

# FT-2200

## TECHNICAL SUPPLEMENT

*2-m, 50-Watt Mobile  
Paging Transceiver*



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# Contents

## 1. General Information

Introduction . . . . .	1-1
Case Disassembly & PCB Access . . . . .	1-2
Chip Component Information . . . . .	1-3
Circuit Description . . . . .	1-7
Block Diagram . . . . .	1-11
Interconnection Diagram . . . . .	1-13

## 2. Servicing

LCD, CNTL Unit Access & Pilot Lamp Replacement . . . . .	2-1
Lithium Backup Battery Replacement . . . . .	2-2
Alignment . . . . .	2-3
PLL VCV & Reference Oscillator . . . . .	2-5
Transmitter Deviation . . . . .	2-5
Receiver Interstage Transformers . . . . .	2-6
Internal System Alignment Routine . . . . .	2-7

## 3. Board Unit's (Schematics, Layout & Parts)

IF Unit . . . . .	3A-1
VCO Unit . . . . .	3B-1
APC Unit . . . . .	3C-1
MIC AMP Unit . . . . .	3D-1
SRX-1 Unit . . . . .	3E-1
PA Unit . . . . .	3F-1
LCD Unit . . . . .	3G-1
MUTE Unit . . . . .	3H-1
MAIN Unit . . . . .	3I-1
CNTL Unit . . . . .	3J-1

## 4. Mechanical

Exploded View . . . . .	4-1
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## 5. Accessory Board Unit's (Specification, Layout & Parts)

FTS-27 CTCSS Tone Squelch Unit (option) . . . . .	5A-1
DVS-3 Digital Voice System Unit (option) . . . . .	5B-1
MW-2 Wireless Remote Microphone (accessory) . . . . .	5C-1
MH-26 series Microphone (accessory) . . . . .	5D-1
MH-27B8 Microphone (accessory) . . . . .	5E-1



The information in this manual is intended to supplement the FT-2200 Operating Manual, for servicing the transceiver. Specifications and details of operation and options are provided in the operating manual, and are not reprinted herein. Therefore, the manual is not intended to serve as an independent reference, but to be used in conjunction with the information provided in the operating manual. The FT-2200 is intended to be serviced only by qualified technicians.

Two PCB layout diagrams are provided for each double-sided circuit board in the transceiver. Each side of the board is referred to by the type of the majority of components installed on that side ("leaded" or "chip-only"). In most cases one side has only chip components, and the other has either a mixture of both chip and leaded components (trimmers,

coils, electrolytic capacitors, ICs, etc.), or leaded components only.

While we believe the technical information in this manual is correct, Yaesu cannot assume liability for any damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

The technical information on this manual supersedes all previously published information on this product. Where information is duplicated in this manual and the operating manual, this manual should generally be considered more current.

Yaesu Musen reserves the right to make changes in the circuitry of this transceiver, in the interest of technological improvement, without obligation to owners.

# Case Disassembly & PCB Access

## Case Disassembly & PCB Access

Turn off the transceiver, and disconnect all cables.

### Main Unit Access (top & bottom)

- Referring to figure 1, remove the eight screws from the top cover to expose the solder side of the Main Unit.
- Remove the four screws from the bottom cover, to expose the component (PCB unit's) side of the Main Unit (Figure 2).
- Unplug the speaker wire connector from J1006 on the Main Unit, and lift the loud-speaker out of it's bracket, as shown in Figure 3.
- Remove the screw affixing the speaker bracket and remove the bracket.

PCB locations are indicated in Figure 4.

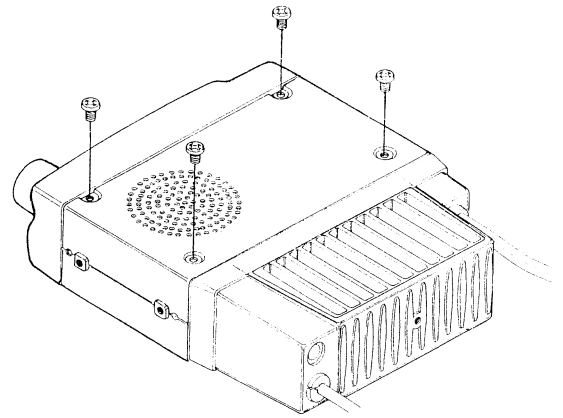


Figure 2.

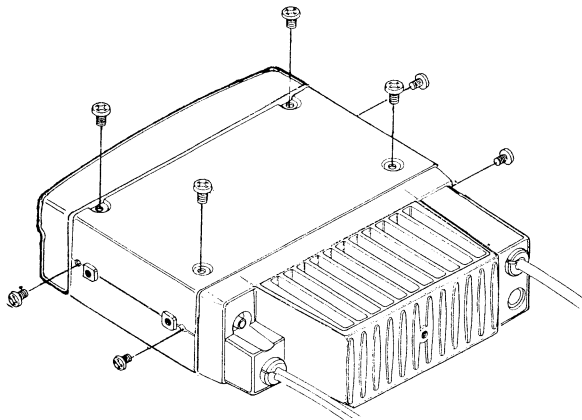


Figure 1.

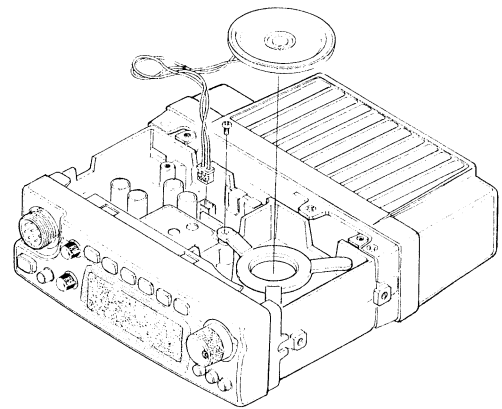


Figure 3.

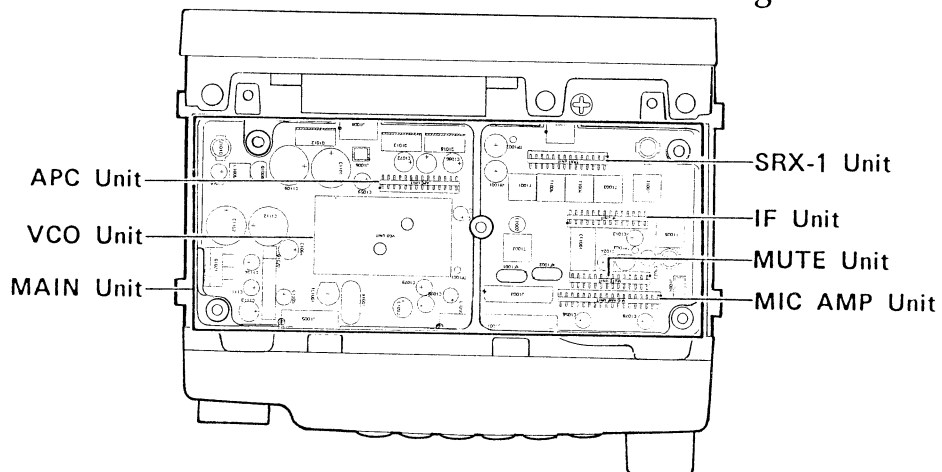


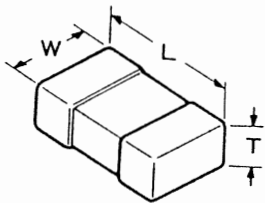
Figure 4.

# Chip Component Information

## Chip Component Information

The diagrams below indicate some of the distinguishing features of common chip components.

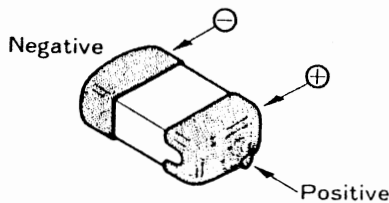
### Ceramic Capacitors



(Unit : mm)

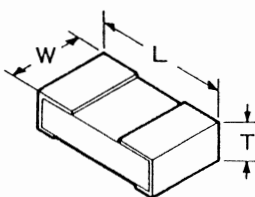
Type	L	W	T
3216	3.2	1.6	0.45~0.60
2125	2.0	1.25	0.35~0.50
1608	1.6	0.8	0.65~0.95

### Tantalum Capacitors



Polarized, Unmarked  
(determine value from layout and Parts List)

### Resistors



Type	L	W	T
1/10	2.0	1.25	0.45
1/16	1.6	0.8	0.45

#### INDICATED LETTERS

**1 2 3 4**  
**5 6 7 :**  
**9 0 .**

Type RMC 1/10W, 1/16W

Marking\* 100,222,473.....

473		
Ten unit	One unit	Multiplier code
0	0	$10^0$
1	1	$10^1$
2	2	$10^2$
3	3	$10^3$
4	4	$10^4$
5	5	$10^5$
6	6	$10^6$
7	7	$10^7$
8	8	$10^8$
9	9	$10^9$

Examples :

100 = 10Ω

222 = 2.2kΩ

473 = 47kΩ

# Chip Component Information

## Replacing Chip Components

Chip components are installed at the factory by a series of robots. The first one places a spot of adhesive resin at the location where each part is to be installed, and later robots handle and place parts using vacuum suction.

For single-sided boards, solder paste is applied and the board is then baked to harden the resin and flow the solder. For double-sided boards, no solder paste is applied, but the board is baked (or exposed to ultra-violet light) to cure the resin before dip soldering.

In our laboratories and service shops, small quantities of chip components are mounted manually by applying a spot of resin, placing with tweezers, and then soldering by very small dual streams of hot air (without physical contact during soldering). We remove parts by first removing solder using a vacuum suction iron, which applies a light, steady vacuum at the iron tip, and then breaking the adhesive with tweezers.

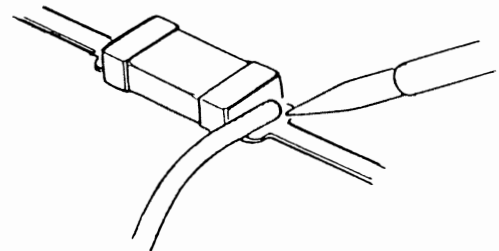
The special vacuum soldering/de-soldering equipment is recommended if you expect to do a lot of chip replacements. Otherwise, it is usually possible to remove and replace the chip components using only a tapered, temperature-controlled soldering iron, a set of tweezers and braided copper solder wick. Soldering iron temperature should be below 280°C (536°F).

## Precautions for Chip Replacement

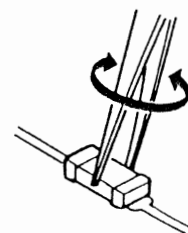
- ✗ Do not disconnect the chip forcefully, or the foil pattern may peel off the board.
- ✗ Never re-use a chip component. Dispose of all removed chip components immediately to avoid mixing with new parts.
- ✗ Limit soldering time to 3 seconds or less to avoid damaging the component and board.

## Removing Chip Components

Remove the solder at each joint, one joint at a time, using solder wick wetted with non-acid flux as shown below. Avoid applying pressure, and do not attempt to remove the tinning from the chip's electrode.



Grasp the chip on both sides with tweezers, and gently twist the tweezers back and forth (to break the adhesive bond) while alternately heating each electrode. Be careful to avoid peeling the foil traces from the board. Dispose of the chip when removed.

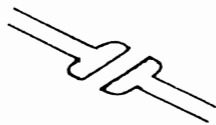


After removing the chip, use the copper braid and soldering iron to wick away any excess solder and smooth the land for installation of the replacement part.

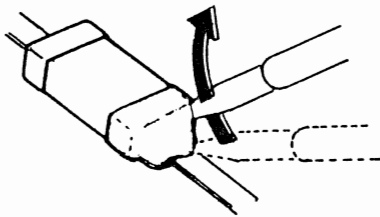
## *Installing a Replacement Chip*

As the value of chip components is not indicated on the body of the chip, be careful to get the right part for replacement.

- Apply a small amount of solder to the land on one side where the chip is to be installed. Avoid too much solder, which may cause bridging (shorting to other parts).



- Hold the chip with tweezers in the desired position, and apply the soldering iron with a motion line that is indicated by the arrow in the line below. Do not apply heat for more than 3 seconds.



- Remove the tweezers and solder the electrode on the other side in the manner just described.



## Receive Signal Path

Incoming RF from the antenna jack is delivered to the PA Unit and passes through a low-pass filter consisting of coils L703 & L704, capacitors C712 & C713 and antenna switching diodes, D703 & D704 (both M1308) to the MAIN Unit. Signals within the frequency range of the transceiver then enter a varactor-tuned bandpass filter consisting of diode D1012 (1T326) & T1005 before RF amplification by Q1004 (3SK131). The amplified RF is then varactor-tuned bandpass filtered again by diodes D1005, D1006, D1007 & D1008 (all 1T362) and T1003, T1004, T1006 & T1007 before impedance matching by T1001 and entering the 1st mixer Q1001 & Q1003 (both 2SK302).

Buffered output from the VCO Unit is amplified by Q1011 (2SC2759) to provide a pure 1st local signal between 126.3 and 130.3MHz for injection to the 1st mixer. The 17.7-MHz 1st mixer product then passes through dual monolithic crystal filters XF1001 & XF1002 (both 17T15BU :  $\pm 7.5$  kHz BW) to strip away all but the desired signal, which is then amplified by Q1002 (2SC2620).

The amplified 1st IF signal is applied to FM IF subsystem IC Q201 (MC3372ML) on the IF Unit, which contains the 2nd mixer, 2nd local oscillator, limiter amplifier, noise amplifier, S-meter amplifier and squelch gates. A 2nd local signal is generated from 17.245MHz crystal X201, to produce the 455kHz 2nd IF when mixed with the 1st IF signal within Q201. The 2nd IF then passes through ceramic filter CF 1001 (CFW455E) on the MAIN Unit, to strip away unwanted mixer products, and is then returned to the IF Unit and applied to the limiter amplifier in Q201, which removes amplitude variations in the 455kHz IF, before detection of the speech by ceramic discriminator CD201 (CDB455C7).

Detected audio from Q201 is fed through mute analog switch Q906 (2SC2812) on the

MUTE Unit and then enters the MIC AMP UNIT for de-emphasis, high-and low-pass filtering by Q501 (NJM2902M-1, -3) on the MIC-AMP Unit before returning to the MAIN Unit. Audio output level is controlled by VOL potentiometer VR2002 on the CNTL Unit and audio amplifier Q1020 (AN5262) before application to audio power amplifier Q1021 (TDA2003) for up to 2 watts for the optional headphone jack or 8-ohm loudspeaker.

## Squelch Control

The squelch circuitry consists of a noise amplifier, high-pass filter & squelch trigger within Q201, and noise detector D201 (1SS302), both on the IF Unit, squelch gate Q506 on the MIC-AMP Unit, and control circuitry within microprocessor Q2001 (HD4074629H) on the CNTL Unit.

When no carrier is received, noise at the output of the detector stage of Q201 (pin 11) is detected by D201 (1SS302) to provide a DC control voltage for squelch gate control. This voltage is delivered to NOISE/H TEMP pin 2 of Q2001 on the CNTL Unit. With no carrier present, pin 2 of Q2001 is high which signals the microprocessor to activate squelch gate Q506 (DTC323TK) on the MIC-AMP Unit, pulling the audio line to ground, thus silencing the receiver while no signal is being received.

## Transmit Signal Path

Speech input from the microphone is delivered via the CNTL Unit to the MIC-AMP Unit, where it passes through Mic Amplifier Q501 (NJM2902M-4) and Mic Mute analog switch Q503 (UPD4052BG). To prevent over-deviation, the audio is processed by IDC (instantaneous deviation control) Q501 (NJM2902M-2), and then low-pass filtered by Q501 (NJM2902M-3) before delivery to the modulator on the VCO Unit.

If a CTCSS tone is enabled for transmission, the subaudible tone from microprocessor Q2001 on the Control Unit is lowpass filtered

# Circuit Description

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by Q2013 (NJM2902M-3) and mixed with the IDC-processed speech audio. Also, DTMF tones from the microprocessor are applied to the transmit audio chain at the input of the IDC stage. The microprocessor also disables microphone audio at Mic Mute analog switch Q503 via Q505 (UPD4094BG) when necessary.

The modulated audio is delivered to varactor diodes D303 & D304 (Both 1T363) on the VCO Unit, frequency modulating the PLL carrier up to  $\pm 5$  kHz from the unmodulated carrier at the transmitting frequency. The modulated signal from transmitter VCO Q303 (2SC4226) is buffered by Q305 (2SC2759) and delivered to the Main Unit for amplification by Q1010 (2SC2759), Q1009 (MMBR951L) and Q1008 (2SC2538). The low-level transmit signal is then applied to the PA Unit, where it is finally amplified by PA module Q701 (M67781L) up to 50 watts output power. The transmit signal then passes through antenna switch D702 (UM9415) and is low-pass filtered to suppress away harmonic spurious radiation before delivery to the antenna.

## *Automatic Transmit Power Control*

RF power output from the final amplifier is sampled by C715 and rectified by D705 (1SS97) on the PA Unit. The resulting DC is passed through high/medium/low power controller Q404 (FMS1) on the APC Unit to Automatic Power Controller Q1012 (2SB1134S) on the MAIN Unit, which regulates supply voltage to transmitter RF amplifiers Q1008 and Q701, to maintain stable high, medium or low output power under varying antenna loading conditions.

## *Spurious Suppression*

Generation of spurious products by the transmitter is minimized by the fundamental carrier frequency being equal to the final transmitting frequency, modulated directly in the transmit VCO. Additional harmonic suppression is provided by low-pass filter consisting of L701, L704, L705 and C706, C707, C708, C713, C714, C722 and C723, resulting in more than 60

dB of harmonic suppression (for transmitting frequencies in the amateur band) prior to delivery to the antenna.

## *PLL Frequency Synthesizer*

PLL circuitry on the Main Unit consists of PLL subsystem IC Q1016 (MB1504), which contains a reference oscillator/divider, serial-to-parallel data latch, programmable divider and a phase comparator. Stability is maintained by a regulated 5-V supply via Q1018 (UPD7805H) to Q1016 and temperature compensating capacitors associated with 12.8 MHz frequency reference crystal X1001.

Receiver VCO Q301 (2SC4226) on the VCO Unit oscillates between 126.3 MHz and 130.3MHz according to the programmed receiving frequency. The VCO output is buffered by Q305 (2SC2759) on the VCO Unit, and then returned to the Main Unit where a sample of the output is buffered by Q1015 (2SC2714) for application to the prescaler/swallow counter section of Q1016. There the VCO signal is divided by 64 or 65, according to a control signal from the data latch section of Q1016, before being applied to the programmable divider section in the PLL chip.

The data latch section of Q1016 also receives serial dividing data from microprocessor Q2001 on the Control Unit, which causes the pre-divided VCO signal to be further divided by 25260 to 26060 in the programmable divider section, depending upon the desired receive frequency, so as to produce a 5 kHz or 6.25 kHz derivative of the current VCO frequency. Meanwhile, the reference divider section in Q1016 divides the 12.8 MHz crystal reference by 2560 (or 2048) to produce the 5 kHz (or 6.25 kHz) loop reference (respectively).

The 5 kHz (or 6.25 kHz) signal from the programmable divider (derived from the VCO) and that derived from the crystal are applied to the phase detector section in Q1016, which produces a dual 5 V pulsed output with pulse duration depending on the phase difference between the input signals. This pulse train

is converted to DC by charge pump section of Q1016, and is then fed through the low-pass filter to varactors D301 to D304 (both 1T363) on the VCO Unit.

Changes in the level of the DC voltage applied to D301 & D302 affect the reactance in the tank circuit of Receiver VCO Q301, changing the oscillating frequency according to the phase difference between the signals derived from the VCO and the crystal reference oscillator. The VCO is thus phase-locked to the crystal reference oscillator.

The output of receiver VCO Q301, after buffering by Q305, is delivered to the Main Unit for amplification by Q1011 (2SC2759) before application to the 1st mixer, as described previously.

Transmitter VCO Q303 (2SC4226) oscillates between 144 MHz and 148 MHz according to the programmed transmit frequency. The remainder of the PLL circuitry is shared with the receiver. However, the dividing data from the microprocessor is such that the VCO frequency is at the actual transmit frequency (rather than offset for IFs, as in the receiving case). Also, the transmitter VCO is modulated by de-empha-

sized audio applied to D303 & D304, as described previously.

## *Transmit Inhibit*

When the transmit PLL is unlocked pin 7 of PLL chip Q1016 goes to a logic low, turning on Q1017, Q405 and Q401, which then turns off Automatic Power Controller Q401 and Q1012 to disable the supply voltage to transmitter RF amplifiers Q1008 and Q701, disabling the transmitter.

## *Miscellaneous Circuits*

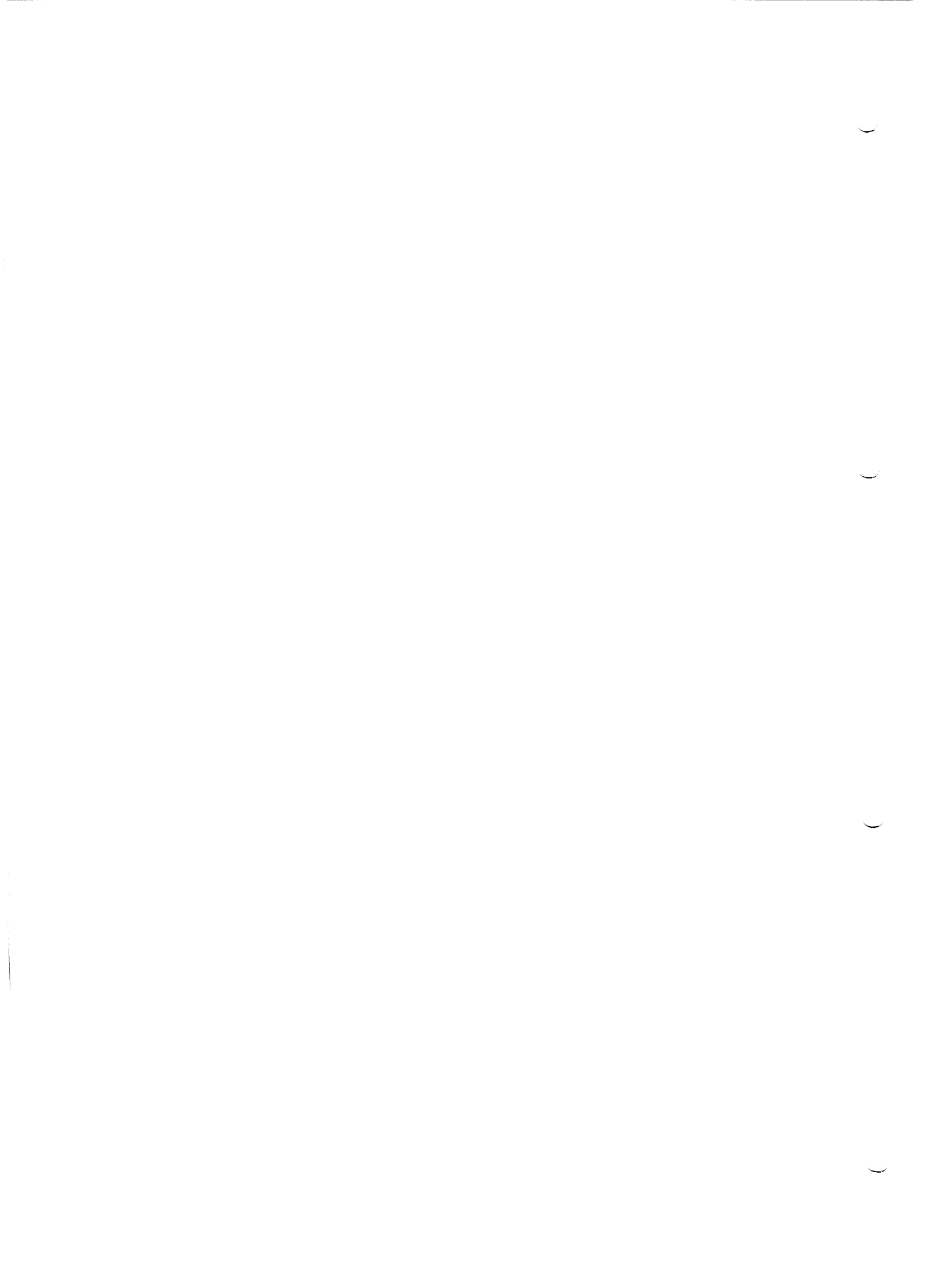
### *Push-To-Talk Transmit Activation*

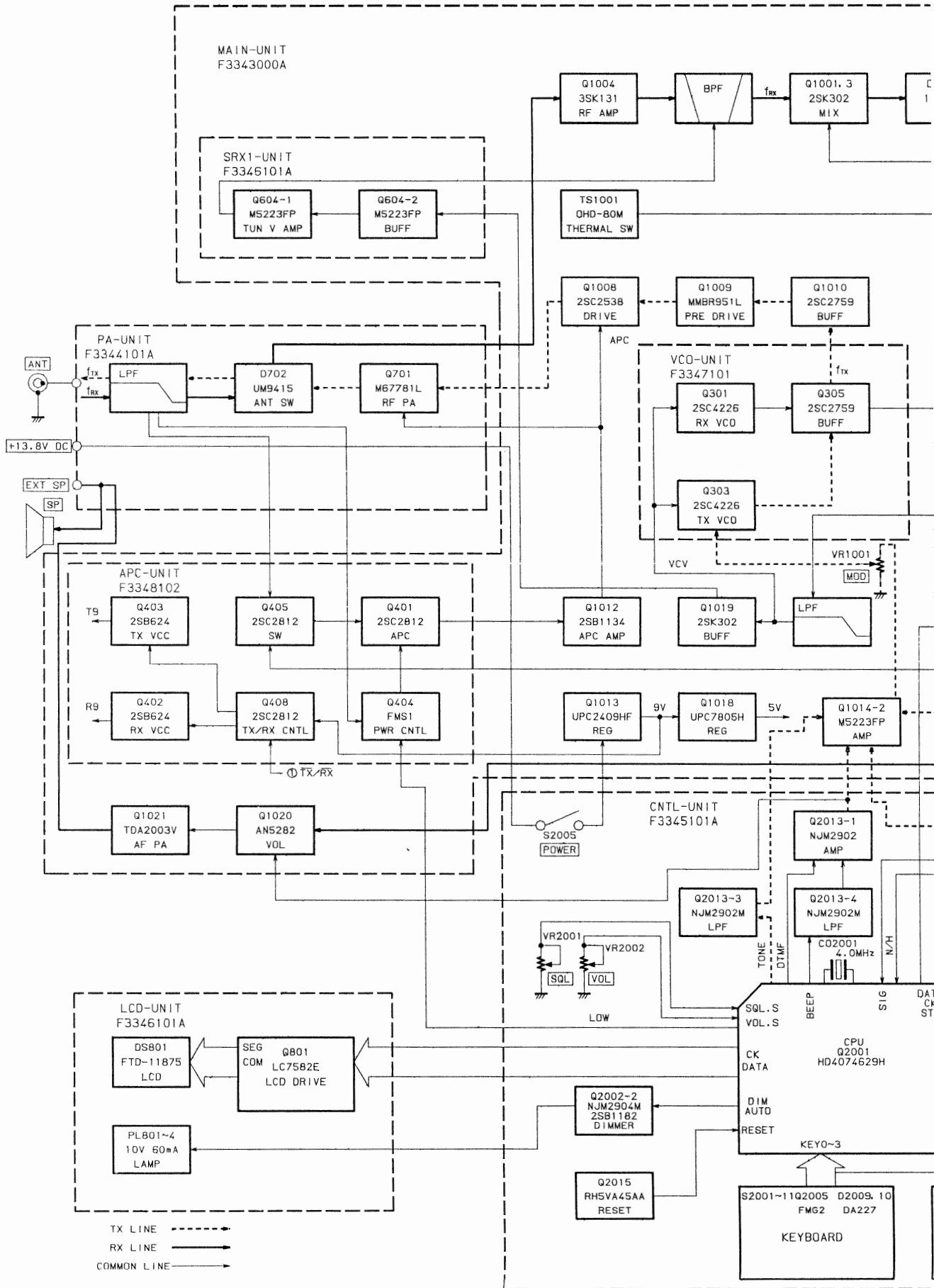
The PTT switch on the microphone is connected to pin 21 of microprocessor Q2001, so that when the PTT switch is closed, pin 21 of Q2001 goes low. This signals microprocessor to activate TX/RX controller Q408 (2SC2812) on the APC Unit, which then disables the receiver by disabling the 9V supply bus at Q402 (2SB624) to the front-end, IF, discriminator and receiver VCO circuitry. At the same time, Q403 (2SB624) activates the transmit 9 V supply line to enable the transmitter.

Notes

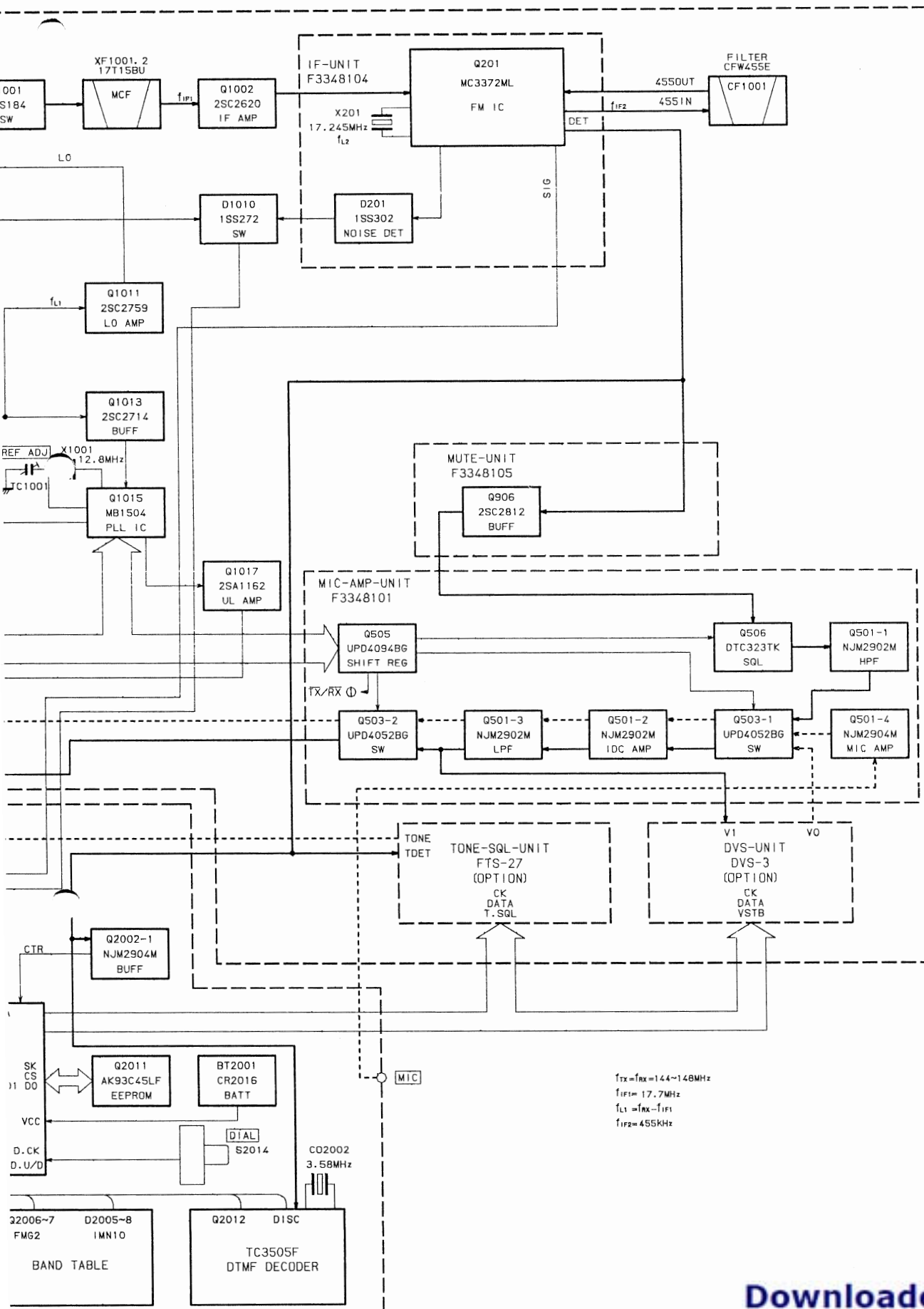
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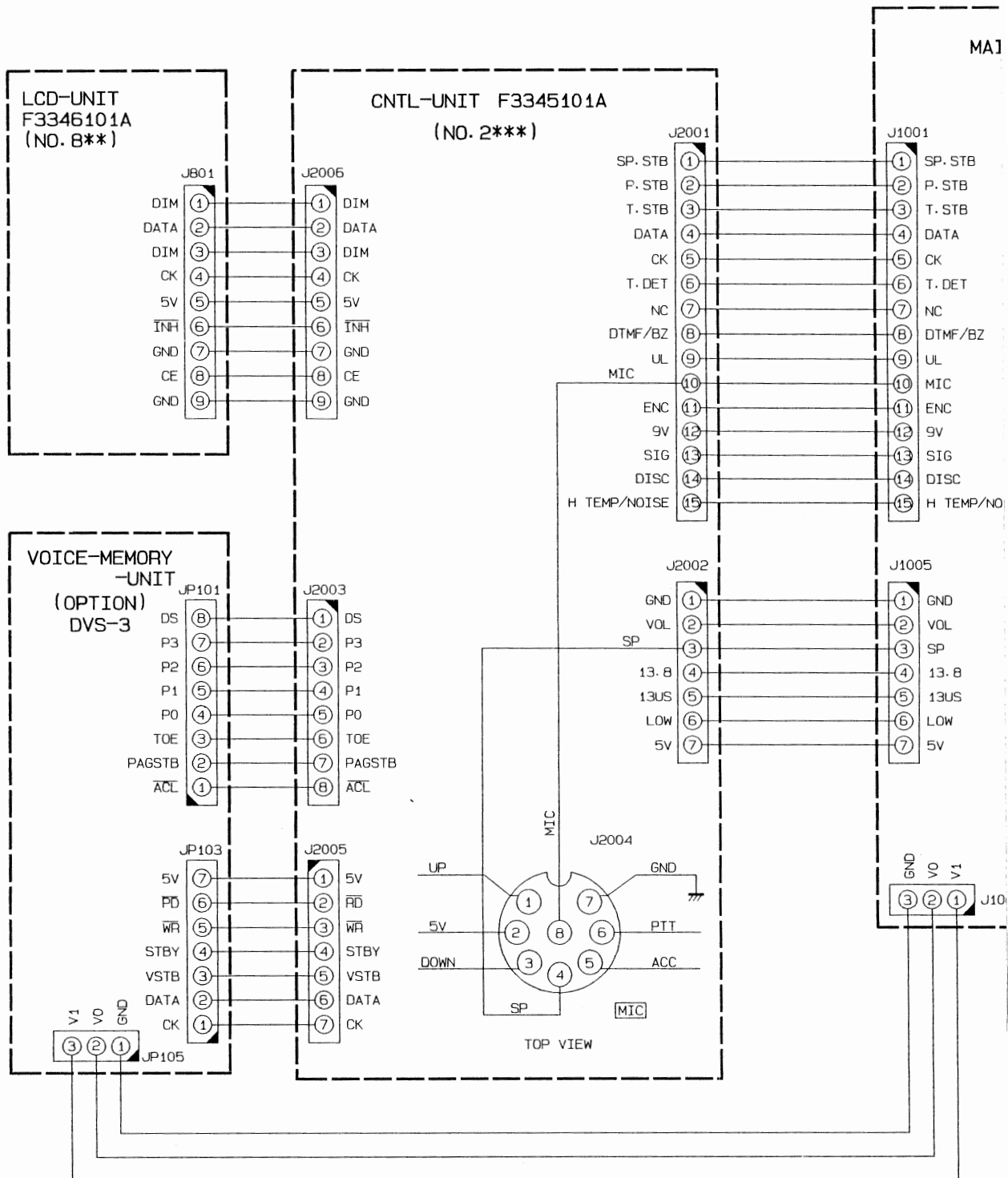


