FT-5200

Technical Supplement





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About This Manual



The information in this manual is intended to supplement the FT-5200 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, this 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-5200 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 any liability for 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 in this manual supercedes 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

☐ Turn off the transceiver, and disconnect all cables.

Main Unit Solder Side Access

☐ Referring to Figure 1, remove the six screws from the top cover to expose the solder side of the Main Unit.

Other Units

☐ Referring to Figure 2, remove the six screws in the bottom cover. When removing the bottom cover, use care not to strain the wires to the loudspeaker.

PCB Locations are indicated in Figure 3.

☐ To access the Interface Unit, remove the three screws in the subpanel indicated in Figure 4.

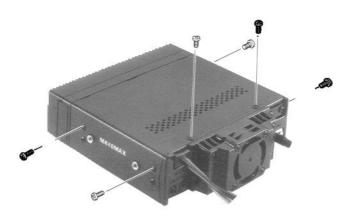


Figure 1.

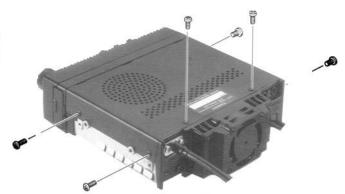


Figure 2.

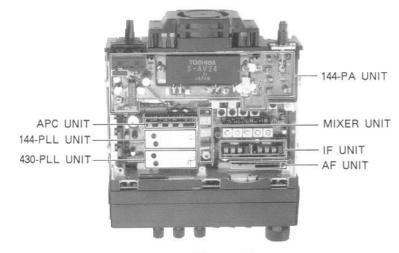
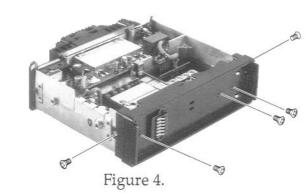


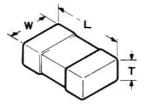
Figure 3.



Chip Component Information

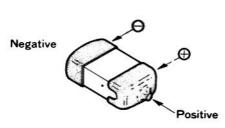
The diagrams below indicate some of the distinguishing features of common chip components.

Ceramic Capacitors

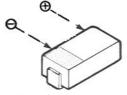


	(Unit: mm							
Туре	L	w	Т					
3216	3.2	1.6	0.45~0.60					
2125	2.0	1.25						
1608	1.6	0.8						

Tantalum Capacitors



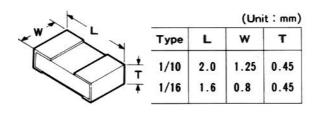
Polarized, Unmarked (determine value from layout and Parts List)



Examples: $J475 = 6.3V \ 4.7\mu F$

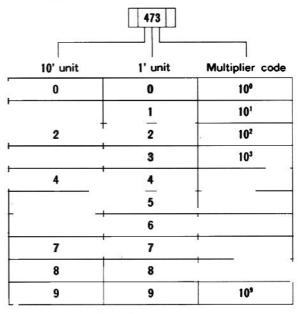
G	4.0V	D	20 V
J	6.3V	E	25 V
Α	10V	V	35V
С	16V		one a

Resistors



INDICATED LETTERS

Type RMC 1/10W, 1/16W Marking* 100, 222, 473.....



Examples:

 $100 = 10\Omega$

 $222 = 2.2k\Omega$

 $473 = 47k\Omega$

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) 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.

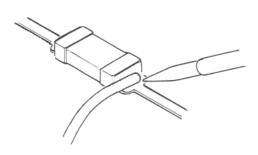
The special vacuum soldering/desoldering equipment is recommended if you expect to do a lot of chip replacements. Otherwise, it is usually possible to remove and replace chip components with only a tapered, temperature-controlled soldering iron, a set of tweezers and braided copper solder wick. Soldering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

Precautions for Chip Replacement

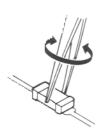
- ✗ Do not disconnect a chip forcefully, or the foil pattern may peel off the board.
- Never re-use a chip component. Dispose of all removed chip components immediately to avoid mixing with new parts.
- ★ Limit soldering time to 3 seconds or less to avoid damaging the component and board.

Removing Chip Components

☐ Remove the solder at each joint, one joint at a time, using solder wick whetted with non-acidic 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 which away any excess solder and smooth the land for installation of the replacement part.

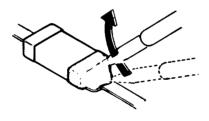
Installing a Replacement Chip

As the value of some 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).



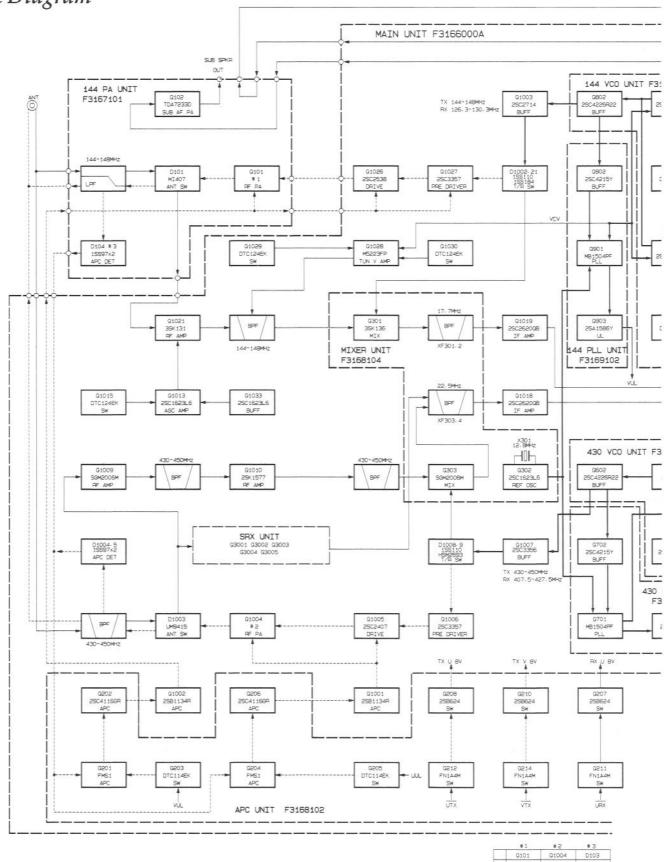
☐ Hold the chip with tweezers in the desired position, and apply the soldering iron with a motion line that indicated by the arrow in the diagram below. Do not apply heat for more than 3 seconds.



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

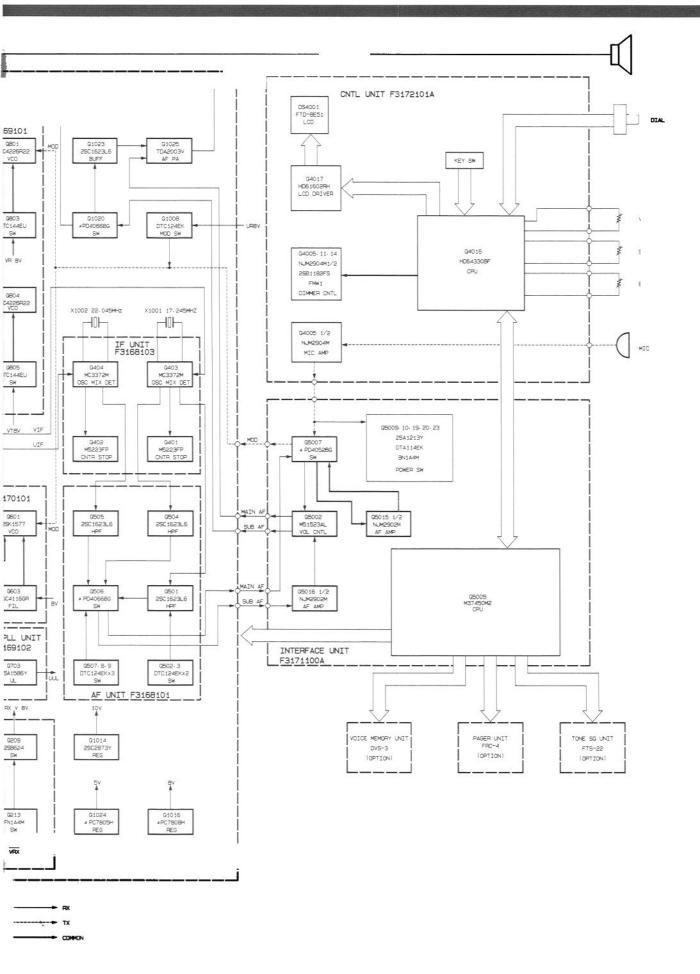
Notes





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	#1	*5	*3
	Q101	G1004	D103
L	M57715	M57704MR	_
м	M57737	M57788MR	18897
н	S-AV24	M57788MR	18897



Servicing

Alignment

The FT-5200 is carefully aligned at the factory for the specified performance across the amateur bands. 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 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 components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is neces-

sary 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. Rather, 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 450 MHz
- ☐ Deviation Meter (linear detector)
- ☐ Oscilloscope
- ☐ AF Millivoltmeter
- ☐ SINAD Meter
- ☐ Inline Wattmeter with 5% accuracy at 450 MHz
- ☐ Regulated DC Power Supply adjustable from 10 to 17 V, 15 A
- \square 50- Ω Dummy Load: 100 W at 450 MHz
- ☐ Frequency Counter: 100-Hz resolution and ± 0.2-ppm accuracy at 450 MHz
- ☐ AF Signal Generator
- ☐ DC Voltmeter: high impedance
- ☐ Spectrum Analyzer
- UHF Sampling Coupler

Alignment Preparation & Precautions

A 50- Ω dummy load and inline wattmeter must be connected to the 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 power supply, 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 temperature 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 equalization with the environment before alignment.

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

Most alignment procedures call for tuning the transceiver to the high or low band edge, or to band center. The actual frequency differs between different versions, so the technician should make sure of the band limits of each set to be aligned before beginning.

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

PLL VCV

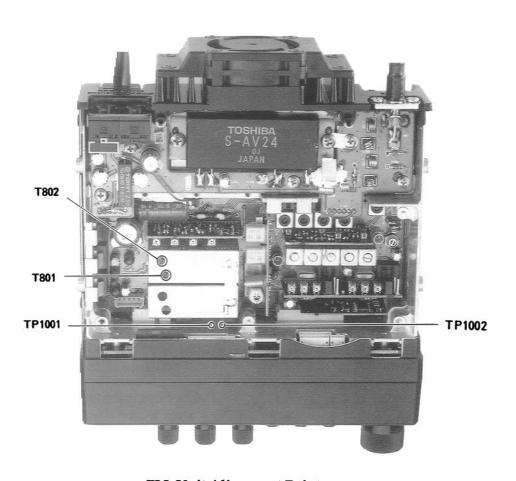
Set up the test equipment as shown here for transmitter alignment. Maintain the supply voltage at 13.6 V for all steps.

VHF PLL VCV (Varactor Control Voltage)

- ☐ Connect the positive lead of the DC voltmeter to test point TP1001 on the Main Unit, as indicated below, and the negative lead to chassis ground.
- Set the transceiver to 144.000 MHz, and adjust T801 on the 144-MHz VCO Unit for 1.5 V on the voltmeter while receiving.
- Key the transmitter while adjusting T802 on the 144-MHz VCO Unit for 1.5V on the voltmeter.

UHF PLL VCV Check

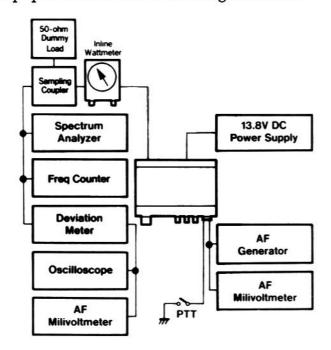
- Connect the DC voltmeter to TP1002 on the Main Unit.
- □ Tune to 430.000 MHz (432.000 MHz in version D) and confirm the VCV is between 1.5 and 4.5 V while receiving, and between 2.5 and 5.5 V while transmitting.



PLL Unit Alignment Points

2-Meter Transmitter & Ref. Oscillator

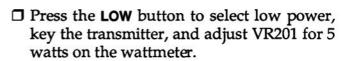
For all of these procedures, connect the test equipment as shown in the diagram below.



2-m Transmitter Alignment Setup

2-Meter Power Output

- ☐ Tune to the center of the band (for the version being aligned), and press the LOW button, if necessary, to select high power output.
- ☐ Key the transmitter and adjust VR202 on the APC Unit for 50 watts on the wattmeter (use care not to exceed 60 watts during the alignment).



Reference Oscillator

☐ While tuned to the center of the band, key the transmitter (without modulation), and adjust TC301 on the Mixer Unit to precisely match the frequency on the counter.

2-Meter Transmitter Deviation

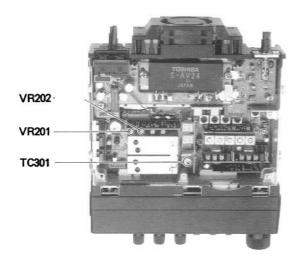
- ☐ While tuned to 146.000 MHz, adjust the AF generator attenuator for 50-mV output at 1 kHz to the MIC jack.
- ☐ Key the transmitter and adjust VR1002 on the Main Unit for ± 4.5 kHz deviation on the deviation meter (within 100 Hz).
- ☐ Reduce the AF injection until the deviation meter shows ± 3.5 kHz deviation, and confirm that the injection level is 4 to 6 mV.

