.01uF 50EV Z SL	CC0501037L	C169	33pF 50WV J SL	CC0503304L
C84	.1uF 50WV Z SL	CC0501047L	C172	33pF 50WV J SL	CC0503304L
C85	.1uF 50WV Z SL	CC0501047L	C173	47pF 50WV J CH	CC0504704A
C86	.1uF 50WV Z SL	CC0501047L	C174	100jpF 50WV K SL	CC0501015L
C87	220pF 50WV K SL	CC0502215L	C176	33pF 50WV J SL	CC0503304L
C89	5pF 50WV C SL	CC0500501L	C177	.01uF 50EV Z SL	CC0501037L
C90	5pF 50WV C CH	CC0500501A	C178	10pF 50WV J SL	CC0501004L
C91	15pF 50WV J SL	CC0501504L	C179	33pF 50WV J SL	CC0503304L
C92	1uF 50WV Z SL	CC0501047L	C180	33pF 50WV J SL	CC0503304L
C93	1uF 50WV Z SL	CC0501047L	C181	100pF 50WV K SL	CC0501015L
C94	.01uF 50EV Z SL	CC0501037L	C182	100pF 50WV K SL	CC0501015L
C97	.01uF 50EV Z SL	CC0501037L	C183	100pF 50WV K SL	CC0501015L
C98	100pF 50WV K SL	CC0501015L	C184	82pF 50WV J UJ	CC0508204G
C100	.01uF 50EV Z SL	CC0501037L	C187	.001pF 50WV Z SL	CC0501027L
C101	.001pF 50WV Z SL	CC0501027L	C188	100pF 50WV K SL	CC0501015L
C104	.047uF 50WV Z SL	CC0504737L	C189	33pF 50WV J SL	CC0503304L
C105	5pF 50WV J CH	CC0501004A	C190	22pF 50WV J SL	CC0502204L
C107	.001pF 50WV Z SL	CC0501027L	C191	.001pF 50WV Z SL	CC0501027L
C108	12(F 50WV J SL	CC0501204L	C192	10pF 50WV J SL	CC0501004L

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7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
C193	100pF 50WV K SL	CC0501015L
C194	100pF 50WV K SL	CC0501015L
C195	33pF 50WV J SL	CC0503304L
C197	.01uF 50EV Z SL	CC0501037L
C198	33pF 50WVG J SL	CC0503304L
C199	22pF 50WV J SL	CC0502204L
C200	.001pF 50WV Z SL	CC0501027L
C202	.1uF 50WV Z SL	CC0501047L
C206	.01uF 50EV Z SL	CC0501037L
C208	.01uF 50EV Z SL	CC0501037L
C209	.01uF 50EV Z SL	CC0501037L
C212	.001pF 50WV Z SL	CC0501027L
C214	.1uF 50WV Z SL	CC0501047L
C215	27pF 50WV J CH	CC0502704A
C218	.1uF 50WV Z SL	CC0501047L
C220	.01uF 50EV Z SL	CC0501037L
C221	.047uF 50WV Z SL	CC0504727L
C222	.1uF 50WV Z SL	CC0501047L
C223	.1uF 50WV Z SL	CC0501047L
C226	.047uF 50WV Z SL	CC0504727L
C228	.01uF 50EV Z SL	CC0501037L
C229	150pF 60WV K SL	CC0501515L
C230	270pF 50WV K SL	CC0502715L
C232	.01uF 50EV Z SL	CC0501037L
C233	.001pF 50WV Z SL	CC0501027L
C236	.001pF 50WV Z SL	CC0501027L
C237	5pF 50WV C CH	CC0500501A
C238	150pF 50WV K RH	CC0501515D
C239	56pF 50WV J RH	CC0505604D
C240	.1uF 50WV Z SL	CC0501047L
C242	.01uF 50EV Z SL	CC0501037L
C243	100pF 50WV K UJ	CC0501015G
C244	.047uF 50WV Z SL	CC0504737L
C245	.1juF 50WV Z SL	CC0501047L
C246	120pF 50WV K CH	CC0501215A
C247	18pF 50WV K UJ	CC0501815G
C248	3pF 50WV C CH	CC0500301A
C249	5pF 50WV C CH	CC0500501A
C250	.5pF 50WV C SL	CC0500591L
C251	270pF 50WV K CH	CC0502715A
C252	3pF 50WV C CH	CC0500301A
C254	330pF 50WV K UJ	CC0503315G
C255	150pF 50WV K UJ	CC0501515G
C256	.1uF 50WV Z SL	CC0501047L
C257	.1uF 50WV Z SL	CC0501047L
C258	560pF 50WV K UJ	CC0505615G
C259	.01uF 50EV Z SL	CC0501037L
C260	.01uF 50EV Z SL	CC0501037L
C261	560pF 50WV L UK	CC0505615G
C262	560pF 50WV L UK	CC0505615G
C263	10pF 50WV J SL	CC0501004L
C264	.1uF 50WV Z SL	CC0501047L
C267	.1uF 50WV Z SL	CC0501047L
C268	.01uF 50EV Z SL	CC0501037L
C269	100pF 50WV K UK	CC0501015G
C270	560pF 50WV K UJ	CC0505615G
C271	.1uF 50WV Z SL	CC0501047L
C272	100pF 50WV K SL	CC0501015L
C273	.001pF 50WV Z SLK	CC0501037L
C274	.01uF 50EV Z SL	CC0501037L

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
C275	270pF 50WV K UJ	CC0502715G
C276	.047uF 50WV Z SL	CC0504727L
C277	5pF 50WV J CH	CC0501004A
C278	33pF 50WV J CH	CC0503304A
C279	180pF 50WV K UJ	CC0501815G
C280	12pF 50WV J CH	CC0501204A
C281	.1uF 50WV Z SL	CC0501047L
C284	100pF 50WV J CH	CC0501015A
C286	.01uF 50EV Z SL	CC0501037L
C287	.01uF 50EV Z SL	CC0501037L
C289	.001pF 50WV Z SL	CC0501027L
C290	560pF 50WV K UJ	CC0505615G
C291	.01uF 50EV Z SL	CC0501037L
C293	12pF 50WV J CH	CC0501204A
C294	.47uF 50WV Z SL	CC0504737L
C295	.1uF 50WV Z SL	CC0501047L
C296	.01uF 50EV Z SL	CC0501037L
C297	.01uF 50EV Z SL	CC0501037L
C298	.1uF 50WV Z SL	CC0501047L
C299	.1uF 50WV Z SL	CC0501047L
C300	.047uF 50WV Z SL	CC0504737L
C302	.001pF 50WV Z SL	CC0501027L
C303	.047uF 50WV Z S;L	CC0504737L
C305	.01uF 50EV Z SL	CC0501037L
C306	.001pF 50WV Z SL	CC0501027L
C307	.01uF 50EV Z SL	CC0501037L
C308	.01uF 50EV Z SL	CC0501037L
C309	.001pF 50WV Z SL	CC0501027L
C310	.1uF 50WV Z SL	CC0501047L
C311	.01uF 50EV Z SL	CC0501037L
C312	.047uF 50WV Z SL	CC0504737L
C313	.1uF 50WV Z SL	CC0501047L
C314	.1uF 50WV Z SL	CC0501047L
C316	.001pF 50WV Z SL	CC0501027L
C317	.047uF 50WV Z SL	CC0504737L
C319	10pF 50WV J SL	CC0501004L
C320	.01uF 50EV Z SL	CC0501037L
C321	.01uF 50EV Z SL	CC0501037L
C323	.001pF 50WV Z SL	CC0501027L
C324	.1uF 50WV Z SL	CC0501047L
C325	.01uF 50EV Z SL	CC0501037L
C326	.1uF 50WV Z SL	CC0501047L
C327	.01uF 50EV Z SL	CC0501037L
C329	.01uF 50EV Z SL	CC0501037L
C330	.001pF 50WV Z SL	CC0501027L
C331	.1uF 50WV Z SL	CC0501047L
C332	.1uF 50WV Z SL	CC0501047L
C333	.1uF 50WV Z SL	CC0501047L
C334	.1uF 50WV Z SL	CC0501047L
C335	.1uF 50WV Z SL	CC0501047L
C336	.1uF 50WV Z SL	CC0501047L
C337	.1uF 50WV Z SL	CC0501047L
C338	.01uF 50EV Z SL	CC0501037L
C339	100pF 50WV K SL	CC0501015L
C340	.01uF 50EV Z SL	CC0501037L
C341	100pF 50WV K SL	CC0501015L
C343	.001pF 50WV Z SL	CC0501027L
C348	3pF 50WV C CH	CC0500301A
C349	.01uF 50EV Z SL	CC0501037L

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
MYLAR CAPACITORS		
C15	.0022uF 50M K	CM0502225Z
C33	.001uF 50WV L	CM0501025Z
C47	.022uF 50M K	CM0502235Z
C186	.001uF 50WV L	CM0501025Z
C234	.047uF 50M K	CM0504735Z
C235	.001uF 50WV K	CM0501025Z
TANTALUM CAPACITORS		
C10	4.7uF 16WV M	CT0164756Z
C106	.22uF 16WV M	CT0162246Z
C141	.22uF 16WV M	CT0162246Z
C155	.22uF 16WV M	CT0162246Z
C156	4.7uF 16WV M	CT0164756Z
C160	.22uF 16WV M	CT0162246Z
C161	2.2uF 16WV M	CT0162256Z
C171	10uF 16WV M	CT0161066Z
C175	10uF 16WV M	CT0161066Z
CHIP CAPACITORS		
C266	.22uF 50WV	CJ0502246Z
C328	.22uF 50WV	CH0502246Z
C345	.22uF 50WV	CH0502246Z
ELECTROLYTIC CAPACITORS		
C13	.47uF 50WV Z	CE0504747Z
C16	2.2uF 50WV Z	CE0502257Z
C25	10uF 25WV Z	CE0251067Z
C27	10uF 25WV Z	CE0251067Z
C32	47uF 10WV Z	CE0104767Z
C36	10uF 25WV Z	CE0251067Z
C39	47uF 10WV Z	CE0104767Z
C44	47uF 10WV Z	CE0104767Z
C46	47uF 10WV Z	CE0104767Z
C49	47uF 10WV Z	CE0104767Z
C50	10uF 25WV Z	CE0251067Z
C57	10uF 25WV Z	CE0251067Z
C58	1000uF 10WV Z	CE0101087Z
C70	10uF 25WV Z	CE0251067Z
C81	2.2uF 50WV Z	CE0502257Z
C88	1uF 50WV Z	CE0501057Z
C95	22uF 10WV Z	CE0102267Z
C96	220uF 16WV Z	CE0162277Z
C99	220uF 16WV Z	CE0162277Z
C102	1uF 16WV NP	CE0161056N
C103	220uF 10WV Z	CE0102277Z
C109	4.7uF 50WV Z	CE0504757Z
C111	100uF 10WV Z	CE0101077Z
C116	220uF 16WV Z	CE0162277Z
C128	47uF 10WV Z	CE0104767Z
C137	10uF 25WV Z	CE0251067Z
C138	1000uF 10WV Z	CE0101087Z
C140	2.2uF 50WV Z	CE0502257Z
C147	10uF 25WV Z	CE0251067Z
C157	220uF 16WV Z	CE0162277Z
C168	10uF 25WV Z	CE0251067Z

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
C170	10uF 25WV Z	CE0251067Z
C196	47uF 10WV Z	CE0104767Z
C201	47uF 10WV Z	CE0104767Z
C205	10uF 25WV Z	CE0251067Z
C207	220uF 16WV Z	CE0162277Z
C213	330mF 16WV	CE0163377Z
C216	22uF 10WV Z	CE0102267Z
C219	4.7uF 50WV Z	CE0504757Z
C223	47uF 10WV Z	CE0104767Z
C224	1uF 50WV Z	CE0501057Z
C231	100uF 10WV Z	CE0101077Z
C265	2.2uF 50WV Z	CE0502257Z
C285	1uF 50WV Z	CE0501057Z
C288	10uF 25WV Z	CE0251067Z
C292	10uF 25WV Z	CE0251067Z
C301	100uF 10WV Z	CE0101077Z
C304	220uF 16WV Z	CE0162287Z
C322	220uF 16WV Z	CE0162287Z
C347	1uF 50WV Z	CE0501057Z
I.C.		
IC1	NJM324D	ENJR00324D
IC2	UPC1028H	ENNE01028H
IC3	AN612	ENMA00612Z
IC4	NJM7805	ENJR07805Z
IC5	TC5081AP	ENTA05081A
IC6	NJM7808A	ENJR07808A
IC7	TC5081AP	ENTA05081A
IC8	TA7310P	ENTA07310P
IC9	TA7310P	ENTA07310P
IC10	TA7310P	ENTA07310P
IC11	TC5082P	ENTA05082P
IC12	HD10551	ENHI10551Z
IC13	HD10551	ENHI10551Z
IC14	TA7310P	ENTA07310P
IC15	NJM7808A	ENJR07808A
IC16	JRC4558D	ENJR04558D
IC17	CX7925B	ENS007925B
IC19	TA7222AP	ENTA07222A
IC20	5042P	ENSM00042P
IC21	TC4069UBP	ENTA04069U
DIODES		
D1	1N60P	ED1N00060P
D2	1N60P	ED1N00060P
D3	1N4148	ED1N04148Z
D4	1N4148	ED1N04148Z
D5	1N4148	ED1N04148Z
D6	1N4148	ED1N04148Z
D7	1N4148	ED1N04148Z
D8	1N4148	ED1N04148Z
D9	1N4148	ED1N04148Z
D10	1N4148	ED1N04148Z
D11	1N60P	ED1N00060P
D12	1N60P	ED1N00060P
D13	1N4148	ED1N04148Z
D14	1N4148	ED1N04148Z
D15	1N4148	ED1N04148Z

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7.0 MAIN BOARD (Con't)

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
D16	1N4148	ED1N04148Z	D76	1N4148	ED1N04148Z
D17	1N4148	ED1N04148Z	D77	1N4148	ED1N04148Z
D18	MC301	EDMC00301Z	D78	1N4148	ED1N04148Z
D19	FC54M	EDEC00054M	D79	1N4148	ED1N04148Z
D20	MC301	EDMC00301Z	D80	1N4148	ED1N04148Z
D21	1N4148	ED1N04148Z	D81	1N4148	ED1N04148Z
D22	1N4148	ED1N04148Z	D82	1N4148	ED1N04148Z
D23	FC54M	EDEC00054M	D83	1N4148	ED1N04148Z
D24	FC54M	EDEC00054M	D84	1N4148	ED1N04148Z
D25	MC301	EDMC00301Z	D85	1N4148	ED1N04148Z
D26	1N4148	ED1N04148Z	D86	ZENER .5W 5.6V	EDZD05569Z
D27	1N4148	ED1N04148Z	D87	FC54M	EDEC00054M
D28	1N4148	ED1N04148Z	C88	1N4148	ED1N04148Z
D29	1N4148	ED1N04148Z	D89	1N4148	ED1N04148Z
D30	1N4148	ED1N04148Z	D90	MV1Y	EDMV00001Y
D31	1N4148	ED1N04148Z	D91	MV1Y	EDMV00001Y
D32	1N4148	ED1N04148Z	D92	MV1Y	EDMV00001Y
D33	1N4148	ED1N04148Z	D93	1N4148	ED1N04148Z
D34	1N60P	ED1N00060P	D94	FC54M	EDEC00054M
D35	1N60P	ED1N00060P	D95	FC54M	EDEC00054M
D36	1N4148	ED1N04148Z	D96	FC54M	EDEC00054M
D37	1N4148	ED1N04148Z	D97	1N4148	ED1N04148Z
D38	1N4148	ED1N04148Z	D98	1N4148	ED1N04148Z
D39	1N4148	ED1N04148Z	D99	1N4148	ED1N04148Z
D40	1N4148	ED1N04148Z	D100	1N4148	ED1N04148Z
D41	1N4148	ED1N04148Z	D101	1N4148	ED1N04148Z
D42	KB362	EDKB00362Z	D102	1N4148	ED1N04148Z
D43	FC54M	EDEC00054M	D103	1N4148	ED1N04148Z
D44	1N4148	ED1N04148Z	D104	1N4148	ED1N04148Z
D45	1N4148	ED1N04148Z	D105	1N4148	ED1N04148Z
D46	1N4148	ED1N04148Z	D106	1N4148	ED1N04148Z
D47	1N4148	ED1N04148Z	D107	1N4148	ED1N04148Z
D48	1N4148	ED1N04148Z	D108	1N4148	ED1N04148Z
D49	1N4148	ED1N04148Z	D109	1N4148	ED1N04148Z
D50	1N4148	ED1N04148Z	D110	1N4148	ED1N04148Z
D51	KB262	EDKB00262Z	D111	FC54M	EDEC00054M
D52	1N4148	ED1N04148Z	D112	1N4148	ED1N04148Z
D53	1N4148	ED1N04148Z	D113	1N4148	ED1N04148Z
D54	1N4148	ED1N04148Z	D116	MC301	EDMC00301Z
D55	1N4148	ED1N04148Z			
D56	1N4148	ED1N04148Z			
D57	1N4148	ED1N04148Z			
D58	1N4148	ED1N04148Z			
D59	1N4148	ED1N04148Z	Q1	2SC1675K	T2SC01675K
D60	1N4148	ED1N04148Z	Q2	2SC1675K	T2SC01675K
D61	1N4148	ED1N04148Z	Q3	2SC945P	TRSC00945P
D62	1N4148	ED1N04148Z	Q4	2SC945P	TRSC00945P
D63	1N4148	ED1N04148Z	Q5	2SC945P	TRSC00945P
D64	1N4148	ED1N04148Z	Q6	2SC945P	TRSC00945P
D65	1N4148	ED1N04148Z	Q7	2SC945P	TRSC00945P
D66	SVC251	EDSV00251Z	Q8	2SC1674K	T2SC01674K
D67	SVC251	EDSV00251Z	Q9	2SC1675K	T2SC01675K
D68	1N4148	ED1N04148Z	Q10	2SC1675K	T2SC01675K
D69	1N4148	ED1N04148Z	Q11	2SC1675K	T2SC01675K
D70	1N4148	ED1N04148Z	Q12	2SA733P	T2SA00733P
D71	1N4148	ED1N04148Z	Q13	2SC945P	TRSC00945P
D72	1N4148	ED1N04148Z	Q14	2SC945P	TRSC00945P
D73	ZENER .5W 2.4V	EDZD05249Z	Q15	2SC945P	TRSC00945P
D74	ZENER .5W 5.6V	EDZD05269Z	Q16	2SC945P	TRSC00945P
D75	KB362	EDKB00362Z	Q17	2SC945P	TRSC00945P
			Q18	2SC1674K	T2SC01674K

TRANSISTORS

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7.0 MAIN BOARD (Con't)

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
Q19	J310	EZZJ00310Z	L29	BEAD F PH=12.5mm	ECBAD18550
Q20	2SC1674K	T2SC01674K	L19	BEAD F PH=12.5mm	ECBAD18550
Q21	2SC1675K	T2SC01675K	L22	CHOKE 22uH (P TYPE)	ECCHK16070
Q22	2SC1675K	T2SC01675K	L26	CHOKE 470uH (P TYPE)	ECCHK16096
Q23	2SC1906	T2SC01906Z	L30	CHOKE 22uH (P TYPE)	ECCHK16070
Q24	2SC945P	TRSC00945P	L33	CHOKE .82uH	ECCHK16082
Q25	2SA733P	T2SA00733P	L34	RF .23uH	ECRFZ10001
Q26	2SC945P	TRSC00945P	L36	BEAD D SU-B-172D	ECBAD18504
Q27	2SC1675K	T2SC01675K	L37	BEAD D SU-B-172D	ECBAD18504
Q28	2SC1675K	T2SC01675K	L38	RF .23uF	ECRFZ10091
Q29	2SC1675K	T2SC01675K	L39	BEAD F SU-B-172F	ECBAD18506
Q30	2SC945P	TRSC00945P	L40	BEAD D SU-B-175D	ECBAD18504
Q31	2SC945P	TRSC00945P	L41	TOROIDAL SU-TR-398	ECRFZ10048
Q32	2SC945P	TRSC00945P	L42	BEAD F SU-B-172F	ECBAD18506
Q33	2SC945P	TRSC00945P	L44	BEAD F PH=12.5mm	ECBAD18550
Q34	2SC945P	TRSC00945P	L45	BEAD F PH=12.5mm	ECBAD18550
Q35	2SA733P	T2SA00733P	L49	CHOKE (BIG ROUND)	ECCHK16151
Q36	2SC945P	TRSC00945P	L50	CHOKE .82uF	ECCHK16082
Q37	2SA1282	T2SA01282F	L51	CHOKE 10CH (P TYPE)	ECCHK16088
Q38	2SA1282	T2SA01282F	L52	CHOKE 10CH (P TYPE)	ECCHK16088
Q39	2SC945P	TRSC00945P	L53	CHOKE 470uH (P TYPE)	ECCHK16096
Q40	2SA1282	T2SA01282F	L59	BEAD F SU-B-172F	ECBAD18506
Q41	2SC945P	TRSC00945P	L60	BEAD F SU-B-172F	ECBAD18506
Q42	2SC945P	TRSC00945P	L61	BEAD F SU-B-172F	ECBAD18506
Q43	2SC1675K	T2SC01675K	L62	BEAD E PH=10mm	ECBAD18526
Q44	2SC1675K	T2SC01675K	L63	CHOKE 470uH (P TYPE)	ECCHK16096
Q45	2SA733P	T2SA00733P	L65	BEAD F SU-B-172F	ECBAD18506
Q46	2SC2312	T2SC02312C	L131	SPRING .8x6.5x7.5t	ECSPG18075
Q47	2SC2312	T2SC02312C	L132	SPRING .8x6.5x7.5t	ECSPR18003
Q48	2SC2166C	T2SC02166C	L503	CHOKE .47uH (P TYPE)	ECCHK16000
Q49	2SC2314F	T2SC02314F	L504	CHOKE .47uH (P TYPE)	ECCHK16000
Q50	2SC1906	T2SC01906Z	T1	CHOKE EI-19 TF-083	ECCHK16004
Q51	2SB754Y	T2SB00754Y			
Q52	2SC945P	T2SC00945P			
Q53	2SA473/0	T2SA004730			
Q54	2SC945P	T2SC00945P			
Q55	2SC945P	T2SC00945P			
Q56	2SC945P	T2SC00945P			
Q57	2SC945P	T2SC00945P			
Q58	2SC945P	T2SC00945P			
	VARIABLE RESISTORS			VARIABLE INDUCTORS	
VR1	10K 3P, SEMI FIXED	RE10300078	L1	IFT M199CC-P14097F	ECIFT12251
VR2	10K 3P, SEMI FIXED	RE10300078	L2	IFT 199CC-P1498N	ECIFT12252
VR3	500K 3P, SEMI FIXED	RE50400080	L3	IFT 7MC-7172ABN	ECIFT12002
VR4	500K 3P, SEMI FIXED	RE50400080	L4	IFT M199CC-P14097F	ECIFT12251
VR7	10K 3P, SEMI FIXED	RE10300078	L5	IFT 7MC-7172ABN	ECIFT12002
VR8	100K 3P, SEMI FIXED	RE10400079	L6	IFT 7MC-7172ABN	ECIFT12002
VR11	3K 3P, SEMI FIXED	RE30200076	L7	IFT 7MC-7174Y	ECIFT12003
VR12	10K 3P, SEMI FIXED	RE10300078	L8	IFT M19CNF-P1499N	ECIFT12253
VR13	5K 3P, SEMI FIXED	RE50200077	L9	IFT 19CN-P1549N	ECIFT12290
VR14	1K 3P, SEMI FIXED	RE10200072	L11	IFT 199CN-P1549N	ECIFT12990
VR15	1K 3P, SEMI FIXED	RE10200072	L12	IFT M199CC-P1501A	ECIFT12255
VR16	10K 3P, SEMI FIXED	RE10300078	L13	IFT 199CC-P1502N	ECIFT12256
VR21	5K 3P, SEMI FIXED	RE50200077	L14	IFT 199CC-P1502N	ECIFT12256
	COILS		L15	IFT 199CC-P1498N	ECIFT12252
J52	CHOKE 470uH (P TYPE)	ECCHK16096	L16	IFT M199CC-P1503A	ECIFT12257
			L17	IFT 292CN-P11221Z	ECIFT12263
			L19	IFT6 M199CC-P1504N	ECIFT12258
			L21	IFT 292CN-P1121Z	ECIFT12263
			L23	IFT 199CC-P1498N	ECIFT12252
			L24	IFT 199CC-P1498N	ECIFT12252
			L25	IFT 199CC-P1498N	ECIFT12252
			L27	IFT 113CN-6344Z	ECIFT12016
			L28	IFT 113CN-6344Z	ECIFT12016
			L29	IFT 113CN-6344Z	ECIFT12016
			L43	IFT 292CN-P1117AQ	ECIFT12262