# Block Diagram

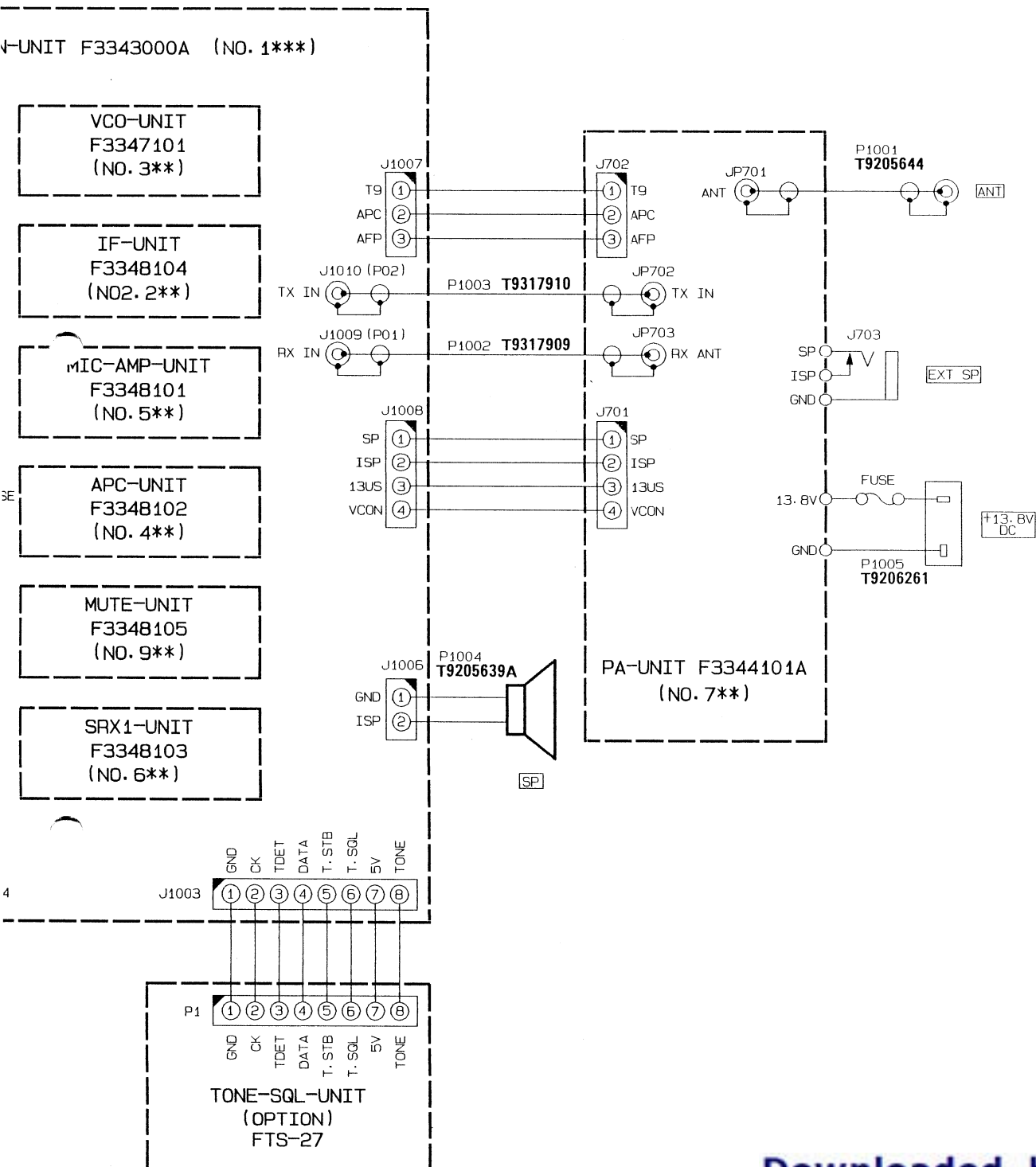


$f_{rx} = f_{cx} - 144 - 148 \text{ MHz}$   
 $f_{IF1} = 17.7 \text{ MHz}$   
 $f_{L1} = f_{rx} - f_{IF1}$   
 $f_{IF2} = 455 \text{ kHz}$

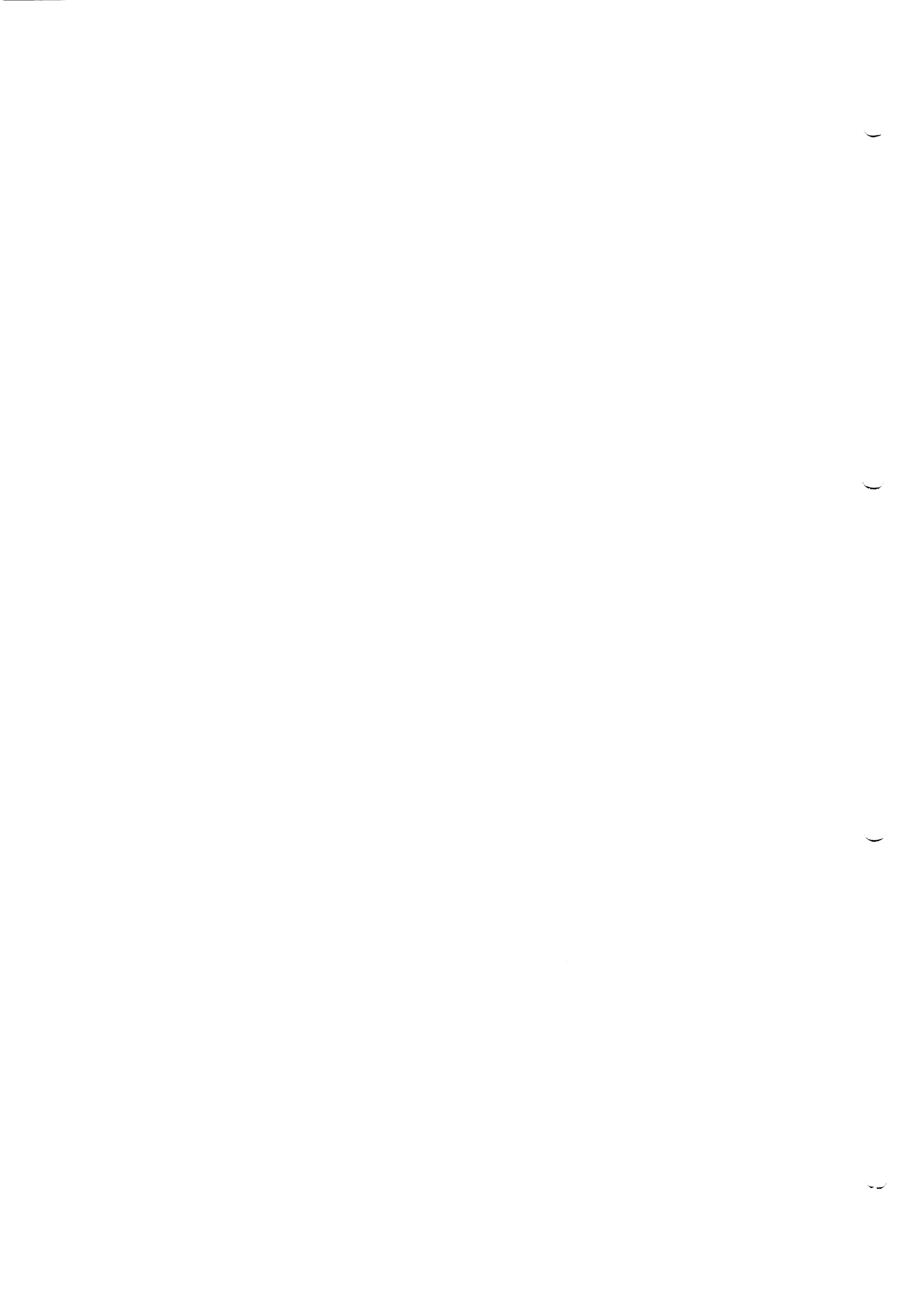
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RadioManual.EU



# Interconnection Diagram



Downloaded by  
RadioManual.EU



# LCD, CNTL Unit Access & Pilot Lamp Replacement

## LCD and Control Unit Access

- ❑ To access the Control Unit and LCD, remove the **VOL**, **SQL** and **DIAL** knobs by gently pulling them outward.
- ❑ Remove the two screws as shown in Figure 5, then unscrew the ring nut affixing the mic jack (you may be able to do this carefully using a pair of long-nose pliers, or have your dealer do this with a special wrench).
- ❑ Again using a pair of long nose pliers, remove the nut from the **DIAL** knob shaft. Remove the front panel and LCD Unit by gently pulling it away from the transceiver body. Note the small connector on the rear of the LCD Unit that mates with jack J2006 on the Control Unit circuit board (Figure 6).

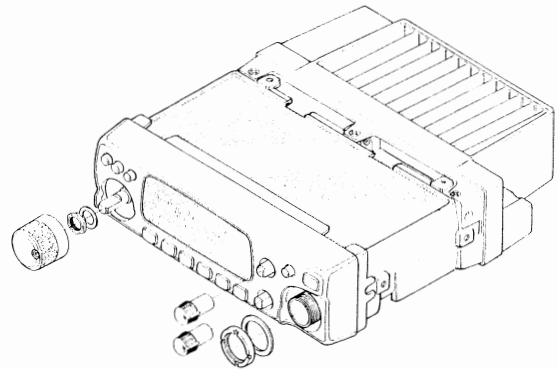


Figure 5.

## Pilot Lamp Replacement

With the rear of the front panel exposed, the four LCD backlighting lamps are accessible (Figure 6). Use a low-wattage soldering iron to remove the lamps and install new ones.

## Control Unit Jumper Settings

From the factory, pin 5 of the microphone jack is wired to enable certain functions by pressing the **D/MR** or **CALL** button on the supplied microphone. The function selectable differs according to transceiver version type, as configured by jumper settings on the front of the Control Unit PCB (see Figure 7 at the right and Table 1 on the next page).

## Squelch Status/ Packet TNC Modification

Most packet TNCs can be connected to the FT-2200 as outlined in the Operation Manual, however, some earlier model TNCs require a Squelch Status indication from the transceiver for operation. If your unit is this type, you can modify a jumper setting for this indication via pin 5 of the mic. jack. However, please confirm this in the documentation supplied with the TNC before performing the modification.

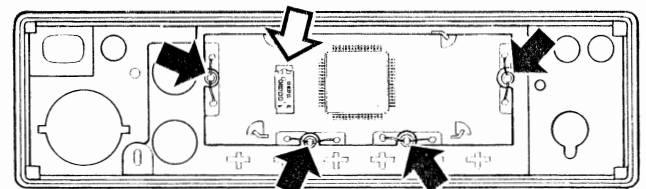


Figure 6.

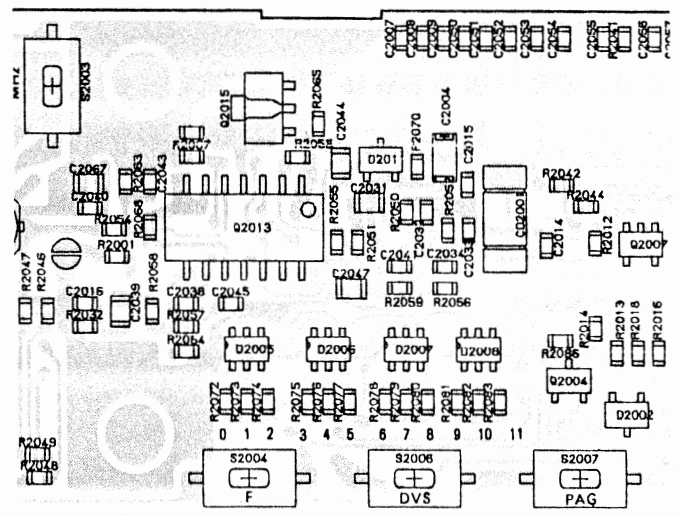


Figure 7.

# Lithium Backup Battery Replacement

Table 1. Accessory Jumper Settings

JMP 8	JMP 9	JMP 10	Function
			Toggle DIAL/Memory Mode
✕			Toggle CALL Channel
	✕		1750 Hz Tone Burst
✕	✕		Monitor (Squelch Disable)
		✕	Squelch Status (channel busy)

" ✕ " denotes installed jumper.

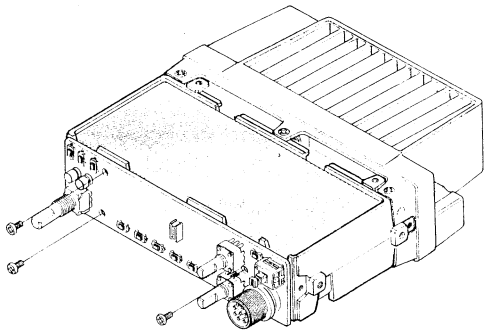


Figure 8.

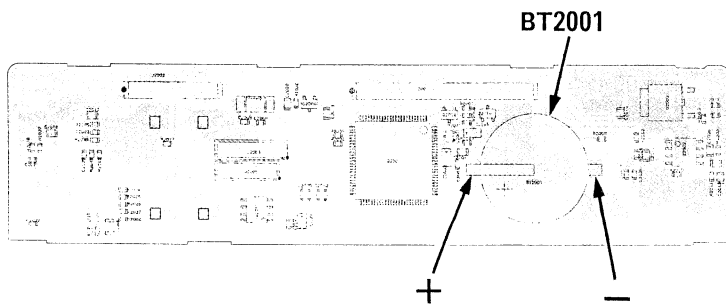


Figure 9.

- ☐ Note the location of jumper pads 8, 9 & 10 on the bottom left of the front of the Control Unit PCB (Figure 7).
- ☐ Using a low-wattage soldering iron, solder a 0-K $\Omega$  chip resistor or jumper wire across pad 10. Do not jumper the pad by forming a solder bridge!

## Control Unit PCB Removal

- ☐ With the Front Panel removed and Control Unit exposed, remove the three screws affixing the Control Unit PCB to the front of the transceiver chassis, then remove the Control Unit using both hands to gently evenly pull it away from the front of the Main Unit PCB and transceiver chassis. Note how jacks J2001 & J2002 on the rear of the Control Unit mate with the corresponding connectors on the Main Unit, use these as alignment guides when re-installing the Control Unit PCB (Figure 8).

## Lithium Battery Replacement

- ☐ With the Control Unit removed from the chassis, locate Lithium Backup Battery BT2001(P/N Q9000552) on the rear side of the PCB (Figure 9). Note the polarity and correct mounting of the cell terminals. Unsolder the battery terminals and remove the old cell. Note: do not dispose of the old battery in fire, and ensure small children cannot play with, or possibly ingest the cell.
- ☐ Install the insulating seals (P/N R8118690) on each side of the battery by peeling back the adhesive covering and sticking one to each side of the cell (below Figure 10).

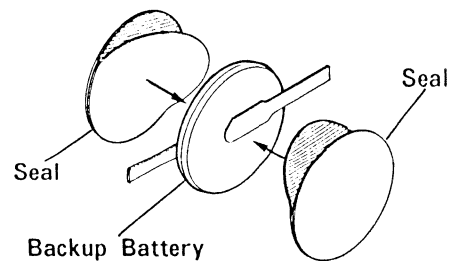


Figure 10.

The FT-2200 has been carefully aligned at the factory for the specified performance across the amateur band. Realignment should therefore not be necessary except in the event of a component failure. All component replacement and service should be performed only by an authorized Yaesu representative, or the warranty policy may be voided.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend that servicing be performed only by authorized Yaesu service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Yaesu service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components.

Those who do undertake any of the following alignments are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty compo-

nents replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Have all test equipment ready before beginning, and follow all of the steps in a section in the order presented.

## *Required Test Equipment*

- RF Signal Generator with calibrated output level at 200 MHz
- Deviation Meter (linear detector)
- Oscilloscope
- AF Millivoltmeter
- SINAD Meter
- Inline Wattmeter with 5% accuracy at 200 MHz
- Regulated DC Power Supply adjustable from 10 to 17 VDC, 10A
- 50- $\Omega$  Dummy Load: 100W at 200 MHz
- Frequency Counter:  $\pm 0.2$  ppm accuracy at 200 MHz
- AF Signal Generator
- DC Voltmeter: high impedance
- DC Ammeter 15 A
- Spectrum Analyzer
- VHF Sampling Coupler

# Alignment

## Alignment Preparation & Precautions

A 50-Ω dummy load and inline wattmeter must be connected to the main antenna jack in all procedures that call for transmission, except where specified otherwise. Correct alignment is not possible with an antenna.

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

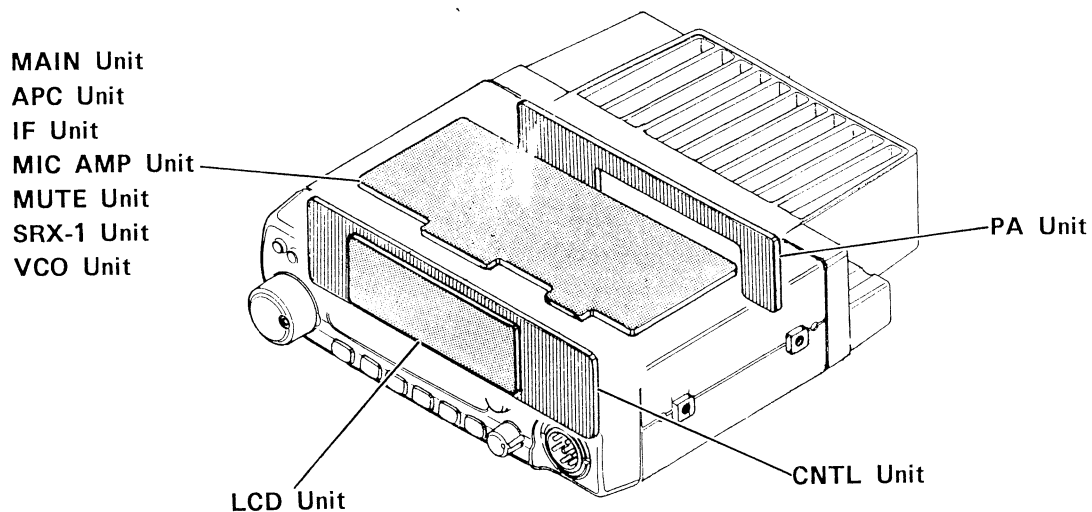
Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this tem-

perature be held constant between 20 and 30 °C (68 ~ 86 °F). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization with the environment before alignment.

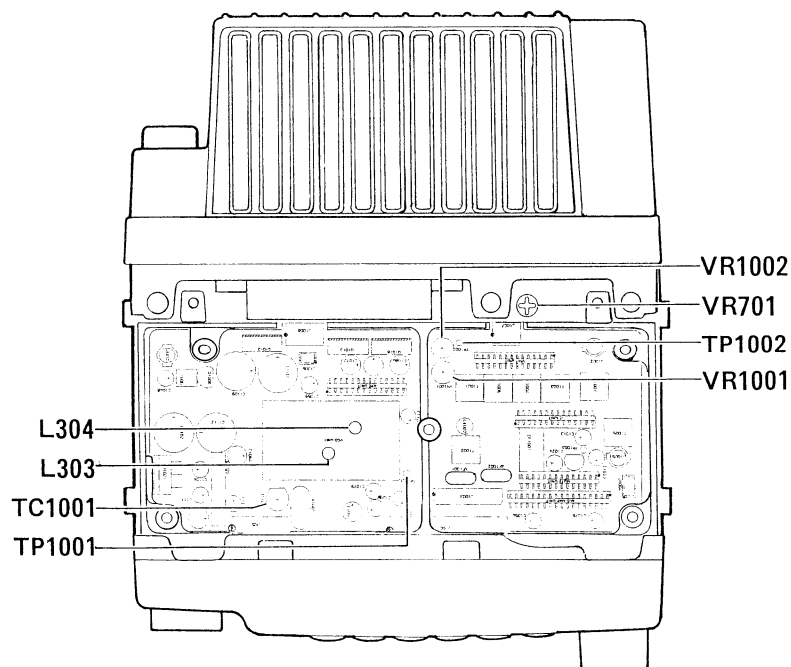
Whenever possible, alignments should be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

*Note:* Signal levels in dB referred to in the alignment procedure are based on  $0 \text{ dB}\mu = 0.5 \mu\text{V}$ .

## Circuit Board Locations



## PLL & Transmitter Alignment Points

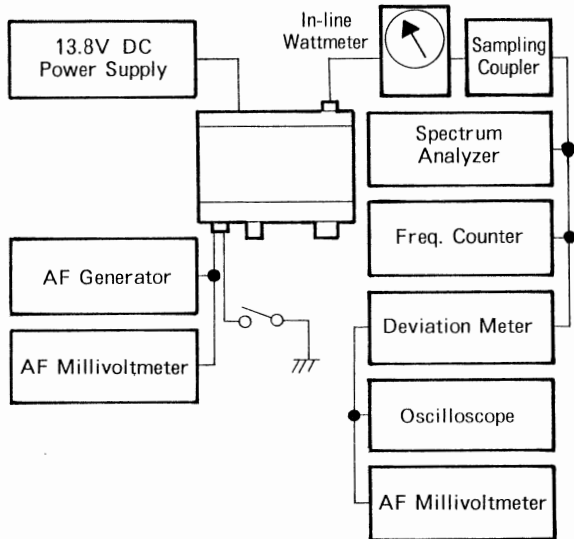


# PLL VCV, Reference Oscillator & Transmitter Deviation

## PLL & Transmitter

Set up the test equipment as shown for transmitter alignment. Maintain the supply voltage at 13.8V DC for all steps.

### PLL & Transmitter Alignment Setup



### PLL VCV (Varactor Control Voltage)

- Connect the positive lead of the DC voltmeter to the test point TP1001 on the Main Unit, as indicated in the figure, and the negative lead to chassis ground.
- Set the transceiver to the top edge of the band for the version type being aligned, and adjust coil L303 on the VCO Unit for the voltage indicated below while receiving at that frequency.

RX & TX VCV ALIGNMENT DATA				
Version	Low Band-Edge		High Band-Edge	
	Frequency	Voltage	Frequency	Voltage
B1	144 MHz	< 2.0	146	> 2.7
A2	140 MHz	< 1.3	150	> 3.2
A3	140 MHz	< 1.3	174	6.3 ± 0.2
B3	140 MHz	< 1.3	174	6.3 ± 0.2

- Retune to the low band-edge frequency, and confirm the VCV voltage as indicated in the table.
- Tune to the high band-edge channel, and this time key the transmitter while adjusting coil L304 on the VCO Unit for the voltage indicated in the table for transmit.
- Again retune to the low-edge channel, key the transmitter, and confirm the VCV voltage.

### PLL Reference Frequency

- With the wattmeter, dummy load and frequency counter connected to the antenna jack, and while tuned to 146.000 MHz, key the transmitter and adjust TC1001 on the Main Unit, if necessary, so the counter frequency is within 100 Hz of 146.000 MHz.

### Transmitter Deviation

- While tuned to 146.000 MHz, adjust the AF generator attenuator for 50 mV output at 1 kHz to the MIC jack.
- Key the transmitter and adjust VR1001 on the Main Unit for ± 4.5 kHz deviation on the deviation meter (within 100 Hz).

### Automatic Final Protection

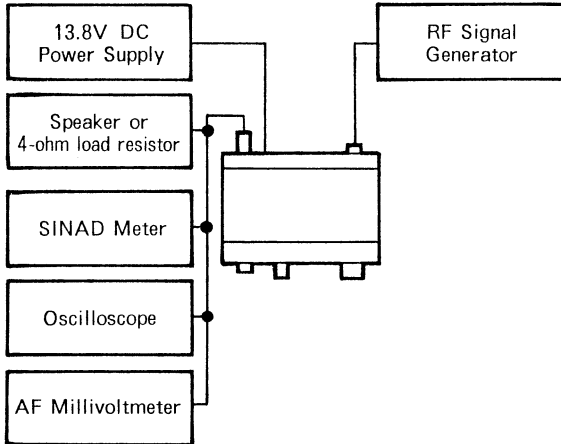
- Disconnect the dummy load from the antenna connector. Connect a DC Ammeter in series with the power cable.
- Connect the DC voltmeter to test point TP1002 located near VR1002.
- Key the transmitter and adjust VR701 on the PA Unit for minimum voltage indicated on the voltmeter.
- Key the transmitter and adjust VR1002 on the Main Unit for maximum current indicated on the ammeter.

# Receiver Interstage Transformers

## Receiver

Set up the test equipment as shown below for receiver alignment.

### Receiver Alignment Setup

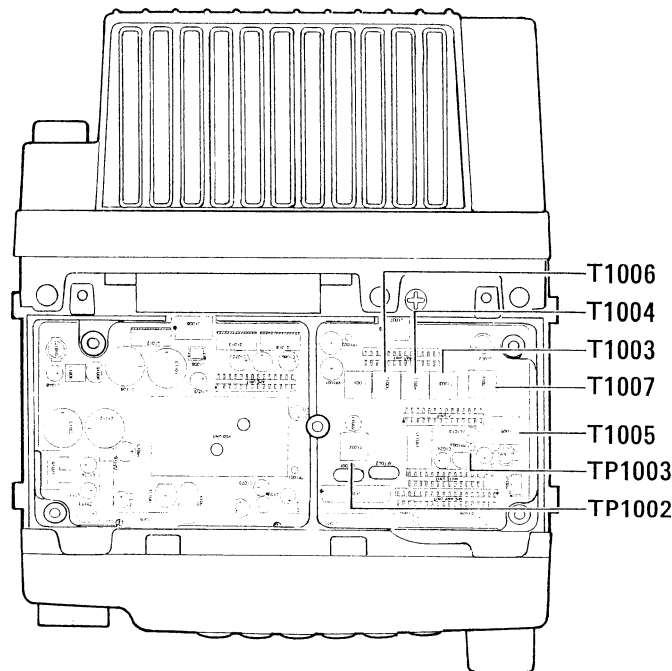


- Tune the transceiver and RF signal generator to 146.000 MHz and inject a signal modulated with  $\pm 3.5$  kHz deviation of a 1 kHz tone.
- Adjust T1002 through T1007 on the Main Unit for optimum indication on the meter.
- Confirm at least  $-7.5$  dB $\mu$  for 12 dB SINAD at high and low band edges.

## Interstage Transformers

- Connect a DC Voltmeter between test point TP1003 on the Main Unit and chassis ground.

### Receiver Alignment Points



# Internal System Alignment Routine

The remainder of the FT-2200 alignment is accomplished by recalling a special routine programmed in the transceiver CPU. This alignment routine simplifies many previously complex discrete component settings and adjustments with digitally-controlled settings via front panel buttons and LCD indications.

Transceiver adjustments using this routine include :

S-Meter Adjustment (S1, S-9)

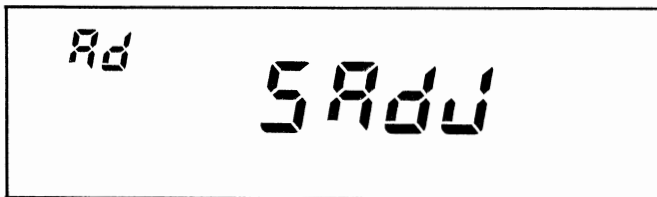
Squelch Preset (threshold, tight)

Scan Center-Stop (+, -, —)

Power Output Adjustment (Hi/Mid/Lo)

To call the routine program, set the transceiver to 146.000 MHz, then turn the transceiver off. Next press and hold the **LOW LOCK**, **STEP REV** and **ACC** button on the microphone together while powering the radio on again (**POWER**).

The alignment routine is now active, and the display will now appear as below, indicating the first adjustment setting (all S-meter segments).



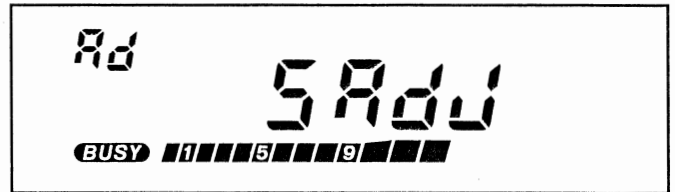
In the alignment routine, each adjustment is selected in sequence by pressing the **MHz PRI** button. Repeatedly pressing **MHz PRI** will step through a total of nine setting adjustments, as listed above. In the memory box "Ad" will appear blinking, indicating the currently selected setting can be adjusted. At this point, alignment is performed by injecting a signal of a required frequency or level, transmitter output power level adjustments are performed using the DIAL knob.

Pressing **CALL DTMF** after a level setting or adjustment has been made writes the entry into

memory, to exit the alignment sub-routine and return the display indications to normal, press **LOW LOCK**. After performing the system alignment in its entirety, individual settings can be returned to and adjusted should the need arise.

## S-Meter Adjustment

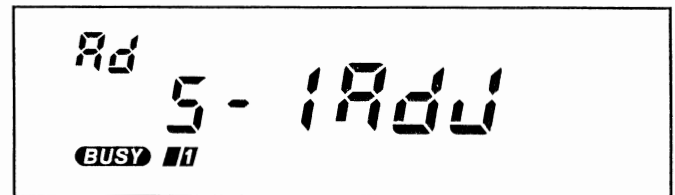
Full-Scale Adjust (all segments)



If you haven't done so already, perform the power-on key combination as previously described, then press **MHz PRI** ("Ad" blinking).

Inject +25 dBμ RF signal (±3.5 kHz deviation at 1-kHz) at the antenna input, press **CALL DTMF** to save the setting, then **MHz PRI** to step to the next setting.

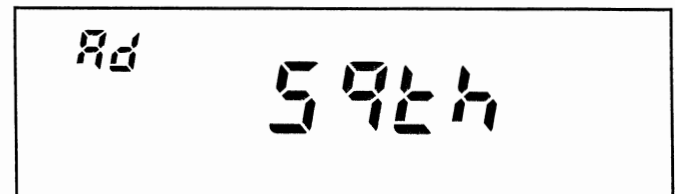
Low-Scale Adjust (single segment)



Adjust the signal generator level 0 dB, then press **CALL DTMF** ⇒ **MHz PRI**.

## Squelch Preset

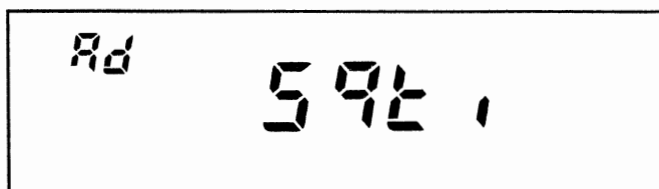
Threshold



Adjust the level for a -16 dB signal, then press **CALL DTMF** ⇒ **MHz PRI**.

# Internal System Alignment Routine

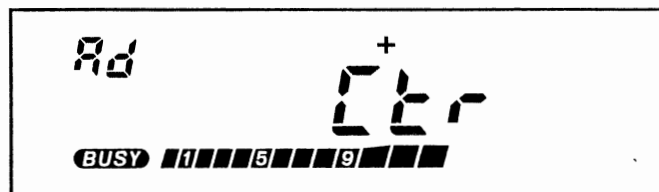
*Tight*



Adjust for a -3 dB signal, then press  $\text{CALL}_{\text{DTMF}} \Rightarrow \text{MHz}_{\text{PRI}}$ .

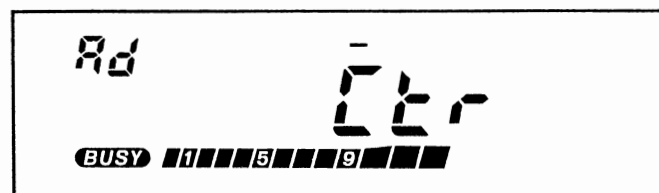
*Scan Center-Stop*

+ Offset



Inject a +20 dB signal of 146.003 MHz ( $\pm 3.5$  kHz deviation of a 1-kHz tone), then press  $\text{MHz}_{\text{PRI}} \Rightarrow \text{CALL}_{\text{DTMF}}$ .

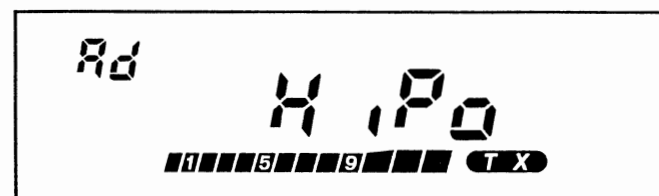
— Offset



Adjust the generator frequency to 145.997 MHz, then press  $\text{CALL}_{\text{DTMF}} \Rightarrow \text{MHz}_{\text{PRI}}$ .

*TX Power Output Level Adjust.*

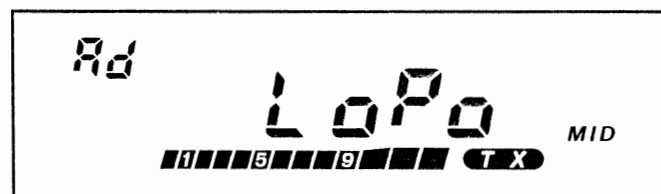
*High Power Adjust*



Connect a dummy load wattmeter to the antenna connector, then key the transmitter and adjust the output power level for 48 watts by rotating the DIAL knob on the transceiver.

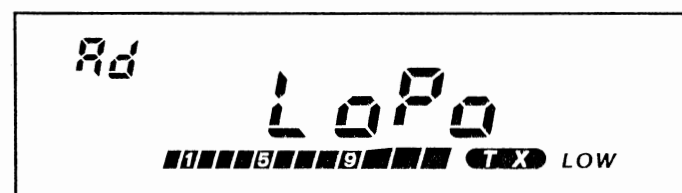
Press  $\text{CALL}_{\text{DTMF}} \Rightarrow \text{MHz}_{\text{PRI}}$ .

*Mid-Power Adjust ("MID" indicator displayed)*



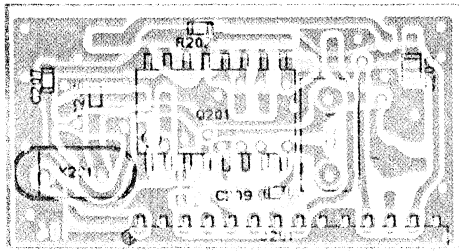
Key the transceiver and adjust for 25 watts, then press  $\text{CALL}_{\text{DTMF}} \Rightarrow \text{MHz}_{\text{PRI}}$ .

*Low Power Adjust*



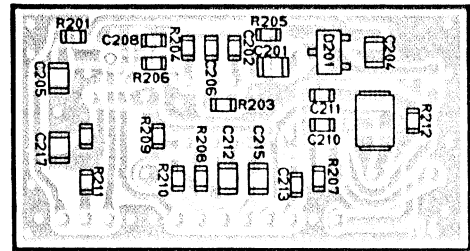
Key the transceiver and adjust for 5 watts, then press  $\text{CALL}_{\text{DTMF}} \Rightarrow \text{MHz}_{\text{PRI}}$ .

This completes the internal alignment routine, to save all settings and exit, press  $\text{CALL}_{\text{DTMF}}$  then  $\text{LOW}_{\text{LOCK}}$ , the normal frequency display will return.