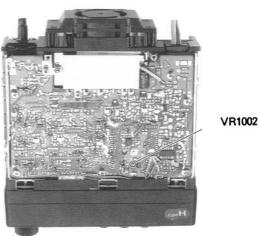
70-Centimeter Transmitter

For all of these procedures, connect the test equipment per the top of the next page.

70-Centimeter Power Output

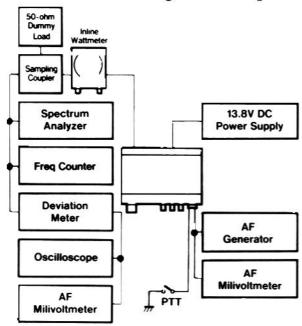
- ☐ Tune to band center (for the version being aligned), and press the LOW button, if necessary, to select high power output.
- ☐ Key the transmitter and adjust VR204 on the APC Unit for 35 watts on the wattmeter (use care not to exceed 42 watts during the alignment).





2-Meter Transmitter & Ref. Osc. Alignment Points

70-cm Transmitter Alignment Setup



☐ Press the **LOW** button to select low power, key the transmitter, and adjust VR203 for 5 watts on the wattmeter.

70-Centimeter Transmitter Deviation

- ☐ While tuned to the center of the band, 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).
- ☐ Reduce the AF injection until the deviation meter shows ± 3.5 kHz deviation, and confirm that the injection level is 4 to 6 mV.

VR204 - VR203 - COOOG TC301

Receiver

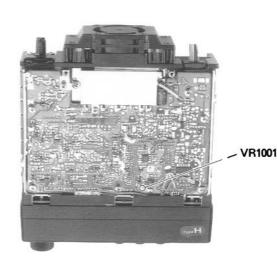
Set up the test equipment as shown below for receiver alignment.

Interstage Transformers

- ☐ Tune the transceiver and RF signal generator to the high 2-m band edge. Modulate the RF signal generator with ±3.5 kHz deviation of a 1-kHz tone.
- ☐ Adjust T1002 through T1006 on the Main Unit for optimum 12-dB SINAD (less than −10 dBμ).
- □ Confirm –8 dBµ or better 12-dB SINAD at the center and bottom edge of the 2-m band.
- ☐ Tune the transceiver and RF signal generator to the *center* of the 70-cm band and repeat the same procedure, adjusting TC-1001 through TC1006, and confirming −8 dBμ or better SINAD at the band edges.

S-Meter Calibration

- □ Tune to the top edge of the 2-m band and, inject 25-dBµ RF modulated with ± 3.5 kHz deviation of a 1-kHz tone. Adjust VR405 on the IF Unit so that all S-meter segments are just on.
- ☐ Tune the transceiver and RF signal generator to the *center* of the 70-cm band and with the same injection level and modulation, adjust VR406 so that all S-meter segments are just on.



70-cm Transmitter Alignment Points

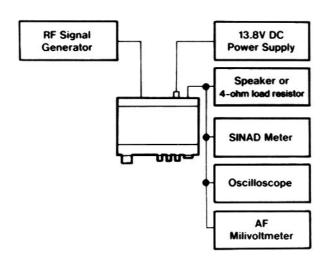
Scanner Center-Stop

- □ With both the transceiver and signal generator tuned to the top edge of the 2-m band, set the signal generator for nil injection, then set the SQL control so that the squelch is just closed.
- □ Connect the DC voltmeter (3-V range) between TP1 (+) and TP2 (-) on the IF Unit, and with no signal at the antenna jack, adjust VR403 for zero volts on the meter.
- Inject 10 dBμ RF modulated with ± 3.5 kHz deviation of a 1-kHz tone, then press the UP button on the microphone for more than ½

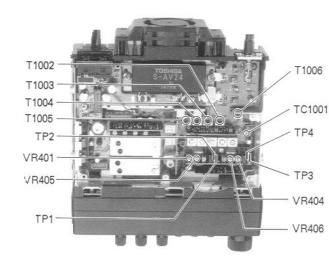
- second to start scanning. Confirm that scanning stops at the injection frequency.
- Move the DC voltmeter to TP3 (+) and TP4, tune the transceiver and signal generator tuned to the *center* of the 70-cm band and repeat the above steps, adjusting VR404 for zero volts with no signal, and injecting 30 dBμ RF when testing scan stop.

Squelch Preset

- ☐ Set the SQL control to the 9 o'clock position.
- ☐ With no signal at the antenna jack, set VR-401 on the IF Unit so that the squelch is just closed.



Receiver Alignment Setup



Receiver Test Points

Pilot Lamp Replacement

- Remove the control head from the chassis, if connected, by lifting the catch on the left side of the head and unhooking the right side.
- ☐ Pull the knobs off the panel, and unscrew the ring nuts affixing the mic jack and the tuning shaft (you may be able to do this with long-nose pliers, or have your dealer do it with a special wrench).
- □ Remove the front panel cover (it clips at the top and bottom edges) and two white plastic shields, and with a jeweler's screwdriver, remove the tiny screw on the circuit board just left of the mic jack.
- □ Remove the two screws from the back side of the control head, and carefully separate the back cover from the circuit board, noting the positions of the brackets on either side as you do so.
- ☐ Referring to Figures 1 and 2, unsolder the old bulbs and install the replacements.

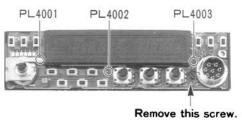


Figure 3.

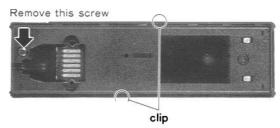
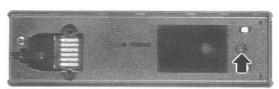


Figure 1.



Remove this screw

Figure 2.

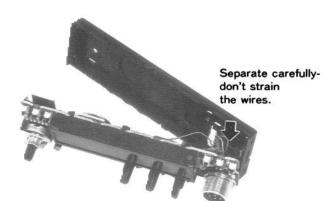


Figure 4.

PL4001

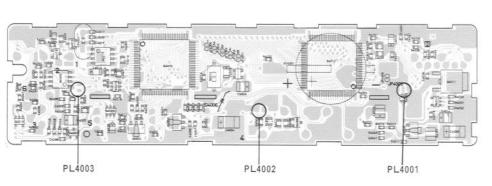
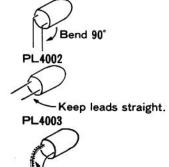


Figure 5.



Use insulating sleeve (0.7φ × 4mm) on 1 wire

Installation of Options

This chapter describes the installation procedures for the DVS-3 Digital Voice Recorder/DTMF Pager, FRC-4 DTMF Pager, FTS-22 Tone Squelch Unit and the YSK-1/1L Trunk Mounting Kits. These options are available from your Yaesu dealer. If installing both the FTS-22 and either the FRC-4 or DVS-3, install the FTS-22 last.

Note! The FRC-4 and DVS-3 cannot be installed together. The DVS-3 includes all functions of the FRC-4.

FRC-4 DTMF Pager or DVS-3 Digital Voice Recorder/DTMF Pager Installation

The FRC-4 provides DTMF paging/selcall features using 3-digit DTMF station ID codes. Six code memories store your ID code plus those of five frequently-called stations. Control is provided through the front panel of the transceiver. The DVS-3 includes all features of the FRC-4, plus recording and playback of received signals and messages for transmission. See the *FT-5200 Operating Manual* for operational details.

The FRC-4 and DVS-3 install in the same location, and cannot both be installed together. If also installing the FTS-22 Tone Squelch Unit, save it until after the FRC-4 or DVS-3 is installed.

- ☐ Disconnect the DC power cable, and set the transceiver upside-down. Referring to Figure 1 on the next page, remove the six screws affixing the bottom cover, and remove the cover.
- ☐ Lift the speaker out of its bracket, and set the bracket and speaker aside for now. Referring to Figure 2, note the accessory mounting location. If the FTS-22 is already installed, you will need to remove it temporarily: just lift the FTS-22 board gently, allowing the double-sided tape underneath to come unstuck. Keep the tape with the FTS-22 board, and fold it aside for the moment (you need not disconnect it).
- ☐ If the FRC-4 is installed and you are installing a DVS-3 (or vice-versa), remove the screw holding the installed board, and unplug its three cables.

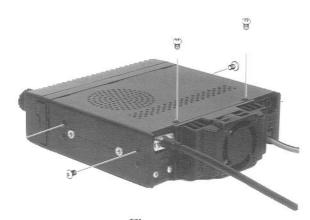
- ☐ Refer to Figure 3 for the location of the three connectors used by the FRC-4 and DVS-3 (just in front of the loudspeaker's position). Connect the cables from the FRC-4 or DVS-3 to these connectors carefully, so as not to install the plugs upside down.
- ☐ Position the FRC-4 or DVS-3 as shown in Figure 4, and use the supplied screw to fix it in place.
- ☐ If the FTS-22 was already installed, reuse the double-sided tape to stick it on top of the newly installed board, in the same way it was before (that is, with the cable running over the top of the FTS-22).
- ☐ If installing an FTS-22 in this transceiver for the first time, proceed to the FTS-22 procedure below. Otherwise, replace the loudspeaker and its bracket, the top cover, and its six screws.

FTS-22 Tone Squelch Unit Installation

The FTS-22 includes an encoder and decoder for 38 EIA standard subaudible CTCSS tones, programmable from the front panel of the FT-6200. It provides silent monitoring of busy channels when activated by the EN-Code/DECode Tone Squelch function. Tone squelch operation on both bands requires only one FTS-22, and it may be installed after installing either the DVS-3 or FRC-4. See the FT-5200 Operating Manual for operational details.

- ☐ Disconnect the power cable, and turn the set upside-down. Referring to Figure 1 on the next page, remove the six screws affixing the bottom cover, and remove the cover.
 - ☐ Referring to Figure 5, locate unused 12-pin connector J5005 inside the front panel.
 - ☐ Peel the covering from one side of the double-sided tape provided with the FTS-22. If the FRC-4 or DVS-3 is installed in front of J5005, stick the tape on top of that board. Otherwise, stick it on the top of the VCO housing just behind J5005.
 - □ Note in Figure 6 how the FTS-22 cable routes over the top of the board. Plug the FTS-22 cable into J5005. Then peel the covering from the exposed side of the tape, and press the FTS-22 onto it.

- ☐ The tactory adjusts the output tone level (VR1 the FTS-22) for the proper deviation should require further adjustment
- ☐ Replace the bottom removed the first step



Figure

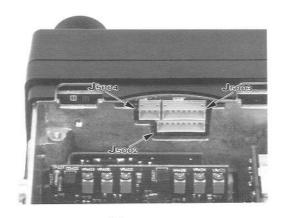


Figure 3.

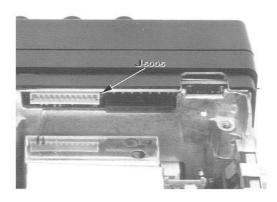


Figure 5.

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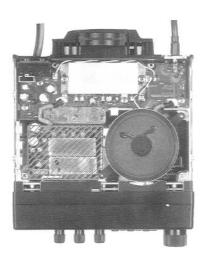


Figure 2.

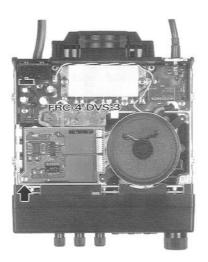
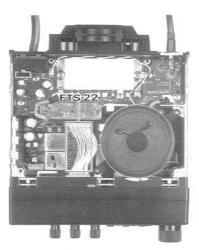


Figure 4.



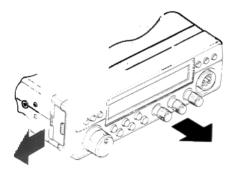
Figure

YSK-1/1L Trunk Mounting Kit Installation

The YSK-1/1L kits consist of a 3-m (YSK-1) or 6-m (YSK-1L) interconnecting cable for the Controller, and Controller mounting hardware. This allows the main body of the transceiver to be installed under a seat, in the trunk, or anywhere else out of the way, while the Controller is mounted on the dashboard. A choice of Controller mounting methods allows it to be easily removed and taken with you when leaving the vehicle.

To install the YSK-1/1L:

Disconnect the DC power cable, and carefully lift the latch on the left side of the Front Panel/Controller while pulling the panel forward.



Radio Manuals

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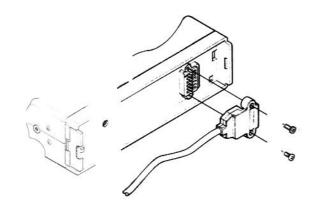
Caution!

Do not install the main body of the transceiver near a heating vent, nor in a tightly closed compartment – the heatsink need ventilation!