7.0 MAIN BOARD (Con't)

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
L46	IFT 292CN-P1125R	ECIFT12265	J14	7x7mmx7	WX01070707
L47	IFT 292CN-P1125R	ECIFT12265	J16	7x5mmx7	WX01070705
L48	IFT M199CC-P1501A	ECIFT12255	J17	7x10mmx7	WX01070710
	RELAYS		J18	7x13mmx7	WX01070713
RL	9V	EX05N40802	J19	1x4mmx7	WX01070704
	TRIMMER CAPACITORS		J20	7x6mmx7	WX01070706
VC1	20P	CV050200AZ	J21	7x10mmx7	WX01070710
VC2	20P	CV050200AZ	J22	7x6mmx7	WX01070706
VC3	30P	CV050300AZ	J23	7x6mmx7	WX01070706
	CERAMIC FILTERS		J24	7x6mmx7	WX01070706
FL1	CFW455HT	EFCFW455HT	J25	7x6mmx7	WX01070706
FL2	SEF 10.7 MX	EFCFE107MX	J26	7x6mmx7	WX01070706
FL3	CRYSTAL, 10.695 MHz	EFX8106952	J27	7x10mmx7	WX01070710
X1	CRYSTAL, 10.240 MHz	EYCAB10240	J28	7x9mmx7	WX01070709
X2	CRYSTAL, 10.240 MHz	EYCAB10240	J29	7x4mmx7	WX01070704
X3	CRYSTAL, 10.6975 MHz	EYCAE10697	J30	7x5mmx7	WX01070705
	CONNECTORS		J31	7x7mmx7	WX01070707
J101	PCB CONN. SOCKET 2P L=17.8	EX07N48185	J32	7x6mmx7	WX01070706
J104	PCB CONNECTOR SOCKET 3P	EX07N41216	J33	7x10mmx7	WX01070710
J105	PCB CONNECTOR SOCKET 2P	EX07N41226	J34	7x10mmx7	WX01070710
J107	PCB CONNECTOR SOCKET 2P	EX07N41226	J36	7x9mmx7	WX01070709
J108	PCB CONNECTOR SOCKET 2P	EX07N41226	J38	7x3mmx7	WX01070703
J109	PCB CONNECTOR SOCKET 3P	EX07N41216	J39	7x27mmx7	WX01070727
J110	PCB CONNECTOR SOCKET 3P	EX07N41216	J40	7x10mmx7	WX01070710
J112	PCB CONNECTOR SOCKET 3P	EX07N41216	J41	7x5mmx7	WX01070705
J113	PCB CONNECTOR SOCKET 6P	EX07N41266	J42	7x10mmx7	WX01070710
J115	PCB CONNECTOR SOCKET 3P	EX07N41216	J43	7x9mmx7	WX01070709
J116	PCB CONNECTOR SOCKET 3P	EX07N41216	J44	7x10mmx7	WX01070710
J117	PCB CONNECTOR SOCKET 7P	EX07N41261	J45	7x10mmx7	WX01070710
J118	PCB CONNECTOR SOCKET 3P	EX07N41216	J46	7x13mmx7	WX01070713
J119	PCB CONNECTOR SOCKET 6P	EX07N41266	J47	7x5mmx7	WX01070705
J501	EARPHONE JACK	EX06N41045	J48	7x5mmx7	WX01070705
J502	EARPHONE JACK	EX06N41045	J49	7x10mmx7	WX01070710
J503	EARPHONE JACK	EX06N41045	J50	7x10mmx7	WX01070710
	JUMPER WIRES		J51	7x10mmx7	WX01070710
J1	7x5mmx7	WX01070705	J53	7x5mmx7	WX01070705
J2	7x13mmx7	WX01070713	J54	7x6mmx7	WX01070706
J3	7x13mmx7	WX01070713	J56	7x5mmx7	WX01070706
J5	7x10mmx7	WX01070710	J57	7x4mmx7	WX01070704
J6	7x10mmx7	WX01070710	J58	7x10mmx7	WX01070710
J7	7x10mmx7	WX01070710	J59	7x5mmx7	WX01070705
J8	7x6mmx7	WX01070706	J60	7x6mmx7	WX01070706
J9	7x10mmx7	WX01070710	J61	7x6mmx7	WX01070706
J10	7x10mmx7	WX01070710	J62	7x4mmx7	WX01070704
J12	7x9mmx7	WX01070709	J63	7x8mmx7	WX01070708
J13	7x5mmx7	WX01070705	J64	7x10mmx7	WX01070710
J14	7x7mmx7	WX01070707	J66	7x10mmx7	WX01070710
J16	7x5mmx7	WX01070705	J67	7x14mmx7	WX01070714
J17	7x10mmx7	WX01070710	J68	7x6mmx7	WX01070706
J18	7x13mmx7	WX01070713	J69	7x10mmx7	WX01070710
			J70	7x5mmx5	WX01070705
			J71	7x4mmx7	WX01070704
			J72	7x5mmx7	WX01070705
			J73	7x5mmx7	WX01070705
			J74	7x10mmx7	WX01070710
			J75	7x8mmx7	WX01070708
			J76	7x7mmx7	WX01070707
			J78	7x7mmx7	WX01070707
			J79	7x6mmx7	WX01070706
			J80	7x6mmx7	WX01070706

7.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
J81	7x13mmx7	WX01070713
J82	7x15mmx7	WX01070715
J83	7x7mmx7	WX01070707
J84	7x14mmx7	WX01070714
J86	7x5mmx7	WX01070705
J114	7x3mmx7	WX01070706
J322	7x5mmx7	WX01070705
ANT	7x50mmx7	WX01070750

7.1 VSWR P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VSWR P.C.B.	EPT360040Z
	CARBON FIXED RESISTORS	
R401	100Ω ¼W(P) TYPE	RCP141014Z
R402	150Ω ¼W(P) TYPE	RCP141014Z
	CERAMIC CAPACITORS	
C405	.01uF 50WV Z SL	CC0501037L
C406	.01uF 50WV Z SL	CC0501037L
	DIODES	
D401	1N60P	ED1N00060P
D402	1N60P	ED1N00060P

7.2 RF/MIC & VOL/SQ P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VR P.C.B.	EPT295050Z
RF/MIC	VR 1KA-5KB	RV10203451
VOL/SQ	VR 50KB-50KA	RV50303453
	CERAMIC CAPACITORS	
C501	.001uF 50WV Z SL	CC0501027L
C505	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J501	PCB CONNECTOR SOCKET 2P	EX07N41226
J502	PCB CONNECTOR SOCKET 2P	EX07N41226
J503	PCB CONNECTOR SOCKET 3P	EX07N41216
J504	PCB CONNECTOR SOCKET 3P	EX07N41216
J505	PCB CONNECTOR SOCKET 2P	EX07N41226

7.3 RF/CAL P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VR P.C.B.	EPT295060Z
RF/CAL	VR 1KB-20KB	RV10203456
	CERAMIC CAPACITORS	
C601	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J601	PCB CONNECTOR SOCKET 3P	EX07N41216
J602	PCB CONNECTOR SOCKET 3P	EX07N41216

7.4 MIC JACK P.C. BOARD

REF#	DESCRIPTION	PART#
-----	MIC JACK P.C.B.	EPT295070Z
	CERAMIC CAPACITORS	
C701	.001uF 50WV Z SL	CC0501027L
C702	.001uF 50WV Z SL	CC0501027L
C703	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J701	PCB CONNECTOR SOCKET 3P	EX07N48244
J702	PCB CONNECTOR SOCKET 2P	EX07N48152
J703	PCB CONNECTOR SOCKET 2P	EX07N48152
-----	MIC JACK 6P	EX06N41111

7.5 BAND P.C. BOARD

REF#	DESCRIPTION	PART#
-----	BAND P.C.B.	EPT295090Z
-----	ROTARY SW, 6N	EWRT32053S
-----	PCB CONNECTOR SOCKET 3P	EX07N41216
-----	PCB CONNECTOR SOCKET 7P	EX07N41261
J403	JUMPER WIRE 1mmx6mmx7mm	WX01070706

7.6 CH/SW P.C. BOARD

REF#	DESCRIPTION	PART#
-----	CH SW P.C.B.	EPT295090A
-----	ROTARY SW, GPS-688	EWRT32051S
-----	PCB CONNECTOR SOCKET 3P	EX07N41216

7.7 CHASSIS PARTS

REF#	DESCRIPTION	PART#
SP501	SPEAKER 3W 8Ω 3½"	ES3008355Q
-----	FUSE 7A 16V	EX02N40210
-----	DC CORD w/FUSE SOCKET	WA0012185A
-----	DC SOCKET 3P	EX06N40007
-----	ANT JACK	EX06N41019
-----	MICROPHONE ASSEMBLY	EX04N40620
-----	WIRE CONN. HOUSING 2-4-2P	EX07N48398
-----	WIRE CONN. HOUSING 3-2-2P	EX07N48394
SP	WIRE CONN. HOUSING 2P	EX07N78041
J105	WIRE CONN. HOUSING 2-2P	EX07N48391
J108	WIRE CONN. HOUSING 2-2P	EX07N48391
J109	WIRE CONN. HOUSING 3-3P	EX07N48389
J112	WIRE CONN. HOUSING 3-3P	EX07N48389
J113	WIRE CONN. HOUSING 6P	EX07N48396
J115	WIRE CONN. HOUSING 3-3P	EX07N48389
J116	WIRE CONN. HOUSING 3-3P	EX07N48389
J117	WIRE CONN. HOUSING 7P	EX07N48387
J119	WIRE CONN. HOUSING 3-3P	EX07N48389
J501	WIRE CONN. HOUSING 2-2P	EX07N48391
J502	WIRE CONN. HOUSING 3-3P	EX07N48389
J503	WIRE CONN. HOUSING 3-3P	EX07N48389
J504	WIRE CONN. HOUSING 3-3P	EX07N48389
J508	WIRE CONN. HOUSING 2-2P	EX07N48391
J601	WIRE CONN. HOUSING 3-3P	EX07N48389
J602	WIRE CONN. HOUSING 3-3P	EX07N48389
J701	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397
J702	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397
J703	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397

7.8 KEY P.C. BOARD

REF#	DESCRIPTION	PART#
-----	KEY P.C.B.	EPT295030Z
	CARON FIXED RESISTORS	
-----	1.5K ¹ / ₁₆ W(P) TYPE	RCP161524Z
	MISC.	
-----	TACT SW	EWPS33042X
-----	IC PIN	EX07N48414
-----	LED YELLOW	EX01N40081
-----	PCB CONN. SOCK. 6P L=21.8mm	EX07N48441

7.9 LCD P.C. BOARD

REF#	DESCRIPTION	PART#
-----	LCD P.C.B.	EPT2950217
	RESISTORS	
R710	39K .1W, CHIP	ROY013934Z
R711	470K .1W, CHIP	ROY014744Z
R712	680K .1W	ROY016844Z
	CAPACITORS	
-----	1uF 25WV Z Y5V, MONOLITHIC	CK2104AB7V
-----	.33uF 35WV M, TANTALUM	CTY353346Z
-----	1uF 16WV M, TANTALUM	CTY161056Z
C701	1uF 16WV M, TANTALUM	CTY161056Z
C702	0.33uF 35WV M, TANTALUM	CTY353346Z
C703	0.33uF 35WV M, TANTALUM	CTY353346Z
C704	0.33uF 35WV M, TANTALUM	CTY353346Z
C705	1uF 16WV M, TANTALUM	CTY161056Z
C707	0.01uF 50WV M, CERAMIC	CK1103AB6U
C710	0.01uF 50WV M, CERAMIC	CK1103AB6U
C711	0.01uF 50WV M, CERAMIC	CK1103AB6U
C712	0.01uF 50WV M, CERAMIC	CK1103AB6U
C713	0.01uF 50WV M, CERAMIC	CK1103AB6U
C716	0.01uF 50WV M, CERAMIC	CK1103AB6U
C717	0.01uF 50WV M, CERAMIC	CK1103AB6U
C720	0.01uF 50WV M, CERAMIC	CK1103AB6U
C721	0.01uF 50WV M, CERAMIC	CK1103AB6U
	I.C.'s	
IC701	HD61602R 80PIN	ENHI61602R
	VARIABLE RESISTORS	
VR701	1M (TMC4K B1M OHM)	RE10500102
	MISC.	
-----	IC HD61602R	ENHI61602R
-----	SEMI-FIXED RESISTOR, 1M	RE10500102
-----	LCD DISPLAY	EX03N40438
-----	LAMP, 5V .08A	EX01N40080
-----	IC SOCKET 2P	EX07N48442
-----	PCB CONN. SOCK. 14P L=21.8mm	EX07N48438

7.10 CPU/MIC UP/DN P.C. BOARD

(PRE-MARCH 1995 VERSION)

REF#	DESCRIPTION	PART#
-----	CPU P.C.B.	EPT295042Z
-----	MIC UP/DN P.C.B.	EPT295080Z
	CARBON FIXED RESISTORS	
R601	270Ω ¼W(U) TYPE	RCU142714Z
R602	220Ω ¼W(U) TYPE	RCU142214Z
R603	180Ω ¼W(U) TYPE	RCU141814Z
R604	82Ω ¼W(U) TYPE	RCU148204Z
R605	470Ω 0.1W	RCY014714Z
R606	470Ω 0.1W	RCY014714Z
R607	470Ω 0.1W	RCY014714Z
R608	470Ω 0.1W	RCY014714Z
R609	10Ω 0.1W	RCY011034Z
R610	1Ω 0.1W	RCY011024Z
R611	47K 0.1W	RCY014734Z
R612	47K 0.1W	RCY014737Z
R613	47K 0.1W	RCY014737Z
R614	150K 0.1W	RCY011544Z
R615	47K 0.1W	RCY014734Z
R617	47K 0.1W	RCY014734Z
R618	47K 0.1W	RCY014734Z
R619	47K 0.1W	RCY014734Z
R620	470Ω 0.1W	RCY014714Z
R621	47K 0.1W	RCY014734Z
R622	47K 0.1W	RCY014734Z
R623	47K 0.1W	RCY014734Z
R624	47K 0.1W	RCY014734Z
R625	47K 0.1W	RCY014734Z
R626	4.7K 0.1W	RCY014724Z
R627	47K 0.1W	RCY014734Z
R628	47K 0.1W	RCY014734Z
R629	47K 0.1W	RCY014734Z
R630	1 MEG 0.1W	RCY011054Z
R631	10K 0.1W	RCY011034Z
R632	47K 0.1W	RCY014734Z
R633	39K 0.1W	RCY013934Z
R634	220K 0.1W	RCY012244Z
R635	1 MEG 0.1W	RCY011054Z
R636	100K 0.1W	RCY011044Z
R637	220K 0.1W	RCY012244Z
R638	100K 0.1W	RCY011044Z
R639	47K 0.1W	RCY014734Z
R640	47K 0.1W	RCY014734Z
R641	150K 0.1W	RCY011544Z
	ARRAY RESISTORS	
RA601	10K/20K 6P	RCS0670023
RA602	47K 5P	RCS0570009
RA603	47K 5P	RCS0570009
RA604	220K 5P	RCS0570022
RA605	47K 5P	RCS0570009
RA606	220K 9P	RCS0970021
RA607	47K 5P	RCS0570009
RA608	47K 5P	RCS0570009
RA609	47K 5P	RCS0570009
RA610	220K 9P	RCS0570022
RA611	47K 5P	RCS0570009

7.10 CPU/MIC UP/DN P.C. BOARD

REF#	DESCRIPTION	PART#
CAPACITORS		
C601	0.1uF 50WV K Z5U, MONO.	CK1103AB7U
C602	.1uF 35WV M TANTALUM	CTY351046Z
C603	.33uF 35WV M, TANTALUM	CTY353346Z
C604	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C605	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C606	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C607	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C608	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C609	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C610	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C611	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C612	33pF 50WV J CH, MONO. CHIP	CK1330AB4A
C613	33pF 50WV J CH, MONO. CHIP	CK1330AB4A
C614	.1uF 50WV Z Y5V, MONO.	CK2104AB7V
C615	.0027uF 50WV Z Y5V, MONO.	CK1272AB5R
C616	470pF 50WV K SL, MONO. CHIP	CK1471AB5L
C617	100pF 50WV K SL, M ONO CHIP	CK1101AB5L
C618	.01uF 50WV K Z5U, MONO.	CK1103AB7U
I.C.'S		
IC601	HD4074008F	ENHI74008F
IC602	TC4069UBF	ENTA04069F
IC603	M5223FP	ENMI05223F
IC601	TC4069UBF	ENTA04069F
IC605	TA78	TZTA00078Z
IC606	TA78	TZTA00078Z
IC612	7805	ENSS07805Z
TRANSISTORS		
TR601	2SC945P	T2SC00945P
TR602	2SC945P	T2SC00945P
TR603	2SC945P	T2SC00945P
T604	2SC945P	T2SC00945P
TR605	2SC2712	T2SC02712G
TR606	2SC2712	T2SC02712G
TR607	2SC2712	T2SC02712G
-----	2SA1162GR	T2SA01162G
DIODES		
D601	1N5711	ED1N05711Z
D602	1SS181	EDSS00181Z
D604	1SS181	EDSS00181Z
D605	1SS181	EDSS00181Z

7.11 MISC. PARTS (Con't)

REF#	DESCRIPTION	PART#
CN609	PCB CONNECTOR SOCKET 2P	EX07N41226
-----	PCB CONNECTOR SOCKET 3P	EX07N48244
-----	PCB CONNECTOR SOCKET 4P	EX07N48440
-----	PCB CONNECTOR SOCKET 7P	EX07N48011
-----	PCB CONNECTOR SOCKET 6P	EX07N48010
-----	PCB CONNECTOR SOCKET 10P	EX07N48416
-----	SHORT PIN 2P	EX07N48151
-----	FRONT PANEL, BLACK	PT2950010A
-----	FRONT PANEL (RCI-2970)	PT2950010G
-----	REFRACTOR PLATE (KEY)	PT2950030A
-----	REFRACTOR PLATE (LCD)	PT2950041A
-----	KNOB, BLACK	PT2950051A
-----	KNOB, BLACK	PT2950060A
-----	INNER KNOB, BLACK	PT2950071A
-----	OUTER KNOB, BLACK	PT2950080A
-----	LCD WINDOW	PT2950090A
-----	FRONT CHASSIS	MT2950010P
-----	SPACE KING	MT2950020E
-----	D SPRING A #6600	MT3600080T
-----	D SPRING B #7800	MT3600090T
-----	D SPRING D #8500	MT3600100T
-----	HANDLER, BLACK	MT3600030A
-----	TOP HOUSING, BLACK	MT2950031A
-----	BOTTOM HOUSING, BLACK	MT2950041A
-----	SET CHASSIS	MT3600022X
-----	SOCKET HOLDER	MT3600050X
-----	SHIELD PLATE (A)	MT1200060N
-----	HEAT SINK, BLACK	MM7878040X
-----	P.C.B BRACKET	MT3600010S
-----	SHIELD PLATE	MT2710060X
-----	TOP HOUSING	MT2950031B
-----	RUBBER KEY	QT2950010A
-----	MIC PLATE	BT2100020A
-----	MIC PLATE	BT2100020D
-----	MIC PLATE	BT0SSB010B
-----	SHIELD CLOTH 10x88x.3t	LZZZ60001Z
-----	SHIELD CLOTH 90x90x.18t	LZZZ60056Z
-----	LCD SPONGE RUBBER 108x25x1t	XZZZ90205Z
-----	CLAMP	GZZZ50000Z
-----	BEEP SPONGE 22x1.5t	XZZZ90206Z
-----	FOAM 14x16x20mm	XZZZ90004Z
-----	PCB STOPPER	XZZZ90006Z
-----	INSULATING PLATE	XZZZ90020Z
-----	INSULATING RING	XZZZ90003Z
-----	ANT/MIC SOLDER PLATE	
-----	16x21x.5t	XZZZ90098Z
-----	SPONGE 15x30x11t	XZZZ90021Z
-----	SODER PLATE	XZZZ90002Z
-----	LCD PCB SHIELD PLATE	
-----	35x8x2t	XZZZ90187Z
-----	RCI MIC PLATE	BT6300041A
-----	LAMP REFRACTOR LABEL 28x11	LZZZ61278Z
-----	TOP REFRACTOR LABEL 25x8	LZZZ61277Z
-----	LCD REFRACTOR LABEL 100x11	LZZZ61276Z
-----	SCREW, M2.0x0.4px10 PAN HEAD	JS052010MN
B757Y	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
TR46	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
TR47	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
TR48	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
-----	FRON PANEL (4) SCREW	
-----	M3.0x0.5px6, FLAT HEAD	JS033006MN

7.11 MISC. PARTS

REF#	DESCRIPTION	PART#
X601	RESONATOR, 4 MHz, CERAMIC	EX14N46510
-----	BUZZER RKM35-4A	EX14N46511
L1	BATTERY LITHIUM, 3V 170mAh	EX08N41405
-----	PCB CONNECTOR SOCKET 6P	EX07N41266
-----	PCB CONNECTOR SOCKET 4P	EX07N41250
-----	PCB CONNECTOR SOCKET 3P	EX07N41216
CN602	PCB CONNECTOR SOCKET 2P	EX07N41226
CN608	PCB CONNECTOR SOCKET 2P	EX07N41226

7.11 MISC. PARTS (Con't)

REF#	DESCRIPTION	PART#
-----	DC SOCKET(2), SET CHASSIS(12) LCE & CPU PCB (6) SCREW M3.0x0.5px6, PAN HEAD	JS053006MN
-----	SCREW, M3.0x0.5px6 (PVC) ROUND HEAD	JS013006MY
-----	MAIN PCB (5) SCREW, T3x6-2 PAN HEAD	JS053006TN
-----	HEAT SINK SCREW, T3x8-2 ROUND HEAD	JS013008TN
-----	SPEAKER (4) SCREW M3.0x0.5px8 PAN HEAD	JS053008MN
-----	T7808 KEY PCB(2) SCREW M3.0x0.5px10 PAN HEAD	JS053010MN
-----	R7808(1) KEY PCB (2) CREW M3.0x0.5px10 PAN HEAD	JS053010MN
-----	IC7808x2 SCREW M2.0x0.4px8 PAN HEAD	JS052008MN
-----	SPEAKER (4) NUT w/WASHER	JN263035ZS
-----	2SC2312 (3) NUT	JN242012ZS
-----	INSULATING RING	XZZZ90072Z
-----	MOUNTING SCREW M5.0x0.8x11 BLACK	XZZZ90007Z
-----	SCREW 5x10-1 STEEL	JS015010WH
-----	SCREW 3.5x8-2	JS013508TH
-----	OUTSIDE TOOTH WASHER 5.5x10x0.3	JW315510CN
-----	INSIDE TOOTH WASHER 4x8x0.3	JW324008CN
-----	FIBER WASHER 4.9x15x1T	XZZZ90188Z

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SECTION 8

RCI-2970 PARTS LIST

8.0 MAIN BOARD

REF#	DESCRIPTION	PART#
-----	MAIN PACB	EPT295012Z
-----	DC B+ PCB	EPT120060Z
	CARBON FILM RESISTORS	
R1	10K 1/4W(U) TYPE	RCU141034Z
R2	33K 1/4W(U) TYPE	RCU143334Z
R3	680Ω 1/4W(U) TYPE	RCU146814Z
R4	220Ω 1/4W(U) TYPE	RCU142214Z
R5	330Ω 1/4W(U) TYPE	RCU143314Z
R6	47K 1/4W(U) TYPE	RCU144734Z
R7	2.7K 1/4W(U) TYPE	RCU142724Z
R8	330Ω 1/4W(U) TYPE	RCU143314Z
R9	56Ω 1/4W(U) TYPE	RCU145604Z
R10	100K 1/4W(U) TYPE	RCU141044Z
R11	10K 1/4W(U) TYPE	RCU141034Z
R12	6.8K 1/4W(U) TYPE	RCU146824Z
R13	470K 1/4W(U) TYPE	RCU144744Z
R14	10K 1/4W(U) TYPE	RCU141034Z
R15	330Ω 1/4W(U) TYPE	RCU143314Z
R16	2.7K 1/4W(U) TYPE	RCU142724Z
R17	1.8K 1/4W(U) TYPE	RCU141824Z
R18	1K 1/4W(M) TYPE	RCM141024A
R19	6.8K 1/4W(U) TYPE	RCU146824Z
R20	100Ω 1/4W(M) TYPE	RCU141014A
R21	1K 1/4W(U) TYPE	RCU141024Z
R22	1.5K 1/4W(U) TYPE	RCU141524Z
R23	2.7K 1/4W(U) TYPE	RCU142724Z
R24	1.5K 1/4W(U) TYPE	RCU141524Z
R25	10K 1/4W(M) TYPE	RCM141034A
R27	1.8K 1/4W(U) TYPE	RCU141824Z
R28	1.8K 1/4W(U) TYPE	RCU141824Z
R29	47K 1/4W(M) TYPE	RCM144734A
R30	100Ω 1/4W(M) TYPE	RCM141014A
R31	100Ω 1/4W(U) TYPE	RCU141014Z
R32	100Ω 1/4W(U) TYPE	RCU141014Z
R33	100Ω 1/4W(M) TYPE	RCM141014A
R34	4.7K 1/4W(M) TYPE	RCM144724A
R35	6.8K 1/4W(U) TYPE	RCU146824Z
R36	6.8K 1/4W(M) TYPE	RCM146824A
R37	100Ω 1/4W(U) TYPE	RCU141014Z
R38	1K 1/4W(U) TYPE	RCU141024Z
R39	330K 1/4W(U) TYPE	RCU143344Z
R40	1M 1/4W(U) TYPE	RCU141054Z
R41	6.8K 1/4W(M) TYPE	RCM146824A
R42	100K 1/4W(U) TYPE	RCU141044Z
R43	100K 1/4W(U) TYPE	RCU141044Z
R44	100K 1/4W(U) TYPE	RCU141044Z
R45	82K 1/4W(U) TYPE	RCU148234Z
R46	47K 1/4W(M) TYPE	RCM144734A
R47	220K 1/4W(U) TYPE	RCU142244Z
R48	680K 1/4W(U) TYPE	RCU146844Z
R49	100K 1/4W(M) TYPE	RCM141044A
R50	100K 1/4W(M) TYPE	RCM141044A