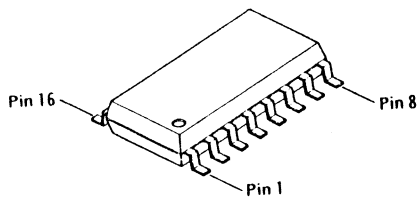


IF IN  
GND  
LOCAL  
455OUT  
BYPASS  
455 IN  
DET IF  
GND  
SIG  
R3  
NOISE  
GND

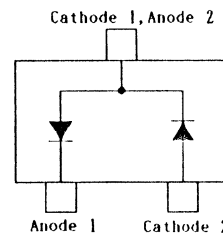
component side



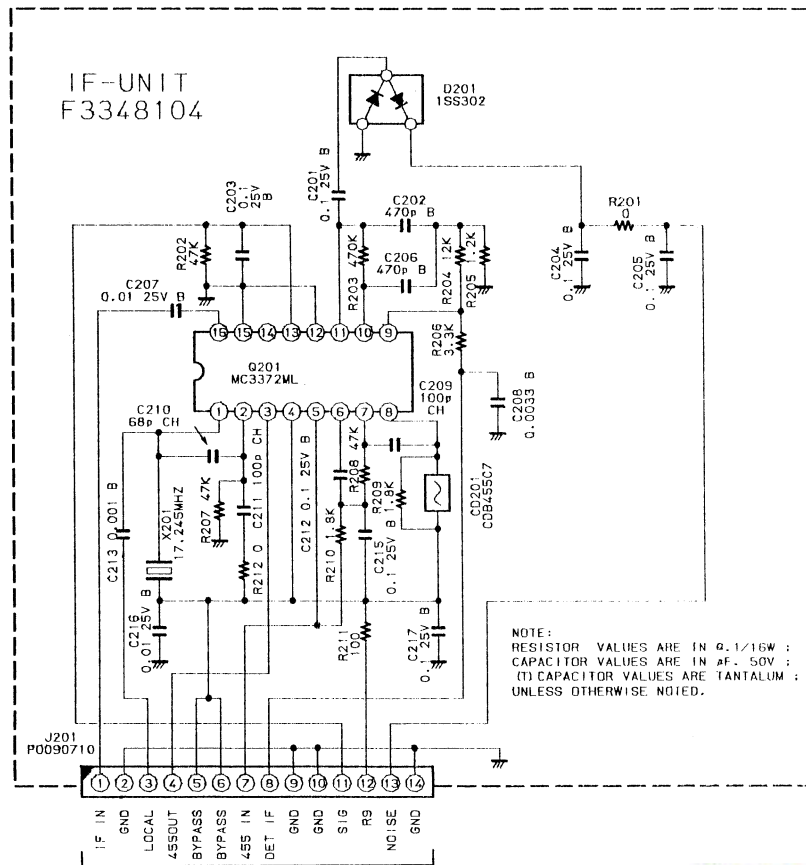
chip-only side



MC3372ML  
(Q201)



1SS302 (C3)  
(D201)



To MAIN Unit  
(See Page 31-1)

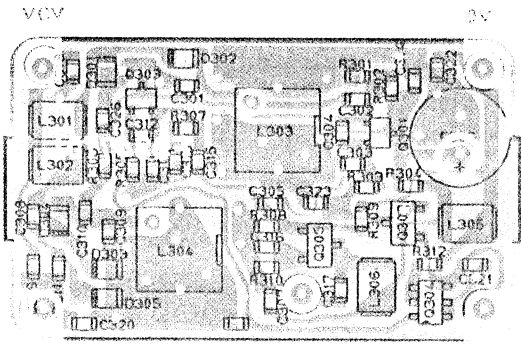
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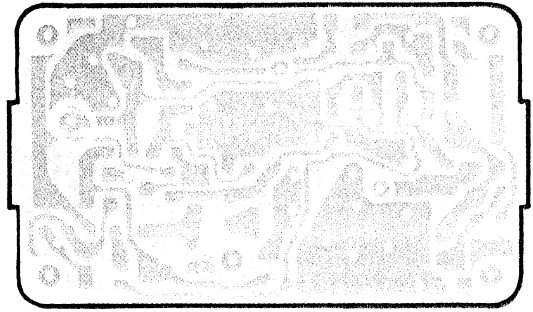
# IF Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** IF UNIT ***								
	PCB With Components					CA0784001		
	Printed Circuit Board					F3348104		
C 0201	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0202	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 0203	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0204	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0205	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0206	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 0207	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0208	CHIP CAP.	0.0033uF	50V	B	GRM39B332M50PT	K22174815		
C 0209	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0210	CHIP CAP.	68pF	50V	CH	GRM39CH680J50PT	K22174231		
C 0211	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0212	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0213	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0215	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0216	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0217	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
CD0201	CERAMIC DISC				CDB455C7	H7900180		
D 0201	DIODE				1SS302 TE85R	G2070088		
J 0201	CONNECTOR				9230B-1-14Z005-T	P0090710		
Q 0201	IC				MC3372ML	G1091108		
R 0201	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 0202	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0203	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0204	CHIP RES.	12K	1/16W	5%	RMC1/16 123JATP	J24185123		
R 0205	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 0206	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0207	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0208	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0209	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 0210	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 0211	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0212	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
X 0201	XTAL	17.245MHz				H0102986		
	XTAL HOLDER					R3129530		

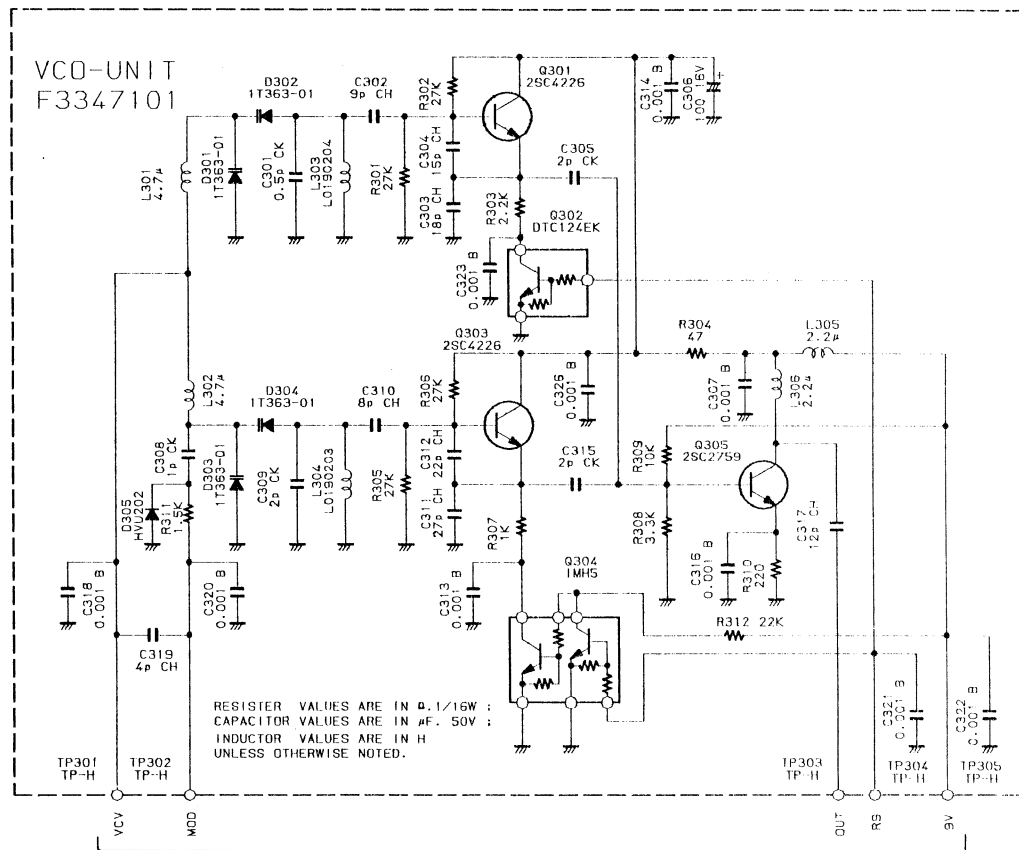
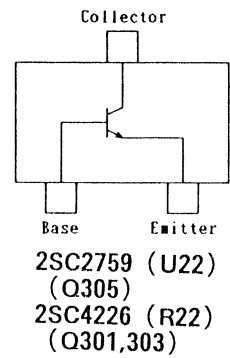
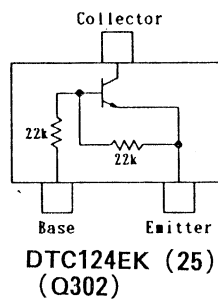
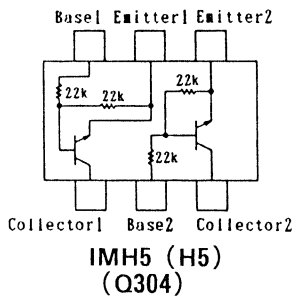




component side



solder side



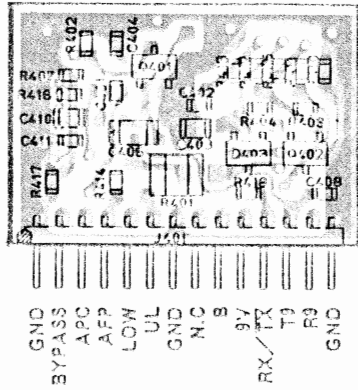
To MAIN Unit  
(See Page 31-1)



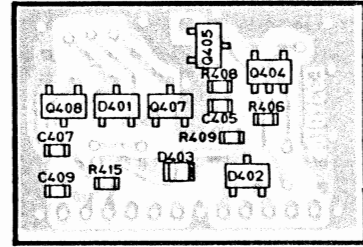
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** VCO UNIT ***								
PCB With Components						CA0953001		
Printed Circuit Board						F3347101		
C 0301	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 0302	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 0303	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		
C 0304	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		
C 0305	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 0306	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 0307	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0308	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 0309	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 0310	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 0311	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 0312	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 0313	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0314	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0315	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 0316	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0317	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 0318	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0319	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 0320	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0321	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0322	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0323	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0326	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 0301	DIODE				1T363-01-T08A	G2070114		
D 0302	DIODE				1T363-01-T08A	G2070114		
D 0303	DIODE				1T363-01-T08A	G2070114		
D 0304	DIODE				1T363-01-T08A	G2070114		
D 0305	DIODE				HVU202-10TRP	G2070092		
L 0301	COIL	4.7uH			32CS 380LB-4R7M=P	L1690035		
L 0302	COIL	4.7uH			32CS 380LB-4R7M=P	L1690035		
L 0303	COIL				MC139	L0190204		
L 0304	COIL				MC139	L0190203		
L 0305	COIL	2.2uH			32CS 380LB-2R2M=P	L1690017		
L 0306	COIL	2.2uH			32CS 380LB-2R2M=P	L1690017		
Q 0301	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0302	TRANSISTOR				DTC124EK T97	G3070034		
Q 0303	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0304	TRANSISTOR				1MH5 T108	G3070027		
Q 0305	TRANSISTOR				2SC2759-T2B U22	G3327597B		
R 0301	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		

# VCO Unit

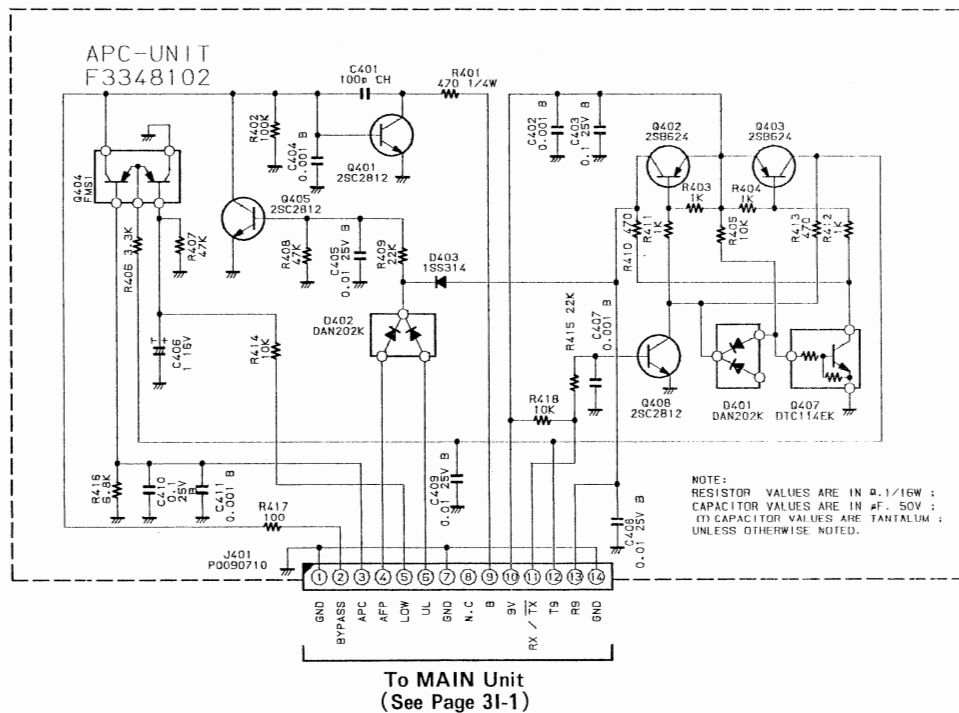
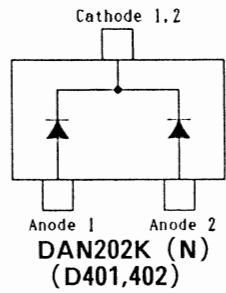
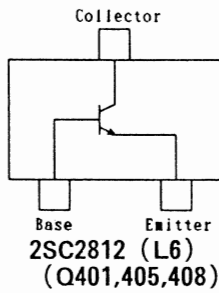
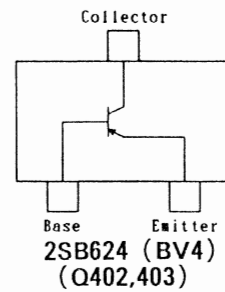
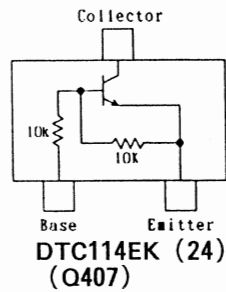
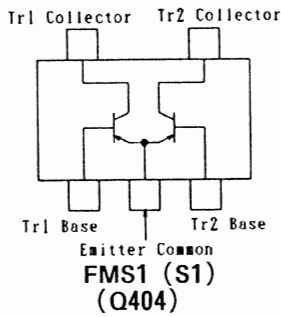
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR
R 0302	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
R 0303	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0304	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		
R 0305	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
R 0306	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
R 0307	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0308	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0309	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0310	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		
R 0311	CHIP RES.	1.5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 0312	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
TP0301	TP-H				MK-10160	Q5000037		
TP0302	TP-H				MK-10160	Q5000037		
TP0303	TP-H				MK-10160	Q5000037		
TP0304	TP-H				MK-10160	Q5000037		
TP0305	TP-H				MK-10160	Q5000037		
	SHIELD CASE					R0145010A		
	SHIELD REAR					R0145020		



component side



chip-only side

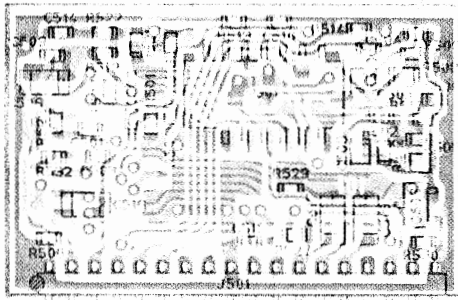




REF.	MFR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** APC UNIT ***								
	PCB With Components					CA0786001		
	Printed Circuit Board					F3348102		
C 0401	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0402	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0403	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0404	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0405	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0406	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0407	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0408	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0409	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0410	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0411	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 0401	DIODE				DAN202K T146	G2070182		
D 0402	DIODE				DAN202K T146	G2070182		
D 0403	DIODE				1SS314 TPH3	G2070122		
J 0401	CONNECTOR				9230B-1-14Z005-T	P0090710		
Q 0401	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 0402	TRANSISTOR				2SB624-T2B BV4	G3206247D		
Q 0403	TRANSISTOR				2SB624-T2B BV4	G3206247D		
Q 0404	TRANSISTOR				FMS1 T98	G3070008		
Q 0405	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 0407	TRANSISTOR				DTC114EK T96	G3070002		
Q 0408	TRANSISTOR				2SC2812L6-TA	G3328127F		
R 0401	CHIP RES.	470	1/4W	5%	RMC1/4 471JATP	J24245471		
R 0402	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0403	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0404	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0405	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0406	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0407	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0408	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0409	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0410	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 0411	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0412	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0413	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 0414	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0415	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0416	CHIP RES.	6.8K	1/16W	5%	RMC1/16 682JATP	J24185682		
R 0417	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0418	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		

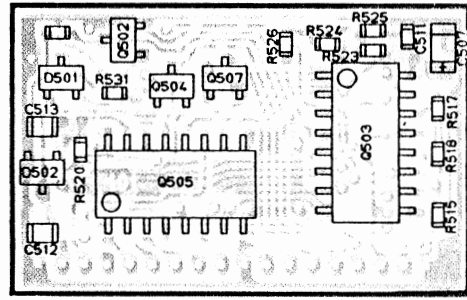


# MIC AMP Unit

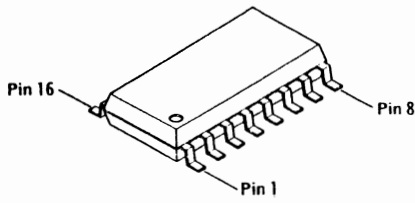


GND  
VO  
VI  
N.C.  
N.C.  
N.C.  
N.C.  
NRX  
DET  
GND  
MIC  
AF  
CK  
DATA  
S1STB  
MOD  
5V  
GND

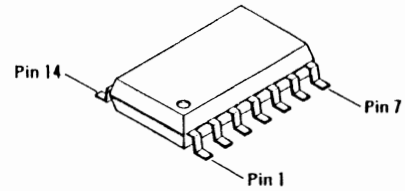
component side



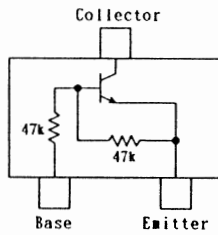
chip-only side



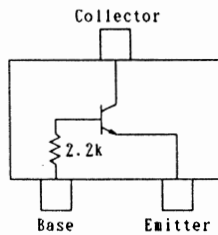
$\mu$ PD4052BG  
(Q503)  
 $\mu$ PD4094BG  
(Q505)



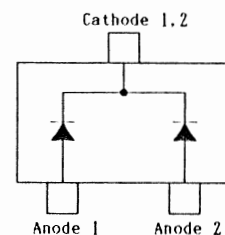
NJM2902M  
(Q501)



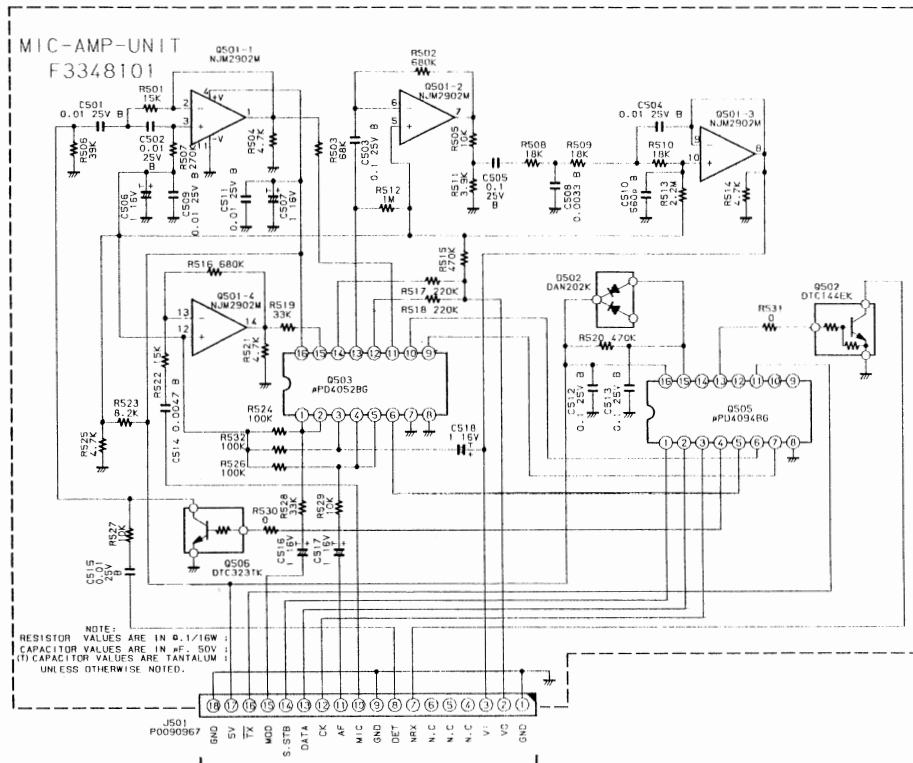
DTC144EK (26)  
(Q502)



DTC323TK (H02)  
(Q506)



DAN202K (N)  
(D502)



To MAIN Unit  
(See Page 31-1)



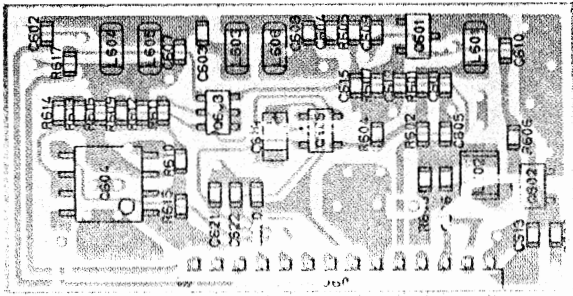
# MIC AMP Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** MIC-AMP UNIT ***								
PCB With Components						CA0785001		
Printed Circuit Board						F3348101		
C 0501	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0502	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0503	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0504	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0505	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0506	TANTALUM CHIP CAP.	1uF	16V		F951C105MRAAF1Q2	K78120013		
C 0507	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0508	CHIP CAP.	0.0033uF	50V	B	GRM39B332M50PT	K22174815		
C 0509	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0510	CHIP CAP.	560pF	50V	B	GRM39B561M50PT	K22174806		
C 0511	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0512	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0513	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0514	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		
C 0515	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0516	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0517	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0518	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
D 0502	DIODE				DAN202K T146	G2070182		
J 0501	CONNECTOR				9230B-1-18Z005-T	P0090967		
Q 0501	IC				NJM2902M-T2	G1090908		
Q 0502	TRANSISTOR				DTC144EK T97	G3070033		
Q 0503	IC				UPD4052BG-T2	G1091033		
Q 0505	IC				UPD4094BG-T2	G1091043		
Q 0506	TRANSISTOR				DTC323TK	G3070042		
R 0501	CHIP RES.	15K	1/16W	5%	RMC1/16 153JATP	J24185153		
R 0502	CHIP RES.	680K	1/16W	5%	RMC1/16 684JATP	J24185684		
R 0503	CHIP RES.	68K	1/16W	5%	RMC1/16 683JATP	J24185683		
R 0504	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0505	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0506	CHIP RES.	39K	1/16W	5%	RMC1/16 393JATP	J24185393		
R 0507	CHIP RES.	270K	1/16W	5%	RMC1/16 274JATP	J24185274		
R 0508	CHIP RES.	18K	1/16W	5%	RMC1/16 183JATP	J24185183		
R 0509	CHIP RES.	18K	1/16W	5%	RMC1/16 183JATP	J24185183		
R 0510	CHIP RES.	18K	1/16W	5%	RMC1/16 183JATP	J24185183		
R 0511	CHIP RES.	3.9K	1/16W	5%	RMC1/16 392JATP	J24185392		
R 0512	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 0513	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 0514	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0515	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0516	CHIP RES.	680K	1/16W	5%	RMC1/16 684JATP	J24185684		

# MIC AMP Unit

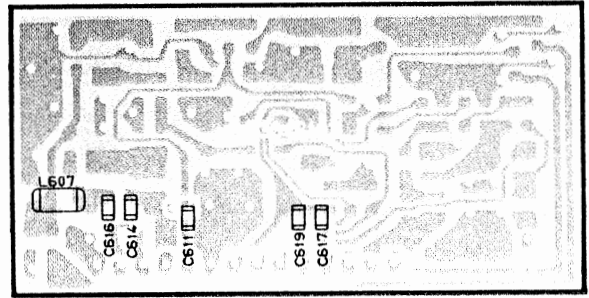
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REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR
R 0517	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0518	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0519	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 0520	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0521	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0522	CHIP RES.	15K	1/16W	5%	RMC1/16 153JATP	J24185153		
R 0523	CHIP RES.	8.2K	1/16W	5%	RMC1/16 822JATP	J24185822		
R 0524	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0525	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0526	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0527	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0528	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 0529	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0530	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 0531	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 0532	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		

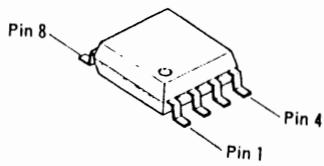


AGCOUT  
GND  
N.C.  
VCV OUT  
VCV IN  
N.C.  
N.C.  
RS  
GND  
BIAS  
N.C.  
GND  
N.C.  
GND

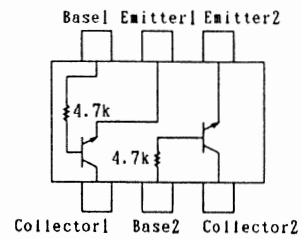
component side



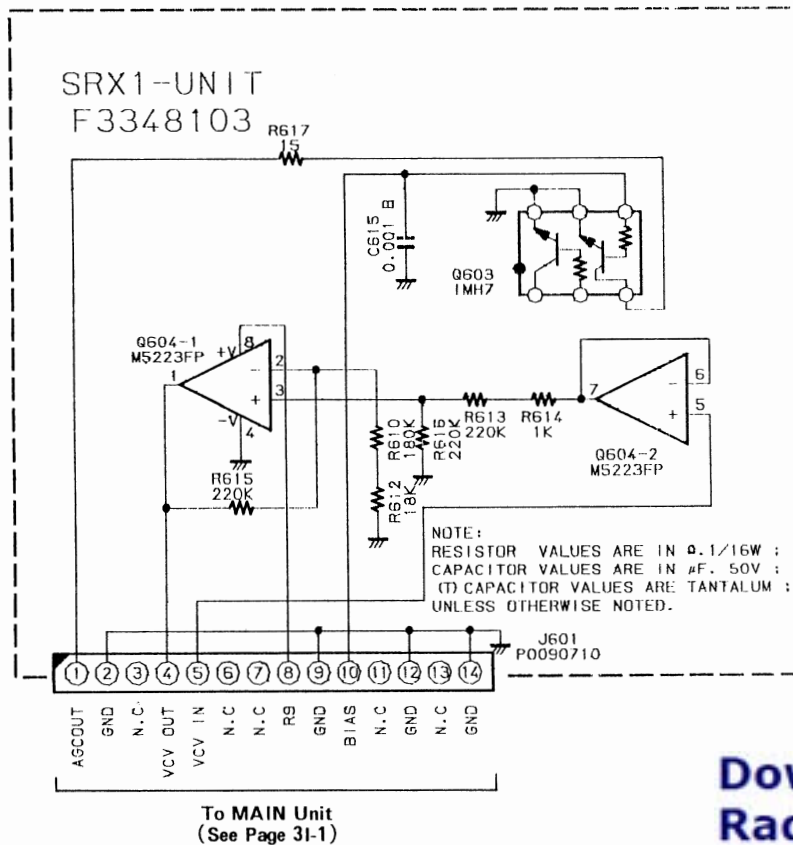
chip-only side



M5223FP  
(Q604)



IMH7 (H7)  
(Q603)



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RadioManual.EU

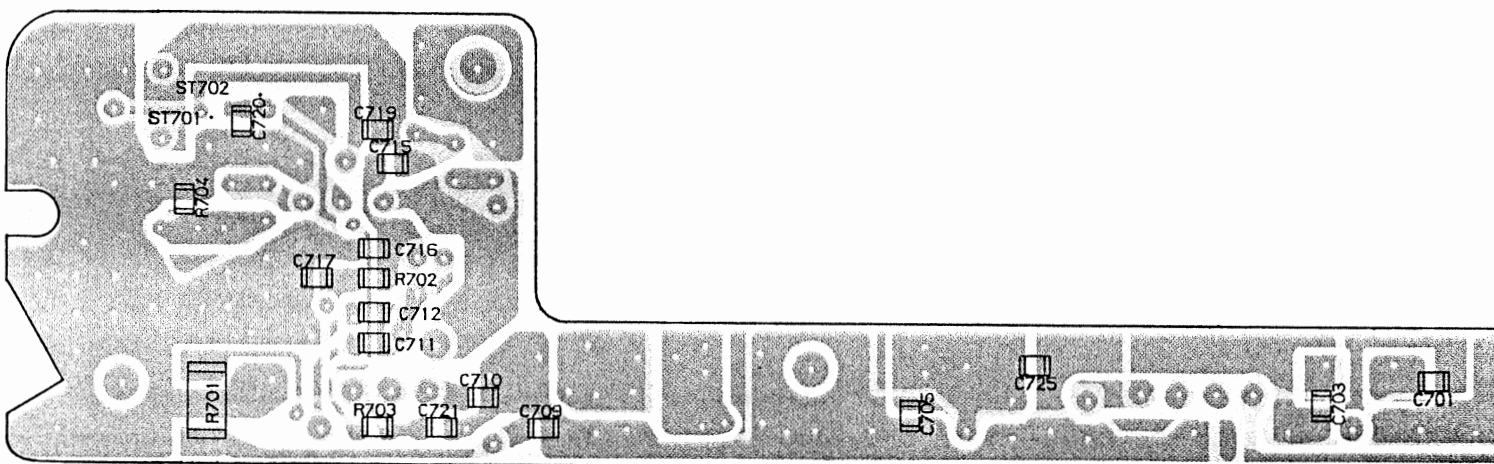
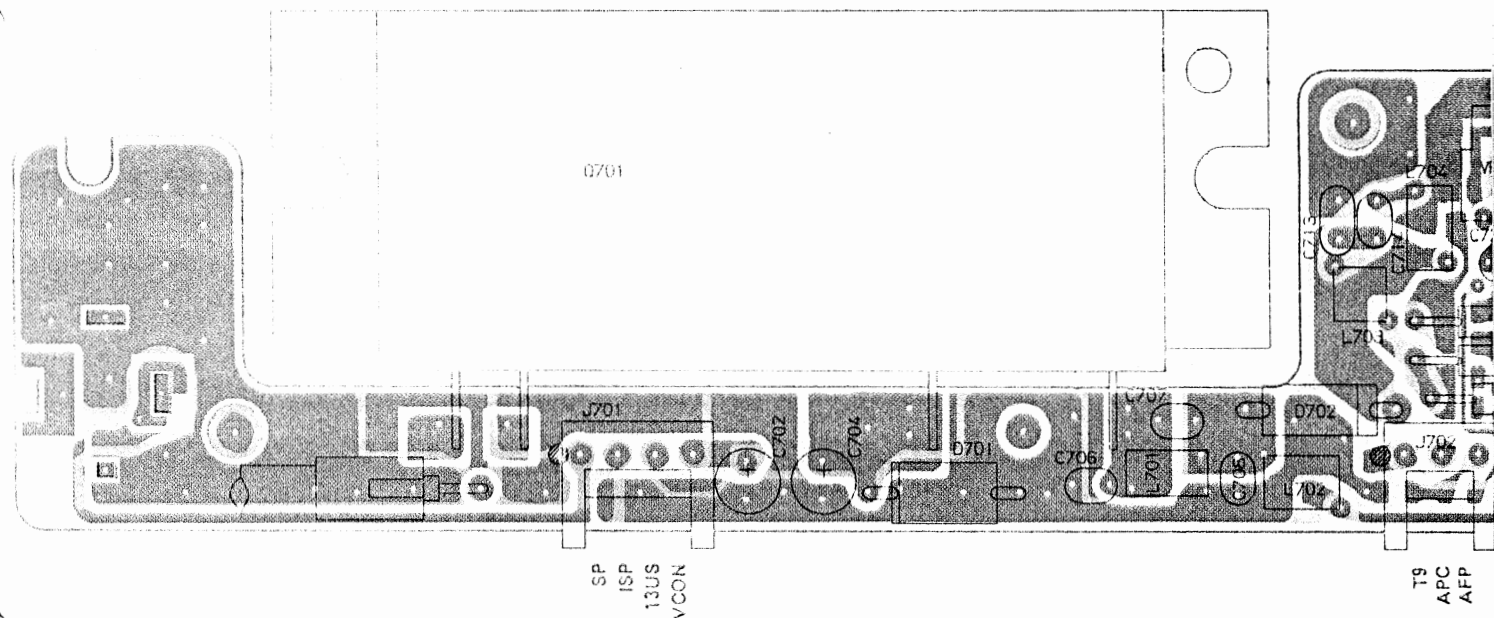


# SRX-1 Unit

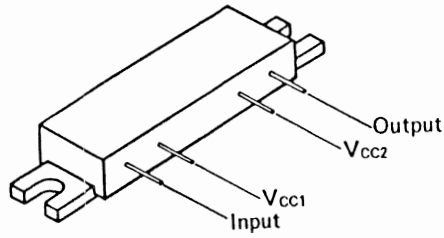
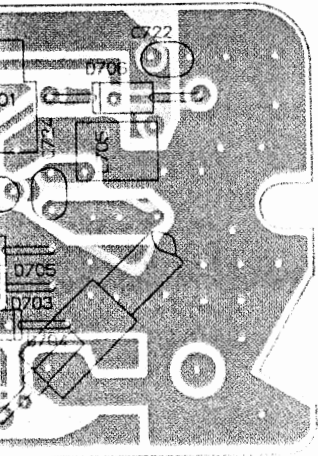
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*** SRX1 UNIT ***								
	PCB With Components					CA0787001		
	Printed Circuit Board					F3348103		
C 0615	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
J 0601	CONNECTOR				9230B-1-14Z005-T	P0090710		
Q 0603	TRANSISTOR				IMH7 T109	G3070091		
Q 0604	IC				M5223FP-72A	G1090990		
R 0610	CHIP RES.	180K	1/16W	5%	RMC1/16 184JATP	J24185184		
R 0612	CHIP RES.	18K	1/16W	5%	RMC1/16 183JATP	J24185183		
R 0613	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0614	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0615	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0616	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0617	CHIP RES.	15	1/16W	5%	RMC1/16 150JATP	J24185150		





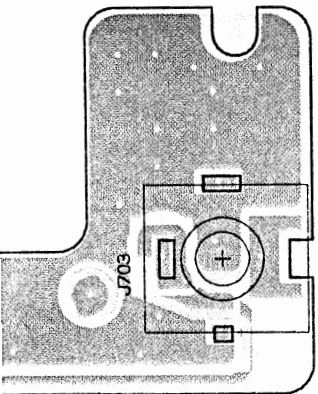


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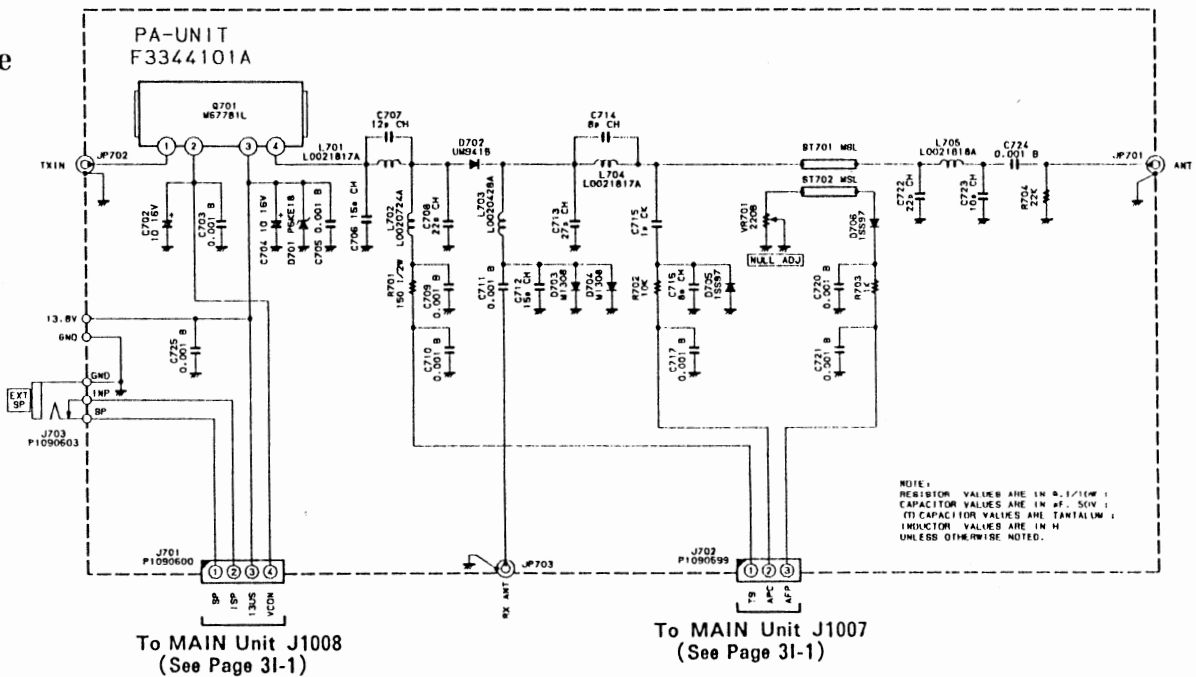