- ☐ Use two of the supplied 12-mm (½-inch) machine screws to connect the mating end of the extension cable (the end with flat contacts) over the contacts on the front of the transceiver body, so that the cable exits the connector toward the center of the transceiver body.
- ☐ Mount the main body of the transceiver in the trunk or other out-of-the-way location using the MMB-37 Mounting Bracket supplied with the transceiver, as described on pages 7 and 8. Remember: DC power must be supplied to the main body, and at least one external speaker (page 9) should be connected.
- ☐ Route the external speaker cable and Controller interconnecting cable to the desired locations.
- Referring to the diagram on the next page, decide where to install the Front Panel/Controller, and which parts of the Controller mounting hardware you will need. The Controller Nest may be screwed directly to a flat surface, or installed with the hinged angle bracket. If you will not

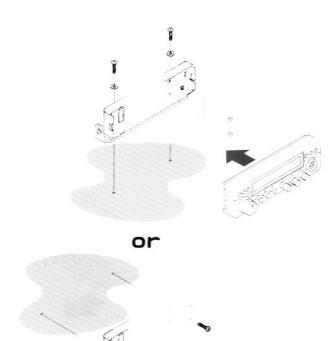
need the hinged bracket, remove the two short machine screws affixing it to the Nest.

- ➤ Do not mount the Controller Unit where it will be exposed to direct sunlight for long periods, nor where temperatures might exceed 60 °C (140 °F).
- ☐ Use the two supplied self-tapping screws and flat washers to mount the Nest (with or without the metal bracket) to the car.



- ☐ Using the two supplied 7-mm (½-inch) machine screws, mount the free end of the cable inside the Controller Nest so that the contacts face outward.
- ☐ Clip the Front Panel/Controller into the Nest, right side first.

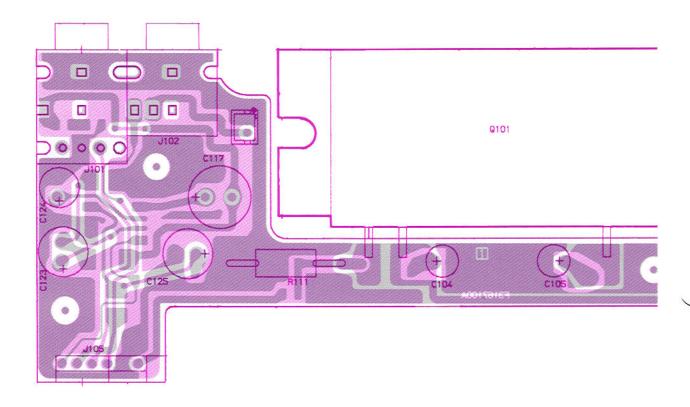
Note: In cold climates the display on the Controller Unit may fail to operate in temperatures below -20 °C (-4 °F).

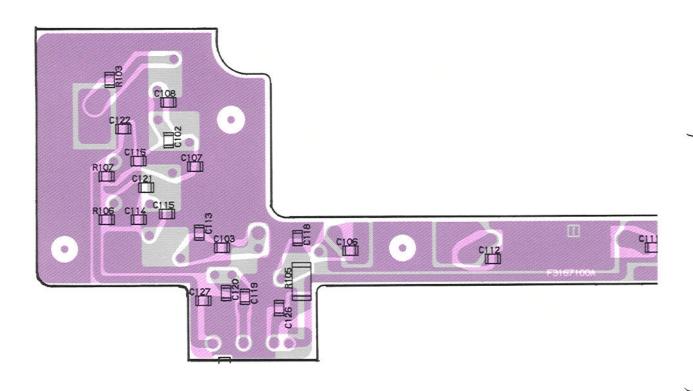


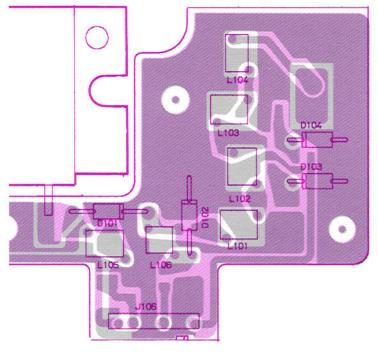
		144 1011	12 1 71 OTHE 1 and Ele	•			1 1-5200
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0237002	P.C.B. W COMP.					
	F3167101A	P. C. B.					
C 0101 C 0102 C 0103 C 0104 C 0105 C 0106 C 0107 C 0108 C 0111 C 0112 C 0113 C 0114 C 0115 C 0116 C 0117 C 0122 C 0121 C 0122 C 0123 C 0124 C 0125 C 0126 C 0127 C 0128 C 0129 C 0120 C 0130 C 0131 D 0101 D 0102 D 0103 D 0104 D 0105 J 0106	F3167101A K22140811 K22170213 K22170805 K46120004 K46120004 K22170211 K22170225 K22170217 K22170805 K22170805 K22170202 K22170202 K22170202 K22170202 K40129066 K22170219 K22170213 K22170213 K22170213 K22170213 K22170217 K46120006 K46120007 K22170805	P. C. B. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. AL. ELECTRO. CAP. AL. ELECTRO. CAP. CHIP CAP.	GRM40B104M25PT GRM40CH120J50PT GRM40B102M50PT 16V100M4X7TR2 16V100M4X7TR2 GRM40CH100D50PT GRM40CH390J50PT GRM40CH390J50PT GRM40B102M50PT GRM40B102M50PT GRM40CH390J50PT GRM40CH330J50PT GRM40CK010C50PT GRM40CK010C50PT GRM40CK010C50PT GRM40CH20J50PT GRM40CH220J50PT GRM40CH120J50PT GRM40CH120J50PT GRM40CH120J50PT GRM40CH180J50PT 16V470M6X7TR2	0. 1uF 12pF 0. 001uF 10uF 10uF 10pF 39pF 18pF 0. 001uF 0. 001uF 33pF 1pF 470uF 0. 001uF 22pF 12pF 12pF 12pF 12pF 12pF 100uF 0. 001uF 0. 001uF 0. 001uF 0. 001uF 0. 001uF	25V 50V 50V 50V 50V 50V 50V 50V 50V 50V 5	B CH CH CH B B CH CH CH B B B CH	
L 0101 L 0102 L 0103 L 0104 L 0105 L 0106	L002 811A L002 811A	COIL COIL COIL COIL	2.5T3.0D0.6UEW R 3.5T3.0D0.6UEW R 2.5T3.0D0.6UEW R 2.5T3.0D0.6UEW R 8.5T3.0D0.5UEW R 4.5T3.0D0.5UEW R				

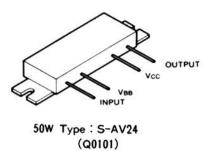
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Q 0102	G1091112	IC	TDA7233D-TR				
R 0101	J24205479	CHIP RES.	RMC1/10T 4R7J	4.7	1/10W		
R 0103	J24205223	CHIP RES.	RMC1/10T 223J	22K	1/10W		
R 0104	J24275221	CHIP RES.	RMC1/2 221JCTP	220	1/2W		
R 0105	J24275151	CHIP RES.	RMC1/2 151JCTP	150	1/2W		
R 0106	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W		
R 0107	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W	!	
R 0108							
R 0109	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W	1	
R 0110	J24245229	CHIP RES.	RMC1/4 2R2JATP	2. 2	1/4W		

144-PA UNIT (No.01XX)

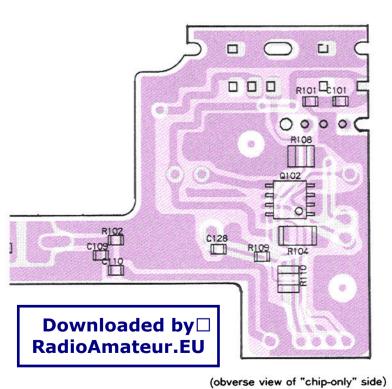






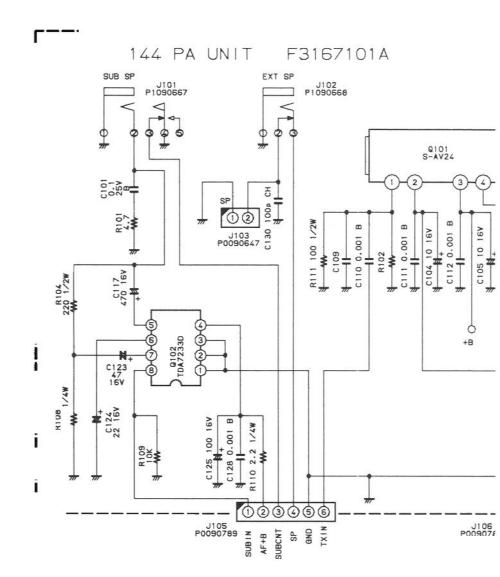


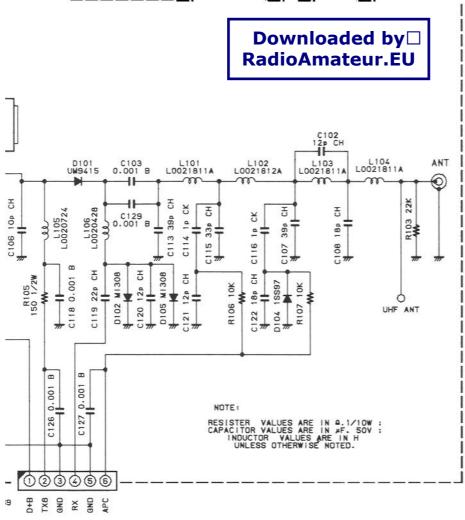
(obverse view of "component" side)





PIN4 PIN1





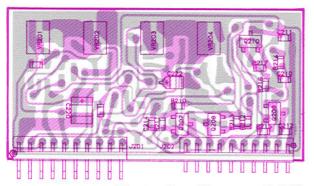
(144-PA UNIT Schematic Diagram)

		Art	J Offict and List				1 1-5200
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0360003	P.C.B. W COMP.					
	F3168102	P. C. B.					
C 0201 C 0202 C 0203 C 0204 C 0205 C 0206 C 0207 C 0208 C 0209 C 0210 C 0211 C 0212 C 0213 C 0214 C 0215 C 0216 C 0217 C 0218 C 0219 C 0220 C 0222	K78120010 K22174809 K78120010	CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP.	GRM39B102M50PT GRM40R683M16PT GRM39B102M50PT TESVB21C335M8R GRM39B102M50PT TESVB21C335M8R	0.001uF 0.068uF 0.001uF 0.001uF 100pF 0.001uF 100pF 0.001uF	50V 16V 50V 50V 50V 50V 50V 50V 50V 50V 50V 50	B R B CH B B B B B B B B B B B B B B B B B	
C 0223	K22174809 G2070009	CHIP CAP. DIODE	GRM39B102M50PT 1SS184 TE85R	0.001uF	50V	В	
D 0202 J 0201 J 0202	G2070009 P0090770 P0090770	DIODE CONNECTOR CONNECTOR	1SS184 TE85R 9230B-1-10Z005-T 9230B-1-10Z005-T				
Q 0201 Q 0202 Q 0203 Q 0204 Q 0205 Q 0206 Q 0207 Q 0208 Q 0210 Q 0211 Q 0212 Q 0213 Q 0214	G3070008 G3341167G G3070008 G3070008 G3070033 G3341167G G3206247D G3206247D G3206247D G3206247D G3070005 G3070005 G3070005	TRANSISTOR	FMS1 T98 2SC4116GR TE85R DTC144EK T97 FMS1 T98 DTC144EK T97 2SC4116GR TE85R 2SB624-T2B BV4 2SB624-T2B BV4 2SB624-T2B BV4 2SB624-T2B BV4 FN1A4M-T2B FN1A4M-T2B FN1A4M-T2B FN1A4M-T2B				
R 0201 R 0202 R 0203 R 0204 R 0205	J24185103 J24185103 J24185103 J24185104 J24185471	CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES.	RMC1/16 103JATP RMC1/16 103JATP RMC1/16 103JATP RMC1/16 104JATP RMC1/16 471JATP	10K 10K 10K 100K 470	1/160 1/160 1/160 1/160 1/160	N N N	

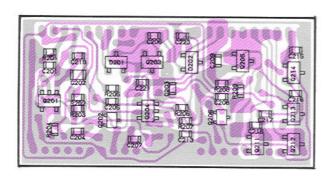
APC Unit Parts List

. VERS.

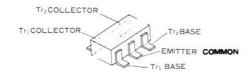
APC UNIT (No.02XX)



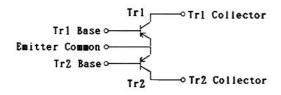
(obverse view of "component" side)



(obverse view of "chip-only" side)

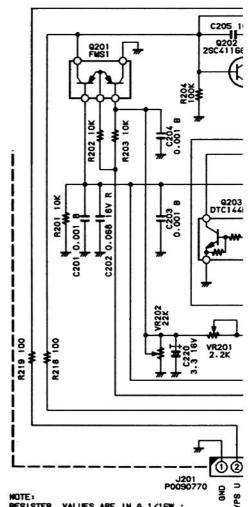


FMS1 (S1) (Q0201,Q0204)

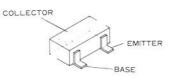


FMS1 CIRCUIT DIAGRAM

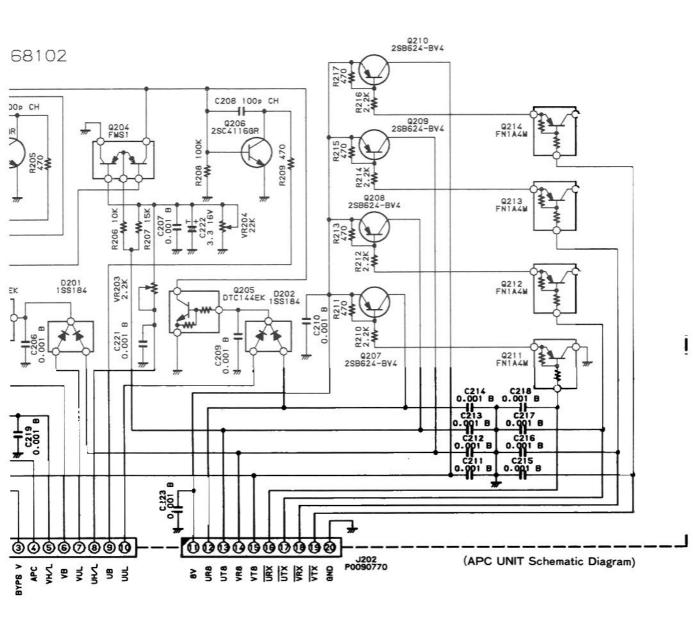
APC UNIT F31

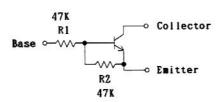


NOTE:
RESISTER VALUES ARE IN 4.1/16W;
CAPACITOR VALUES ARE IN AF. 50V;
(T) CAPACITOR VALUES ARE TANTALUM;
UNLESS OTHERWISE NOTED.