8.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
R51	220K 1/4W(M) TYPE	RCM142244A
R52	1K 1/4W(U) TYPE	RCU141024Z
R53	1K 1/4W(U) TYPE	RCU141024Z
R54	100K 1/4W(U) TYPE	RCM141044A
R55	100K 1/4W(U) TYPE	RCM141044A
R56	3.3K 1/4W(U) TYPE	RCU143324Z
R57	3.3K 1/4W(U) TYPE	RCU143324Z
R58	3.3K 1/4W(U) TYPE	RCU143324Z
R59	1K 1/4W(U) TYPE	RCU141024Z
R60	3.3K 1/4W(U) TYPE	RCU143324Z
R61	3.3K 1/4W(U) TYPE	RCU143324Z
R62	10K 1/4W(U) TYPE	RCU141034Z
R63	47K 1/4W(U) TYPE	RCU144734Z
R64	2.7K 1/4W(U) TYPE	RCU142724Z
R65	1K 1/4W(U) TYPE	RCU141024Z
R66	10K 1/4W(U) TYPE	RCU141034Z
R67	1K 1/4W(U) TYPE	RCU474157Z
R68	1K 1/4W(M) TYPE	RCM141024A
R69	1K 1/4W(U) TYPE	RCU141024Z
R70	10K 1/4W(M) TYPE	RCM141034A
R71	47K 1/4W(U) TYPE	RCU144734Z
R72	6.8K 1/4W(M) TYPE	RCM146824A
R73	1K 1/4W(U) TYPE	RCU141024Z
R74	100K 1/4W(P) TYPE	RCP141044Z
R75	680Ω 1/4W(U) TYPE	RCU146814Z
R76	1.5K 1/4W(U) TYPE	RCU141524Z
R77	10K 1/4W(U) TYPE	RCU141034Z
R78	2.2K 1/4W(U) TYPE	RCU142224Z
R79	2.7K 1/4W(U) TYPE	RCU142724Z
R80	100Ω 1/4W(U) TYPE	RCU141014Z
R81	2.2K 1/4W(M) TYPE	RCM142224A
R82	100K 1/4W(U) TYPE	RCU141044Z
R83	10K 1/4W(U) TYPE	RCU141034Z
R84	100Ω 1/4W(U) TYPE	RCU141014Z
R85	2.2K 1/4W(U) TYPE	RCU142224Z
R86	1K 1/4W(U) TYPE	RCU141024Z
R87	5.6K 1/4W(M) TYPE	RCM145624A
R88	10K 1/4W(U) TYPE	RCU141034Z
R89	10K 1/4W(M) TYPE	RCM141034A
R90	1K 1/4W(U) TYPE	RCU141024Z
R91	10K 1/4W(U) TYPE	RCU141034Z
R92	1.5K 1/4W(U) TYPE	RCU141524Z
R93	680Ω 1/4W(M) TYPE	RCM146814B
R94	1.2K 1/4W(U) TYPE	RCU141224Z
R95	8.2K 1/4W(U) TYPE	RCU148224Z
R96	22K 1/4W(M) TYPE	RCM142234B
R97	2.2K 1/4W(U) TYPE	RCU142224Z
R98	5.6K 1/4W(U) TYPE	RCU145624Z
R100	47K 1/4W(M) TYPE	RCM144734A
R101	1.5K 1/4W(U) TYPE	RCU141524Z
R102	220Ω 1/4W(U) TYPE	RCU142214Z
R103	100Ω 1/4W(U) TYPE	RCU141014Z
R104	100Ω 1/4W(M) TYPE	RCM141014A
R105	1M 1/4W(U) TYPE	RCU141054Z

RCI-2970

8.0 MAIN BOARD (Con't)

8.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
R106	6.8K 1/4W(U) TYPE	RCU146824Z	R169	12K 1/4W(U) TYPE	RCU141234Z
R107	100K 1/4W(U) TYPE	RCU141044Z	R170	10K 1/4W(U) TYPE	RCU141034Z
R108	68K 1/4W(U) TYPE	RCU146834Z	R171	1K 1/4W(U) TYPE	RCU141024Z
R109	100K 1/4W(U) TYPE	RCU141044Z	R172	1K 1/4W(U) TYPE	RCU141024Z
R110	1.5M 1/4W(U) TYPE	RCU141554Z	R173	470Ω 1/4W(U) TYPE	RCU144714Z
R111	68K 1/4W(U) TYPE	RCU146834Z	R174	3.3K 1/4W(M) TYPE	RCM143324A
R112	22K 1/4W(M) TYPE	RCM142234A	R175	1.5K 1/4W(U) TYPE	RCU141524Z
R113	3.3K 1/4W(U) TYPE	RCU143324Z	R176	1K 1/4W(U) TYPE	RCU141024Z
R114	680Ω 1/4W(M) TYPE	RCM146814A	R177	10K 1/4W(U) TYPE	RCU141034Z
R115	220K 1/4W(U) TYPE	RCU142244Z	R178	4.7K 1/4W(U) TYPE	RCU144724Z
R116	47K 1/4W(U) TYPE	RCU144734Z	R179	1.5K 1/4W(U) TYPE	RCU141554Z
R117	1K 1/4W(U) TYPE	RCU141024Z	R180	10K 1/4W(P) TYPE	RCP141034Z
R118	10K 1/4W(M) TYPE	RCM141034A	R181	10K 1/4W(U) TYPE	RCU141034Z
R119	10Ω 1/4W(U) TYPE	RCU144794Z	R182	4.7K 1/4W(U) TYPE	RCU144724Z
R120	1K 1/4W(U) TYPE	RCU141024Z	R183	4.7K 1/4W(U) TYPE	RCU144724Z
R121	27K 1/4W(U) TYPE	RCU142734Z	R184	2.2K 1/4W(U) TYPE	RCU142224Z
R122	1K 1/4W(U) TYPE	RCU141024Z	R185	100Ω 1/4W(U) TYPE	RCU141014Z
R123	10K 1/4W(U) TYPE	RCU141034Z	R186	3.3K 1/4W(M) TYPE	RCM143324A
R124	10K 1/4W(U) TYPE	RCU141034Z	R188	47K 1/4W(U) TYPE	RCU144734Z
R125	100K 1/4W(U) TYPE	RCU141044Z	R189	10K 1/4W(M) TYPE	RCM141034B
R126	10K 1/4W(U) TYPE	RCU141034Z	R190	10K 1/4W(U) TYPE	RCU141034Z
R127	1K 1/4W(U) TYPE	RCU141024Z	R191	220K 1/4W(U) TYPE	RCU142244Z
R128	220Ω 1/4(U) TYPE	RCU142214Z	R192	100K 1/4W(M)	RCM141044A
R129	10K 1/4W(U) TYPE	RCU141034Z	R193	10K 1/4W(U) TYPE	RCU141034Z
R130	10K 1/4W(U) TYPE	RCU141034Z	R194	22K 1/4W(U) TYPE	RCU142234Z
R131	10K 1/4W(U) TYPE	RCU141034Z	R195	47K 1/4W(M) TYPE	RCM144734A
R132	100Ω 1/4W(U) TYPE	RCU141014Z	R196	680Ω 1/4W(M) TYPE	RCM146814A
R133	10K 1/4W(U) TYPE	RCU141034Z	R197	100Ω 1/4W(U) TYPE	RCU141014Z
R134	10K 1/4W(U) TYPE	RCU141034Z	R198	1.8K 1/4W(U) TYPE	RCU141824Z
R135	220Ω 1/4W(U) TYPE	RCU142214Z	R199	47K 1/4W(U) TYPE	RCU144734Z
R136	56Ω 1/4W(U) TYPE	RCU145604Z	R200	22K 1/4W(U) TYPE	RCU142234Z
R137	560Ω 1/4W(U) TYPE	RCU145614Z	R201	10K 1/4W(U) TYPE	RCU141034Z
R138	150Ω 1/4W(U) TYPE	RCU141514Z	R202	56Ω 1/4W(M) TYPE	RCM145604A
R139	220K 1/4W(U) TYPE	RCU142244Z	R203	10K 1/4W(U) TYPE	RCU141034Z
R140	1.5K 1/4W(M) TYPE	RCM141524A	R204	560Ω 1/4W(U) TYPE	RCU145614Z
R141	100Ω 1/4W(U) TYPE	RCU141014Z	R205	3.3K 1/4W(U) TYPE	RCU143324Z
R142	1K 1/4W(U) TYPE	RCU141024Z	R206	100Ω 1/4W(U) TYPE	RCU141014Z
R143	10K 1/4W(U) TYPE	RCU141034Z	R207	22Ω 1/4W(M) TYPE	RCM142204A
R144	330Ω 1/4W(U) TYPE	RCU143314Z	R208	100Ω 1/4W(U) TYPE	RCU141014Z
R145	10K 1/4W(U) TYPE	RCU141034Z	R209	22Ω 1/4W (U) TYPE	RCU142204Z
R146	10K 1/4W(U) TYPE	RCU141034Z	R210	1K 1/4W(U) TYPE	RCU141024Z
R147	1K 1/4W(M) TYPE	RCM141024A	R211	4.7K 1/4W(U) TYPE	RCU144724Z
R148	270K 1/4W(M) TYPE	RCM142744A	R212	33K 1/4W(U) TYPE	RCU143334Z
R150	270K 1/4W(U) TYPE	RCU142744Z	R213	10K 1/4W(M) TYPE	RCM141034A
R151	4.7K 1/4W(U) TYPE	RCU144724Z	R214	10K 1/4W(U) TYPE	RCU141034Z
R152	4.7K 1/4W(M) TYPE	RCM144724A	R215	4.7K 1/4W(U) TYPE	RCU144724Z
R153	10K 1/4W(U) TYPE	RCU141034Z	R216	10K 1/4W(U) TYPE	RCU141034Z
R154	3.3K 1/4W(U) TYPE	RCU143324Z	R217	10K 1/4W(M) TYPE	RCM141034A
R155	220Ω 1/4W(M) TYPE	RCM142214A	R218	1K 1/4W(M) TYPE	RCM141024A
R156	100Ω 1/4W(U) TYPE	RCU141014Z	R219	22K 1/4W(U) TYPE	RCU142234Z
R157	1K 1/4W(P) TYPE	RCP141024Z	R220	1K 1/4W(U) TYPE	RCU141024Z
R159	10K 1/4W(U) TYPE	RCU141034Z	R221	10K 1/4W(U) TYPE	RCU141034Z
R160	330K 1/4W(U) TYPE	RCU143344Z	R222	4.7K 1/4W(M) TYPE	RCM144724B
R161	220Ω 1/4W(U) TYPE	RCU142214Z	R223	6.8K 1/4W(M) TYPE	RCM146824A
R162	100K 1/4W(U) TYPE	RCU141044Z	R224	56Ω 1/4W(U) TYPE	RCU145604Z
R163	470K 1/4W(U) TYPE	RCU144744Z	R225	1K 1/4W(M) TYPE	RCM141024A
R164	15K 1/4W(U) TYPE	RCU141534Z	R226	10K 1/4W(M) TYPE	RCM141034A
R166	10K 1/4W(U) TYPE	RCU141034Z	R227	22K 1/4W(U) TYPE	RCU142234Z
R167	100K 1/4W(U) TYPE	RCU141044Z	R228	4.7K 1/4W(U) TYPE	RCU144724Z
R168	47K 1/4W(U) TYPE	RCU144734Z	R229	220K 1/4W(U) TYPE	RCU142244Z

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
R230	1K 1/4W(U) TYPE	RCU141024Z	R295	10K 1/4W(U) TYPE	RCU141034Z
R231	470K 1/4W(U) TYPE	RCU144744Z	R296	10K 1/4W(U) TYPE	RCU141034Z
R232	4.7K 1/4W(P) TYPE	RCP144724Z	R297	10Ω 1/4W(U) TYPE	RCU141004Z
R233	100Ω 1/4W(U) TYPE	RCU141014Z	R298	1K 1/4W(U) TYPE	RCU141024Z
R234	10K 1/4W(P) TYPE	RCP141034Z	R299	NO NEED	OMITTED
R235	1K 1/4W(U) TYPE	RCU141024Z	R300	560Ω 1/4W(U) TYPE	RCU145614Z
R236	330Ω 1/4W(U) TYPE	RCU143314Z	R301	6.8K 1/4W(U) TYPE	RCU146824Z
R237	10K 1/4W(U) TYPE	RCU141034Z	R302	1K 1/4W(P) TYPE	RCP141024Z
R238	10K 1/4W(U) TYPE	RCU141034Z	R303	10K 1/4W(U) TYPE	RCU141034Z
R239	220Ω 1/4W(U) TYPE	RCU142214Z	R304	1Ω 1/4W(P) TYPE	RCP141094Z
R240	10K 1/4W(M) TYPE	RCM141034A	R305	220Ω 1/4W(M) TYPE	RCM142214A
R241	2.2K 1/4W(U) TYPE	RCU142224Z	R306	10K 1/4W(U) TYPE	RCU141034Z
R242	100Ω 1/4W(M) TYPE	RCM141014A	R307	1K 1/4W(U) TYPE	RCU141024Z
R243	47K 1/4W(U) TYPE	RCU144734Z	R308	100Ω 1/4W(U) TYPE	RCU141014Z
R244	22K 1/4W(U) TYPE	RCU142234Z	R309	33K 1/4W(U) TYPE	RCU143334Z
R245	47K 1/4W(U) TYPE	RCU144734Z	R310	270K 1/4W(U) TYPE	RCU143344Z
R246	1.5K 1/4W(U) TYPE	RCU141524Z	R311	1K 1/4W(M) TYPE	RCM141024A
R247	4.7K 1/4W(U) TYPE	RCU144724Z	R312	1K 1/4W(U) TYPE	RCU141024Z
R248	1K 1/4W(U) TYPE	RCU141024Z	R313	1K 1/4W(U) TYPE	RCU141024Z
R249	NO NEED	OMITTED	R314	10K 1/4W(U) TYPE	RCU141034Z
R250	NO NEED	OMITTED	R315	22K 1/4W(U) TYPE	RCU142234Z
R251	10K 1/4W(P) TYPE	RCP121034Z	R317	1K 1/4W(U) TYPE	RCU141024Z
R252	1K 1/4W(M) TYPE	RCM141024A	R318	100Ω 1/4W(M) TYPE	RCM141014A
R253	NO NEED	OMITTED	R319	1K 1/4W(U) TYPE	RCU141024Z
R254	NO NEED	OMITTED	R320	100Ω 1/4W(U) TYPE	RCU141014Z
R255	NO NEED	OMITTED	R321	10K 1/4W(U) TYPE	RCU141034Z
R256	15Ω 1/4W(U) TYPE	RCU141504Z	R322	100K 1/4W(M) TYPE	RCM141044A
R257	150Ω 1/4W(P) TYPE	RCP121514Z	R323	33K 1/4W(U) TYPE	RCU143334Z
R258	2.2Ω 1/4W(P) TYPE	RCP142294Z	R234	4.7K 1/4W(M) TYPE	RCM144724A
R259	150Ω 1/4W(U) TYPE	RCU141514Z	R325	10K 1/4W(U) TYPE	RCU141034Z
R260	4.7Ω 1/4W(U) TYPE	RCU144794Z	R326	1K 1/4W(M) TYPE	RCM141024A
R261	1.5K 1/4W(U) TYPE	RCU141524Z	R327	10K 1/4W(U) TYPE	RCU141034Z
R262	330Ω 1/4W(U) TYPE	RCU143314Z	R330	1K 1/4W(U) TYPE	RCU141024Z
R264	47Ω 1/4W(U) TYPE	RCU144704Z	R331	10K 1/4W(M) TYPE	RCM141034A
R265	330Ω 1/4W(U) TYPE	RCU143314Z	R332	1K 1/4W(U) TYPE	RCU141024Z
R266	1.5K 1/4W(U) TYPE	RCU141524Z	R333	100Ω 1/4W(M) TYPE	RCM141014A
R268	1K 1/4W(U) TYPE	RCU141024Z	R334	100Ω 1/4W(M) TYPE	RCM141014B
R269	100K 1/4W(U) TYPE	RCU141044Z	R335	22K 1/4W(U) TYPE	RCU142234Z
R270	100K 1/4W(U) TYPE	RCU141044Z	R336	10K 1/4W(M) TYPE	RCM141034A
R272	100K 1/4W(U) TYPE	RCU141044Z			
R273	100Ω 1/4W(U) TYPE	RCU141014Z		CERAMIC CAPACITORS	
R274	10K 1/4W(U) TYPE	RCU141034Z	C1	5pF 50WV J CH	CC0501004A
R276	150Ω 1/4W(U) TYPE	RCU141514Z	C2	.01uF 50EV Z SL	CC0501037L
R277	2.2K 1/4W(U) TYPE	RCU142224Z	C3	.01uF 50EV Z SL	CC0501037L
R278	10K 1/4W(U) TYPE	RCU141034Z	C4	100pF 50WV K SL	CC0501015L
R279	100Ω 1/4W(M) TYPE	RCM141014A	C5	5pF 50WV C CH	CC0500501A
R280	4.7K 1/4W(M) TYPE	RCM144724A	C6	0.1uF 50EV Z SL	CC0501037L
R281	4.7K 1/4W(U) TYPE	RCU144724Z	C7	.047uF 50WV Z SL	CC0501027L
R282	4.7K 1/4W(P) TYPE	RCP144724Z	C8	.001pF 50WV Z SL	CC0501027L
R283	10K 1/4W(M) TYPE	RCM141034A	C9	.01uF 50EV Z SL	CC0501037L
R284	1K 1/4W(U) TYPE	RCU141024Z	C11	82pF 50WV J SL	CC0508204L
R285	470Ω 1/4W(U) TYPE	RCU144714Z	C12	.01uF 50EV Z SL	CC0501037L
R286	15Ω 1/4W(U) TYPE	RCU141504Z	C14	330pF 50WV K SL	CC0503315L
R287	3.3K 1/4W(U) TYPE	RCU143324Z	C17	330pF 50WV K SL	CC0503315L
R289	470Ω 1/4W(U) TYPE	RCU144714Z	C18	.01uF 50EV Z SL	CC0501037L
R290	47K 1/4W(U) TYPE	RCU144734Z	C19	.047uF 50WV Z SL	CC0504737L
R291	4.7K 1/4W(U) TYPE	RCU144724Z	C20	5pF 50WV C SL	CC0500501L
R292	4.7K 1/4W(M) TYPE	RCM144724B	C21	.01uF 50EV Z SL	CC0501037L
R293	10K 1/4W(U) TYPE	RCU141034Z	C22	.1uF 50WV Z SL	CC0501047L
R294	4.7K 1/4W(U) TYPE	RCU144724Z			

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
C23	.1uF 50WV Z SL	CC0501047L	C110	.01uF 50EV Z SL	CC0501037L
C24	.01uF 50EV Z SL	CC0501037L	C113	.01uF 50EV Z SL	CC0501037L
C28	.047uF 50WV Z SL	CC0504737L	C114	270pF 50WV K SL	CC0502715L
C29	68pF 50WV J SL	CC0506804L	C115	270pF 50WV K SL	CC0502715L
C30	560pF 50WV K SL	CC0505615L	C117	.047uF 50WV Z SL	CC0504737L
C31	15pF 50WV J CH	CC0501504A	C118	.01uF 50EV Z SL	CC0501037L
C34	.01uF 50EV Z SL	CC0501037L	C119	5pF 50WV J CH	CC0501004A
C35	100pF 50WV K SL	CC0501015L	C120	.01uF 50EV Z SL	CC0501037L
C37	270pF 50WV K SL	CC0502715L	C121	33pF 50WV J SL	CC0503304L
C38	.01uF 50EV Z SL	CC0501037L	C122	33pF 50WV J SL	CC0503304L
C41	.001pF 50WV Z SL	CC0501027L	C123	.01uF 50EV Z SL	CC0501037L
C42	.1uF 50WV Z SL	CC0501047L	C124	.01uF 50EV Z SL	CC0501037L
C43	1pF 50WV J SL	CC0500101A	C125	.001pF 50WV Z SL	CC0501027L
C45	.001pF 50WV Z SL	CC0501027L	C126	.01uF 50EV Z SL	CC0501037L
C48	.1uF 50WV Z SL	CC0501047L	C127	.01uF 50EV Z SL	CC0501037L
C51	.001pF 50WV K SL	CC0502215L	C129	.01uF 5EV Z SL	CC0501037L
C52	220pF 50WV K SL	CC0502215L	C130	10pF 50WV J SL	CC0501004L
C53	12pF 50WV J CH	CC0501204A	C131	.1uF 50WV Z SL	CC0501047L
C54	.047uF 50WV Z SL	CC0504737L	C132	.01uF 50EV Z SL	CC0501037L
C55	68pF 50WV J CH	CC0506804A	C133	47pF 50WV J UJ	CC0504704G
C56	.01uF 50EV Z SL	CC0501037L	C134	100pF 50WV L UK	CC0501015G
C59	.047uF 50WV Z SL	CC0504737L	C135	.001pF 50WV Z SL	CC0501027L
C60	.01uF 50EV Z SL	CC0501037L	C136	.1uF 50WV Z SL	CC0501047L
C61	5pF 50WV J CH	CC0501004A	C139	.001pF 50WV Z SL	CC0501027L
C63	.1uF 50WV Z SK	CC0501047L	C142	.001pF 50WV Z SL	CC0501027L
C65	56pF 50WV J CH	CC0503304A	C145	.001pF 50WV Z SL	CC0501027L
C66	1pF 50WV C CH	CC0500101A	C148	.1uF 50WV Z SL	CC0501047L
C67	39pF 50WV J CH	CC0503904A	C149	.001pF 50WV Z SL	CC0501027L
C68	5pF 50WV C CH	CC0500501A	C150	.47uF 50WV Z SL	CC0504727L
C69	.01uF 50EV Z SL	CC0501037L	C151	.47uF 50WV Z SL	CC0504727L
C71	.01uF 50EV Z SL	CC0501037L	C152	.01uF 50EV Z SL	CC0501037L
C72	3pF 50WV CH	CC0500301A	C153	.001pF 50WV Z SL	CC0501027L
C73	3pF 50WV C CH	CC0500301A	C154	100pF 50WV K SL	CC0501015L
C74	.01uF 50EV Z SL	CC0501037L	C158	150pF 50WV K SL	CC0501515L
C75	27pF 50WV J SL	CC0502704L	C159	.001pF 50WV Z SL	CC0501027L
C76	.1uF 50WV Z SL	CC0501047L	C162	.001pF 5WV Z SL	CC0501027L
C77	5pF 50WV C SL	CC0500501L	C163	47pF 50WV J SL	CC0504704L
C78	.01uF 50EV Z SL	CC0501037L	C164	560pF 50WV K SL	CC0505615L
C79	.01uF 50EV Z SL	CC0501037L	C165	390pF 50WV K SL	CC0503915L
C80	.047uF 50WV Z SL	CC0504737L	C166	33pF 50WV J SL	CC0503304L
C82	47pF 50WV J SL	CC0504704L	C167	150pF 50WV K SL	CC0501515L
C83	.01uF 50EV Z SL	CC0501037L	C169	33pF 50WV J SL	CC0503304L
C84	.1uF 50WV Z SL	CC0501047L	C172	33pF 50WV J SL	CC0503304L
C85	.1uF 50WV Z SL	CC0501047L	C173	47pF 50WV J CH	CC0504704A
C86	.1uF 50WV Z SL	CC0501047L	C174	100jpF 50WV K SL	CC0501015L
C87	220pF 50WV K SL	CC0502215L	C176	33pF 50WV J SL	CC0503304L
C89	5pF 50WV C SL	CC0500501L	C177	.01uF 50EV Z SL	CC0501037L
C90	5pF 50WV C CH	CC0500501A	C178	10pF 50WV J SL	CC0501004L
C91	15pF 50WV J SL	CC0501504L	C179	33pF 50WV J SL	CC0503304L
C92	1uF 50WV Z SL	CC0501047L	C180	33pF 50WV J SL	CC0503304L
C93	1uF 50WV Z SL	CC0501047L	C181	100pF 50WV K SL	CC0501015L
C94	.01uF 50EV Z SL	CC0501037L	C182	100pF 50WV K SL	CC0501015L
C97	.01uF 50EV Z SL	CC0501037L	C183	100pF 50WV K SL	CC0501015L
C98	100pF 50WV K SL	CC0501015L	C184	82pF 50WV J UJ	CC0508204G
C100	.01uF 50EV Z SL	CC0501037L	C187	.001pF 50WV Z SL	CC0501027L
C101	.001pF 50WV Z SL	CC0501027L	C188	100pF 50WV K SL	CC0501015L
C104	.047uF 50WV Z SL	CC0504737L	C189	33pF 50WV J SL	CC0503304L
C105	5pF 50WV J CH	CC0501004A	C190	22pF 50WV J SL	CC0502204L
C107	.001pF 50WV Z SL	CC0501027L	C191	.001pF 50WV Z SL	CC0501027L
C108	12pF 50WV J SL	CC0501204L	C192	10pF 50WV J SL	CC0501004L