M67781L  
(Q701)

mpo. at side



chip side





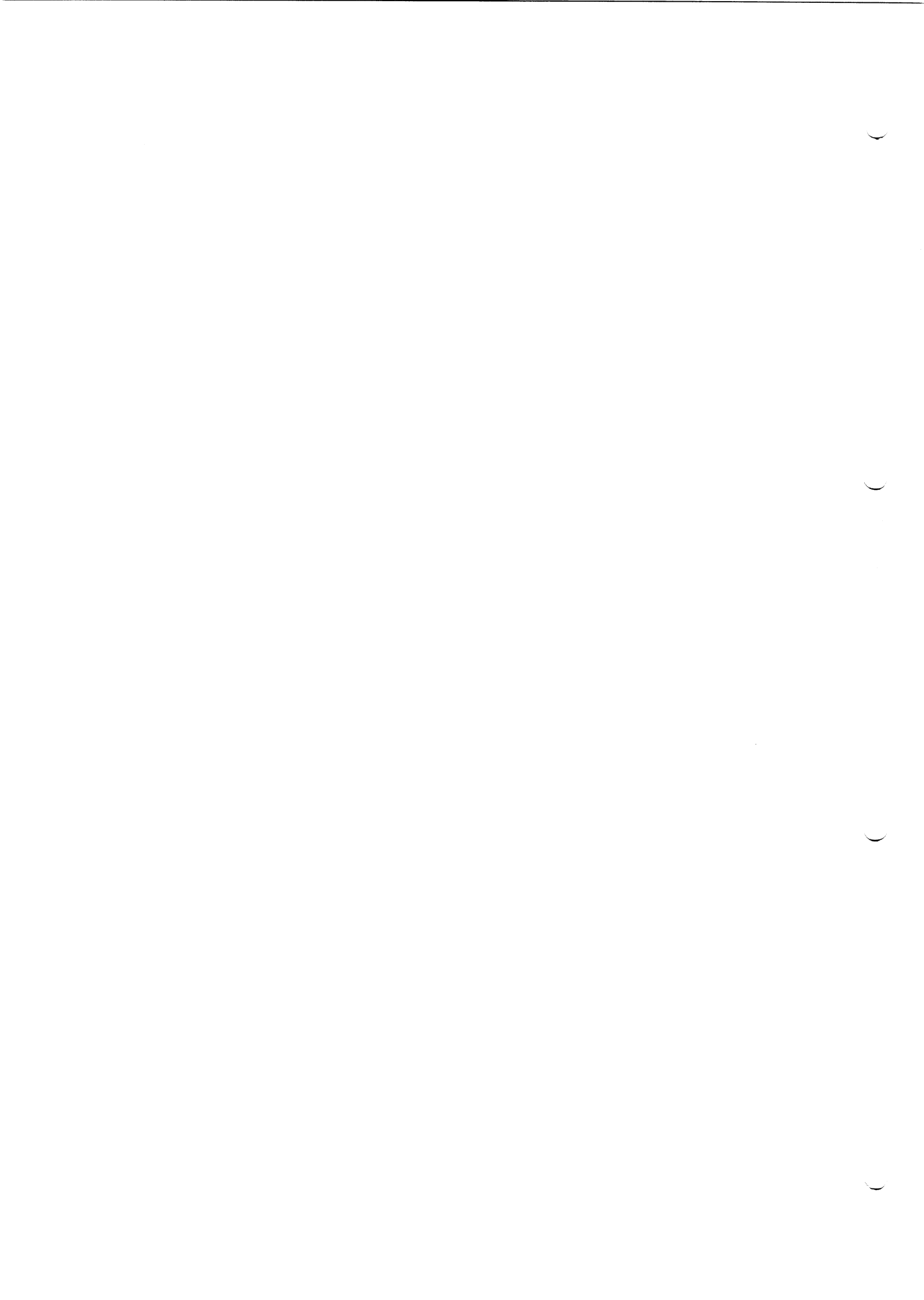
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** PA UNIT ***								
	PCB With Components					CA0963003		
	Printed Circuit Board					F3344101		
C 0702	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 0703	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0704	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 0705	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0706	CERAMIC CAP.	15pF	50V	CH	DD104CH150J50	K02175150		
C 0707	CERAMIC CAP.	12pF	50V	CH	DD104CH120J50	K02175120		
C 0708	CERAMIC CAP.	22pF	50V	CH	DD104CH220J50	K02179009		
C 0709	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0710	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0711	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0712	CHIP CAP.	15pF	50V	CH	GRM40CH150J50PT	K22170215		
C 0713	CERAMIC CAP.	27pF	50V	CH	DD105CH270J50	K02175270		
C 0714	CERAMIC CAP.	8pF	50V	CH	DD104CH080D50	K02173080		
C 0715	CHIP CAP.	1pF	50V	CK	GRM40CK010C50PT	K22170202		
C 0716	CHIP CAP.	8pF	50V	CH	GRM40CH080D50PT	K22170209		
C 0717	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0720	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0721	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0722	CERAMIC CAP.	22pF	50V	CH	DD104CH220J50	K02179009		
C 0723	CERAMIC CAP.	10pF	50V	CH	DD104CH100D50	K02173100		
C 0724	CERAMIC CAP.	0.001uF	50V	B	DD104B102K50	K10176102		
C 0725	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
D 0701	SURGE ABSORBER				P6KE18	Q9000534		
D 0702	DIODE				UM9415	G2090425		
D 0703	DIODE				MI308	G2090337		
D 0704	DIODE				MI308	G2090337		
D 0705	DIODE				1SS97	G2090118		
D 0706	DIODE				1SS97	G2090118		
J 0701	CONNECTOR				SQ-4-A.	P1090600		
J 0702	CONNECTOR				SQ-3-A	P1090599		
J 0703	CONNECTOR				HSJ0842-01-010	P1090603		
L 0701	COIL				2.5T3.5D0.6UEW R	L0021817A		
L 0702	COIL				8.5T3.0D0.5UEW R	L0020724A		
L 0703	COIL				4.5T3.0D0.5UEW R	L0020428A		
L 0704	COIL				2.5T3.5D0.6UEW R	L0021817A		
L 0705	COIL				3.5T3.5D0.6UEW R	L0021818A		
Q 0701	IC				M67781L	G1091642		
R 0701	CHIP RES.	150	1/2W		RMC1/2 151JCTP	J24275151		
R 0702	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 0703	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		

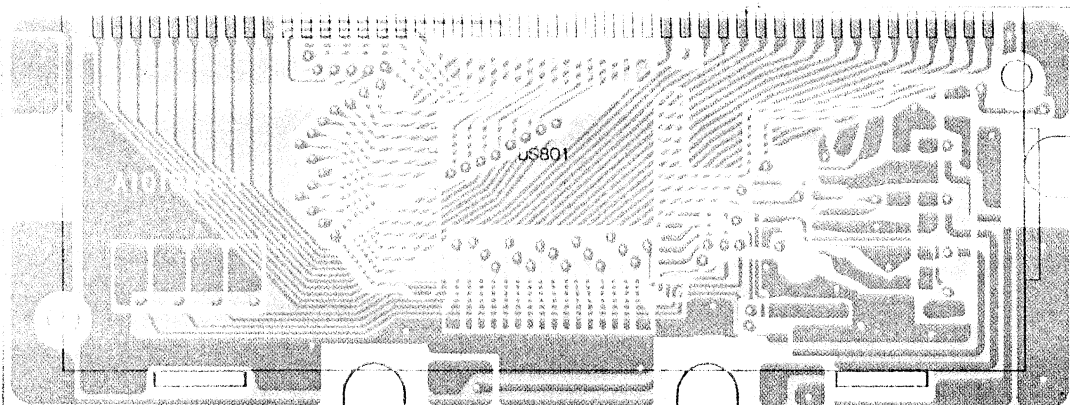
# PA Unit

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R 0704	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
VR0701	POT.	220		B	H0652A003-220B	J50770221		
	HEATSINK PLATE					R0139360		



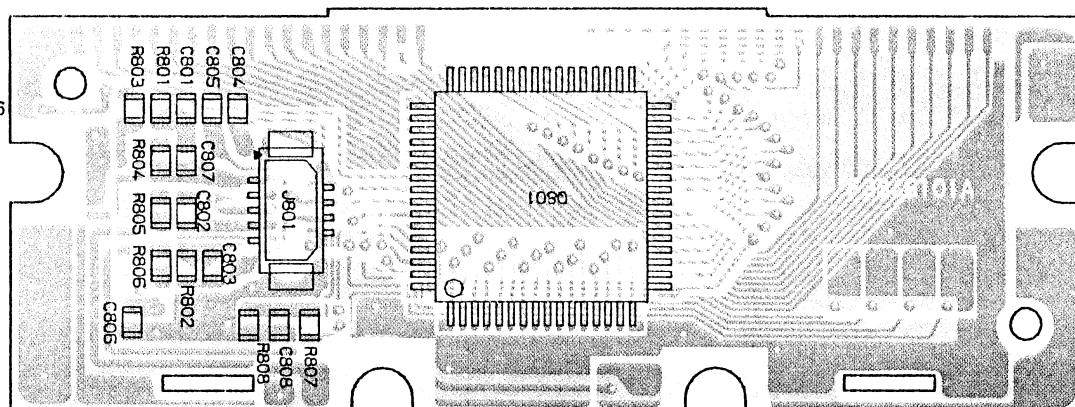




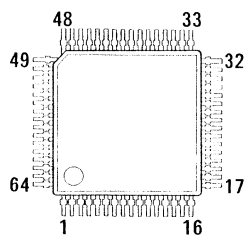
display side

J801  
To CNTL Unit J2006  
(See Page 3J-3)

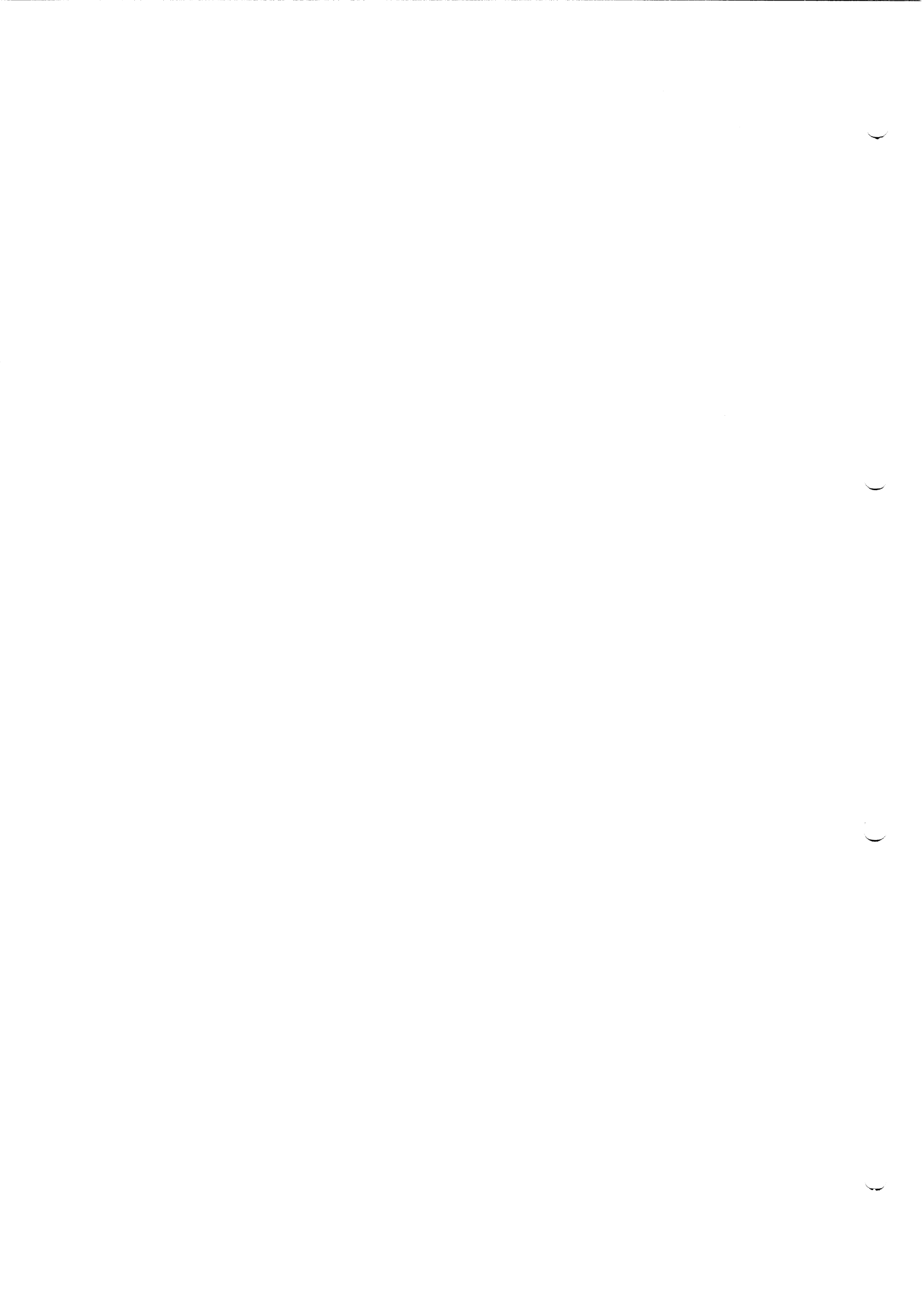
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|--------|---------|
| 1. DIM | 2. DATA |
| 3. DIM | 4. CK   |
| 5. 5V  | 6. INH  |
| 7. GND | 8. CE   |
| 9. GND |         |



chip component side

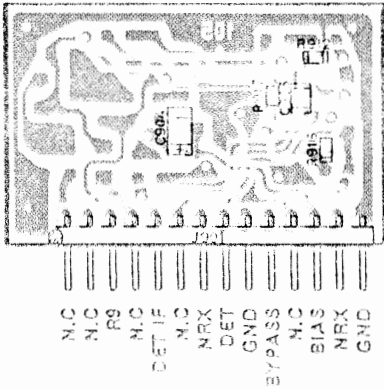


LC7582E  
(Q801)

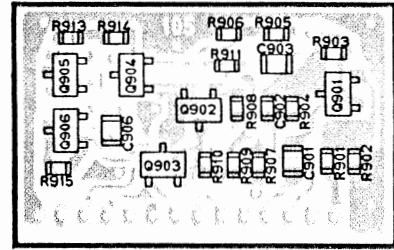


REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N
*** LCD UNIT ***						
	PCB With Components (With out DS0801)					CS1261002
	Printed Circuit Board					F3346101A
C 0801	CHIP CAP.	680pF	50V	B	GRM40B681M50PT	K22170803
C 0802	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811
C 0803	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805
C 0804	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235
C 0805	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235
C 0806	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235
C 0807	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817
DS0801	LCD				FTD-11875AC	G6090096
J 0801	CONNECTOR				DF9-9S-1V	P1090797
PL0801	LAMP		60mA		T-3 10V 60MA	Q1000078
PL0802	LAMP		60mA		T-3 10V 60MA	Q1000078
PL0803	LAMP		60mA		T-3 10V 60MA	Q1000078
PL0804	LAMP		60mA		T-3 10V 60MA	Q1000078
Q 0801	IC				LC7582E	G1091496
R 0801	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473
R 0802	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474
R 0803	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000
R 0804	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000
R 0805	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000
R 0806	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000
R 0807	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102
R 0808	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103

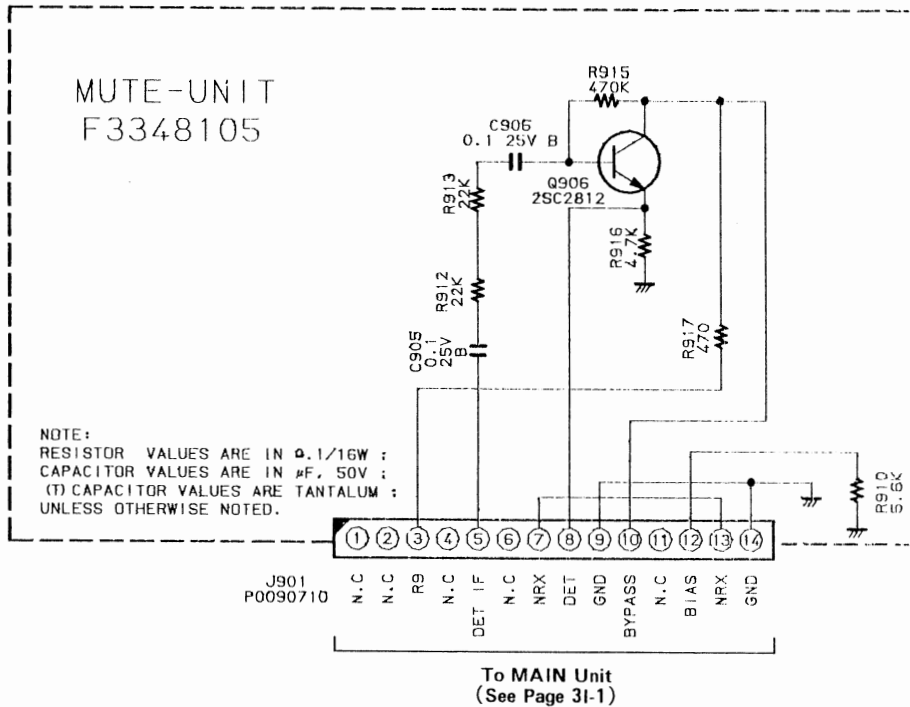
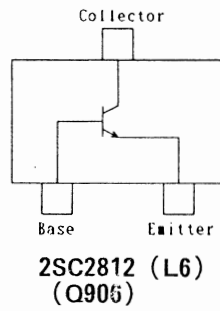




component side



chip-only side





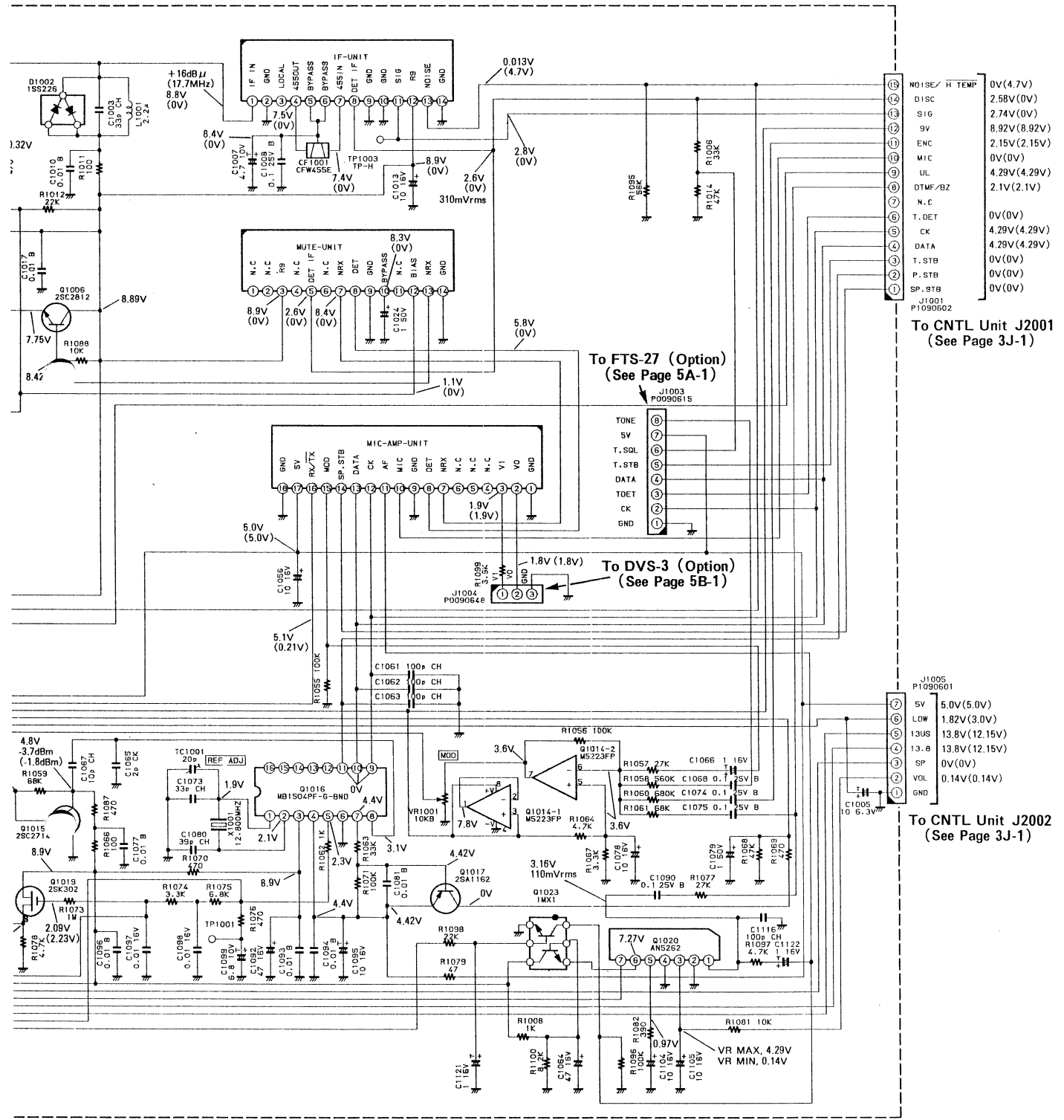
# MUTE Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** MUTE UNIT ***								
	PCB With Components					CA0980001		
	Printed Circuit Board					F3348105		
C 0905	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0906	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
J 0901	CONNECTOR				9230B-1-14Z005-T	P0090710		
Q 0906	TRANSISTOR				2SC2812L6-TA	G3328127F		
R 0910	CHIP RES.	5.6K	1/16W	5%	RMC1/16 562JATP	J24185562		
R 0912	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0913	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0915	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0916	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0917	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		









NO	ISE	H	TEMP	VOLTAGE
1				0V(0.0V)
2				0V(0.0V)
3				0V(0.0V)
4				4.29V(4.29V)
5				4.29V(4.29V)
6				0V(0.0V)
7				2.1V(2.1V)
8				N.C
9				DTMF/BZ
10				4.29V(4.29V)
11				0V(0.0V)
12				0V(0.0V)
13				2.15V(2.15V)
14				8.92V(8.92V)
15				2.74V(0V)
16				2.58V(0V)
17				0V(4.7V)

To CNTL Unit J2001  
(See Page 3J-1)

To FTS-27 (Option)  
(See Page 5A-1)

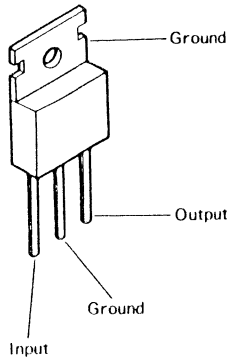
To DVS-3 (Option)  
(See Page 5B-1)

NO	VOLTAGE
1	0V(0.0V)
2	0.14V(0.14V)
3	0V(0.0V)
4	13.8V(12.15V)
5	13.8V(12.15V)
6	1.82V(3.0V)
7	5.0V(5.0V)

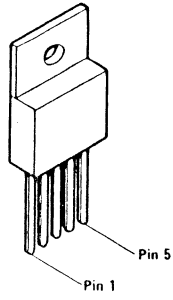
To CNTL Unit J2002  
(See Page 3J-1)

145MHz 40dBμ (MOD f=KHz, DEV=3.5KHz)  
145MHz 50W

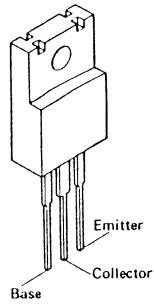




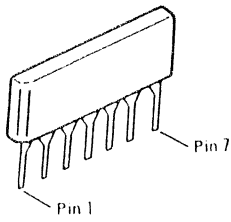
$\mu$ PC2409HF  
 (Q1013)  
 $\mu$ PC7805H  
 (Q1018)



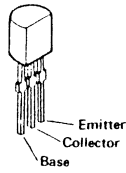
TDA2003  
 (Q1021)



2SB1134R  
 (Q1012)

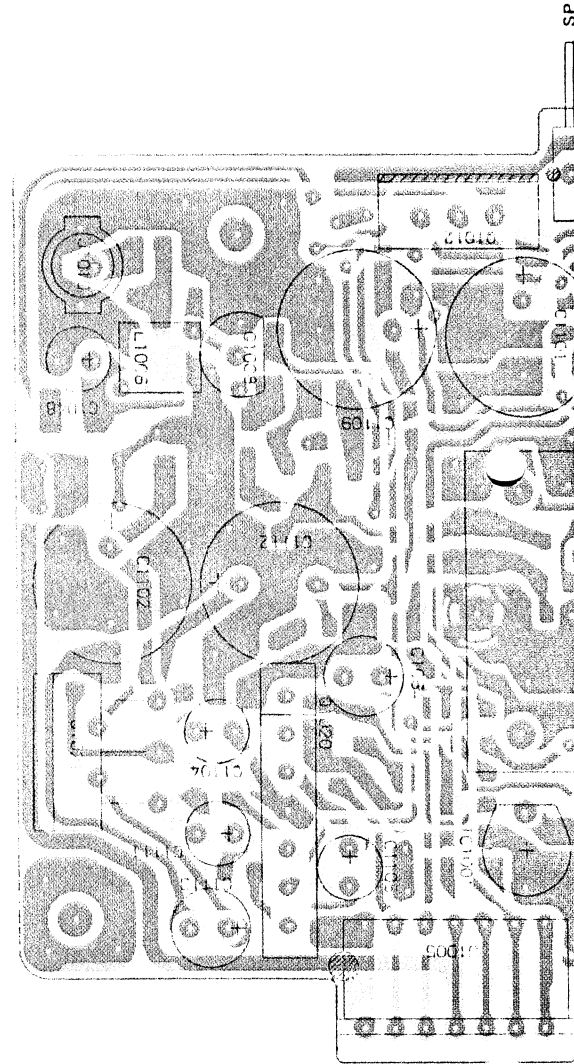


AN5262  
 (Q1020)



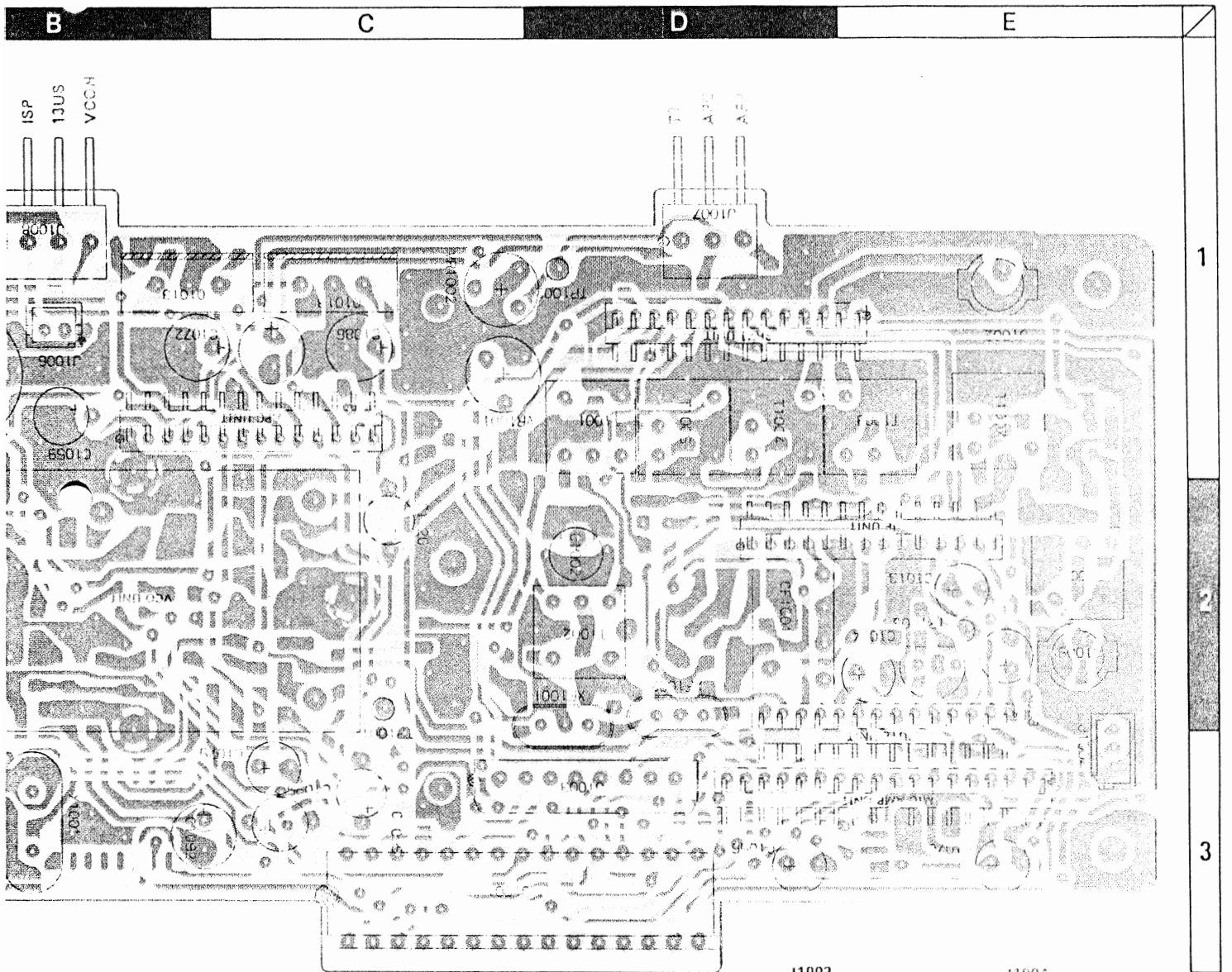
2SC2538  
 (Q1008)

A



To CNTL Unit 002  
 (See Page 3J-3)

1.	GND
2.	VOL
3.	SP
4.	13.8
5.	13US
6.	LOW
7.	5V



To CNTL Unit J2001  
(See Page 3J-3)

J1003  
To FTS-27 (Option)  
(See Page 5A-1)

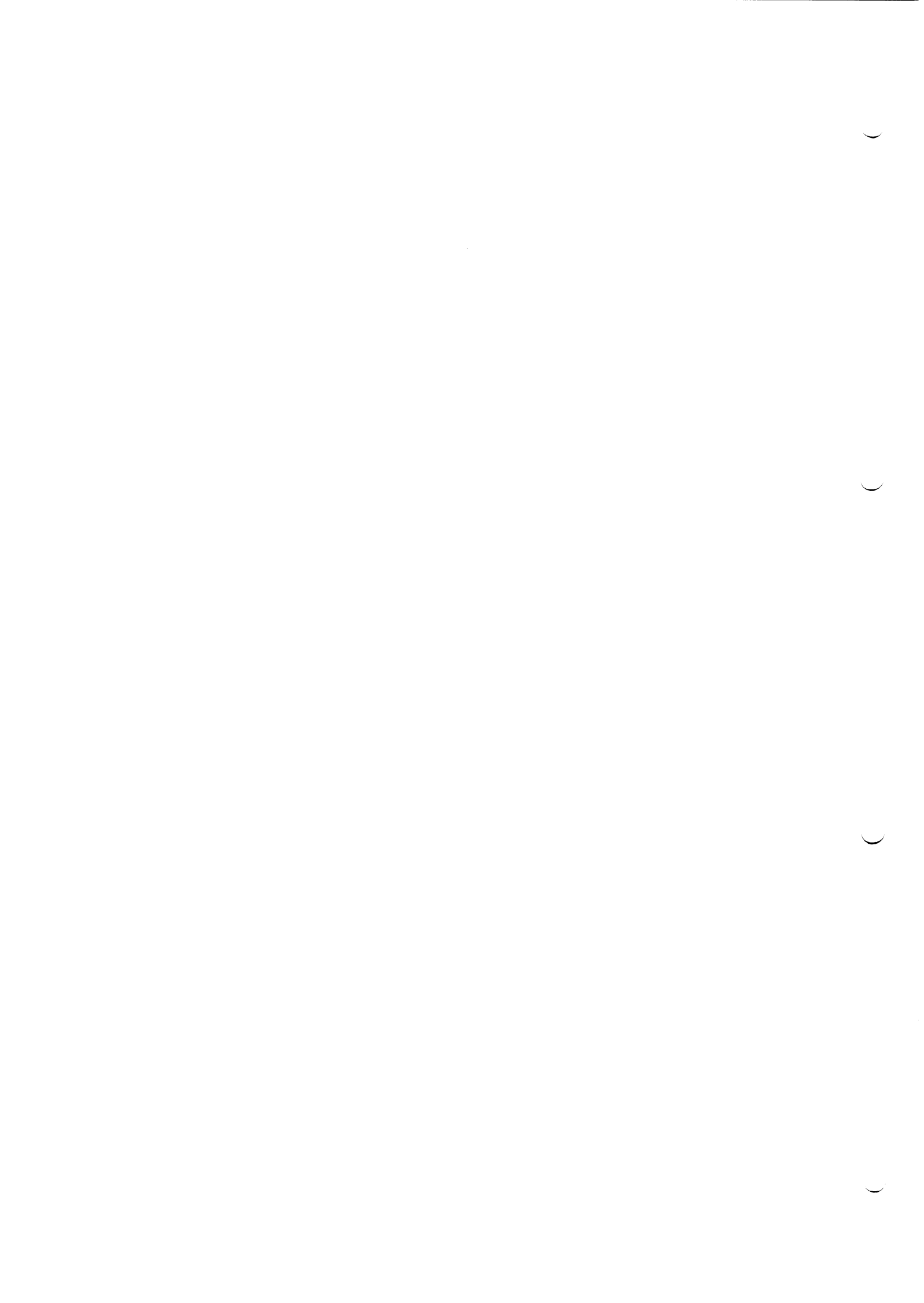
J1004  
To DVS-3 (Option)  
(See Page 5B-1)

- |                  |
|------------------|
| 1. SP.STB        |
| 2. P.STB         |
| 3. T.STB         |
| 4. DATA          |
| 5. CK            |
| 6. T.DET         |
| 7. N.C           |
| 8. DTMF/BZ       |
| 9. UL            |
| 10. MIC          |
| 11. ENC          |
| 12. 9V           |
| 13. SIG          |
| 14. DISC         |
| 15. NOISE/H TEMP |

- |          |
|----------|
| 1. GND   |
| 2. CK    |
| 3. TDET  |
| 4. DATA  |
| 5. T.STB |
| 6. T.SOL |
| 7. 5V    |
| 8. TONE  |

- |        |
|--------|
| 3. GND |
| 2. VO  |
| 1. VI  |

component side



REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** MAIN UNIT ***								
	PCB With IF, VCO, APC, MIC-AMP, MUTE UNIT					CP4225003		
	Printed Circuit Board					F3343000A		
C 1001	CHIP CAP.	18pF	50V	CH	GRM40CH180J50PT	K22170217		
C 1002	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1003	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1004	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1005	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVB20J106M-8R	K78080019		
C 1006	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1007	TANTALUM CHIP CAP.	4.7uF	10V		TESVB21A475M8R	K78100010		
C 1008	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1009	CHIP CAP.	7pF	50V	CH	GRM40CH070D50PT	K22170208		
C 1010	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1011	CHIP CAP.	18pF	50V	CH	GRM40CH180J50PT	K22170217		
C 1012	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1013	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1014	CHIP CAP.	18pF	50V	CH	GRM40CH180J50PT	K22170217		
C 1015	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1016	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1017	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1018	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1019	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1020	CHIP CAP.	12pF	50V	CH	GRM40CH120J50PT	K22170213		
C 1021	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1024	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1027	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1028	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1030	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1031	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1032	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1033	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1034	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1035	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1036	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1037	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1038	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1039	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1040	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1041	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1042	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1043	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1044	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 1045	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1046	CHIP CAP.	18pF	50V	CH	GRM40CH180J50PT	K22170217		
C 1047	CHIP CAP.	15pF	50V	CH	GRM40CH150J50PT	K22170215		
C 1048	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1049	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1050	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		

# MAIN Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 1051	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1052	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1053	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1054	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1055	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1056	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1057	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1058	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1059	TANTALUM CAP.	10uF	16V		TPDN1C100M8S	K76120019		
C 1060	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1061	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1062	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1063	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1064	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1065	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1066	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1067	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1068	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1069	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1070	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1071	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1072	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1073	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1074	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1075	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1076	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1077	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1078	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1079	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1080	CHIP CAP.	39pF	50V	CH	GRM40CH390J50PT	K22170225		
C 1081	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1082	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1083	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1084	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1085	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1086	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1087	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1088	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1089	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1090	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1091	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1092	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1093	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1094	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1095	TANTALUM CAP.	10uF	16V		TPDN1C100M8S	K76120019		
C 1096	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1097	FILM CAP.	0.01uF	16V		ECHU1C103JB5	K57120007		
C 1098	FILM CAP.	0.01uF	16V		ECHU1C103JB5	K57120007		
C 1099	TANTALUM CAP.	6.8uF	10V		TPDN1A6R8M8S	K76100005		
C 1100	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1101	AL. ELECTRO. CAP.	470uF	25V		RE2-25V471M	K40149037		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 1102	AL. ELECTRO. CAP.	1000uF	16V		RE3-16V102MS	K40129067		
C 1103	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1104	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1105	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1106	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1107	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1108	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1109	AL. ELECTRO. CAP.	1000uF	16V		RE3-16V102MS	K40129067		
C 1110	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1111	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1112	AL. ELECTRO. CAP.	470uF	25V		RE2-25V471M	K40149037		
C 1113	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1114	CHIP CAP.	0.033uF	25V	B	GRM40B333M25PT	K22140810		
C 1115	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1116	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1117	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1118	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1119	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1120	TANTALUM CAP.	1.5uF	25V		TPDN1E1R5M8S	K76140014		
C 1121	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1122	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
CF1001	CERAMIC FILTER				CFW455E	H3900200		
D 1001	DIODE				1SS184 TE85R	G2070009		
D 1002	DIODE				1SS226 TE85R	G2070003		
D 1003	DIODE				HSU277	G2070118		
D 1004	DIODE				HSU277	G2070118		
D 1005	DIODE				1T362-T8	G2070102		
D 1006	DIODE				1T362-T8	G2070102		
D 1007	DIODE				1T362-T8	G2070102		
D 1008	DIODE				1T362-T8	G2070102		
D 1009	DIODE				HSM2838-TR	G2070108		
D 1010	DIODE				1SS272 TE85R	G2070048		
D 1011	DIODE				1SS226 TE85R	G2070003		
D 1012	DIODE				1T362-T8	G2070102		
J 1001	CONNECTOR				5420-15APB	P1090602		
J 1003	CONNECTOR				SB20-08WS	P0090615		
J 1004	CONNECTOR				B3B-ZR	P0090648		
J 1005	CONNECTOR				5420-07APB	P1090601		
J 1006	CONNECTOR				B2B-ZR	P0090647		
J 1007	CONNECTOR				BS3P-SHF-1AA	P0090640		
J 1008	CONNECTOR				BS4P-SHF-1AA	P0090641		
J 1009	CONNECTOR				TMP-J01X-V6	P1090210		
J 1010	CONNECTOR				TMP-J01X-V6	P1090210		
L 1001	CHIP COIL	2.2uH			LQH3N2R2M02M00-	L1690079		
L 1002	CHIP COIL	0.047uH			LQN2A47NM	L1690007		
L 1003	CHIP COIL	2.2uH			LQH3N2R2M02M00-	L1690079		
L 1004	CHIP COIL	0.22uH			LQN2AR22K	L1690003		