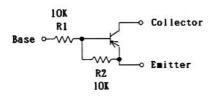


2SB624(BV4) (Q0207,Q0208,Q0209,Q0210) 2SC4116GR(LG) (Q0202,Q0206) DTC144EK(26) (Q0203,Q0205) FN1A4M(M33) (Q0211,Q0212,Q0213,Q0214)

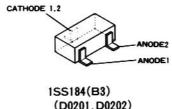




DTC114EK CIRCUIT DIAGRAM



FN1A4M CIRCUIT DIAGRAM



(D0201, D0202)

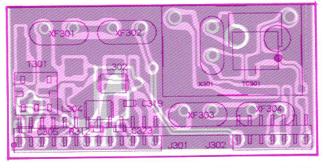
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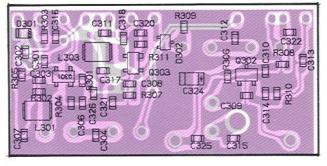
		Mix	er Unit Parts List			FT-5200
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV T	OL. VERS.
	CA0247001	P.C.B. W COMP.				
	F3168104	P. C. B.				
C 0301 C 0302 C 0303 C 0304 C 0305 C 0306 C 0307 C 0308 C 0309 C 0311 C 0312 C 0313 C 0314 C 0315 C 0316 C 0320 C 0321 C 0322 C 0323 C 0324 C 0325	K22144802 K22174207 K22174207 K22144802 K22174239 K22174221 K22144802 K22174204 K22144802 K22144802 K22144802 K22144802 K22144802	CHIP CAP.	GRM39B102M50PT GRM39CH220J50PT GRM39CH330J50PT GRM39CH070D50PT GRM39B102M50PT GRM39B103M25PT GRM39CH560J50PT GRM39CH560J50PT GRM39CH151J50PT GRM39CH040C50PT GRM39CH060D50PT GRM39CH051J50PT GRM39CH151J50PT GRM39CH050PT	0.001uF 22pF 33pF 7pF 0.001uF 0.01uF 0.01uF 56pF 150pF 0.01uF 4pF 6pF 0.01uF 150pF 27pF 0.01uF 3pF 0.01uF 0.01uF 0.01uF 0.01uF 0.01uF	50V B 50V C 50V C 50V B 25V B 25V B 50V C 25V B	H H H H H H
D 0301 D 0302	G2070114 G2070086	DIODE DIODE	1T363-01-T08A 1SS301 TE85R			
J 0301 J 0302	P0090709 P0090740	CONNECTOR CONNECTOR	9230B-1-13Z005-T 9230B-1-07Z005-T			
L 0301 L 0302 L 0303 L 0304	L1690017 L1690074 L1690005 L1690005	COIL CHIP COIL CHIP COIL	32CS 380LB-2R2M=P LQH3NR82M92M00- LQN2A33NM LQN2A33NM	2. 2uH 0. 82uH 0. 033uH 0. 033uH		
Q 0301 Q 0302 Q 0303	G4801367 G3316237F G4070001	FET TRANSISTOR FET	3SK136 IV TR 2SC1623-T2BL6 SGM2006M-T8			
R 0301 R 0302 R 0303 R 0304 R 0305 R 0306 R 0307 R 0308 R 0309 R 0310 R 0311 R 0312	J24185472 J24185332 J24185104 J24185181 J24185101 J24185224 J24185222 J24185101 J24185103 J24185331 J24185331 J24185101 L0021913	CHIP RES.	RMC1/1 472JATP RMC1/1 332JATP RMC1/1 104JATP RMC1/1 181JATP RMC1/1 101JATP RMC1/1 224JATP RMC1/1 222JATP RMC1/1 101JATP RMC1/1 103JATP RMC1/1 221JATP RMC1/1 331JATP RMC1/1 331JATP RMC1/1 101JATP	4. 7K 3. 3K 100K 180 100 220K 2. 2K 100 10K 220 330 100	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W	

FT-5200		Mix	er Unit Parts List				
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
TC0301	K91000184	TRIMMER CAP.	TZ03T200YR	20pF			
X 0301	H0102912	XTAL		12.800MHZ			
XF0301 XF0303	H1102186 H1102187	XTAL XTAL	17T15BU 22T15BU				

R3129530 XTAL (5pcs)

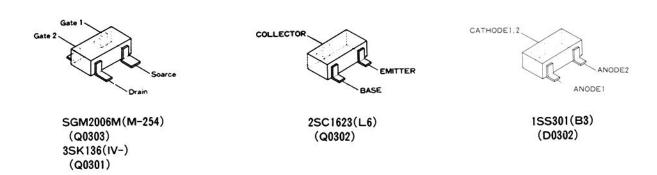
MIXER UNIT (No.03XX)

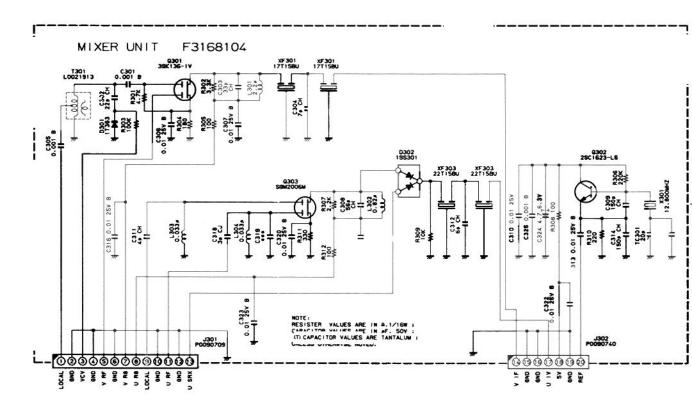




(obverse view of "component" side)

(obverse view of "chip-only" side)



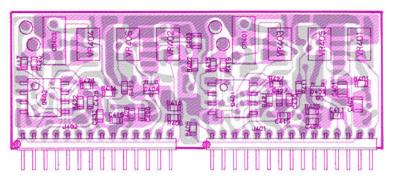


(MIXER UNIT Schematic Diagnam)

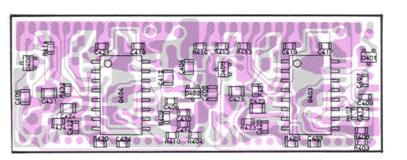
							. 0200
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
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	F3168103	P. C. B.					
C 0403	K22174805 K22174805 K22174805 K22174805 K22174805 K22174805 K22174802 K22144802 K22144802 K22144802 K22174235 K22140811 K22144802	CHIP CAP.	GRM40B104M25F1 GRM39B471M50PT GRM39B471M50PT GRM40B104M25PT GRM39B471M50PT GRM39B471M50PT GRM39B103M25PT GRM39B103M25PT GRM39B103M25PT GRM39B103M25PT GRM39CH680J50PT GRM39CH560J50PT GRM39CH101J50PT GRM40B104M25PT GRM40B104M25PT GRM40B104M25PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT	0. 022uF 0. 022uF 0. 1uF 470pF 470pF 0. 01uF 0. 01uF 0. 01uF 68pF 100pF 56pF 100pF 0. 1uF 100pF 0. 1uF 100pF 0. 01uF 0. 01uF	25V 25V 25V 25V 25V 25V 25V 50V 50V 50V 50V 50V 50V 50V 50V 50V 5	B B B B B B B B B B B B B B C C C C B B C C B	
CD0401	H7900480	CERAMIC DISC	CDBM455C7	0.0141	201	D	
D 0401 D 0402 D 0405 D 0406		CERAMIC DISC DIODE DIODE DIODE DIODE DIODE	CDBM455C7 1SS302 TE85R 1SS302 TE85R 1SS300 TE85R 1SS300 TE85R				
J 0401 J 0402	P0090711 P0090710	CONNECTOR CONNECTOR	9230B-1-15Z005-T 9230B-1-14Z005-T				
Q 0401 Q 0402 Q 0403 Q 0404	G1091108	IC IC IC	M5223FP-72A M5223FP-72A MC3372ML MC3372ML				
R 0401 R 0402		CHIP RES. CHIP RES.	RMC1/16 000JATP RMC1/16 000JATP	0	1/16V		

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
REF R 0403 R 0404 R 0407 R 0408 R 0409 R 0410 R 0411 R 0412 R 0413 R 0414 R 0415 R 0417 R 0419 R 0420 R 0421 R 0422 R 0423 R 0424	YAESU P/N J24185122 J24185122 J24185474 J24185123 J24185474 J24185332 J24185473 J24185473 J24185122 J24185122 J24185122 J24185122 J24185122 J24185122 J24185103 J24185473 J24185473 J24185473 J24185473	CHIP RES.	MFGR'S DESIG	VALUE 1. 2K 1. 2K 470K 12K 470K 12K 3. 3K 47K 3. 3K 47K 1. 2K 1. 2K 1. 2K 1. 2K 1. 0K 10K 47K 47K	WV 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W	TOL.	VERS.
R 0425 R 0426 R 0427 R 0428 R 0429 R 0430 R 0431 R 0432 R 0433 R 0434 R 0435 R 0436	J24185473 J24185471 J24185471 J24185182 J24185182 J24185182 J24185182 J24185101 J24185101 J24185000 J24185000	CHIP RES.	RMC1/16 473JATP RMC1/16 473JATP RMC1/16 471JATP RMC1/16 471JATP RMC1/16 182JATP RMC1/16 182JATP RMC1/16 182JATP RMC1/16 182JATP RMC1/16 101JATP RMC1/16 101JATP RMC1/16 000JATP RMC1/16 000JATP	47K 47K 470 470 1.8K 1.8K 1.8K 1.00 100	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		
TP0401 TP0402 TP0403 TP0404	Q5000016	TP-E TP-E TP-E TP-E	TP-E/MS-60124 TP-E/MS-60124 TP-E/MS-60124 TP-E/MS-60124				
VR0401 VR0402 VR0403 VR0404 VR0405 VR0406	J50785473 J50785473 J50785103 J50785103 J50785104 J50785104	POT. POT. POT. POT. POT. POT.	RHO3AVAS4X01A RHO3AVAS4X01A RHO3AVA14X01A RHO3AVA14X01A RHO3AVA15X01A RHO3AVA15X01A	47K 47K 10K 10K 100K 100K			

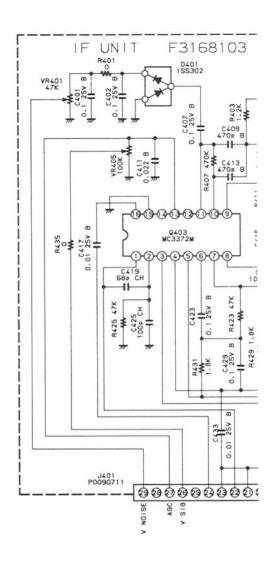
IF UNIT (No.04XX)

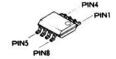


(obverse view of "component" side)



(obverse view of "chip-only" side)



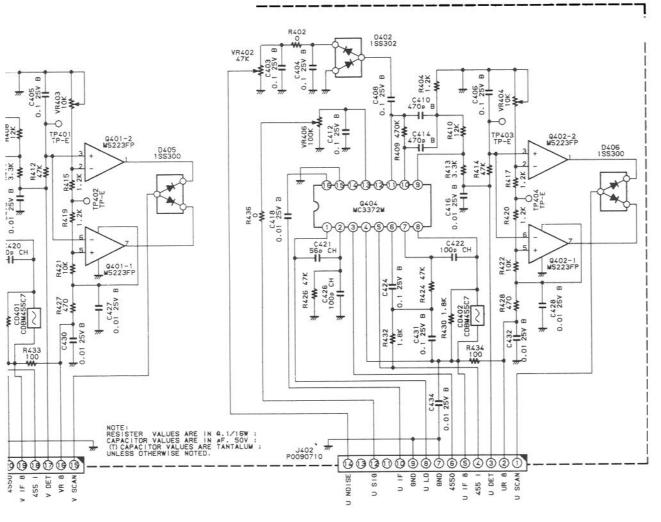


M5223FP (Q0401,Q0402)

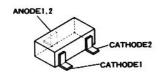


MC3372ML (Q0403, Q0404)