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
C193	100pF 50WV K SL	CC0501015L	C275	270pF 50WV K UJ	CC0502715G
C194	100pF 50WV K SL	CC0501015L	C276	.047uF 50WV Z SL	CC0504727L
C195	33pF 50WV J SL	CC0503304L	C277	5pF 50WV J CH	CC0501004A
C197	.01uF 50EV Z SL	CC0501037L	C278	33pF 50WV J CH	CC0503304A
C198	33pF 50WVG J SL	CC0503304L	C279	180pF 50WV K UJ	CC0501815G
C199	22pF 50WV J SL	CC0502204L	C280	12pF 50WV J CH	CC0501204A
C200	.001pF 50WV Z SL	CC0501027L	C281	.1uF 50WV Z SL	CC0501047L
C202	.1uF 50WV Z SL	CC0501047L	C284	100pF 50WV J CH	CC0501015A
C206	.01uF 50EV Z SL	CC0501037L	C286	.01uF 50EV Z SL	CC0501037L
C208	.01uF 50EV Z SL	CC0501037L	C287	.01uF 50EV Z SL	CC0501037L
C209	.01uF 50EV Z SL	CC0501037L	C289	.001pF 50WV Z SL	CC0501027L
C212	.001pF 50WV Z SL	CC0501027L	C290	NO NEED	OMITTED
C214	.1uF 50WV Z SL	CC0501047L	C291	.01uF 50EV Z SL	CC0501037L
C215	27pF 50WV J CH	CC0502704A	C293	12pF 50WV J CH	CC0501204A
C218	.1uF 50WV Z SL	CC0501047L	C294	.47uF 50WV Z SL	CC0504737L
C220	.01uF 50EV Z SL	CC0501037L	C295	.1uF 50WV Z SL	CC0501047L
C221	.047uF 50WV Z SL	CC0504727L	C296	.01uF 50EV Z SL	CC0501037L
C222	.1uF 50WV Z SL	CC0501047L	C297	.01uF 50EV Z SL	CC0501037L
C223	.1uF 50WV Z SL	CC0501047L	C298	.1uF 50WV Z SL	CC0501047L
C226	.047uF 50WV Z SL	CC0504727L	C299	.1uF 50WV Z SL	CC0501047L
C228	.01uF 50EV Z SL	CC0501037L	C300	.047uF 50WV Z SL	CC0504737L
C229	150pF 60WV K SL	CC0501515L	C302	.001pF 50WV Z SL	CC0501027L
C230	270pF 50WV K SL	CC0502715L	C303	.047uF 50WV Z S;L	CC0504737L
C232	.01uF 50EV Z SL	CC0501037L	C305	.01uF 50EV Z SL	CC0501037L
C233	.001pF 50WV Z SL	CC0501027L	C306	.001pF 50WV Z SL	CC0501027L
C236	.001pF 50WV Z SL	CC0501027L	C307	.01uF 50EV Z SL	CC0501037L
C237	5pF 50WV C CH	CC0500501A	C308	.01uF 50EV Z SL	CC0501037L
C238	150pF 50WV K RH	CC0501515D	C309	.001pF 50WV Z SL	CC0501027L
C239	56pF 50WV J RH	CC0505604D	C310	.1uF 50WV Z SL	CC0501047L
C240	.1uF 50WV Z SL	CC0501047L	C311	.01uF 50EV Z SL	CC0501037L
C242	.01uF 50EV Z SL	CC0501037L	C312	.047uF 50WV Z SL	CC0504737L
C243	100pF 50WV K UJ	CC0501015G	C313	.1uF 50WV Z SL	CC0501047L
C244	.047uF 50WV Z SL	CC0504737L	C314	.1uF 50WV Z SL	CC0501047L
C245	.1juF 50WV Z SL	CC0501047L	C316	.001pF 50WV Z SL	CC0501027L
C246	27pF 50WV K CH	CC0502704A	C317	.047uF 50WV Z SL	CC0504737L
C247	150pF 50WV K UJ	CC0501515G	C319	10pF 50WV J SL	CC0501004L
C248	3pF 50WV C CH	CC0500301A	C320	.01uF 50EV Z SL	CC0501037L
C249	5pF 50WV C CH	CC0500501A	C321	.01uF 50EV Z SL	CC0501037L
C250	5pF 50WV C CH	CC0500501A	C323	.001pF 50WV Z SL	CC0501027L
C251	270pF 50WV K CH	CC0502715A	C324	.1uF 50WV Z SL	CC0501047L
C252	3pF 50WV C CH	CC0500301A	C325	.01uF 50EV Z SL	CC0501037L
C254	270pF 50WV K UJ	CC0502715L	C326	.1uF 50WV Z SL	CC0501047L
C255	150pF 50WV K UJ	CC0501515G	C327	.01uF 50EV Z SL	CC0501037L
C256	.1uF 50WV Z SL	CC0501047L	C329	.01uF 50EV Z SL	CC0501037L
C257	.1uF 50WV Z SL	CC0501047L	C330	.001pF 50WV Z SL	CC0501027L
C258	560pF 50WV K UJ	CC0505615G	C331	.1uF 50WV Z SL	CC0501047L
C259	.01uF 50EV Z SL	CC0501037L	C332	.1uF 50WV Z SL	CC0501047L
C260	NO NEED	OMITTED	C333	.1uF 50WV Z SL	CC0501047L
C261	680pF 50WV P UJ	CC0506815G	C334	.1uF 50WV Z SL	CC0501047L
C262	NO NEED	OMITTED	C335	.1uF 50WV Z SL	CC0501047L
C263	10pF 50WV J SL	CC0501004L	C336	.1uF 50WV Z SL	CC0501047L
C264	.1uF 50WV Z SL	CC0501047L	C337	.1uF 50WV Z SL	CC0501047L
C267	.1uF 50WV Z SL	CC0501047L	C338	.01uF 50EV Z SL	CC0501037L
C268	.01uF 50EV Z SL	CC0501037L	C339	100pF 50WV K SL	CC0501015L
C269	100pF 50WV K UK	CC0501015G	C340	.01uF 50EV Z SL	CC0501037L
C270	560pF 50WV K UJ	CC0505615G	C341	100pF 50WV K SL	CC0501015L
C271	.1uF 50WV Z SL	CC0501047L	C343	.001pF 50WV Z SL	CC0501027L
C272	100pF 50WV K SL	CC0501015L	C348	3pF 50WV C CH	CC0500301A
C273	.001pF 50WV Z SLK	CC0501037L	C349	.01uF 50EV Z SL	CC0501037L
C274	.01uF 50EV Z SL	CC0501037L			

8.0 MAIN BOARD (Con't)

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
MYLAR CAPACITORS			C170	10uF 25WV Z	CE0251067Z
C15	.0022uF 50M K	CM0502225Z	C196	47uF 10WV Z	CE0104767Z
C33	.001uF 50WV L	CM0501025Z	C201	47uF 10WV Z	CE0104767Z
C47	.022uF 50M K	CM0502235Z	C205	10uF 25WV Z	CE0251067Z
C186	.001uF 50WV L	CM0501025Z	C207	220uF 16WV Z	CE0162277Z
C234	.047uF 50M K	CM0504735Z	C213	330mF 16WV	CE0163377Z
C235	.001uF 50WV K	CM0501025Z	C216	22uF 10WV Z	CE0102267Z
TANTALUM CAPACITORS			C219	4.7uF 50WV Z	CE0504757Z
C10	4.7uF 16WV M	CT0164756Z	C223	47uF 10WV Z	CE0104767Z
C106	.22uF 16WV M	CT0162246Z	C224	1uF 50WV Z	CE0501057Z
C141	.22uF 16WV M	CT0162246Z	C231	100uF 10WV Z	CE0101077Z
C155	.22uF 16WV M	CT0162246Z	C265	2.2uF 50WV Z	CE0502257Z
C156	4.7uF 16WV M	CT0164756Z	C285	1uF 50WV Z	CE0501057Z
C160	.22uF 16WV M	CT0162246Z	C288	10uF 25WV Z	CE0251067Z
C161	2.2uF 16WV M	CT0162256Z	C292	10uF 25WV Z	CE0251067Z
C171	10uF 16WV M	CT0161066Z	C301	100uF 10WV Z	CE0101077Z
C175	10uF 16WV M	CT0161066Z	C304	220uF 16WV Z	CE0162287Z
CHIP CAPACITORS			C322	220uF 16WV Z	CE0162287Z
C266	.22uF 50WV	CJ0502246Z	C347	1uF 50WV Z	CE0501057Z
C328	.22uF 50WV	CH0502246Z	I.C.		
C345	.22uF 50WV	CH0502246Z	IC1	NJM324D	ENJR00324D
ELECTROLYTIC CAPACITORS			IC2	UPC1028H	ENNE01028H
C13	.47uF 50WV Z	CE0504747Z	IC3	AN612	ENMA00612Z
C16	2.2uF 50WV Z	CE0502257Z	IC4	NJM7805	ENJR07805Z
C25	10uF 25WV Z	CE0251067Z	IC5	TC5081AP	ENTA05081A
C27	10juF 25WV Z	CE0251067Z	IC6	NJM7808A	ENJR07808A
C32	47uF 10WV Z	CE0104767Z	IC7	TC5081AP	ENTA05081A
C36	10uF 25WV Z	CE0251067Z	IC8	TA7310P	ENTA07310P
C39	47uF 10WV Z	CE0104767Z	IC9	TA7310P	ENTA07310P
C44	47uF 10WV Z	CE0104767Z	IC10	TA7310P	ENTA07310P
C46	47uF 10WV Z	CE0104767Z	IC11	TC5082P	ENTA05082P
C49	47uF 10WV Z	CE0104767Z	IC12	HD10551	ENHI10551Z
C46	47uF 10WV Z	CE0104767Z	IC13	HD10551	ENHI10551Z
C50	10uF 25WV Z	CE0251067Z	IC14	TA7310P	ENTA07310P
C57	10uF 25WV Z	CE0251067Z	IC15	NJM7808A	ENJR07808A
C58	1000uF 10WV Z	CE0101087Z	IC16	JRC4558D	ENJR04558D
C70	10uF 25WV Z	CE0251067Z	IC17	CX7925B	ENS007925B
C81	2.2uF 50WV Z	CE0502257Z	IC19	TA7222AP	ENTA07222A
C88	1uF 50WV Z	CE0501057Z	IC20	S042P	ENSM00042P
C95	22uF 10WV Z	CE0102267Z	IC21	TC4069UBP	ENTA04069U
C96	220uF 16WV Z	CE0162277Z	DIODES		
C99	220uF 16WV Z	CE0162277Z	D1	1N60P	ED1N00060P
C102	1uF 16WV NP	CE0161056N	D2	1N60P	ED1N00060P
C103	220uF 10WV Z	CE0102277Z	D3	1N4148	ED1N04148Z
C109	4.7uF 50WV Z	CE0504757Z	D4	1N4148	ED1N04148Z
C111	100uF 10WV Z	CE0101077Z	D5	1N4148	ED1N04148Z
C116	220uF 16WV Z	CE0162277Z	D6	1N4148	ED1N04148Z
C128	47uF 10WV Z	CE0104767Z	D7	1N4148	ED1N04148Z
C137	10uF 25WV Z	CE0251067Z	D8	1N4148	ED1N04148Z
C138	1000uF 10WV Z	CE0101087Z	D9	1N4148	ED1N04148Z
C140	2.2uF 50WV Z	CE0502257Z	D10	1N4148	ED1N04148Z
C147	10uF 25WV Z	CE0251067Z	D11	1N60P	ED1N00060P
C157	220uF 16WV Z	CE0162277Z	D12	1N60P	ED1N00060P
C168	10uF 25WV Z	CE0251067Z	D13	1N4148	ED1N04148Z
			D14	1N4148	ED1N04148Z
			D15	1N4148	ED1N04148Z

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8.0 MAIN BOARD (Con't)

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REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
D16	1N4148	ED1N04148Z	D76	1N4148	ED1N04148Z
D17	1N4148	ED1N04148Z	D77	1N4148	ED1N04148Z
D18	MC301	EDMC00301Z	D78	1N4148	ED1N04148Z
D19	FC54M	EDEC00054M	D79	1N4148	ED1N04148Z
D20	MC301	EDMC00301Z	D80	1N4148	ED1N04148Z
D21	1N4148	ED1N04148Z	D81	1N4148	ED1N04148Z
D22	1N4148	ED1N04148Z	D82	1N4148	ED1N04148Z
D23	FC54M	EDEC00054M	D83	1N4148	ED1N04148Z
D24	FC54M	EDEC00054M	D84	1N4148	ED1N04148Z
D25	MC301	EDMC00301Z	D85	1N4148	ED1N04148Z
D26	1N4148	ED1N04148Z	D86	ZENER .5W 5.6V	EDZD05569Z
D27	1N4148	ED1N04148Z	D87	FC54M	EDEC00054M
D28	1N4148	ED1N04148Z	C88	1N4148	ED1N04148Z
D29	1N4148	ED1N04148Z	D89	1N4148	ED1N04148Z
D30	1N4148	ED1N04148Z	D90	NO NEED	OMITTED
D31	1N4148	ED1N04148Z	D91	MV1Y	EDMV00001Y
D32	1N4148	ED1N04148Z	D92	MV1Y	EDMV00001Y
D33	1N4148	ED1N04148Z	D93	1N4148	ED1N04148Z
D34	1N60P	ED1N00060P	D94	FC54M	EDEC00054M
D35	1N60P	ED1N00060P	D95	FC54M	EDEC00054M
D36	1N4148	ED1N04148Z	D96	FC54M	EDEC00054M
D37	1N4148	ED1N04148Z	D97	1N4148	ED1N04148Z
D38	1N4148	ED1N04148Z	D98	1N4148	ED1N04148Z
D39	1N4148	ED1N04148Z	D99	1N4148	ED1N04148Z
D40	1N4148	ED1N04148Z	D100	1N4148	ED1N04148Z
D41	1N4148	ED1N04148Z	D101	1N4148	ED1N04148Z
D42	KB362	EDKB00362Z	D102	1N4148	ED1N04148Z
D43	FC54M	EDEC00054M	D103	1N4148	ED1N04148Z
D44	1N4148	ED1N04148Z	D104	1N4148	ED1N04148Z
D45	1N4148	ED1N04148Z	D105	1N4148	ED1N04148Z
D46	1N4148	ED1N04148Z	D106	1N4148	ED1N04148Z
D47	1N4148	ED1N04148Z	D107	1N4148	ED1N04148Z
D48	1N4148	ED1N04148Z	D108	1N4148	ED1N04148Z
D49	1N4148	ED1N04148Z	D109	1N4148	ED1N04148Z
D50	1N4148	ED1N04148Z	D110	1N4148	ED1N04148Z
D51	KB262	EDKB00262Z	D111	FC54M	EDEC00054M
D52	1N4148	ED1N04148Z	D112	1N4148	ED1N04148Z
D53	1N4148	ED1N04148Z	D113	1N4148	ED1N04148Z
D54	1N4148	ED1N04148Z	D116	MC301	EDMC00301Z
D55	1N4148	ED1N04148Z			
D56	1N4148	ED1N04148Z			
D57	1N4148	ED1N04148Z			
D58	1N4148	ED1N04148Z			
D59	1N4148	ED1N04148Z			
D60	1N4148	ED1N04148Z			
D61	1N4148	ED1N04148Z			
D62	1N4148	ED1N04148Z			
D63	1N4148	ED1N04148Z			
D64	1N4148	ED1N04148Z			
D65	1N4148	ED1N04148Z			
D66	SVC251	EDSV00251Z			
D67	SVC251	EDSV00251Z			
D68	1N4148	ED1N04148Z			
D69	1N4148	ED1N04148Z			
D70	1N4148	ED1N04148Z			
D71	1N4148	ED1N04148Z			
D72	1N4148	ED1N04148Z			
D73	ZENER .5W 2.4V	EDZD05249Z			
D74	ZENER .5W 5.6V	EDZD05269Z			
D75	KB362	EDKB00362Z			
				TRANSISTORS	
			Q1	2SC1675K	T2SC01675K
			Q2	2SC1675K	T2SC01675K
			Q3	2SC945P	TRSC00945P
			Q4	2SC945P	TRSC00945P
			Q5	2SC945P	TRSC00945P
			Q6	2SC945P	TRSC00945P
			Q7	2SC945P	TRSC00945P
			Q8	2SC1674K	T2SC01674K
			Q9	2SC1675K	T2SC01675K
			Q10	2SC1675K	T2SC01675K
			Q11	2SC1675K	T2SC01675K
			Q12	2SA733P	T2SA00733P
			Q13	2SC945P	TRSC00945P
			Q14	2SC945P	TRSC00945P
			Q15	2SC945P	TRSC00945P
			Q16	2SC945P	TRSC00945P
			Q17	2SC945P	TRSC00945P
			Q18	2SC1674K	T2SC01674K

8.0 MAIN BOARD (Con't)

8.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
Q19	J310	EZZJ00310Z	L29	BEAD F PH=12.5mm	ECBAD18550
Q20	2SC1674K	T2SC01674K	L19	BEAD F PH=12.5mm	ECBAD18550
Q21	2SC1675K	T2SC01675K	L22	CHOKE 22uH (P TYPE)	ECCHK16070
Q22	2SC1675K	T2SC01675K	L26	CHOKE 470uH (P TYPE)	ECCHK16096
Q23	2SC1906	T2SC01906Z	L30	CHOKE 22uH (P TYPE)	ECCHK16070
Q24	2SC945P	TRSC00945P	L33	CHOKE .82uH	ECCHK16082
Q25	2SA733P	T2SA00733P	L34	RF .23uH	ECRFZ10001
Q26	2SC945P	TRSC00945P	L36	NO NEED	OMITTED
Q27	2SC1675K	T2SC01675K	L37	BEAD D SU-B-172D	ECBAD18504
Q28	2SC1675K	T2SC01675K	L38	RF .23uF	ECRFZ10091
Q29	2SC1675K	T2SC01675K	L39	BEAD F SU-B-172F	ECBAD18506
Q30	2SC945P	TRSC00945P	L40	BEAD D SU-B-175D	ECBAD18504
Q31	2SC945P	TRSC00945P	L41	TOROIDAL SU-TR-398	ECRFZ10048
Q32	2SC945P	TRSC00945P	L42	BEAD F SU-B-172F	ECBAD18506
Q33	2SC945P	TRSC00945P	L44	BEAD F PH=12.5mm	ECBAD18550
Q34	2SC945P	TRSC00945P	L45	BEAD F PH=12.5mm	ECBAD18550
Q35	2SA733P	T2SA00733P	L49	CHOKE (BIG ROUND)	ECCHK16151
Q36	2SC945P	TRSC00945P	L50	CHOKE .82uF	ECCHK16082
Q37	2SA1282	T2SA01282F	L51	CHOKE 10CH (P TYPE)	ECCHK16088
Q38	2SA1282	T2SA01282F	L52	CHOKE 10CH (P TYPE)	ECCHK16088
Q39	2SC945P	TRSC00945P	L53	CHOKE 470uH (P TYPE)	ECCHK16096
Q40	2SA1282	T2SA01282F	L59	BEAD F SU-B-172F	ECBAD18506
Q41	2SC945P	TRSC00945P	L60	BEAD F SU-B-172F	ECBAD18506
Q42	2SC945P	TRSC00945P	L61	BEAD F SU-B-172F	ECBAD18506
Q43	2SC1675K	T2SC01675K	L62	BEAD E PH=10mm	ECBAD18526
Q44	2SC1675K	T2SC01675K	L63	CHOKE 470uH (P TYPE)	ECCHK16096
Q45	2SA733P	T2SA00733P	L65	BEAD F SU-B-172F	ECBAD18506
Q46	2SC2312	T2SC02312C	L131	SPRIN G .8x6.5x7.5t	ECSPG18075
Q47	2SC2312	T2SC02312C	L132	SPRING .8x6.5x7.5t	ECSPR18003
Q48	2SC2166C	T2SC02166C	L503	CHOKE .47uH (P TYPE)	ECCHK16000
Q49	2SC2314F	T2SC02314F	L504	CHOKE .47uH (P TYPE)	ECCHK16000
Q50	2SC1906	T2SC01906Z	T1	CHOKE EI-19 TF-083	ECCHK16004
Q51	2SB754Y	T2SB00754Y			
Q52	2SC945P	T2SC00945P			
Q53	2SA473/0	T2SA004730			
Q54	2SC945P	T2SC00945P			
Q55	2SC945P	T2SC00945P			
Q56	2SC945P	T2SC00945P			
Q57	2SC945P	T2SC00945P			
Q58	2SC945P	T2SC00945P			
	VARIABLE RESISTORS				
VR1	10K 3P, SEMI FIXED	RE10300078			
VR2	10K 3P, SEMI FIXED	RE10300078			
VR3	500K 3P, SEMI FIXED	RE50400080			
VR4	500K 3P, SEMI FIXED	RE50400080			
VR7	10K 3P, SEMI FIXED	RE10300078			
VR8	100K 3P, SEMI FIXED	RE10400079			
VR11	3K 3P, SEMI FIXED	RE30200076			
VR12	10K 3P, SEMI FIXED	RE10300078			
VR13	5K 3P, SEMI FIXED	RE50200077			
VR14	1K 3P, SEMI FIXED	RE10200072			
VR15	1K 3P, SEMI FIXED	RE10200072			
VR16	10K 3P, SEMI FIXED	RE10300078			
VR21	5K 3P, SEMI FIXED	RE50200077			
	COILS				
J52	CHOKE 470uH (P TYPE)	ECCHK16096			
				VARIABLE INDUCTORS	
			L1	IFT M199CC-P14097F	ECIFT12251
			L2	IFT 199CC-P1498N	ECIFT12252
			L3	IFT 7MC-7172ABN	ECIFT12002
			L4	IFT M199CC-P14097F	ECIFT12251
			L5	IFT 7MC-7172ABN	ECIFT12002
			L6	IFT 7MC-7172ABN	ECIFT12002
			L7	IFT 7MC-7174Y	ECIFT12003
			L8	IFT M19CNF-P1499N	ECIFT12253
			L9	IFT 19CN-P1549N	ECIFT12290
			L11	IFT 199CN-P1549N	ECIFT12990
			L12	IFT M199CC-P1501A	ECIFT12255
			L13	IFT 199CC-P1502N	ECIFT12256
			L14	IFT 199CC-P1502N	ECIFT12256
			L15	IFT 199CC-P1498N	ECIFT12252
			L16	IFT M199CC-P1503A	ECIFT12257
			L17	IFT 292CN-P11221Z	ECIFT12263
			L19	IFT6 M199CC-P1504N	ECIFT12258
			L21	IFT 292CN-P1121Z	ECIFT12263
			L23	IFT 199CC-P1498N	ECIFT12252
			L24	IFT 199CC-P1498N	ECIFT12252
			L25	IFT 199CC-P1498N	ECIFT12252
			L27	IFT 113CN-6344Z	ECIFT12016
			L28	IFT 113CN-6344Z	ECIFT12016
			L29	IFT 113CN-6344Z	ECIFT12016
			L43	IFT 292CN-P1117AQ	ECIFT12262

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8.0 MAIN BOARD (Con't)