# MAIN Unit

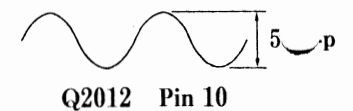
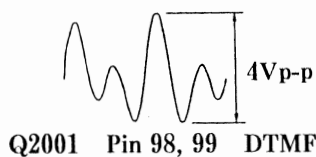
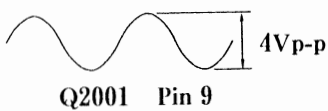
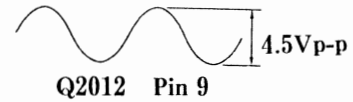
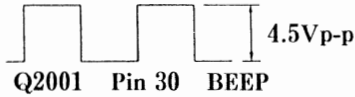
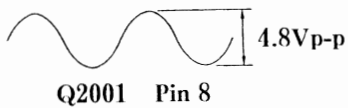
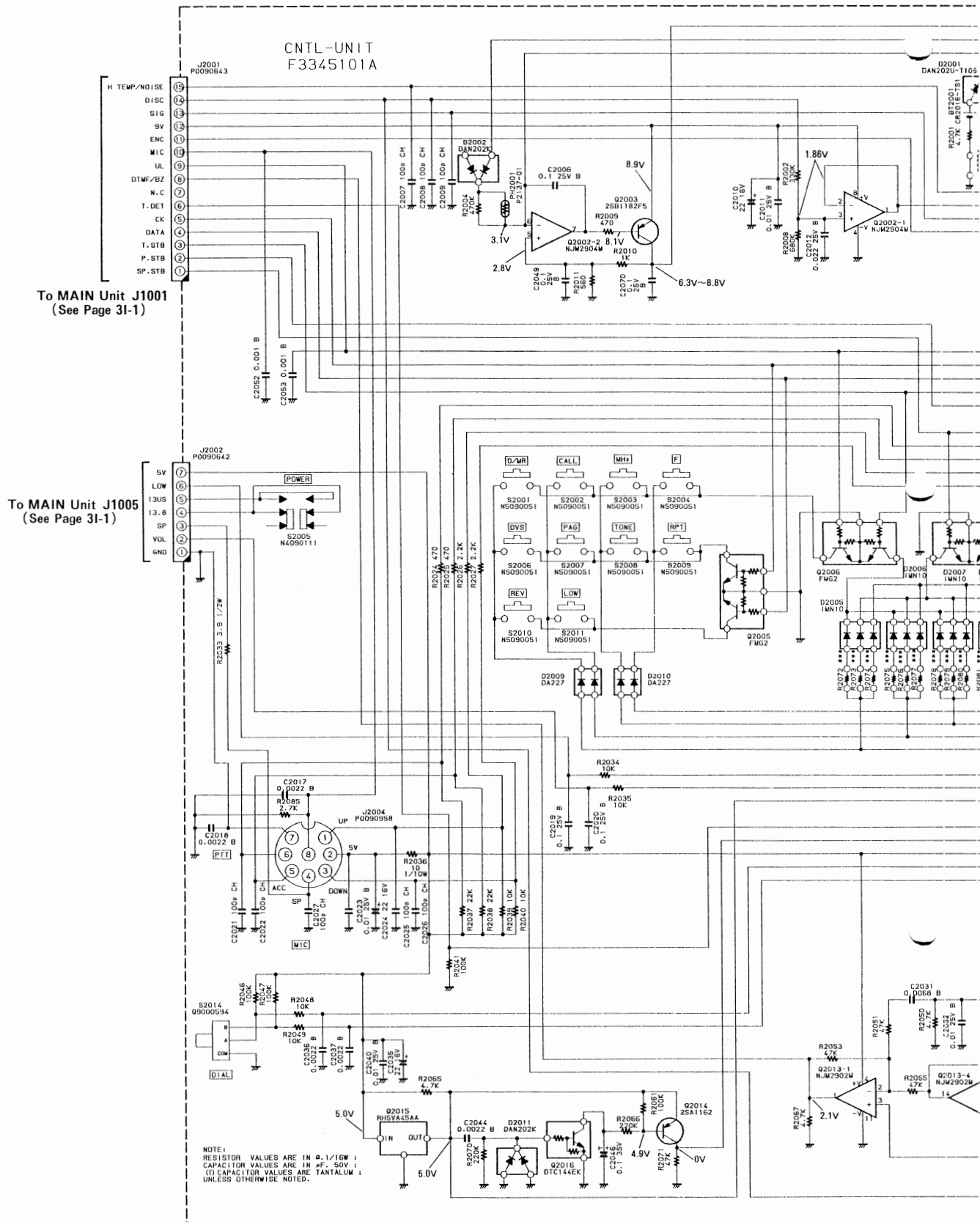
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L 1005	CHIP COIL	0.047uH			LQN2A47NM	L1690007		
L 1006	COIL				4.5T3.5DO.6UEW R	L0021819A		
L 1007	CHIP COIL	0.033uH			LQN2A33NM	L1690005		
L 1008	CHIP COIL	0.068uH			LQN2A68NM	L1690009		
Q 1001	FET				2SK302GR TE85R	G3803027G		b2
Q 1002	TRANSISTOR				2SC2620QBTR	G3326207B		b2
Q 1003	FET				2SK302GR TE85R	G3803027G		b2
Q 1004	FET				3SK131-T2B V12	G4801317B		a1
Q 1006	TRANSISTOR				2SC2812L6-TA	G3328127F		b2
Q 1008	TRANSISTOR				2SC2538	G3325380		A1
Q 1009	TRANSISTOR				MMBR951LT1	G3070056		e2
Q 1010	TRANSISTOR				2SC2759-T2B U23	G3327597C		d2
Q 1011	TRANSISTOR				2SC2759-T2B U23	G3327597C		c2
Q 1012	TRANSISTOR				2SB1134R	G3211340R		B1
Q 1013	IC				UPC2409HF	G1091069		B1
Q 1014	IC				M5223FP-72A	G1090990		a3
Q 1015	TRANSISTOR				2SC2714YTE85R	G3327147Y		d2
Q 1016	IC				MB1504PF-G-BND-TF	G1091123		d3
Q 1017	TRANSISTOR				2SA1162GR TE85R	G3111627G		c2
Q 1018	IC				UPC7805H	G1090299		C1
Q 1019	FET				2SK302GR TE85R	G3803027G		c2
Q 1020	IC				AN5262	G1091250		A2
Q 1021	IC				TDA2003	G1090769		A2
Q 1022	TRANSISTOR				DTC114EK T96	G3070002		c1
Q 1023	TRANSISTOR				IMX1 T110	G3070024		e2
R 1001	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1002	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1003	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1004	CHIP RES.	820	1/10W	5%	RMC1/10T 821J	J24205821		
R 1005	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1006	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1007	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1008	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1009	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1011	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1012	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1013	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1014	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1019	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1020	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1021	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1022	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1023	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1024	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 1026	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1027	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1029	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1030	CHIP RES.	15	1/10W	5%	RMC1/10T 150J	J24205150		
R 1031	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		

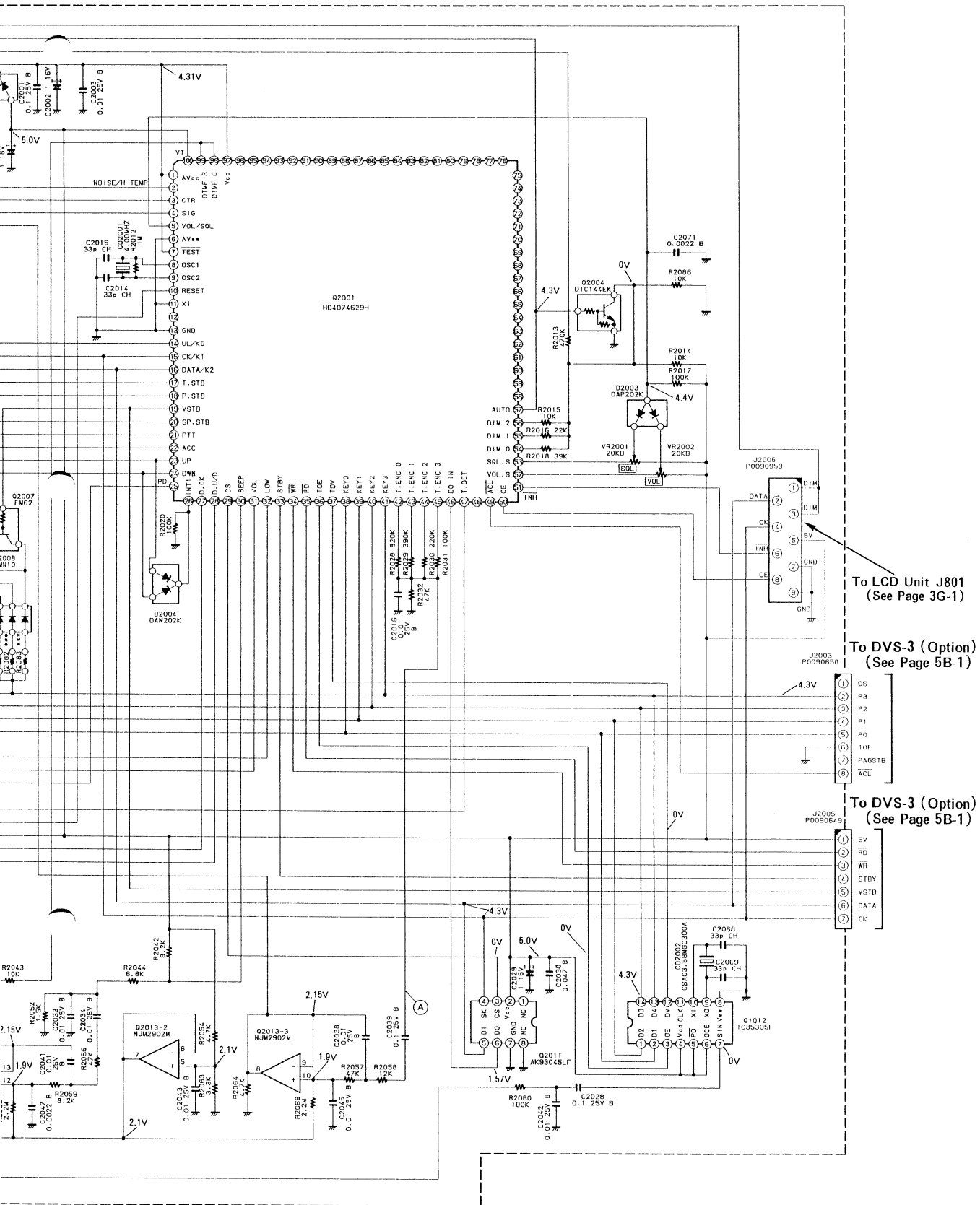
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R 1032	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1033	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1034	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 1035	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1036	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1037	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1038	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1039	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 1040	CHIP RES.	56K	1/10W	5%	RMC1/10T 563J	J24205563		
R 1041	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 1042	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1043	CHIP RES.	22	1/10W	5%	RMC1/10T 220J	J24205220		
R 1044	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1045	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1046	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1047	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 1048	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1049	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 1050	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1051	CHIP RES.	10	1/4W	5%	RMC1/4100JATP	J24245100		
R 1052	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1053	CHIP RES.	18K	1/10W	5%	RMC1/10T 183J	J24205183		
R 1054	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1055	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1056	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1057	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 1058	CHIP RES.	560K	1/10W	5%	RMC1/10T 564J	J24205564		
R 1059	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 1060	CHIP RES.	680K	1/10W	5%	RMC1/10T 684J	J24205684		
R 1061	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 1062	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1063	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1064	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1065	CHIP RES.	15	1/10W	5%	RMC1/10T 150J	J24205150		
R 1066	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1067	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1068	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1069	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1070	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1071	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1072	CHIP RES.	15	1/10W	5%	RMC1/10T 150J	J24205150		
R 1073	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 1074	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1075	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 1076	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1077	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 1078	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1079	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1080	CHIP RES.	1	1W		RMC1 1R0JTE	J24305010		
R 1081	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1082	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		

# MAIN Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 1083	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1084	CHIP RES.	1	1/10W	5%	RMC1/10T 1R0J	J24205010		
R 1085	CHIP RES.	220	1/4W	5%	RMC1/4 221JATP	J24245221		
R 1086	CHIP RES.	6.8	1/10W	5%	RMC1/10T 6R8J	J24205689		
R 1087	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1088	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1089	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1090	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1091	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1093	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 1094	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 1095	CHIP RES.	56K	1/10W	5%	RMC1/10T 563J	J24205563		
R 1096	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1097	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1098	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1099	CARBON FILM RES.	3.9K	1/10W	5%	RD16PT392	J01225392		
R 1100	CHIP RES.	8.2K	1/10W	5%	RMC1/10T 822J	J24205822		
T 1001	COIL				456DB-1007	L0190173		
T 1002	COIL				21.4M	L0022111		
T 1003	COIL				145M R12-L044X	L0022067		
T 1004	COIL				145M R12-L044X	L0022067		
T 1005	COIL				145M R12-L044X	L0022067		
T 1006	COIL				145M R12-L044X	L0022067		
T 1007	COIL				145M R12-L044X	L0022067		
TC1001	TRIMMER CAP.	20pF			TZ03R200ER	K91000071		
TP1002	TP-H				MK-10160	Q5000037		
TP1003	TP-H				MK-10160	Q5000037		
VR1001	POT.	10K		B	H0651A013-10KB	J51745103		
VR1002	POT.	10K		B	H0651A013-10KB	J51745103		
X 1001	XTAL	12.800MHz				H0102801		
XF1001	XTAL				17T15BU	H1102186		
	XTAL HOLDER (2pcs)					R3129530		
	XTAL SPACER					R7076390		

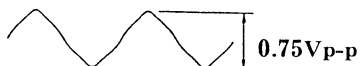




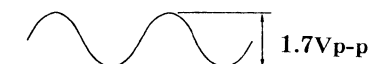


To DVS-3 (Option)  
(See Page 5B-1)

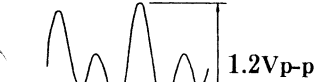
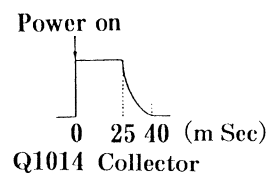
To DVS-3 (Option)  
(See Page 5B-1)



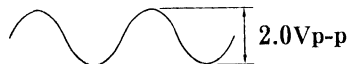
Q2013 Pin 1 BEEP



Q2013 Pin 8, 9 TONE

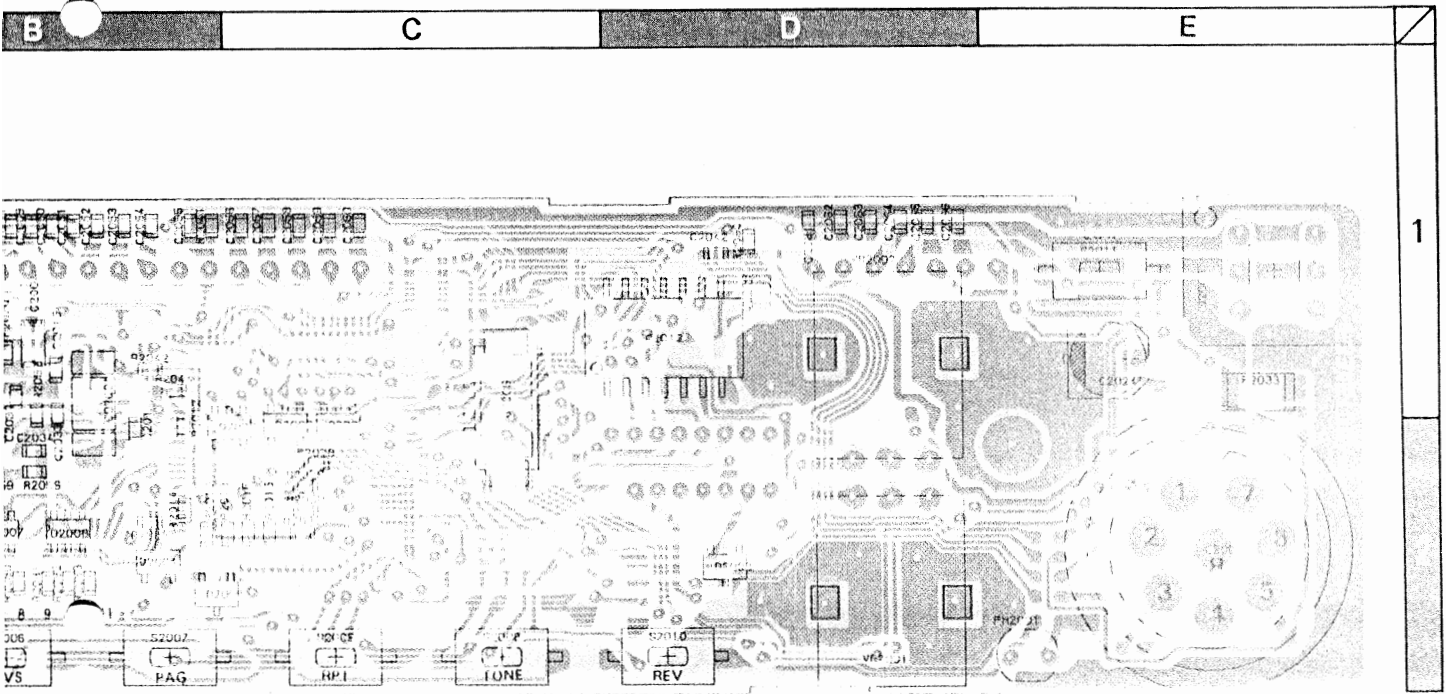


Q2013 Pin 1 DTMF

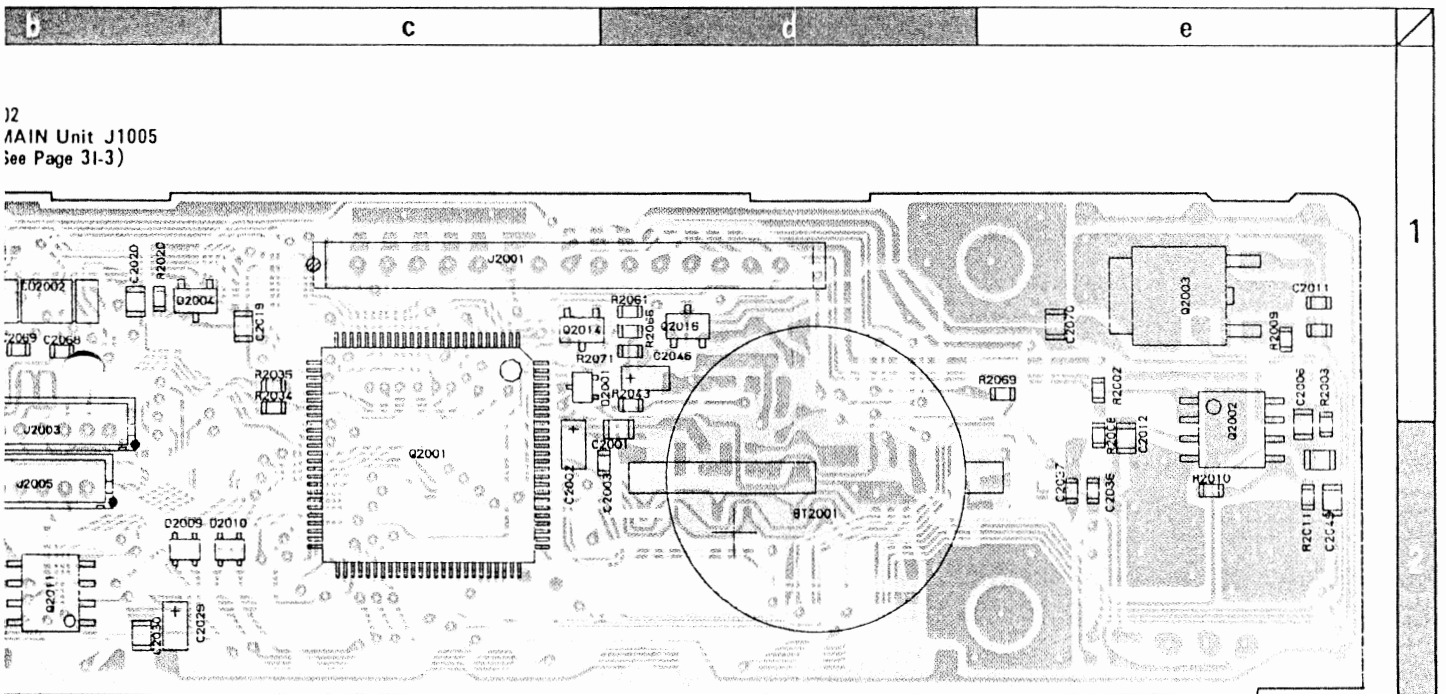


Ⓐ TONE





front



rear

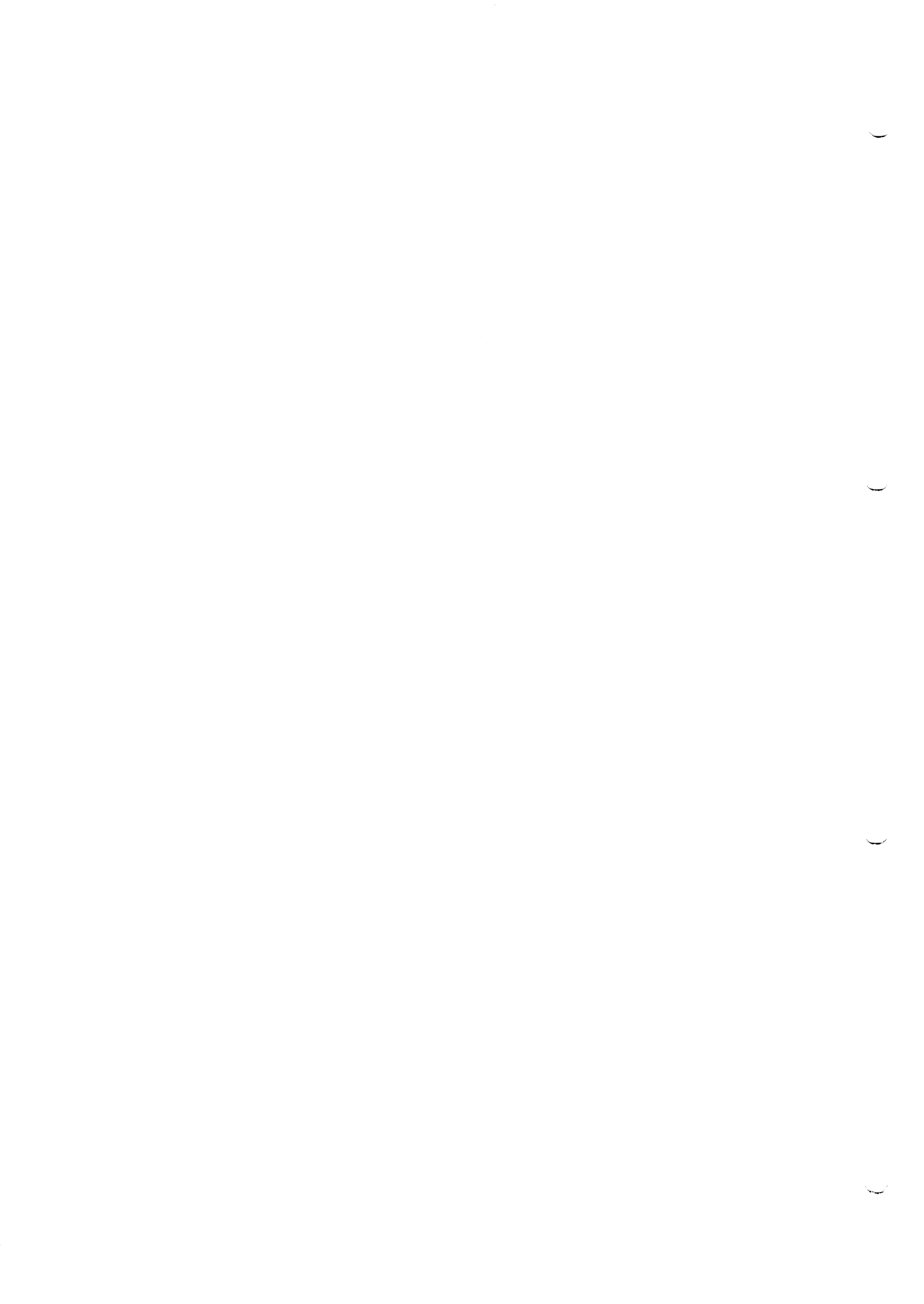
J2  
MAIN Unit J1005  
(see Page 31-3)

J2005  
To DVS-3 (Option)  
(See Page 5B-1)

- |         |
|---------|
| 7. CK   |
| 6. DATA |
| 5. VSTB |
| 4. STBY |
| 3. WR   |
| 2. RD   |
| 1. 5V   |

J2001  
To MAIN Unit J1001  
(See Page 31-3)

- |                  |
|------------------|
| 1. SP.STB        |
| 2. P.STB         |
| 3. T.STB         |
| 4. DATA          |
| 5. CK            |
| 6. T.DET         |
| 7. N.C           |
| 8. DTMF/BZ       |
| 9. UL            |
| 10. MIC          |
| 11. ENC          |
| 12. 9V           |
| 13. SIG          |
| 14. DISC         |
| 15. H TEMP/NOISE |



REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** CNTL UNIT ***								
	PCB With Components					CA0738005	TYP A2	
	PCB With Components					CA0738006	TYP B1	
	PCB With Components					CA0738007	TYP A3	
	PCB With Components					CA0738008	TYP B3	
	Printed Circuit Board					F3345101A		
BT2001	LITHIUM BATTERY				CR2016-TS1	Q9000552		
C 2001	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2002	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 2003	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2004	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 2006	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2007	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2008	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2009	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2010	AL. ELECTRO. CAP.	22uF	16V		ECEV1CA220P	K48120002		
C 2011	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2012	CHIP CAP.	0.022uF	25V	B	GRM40B223K25PT	K22140812		
C 2014	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 2015	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 2016	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2017	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 2018	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 2019	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2020	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2021	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2022	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2023	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2024	AL. ELECTRO. CAP.	22uF	16V		ECEV1CA220P	K48120002		
C 2025	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2026	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2027	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2028	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2029	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 2030	CHIP CAP.	0.047uF	50V	B	GRM40B473M50PT	K22170823		
C 2031	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 2032	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2033	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2034	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2035	AL. ELECTRO. CAP.	22uF	16V		ECEV1CA220P	K48120002		
C 2036	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		
C 2037	CHIP CAP.	0.0022uF	50V	B	GRM39B222K50PT	K22174822		
C 2038	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2039	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2040	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2041	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2042	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2043	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2044	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 2045	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		

# CNTL Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 2046	TANTALUM CHIP CAP.	0.1uF	35V		TESVA1V104M1-8R	K78160025		
C 2047	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 2049	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2052	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2053	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2068	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 2069	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 2070	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2071	CERAMIC CAP.	0.0022uF	50V	B	DD106B222K50	K10176222		
CO2001	CERAMIC OSC				CSAC4.00MGCM-TC	H7900850		
CO2002	CERAMIC OSC				CSAC3.58MGC300A-TC	H7900790		
D 2001	DIODE				DAN202U T106	G2070162		
D 2002	DIODE				DAN202K T146	G2070182		
D 2003	DIODE				DAP202K T146	G2070180		
D 2004	DIODE				DAN202K T146	G2070182		
D 2005	DIODE				IMN10 T108	G2070078		
D 2006	DIODE				IMN10 T108	G2070078		
D 2007	DIODE				IMN10 T108	G2070078		
D 2008	DIODE				IMN10 T108	G2070078		
D 2009	DIODE				DA227-TR	G2070292		
D 2010	DIODE				DA227-TR	G2070292		
D 2011	DIODE				DAN202K T146	G2070182		
J 2001	CONNECTOR				5428-15AX	P0090643		
J 2002	CONNECTOR				5428-07AX	P0090642		
J 2003	CONNECTOR				B8B-ZR	P0090650		
J 2004	CONNECTOR				FM214-8SMPY	P0090958		
J 2005	CONNECTOR				B7B-ZR	P0090649		
J 2006	CONNECTOR				DF9-9P-1V	P0090959		
PH2001	CDS				P2137-01	G9090056		
Q 2001	IC				HD4074629H	G1091323		c2
Q 2002	IC				NJM2904M-T2	G1091374		e2
Q 2003	TRANSISTOR				2SB1182-TLQ	G3070063		e1
Q 2004	TRANSISTOR				DTC144EK T97	G3070033		B2
Q 2005	TRANSISTOR				FMG2 T99	G3070015		C2
Q 2006	TRANSISTOR				FMG2 T99	G3070015		C2
Q 2007	TRANSISTOR				FMG2 T99	G3070015		C2
Q 2011	IC				AK93C45LF E-1	G1091680		b2
Q 2012	IC				TC35305F-11 TP2	G1091177		D1
Q 2013	IC				NJM2902M-T2	G1090908		A1
Q 2014	TRANSISTOR				2SA1162GR TE85R	G3111627G		c1
Q 2015	IC				RH5VA45AA-T1	G1090966		A1
Q 2016	TRANSISTOR				DTC144EK T97	G3070033		d1
R 2001	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2002	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 2004	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 2008	CHIP RES.	680K	1/16W	5%	RMC1/16 684JATP	J24185684		
R 2009	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2010	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 2011	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		
R 2012	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 2013	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 2014	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2015	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2016	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2017	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2018	CHIP RES.	39K	1/16W	5%	RMC1/16 393JATP	J24185393		
R 2020	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2024	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2025	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2026	CHIP RES.	2. 2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 2027	CHIP RES.	2. 2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 2028	CHIP RES.	820K	1/16W	5%	RMC1/16 824JATP	J24185824		
R 2029	CHIP RES.	390K	1/16W	5%	RMC1/16 394JATP	J24185394		
R 2030	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 2031	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2032	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2033	CHIP RES.	3. 9	1/2W		RMC1/2 3R9JATP	J24275399		
R 2034	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2035	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2036	CHIP RES.	10	1/16W	5%	RMC1/16 100JATP	J24185100		
R 2037	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2038	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2039	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2040	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2041	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2042	CHIP RES.	8. 2K	1/16W	5%	RMC1/16 822JATP	J24185822		
R 2043	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2044	CHIP RES.	6. 8K	1/16W	5%	RMC1/16 682JATP	J24185682		
R 2046	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2047	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2048	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2049	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2050	CHIP RES.	4. 7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2051	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2052	CHIP RES.	1. 5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 2053	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2054	CHIP RES.	4. 7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2055	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2056	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2057	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2058	CHIP RES.	12K	1/16W	5%	RMC1/16 123JATP	J24185123		
R 2059	CHIP RES.	8. 2K	1/16W	5%	RMC1/16 822JATP	J24185822		
R 2060	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2061	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2063	CHIP RES.	3. 3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 2064	CHIP RES.	4. 7K	1/16W	5%	RMC1/16 472JATP	J24185472		

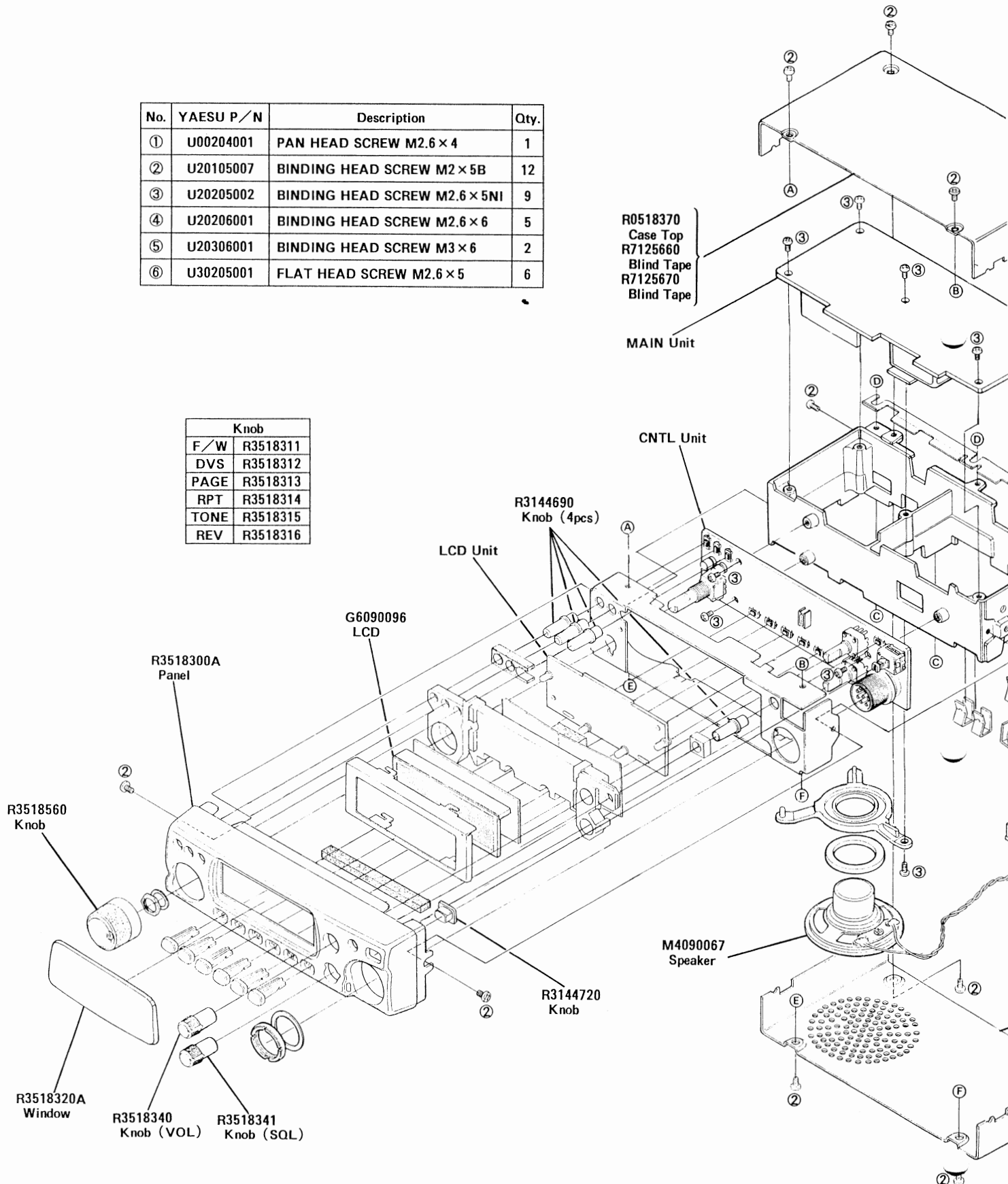
# CNTL Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 2065	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2066	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 2067	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2068	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 2069	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 2070	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 2071	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2085	CHIP RES.	2.7K	1/16W	5%	RMC1/16 272JATP	J24185272		
R 2086	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
S 2001	TACT SWITCH				SKQDAA	N5090051		
S 2002	TACT SWITCH				SKQDAA	N5090051		
S 2003	TACT SWITCH				SKQDAA	N5090051		
S 2004	TACT SWITCH				SKQDAA	N5090051		
S 2005	PUSH SWITCH				SPEA12	N4090111		
S 2006	TACT SWITCH				SKQDAA	N5090051		
S 2007	TACT SWITCH				SKQDAA	N5090051		
S 2008	TACT SWITCH				SKQDAA	N5090051		
S 2009	TACT SWITCH				SKQDAA	N5090051		
S 2010	TACT SWITCH				SKQDAA	N5090051		
S 2011	TACT SWITCH				SKQDAA	N5090051		
S 2014	ROTARY CODE S. W.				EC09P20-70	Q9000594		
VR2001	POT.	20K		B	RK09K1130	J60800143		
VR2002	POT.	20K		B	RK09K1130	J60800143		
	SPACER					R7144730		
	SEAL (LITHIUM BATTERY, 2pcs)					R8118690		
	LED SPACER				LH-5-9	S6000242		