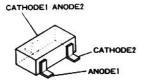
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(IF UNIT Schematic Diagram)



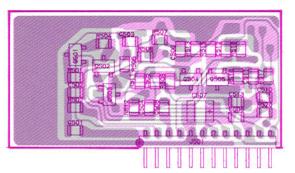
1SS300(A3) (D0405, D0406)



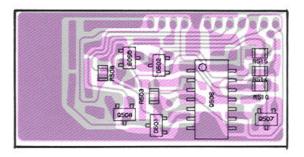
1SS302(C3) (D0401, D0402)

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0424001	P.C.B. W COMP.					
	F3168101	P. C. B.					
C 0505 C 0506 C 0507 C 0508 C 0509 C 0510 C 0511	K22140811 K78080019 K22170821	CHIP CAP.	TEMSVB20J106M-8R GRM40B223M50PT GRM40B102M50PT	0. 1uf 10uf 0. 022uf	50 V 50 V 25 V 50 V 25 V 6. 3 V 50 V 50 V 50 V 25 V 50 V	B B B B B B B B B B B B B B B B B B B	
D 0501 D 0502	G2070009 G2070009	DIODE DIODE	1SS184 TE85R 1SS184 TE85R				
J 0501	P0090733	CONNECTOR					
Q 0501 Q 0502 Q 0503 Q 0504 Q 0505 Q 0506 Q 0507 Q 0508 Q 0509	G3316237F G3070034 G3070034 G3316237F G3316237F G1091035 G3070034 G3070034	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR IC TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	2SC1 23-T2BL6 DTC1 4EK T97 DTC1 4EK T97 2SC1 23-T2BL6 2SC1 23-T2BL6 UPD4 66BG-T2 DTC1 4EK T97 DTC1 4EK T97 DTC1 4EK T97				
R 0501 R 0502 R 0503 R 0504 R 0505 R 0506 R 0507 R 0509 R 0510 R 0511 R 0512 R 0513 R 0514 R 0515 R 0516 R 0517 R 0518 R 0519 R 0520	J24205564 J24205393 J24205104 J24205221 J24205472 J24205472 J24205104 J24205564 J24205104 J24205222 J24205153 J24205222 J24205104 J24205472 J24205472 J24205222 J24205472 J24205222 J24205472 J24205222 J24205153	CHIP RES.	RMC1/10T 564J RMC1/10T 393J RMC1/10T 104J RMC1/10T 221J RMC1/10T 223J RMC1/10T 472J RMC1/10T 472J RMC1/10T 104J RMC1/10T 564J RMC1/10T 104J RMC1/10T 222J RMC1/10T 222J RMC1/10T 222J RMC1/10T 472J RMC1/10T 472J RMC1/10T 564J RMC1/10T 472J RMC1/10T 222J RMC1/10T 472J RMC1/10T 222J RMC1/10T 222J RMC1/10T 222J RMC1/10T 222J RMC1/10T 222J RMC1/10T 472J RMC1/10T 222J RMC1/10T 153J	560K 39K 100K 220 22K 4.7K 4.7K 100K 560K 100K 2.2K 15K 2.2K 100K 4.7K 560K 2.2K 4.7K 5.2K	1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W		

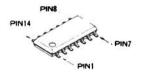
AF UNIT (No.05XX)



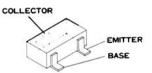
(obverse view of "component" side)



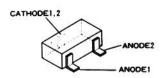
(obverse view of "chip-only" side)



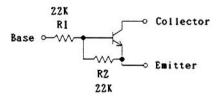
μPD4066BG (Q0506)



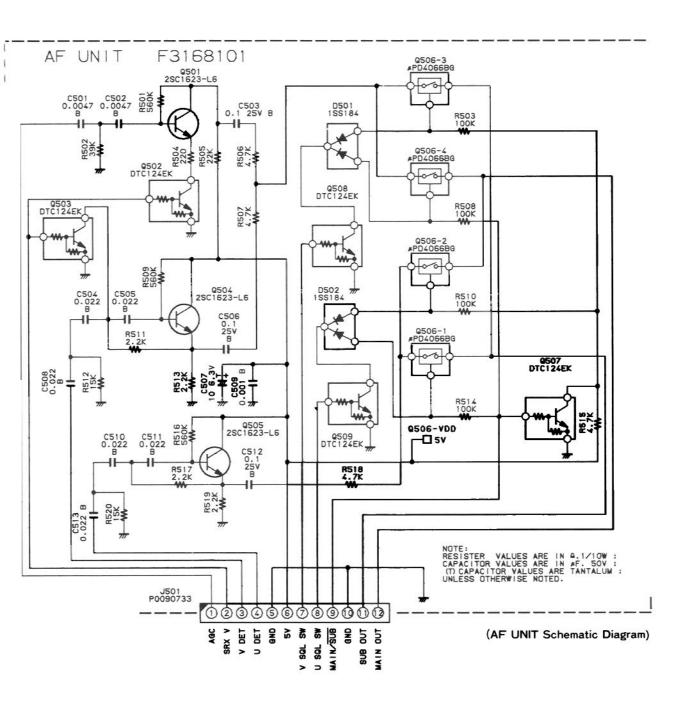
2SC1623(L6) (Q0501,Q0504,Q0505) DTC124EK(25) (Q0502,Q0503,Q0507,Q0508,Q0509)



1SS184(B3) (D0501, D0502)



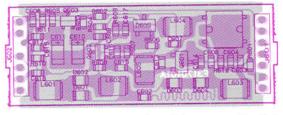
DTC124EK CIRCUIT DIAGRAM



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REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
		P. C. B. W COMP.					
	F3170101A						
C 0602 C 0603 C 0604 C 0606 C 0607 C 0608 C 0609 C 0610 C 0611 C 0612 C 0613 C 0614 C 0615 C 0616 C 0617 C 0618 C 0619	K22174809 K22174235 K22174202 K22174809 K22174809 K78100015 K78100015 K22174809 K22174207 K22174202 K22174202 K22174204 K22174204 K22174809		GRM39B331K50PT GRM39B102M50PT GRM39B102M50PT GRM39CH101J50PT GRM39CK010C50PT GRM39B102M50PT TEMSVA1A335M-8R TEMSVA1A335M-8R GRM39B102M50PT GRM39CH060D50PT GRM39CK010C50PT GRM39CK010C50PT GRM39CK010C50PT GRM39CK010C50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT	330pF 0.001uF 0.001uF 100pF 1pF 0.001uF 3.3uF 3.3uF 0.001uF 6pF 1pF 1pF 1pF 3pF 0.001uF 0.001uF	50V 50V 50V 50V 50V 50V 10V 50V 50V 50V 50V 50V 50V	B B CH CK B B CH CK CJ B B B	
D 0601 D 0602 D 0603 D 0604 D 0605	G2070114 G2070114 G2070118 G2070118 G2070032	DIODE DIODE DIODE DIODE DIODE	1T363-01-T08A 1T363-01-T08A HSU277(¬-¬-) HSU277(¬-¬-) 1SS153-T2B				
J 0601 J 0602	P0090788 P0090807	CONNECTOR CONNECTOR	9230B-1-07Z021-T 9230B-1-06Z023-T				
L 0601 L 0602 L 0603 L 0604 L 0605	L1690016 L1690016 L1690016 L1690016 L1690016	COIL COIL COIL	32CS 380LB-1R0M=P 32CS 380LB-1R0M=P 32CS 380LB-1R0M=P 32CS 380LB-1R0M=P 32CS 380LB-1R0M=P	luH luH luH luH luH			
Q 0601 Q 0602 Q 0603	G3815777 G3342267B G3341167G	FET TRANSISTOR TRANSISTOR	2SK157 2SC422				
R 0601 R 0602 R 0603 R 0604 R 0605 R 0606 R 0607 R 0608 R 0609 R 0610 R 0611 R 0612	J24185471 J24185103 J24185104 J24185100 J24185222 J24185560 J24185222 J24185103 J24185470 J24185101 J24185150 J24185102	CHIP RES.	RMC1/16 471JATP RMC1/16 103JATP RMC1/16 104JATP RMC1/16 100JATP RMC1/16 222JATP RMC1/16 560JATP RMC1/16 103JATP RMC1/16 470JATP RMC1/16 101JATP RMC1/16 150JATP RMC1/16 150JATP RMC1/16 102JATP	470 10K 100K 10 2. 2K 56 2. 2K 10K 47 100 15	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		
T 0601	L0022098	COIL	EIV-4EN009EN				

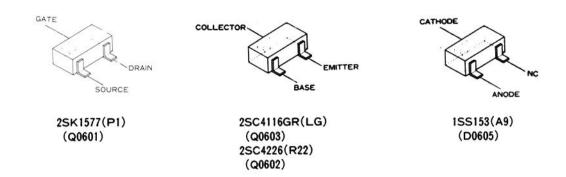
430-VCO UNIT (No.06XX)

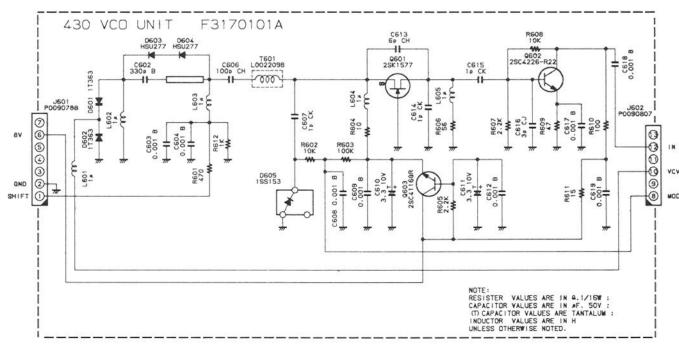


(obverse view of "component" side)



(obverse view of "solder" side)

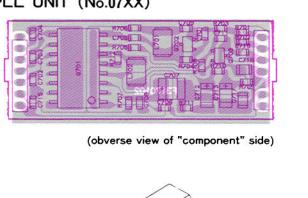


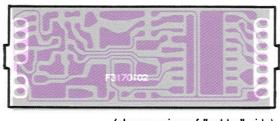


(430-VCO UNIT Schematic Diagram)

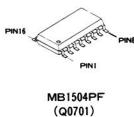
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0243001	P.C.B. W. COMP.					
	F3170102	P. C. B.					
C 0701 C 0702 C 0703 C 0704 C 0705 C 0706 C 0707 C 0708 C 0710 C 0711 C 0711 C 0712 C 0715 C 0716 C 0717	K22174206 K22174235 K22174235 K22174204 K22144802 K78100010 K22174809 K22174809 K22174809 K22174809 K22174809 K22174809 K22174809 K22144802 K70107475 K22174809	CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. TANTALUM CAP. CHIP CAP. CHIP CAP.	GRM39CH050C50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CJ030C50PT GRM39B103M25PT TESVB21A475M8R GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B103M25PT DN1A4R7M1S GRM39B102M50PT GRM39B102M50PT GRM40B104M25PT GRM40B104M25PT	5pF 100pF 100pF 100pF 3pF 0.01uF 4.7uF 0.001uF 0.001uF 0.01uF 4.7uF 0.001uF	50V 50V 50V 50V 25V 10V 50V 50V 25V 10V 50V 25V 25V	CH CH CH CJ B B B B	
L 0701 L 0702	L1690029 L1690055	COIL	32CS 380NB-33NM=P 32CS 380HB-221K=P	0.033uH 220uH			
Q 0701 Q 0702 Q 0703	G1091123 G3342157Y G3115867Y	IC TRANSISTOR TRANSISTOR	MB1504PF-G-BND-TF 2SC4215Y TE85R 2SA1586Y TE85R				
R 0701 R 0702 R 0703 R 0704 R 0705 R 0706 R 0707 R 0708 R 0709 R 0710 R 0711	J24185150 J24185150 J24185150 J24185683 J24185333 J24185471 J24185471 J24185104 J24185472 J24185222 J24185102 J24185222	CHIP RES.	RMC1/16 150JATP RMC1/16 150JATP RMC1/16 150JATP RMC1/16 683JATP RMC1/16 333JATP RMC1/16 471JATP RMC1/16 471JATP RMC1/16 104JATP RMC1/16 472JATP RMC1/16 222JATP RMC1/16 102JATP RMC1/16 222JATP	15 15 68K 33K 470 470 100K 4.7K 2.2K 1K 2.2K	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		

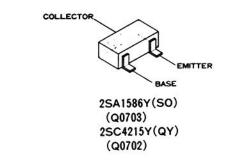
430-PLL UNIT (No.07XX)

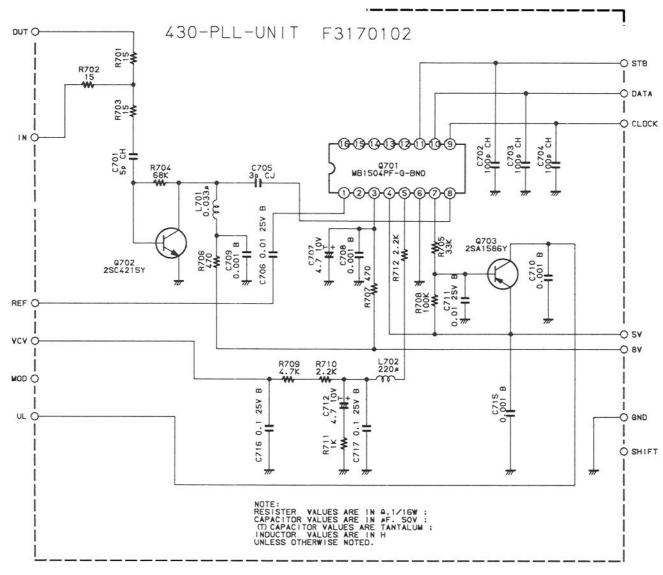




(obverse view of "solder" side)