8.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
L46	IFT 292CN-P1125R	ECIFT12265	J14	7x7mmx7	WX01070707
L47	IFT 292CN-P1125R	ECIFT12265	J16	7x5mmx7	WX01070705
L48	IFT M199CC-P1501A	ECIFT12255	J17	7x10mmx7	WX01070710
	RELAYS		J18	7x13mmx7	WX01070713
RL	9V	EX05N40802	J19	1x4mmx7	WX01070704
	TRIMMER CAPACITORS		J20	7x6mmx7	WX01070706
VC1	20P	CV050200AZ	J21	7x10mmx7	WX01070710
VC2	20P	CV050200AZ	J22	7x6mmx7	WX01070706
VC3	30P	CV050300AZ	J23	7x6mmx7	WX01070706
	CERAMIC FILTERS		J24	7x6mmx7	WX01070706
FL1	CFW455HT	EFCFW455HT	J25	7x6mmx7	WX01070706
FL2	SEF 10.7 MX	EFCFE107MX	J26	7x6mmx7	WX01070706
FL3	CRYSTAL, 10.695 MHz	EFX8106952	J27	7x10mmx7	WX01070710
X1	CRYSTAL, 10.240 MHz	EYCAB10240	J28	7x9mmx7	WX01070709
X2	CRYSTAL, 10.240 MHz	EYCAB10240	J29	7x4mmx7	WX01070704
X3	CRYSTAL, 10.6975 MHz	EYCAE10697	J30	7x5mmx7	WX01070705
	CONNECTORS		J31	7x7mmx7	WX01070707
J101	PCB CONN. SOCKET 2P L=17.8	EX07N48185	J32	7x6mmx7	WX01070706
J104	PCB CONNECTOR SOCKET 3P	EX07N41216	J33	7x10mmx7	WX01070710
J105	PCB CONNECTOR SOCKET 2P	EX07N41226	J34	7x10mmx7	WX01070710
J107	PCB CONNECTOR SOCKET 2P	EX07N41226	J36	7x9mmx7	WX01070709
J108	PCB CONNECTOR SOCKET 2P	EX07N41226	J38	7x3mmx7	WX01070703
J109	PCB CONNECTOR SOCKET 3P	EX07N41216	J39	7x27mmx7	WX01070727
J110	PCB CONNECTOR SOCKET 3P	EX07N41216	J40	7x10mmx7	WX01070710
J112	PCB CONNECTOR SOCKET 3P	EX07N41216	J41	7x5mmx7	WX01070705
J113	PCB CONNECTOR SOCKET 6P	EX07N41266	J42	7x10mmx7	WX01070710
J115	PCB CONNECTOR SOCKET 3P	EX07N41216	J43	7x9mmx7	WX01070709
J116	PCB CONNECTOR SOCKET 3P	EX07N41216	J44	7x10mmx7	WX01070710
J117	PCB CONNECTOR SOCKET 7P	EX07N41261	J45	7x10mmx7	WX01070710
J118	PCB CONNECTOR SOCKET 3P	EX07N41216	J46	7x13mmx7	WX01070713
J119	PCB CONNECTOR SOCKET 6P	EX07N41266	J47	7x5mmx7	WX01070705
J501	EARPHONE JACK	EX06N41045	J48	7x5mmx7	WX01070705
J502	EARPHONE JACK	EX06N41045	J49	7x10mmx7	WX01070710
J503	EARPHONE JACK	EX06N41045	J50	7x10mmx7	WX01070710
	JUMPER WIRES		J51	7x10mmx7	WX01070710
J1	7x5mmx7	WX01070705	J53	7x5mmx7	WX01070705
J2	7x13mmx7	WX01070713	J54	7x6mmx7	WX01070706
J3	7x13mmx7	WX01070713	J56	7x5mmx7	WX01070706
J5	7x10mmx7	WX01070710	J57	7x4mmx7	WX01070704
J6	7x10mmx7	WX01070710	J58	7x10mmx7	WX01070710
J7	7x10mmx7	WX01070710	J59	7x5mmx7	WX01070705
J8	7x6mmx7	WX01070706	J60	7x6mmx7	WX01070706
J9	7x10mmx7	WX01070710	J61	7x6mmx7	WX01070706
J10	7x10mmx7	WX01070710	J62	7x4mmx7	WX01070704
J12	7x9mmx7	WX01070709	J63	7x8mmx7	WX01070708
J13	7x5mmx7	WX01070705	J64	7x10mmx7	WX01070710
J14	7x7mmx7	WX01070707	J66	7x10mmx7	WX01070710
J16	7x5mmx7	WX01070705	J67	7x14mmx7	WX01070714
J17	7x10mmx7	WX01070710	J68	7x6mmx7	WX01070706
J18	7x13mmx7	WX01070713	J69	7x10mmx7	WX01070710
			J70	7x5mmx5	WX01070705
			J71	7x4mmx7	WX01070704
			J72	7x5mmx7	WX01070705
			J73	7x5mmx7	WX01070705
			J74	7x10mmx7	WX01070710
			J75	7x8mmx7	WX01070708
			J76	7x7mmx7	WX01070707
			J78	7x7mmx7	WX01070707
			J79	7x6mmx7	WX01070706
			J80	7x6mmx7	WX01070706

8.0 MAIN BOARD (Con't)

REF#	DESCRIPTION	PART#
J81	7x13mmx7	WX01070713
J82	7x15mmx7	WX01070715
J83	7x7mmx7	WX01070707
J84	7x14mmx7	WX01070714
J86	7x5mmx7	WX01070705
J114	7x3mmx7	WX01070706
J322	7x5mmx7	WX01070705
ANT	7x50mmx7	WX01070750

8.1 VSWR P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VSWR P.C.B.	EPT360040Z
	CARBON FIXED RESISTORS	
R401	100Ω ¼W(P) TYPE	RCP141014Z
R402	150Ω ¼W(P) TYPE	RCP141014Z
	CERAMIC CAPACITORS	
C405	.01uF 50WV Z SL	CC0501037L
C406	.01uF 50WV Z SL	CC0501037L
	DIODES	
D401	1N60P	ED1N00060P
D402	1N60P	ED1N00060P

8.2 RF/MIC & VOL/SQ P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VR P.C.B.	EPT295050Z
RF/MIC	VR 1KA-5KB	RV10203451
VOL/SQ	VR 50KB-50KA	RV50303453
	CERAMIC CAPACITORS	
C501	.001uF 50WV Z SL	CC0501027L
C505	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J501	PCB CONNECTOR SOCKET 2P	EX07N41226
J502	PCB CONNECTOR SOCKET 2P	EX07N41226
J503	PCB CONNECTOR SOCKET 3P	EX07N41216
J504	PCB CONNECTOR SOCKET 3P	EX07N41216
J505	PCB CONNECTOR SOCKET 2P	EX07N41226

8.3 RF/CAL P.C. BOARD

REF#	DESCRIPTION	PART#
-----	VR P.C.B.	EPT295060Z
RF/CAL	VR 1KB-20KB	RV10203456
	CERAMIC CAPACITORS	
C601	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J601	PCB CONNECTOR SOCKET 3P	EX07N41216
J602	PCB CONNECTOR SOCKET 3P	EX07N41216

8.4 MIC JACK P.C. BOARD

REF#	DESCRIPTION	PART#
-----	MIC JACK P.C.B.	EPT295070Z
	CERAMIC CAPACITORS	
C701	.001uF 50WV Z SL	CC0501027L
C702	.001uF 50WV Z SL	CC0501027L
C703	.001uF 50WV Z SL	CC0501027L
	CONNECTORS	
J701	PCB CONNECTOR SOCKET 3P	EX07N48244
J702	PCB CONNECTOR SOCKET 2P	EX07N48152
J703	PCB CONNECTOR SOCKET 2P	EX07N48152
-----	MIC JACK 6P	EX06N41111

7.5 BAND P.C. BOARD

REF#	DESCRIPTION	PART#
-----	BAND P.C.B.	EPT295090Z
-----	ROTARY SW, 6N	EWRT32053S
-----	PCB CONNECTOR SOCKET 3P	EX07N41216
-----	PCB CONNECTOR SOCKET 7P	EX07N41261
J403	JUMPER WIRE 1mmx6mmx7mm	WX01070706

8.6 CH/SW P.C. BOARD

REF#	DESCRIPTION	PART#
-----	CH SW P.C.B.	EPT295090A
-----	ROTARY SW, GPS-688	EWRT32051S
-----	PCB CONNECTOR SOCKET 3P	EX07N41216

8.7 CHASSIS PARTS

REF#	DESCRIPTION	PART#
SP501	SPEAKER 3W 8Ω 2"	ES200820MC
-----	FUSE 20A 16V	FUS-0020-000
-----	DC CORD w/FUSE SOCKET	WA9812300C
-----	DC SOCKET 6P	EX06N41163
-----	ANT JACK	EX06N41019
-----	MICROPHONE ASSEMBLY	EX04N40620
-----	WIRE CONN. HOUSING 2-4-2P	EX07N48398
-----	WIRE CONN. HOUSING 3-2-2P	EX07N48394
SP	WIRE CONN. HOUSING 2P	EX07N78041
J105	WIRE CONN. HOUSING 2-2P	EX07N48391
J108	WIRE CONN. HOUSING 2-2P	EX07N48391
J109	WIRE CONN. HOUSING 3-3P	EX07N48389
J112	WIRE CONN. HOUSING 3-3P	EX07N48389
J113	WIRE CONN. HOUSING 6P	EX07N48396
J115	WIRE CONN. HOUSING 3-3P	EX07N48389
J116	WIRE CONN. HOUSING 3-3P	EX07N48389
J117	WIRE CONN. HOUSING 7P	EX07N48387
J119	WIRE CONN. HOUSING 3-3P	EX07N48389
J501	WIRE CONN. HOUSING 2-2P	EX07N48391
J502	WIRE CONN. HOUSING 3-3P	EX07N48389
J503	WIRE CONN. HOUSING 3-3P	EX07N48389
J504	WIRE CONN. HOUSING 3-3P	EX07N48389
J508	WIRE CONN. HOUSING 2-2P	EX07N48391
J601	WIRE CONN. HOUSING 3-3P	EX07N48389
J602	WIRE CONN. HOUSING 3-3P	EX07N48389
J701	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397
J702	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397
J703	WIRE CONN. HOUSING 2-3-2-3P	EX07N48397

8.8 KEY P.C. BOARD

REF#	DESCRIPTION	PART#
-----	KEY P.C.B.	EPT295030Z
	CARON FIXED RESISTORS	
-----	1.5K ¹ / ₁₆ W(P) TYPE	RCP161524Z
	MISC.	
-----	TACT SW	EWPS33042X
-----	IC PIN	EX07N48414
-----	LED YELLOW	EX01N40081
-----	PCB CONN. SOCK. 6P L=21.8mm	EX07N48441

8.9 LCD P.C. BOARD

REF#	DESCRIPTION	PART#
-----	LCD P.C.B.	EPT2950217
	RESISTORS	
R710	39K .1W, CHIP	ROY013934Z
R711	470K .1W, CHIP	ROY014744Z
R712	680K .1W	ROY016844Z
	CAPACITORS	
-----	1uF 25WV Z Y5V , MONOLITHIC	CK2104AB7V
-----	.33uF 35WV M, TANTALUM	CTY353346Z
-----	1uF 16WV M, TANTALUM	CTY161056Z
C701	1uF 16WV M, TANTALUM	CTY161056Z
C702	0.33uF 35WV M, TANTALUM	CTY353346Z
C703	0.33uF 35WV M, TANTALUM	CTY353346Z
C704	0.33uF 35WV M, TANTALUM	CTY353346Z
C705	1uF 16WV M, TANTALUM	CTY161056Z
C707	0.01uF 50WV M, CERAMIC	CK1103AB6U
C710	0.01uF 50WV M, CERAMIC	CK1103AB6U
C711	0.01uF 50WV M, CERAMIC	CK1103AB6U
C712	0.01uF 50WV M, CERAMIC	CK1103AB6U
C713	0.01uF 50WV M, CERAMIC	CK1103AB6U
C716	0.01uF 50WV M, CERAMIC	CK1103AB6U
C717	0.01uF 50WV M, CERAMIC	CK1103AB6U
C720	0.01uF 50WV M, CERAMIC	CK1103AB6U
C721	0.01uF 50WV M, CERAMIC	CK1103AB6U
	I.C.'s	
IC701	HD61602R 80PIN	ENHI61602R
	VARIABLE RESISTORS	
VR701	IM (TMC4K B1M OHM)	RE10500102
	MISC.	
-----	IC HD61602R	ENHI61602R
-----	SEMI-FIXED RESISTOR, 1M	RE10500102
-----	LCD DISPLAY	EX03N40438
-----	LAMP, 5V .08A	EX01N40080
-----	IC SOCKET 2P	EX07N48442
-----	PCB CONN. SOCK. 14P L=21.8mm	EX07N48438

8.10 CPU/MIC UP/DN P.C. BOARD

(PRE-MARCH 1995 VERSION)

REF#	DESCRIPTION	PART#
-----	CPU P.C.B.	EPT295042Z
-----	MIC UP/DN P.C.B.	EPT295080Z
	CARBON FIXED RESISTORS	
R601	270Ω ¼W(U) TYPE	RCU142714Z
R602	220Ω ¼W(U) TYPE	RCU142214Z
R603	180Ω ¼W(U) TYPE	RCU141814Z
R604	82Ω ¼W(U) TYPE	RCU148204Z
R605	470Ω 0.1W	RCY014714Z
R606	470Ω 0.1W	RCY014714Z
R607	470Ω 0.1W	RCY014714Z
R608	470Ω 0.1W	RCY014714Z
R609	10Ω 0.1W	RCY011034Z
R610	1Ω 0.1W	RCY011024Z
R611	47K 0.1W	RCY014734Z
R612	47K 0.1W	RCY014737Z
R613	47K 0.1W	RCY014737Z
R614	150K 0.1W	RCY011544Z
R615	47K 0.1W	RCY014734Z
R617	47K 0.1W	RCY014734Z
R618	47K 0.1W	RCY014734Z
R619	47K 0.1W	RCY014734Z
R620	470Ω 0.1W	RCY014714Z
R621	47K 0.1W	RCY014734Z
R622	47K 0.1W	RCY014734Z
R623	47K 0.1W	RCY014734Z
R624	47K 0.1W	RCY014734Z
R625	47K 0.1W	RCY014734Z
R626	4.7K 0.1W	RCY014724Z
R627	47K 0.1W	RCY014734Z
R628	47K 0.1W	RCY014734Z
R629	47K 0.1W	RCY014734Z
R630	1 MEG 0.1W	RCY011054Z
R631	10K 0.1W	RCY011034Z
R632	47K 0.1W	RCY014734Z
R633	39K 0.1W	RCY013934Z
R634	220K 0.1W	RCY012244Z
R635	1 MEG 0.1W	RCY011054Z
R636	100K 0.1W	RCY011044Z
R637	220K 0.1W	RCY012244Z
R638	100K 0.1W	RCY011044Z
R639	47K 0.1W	RCY014734Z
R640	47K 0.1W	RCY014734Z
R641	150K 0.1W	RCY011544Z
	ARRAY RESISTORS	
RA601	10K/20K 6P	RCS0670023
RA602	47K 5P	RCS0570009
RA603	47K 5P	RCS0570009
RA604	220K 5P	RCS0570022
RA605	47K 5P	RCS0570009
RA606	220K 9P	RCS0970021
RA607	47K 5P	RCS0570009
RA608	47K 5P	RCS0570009
RA609	47K 5P	RCS0570009
RA610	220K 9P	RCS0570022
RA611	47K 5P	RCS0570009

8.10 CPU/MIC UP/DN P.C. BOARD

REF#	DESCRIPTION	PART#
CAPACITORS		
C601	0.1uF 50WV K Z5U, MONO.	CK1103AB7U
C602	.1uF 35WV M TANTALUM	CTY351046Z
C603	.33uF 35WV M, TANTALUM	CTY353346Z
C604	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C605	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C606	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C607	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C608	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C609	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C610	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C611	.01uF 50WV K Z5U, MONO.	CK1103AB7U
C612	33pF 50WV J CH, MONO. CHIP	CK1330AB4A
C613	33pF 50WV J CH, MONO. CHIP	CK1330AB4A
C614	.1uF 50WV Z Y5V, MONO.	CK2104AB7V
C615	.0027uF 50WV Z Y5V, MONO.	CK1272AB5R
C616	470pF 50WV K SL, MONO. CHIP	CK1471AB5L
C617	100pF 50WV K SL, M ONO CHIP	CK1101AB5L
C618	.01uF 50WV K Z5U, MONO.	CK1103AB7U
I.C.'S		
IC601	HD4074008F	ENHI74008F
IC602	TC4069UBF	ENTA04069F
IC603	M5223FP	ENMI05223F
IC601	TC4069UBF	ENTA04069F
IC605	TA78	TZTA00078Z
IC606	TA78	TZTA00078Z
IC612	7805	ENSS07805Z
TRANSISTORS		
TR601	2SC945P	T2SC00945P
TR602	2SC945P	T2SC00945P
TR603	2SC945P	T2SC00945P
T604	2SC945P	T2SC00945P
TR605	2SC2712	T2SC02712G
TR606	2SC2712	T2SC02712G
TR607	2SC2712	T2SC02712G
-----	2SA1162GR	T2SA01162G
DIODES		
D601	1N5711	ED1N05711Z
D602	1SS181	EDSS00181Z
D604	1SS181	EDSS00181Z
D605	1SS181	EDSS00181Z

8.11 MISC. PARTS

REF#	DESCRIPTION	PART#
X601	RESONATOR, 4 MHz, CERAMIC	EX14N46510
-----	BUZZER RKM35-4A	EX14N46511
L1	BATTERY LITHIUM, 3V 170mAh	EX08N41405
-----	PCB CONNECTOR SOCKET 6P	EX07N41266
-----	PCB CONNECTOR SOCKET 4P	EX07N41250
-----	PCB CONNECTOR SOCKET 3P	EX07N41216
CN602	PCB CONNECTOR SOCKET 2P	EX07N41226
CN608	PCB CONNECTOR SOCKET 2P	EX07N41226

8.11 MISC. PARTS (Con't)

REF#	DESCRIPTION	PART#
CN609	PCB CONNECTOR SOCKET 2P	EX07N41226
-----	PCB CONNECTOR SOCKET 3P	EX07N48244
-----	PCB CONNECTOR SOCKET 4P	EX07N48440
-----	PCB CONNECTOR SOCKET 7P	EX07N48011
-----	PCB CONNECTOR SOCKET 6P	EX07N48010
-----	PCB CONNECTOR SOCKET 10P	EX07N48416
-----	SHORT PIN 2P	EX07N48151
-----	FRONT PANEL, BLACK	PT2950010A
-----	FRONT PANEL (RCI-2970)	PT2950010G
-----	REFRACTOR PLATE (KEY)	PT2950030A
-----	REFRACTOR PLATE (LCD)	PT2950041A
-----	KNOB, BLACK	PT2950051A
-----	KNOB, BLACK	PT2950060A
-----	INNER KNOB, BLACK	PT2950071A
-----	OUTER KNOB, BLACK	PT2950080A
-----	LCD WINDOW	PT2950090A
-----	FRONT CHASSIS	MT2950010P
-----	SPACE KING	MT2950020E
-----	D SPRING A #6600	MT3600080T
-----	D SPRING B #7800	MT3600090T
-----	D SPRING D #8500	MT3600100T
-----	HANDLER, BLACK	MT3600030A
-----	TOP HOUSING, BLACK	MT2950031A
-----	BOTTOM HOUSING, BLACK	MT2950041A
-----	SET CHASSIS	MT3600022X
-----	SOCKET HOLDER	MT3600050X
-----	SHIELD PLATE (A)	MT1200060N
-----	HEAT SINK, BLACK	MM7878040X
-----	P.C.B BRACKET	MT3600010S
-----	SHIELD PLATE	MT2710060X
-----	TOP HOUSING	MT2950031B
-----	RUBBER KEY	QT2950010A
-----	MIC PLATE	BT2100020A
-----	MIC PLATE	BT2100020D
-----	MIC PLATE	BT0SSB010B
-----	SHIELD CLOTH 10x88x.3t	LZZZ60001Z
-----	SHIELD CLOTH 90x90x.18t	LZZZ60056Z
-----	LCD SPONGE RUBBER 108x25x1t	XZZZ90205Z
-----	CLAMP	GZZZ50000Z
-----	BEEP SPONGE 22x1.5t	XZZZ90206Z
-----	FOAM 14x16x20mm	XZZZ90004Z
-----	PCB STOPPER	XZZZ90006Z
-----	INSULATING PLATE	XZZZ90020Z
-----	INSULATING RING	XZZZ90003Z
-----	ANT/MIC SOLDER PLATE	
-----	16x21x.5t	XZZZ90098Z
-----	SPONGE 15x30x11t	XZZZ90021Z
-----	SODER PLATE	XZZZ90002Z
-----	LCD PCB SHIELD PLATE	
-----	35x8x2t	XZZZ90187Z
-----	RCI MIC PLATE	BT6300041A
-----	LAMP REFRACTOR LABEL 28x11	LZZZ61278Z
-----	TOP REFRACTOR LABEL 25x8	LZZZ61277Z
-----	LCD REFRACTOR LABEL 100x11	LZZZ61276Z
B757Y	SCREW, M2.0x0.4px10 PAN HEAD	JS052010MN
TR46	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
TR47	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
TR48	SCREW, M2.0x0.4px12 PAN HEAD	JS052012MN
-----	FRON PANEL (4) SCREW	
-----	M3.0x0.5px6, FLAT HEAD	JS033006MN

8.11 MISC. PARTS (Con't)

REF#	DESCRIPTION	PART#
-----	DC SOCKET(2), SET CHASSIS(12) LCE & CPU PCB (6) SCREW M3.0x0.5px6, PAN HEAD	JS053006MN
-----	SCREW, M3.0x0.5px6 (PVC) ROUND HEAD	JS013006MY
-----	MAIN PCB (5) SCREW, T3x6-2 PAN HEAD	JS053006TN
-----	HEAT SINK SCREW, T3x8-2 ROUND HEAD	JS013008TN
-----	SPEAKER (4) SCREW M3.0x0.5px8 PAN HEAD	JS053008MN
-----	T7808 KEY PCB(2) SCREW M3.0x0.5px10 PAN HEAD	JS053010MN
-----	R7808(1) KEY PCB (2) CREW M3.0x0.5px10 PAN HEAD	JS053010MN
-----	IC7808x2 SCREW M2.0x0.4px8 PAN HEAD	JS052008MN
-----	SPEAKER (4) NUT w/WASHER	JN263035ZS
-----	2SC2312 (3) NUT	JN242012ZS
-----	INSULATING RING	XZZZ90072Z
-----	MOUNTING SCREW M5.0x0.8x11 BLACK	XZZZ90007Z
-----	SCREW 5x10-1 STEEL	JS015010WH
-----	SCREW 3.5x8-2	JS013508TH
-----	OUTSIDE TOOTH WASHER 5.5x10x0.3	JW315510CN
-----	INSIDE TOOTH WASHER 4x8x0.3	JW324008CN
-----	FIBER WASHER 4.9x15x1T	XZZZ90188Z

8.11 POWER PCB

REF#	DESCRIPTION	PART#
-----	POWER P.C.B	EPA010010A
-----	C/F/R 22W ¼W(U) TYPE	RCU142204Z
R901	C/F/R 1K ¼W(P) TYPE	RCP141024Z
R902	C/F/R 1K ¼W(M) TYPE	RCM141024A
R903	C/F/R 39K 2W(P) TYPE	RCP203904Z
R904	C/F/R 1W ¼W(U) TYPE	RCU141094Z
R909	C/F/R 10K ¼W(U) TYPE	RCU141034Z
R910	S/F/R 10K (S) TYPE	RE10300069
R911	C/F/R 10K ½W(P) TYPE	RCP121034Z
-----	M/O/R 220W 2W(P) TYPE	RFP202214Z
-----	C/C 22pF 50WV SL J	CC0502204L
C901	C/C 0.1uF 50WV SL Z	CC0501047L
C902	C/C 390pF 50WV SL K	CC0503915L
C903	C/C 390pF 50WV SL K	CC0503915L
C905	C/C 31uF 50WV SL Z	CC0501037L
C906	C/C 0.1uF 50WV SL Z	CC0501047L
C908	MICA/X 180pF 300WV J	CD3001814Z
C909	MICA/C 680pF 300WV J	CD3006814Z
C910	MICA/C 180pF 300WV J	CD3001814Z
C916	MICA/C 150pF 300WV J	CD3001514Z
C917	MICA/C 100pF 500V G	CD5001018Z
C918	MICA/C 68pF 300WV J	CD3006804Z
C919	HV DISC/C 0.01uF DE1510E103Z1K	CX0071037Z
C920	C/C 0.1uF 50WV SL Z	CC0501047L
C921	C/C 0.1uF 50WV SL Z	CC0501047L
C922	E/C 220uF 16WV Z	CE0162277Z

8.11 POWER PCB (Con't)

REF#	DESCRIPTION	PART#
C923	C/C 0.1uF 50WV SL Z	CC0501047L
C924	C/C 0.1uF 50WV SL Z	CC0501047L
C925	C/C 0.1uF 50WV SL Z	CC0501047L
C926	C/C 0.1uF 50WV SL Z	CC0501047L
C927	C/C 0.1uF 50WV SL Z	CC0501047L
C928	C/C 0.1uF 50WV SL Z	CC0501047L
C929	C/C 0.1uF 50WV SL Z	CC0501047L
C930	C/C 0.1uF 50WV SL Z	CC0501047L
C931	C/C 0.1uF 50WV SL Z	CC0501047L
C932	C/C 0.1uF 50WV SL Z	CC0501047L
C933	C/C 0.1uF 50WV SL Z	CC0501047L
C934	C/C 0.1uF 50WV SL Z	CC0501047L
C935	C/C 0.1uF 50WV SL Z	CC0501047L
C936	MICA/C 100pF 500V G	CD5001018Z
C937	C/C 0.1uF 50WV SL Z	CC0501047L
C938	E/C 220uF 38WV Z	CE0352277Z
C939	C/C 0.1uF 50WV SL Z	CC0501047L
C940	C/C 0.1uF 50WV SL Z	CC0501047L
C941	C/C 0.1uF 50WV SL Z	CC0501047L
D901	DIODE 1N4001	ED1N04001Z
D902	DIODE 1N4001	ED1N04001Z
D903	DIODE 1N4148	ED1N04148Z
D904	DIODE 1N4148	ED1N04148Z
J901	PCB CONN/S 2P T	EX07N41226
J902	PCB CONN/S 2P T	EX07N41226
L901	BEED COAIL 6x10x3t	ECBAD18553
L902	CHOKE COIL 6.8uH	ECCHK16098
L903	SPRING COIL 1x6.5x7t	ECSPG18069
L904	SPRING COIL 1x6.5x7t	ECSPG18069
R901	S/F/R 1K (S) TYPE	RE10200046
RL901	RELAY DS2-M-DC9V	EX05N40825
T901	RF COIL	ECRFZ10096
T902	RF COIL	RCRFZ10097
TR901	TR 2SC2290	T2SC02290Z
TR902	TR 2SC2290	T2SC02290Z
TR903	TR 2SC1406-GR	T2SD01406R
-----	V TYPE JACK (M PIN)	
-----	TMP-JP1X-V6	GZZZ50062Z
-----	C PIN AC 220V	GZZZ50011Z
-----	SHIELD COVER	MT2970040X
-----	ONSERT M2.6xM5x3t	MTTURB160X
-----	HEAT SINK	MT2970030X