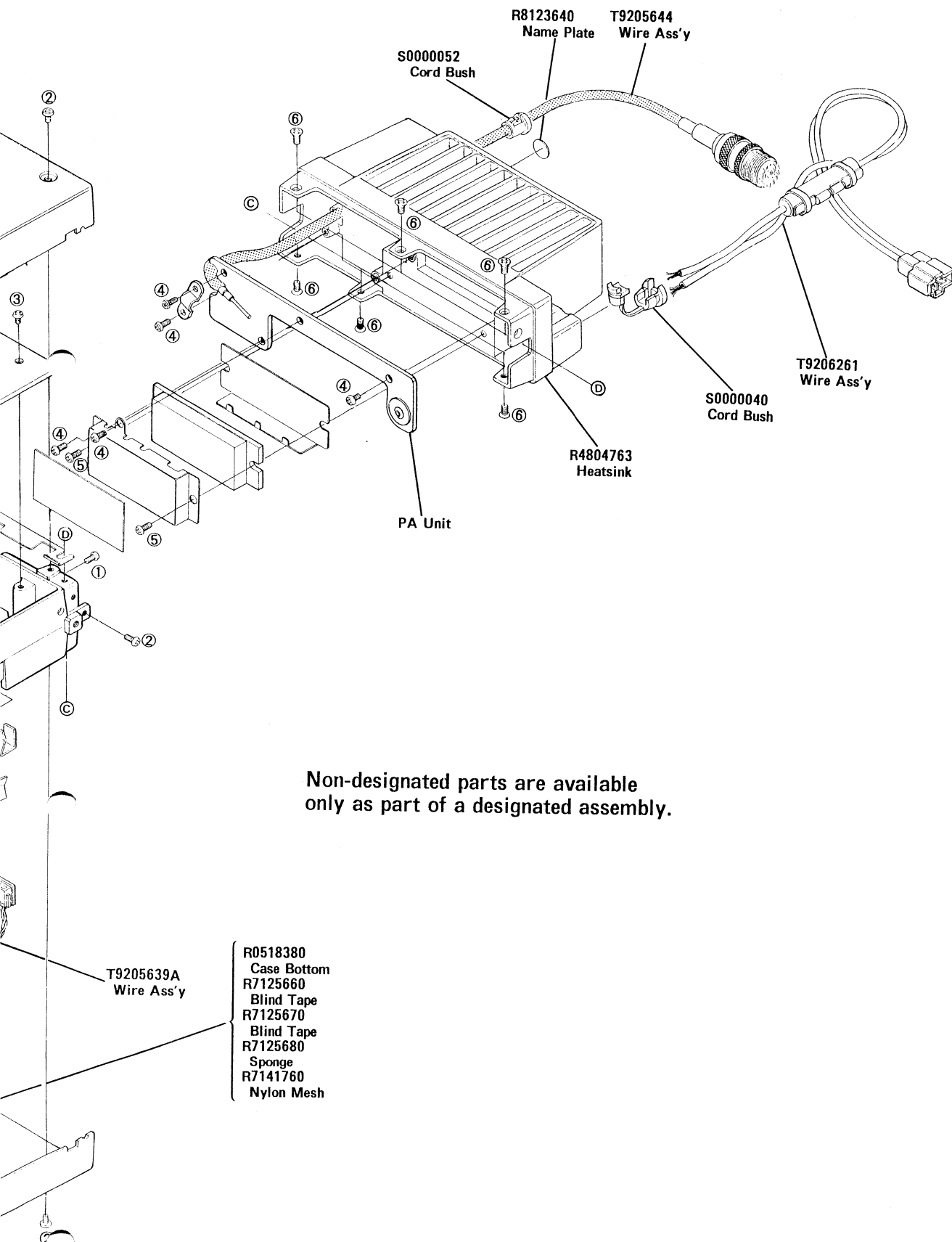


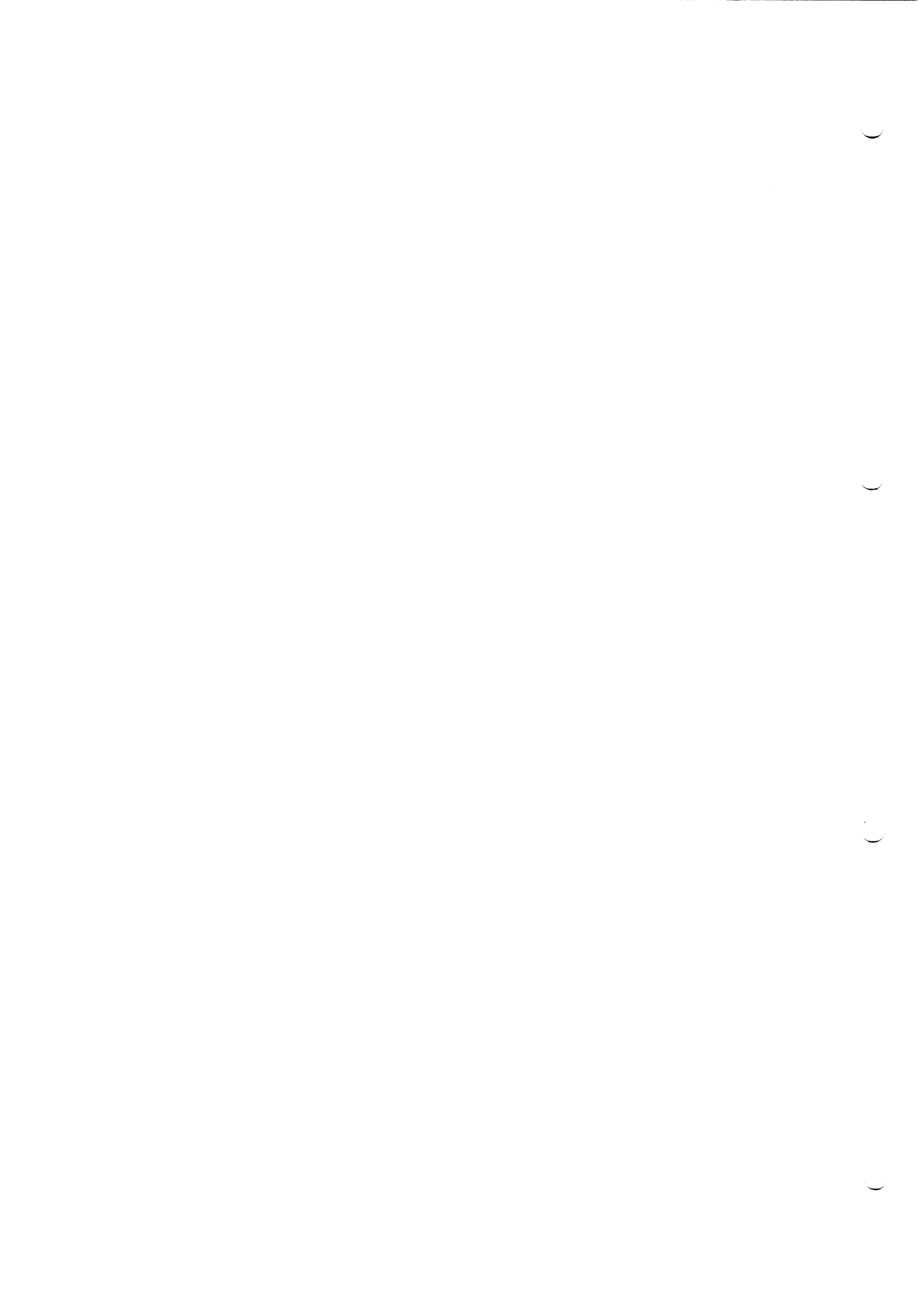
No.	YAESU P/N	Description	Qty.
①	U00204001	PAN HEAD SCREW M2.6 × 4	1
②	U20105007	BINDING HEAD SCREW M2 × 5B	12
③	U20205002	BINDING HEAD SCREW M2.6 × 5NI	9
④	U20206001	BINDING HEAD SCREW M2.6 × 6	5
⑤	U20306001	BINDING HEAD SCREW M3 × 6	2
⑥	U30205001	FLAT HEAD SCREW M2.6 × 5	6

Knob	
F/W	R3518311
DVS	R3518312
PAGE	R3518313
RPT	R3518314
TOPE	R3518315
REV	R3518316

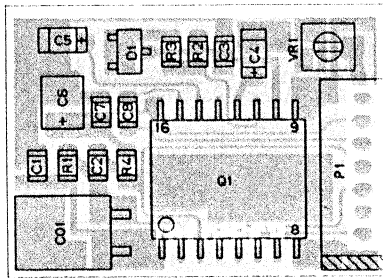


# Exploded View

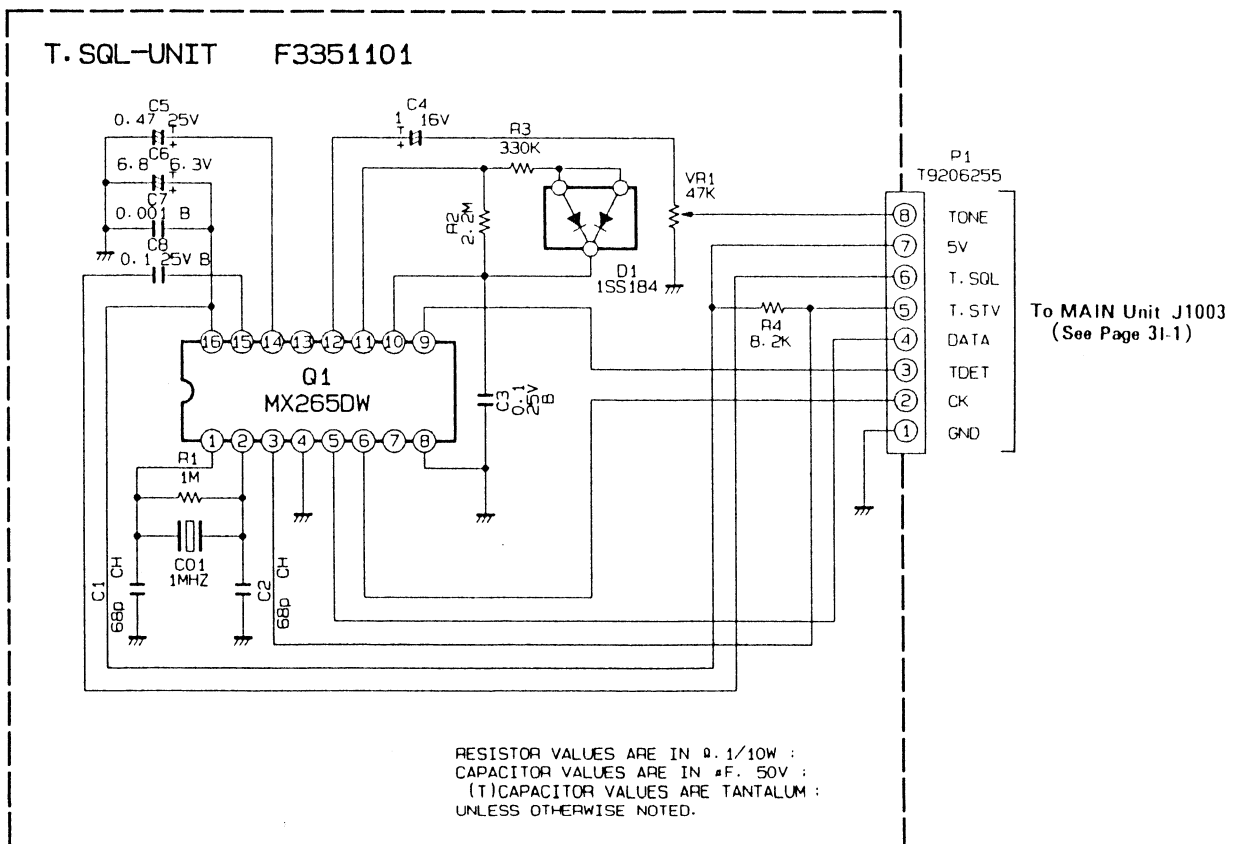
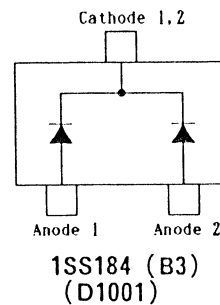
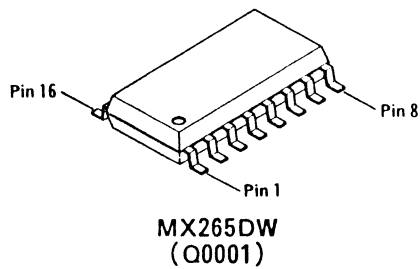
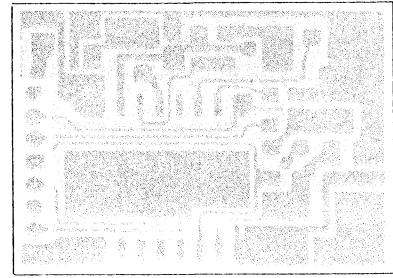




# FTS-27 CTCSS Tone Squelch Unit (option)



- 8. TONE
- 7. 5V
- 6. T.SQL
- 5. T.STV
- 4. DATA
- 3. TDET
- 2. CK
- 1. GND



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RadioManual.EU

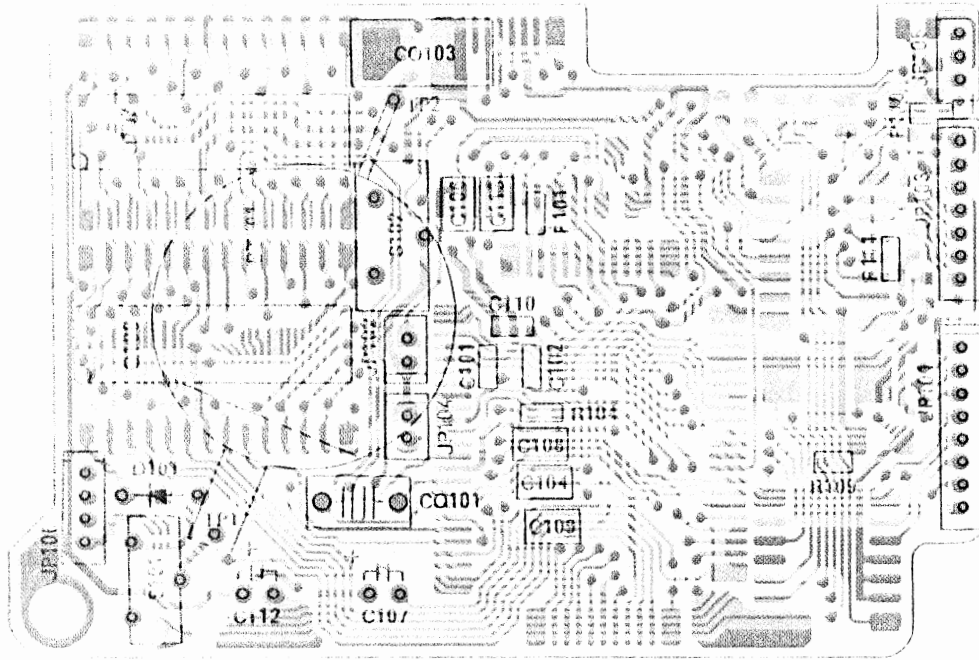


# FTS-27 CTCSS Tone Squelch Unit (option)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** FTS-27 ***								
	Printed Circuit Board					F3351101		
C 0001	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 0002	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 0003	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0004	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0005	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 0006	TANTALUM CHIP CAP.	6.8uF	6.3V		TESVB20J685M8R	K78080010		
C 0007	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 0008	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C00001	CERAMIC OSC				KBR-1000YTR17	H7900840		
D 0001	DIODE				1SS184 TE85R	G2070009		
P 0001	WIRE-ASSY					T9206255		
Q 0001	IC				MX265DW-TR	G1091670		
R 0001	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 0002	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 0003	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 0004	CHIP RES.	8.2K	1/10W	5%	RMC1/10T 822J	J24205822		
VR0001	POT.	47K			EVM-7JS-X30-BQ4	J51788473		
	RUBBER SPONGE					R7146670		







GND  
 VOI OUT  
 VOI IN

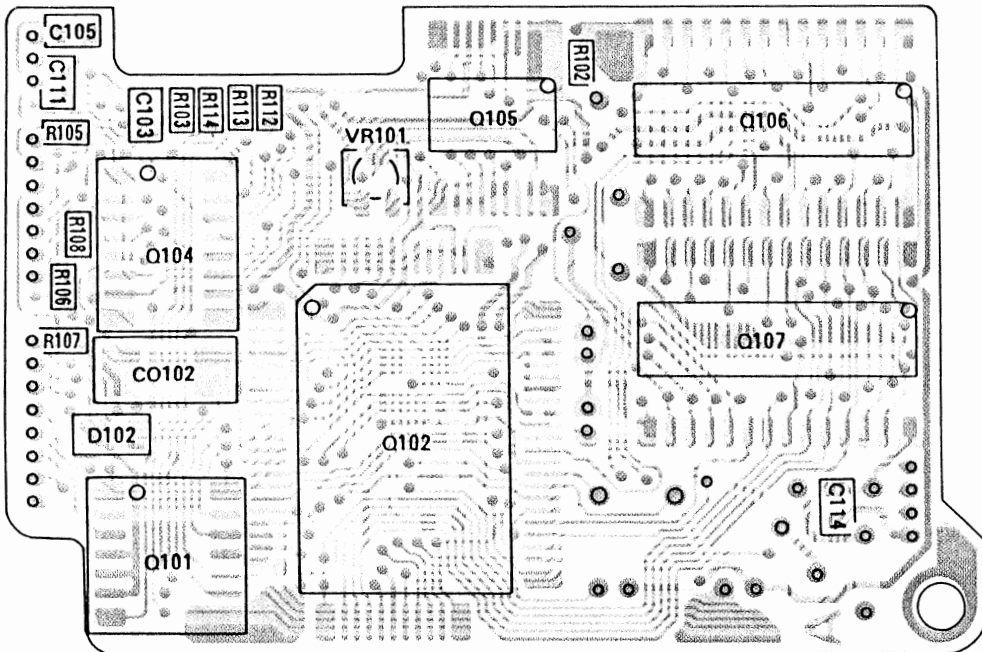
CLOCK  
 DATA  
 V.STB  
 STBY  
 WR  
 RD  
 +5V

ACL  
 PAG STB  
 TOE  
 P0  
 P1  
 P2  
 P3  
 DS

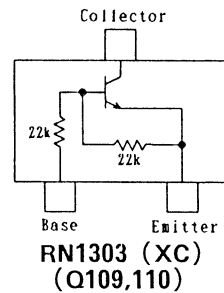
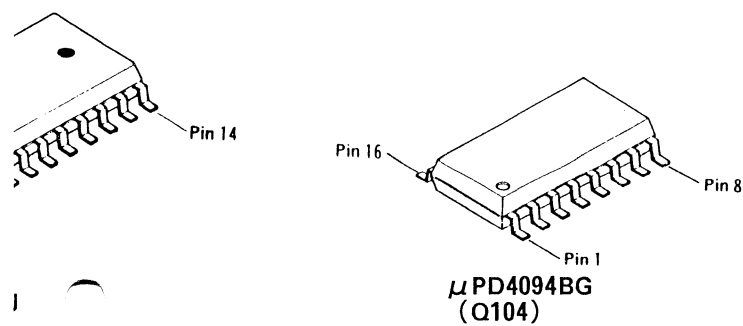
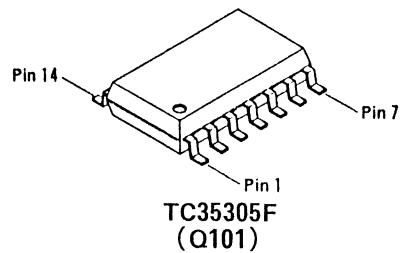
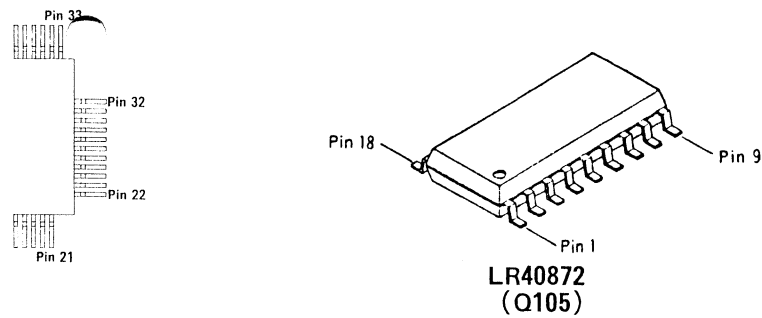
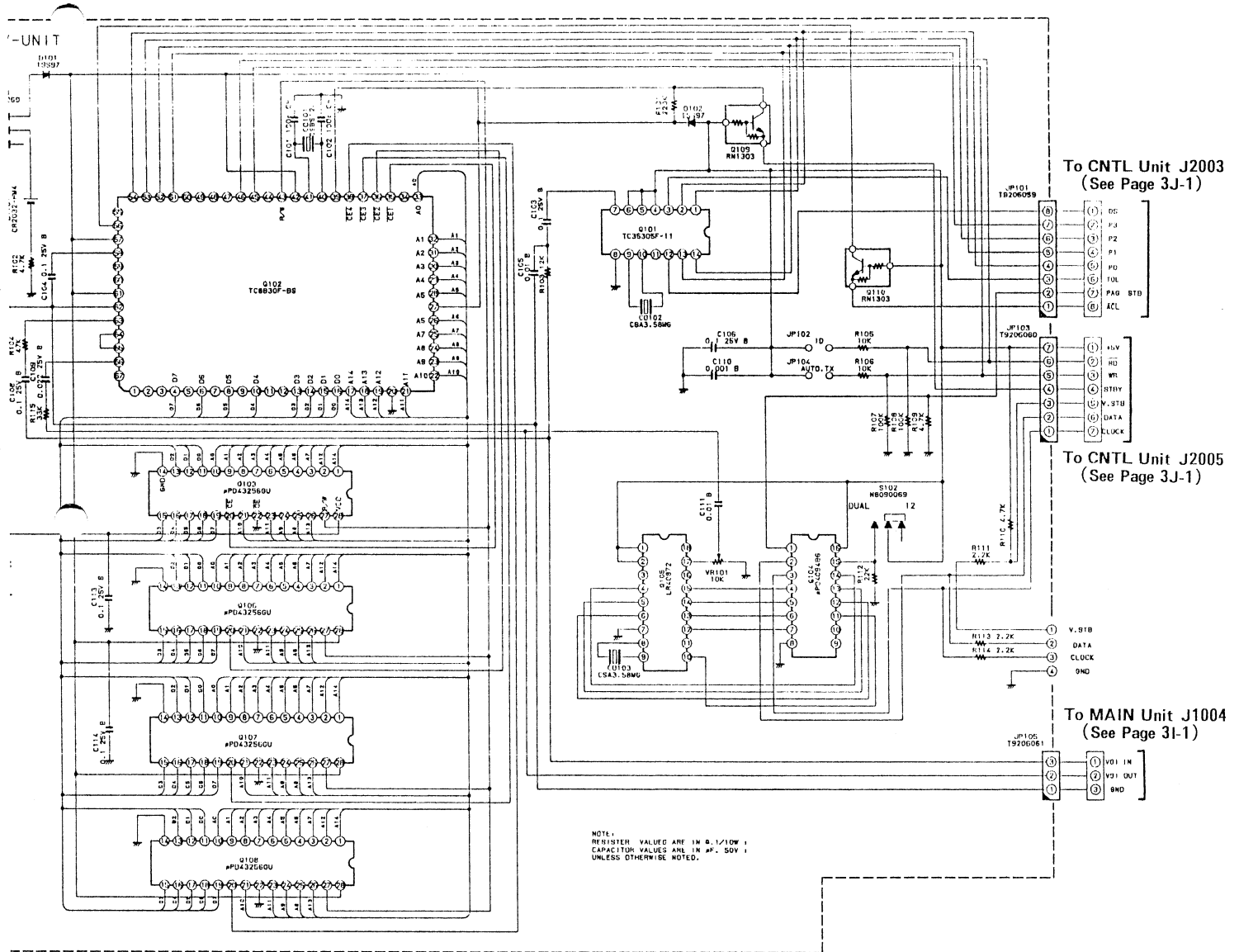
VOICE-MEMORY  
 F32:510:1A



connector side



# DVS-3 Digital Voice System Unit (option)



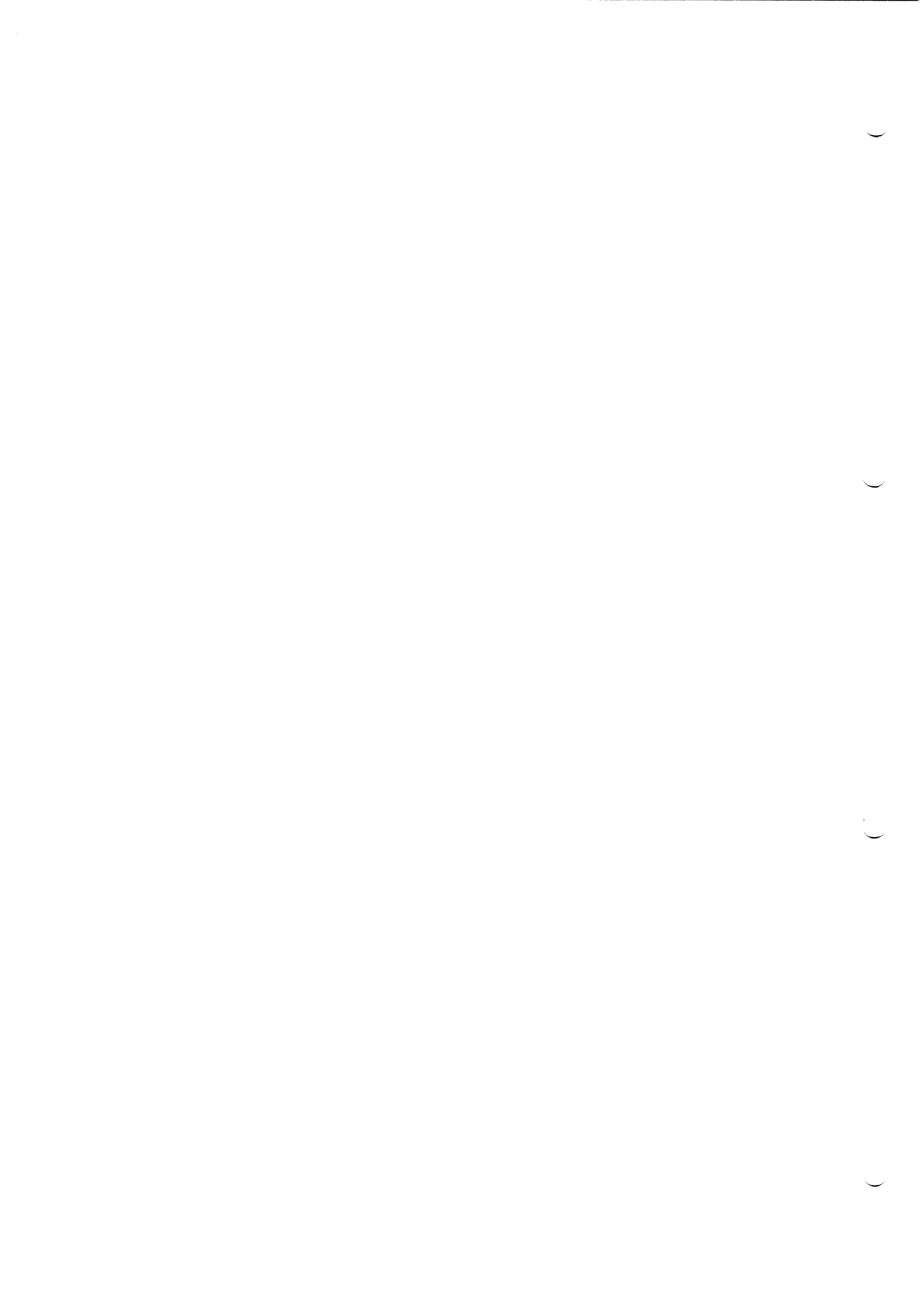


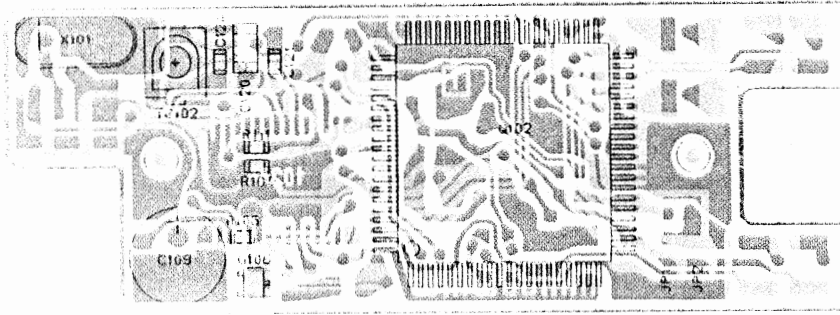
# DVS-3 Digital Voice System Unit (option)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** DVS-3 ***								
	Printed Circuit Board					F3215101A		
BT0101	LITHIUM BATTERY				CR2032-HM4	Q9000268		
C 0101	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0102	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0103	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0104	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0105	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 0106	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0107	AL. ELECTRO. CAP.	47uF	6.3V		RC2-6V470MS	K40089023		
C 0108	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0109	CHIP CAP.	0.022uF	25V	B	GRM40B223K25PT	K22140812		
C 0110	CHIP CAP.	0.001uF	50V	B	GRM39B102K50PT	K22174821		
C 0111	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 0112	AL. ELECTRO. CAP.	47uF	6.3V		RC2-6V470MS	K40089023		
C 0113	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0114	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
CO0101	CERAMIC OSC				CSB512J	H7900660		
CO0102	CERAMIC OSC				CSA3.58MG	H7900510		
CO0103	CERAMIC OSC				CSA3.58MG	H7900510		
D 0101	DIODE				1SS97	G2090118		
D 0102	DIODE				1SS97	G2090118		
JP0101	WIRE-ASSY					T9206059		
JP0103	WIRE-ASSY					T9206060		
JP0105	WIRE-ASSY					T9206061		
Q 0101	IC				TC35305F-11 TP2	G1091177		
Q 0102	IC				TC8830F-BS	G1090841		
Q 0103	IC				UPD43256AGU-12LL	G1090863		
Q 0104	IC				UPD4094BG	G1090696		
Q 0105	IC				LR40872	G1090731		
Q 0106	IC				UPD43256AGU-12LL	G1090863		
Q 0107	IC				UPD43256AGU-12LL	G1090863		
Q 0108	IC				UPD43256AGU-12LL	G1090863		
Q 0109	TRANSISTOR				RN1303	G3070037		
Q 0110	TRANSISTOR				RN1303	G3070037		
R 0101	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0102	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0103	CHIP RES.	12K	1/16W	5%	RMC1/16 123JATP	J24185123		
R 0104	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0105	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0106	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0107	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0108	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		

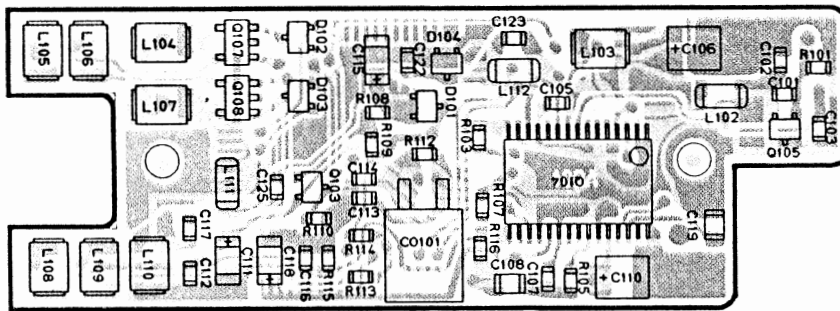
# DVS-3 Digital Voice System Unit (option)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 0109	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0110	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0111	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0112	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0113	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0114	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0115	CARBON FILM RES.	33K	1/8W		RD18TJ333	J01215333		
S 0101	SLIDE SWITCH				SSSS21	N6090069		
S 0102	SLIDE SWITCH				SSSS21	N6090069		
VR0101	POT.	10K			RH03AYA14X	J51778103		
	SEAL					R8118690		

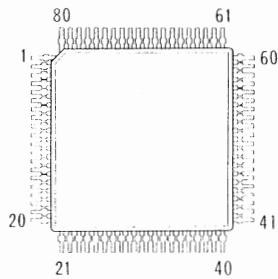
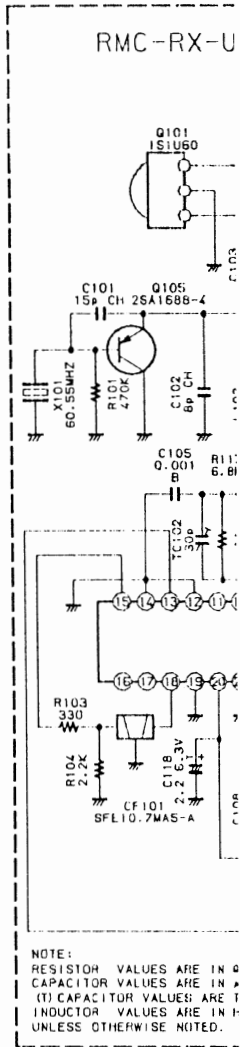




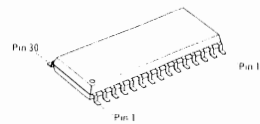
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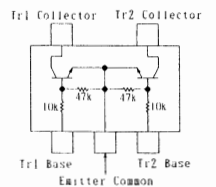
chip-only side



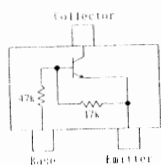
HD404618A81H  
(Q102)



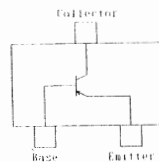
CXA1280N  
(Q104)



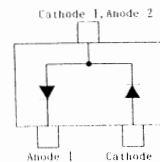
FMG5 (G5)  
(Q107,108)



DTC144EU (26)  
(Q106)

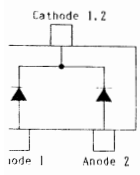
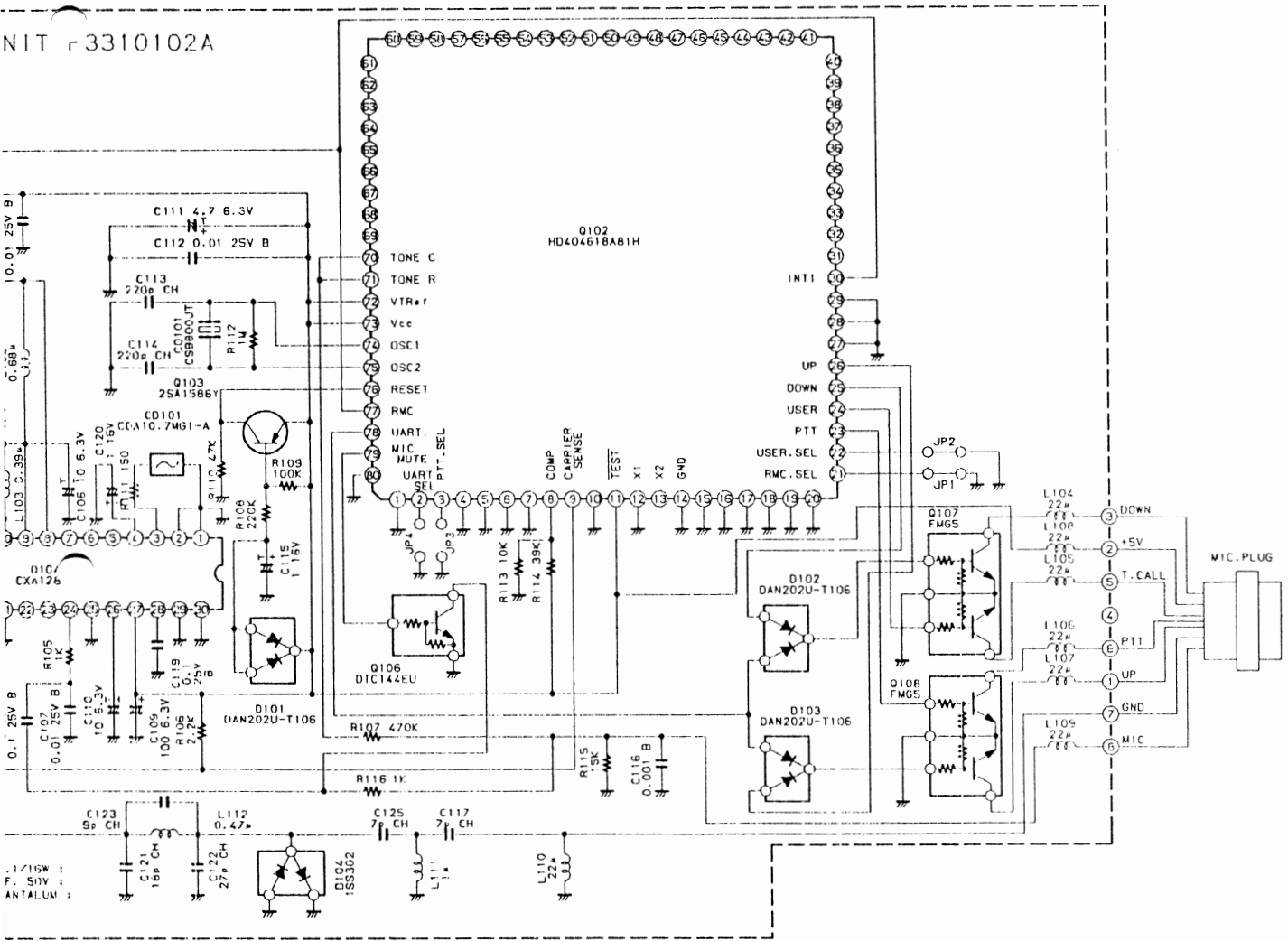