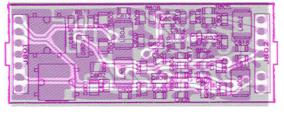
(430-PLL UNIT Schematic Diagram)

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0239001	P.C.B. W COMP.					
	F3169101A	P. C. B.					
C 0801 C 0802 C 0803 C 0804 C 0805 C 0806 C 0807 C 0808 C 0809 C 0810 C 0811 C 0812 C 0813 C 0814 C 0815 C 0816 C 0817 C 0818 C 0820 C 0822		CHIP CAP.	GRM39B102M50PT GRM39CH150J50PT GRM39CH150J50PT GRM39CK020C50PT GRM39CH100D50PT GRM39CH180J50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39CH120J50PT GRM39CK020C50PT GRM39CK020C50PT GRM39CH150J50PT GRM39CH150J50PT GRM39CH150J50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39CJ030C50PT GRM39CH040C50PT	0.001uF 15pF 15pF 2pF 10pF 18pF 0.001uF 0.001uF 0.001uF 0.001uF 12pF 2pF 10pF 2pF 15pF 0.001uF 0.001uF 0.001uF	50V 50V 50V 50V 50V 50V 50V 50V 50V 50V	B CH CK CH B B CK CK CH B B B CH	
D 0801 D 0802 D 0803 D 0804 D 0805	G2070114 G2070114 G2070114 G2070114 G2070032	DIODE DIODE DIODE DIODE DIODE	1T363-01-T08A 1T363-01-T08A 1T363-01-T08A 1T363-01-T08A 1SS153-T2B				
J 0801 J 0802	P0090788 P0090807	CONNECTOR CONNECTOR	9230B-1-07Z021-T 9230B-1-06Z023-T				
L 0801 L 0802 L 0803 L 0804	L1690039 L1690017 L1690035 L1690039	COIL COIL COIL	32CS 380KB-100K=P 32CS 380LB-2R2M=P 32CS 380LB-4R7M=P 32CS 380KB-100K=P	10uH 2.2uH 4.7uH 10uH			
Q 0801 Q 0802 Q 0803 Q 0804 Q 0805	G3342267B G3342267B G3070041 G3342267B G3070041	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	2SC4226-T2B R22 2SC4226-T2B R22 DTC144EU T107 2SC4226-T2B R22 DTC144EU T107				
R 0801 R 0802 R 0803 R 0804 R 0805 R 0806 R 0807 R 0808 R 0809 R 0810	J24185273 J24185472 J24185273 J24185222 J24185471 J24185102 J24185470 J24185273 J24185273 J24185102	CHIP RES.	RMC1/16 273JATP RMC1/16 472JATP RMC1/16 273JATP RMC1/16 222JATP RMC1/16 471JATP RMC1/16 102JATP RMC1/16 470JATP RMC1/16 273JATP RMC1/16 273JATP RMC1/16 102JATP	27K 4.7K 27K 2.2K 470 1K 47 27K 27K 1K	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		

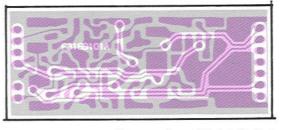
144-MHz VCO Unit Parts List

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	J24185152 J24185104		RMC1/16 152JATP RMC1/16 104JATP	1.5K 100K	1/16W 1/16W		
T 0801 T 0802	L0022072 L0022073	COIL	EIV-4EN007EN EIV-4EN008EN				

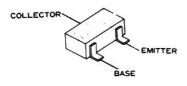
144-VCO UNIT (No.08XX)



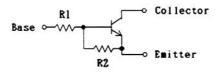
(obverse view of "component" side)



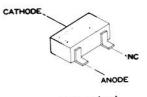
(obverse view of "solder" side)



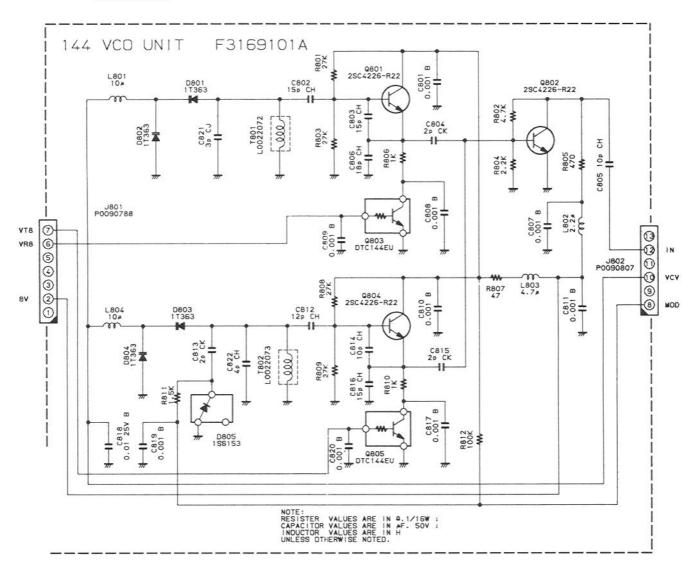
2SC4226(R22) (Q0801,Q0802,Q0804) DTC144EU(26) (Q0803,Q0805)



DTC144EU CIRCUIT DIAGRAM



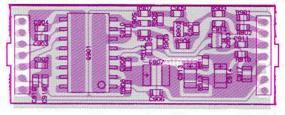
1SS153(A9) (D0805)



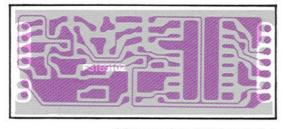
(144-VCO UNIT Schematic Diagram)

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
		P.C.B. W COMP.					
	F3169102	P. C. B.					
C 0901 C 0902 C 0903 C 0904 C 0905 C 0906 C 0907 C 0908 C 0910 C 0911 C 0912 C 0913 C 0914 C 0915 C 0916 C 0917	K22174206 K22174235 K22174235 K22174206 K22174206 K22144802 K78100010 K22174809 K22174809 K22174203 K22174809 K22174809 K22144802 K70107475 K22141809 K22174809 K22174809 K22174809	CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. TANTALUM CHIP CAP.	GRM39CH050C50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH101J50PT GRM39CH050C50PT GRM39B103M25PT TESVB21A475M8R GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B103M25PT DN1A4R7M1S GRM42-6B104M25PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT	5pF 100pF 100pF 100pF 5pF 0.01uF 4.7uF 0.001uF 2pF 0.001uF 4.7uF 0.1uF 0.001uF 0.001uF	50V 50V 50V 50V 25V 10V 50V 50V 25V 10V 25V 50V 50V	CH CH CH CH B B B B B B B	
Q 0901 Q 0902 Q 0903	G3342157Y G3115867Y	TRANSISTOR TRANSISTOR	2SC4215Y TE85R 2SA1586Y TE85R				
R 0901 R 0902 R 0903 R 0904 R 0905 R 0906 R 0907 R 0908 R 0910 R 0911 R 0912 R 0913	J24185150 J24185150 J24185150 J24185683 J24185471 J24185333 J24185101 J24185471 J24185332 J24185000 J24185103	CHIP RES.	RMC1/16 150JATP RMC1/16 150JATP RMC1/16 150JATP RMC1/16 683JATP RMC1/16 471JATP RMC1/16 101JATP RMC1/16 471JATP RMC1/16 104JATP RMC1/16 332JATP RMC1/16 000JATP RMC1/16 103JATP RMC1/16 102JATP	15 15 15 68K 470 33K 100 470 100K 3. 3K 0	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		

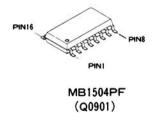
144-PLL UNIT (No.09XX)

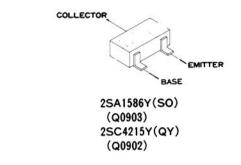


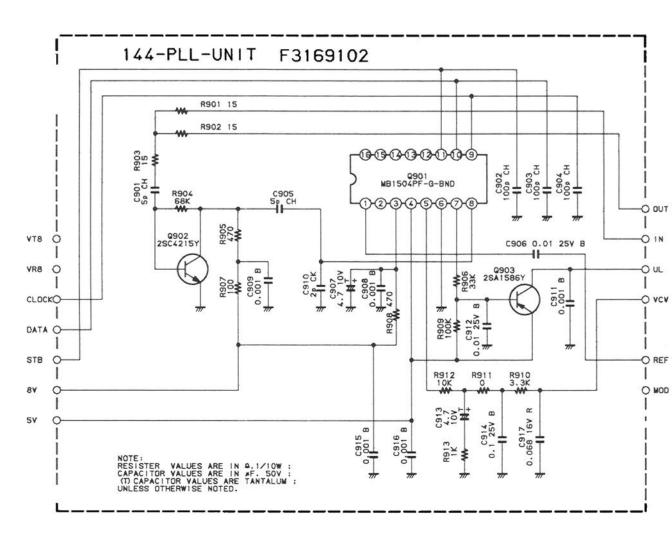
(obverse view of "component" side)



(obverse view of "solder" side)







(144-PLL UNIT Schematic Diagram)

VERS.

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.
	CS0975002	P.C.B. W COMP.				
	F3166000C	P. C. B.				
C 1001 C 1002	K40129066 K28179001	AL. ELECTRO. CAP. CERAMIC CAP.	RE3-16V471M UP050B102K-A	470uF 0. 001uF	16V 50V	В
C 1003	K22170203	CHIP CAP.	GRM40CK020C50PT	2pF	50V	CK
C 1004 C 1005	K22170203 K22275221	CHIP CAP. CHIP CAP.	GRM40CK020C50PT GRM42-2CH220J500PT	2pF	50V	CK Ch
C 1005	K22170203	CHIP CAP.	GRM40CK020C50PT	22pF 2pF	500V 50V	CK
C 1007	K22170203	CHIP CAP.	GRM40CK020C50PT	2pF	50V	CK
C 1008	K22170204	CHIP CAP.	GRM40CJ030C50PT	3pF	50V	CJ
C 1009	K22170206	CHIP CAP.	GRM40CH050C50PT	5pF	50V	CH
C 1010	K22170211	CHIP CAP.	GRM40CH100D50PT	10pF	50V	СН
C 1011	K22170202	CHIP CAP.	GRM40CK010C50PT	lpF	50V	CK
C 1013	K22170202	CHIP CAP.	GRM40CK010C50PT	lpF	50V	CK
C 1014 C 1015	K22170213 K22174211	CHIP CAP. CHIP CAP.	GRM40CH120J50PT GRM39CH100D50PT	12pF 10pF	50V 50V	CH CH
C 1016		AL. ELECTRO. CAP.	16V100M4X7TR2	10pr 10uF	16V	CII
C 1017		AL. ELECTRO. CAP.		10uF	16V	
C 1018	K40129059	AL. ELECTRO. CAP.		4. 7uF	16V	
C 1019	K40129059		RC3-16V4R7MS(3X5)	4. 7uF	16V	
C 1020	K22170208		GRM40CH070D50PT	7pF	50V	CH
C 1021 C 1022	K46120004 K22170209		16V100M4X7TR2	10uF	16V	ΛII
C 1022	K22170209	CHIP CAP.	GRM40CH080D50PT GRM40CJ030C50PT	8pF 3pF	50V 50V	CH CJ
C 1023	K22170204	CHIP CAP.	GRM40CH040C50PT	4pF	50V	CH
C 1025	K22170251	CHIP CAP.	GRM40CH471J50PT	470pF	50V	CH
C 1026	K22170251	CHIP CAP.	GRM40CH471J50PT	470pF	50V	CH
C 1027	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В
C 1028	K22170805		GRM40B102M50PT	0.001uF	50V	B
C 1029 C 1030	K22170221 K22170251	CHIP CAP. CHIP CAP.	GRM40CH270J50PT GRM40CH471J50PT	27pF	50V 50V	CH CH
C 1030	K22170231	CHIP CAP.		470pF 10pF	50V	CH
C 1032	K22170211		GRM40B102M50PT	0.001uF	50V	В
C 1033	K22170805		GRM40B102M50PT	0.001uF	50V	В
C 1034	K22170251	CHIP CAP.	GRM40CH471J50PT	470pF	50 V	CH
C 1035	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В
C 1036	K22170805		GRM40B102M50PT	0.001uF	50V	В
C 1037 C 1038	K22170251	CHIP CAP.	GRM40CH471J50PT GRM40B102M50PT	470pF	50V	CH
C 1038	K22170805 K22174207		GRM39CH060D50PT	0.001uF 6pF	50V 50V	B CH
C 1040	K22170805		GRM40B102M50PT	0.001uF	50V	B
C 1041	K78120009			1uF	16V	-
C 1042	K22170805		GRM40B102M50PT	0.001uF	50V	В
C 1043	K78120009		TESVA1C105M1-8R	1uF	16V	
C 1044	K22170209		GRM40CH080D50PT	8pF	50V	CH
C 1045 C 1046	K22170203 K22170203		GRM40CK020C50PT GRM40CK020C50PT	2pF	50V	CK CK
C 1046	K22170203	CHIP CAP.	GRM40B102M50PT	2pF 0.001uF	50V 50V	B B
C 1047	K22170209		GRM40CH080D50PT	0.001ur 8pF	50V	CH
C 1049	K22170205		GRM40CH040C50PT	4pF	50V	CH
C 1050		AL. ELECTRO. CAP.		10uF	16V	
C 1051	K46120004	AL. ELECTRO. CAP.	16V100M4X7TR2	10uF	16V	