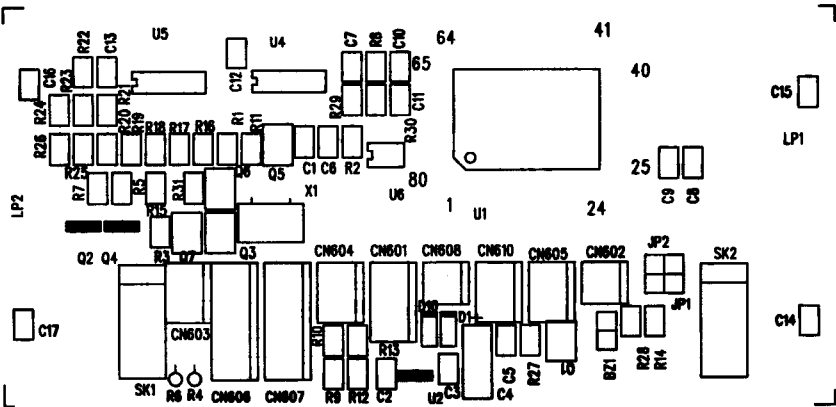


**SECTION 9
RCI-2950 SURFACE MOUNT
SCHEMATIC/CPU PCB
BOARD LAYOUT**

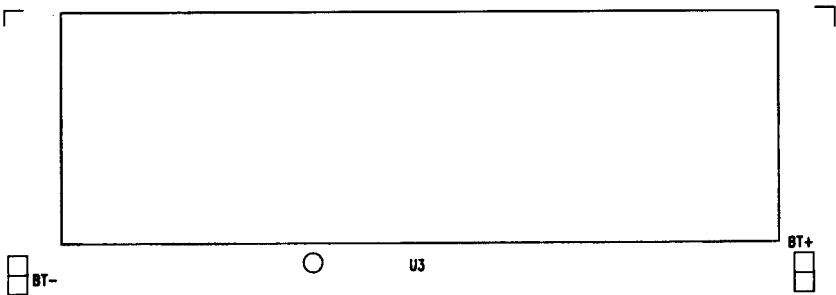
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RCI-2950 MICROPROCESSOR CONTROL BOARD

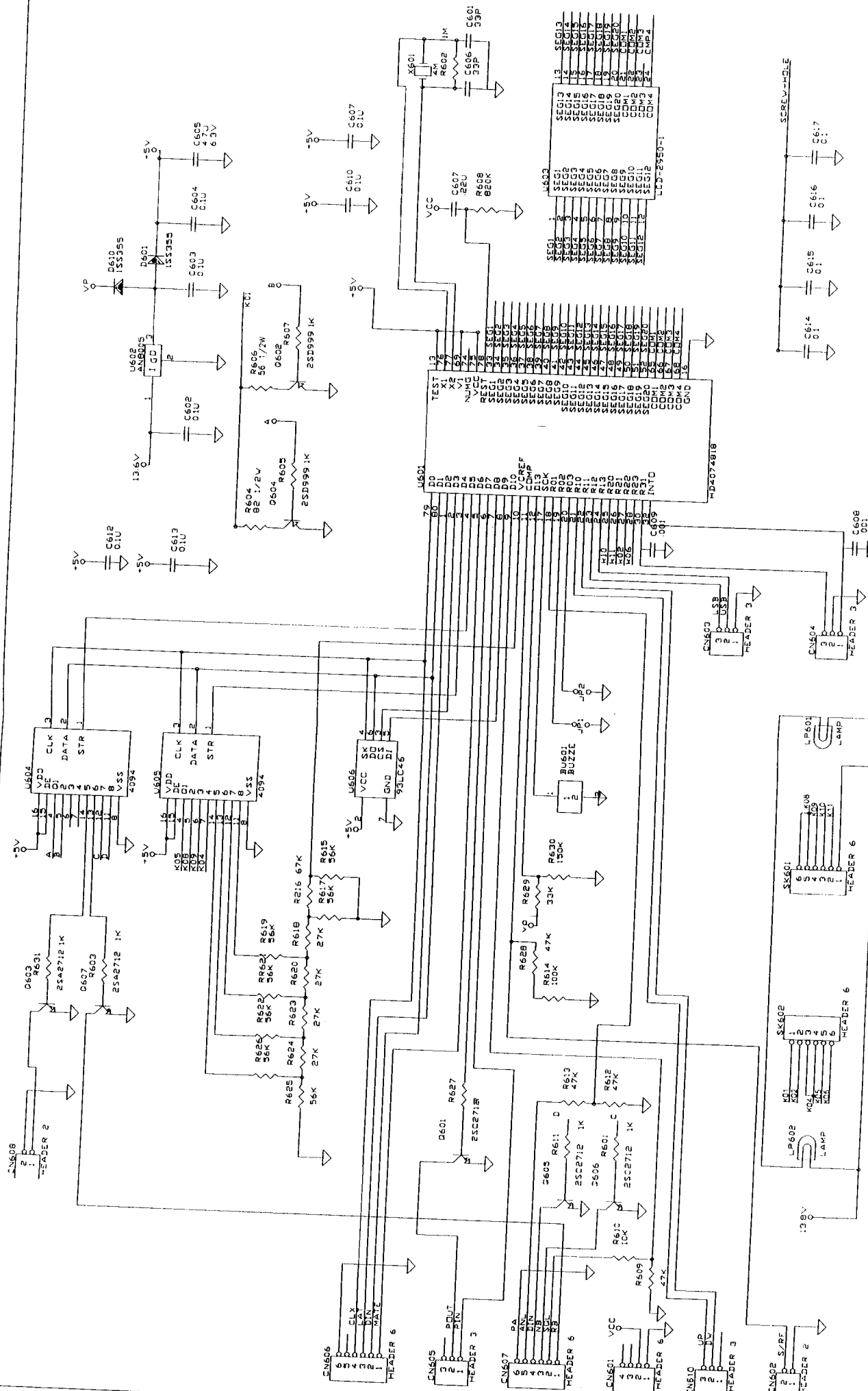
• POST MARCH, 1995 (SMD VERSION) ONLY •
(TOP VIEW)



(BOTTOM VIEW)



DPL295040Z



RANGER COMMUNICATIONS, INC.
 RC-2950 SURFACE MOUNT CPU PCB
 SCHEMATIC DIAGRAM
 Date: 01/23/95 Sheet: 01

U601	K10	DV	A BEEP	SWP
U605	K12	SCAN	PRG	KDE
X05	SPLIT	ENT	MAX	LOCK
X08	SHF			
X09				
X04	NE/ANL			

*NOTES: THIS SCHEMATIC COVERS POST MARCH, 1995 CPU/CONTROL P.C. BOARDS VERSION ONLY.

RCI-2950 SURFACE MOUNT (POST MARCH 1995 VERSION)

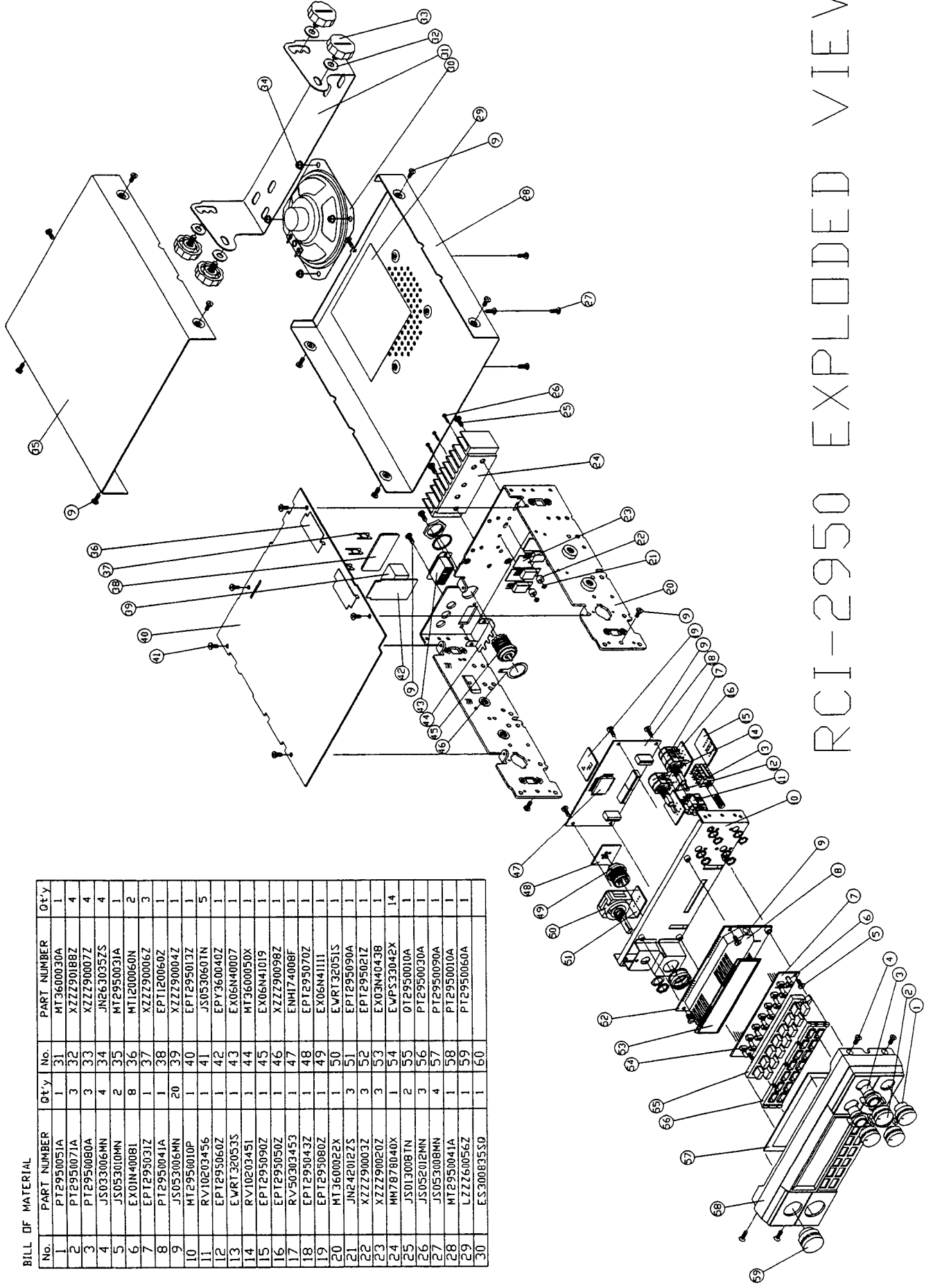


**SECTION 10
RCI-2950 SURFACE MOUNT/
CPU PCB PARTS LIST**

10.0 RCI-2950 SURFACE MOUNT CPU P.C.B			10.0 RCI-2950 SURFACE MOUNT CPU P.C.B (Cont)		
REF#	DESCRIPTION	PART#	REF#	DESCRIPTION	PART#
-----	CPU P.C.B	DPT295040Z	C612	0.1uF 50WV Z SL	CK1104AB7L
-----	KEY SW P.C.B	EPT295031Z	C613	0.1uF 50WV Z SL	CK1104AB7L
-----	C/F/R 1.5K OHM 1/16W P	RCP161524Z	C614	0.1uF 50WV Z SL	CK1104AB7L
-----	TACT SW JIP-1250	EWPS33042X	C615	0.1uF 50WV Z SL	CK1104AB7L
-----	IC PIN	EX07N48414	C616	0.1uF 50WV Z SL	CK1104AB7L
-----	PCB CONNECTOR/S	EX07N48441	C617	0.1uF 50WV Z SL	CK1104AB7L
	CARBON FILM RESISTORS			I.C. (S.M.D)	
R601	10K 0.1W	RCY011034Z	U601	HD404818C89FS 80 PIN	YNRG2950SP
R602	1M 0.1W	RCY011054Z	U602	AN8005M-E2 3 PIN	YNMA08005M
R603	10K 0.1W	RCY011034Z	U604	BU4094BF 16 PIN	YNR004094B
R604	82 OHM 1/2W (U) TYPE	RCU128204Z	U605	BU4094BF 16 PIN	YNR004094B
R605	10K 0.1W	RCY011034Z	U606	P93L46 8P	YNEX93L46P
R604	56Ω 1/2W(U) TYPE	RCU125604Z		TRANSISTORS	
R607	5.6K 0.1W	RCY015624Z			
R608	470K 0.1W	RCY014744Z			
R609	47K 0.1W	RCY014734Z	Q601	2SC2712GR-TE85L	TY2SC2712G
R610	10K 0.1W	RCY011034Z	Q602	2SD999	TY2SD0999Z
R611	10K 0.1W	RCY011034Z	Q603	2SC2712GR-TE85L	TY2SC2712G
R612	47K 0.1W	RCY014734Z	Q604	2SD999	TY2SD0999Z
R613	47K 0.1W	RCY014734Z	Q605	2SC2712GR-TE85L	TY2SC2712G
R614	100K 0.1W	RCY011044Z	Q606	2SC2712GR-TE85L	TY2SC2712G
R615	56K 0.1W	RCY015634Z	Q607	2SC2712GR-TE85L	TY2SC2712G
R616	27K 0.1W	RCY012734Z		DIODES	
R617	56K 0.1W	RCY015634Z			
R618	27K 0.1W	RCY012734Z	D601	1SS355	EDSS00355Y
R619	56K 0.1W	RCY015634Z	D602	1SS355	EDSS00355Y
R620	27K 0.1W	RCY012734Z		MISC.	
R621	56K 0.1W	RCY015634Z			
R622	56K 0.1W	RCY015634Z			
R623	27K 0.1W	RCY012734Z			
R624	27K 0.1W	RCY012734Z	-----	LCD DISPLAY MT-628PAT	EX03N40460
R625	56K 0.1W	RCY015634Z	X601	KBR-4.0M	EX14N46510
R626	56K 0.1W	RCY015634Z	BZ601	BUZZER PKM35-4A WHY	EX14N46511
R627	10K 0.1W	RCY011034Z		PCB CONNECTOR/S	
R628	47K 0.1W	RCY014734Z			
R629	33K 0.1W	RCY013334Z	CN601	4P T	EX07N41250
R630	150K 0.1W	RCY011544Z	CN602	2P T	EX07N41226
R631	10K 0.1W	RCY011034Z	CN603	3P T	EX07N41216
	CERAMIC CAPACITORS		CN604	3P T	EX07N41216
C601	33pF 50WV	CK1330AB4A	CN605	3P T	EX07N41216
C602	0.1uF 50WV Z SL	CK0114AB7L	CN606	6P T	EX07N41266
C603	0.1uF 50WV Z SL	CK0114AB7L	CN607	6P T	EX07N41266
C604	1000uF 10WV Z	CE0101087Z	CN608	2P T	EX07N41226
C605	0.1uF 50WV Z SL	CK0114AB7L	CN610	3P T	EX07N41216
C606	33pF 50WV	CK1330AB4A	JP601	4P	EX07N48440
C607	0.22uF 50WV Z Y5V	CK1224AB7R	JP602	4P	EX07N48440
C608	0.001uF 50WV Z SL	CK1102AB7L	SHORT1	SHORT PIN	EX07N48151
C609	0.001uF 50WV Z SL	CK1102AB7L	SHORT2	SHORT PIN	EX07N48151
C610	0.1uF 50WV Z SL	CK1104AB7L	SK601	6P	EX07N48772
C611	0.1uF 50WV Z SL	CK1104AB7L	SK602	6P	EX07N48772
			LP601	5.3V 150mA	EX01N40102
			LP602	5.3V 150mA	EX01N40102

BILL OF MATERIAL

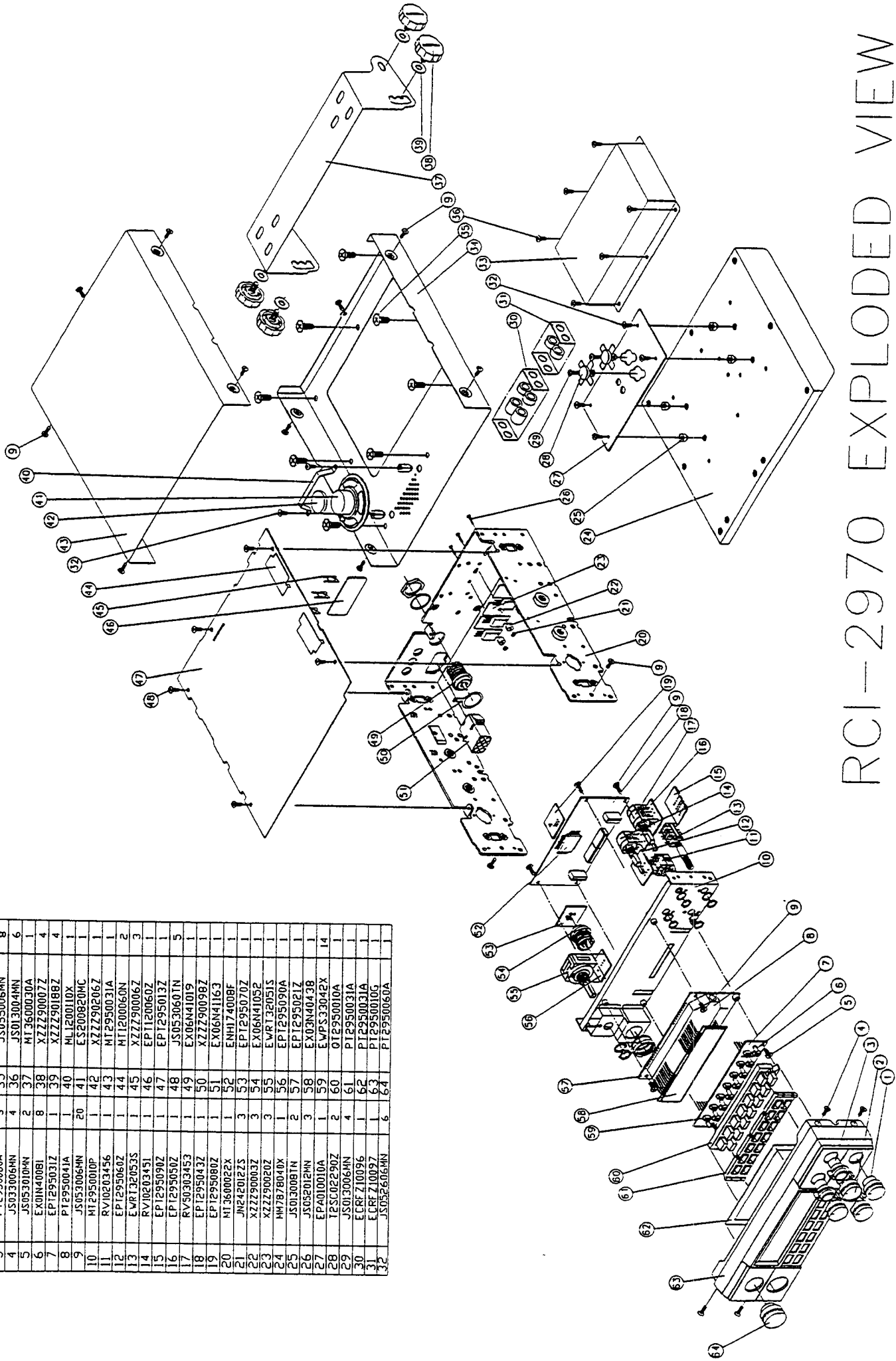
No.	PART NUMBER	Qty	No.	PART NUMBER	Qty
1	PT2950051A	1	31	MT3600030A	1
2	PT2950071A	3	32	XZZ790188Z	4
3	PT2950080A	3	33	XZZ790007Z	4
4	JS033006MN	4	34	JN263035ZS	4
5	JS053010MN	2	35	MT2950031A	1
6	EX01N4008I	8	36	MT1200060N	2
7	EPT295031Z	1	37	XZZ790006Z	3
8	PT2950041A	1	38	EPT120060Z	1
9	JS053006MN	20	39	XZZ790004Z	1
10	MT2950010P	1	40	EPT295013Z	1
11	RV10203456	1	41	JS053060TN	5
12	EPT295060Z	1	42	EPY360040Z	1
13	EVRT32053S	1	43	EX06N40007	1
14	RV10203451	1	44	MT3600050X	1
15	EPT295090Z	1	45	EX06N41019	1
16	EPT295050Z	1	46	XZZ790098Z	1
17	RV50303453	1	47	ENHI74008F	1
18	EPT295043Z	1	48	EPT295070Z	1
19	EPT295080Z	1	49	EX06N41111	1
20	MT3600022X	1	50	EVRT32051S	1
21	JN242012ZS	3	51	EPT295090A	1
22	XZZ790003Z	3	52	EPT295021Z	1
23	XZZ790020Z	3	53	EX03N40438	1
24	MM7878040X	1	54	EWPS33042X	14
25	JS013008TN	2	55	012950010A	1
26	JS052012MN	3	56	PT2950030A	1
27	JS053008MN	4	57	PT2950090A	1
28	MT2950041A	1	58	PT2950010A	1
29	LZZ760056Z	1	59	PT2950060A	1
30	ES300835S0	1	60		



RCI-2950 EXPLODED VIEW

BILL OF MATERIAL

No.	PART NUMBER	Qty	No.	PART NUMBER	Qty
1	PT295005JA	1	33	MT2970040X	1
2	PT295007IA	3	34	MT2970020A	1
3	PT2950080A	3	35	JS055006MN	8
4	JS033006HN	4	36	JS013004HN	6
5	JS053010MN	2	37	MT3600030A	1
6	EX01N4100B1	8	38	XZZZ90007Z	4
7	PT295003IZ	1	39	XZZZ9018BZ	4
8	PT295004IA	1	40	MLJ200110X	1
9	JS053006MN	20	41	ES200820MC	1
10	MT2950010P	1	42	XZZZ90206Z	1
11	RV10203456	1	43	MT2950031A	1
12	EPI2950660Z	1	44	MT1200060N	2
13	EWRT32053S	1	45	XZZZ90006Z	3
14	RV10203451	1	46	EPT120060Z	1
15	EPI2950990Z	1	47	EPT295013Z	1
16	EPI295050Z	1	48	JS053060TN	5
17	RV50303453	1	49	EX06N41019	1
18	EPI295043Z	1	50	XZZZ90098Z	1
19	EPI295080Z	1	51	EX06N41163	1
20	MT3600022X	1	52	ENH17400BF	1
21	JN2420123S	3	53	EPT295070Z	1
22	XZZZ90003Z	3	54	EX06N41052	1
23	XZZZ90020Z	3	55	EWRT32051S	1
24	HM7878040X	1	56	EPI295090A	1
25	JS0330081N	2	57	EPI295021Z	1
26	JS052012MN	3	58	EX03N40438	14
27	EPA010010A	1	59	EWPS33042X	1
28	TPSC02290Z	2	60	PT2950010A	1
29	JS013006MN	4	61	PT2950031A	1
30	ECRFZ10096	1	62	PT2950031A	1
31	ECRFZ10097	1	63	PT2950010G	1
32	JS052606MN	6	64	PT2950060A	1



RCI-2970 EXPLODED VIEW

LIMITED WARRANTY

Ranger Communications, Inc. (*Ranger*) warrants to the original purchaser **ONLY** this product against defects in material or workmanship as follows:

(1) Ranger warrants the product to be free of defects in material for a period of one (1) year from the original date of invoice or other proof of purchase. Labor to perform warranty services will be provided without charge for the first ninety (90) days of the warranty period. After this period, the original purchaser must pay for any labor at the prevailing rates at either an authorized Ranger warranty repair facility or at the factory. In addition, Ranger will supply, at no charge, new or rebuilt replacements for defective parts during the warranty period.

(2) In the event of a defect during the warranty period, Ranger shall, at its option, repair or replace the defective product. Such action shall constitute the purchaser's exclusive remedy under this warranty.

(3) A **Return Authorization Number** must be obtained from the Ranger Customer Service Department before any returns for warranty repair will be accepted. Send the defective product postage-paid, along with proof of the date of purchase (photocopy of the original invoice or receipt) to:

RANGER
Communications, Inc.