2SA1586Y (S0)  
(Q103)  
2SA1688 (E4)  
(Q105)



1SS302 (C3)  
(D104)

# MW-2 Wireless Remote Microphone (accessory)



AN202U (N)  
101,102,103

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# MW-2 Wireless Remote Microphone (accessory)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** RMC-RX UNIT ***								
	PCB With Components					CA1132001		
	Printed Circuit Board					F3310102A		
C 0101	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		
C 0102	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 0103	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0105	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0106	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVB20J106M-8R	K78080019		
C 0107	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0108	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0109	AL. ELECTRO. CAP.	100uF	6.3V		RC3-6V101M	K40089020		
C 0110	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVB20J106M-8R	K78080019		
C 0111	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 0112	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0113	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 0114	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 0115	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0116	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0117	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 0118	TANTALUM CHIP CAP.	2.2uF	6.3V		TESVA0J225M1-8R	K78080009		
C 0119	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 0120	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0121	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		
C 0122	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 0123	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 0125	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
CD0101	CERAMIC DISC				CDA10.7MG1-A	H7900890		
CF0101	CERAMIC FILTER				SFE10.7MA5-A	H3900408		
CO0101	CERAMIC OSC				CSB800JT	H7900530		
D 0101	DIODE				DAN202U T106	G2070162		
D 0102	DIODE				DAN202U T106	G2070162		
D 0103	DIODE				DAN202U T106	G2070162		
D 0104	DIODE				1SS302 TE85R	G2070088		
L 0102	M. RFC	0.68uH			LER015TR68M	L1690117		
L 0103	CHIP COIL	0.39uH			LQH3NR39M92M00-	L1690071		
L 0104	M. RFC	22uH			FLC32T-220J	L1690219		
L 0105	M. RFC	22uH			FLC32T-220J	L1690219		
L 0106	M. RFC	22uH			FLC32T-220J	L1690219		
L 0107	M. RFC	22uH			FLC32T-220J	L1690219		
L 0108	M. RFC	22uH			FLC32T-220J	L1690219		
L 0109	M. RFC	22uH			FLC32T-220J	L1690219		
L 0110	M. RFC	22uH			FLC32T-220J	L1690219		
L 0111	M. RFC	1uH			LER015T1ROM	L1690119		

# MW-2 Wireless Remote Microphone (accessory)

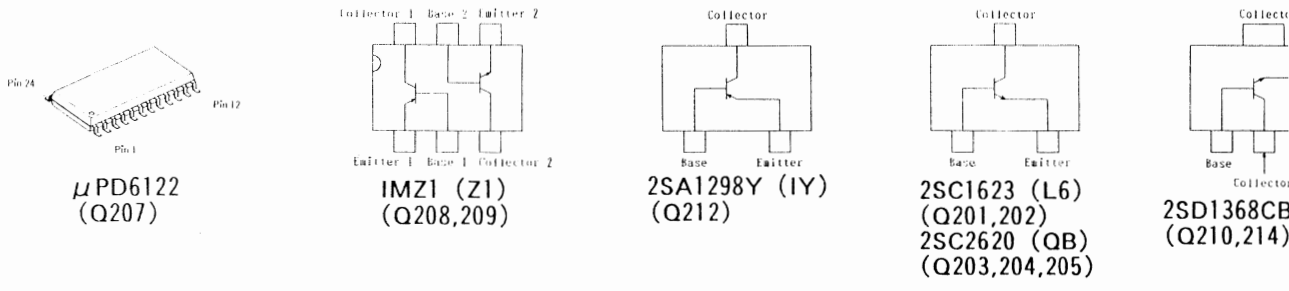
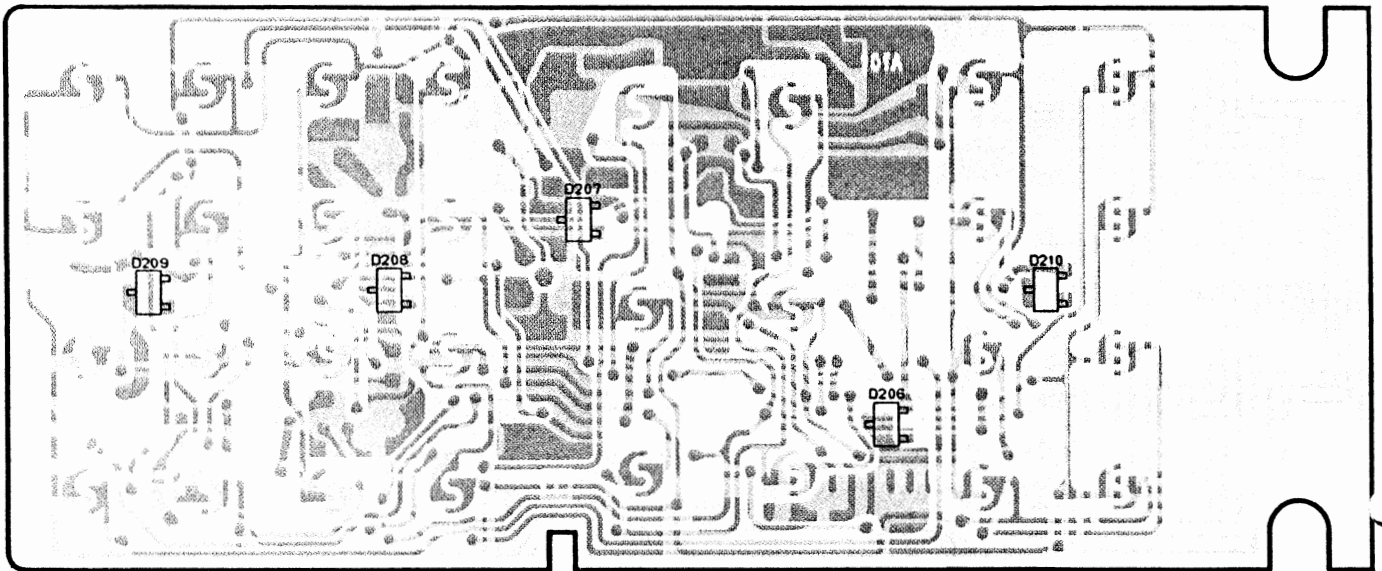
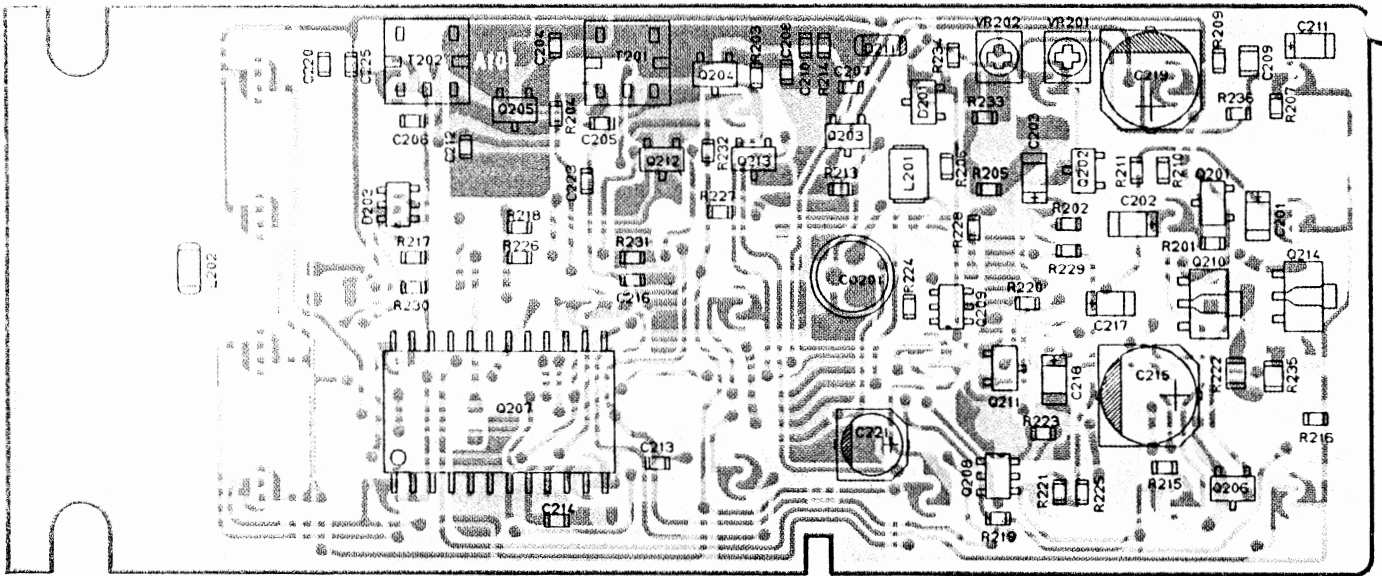
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
L 0112	M. RFC	0.47uH			LER015TR47M	L1690115		
Q 0101	REMOTE SENSOR				IS1U60	G9090054		
Q 0102	IC				HD404618A81H	G1091703		
Q 0103	TRANSISTOR				2SA1586Y TE85R	G3115867Y		
Q 0104	IC				CXA1280N-T3	G1091209		
Q 0105	TRANSISTOR				2SA1688-4-TR	G3116887D		
Q 0106	TRANSISTOR				DTC144EU T107	G3070041		
Q 0107	TRANSISTOR				FMG5 T99	G3070021		
Q 0108	TRANSISTOR				FMG5 T99	G3070021		
R 0101	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0103	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
R 0104	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0105	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0106	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0107	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 0108	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0109	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0110	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0111	CHIP RES.	150	1/16W	5%	RMC1/16 151JATP	J24185151		
R 0112	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 0113	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0114	CHIP RES.	39K	1/16W	5%	RMC1/16 393JATP	J24185393		
R 0115	CHIP RES.	15K	1/16W	5%	RMC1/16 153JATP	J24185153		
R 0116	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0117	CHIP RES.	6.8K	1/16W	5%	RMC1/16 682JATP	J24185682		
TC0102	TRIMMER CAP.	30pF			ECR-JA030E12X	K91000180		
X 0101	XTAL	60.55MHz				H0103028		
	XTAL HOLDER					R3129530		

1

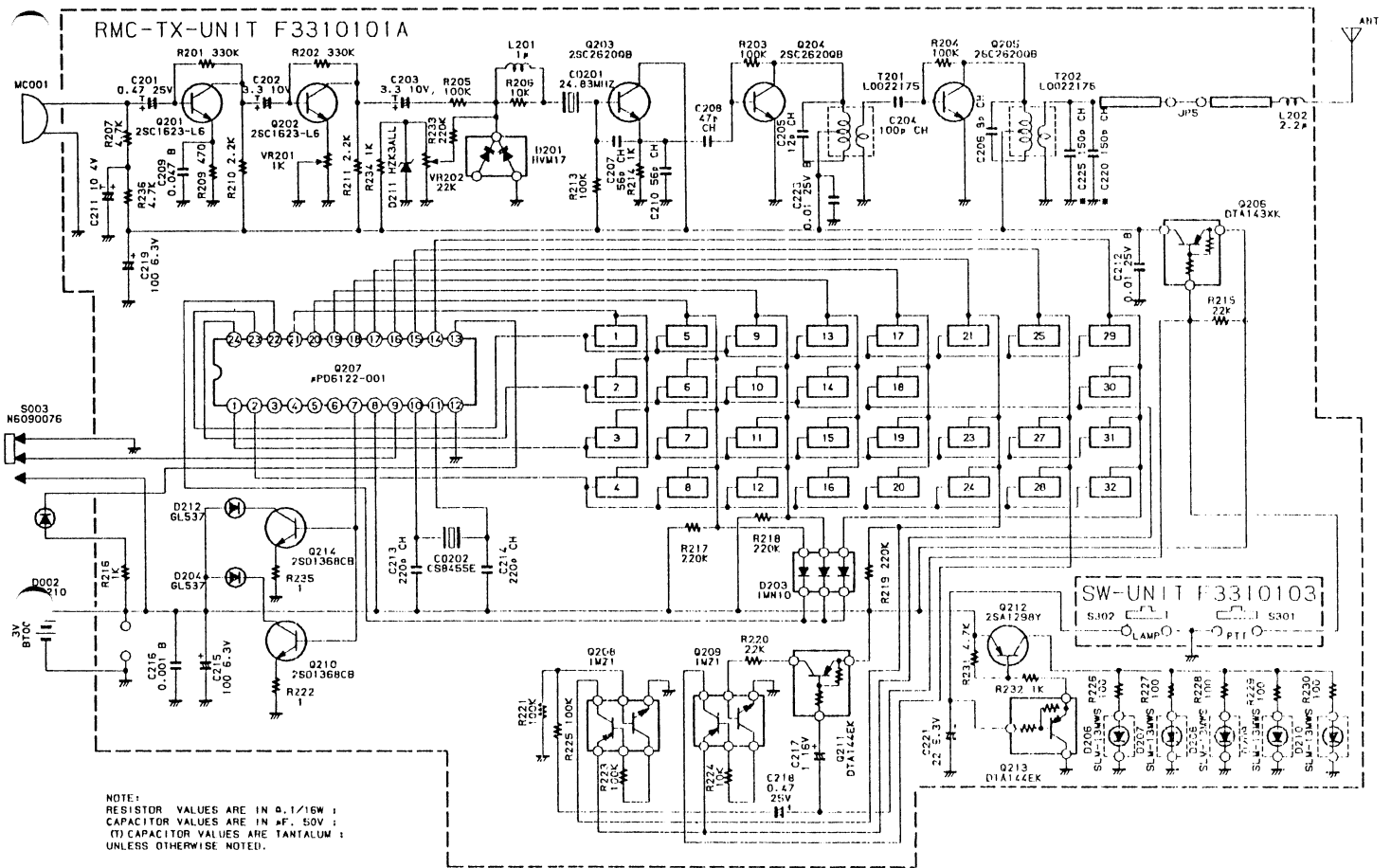
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3

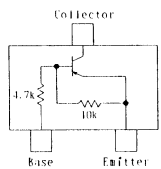
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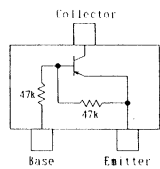
# MW-2 Wireless Remote Microphone (accessory)



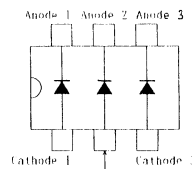
(CB)



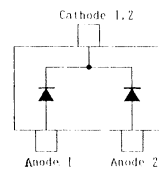
DTA143XK (33)  
(Q206)



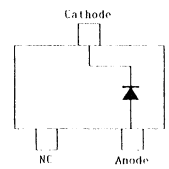
DTA144EK (16)  
(Q211,213)



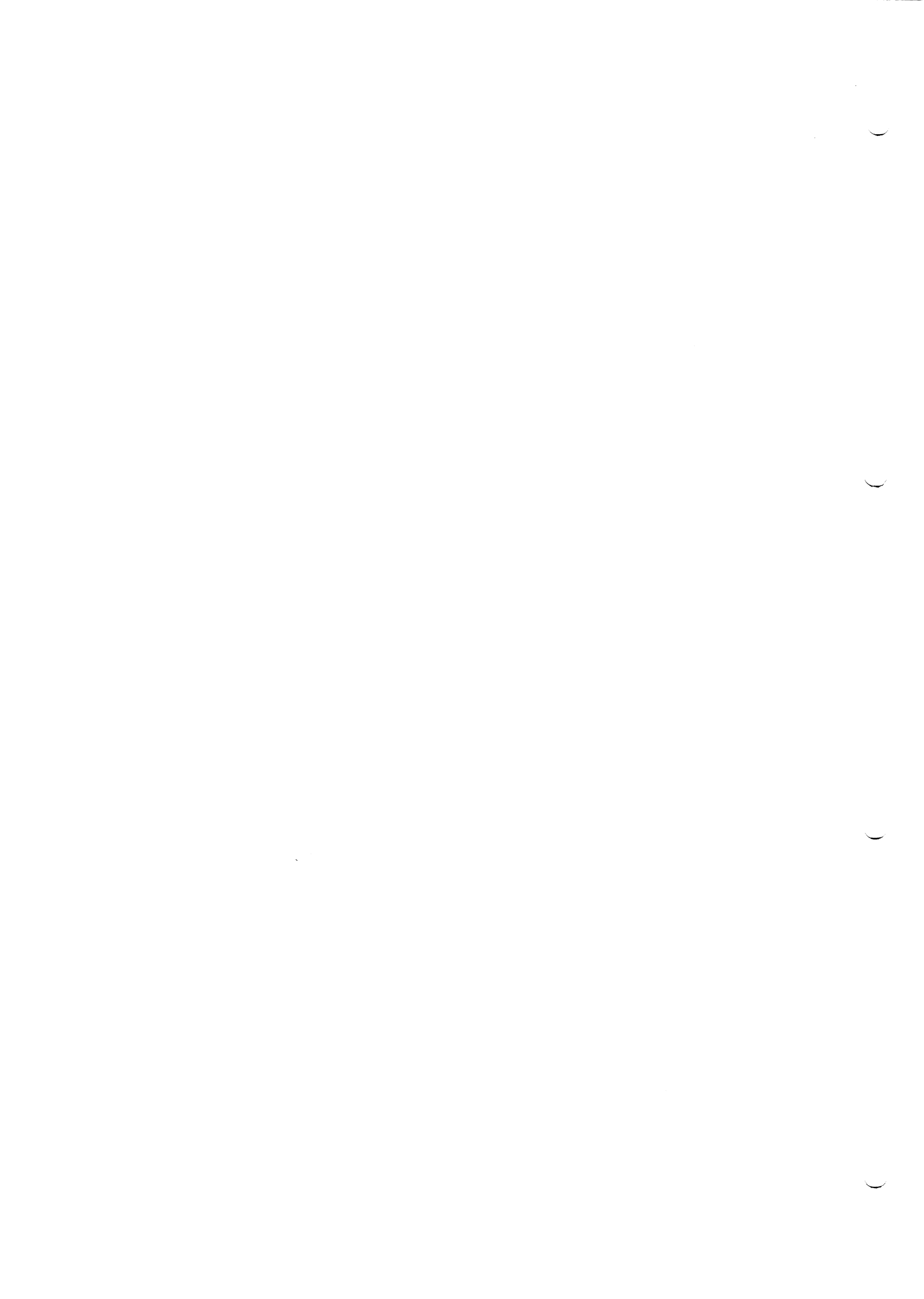
IMN10 (N10)  
(D203)



HVM17 (T6)  
(D201)



SLM-13MWS  
(D206,207,208,  
209,210)



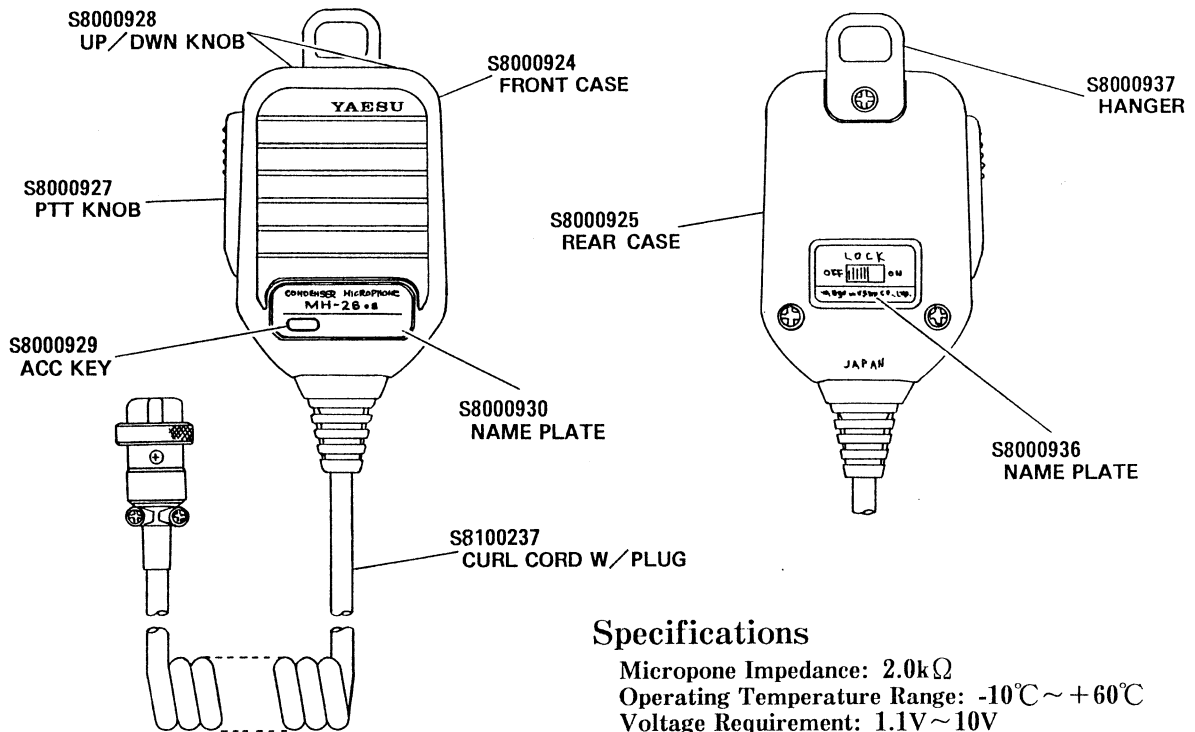
# MW-2 Wireless Remote Microphone (accessory)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
*** RMC-TX UNIT ***								
	PCB With Components					CA1131001		
	Printed Circuit Board					F3310101A		
C 0201	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 0202	TANTALUM CHIP CAP.	3.3uF	10V		TEMSVA1A335M-8R	K78100015		
C 0203	TANTALUM CHIP CAP.	3.3uF	10V		TEMSVA1A335M-8R	K78100015		
C 0204	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 0205	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 0206	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 0207	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		
C 0208	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		
C 0209	CHIP CAP.	0.047uF	50V	B	GRM40B473M50PT	K22170823		
C 0210	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		
C 0211	TANTALUM CHIP CAP.	10uF	4V		TEMSVAOG106M-8R	K78060010		
C 0212	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0213	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 0214	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 0215	AL. ELECTRO. CAP.	100uF	6.3V		ECEVOJA101P	K48080002		
C 0216	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0217	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0218	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 0219	AL. ELECTRO. CAP.	100uF	6.3V		ECEVOJA101P	K48080002		
C 0220	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 0221	AL. ELECTRO. CAP.	22uF	6.3V		ECEVOJA220R	K48080001		
C 0223	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0225	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
CO0201	BAR-OSC				FAR-V2MF-24830	H7900780		
CO0202	CERAMIC OSC				CSB455E	H7900500		
D 0201	DIODE				HVM17-TR	G2070148		
D 0202	LED				TLR210	G2090243		
D 0203	DIODE				IMN10 T108	G2070078		
D 0204	LED				GL537	G2090511		
D 0206	LED				SLM-13MWS T-97B	G2070098		
D 0207	LED				SLM-13MWS T-97B	G2070098		
D 0208	LED				SLM-13MWS T-97B	G2070098		
D 0209	LED				SLM-13MWS T-97B	G2070098		
D 0210	LED				SLM-13MWS T-97B	G2070098		
D 0211	DIODE				HZK3ALL-TR	G2070204		
D 0212	LED				GL537	G2090511		
L 0201	M. RFC	1uH			FLC32T-1ROK	L1690203		
L 0202	M. RFC	2.2uH			LER015T2R2M	L1690123		
Q 0201	TRANSISTOR				2SC1623-T2BL6	G3316237F		
Q 0202	TRANSISTOR				2SC1623-T2BL6	G3316237F		
Q 0203	TRANSISTOR				2SC2620QBTR	G3326207B		
Q 0204	TRANSISTOR				2SC2620QBTR	G3326207B		
Q 0205	TRANSISTOR				2SC2620QBTR	G3326207B		
Q 0206	TRANSISTOR				DTA143XK T97	G3070032		
Q 0207	IC				UPD6122-001	G1091208		
Q 0208	TRANSISTOR				IMZ1 T108	G3070025		

# MW-2 Wireless Remote Microphone (accessory)

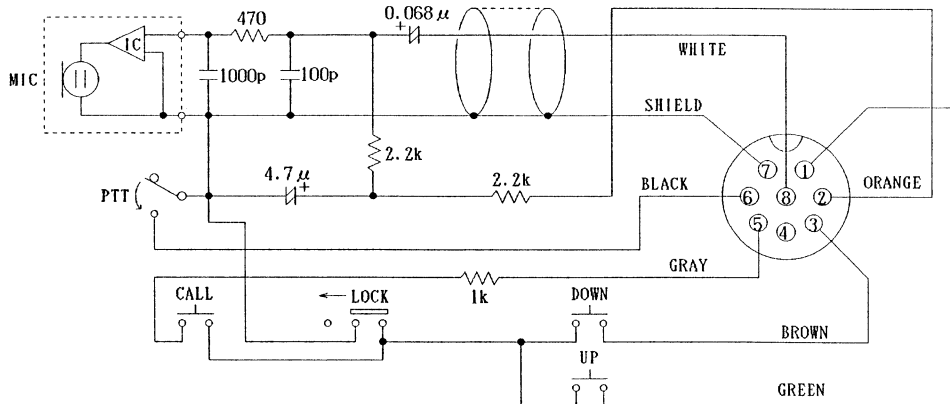
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
Q 0209	TRANSISTOR				IMZ1 T108	G3070025		
Q 0210	TRANSISTOR				2SD1368CB TL	G3413688B		
Q 0211	TRANSISTOR				DTA144EK T146	G3070069		
Q 0212	TRANSISTOR				2SA1298Y TE85R	G3112987Y		
Q 0213	TRANSISTOR				DTA144EK T146	G3070069		
Q 0214	TRANSISTOR				2SD1368CB TL	G3413688B		
R 0201	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 0202	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 0203	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0204	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0205	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0206	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0207	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0209	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 0210	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0211	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0213	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0214	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0215	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0216	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0217	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0218	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0219	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0220	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0221	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0222	CHIP RES.	1	1/10W	5%	RMC1/10T 1R0J	J24205010		
R 0223	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0224	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0225	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0226	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0227	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0228	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0229	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0230	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0231	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0232	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0233	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0234	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0235	CHIP RES.	1	1/10W	5%	RMC1/10T 1R0J	J24205010		
R 0236	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
T 0201	COIL				CS-5 49.85M	L0022175		
T 0202	COIL				CS-5 49.85M	L0022175		
VR0201	POT.	1K		B	RH03AYA13X	J51778102		
VR0202	POT.	22K			RH03AYAJ4X	J51778223		
*** SW UNIT ***								
	PCB With Components					CP4348001		
	Printed Circuit Board					F3310103		
S 0301	TACT SWITCH				SKQDAB	N5090058		
S 0302	TACT SWITCH				SKQDAB	N5090058		

# MH-26<sub>A8</sub> Microphone (accessory)



## Specifications

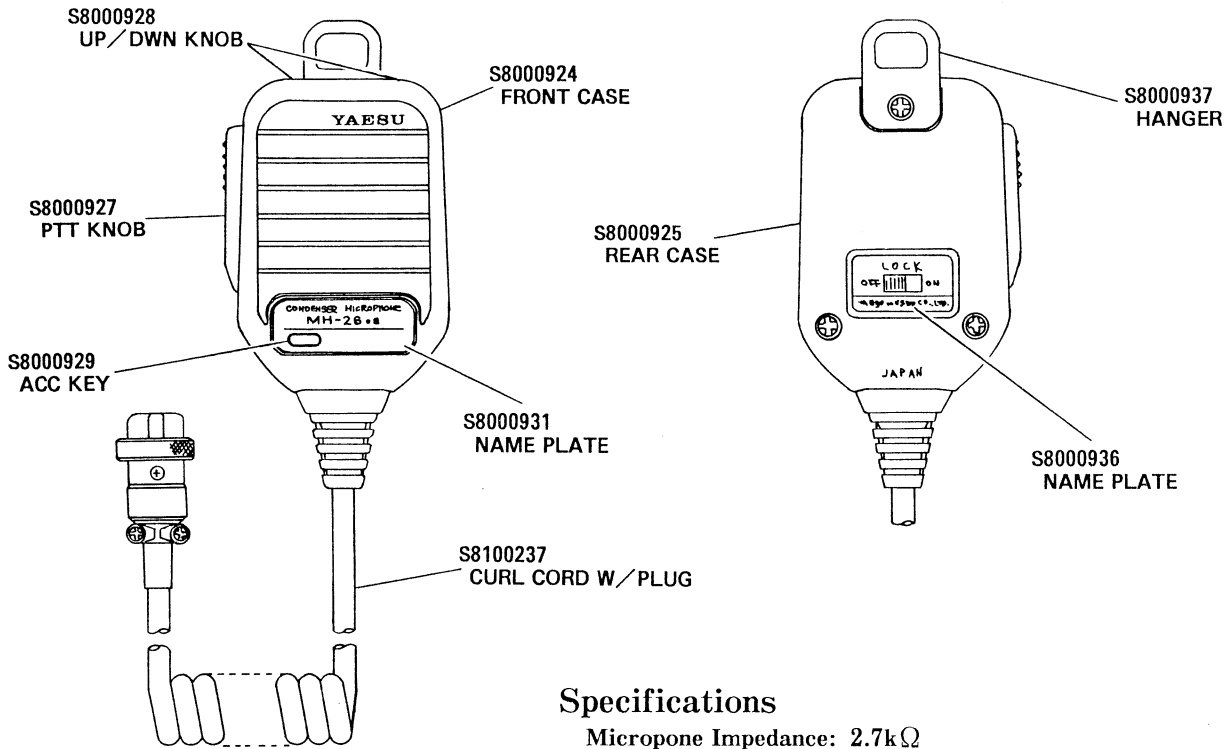
Microphone Impedance: 2.0kΩ  
 Operating Temperature Range: -10°C ~ +60°C  
 Voltage Requirement: 1.1V ~ 10V



REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
*** MH-26A8 ***							
	MIC ELEMENT				EM-78	M3290007	
	TACT SWITCH (3pcs)				SKHHLN	N5090036	
	HOOK					S8000938	

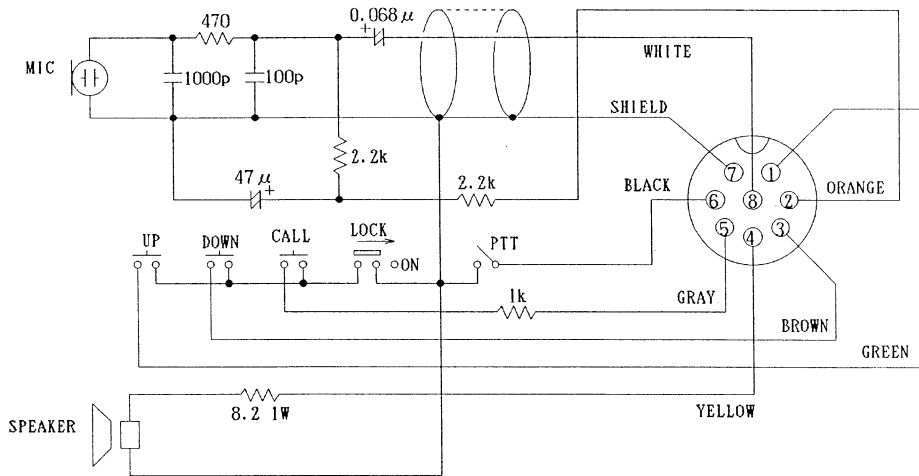
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RadioManual.EU

# MH-26<sub>B8</sub> Microphone (accessory)



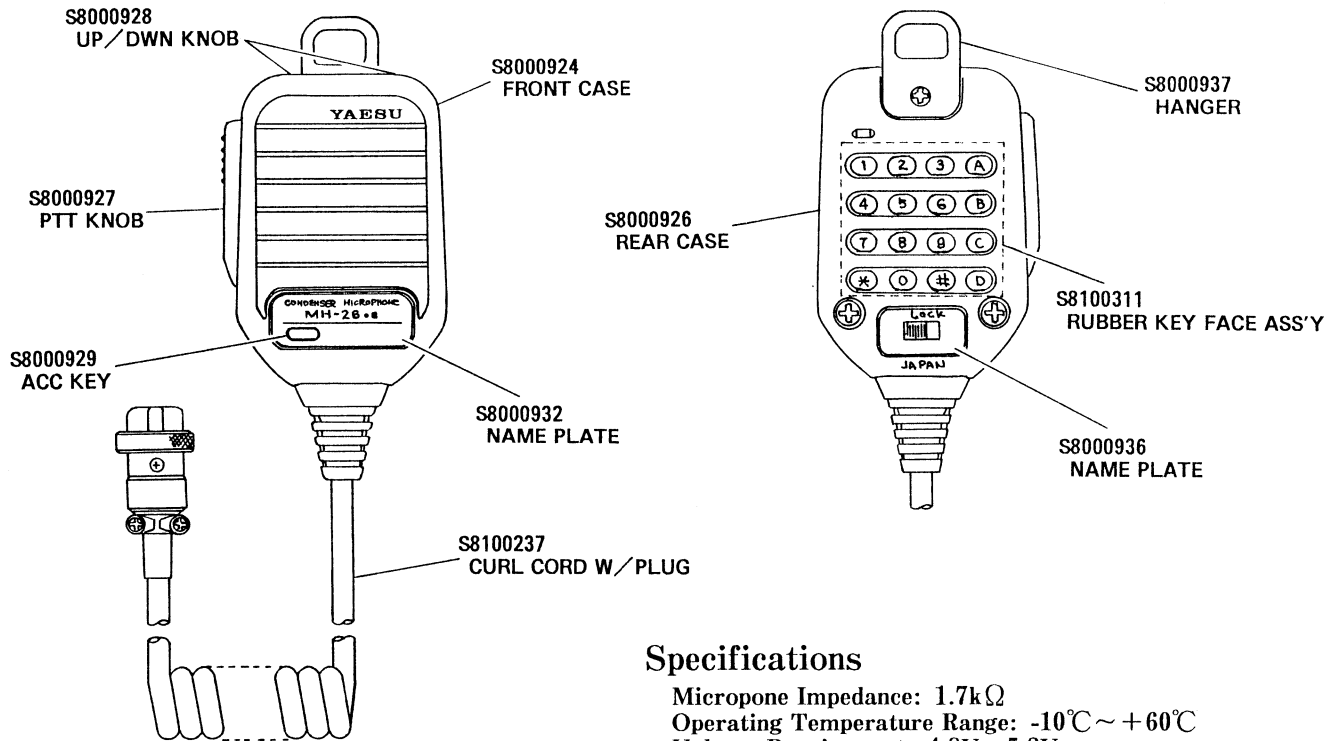
## Specifications

Microphone Impedance:  $2.7k\Omega$   
 Speaker Impedance:  $17\Omega$   
 Speaker Maximum Range: 2W  
 Operating Temperature Range:  $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$   
 Voltage Requirement: 1.1V ~ 10V