REF.	YAESU P/N	DESCRIPTION CHIP CAP. AL. ELECTRO. CAP. CHIP CAP. TANTALUM CAP. CHIP CAP. TANTALUM CAP. CHIP CAP. TANTALUM CAP. CHIP CAP. TANTALUM CAP. CHIP CAP. AL. ELECTRO. CAP. CHIP CAP.	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
C 1052	K22170805	CHIP CAP	GRM40R102M50PT	0 001 ₁₁ F	รกข	В	
C 1054	K22170805	CHIP CAP.	GRM40B102M50PT	0.001ur	50 V	В	
C 1055	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1056	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1057	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	B	
C 1058	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	B	
C 1059	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1060	K40129012	AL. ELECTRO. CAP.	RC2-16V100M(4X7)	10uF	16 V		
C 1061	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50 V	В	
C 1062	K70107106	TANTALUM CAP.	DN1A100M1S	10uF	10 V		
C 1065	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50V	В	
C 1066	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50 V	В	
C 1067	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1068	K70127475	TANTALUM CAP.	DN1C4R7M1S	4.7uF	16V		
C 1069	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1070	K70127475	TANTALUM CAP.	DN1C4R7M1S	4. 7uF	16V		
C 1071	K22170227	CHIP CAP.	GRM40CH470J50PT	47pF	50V	CH	
C 1072	K22170231	CHIP CAP.	GRM40CH680J50PT	68pF	50V	CH	
0 1073	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uf	50V	В	
0 1074	KZZ17U8U5	CHIP CAP.	GKM4UBIUZM5UPT	0.001uf	50V	В	
C 1075	K/U10/1U5	IANIALUM CAP.	UNIVUIUMIS	luf	35 V	ъ	
C 1077	N22170005	CHIP CAP	UKM4UBIUZMDUPI	0.001ur	507	В	
C 1077	V40120046	OHIP CAP.	UKM4UBIUZM5UPI	0. 00 Lur	5UV	В	
C 1070	K40123040	ALL ELECTRU. CAP.	REZ-10¥1UZM CDM40D102ME0DΦ	1000ur	10 V	D	
C 1079	K46120003	AI DIDOTO CAD	16V100M4V7TD2	0.001ur	16V	В	
C 1000 C 1081	K20120004	CHID CAD	101100M4A111.2 CDMAOD109M50DT	10ur 0 001	EUA 101	В	
C 1001	K22170003	CHIP CAP	GRMANCHINNDSNPT	0.001ur 10nF	50 V	CH	
C 1083	K22170211	CHIP CAP	GRM40CK010C50PT	lopr	50 V	CK	
C 1085	K40129046	AL ELECTRO CAP.	RE2-16V102M	1000uF	16V	OK.	
C 1086	K22170201	CHIP CAP.	GRM40CKOR5C50PT	0.5pF	50V	CK	
C 1087	K22170203	CHIP CAP.	GRM40CK020C50PT	2pF	50V	CK	
C 1089	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1091	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	B	
C 1092	K70127106	TANTALUM CAP.	DN1C100M1S	10uF	16V		
C 1093	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1096	K22170 805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1097	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1098	K46120010		RC2-16V470M-T34		16 V		
C 1099			GRM40B102M50PT		50 V	В	
C 1100			GRM40B104M25PT		25 V	В	
C 1101					50 V		
C 1102		AL. ELECTRO. CAP.			50 V		
C 1103			GRM40CH080D50PT	-	50 V	CH	
C 1104				22pF		СН	
C 1105	K22170805		GRM40B102M50PT			В	
C 1106	K22170805		GRM40B102M50PT		50 V	В	
C 1107	K22140811	CHIP CAP.	GRM40B104M25PT		25 V	В	
C 1108 C 1109	K22170805 K22170805		GRM40B102M50PT GRM40B102M50PT	0.001uF	50V	В	
C 11103	K22140811		GRM40B104M25PT	0.001uF 0.1uF	50V	В	
C 1111			GRM40B104M25PT		25 V 25 V	B B	
C 1111		CHIP CAP.	GRM40B102M50PT		25 V 50 V	В	
C 1112				3pF	50 V	СJ	
5 -110		·····		OF.	001	00	

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REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
C 1114	K40120020	AL ELECTRO CAP	RC-16V101M(8Y9)	1001F	16V		
C 1115	K40123020	AL. ELECTRO. CAP.	RE3-16V471M	470uF	16V		
C 1116	K40129066	AL. ELECTRO. CAP.	RE3-16V471M	470uF	16V		
C 1117	K22170203	CHIP CAP.	GRM40CK020C50PT	2pF	50V	CK	
C 1119	K22170215	CHIP CAP.	GRM40CH150J50PT	15pF	50 V	CH	
C 1122	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50V	В	
C 1123	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1124	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1125	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1127	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1128	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50V	В	
C 1129	K22170206	CHIP CAP.	GRM40CH050C50PT	5pF	50V	CH	
C 1130	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1131	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1132	K22170805	CHIP CAP.	GRM4UBIUZM5UPT	0.001uf	50V	В	
C 1133	K22170817	CHIP CAP.	GKM4UBIUJM5UPT	0. 01ur	50V	B B	
0 1135	K22170817	CHIP CAP.	CDM4OD1O3M3UPI	0. 01ur	50V 50V	В	
C 1136	K22170805	CHIP CAP.	CDM40CK0DECE0D4	0.001ur	50V	CK	
C 1137	NAGI (UAUI V70160027	TANTALIM CUID CAD	######################################	0. opr	35V	CK	
C 1140	170100021	TANTALUM CHID CAP	TECVATV224H1-OR	0. 22ur 0. 29uF	35V		
C 1141	K221702021	CHID CAD	CBW4UCKU3UC2UDT	0. 22ur 2nk	50V	CK	
C 1142	K22170203	CHIP CAP	GRM40CK020C50FT	2pr 2pr	50V	CK	
C 1143	K40109094	AL RIECTRO CAP	RE2-10V101M	100nF	10V	OK	
C 1145	K22170805	CHIP CAP	GRM40B102M50PT	0.001uF	50V	В	
C 1146	K22140811	CHIP CAP.	GRM40B104M25PT	0. 1uF	25 V	B	
C 1147	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 1148	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1149	K22140811	CHIP CAP.	GRM40B104M25PT	0. 1uF	25 V	В	
C 1150	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1151	K22140811	CHIP CAP.	GRM40B104M25PT	0. 1uF	25 V	В	
C 1152	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50 V	В	
C 1153	K22170817	CHIP CAP.	GRM40B103M50PT	0.01uF	50 V	В	
C 1154	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1155	K22170805	CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
						011	
C 1157		CHIP CAP.	GRM39CH101J50PT	100pF	50V	CH	
C 1158		CHIP CAP.	GRM39CH101J50PT	100pF	50V 50V	CH CH	
C 1159 C 1160		CHIP CAP. CHIP CAP.	GRM40CH100D50PT GRM40B104M25PT	10pF 0.1uF	25V	B	
C 1160		CHIP CAP.	GRM39B103M25PT	0. 1ur 0. 01uF	25V	В	
C 1162		CHIP CAP.	GRM39B103M25PT	0.01uF	25V	В	
C 1162		CHIP CAP.	GRM40CH100D50PT	10pF	50V	CH	
C 1165		CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В.	
C 1166		CHIP CAP.	GRM40B102M50PT	0.001uF	50V	B	
C 1167		CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1168		CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1169		CHIP CAP.	GRM40B102M50PT	0.001uF	50V	В	
C 1170		CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1172	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50 V	В	
C 1173		CHIP CAP.	GRM39B102M50PT	0.001uF	50 V	В	
C 1174		CHIP CAP.	GRM40B102M50PT	0.001uF	50 V	В	
C 1175		CHIP CAP.	GRM40B104M25PT	0. luF	25 V	В	
C 1176	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50 V	В	

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE		TOL.	VERS.
C 1179 C 1181 C 1182 C 1183 C 1185 C 1186 C 1187 C 1188 C 1189 C 1191 C 1192 C 1193 C 1199 C 1200 C 1201 C 1202 C 1203 C 1204 C 1205	K22174809 K22170805 K22174809 K22170805 K22174809 K22174809 K22170805 K22170805 K22170805 K22170813 K78140009 K78140009 K78140009 K22174219 K22174206 K22170206 K22170203 K22170203	CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP.	GRM39B102M50PT GRM40B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM39B102M50PT GRM40B102M50PT GRM40B102M50PT GRM40B102M50PT GRM40B472M50PT TESVA1E474M1-8R TESVA1E474M1-8R GRM39CH020J50PT GRM40CH050C50PT GRM40CH050C50PT GRM40CK020C50PT GRM40CK020C50PT GRM40CK020C50PT	0.001uF 0.001uF 0.001uF 0.001uF 0.001uF 0.001uF 0.001uF 0.001uF 0.47uF 0.47uF 22pF 5pF 5pF 5pF 2pF 10pF 2pF	50V 50V 50V 50V 50V 50V 50V 50V 25V 25V 50V 50V 50V 50V 50V	B B B B B B CH CH CH CK CH	
CF1001 CF1002	Н3900400 Н3900400	CERAMIC FILTER CERAMIC FILTER	Urwm455L	-			
CV1001 CV1002	L4020082 L4020081	HELICAL RESONATOR HELICAL RESONATOR	HF-62H14 440M R-F5 HF-63H21 440M R-F5				
D 1001 D 1002 D 1003 D 1004 D 1005 D 1006 D 1007 D 1008 D 1010 D 1011 D 1012 D 1013 D 1014 D 1016 D 1017 D 1019 D 1020 D 1020 D 1025 D 1025 D 1028	Q9000534 G2070009 G2090425 G2090118 G2090118 G2015550 G2090337 G2090297 G2070112 G2070118 G2070102 G2070102 G2070102 G2070102 G2070003 G2070003 G2070003 G2070009 G2070009 G2070009 G2070118	SURGE ABSORBER DIODE	P6KE18 1SS184 TE85R UM9415 1SS97 1SS97 1S1555 MI308 1SS110 HSU277 HZM11B-TR HSU277 HSU277 1T362-T8 1T362-T8 1T362-T8 1T362-T8 1T362-T8 1SS226 TE85R 1SS226 TE85R 1SS110 1S1555 1SS184 TE85R 1SS184 TE85R MI308 HSU277				
J 1001 J 1002 J 1003	P1090671 P1090672 P1090560	CONNECTOR CONNECTOR CONNECTOR	5533-26APB 9110S-06 5533-14APB	Down Radio <i>A</i>		ed by eur.El	

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		٨	Main Unit Parts List				FT-5200
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
J 1004 J 1005 J 1006 J 1007	P0090612 P1090672 P1090210 P1090210	CONNECTOR CONNECTOR CONNECTOR CONNECTOR	SB20-05WS 9110S-06 TMP-J01X-V6 TMP-J01X-V6				
L 1001 L 1002 L 1003 L 1004 L 1005 L 1006 L 1007 L 1008 L 1009 L 1010 L 1011 L 1012 L 1013 L 1014 L 1016 L 1017 L 1018 L 1019 L 1020 L 1021 L 1022 L 1023 L 1024 L 1025 P 1001 P 1002 P 1002	L0021817 L0021359 L0021359 L0021359 L0020917 L0021817 L0020724 L1690003 L1690007 L0021811A L1690004 L1690004 L1690004 L1690002 L1690073 L1690073 L1690073 L1690073 L16900707 L0020900 L1690004 L1690004 L1690005 T9206005 T9206005	COIL COIL COIL COIL COIL COIL COIL COIL	2. 5T3. 5D0. 6UEW R 1. 0T3. 0D0. 5UEW R 2. 5T3. 5D0. 6UEW R 8. 5T3. 0D0. 5UEW R LQN2AR22K LQH3N2R2M02M00-LQN2A47NM 2. 5T3. 0D0. 6UEW R LQN2A18NM LQN2A18NM LQN2A18NM LQN2A18NM LQN2A22NM LQH3NR68M92M00-LQH3NR68M92M00-LQH3NR68M92M00-LQH3NR68M92M00-LQH3NR68M92M00-2. 5T3. 5D0. 8ACW R LQN2A18NM LQN2A47NM 5. 5T3. 0D0. 5UEW R LER015TR10M	0. 22uH 2. 2uH 0. 047uH 0. 018u 0. 018u 0. 022uH 0. 68uH 0. 68uH 2. 2uH 0. 018u 0. 017uH			DST EXP DST USA
P 1003 Q 1001 Q 1002 Q 1003 Q 1004 Q 1005 Q 1006 Q 1007 Q 1008 Q 1010 Q 1011 Q 1011 Q 1012 Q 1013 Q 1014 Q 1015 Q 1016 Q 1018 Q 1019 Q 1020	T9205639A G3211340R G3211340R G327147Y G1091122 G3090050 G3333577 G3342267B G3070034 G4070001 G3815777 G3070025 G3070034 G3316237F G3328737Y G3070034 G1090294 G3326207B G1091035	TRANSISTOR TRANSISTOR TRANSISTOR IC TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR FET FET TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR IC TRANSISTOR IC	2SB1134R 2SB1134R 2SC2714YTE85R M57788MR 2SC2407(1) 2SC3357-T2 2SC4226-T2B R22 DTC124EK T97 SGM2006M-T8 2SK1577 IMZ1 T108 DTC124EK T97 2SC1623-T2BL6 2SC2873-Y TE12R DTC124EK T97 UPC7808H 2SC2620QBTR 2SC2620QBTR UPD4066BG-T2				