3377 Carmel Mountain Road
San Diego, CA 92121
(619) 259-0287 • FAX (619) 259-0437

(4) This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, improper installation, **UNAUTHORIZED MODIFICATION** or any action in violation of the product's instruction manual. This warranty is valid **ONLY** in the United States of America.

(5) This warranty is valid **ONLY** if the serial number appears on the products.

(6) Ranger reserves the right to void a warranty or make reasonable charges for the repair of a product which displays evidence of misuse, abuse, neglect, accident, or modification of the basic design.

(7) Warranties give you, the buyer, specific legal rights. You may also have other rights which may vary from state to state. This warranty is extended only to Ranger products purchased and shipped to locations in the United States of America or its possessions.



**3377 Carmel Mountain Road
San Diego, CA 92121
(619) 259-0287 • FAX (619) 259-0437**



RCI-2950/2970 MAIN BOARD VOLTAGE CHART

Source Voltage = 13.80; Frequency = 28.000 MHz; Power Settings = AM 2W SSB 25W

	AM/FM/SSB	
	NB/OFF	NB/ON
Q1	E= 0.00	1.06
2SC1675	C= 0.00	7.67
NPN	B= 0.00	1.77

	AM/FM/SSB	
	NB/OFF	NB/ON
Q2	E= GRD	GRD
2SC1675	C= 0.00	2.09
NPN	B= 0.00	0.71

	AM/FM/SSB	
	NB/OFF	NB/ON
Q3	E= 0.00	1.45
2SC945	C= 0.00	7.76
NPN	B= 0.00	2.09

	AM/FM/SSB	
	NB/OFF	NB/ON
Q4	E= 0.01	1.06
2SC945	C= 8.01	8.01
NPN	B= 0.00	0.02

	AM/FM/SSB	
	NB/OFF	NB/ON
Q5	E= 0.01	0.03
2SC945	C= 7.37	7.37
NPN	B= 0.00	0.01

	AM/FM/SSB	
	NB/OFF	NB/ON
Q6	E= 8.01	8.01
2SA733	C= 0.00	0.00
NPN	B= 7.36	7.36

	AM/FM/SSB	
	NB/OFF	NB/ON
Q7	E= GRD	GRD
2SC945	C= 0.00	0.01
NPN	B= 0.00	0.00

	AM		FM		USB/LSB	
	RX	TX	RX	TX	RX	TX
Q8	E= 0.48	2.44	0.48	2.44	2.38	2.44
2SC1674	C= 6.93	0.03	6.93	0.02	7.60	0.02
NPN	B= 1.18	0.02	1.18	0.01	1.30	0.01

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q9	E= GRD	GRD	GRD	GRD
2SC1674	C= 3.04	0.03	0.03	0.02
NPN	B= 0.71	0.01	0.82	0.81

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q10	E= 2.26	0.01	0.00	0.01
2SC1675	C= 5.764	0.02	8.02	0.02
NPN	B= 3.03	0.02	0.03	0.02

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q11	E= 1.52	0.01	0.01	0.01
2SC1675	C= 6.49	0.02	8.02	0.02
NPN	B= 2.26	0.01	0.00	0.01

	AM/FM	
	NB/OFF	NB/ON
Q12	E= 8.06	8.06
2SA733	C= 0.00	8.01
PNP	B= 8.02	7.35

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q13	E= GRD	GRD	GRD	GRD
2SC945	C= -0.25	-0.24	0.01	0.01
NPN	B= 0.00	0.01	0.71	0.71

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q14	E= GRD	GRD	GRD	GRD
2SC945	C= 0.01	0.02	0.11	0.01
NPN	B= 0.70	0.71	0.01	0.01

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q15	E= GRD	GRD	GRD	GRD
2SC945	C= 0.02	0.01	0.01	0.01
NPN	B= 0.01	0.01	0.70	0.71

	AM/FM		USB/LB	
	RX	TX	RX	TX
Q16	E= 0.67	0.68	0.68	0.68
2SC945	C= 5.04	5.05	5.01	5.01
NPN	B= 1.26	1.27	1.26	1.26

		AM/FM USB/LB	
		RX	TX
Q17	E=	GRD	GRD
2SC945	C=	0-0.01	0.02
NPN	B=	0.00	0.76

		AM		FM		USB/LSB	
		RX	TX	RX	TX	RX	TX
Q18	E=	1.41	0.01	1.41	0.01	1.41	0.01
2SC1674	C=	7.73	0.03	74.73	0.08	7.74	0.02
NPN	B=	2.15	0.02	2.15	0.03	2.16	0.01

		AM/SSB		FM	
		RX	TX	RX	TX
Q19	1=	1.89	0.03	1.90	0.07
J310	2=	7.95	0.02	7.95	0.07
FET	3=	0.03	0.01	0.00	0.01

		AM		FM		SSB	
		RX	TX	RX	TX	RX	TX
Q20	E=	0.23	7.34	0.23	7.35	0.85	7.34/7.36wMOD
2SC1675	C=	0.24	3.02	0.24	1.19	6.69	7.11/7.13wMOD
NPN	B=	0.95	3.41	0.95	1.96	1.60	3.40/3.42wMOD

		AM/FM		USB/LSB	
		RX	TX	RX	TX
Q21	E=	GRD	GRD	GRD	GRD
2SC1675	C=	1.74	0.03	3.43	0.02/0.04wMOD
NPN	B=	0.22	0.02	0.73	0.01/0.03wMOD

		AM/FM		USB/LSB	
		RX	TX	RX	TX
Q22	E=	0.92	0.02	2.66	0.01/0.03wMOD
2SC1675	C=	0.93	0.40	6.52	7.09/7.16wMOD
NPN	B=	1.74	0.03	3.43	0.02/0.04wMOD

		AM/FM		USB/LSB	
		RX	TX	RX	TX
Q23	E=	0.23	0.02	1.90	0.01/0.03wMOD
2SC1906	C=	7.78	0.02	6.10	0.02/0.04wMOD
NPN	B=	0.92	0.02	2.65	0.01/0.02wMOD

		AM		FM		SSB	
		RX	TX	RX	TX	RX	TX
Q24	E=	GRD	GRD	GRD	GRD	GRD	GRD
2SC945	C=	0.01	0.02	0.18	0.05	0.01	0.02/0.20wMOD
NPN	B=	0.70	0.71	0.01	0.02	0.01	0.01/0.03wMOD

		AM		FM		SSB	
		RX	TX	RX	TX	RX	TX
Q25	E=ON	8.05	8.06	0.01	0.02	0.01	0.01
	OFF	7.38	7.39	0.01	0.02	0.01	0.01
2SA733	C=ON	0.16	0.22	0.01	0.02	0.01	0.01
	OFF	7.38	7.38	0.01	0.02	0.01	0.01
NPN	B=ON	8.01	8.02	0.01	0.02	0.01	0.02
(ANL)	OFF	6.72	6.73	0.01	0.02	0.01	0.02

		AM/FM/SSB	
		RX	TX
Q26	E=	2.28	2.29
2SC945	C=	7.19	7.20
NPN	B=	2.82	2.84

		AM/FM/SSB	
		RX	TX
Q27	E=	2.70	2.71
2SC1675	C=	5.93	5.94
NPN	B=	3.44	3.45

		AM/FM/SSB	
		RX	TX
Q28	E=	GRD	GRD
2SC1675	C=	4.36	4.37
NPN	B=	0.72	0.72

		AM		FM		SSB	
		RX	TX	RX	TX	RX	TX
Q29	E=	GRD	GRD	GRD	GRD	GRD	GRD
2SC1675	C=	7.95	7.96	0.02	0.07	7.94	7.95
NPN	B=	0.01	0.02	0.75	0.79	0.01	0.01

		AM/FM		SSB	
		RX	TX	RX	TX
Q30	E=	GRD	GRD	GRD	GRD
2SC945	C=	0.02	0.03	2.95	2.89/2.91wMOD
NPN	B=	0.71	0.72	0.01	0.01/0.03wMOD

		AM		FM		SSB	
		RX	TX	RX	TX	RX	TX
Q31	E=	8.06	8.06	8.06	8.06	8.06	8.05/7.57wMOD
2SA945	C=	0.11	-0.34	0.11	-0.39	-0.11	-0.43/5.46wMOD
NPN	B=	8.02	8.02	8.02	8.02	8.02	8.02/6.95wMOD

		AM/FM	
		RX	TX
Q32	E=	GRD	GRD
2SC945	C=	0.01	0.01
NPN	B=	0.71	0.01/0.50wMOD

		AM/FM/SSB	
		RX	TX
Q33	E=	GRD	GRD
2SC945	C=	0.25	0.72/0.74w/SSB MOD
NPN	B=	0.24	0.57/0.58w/SSB MOD

		AM/FM/SSB	
		RX	TX
Q34	E=	GRD	GRD
2SC945	C=	1.32	0.01/0.44w/AM/SSB MOD
NPN	B=	0.00	0.00/0.01w/SSB MOD

AM/FM/SSB					
		ROGER		ROGER	
		BEEP		BEEP	
		ON		OFF	
		RX	TX	RX	TX
Q35	E=	8.06	8.07	8.06	8.07
2SA733	C=	3.05	-0.70	8.05	8.06
PNP	B=	8.02	8.03	7.41	7.42

AM/FM/SSB		
	RX	TX
Q36	E=	0.01 0.35
2SC945	C=	8.03 8.04
NPN	B=	0.01 0.02

AM/FM/SSB		
	RX	TX
Q37	E=	8.05 8.06
2SA1282	C=	8.02 0.02
PNP	B=	7.36 8.05

AM FM/SSB				
	RX	TX	RX	TX
Q38	E=	8.06 8.05	8.06 8.04	
2SA1282	C=	0.00 7.95	0.00 7.96	
PNP	B=	8.02 7.27	8.02 7.28	

AM/FM/SSB		
	RX	TX
Q39	E=	GRD GRD
2SC945	C=	0.05 8.04
NPN	B=	0.63 0.01

AM/FM/SSB		
	RX	TX
Q40	E=	8.05 8.06
2SA1282	C=	0.28 8.04
PNP	B=	7.54 7.35

AM/FM/SSB CW MODE				
	RX	TX	RX	TX
Q41	E=	GRD GRD	GRD GRD	
2SC945	C=	0.29 3.15	0.01 0.02	
NPN	B=	0.00 0.01	0.70 0.71	

AM/FM/SSB		
	RX	TX
Q42	E=	0.15 0.16
2SC945	C=	1.65 1.65
NPN	B=	0.77 0.78

AM/FM		SSB		
	RX	TX	RX	TX
Q43	E=	0.01 1.41	1.38 1.40/1.05wMOD	
2SC1675	C=	8.04 8.04	8.04 8.04/5.60wMOD	
NPN	B=	0.00 0.01	0.00 0.01/0.07wMOD	

		AM/FM		SSB	
		RX	TX	RX	TX
Q44	E=	0.01 1.41	1.38 1.40		
2SC1675	C=	0.03 4.56	4.54 4.57		
NPN	B=	0.02 2.12	2.10 2.12		

		AM/FM/SSB		CW	
		RX	TX	RX	TX
Q45	E=	0.00 0.01	8.04 5.58		
2SA733	C=	0.01 0.02	0.00 5.54		
PNP	B=	8.04 8.05	8.04 4.91		

		AM/FM		SSB	
		RX	TX	RX	TX
Q46	E=	0.00 0.68	0.00 0.68/0.71wMOD		
2SC2312	C=	4.15 3.80	13.25 12.60/15.11wMOD		
NPN	B=	GRD GRD	GRD GRD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q47	E=	0.00 0.68	0.00 0.68/0.71wMOD		
2SC2312	C=	4.15 3.80	13.25 12.60/15.11wMOD		
NPN	B=	GRD GRD	GRD GRD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q48	E=	0.00 0.74	0.00 0.74		
2SC2166	C=	4.15 3.88	13.25 12.75		
NPN	B=	GRD GRD	GRD GRD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q49	E=	0.00 0.70	0.00 0.57/0.59wMOD		
2SC2314	C=	0.00 8.30	0.00 7.95/8.06wMOD		
NPN	B=	0.00 1.25	0.00 1.28/1.30wMOD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q50	E=	0.00 0.71	0.00 0.66/0.69wMOD		
2SC1906	C=	0.00 7.95	0.00 7.95/7.97wMOD		
NPN	B=	0.00 1.41	0.00 1.45		

		AM/FM		SSB	
		RX	TX	RX	TX
Q51	E=	13.31 12.74	13.25 12.80/12.15wMOD		
2SB754	C=	4.29 3.43	13.25 12.30/11.52wMOD		
PNP	B=	13.79 13.57	13.79 13.66/13.39wMOD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q52	E=	4.18 3.48	12.85 12.55/11.79wMOD		
2SC945	C=	13.30 12.15	12.63 12.30/11.52wMOD		
NPN	B=	4.03 4.03	12.27 11.75/11.23wMOD		

		AM/FM		SSB	
		RX	TX	RX	TX
Q53	E=	13.30 12.15	12.63 12.30/11.52wMOD		
2SA473	C=	4.29 3.43	13.25 12.80/12.13wMOD		
PNP	B=	13.31 12.74	13.25 12.80/12.15wMOD		

	AM/FM		SSB	
	RX	TX	RX	TX
Q54	E= GRD	GRD	GRD	GRD
2SC945	C= 13.30	12.18	0.05	0.05/0.07 _{wMOD}
NPN	B= 0.00	0.02	0.73	0.73/0.75 _{wMOD}

	AM/FM		SSB	
	RX	TX	RX	TX
Q55	E= 0.53	0.43	1.65	1.62/1.53 _{wMOD}
2SC945	C= 8.05	8.05	8.05	8.05/6.90 _{wMOD}
NPN	B= 0.63	0.64	0.63	0.63/0.63 _{wMOD}

	AM/FM		SSB	
	RX	TX	RX	TX
Q56	E= GRD	GRD	GRD	GRD
2SC945	C= 0.01	0.02	0.01	0.01/0.03 _{wMOD}
NPN	B= 0.71	0.72	0.71	0.71/0.73 _{wMOD}

	AM		FM		SSB	
	RX	TX	RX	TX	RX	TX
Q57	E= GRD	GRD	GRD	GRD	GRD	GRD
2SC945	C= 0.02	0.03	0.71	0.72	0.71	0.72/0.73 _{wMOD}
NPN	B= 0.69	0.70	0.00	0.02	0.00	0.01/0.03 _{wMOD}

	AM		FM		SSB	
	RX	TX	RX	TX	RX	TX
Q58	E= 0.01	0.02	0.38	0.40	0.01	0.01
2SC945	C= 0.01	0.02	4.32	4.32	0.01	0.01
NPN	B= 0.01	0.02	1.02	1.03	0.01	0.01

IC VOLTAGES

	SQUELCH	
	OFF	ON
IC1	1= 6.66	6.66
SQ AMP,	2= 0.01	0.01
AGC AMP	3= 4.05	4.05
NJM324D	4= 8.06	8.06
	5= 0.02	0.02
	6= 0.02	0.02
	7= 0.04	0.04
	8= 0.01	6.64
	9= 2.23	2.23
	10= 0.63	3.11
	11= GRD	GRD
	12= 0.40	0.40
	13= 0.40	0.40
	14= 0.88	0.88

	FM		AM/SSB	
	RX	TX	RX	TX
IC2	1= 1.24	0.00		
FM DET	2= 1.27	0.00		
UPC1028H	3= 6.93	0.00		
	4= GRD	GRD		
	5= 3.26	0.00		
	6= 3.17	0.00		
	7= 4.40	0.00		

	AM/FM		SSB	
	RX	TX	RX	TX
IC3	1= 0.02	0.03	2.95	2.90
BAL MOD	3= 3.28	3.22	3.31	3.25
AN612	3= 3.26	3.20	3.30	3.23
	4= GRD	GRD	GRD	GRD
	5= 5.86	5.75	5.92	5.80
	6= 7.34	7.22	7.40	7.28

IC4	1= 8.02	8.02
NJM7805	2= GRD	GRD
V-REG	3= 5.04	5.05

AM/FM/SSB

	RX/TX	
	RX	TX
IC5	1= 2.94	
TC5081	2= 3.36	
PHASE-	3= 3.36	
COMP.	4= 7.39	
	5= 7.41	
	6= 7.23	
	7= 2.57	
	8= 7.37	
	9= GRD	

IC6	1= 13.63	13.32
NJM7808	2= GRD	GRD
V-REG	3= 8.06	8.07

	AM/FM		USB		LSB	
	RX	TX	RX	TX	RX	TX
IC7	1= 0.01	0.02	0.02	0.02	0.02	0.02
TC5081	2= 7.95	7.95	7.95	7.95	7.95	7.95
PHASE-	3= 1.90	1.90	2.36	2.36	1.49	1.49
COMP.	4= 7.98	7.98	7.98	7.98	7.98	7.98
	5= 7.99	7.99	7.99	7.99	7.99	7.99
	6= 7.99	7.99	7.99	7.99	7.99	7.99
	7= 1.97	1.97	1.97	1.97	2.00	2.00
	8= 2.57	2.57	2.57	2.57	2.57	2.57
	9= GRD	GRD	GRD	GRD	GRD	GRD

AM/FM/SSB

	RX/TX	
	RX	TX
IC8	1= 2.58	
TA7310	2= 1.90	
VCO	3= 1.22	
MIXER	4= 2.63	
	5= GRD	
	6= 5.00	
	7= 2.07	
	8= 5.03	
	9= 4.62	

AM/FM/SSB

RX/TX	
IC9	1= 2.56
TA7310	2= 2.17
VCO	3= 1.38
MIXER	4= 2.56
	5= GRD
	6= 5.03
	7= 2.05
	8= 5.04
	9= 1.31

AM/FM/SSB

RX/TX	
IC10	1= 2.62
TA7310	2= 1.94
VCO	3= 1.23
MIXER	4= 2.65
	5= GRD
	6= 5.03
	7= 2.09
	8= 5.04
	9= 4.62

AM/FM/SSB

RX/TX	
IC11	1= 0.98
TC5082P	2= 2.85
CMOS FREQ.	3= 2.78
DIVIDER	4= 2.52
and AMP	5= 5.21
	6= 2.46
	7= 2.57
	8= 2.57
	9= GRD

AM/FM/SSB

RX/TX	
IC12	1= GRD
HD10551	2= GRD
	3= 2.21
	4= GRD
	5= 4.22
	6= 4.22
	7= 4.22
	8= 2.37

IC13	1= GRD
HD10551	2= GRD
	3= 2.32
	4= GRD
	5= 4.22
	6= 4.22
	7= 4.22
	8= 2.36

IC14	1= 2.62
TA7310	2= 2.28
VCO	3= 0.01
MIXER	4= 2.66
	5= GRD
	6= 5.02
	7= 2.10
	8= 5.03
	9= 5.01

IC15	1= 13.64
NJM7808	2= GRD
V-REG	3= 8.06

AM/FM/SSB

RX TX		
IC16	1= 3.88	3.87
JRC4558D	2= 3.89	3.88
NJM4558D	3= 3.88	3.88
MIC-AMP	4= GRD	GRD
	5= 4.16	2.14
	6= 3.11	3.11
	7= 7.10	2.10
	8= 7.78	7.77

AM/FM**USB****LSB**

	RX	TX	RX	TX	RX	TX
IC17	1= -2.37	-2.36	-2.37	-2.36	-2.37	-2.36
CX7925B	2= 4.86	4.87	4.86	4.87	4.86	4.87
	3= 4.86	4.87	4.86	4.87	4.86	4.87
	4= 4.87	4.87	4.87	4.87	4.87	4.87
	5= 2.00	2.00	2.00	2.00	2.00	2.00
	6= 2.18	2.18	2.6	2.16	2.20	2.20
	7= 3.43	3.43	3.43	3.43	3.43	3.43
	8= 0.21	0.22	0.19	0.20	0.23	0.24
	9= 6.57	6.57	6.57	6.57	6.57	6.57
	10= 0.23	0.23	0.23	0.23	0.23	0.23
	11= 0.48	0.48	0.48	0.48	0.48	0.48
	12= 4.78	4.78	4.78	4.78	4.78	4.78
	13= 2.00	2.00	2.00	2.00	2.00	2.00
	14= GRD	GRD	GRD	GRD	GRD	GRD

AM/FM/SSB

RX TX		
IC19	1= 13.64	13.30
TA7222AP	2= 6.55	6.42
AUDIO-	3= 0.01	0.02
AMP	4= 0.00	0.50
	5= 1.10	2.14
	6= 1.11	2.12
	7= GRD	GRD
	8= GRD	GRD
	9= 6.80	0.01
	10= 12.92	11.02

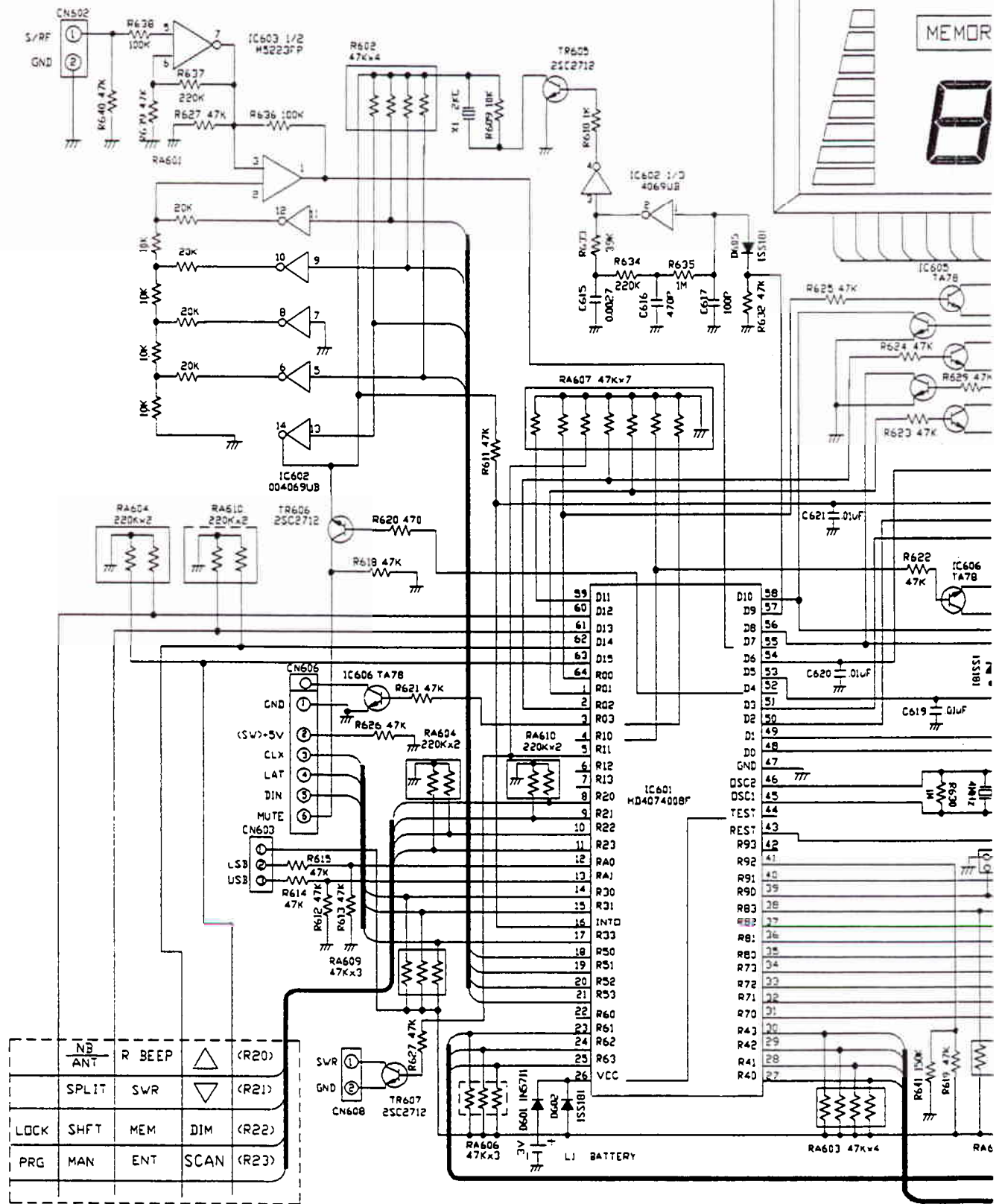
AM/FM/SSB

		RX	TX
IC20	1=	GRD	GRD
S042P	2=	0.00	7.77
TRANS-	3=	0.00	7.77
MIXER	4=	GRD	GRD
	5=	0.00	7.77
	6=	GRD	GRD
	7=	0.00	2.92
	8=	0.00	2.92
	9=	GRD	GRD
	10=	0.00	0.82
	11=	-0.03	1.45
	12=	0.00	0.82
	13=	-0.03	1.45
	14=	GRD	GRD