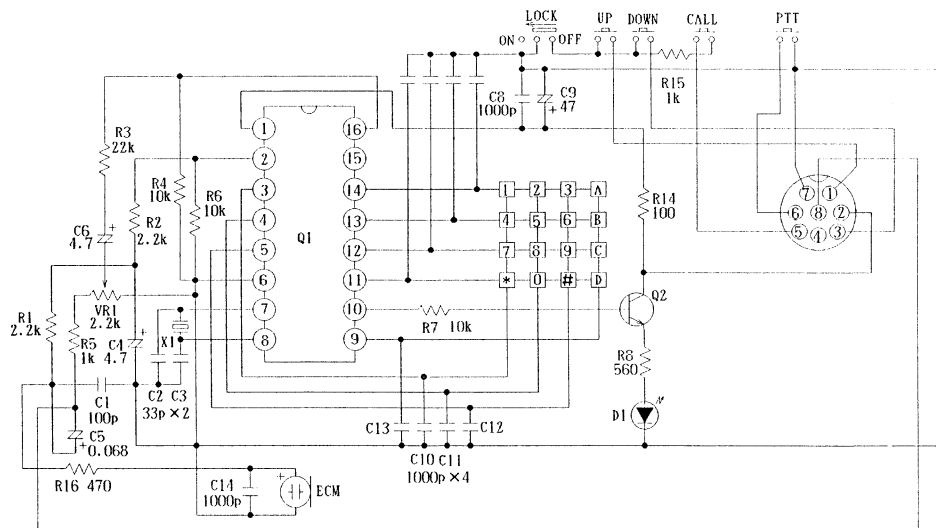
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
*** MH-26B8 ***							
	MIC ELEMENT				EM-78	M3290007	
	SPEAKER				DH-17S-2	S8100262	
	TACT SWITCH (3pcs)				SKHHLN	N5090036	
	HOOK					S8000938	

# MH-26<sub>C8</sub> Microphone (accessory)



## Specifications

Microphone Impedance: 1.7k $\Omega$   
 Operating Temperature Range: -10°C ~ +60°C  
 Voltage Requirement: 4.8V ~ 5.2V

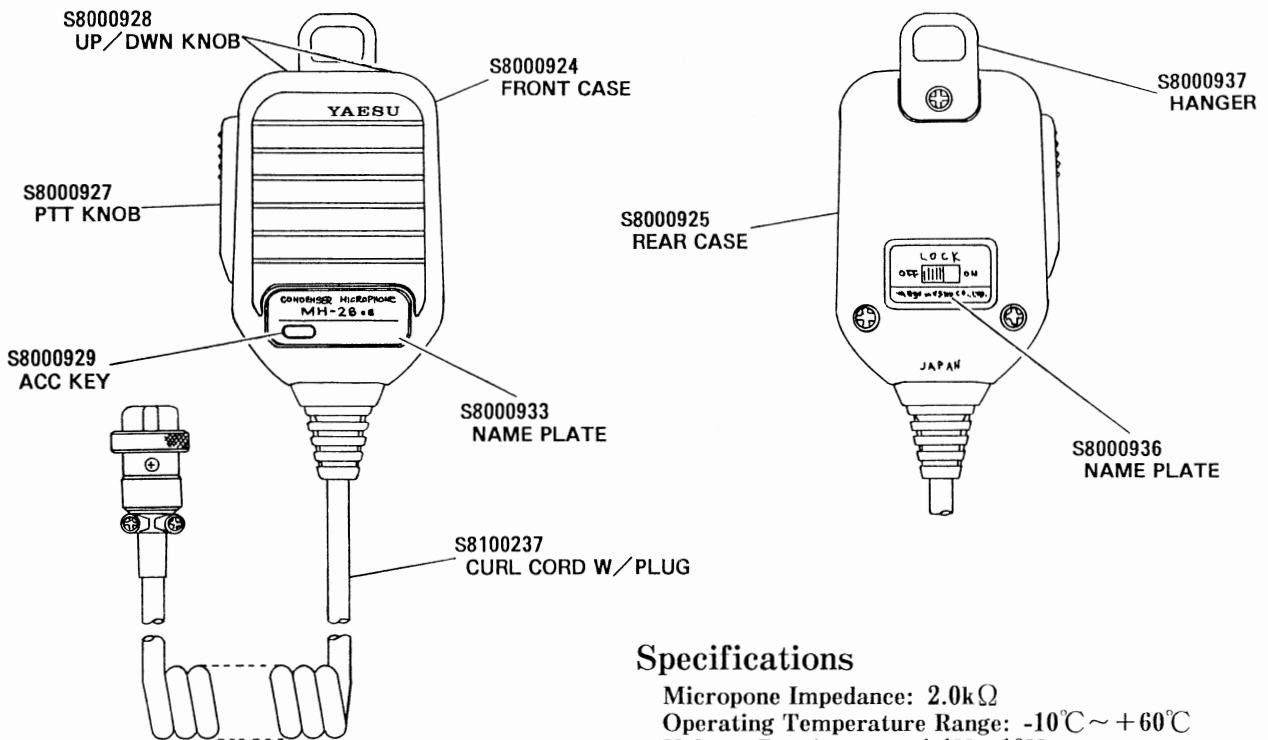


REF.	MFR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
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\*\*\* MH-26C8 \*\*\*

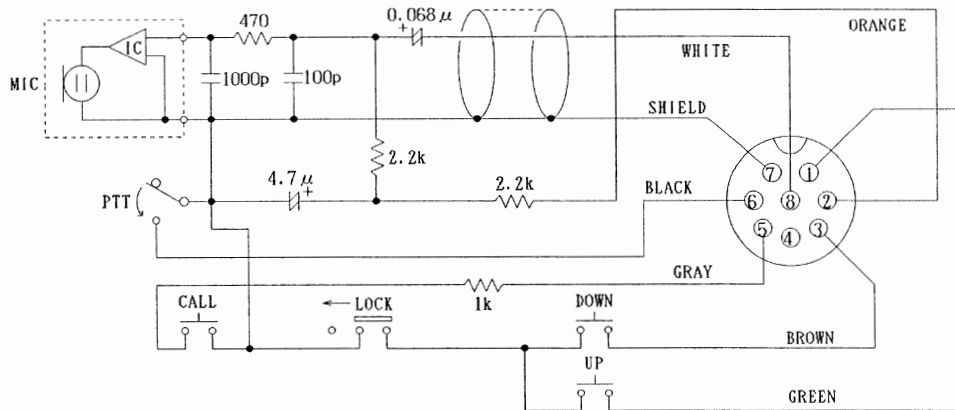
D 0001	LED				TLR210	G2090243	
	MIC ELEMENT				EM-78	M3290007	
	TACT SWITCH (3pcs)				SKHHLN	N5090036	
	DTMF UNIT ASS'Y				EM-4130YE1-3	S8100310	
	HOOK					S8000938	

# MH-26<sub>D8</sub> Microphone (accessory)



## Specifications

Microphone Impedance: 2.0k $\Omega$   
 Operating Temperature Range: -10 $^{\circ}$ C ~ +60 $^{\circ}$ C  
 Voltage Requirement: 1.1V ~ 10V

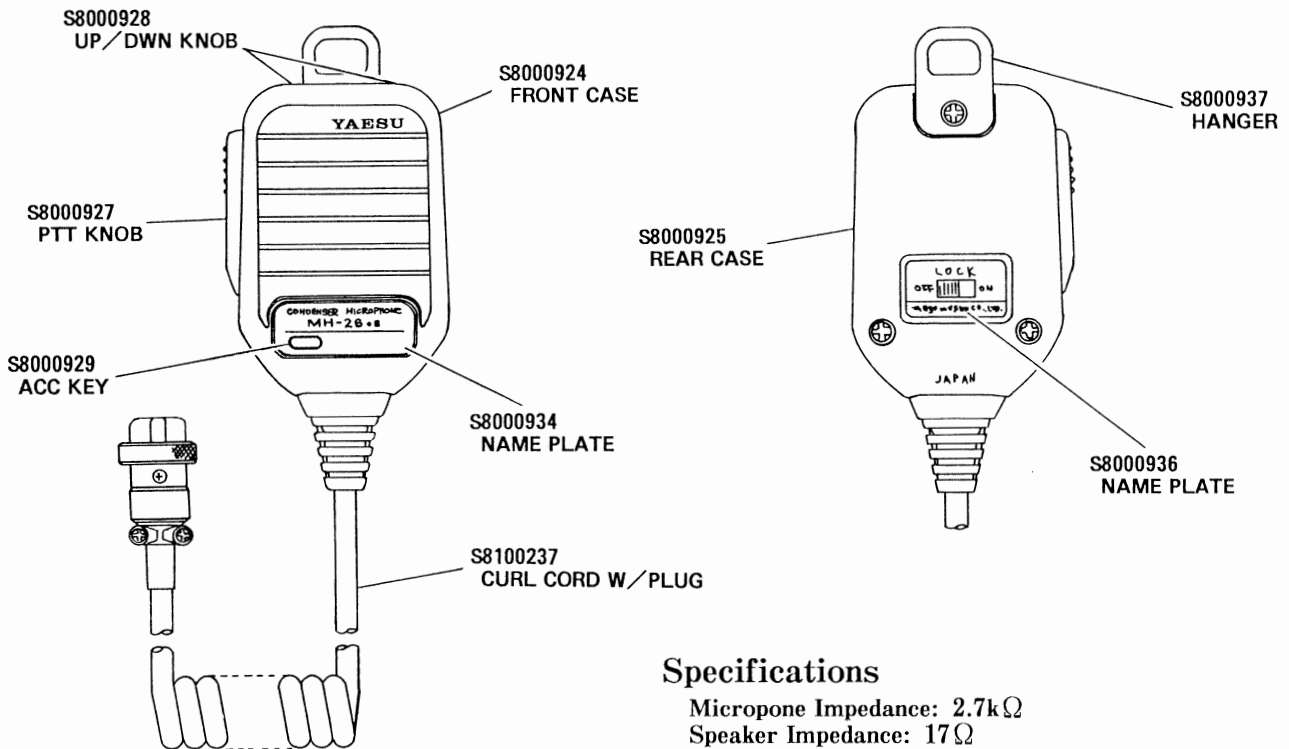


REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
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\*\*\* MH-26D8 \*\*\*

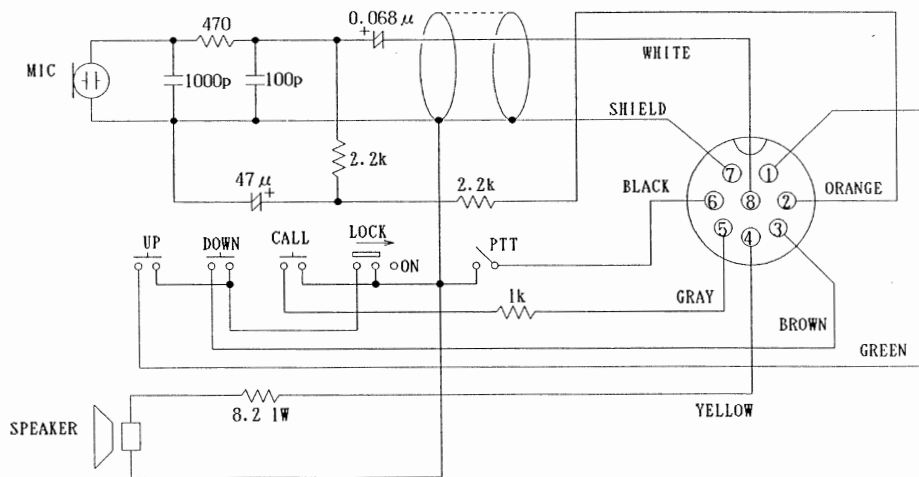
MIC ELEMENT					EM-78	M3290007	
TACT SWITCH (3pcs)					SKHHLN	N5090036	
HOOK						S8000938	

# MH-26<sub>E8</sub> Microphone (accessory)



## Specifications

Microphone Impedance: 2.7k $\Omega$   
 Speaker Impedance: 17 $\Omega$   
 Speaker Maximum Range: 2W  
 Operating Temperature Range: -10 $^{\circ}$ C ~ +60 $^{\circ}$ C  
 Voltage Requirement: 1.1V ~ 10V

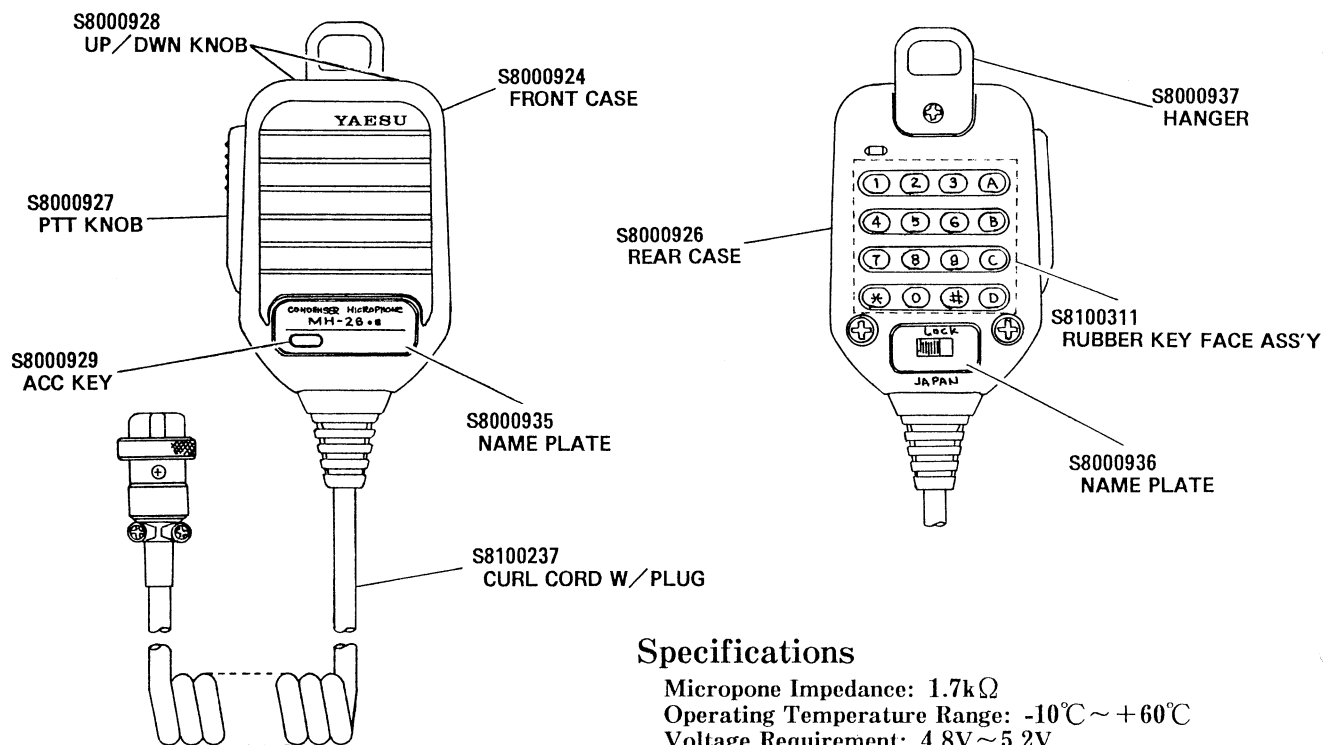


REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
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\*\*\* MH-26E8 \*\*\*

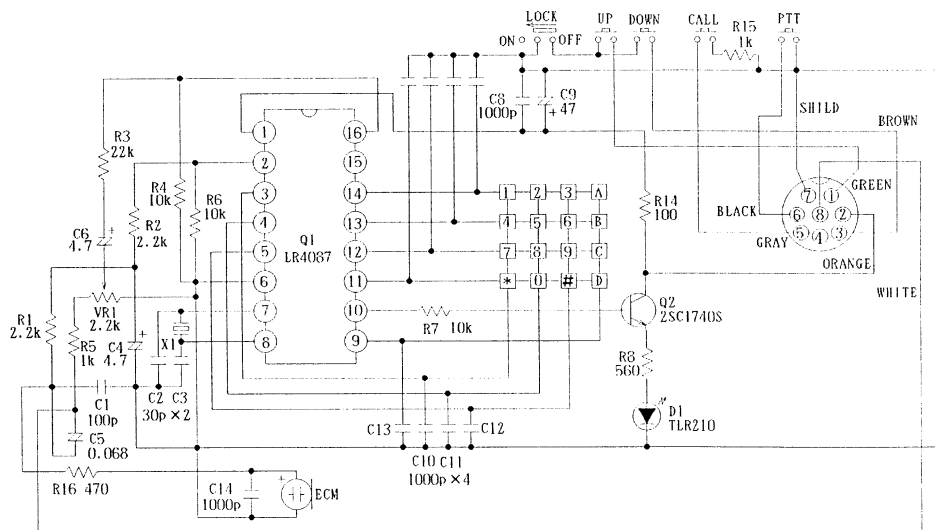
	MIC ELEMENT				EM-78	M3290007	
	SPEAKER				DH-17S-2	S8100262	
	TACT SWITCH (3pcs)				SKHHLN	N5090036	
	HOOK					S8000938	

# MH-26<sub>F8</sub> Microphone (accessory)



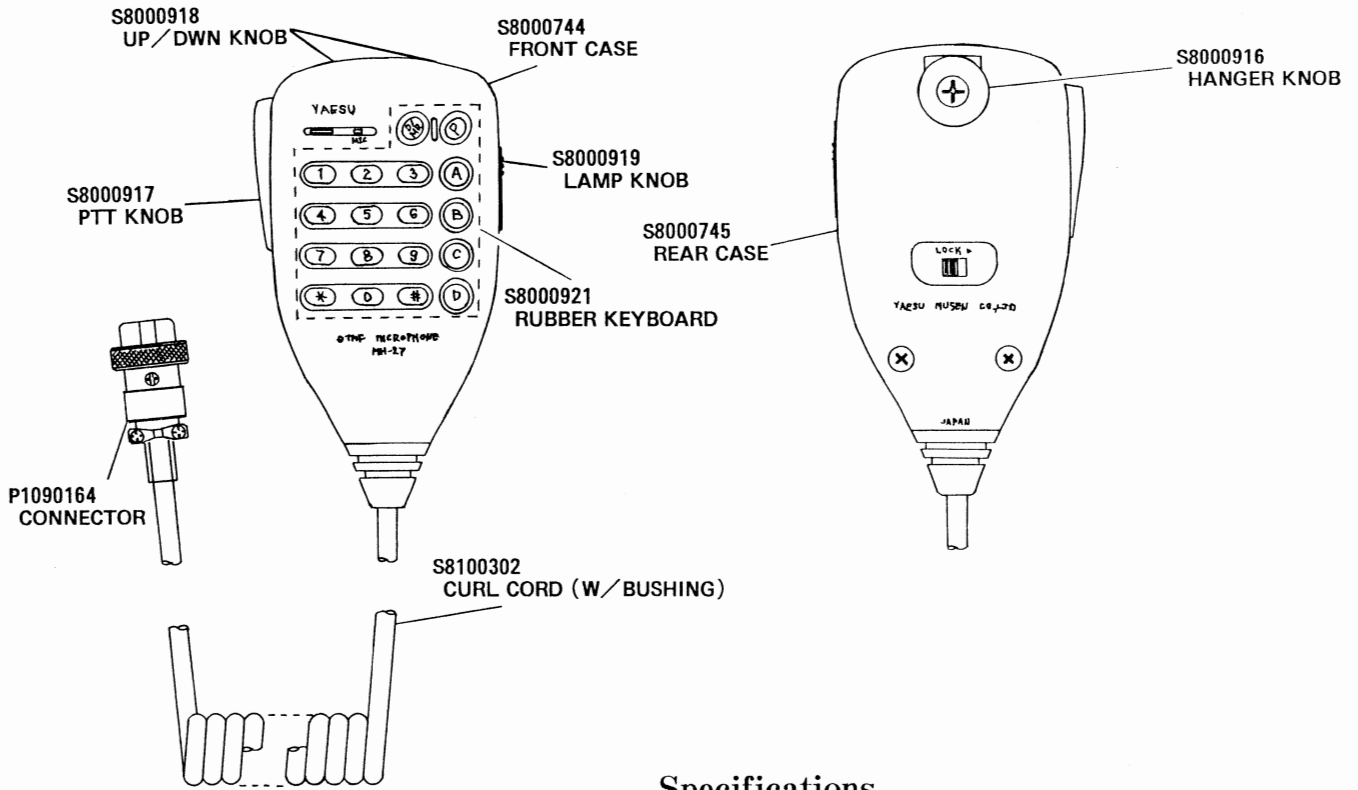
## Specifications

Microphone Impedance: 1.7k $\Omega$   
 Operating Temperature Range: -10°C ~ +60°C  
 Voltage Requirement: 4.8V ~ 5.2V



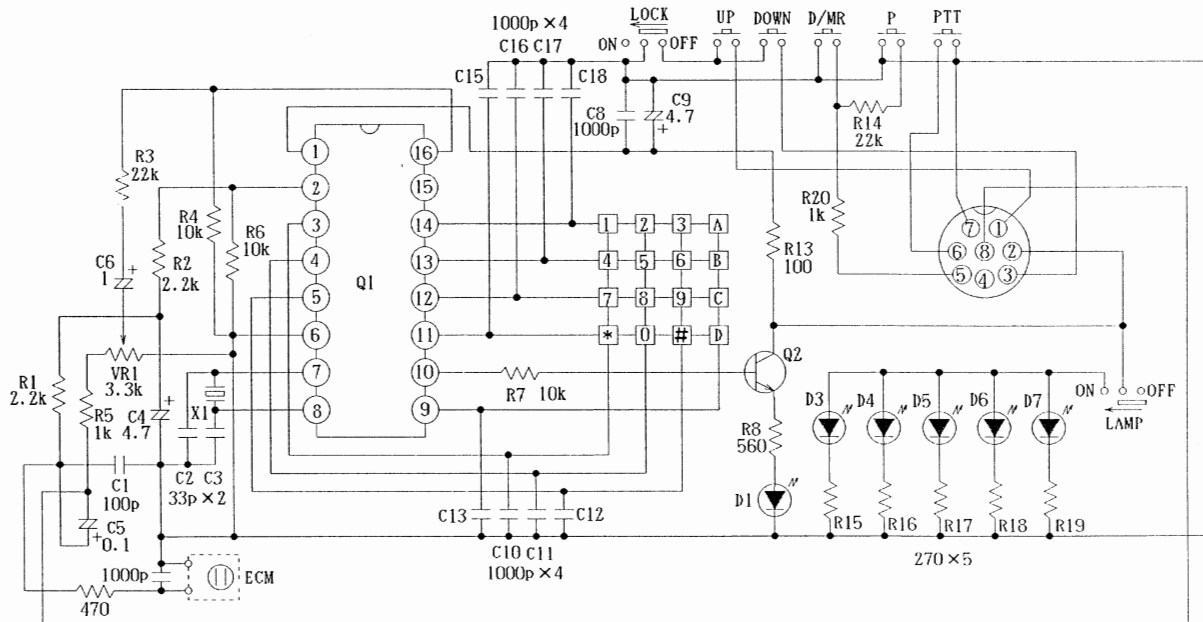
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
*** MH-26F8 ***							
D 0001	LED				TLR210	G2090243	
	MIC ELEMENT				EM-78	M3290007	
	TACT SWITCH (3pcs)				SKHHLN	N5090036	
	DTMF UNIT ASS'Y				EM-4130YE1-3	S8100310	
	HOOK					S8000938	

# MH-27<sub>B8</sub> Microphone (accessory)



## Specifications

Microphone Impedance: 1.5k $\Omega$   
 Operating Temperature Range: -10 $^{\circ}$ C ~ +60 $^{\circ}$ C  
 Voltage Requirement: 4.8V ~ 5.2V



# MH-27<sub>B8</sub> Microphone (accessory)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.
*** MH-27B8 ***							
D 0001	LED				SEL1123R	G2090576	
D 0003	LED				SLM-13DW	G2070326	
D 0004	LED				SLM-13DW	G2070326	
D 0005	LED				SLM-13DW	G2070326	
D 0006	LED				SLM-13DW	G2070326	
D 0007	LED				SLM-13DW	G2070326	
	MAIN UNIT ASS'Y				B76118G1	S8100307	
	KEYBOARD UNIT ASS'Y				B76120Y1	S8100308	
	SWITCH UNIT ASS'Y				B76119G1	S8100309	
	MIC ELEMENT				T006P70F0001	M3290021	
	RUBBER				14-09-290-00	S8000716	
	HANGER				14-11-244-00	S8000668	



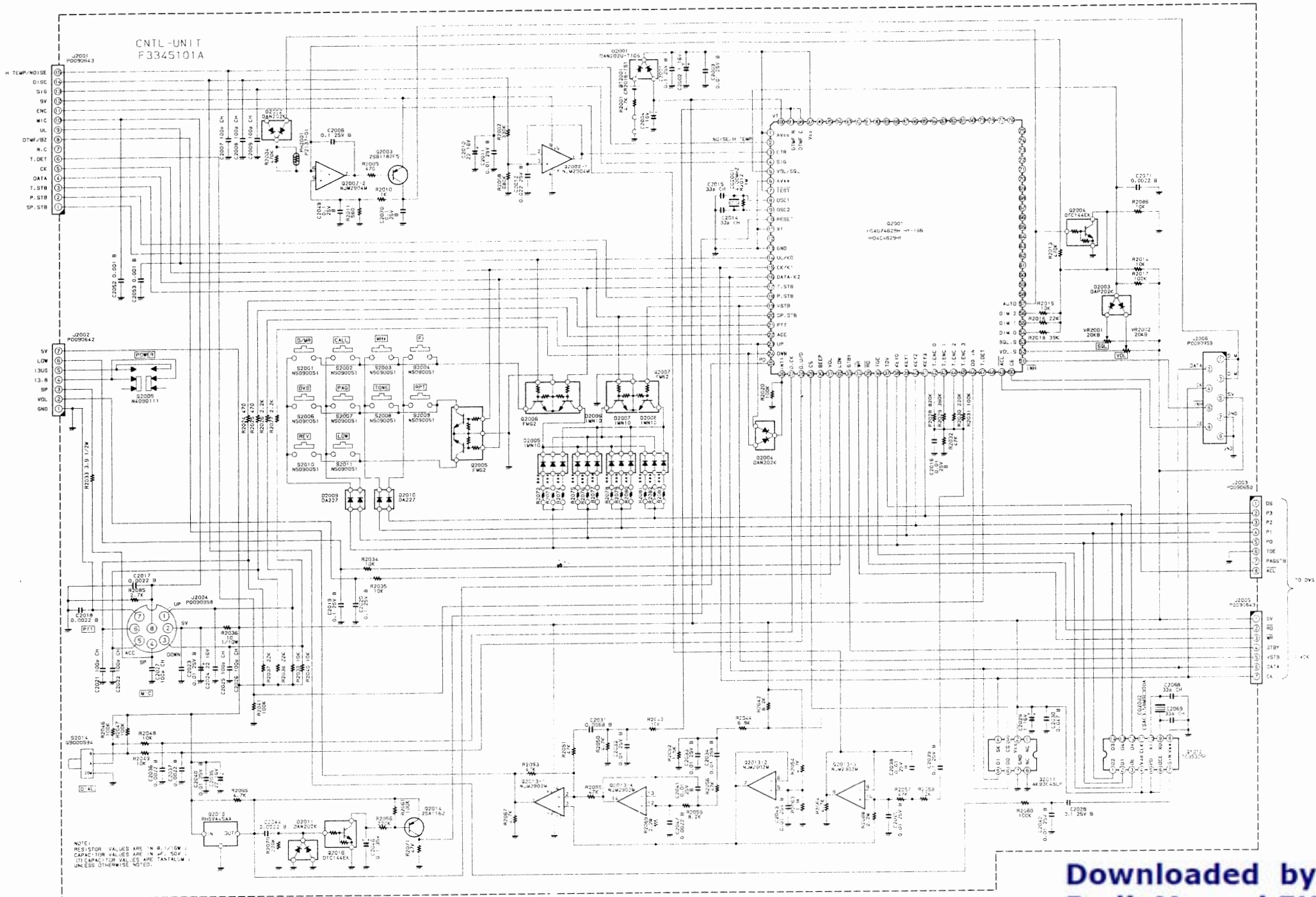
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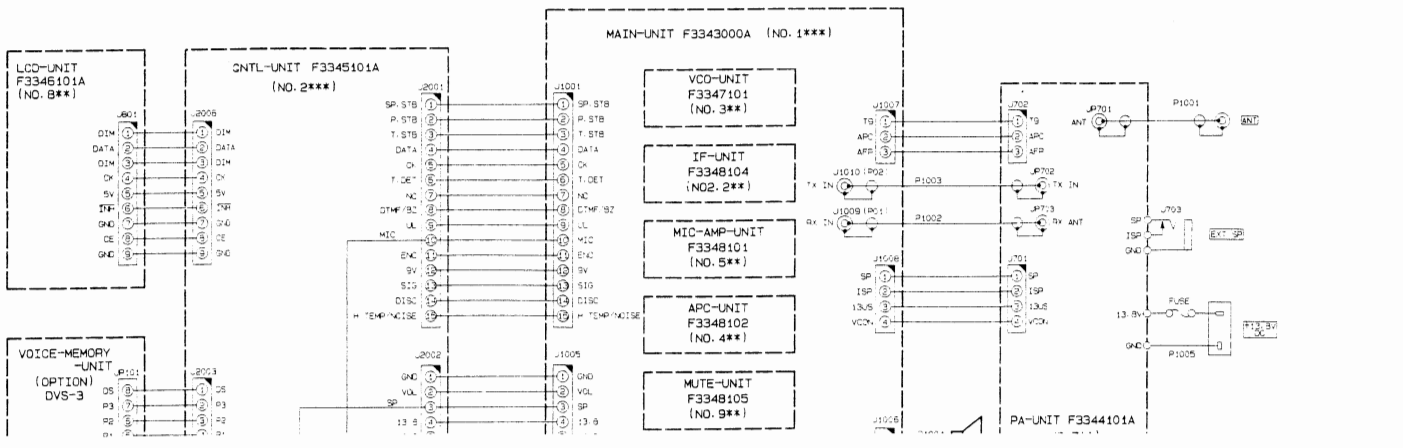
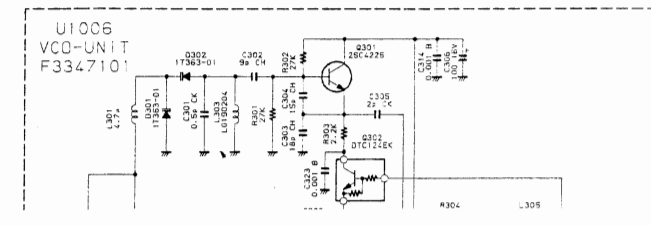
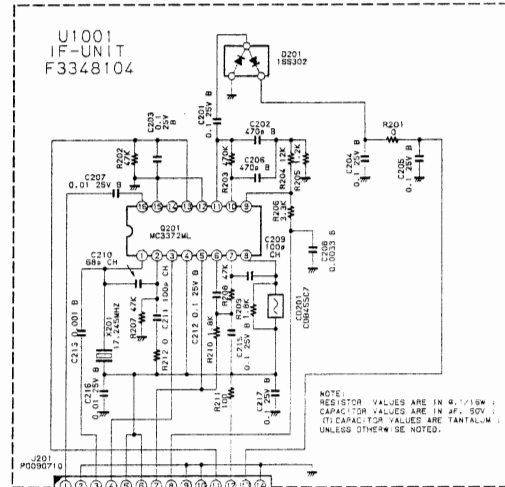
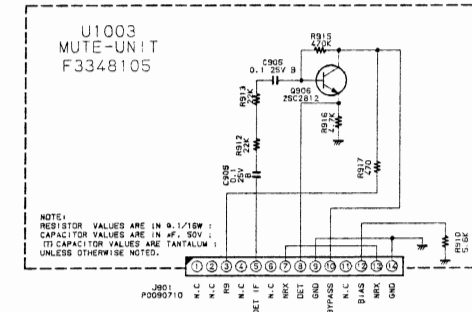
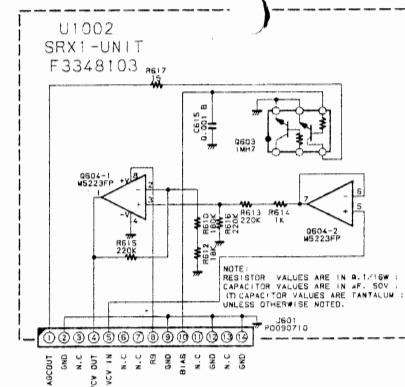
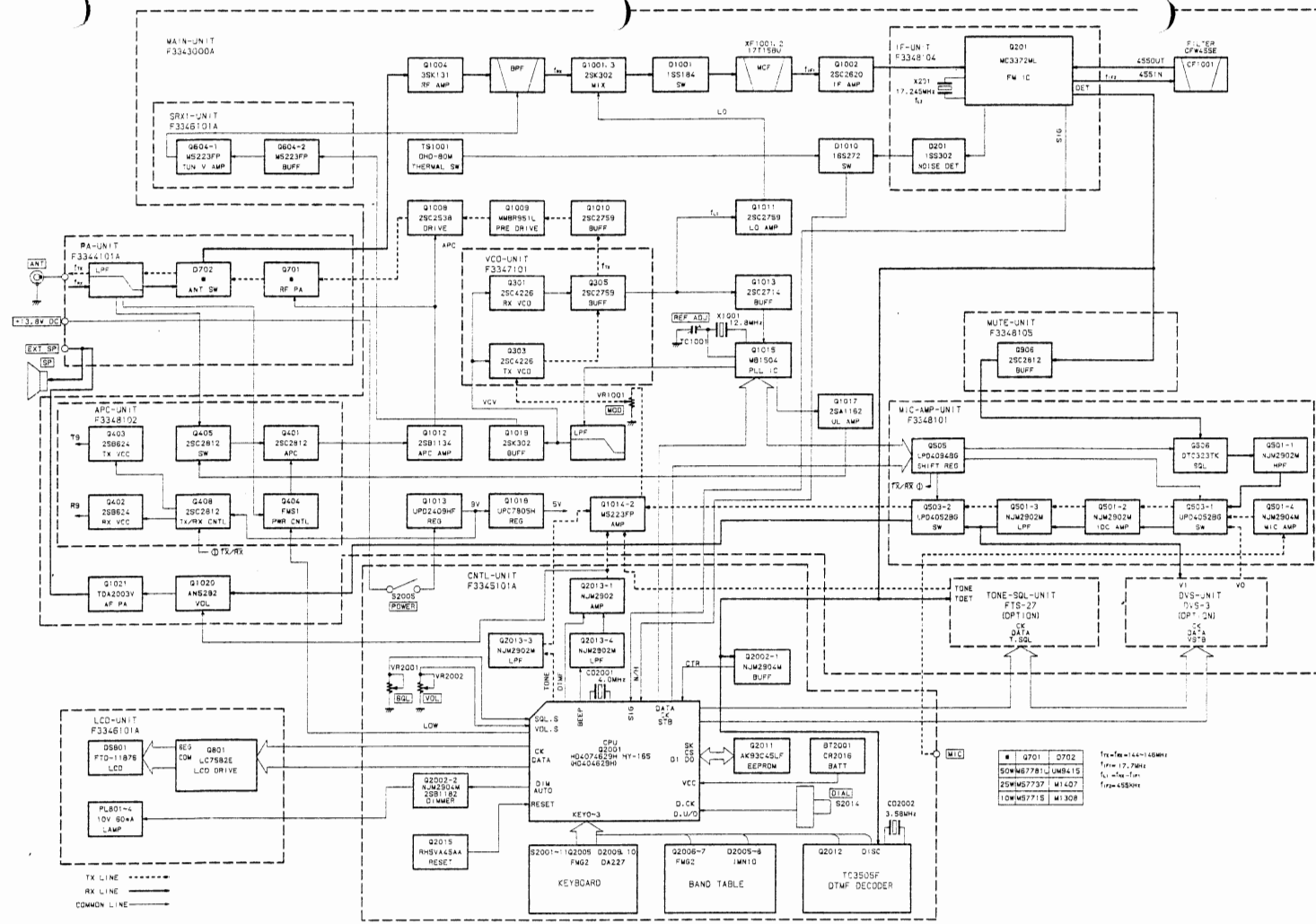
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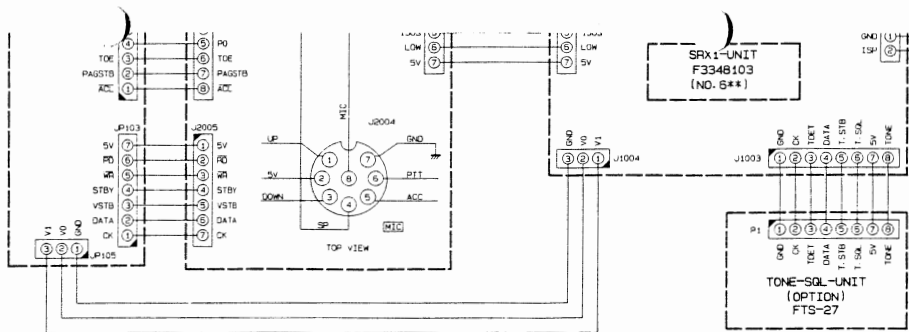
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