		AM/FM		SSB	
		RX	TX	RX	TX
IC21	1=	8.05	8.04	0.78	0.73
TC4069UBP	2=	0.00	0.01	7.78	7.78
CMOS	3=	0.01	0.02	0.01	0.02
HEX	4=	8.06	8.05	0.79	0.73
INVERTER	5=	8.06	8.05	0.79	0.73
	6=	0.00	0.01	7.78	7.78
	7=	GRD	GRD	GRD	GRD
	8=	0.00	0.01	0.00	0.01
	9=	8.05	8.04	8.05	8.04
	10=	8.05	8.04	8.05	8.04
	11=	0.44	0.44	0.44	0.44
	12=	0.01	0.02	0.01	0.02
	13=	8.05	8.04	8.05	8.04
	14=	8.06	8.05	8.06	8.05

(I) A1

A2



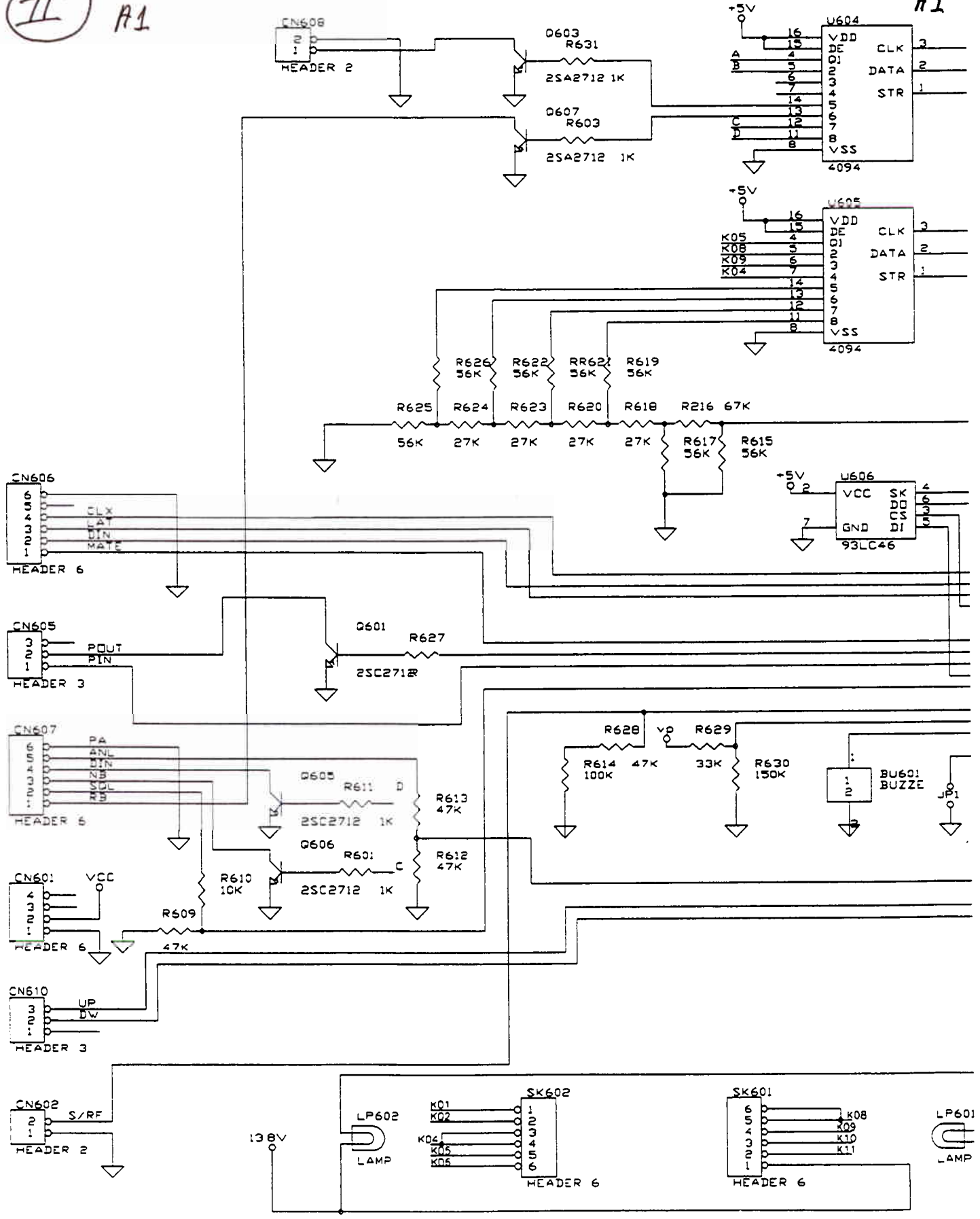
*NOTES: THIS SCHEMATIC COVERS PRE-MARCH, 1995 CPU/CONTROL P.C. BOARDS (THROUGH-HOLE VERSION) ONLY.

A1

A1

II A1

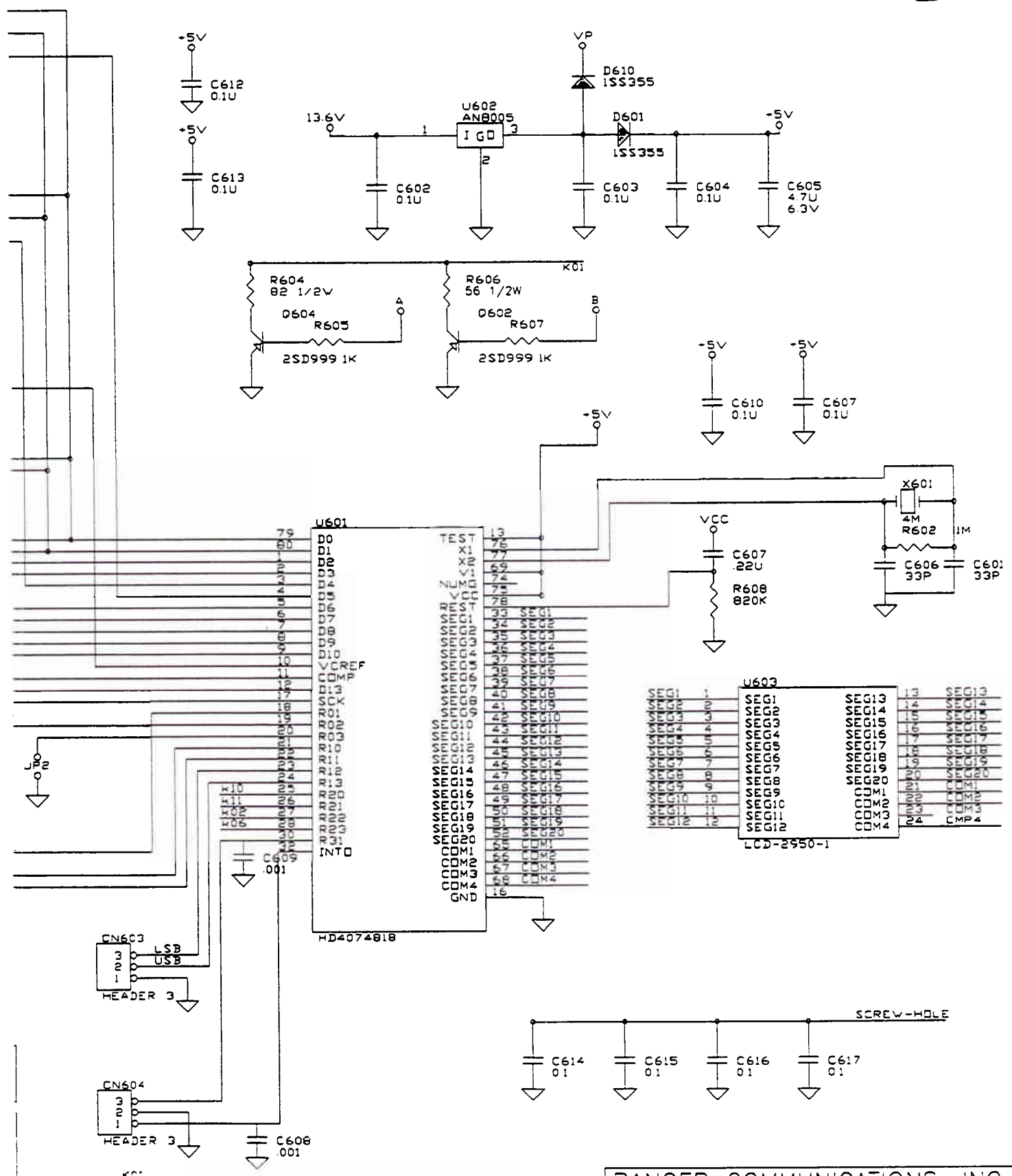
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*NOTES: THIS SCHEMATIC COVERS POST MARCH, 1995 CPU/CONTROL P.C. BOARDS VERSION ONLY.

A1

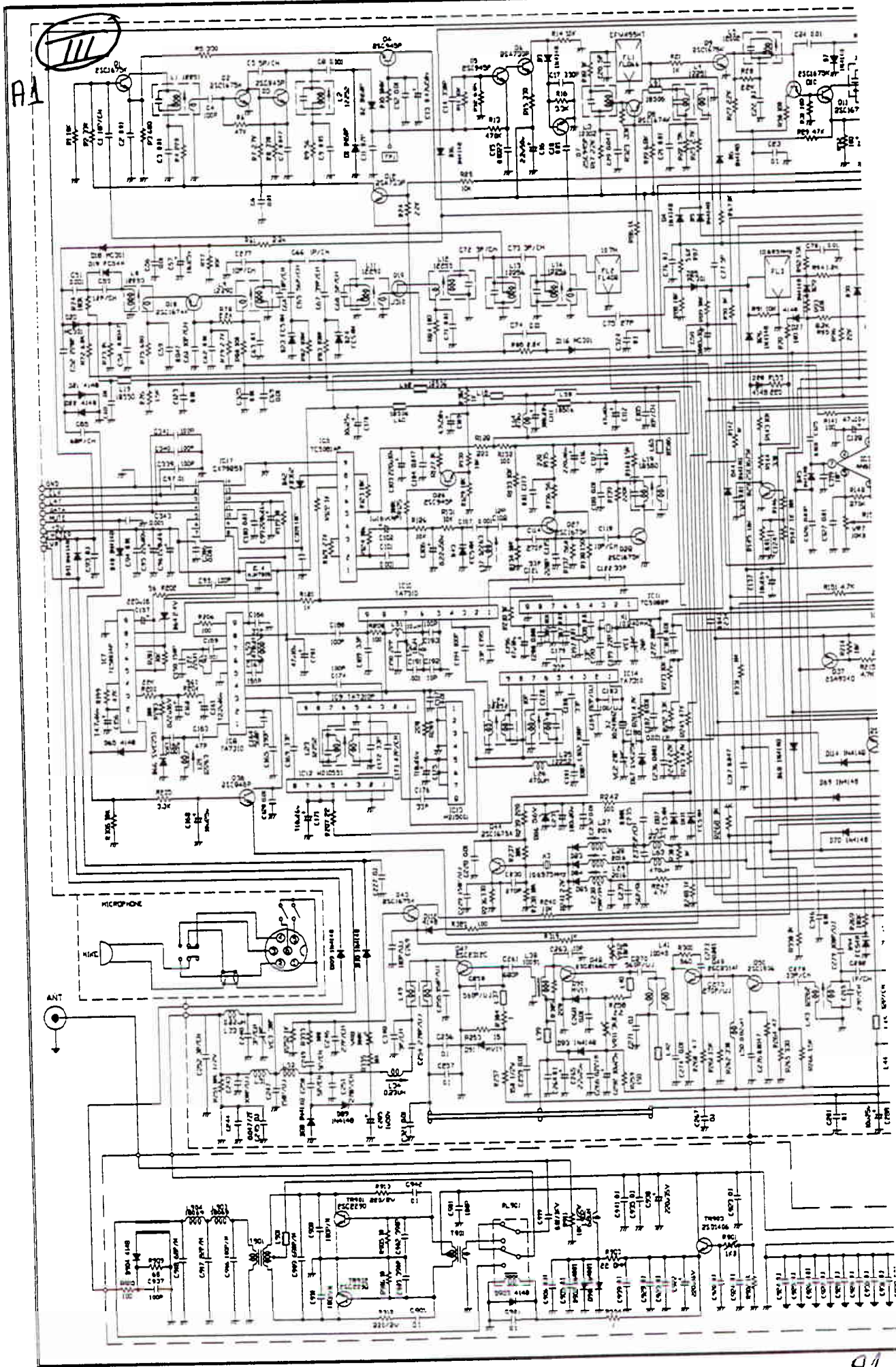
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U601				
U605	K10	K11	K02	K0E
K05	SPLIT	SCAN	PRG	MEM
K08	SHF	ENT	MAN	LOCK
K09	▲	▼		
K04	NB/ANL	DIM	R BEEP	SWR

RANGER COMMUNICATIONS, INC.
 Title: RCI-2950 SURFACEMOUNT CPU PCB SCHEMATIC DIAGRAM
 Date: 01/23/96 Sheet: of A2

A1



A1

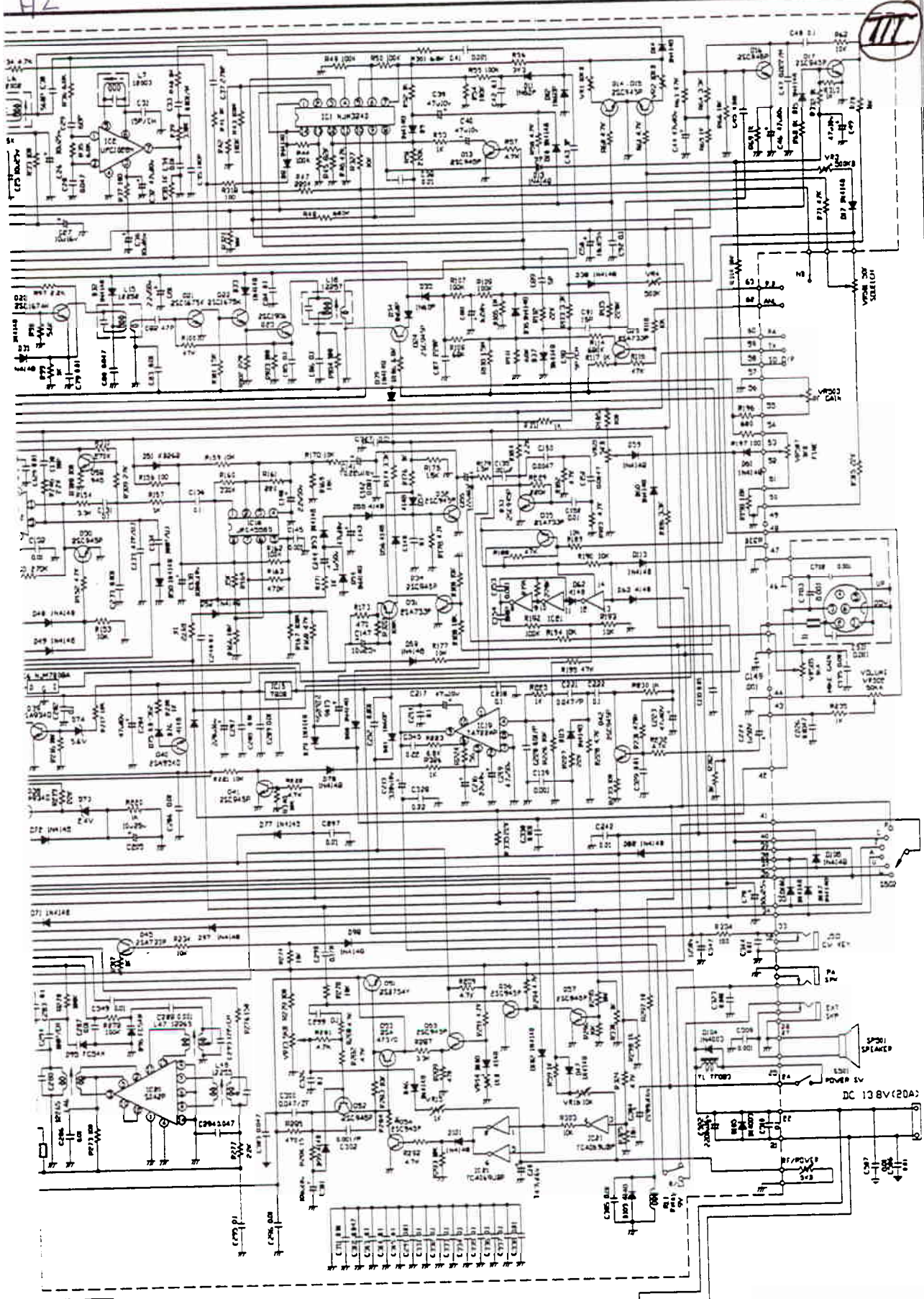
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III

A1

A2

A2



RANGER COMMUNICATIONS, INC.			
MODEL	RC1-2970		
TITLE	SCHEMATIC DIAGRAM		
APPROVED	CHECKED	DRAWN	ITER
	01/23/95	MG	D-1355

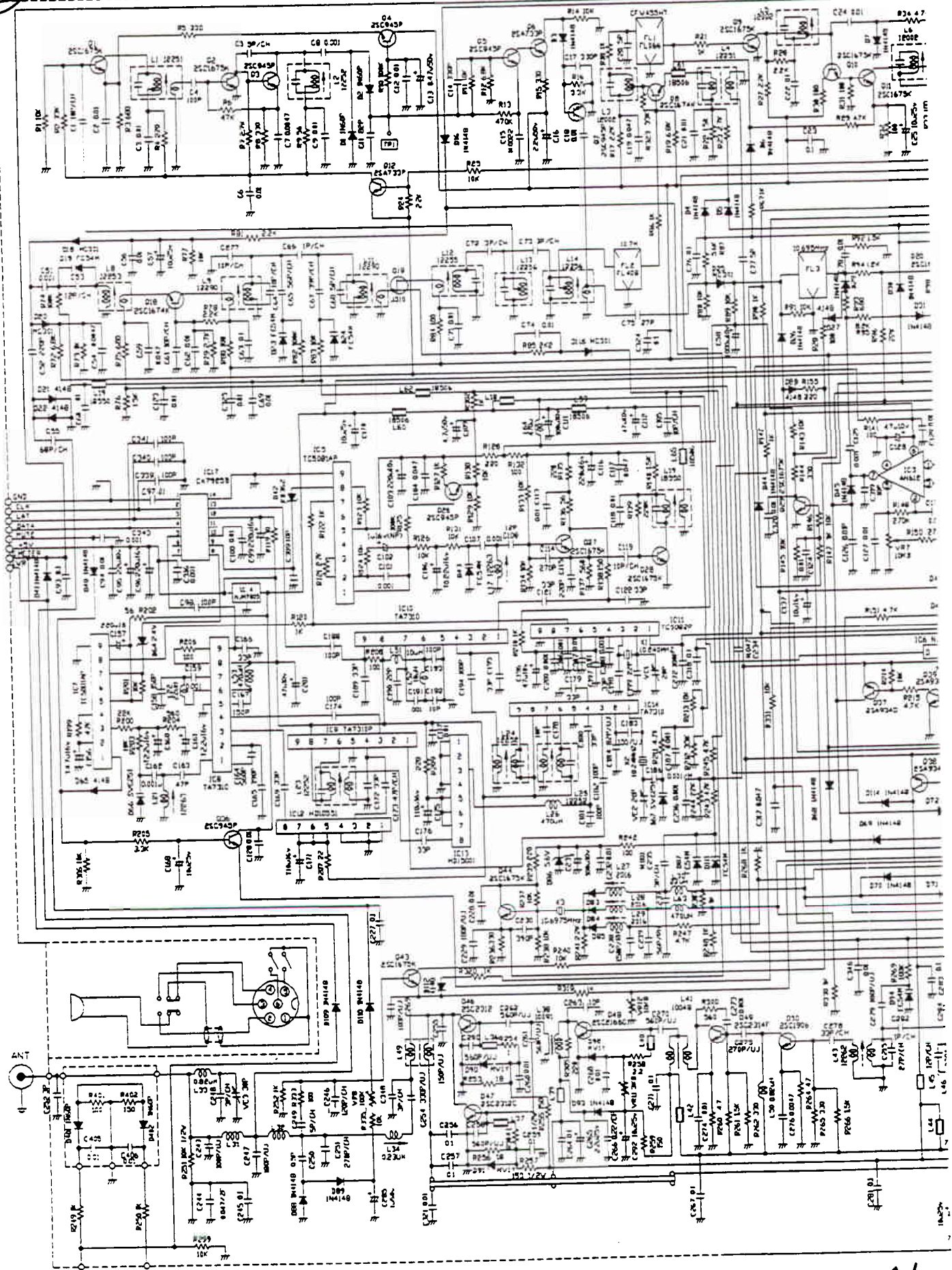
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III

A2

IV A1

A1



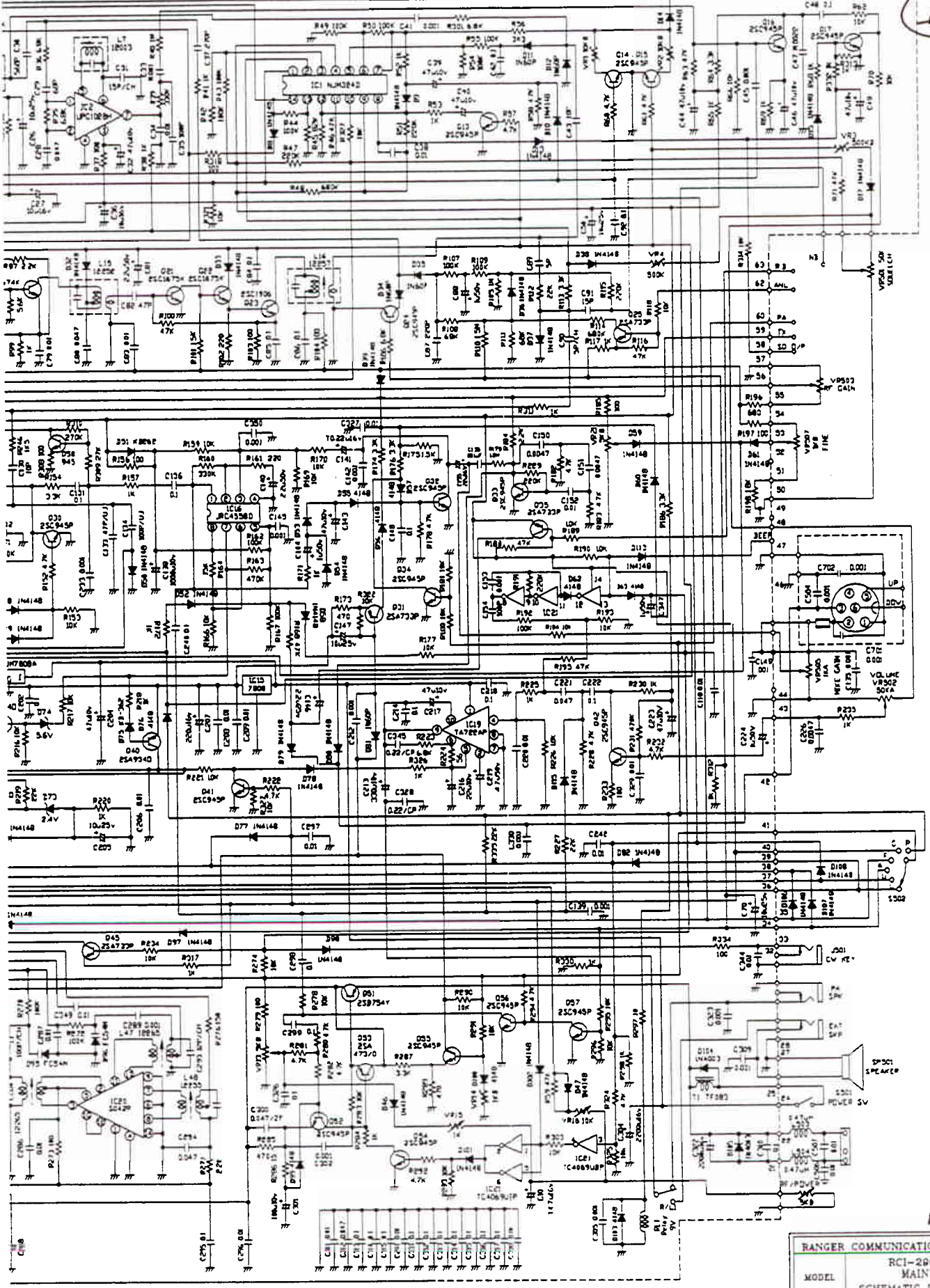
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A2

A2

IV



C1	100K
C2	100K
C3	100K
C4	100K
C5	100K
C6	100K
C7	100K
C8	100K
C9	100K
C10	100K
C11	100K
C12	100K
C13	100K
C14	100K
C15	100K
C16	100K
C17	100K
C18	100K
C19	100K
C20	100K
C21	100K
C22	100K
C23	100K
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C85	100K
C86	100K
C87	100K
C88	100K
C89	100K
C90	100K
C91	100K
C92	100K
C93	100K
C94	100K
C95	100K
C96	100K
C97	100K
C98	100K
C99	100K
C100	100K

RANGER COMMUNICATIONS, INC.

RCI-2950
MAIN
SCHEMATIC DIAGRAM

CHECKED 01/23/56 BRAYER, M.G.

APPROVED: ITEM NO. 10-333

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