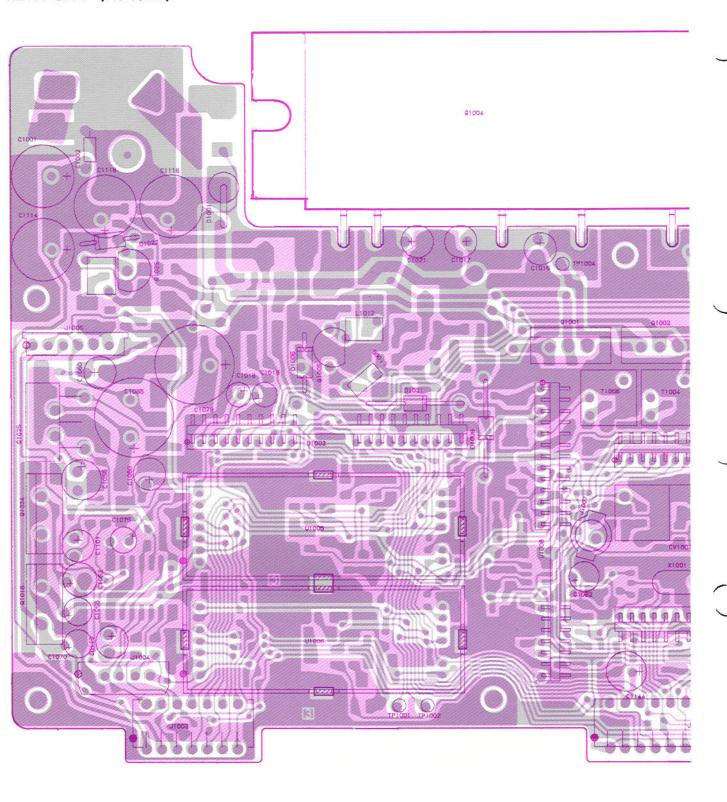
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE		VERS.
Q 1024 Q 1025 Q 1026 Q 1027 Q 1028 Q 1029	G4801317A G3316237F G1090299 G1090769 G3325380 G3333577 G1090990 G3070034 G3070034 G3316237F G3070037 G3070037	FET TRANSISTOR IC IC TRANSISTOR TRANSISTOR IC TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	3SK131-T2B V11 2SC1623-T2BL6 UPC7805H TDA2003 2SC2538 2SC3357-T2 M5223FP-72A DTC124EK T97 DTC124EK T97 2SC1623-T2BL6 RN1303 TE85R RN1303 TE85R			
R 1001 R 1002 R 1003 R 1004 R 1005 R 1006 R 1007 R 1008 R 1010 R 1011 R 1012 R 1013 R 1014 R 1015 R 1016 R 1017 R 1018 R 1020 R 1021 R 1022 R 1022 R 1023 R 1024 R 1025 R 1026 R 1027 R 1028 R 1027 R 1028 R 1029 R 1030 R 1031 R 1032 R 1035 R 1036 R 1037 R 1038 R 1039 R 1041 R 1042	J24205683 J24205470 J24205103 J24205103 J24205122 J24205150 J24205102 J24205472 J24205221 J24205471 J24205100 J24185683 J24205221 J24205471 J24205104 J24205471 J24205102 J24205470 J24205102 J24205682 J24205682 J24205682 J24205682 J24205100 J24205100 J24205100 J24205100 J24205103 J24205103 J24205103 J24205101 J24205331	CHIP RES.	RMC1/10T 683J RMC1/10T 470J RMC1/4 100JATP RMC1/10T 103J RMC1/10T 103J RMC1/10T 222J RMC1/10T 150J RMC1/10T 150J RMC1/10T 472J RMC1/10T 472J RMC1/10T 471J RMC1/10T 100J RMC1/10T 100J RMC1/10T 104J RMC1/10T 221J RMC1/10T 221J RMC1/10T 223J RMC1/10T 471J RMC1/10T 223J RMC1/10T 470J RMC1/10T 104J RMC1/10T 104J RMC1/10T 104J RMC1/10T 104J RMC1/10T 104J RMC1/10T 104J RMC1/10T 103J RMC1/10T 100J RMC1/10T 100J RMC1/10T 103J RMC1/10T 103J RMC1/10T 103J RMC1/10T 103J RMC1/10T 103J RMC1/10T 103J RMC1/10T 101J RMC1/10T 101J RMC1/10T 331J	6. 8K 68 10 10 4. 7K 10K 10K 10K 10O 100 330 330 120K 1	1/10W	
R 1043 R 1044	J24205824 J24205103	CHIP RES. CHIP RES.	RMC1/10T 824J RMC1/10T 103J	820K 10K	1/10W 1/10W	

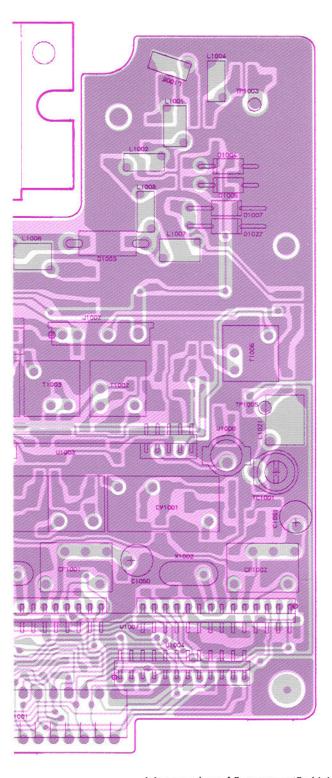
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-	REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV TOL. VERS.
	R 1045	J24205102	CHIP RES.	RMC1/10T 102J RMC1/10T 102J RMC1/10T 103J RMC1/4 1R0JATP RMC1/4 221JATP RMC1/10T 104J RMC1/10T 103J RMC1/10T 120J RMC1/10T 120J RMC1/10T 103J RMC1/10T 122J RMC1/10T 222J RMC1/10T 122J	1 K	1/10W
	R 1046	J24205122	CHIP RES.	RMC1/10T 122J	1. 2K	1/10W
	R 1048	J24205103	CHIP RES.	RMC1/10T 103.J	10K	1/10W
	R 1049	J24245010	CHIP RES.	RMC1/4 1ROJATP	1	1/4W
	R 1050	J24245221	CHIP RES.	RMC1/4 221.JATP	220	1/4W
	R 1051	J24205104	CHIP RES.	RMC1/10T 104J	100K	1/10W
	R 1052	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1053	J24205223	CHIP RES.	RMC1/10T 223J	22K	1/10W
	R 1054	J24205120	CHIP RES.	RMC1/10T 120J	12	1/10W
	R 1056	J24205223	CHIP RES.	RMC1/10T 223J	22K	1/10W
	R 1058	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1059	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1060	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1061	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1062	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1063	J24245229	CHIP RES.	RMC1/4 2R2JATP	2. 2	1/4W
	R 1064	J24205100	CHIP RES.	RMC1/10T 100J	10	1/10W
	R 1065	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1066	J24205472	CHIP RES.	RMC1/10T 472J	4.7K	1/10W
	R 1068	J24205103	CHIP RES.	RMC1/10T 103J	10K	1/10W
	R 1070	J24205680	CHIP RES.	RMC1/10T 680J	68	1/10W
	R 1071	J24205222	CHIP RES.	RMC1/10T 222J	2. 2K	1/10W
	R 1072	J24205220	CHIP RES.	RMC1/10T 220J	22	1/10W
	R 1073	J24205150	CHIP RES.	RMC1/10T 150J	15	1/10W
	R 1074	J24205102	CHIP RES.	RMC1/10T 102J	1 K	1/10W
	R 1075	J24205472	CHIP RES.	RMC1/10T 472J	4.7K	1/10W
	R 1076	J24205224	CHIP RES.	RMC1/10T 224J	220K	1/10W
	R 1078	J24205184	CHIP RES.	RMC1/10T 184J	180K	1/10W
	R 1079	J24205183	CHIP RES.	RMC1/10T 183J	18K	1/10W
	R 1080	J24205222	CHIP RES.	RMC1/10T 222J	2. 2K	1/10W
	R 1081	J24205224	CHIP RES.	RMC1/10T 224J	220K	1/10W
	R 1082	J24205102	CHIP RES.	RMC1/10T 102J	1 K	1/10W
	R 1083	J24205224	CHIP RES.	RMC1/10T 224J	220K	1/10W
	R 1084	J24205223	CHIP RES.	RMC1/10T 223J	22K	1/10W
	R 1085	J24205122	CHIP RES.	RMC1/10T 122J	1.2K	1/10W
	If 1000	J444UJ044	CHII RES.	RFIC1/101 022J	0. 4N	1/10W
	R 1087	J24205152		RMC1/10T 152J	1.5K	1/10W
	R 1088	J24245150		RMC1/4 150JATP	15	1/4W
	R 1090	J24205122		RMC1/10T 122J	1.2K	1/10W
	R 1091	J24245569		RMC1/4 5R6JATP	5.6	1/4W
	R 1092	J24205122		RMC1/10T 122J	1.2K	1/10W
	R 1093	J24205122		RMC1/10T 122J	1.2K	1/10W
	R 1094	J24245569		RMC1/4 5R6JATP	5.6	1/4W
	R 1095	J24205122		RMC1/10T 122J	1.2K	1/10W
	R 1096	J24205101		RMC1/10T 101J	100	1/10W
	R 1097	J24205680		RMC1/10T 680J	68	1/10W
	R 1098	J24205101		RMC1/10T 101J	100	1/10W
	R 1099	J24185560		RMC1/16 560JATP	56	1/16W
	R 1100	J24275470		RMC1/2 470JCTP	47	1/2W
	R 1101	J24205000		RMC1/10T 000J	0	1/10W
	R 1102	J24185105		RMC1/16 105JATP	1M	1/16W
	R 1103	J24185105	CHIP DEC	RMC1/16 105JATP	1M	1/16W
	R 1104	J24185472		RMC1/16 472JATP RMC1/16 472JATP		1/16W
	R 1105	J24185472	CHIP RES.	111101/10 412JAIF	4.7K	1/16W

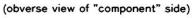
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R 1106 R 1107 R 1108 R 1109 R 1110 R 1111 R 1112 R 1113 R 1114 R 1115 R 1116 R 1124 R 1125 R 1126 R 1127 R 1128	J24185472 J24185683 J24185682 J24205683 J24205183 J24205822 J24185393 J24185823 J24185152 J24185000	CHIP RES.	RMC1/16 472JATP RMC1/16 472JATP RMC1/16 683JATP RMC1/16 682JATP RMC1/10T 683J RMC1/10T 183J RMC1/10T 822J RMC1/16 393JATP RMC1/16 152JATP RMC1/16 100JATP RMC1/16 103JATP RMC1/16 224JATP RMC1/16 103JATP RMC1/16 224JATP RMC1/16 224JATP RMC1/16 224JATP	4.7K 68K 6.8K 68K 18K 8.2K 39K 82K 1.5K	1/16W 1/16W 1/16W 1/10W 1/10W 1/10W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		
SP1001	M4090067	SPEAKER	TL-57A	8ohm	1.5W		
T 1002 T 1003 T 1004 T 1005 T 1006	L0022067 L0022067 L0022067 L0022067 L0022067	COIL COIL COIL	145M R12-L044X 145M R12-L044X 145M R12-L044X 145M R12-L044X 145M R12-L044X				
TC1001	K91000 059	TRIMMER CAP.	ECV1ZW04X53T				
TP1001 TP1002 TP1003 TP1004 TP1005	Q5000101	TP-E TP-E TP-R TP-R TP-E	TP-E/MS-60124 TP-E/MS-60124 TP-R IPS-1110 TP-R IPS-1110 TP-E/MS-60124				
	J51778473 J51778473	POT. POT.	RHO3AYAS4X RHO3AYAS4X	47K 47K			
X 1001 X 1002	H0102986 H0102983	XTAL XTAL		17.245MHZ 22.045MHZ			
	L9190001	FERRITE BEADS	4A2 RI3X3-1				
	R3129530 R0139830	XTAL HOLDER LEAF SPRING					

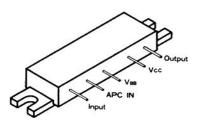
S6000238 LED SPACER LH-5-5

MAIN UNIT (No.10XX)

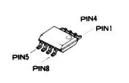




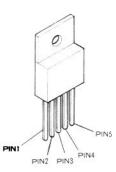




10W Type : M57704MR Hi Pow Type : M57788MR (Q1004)

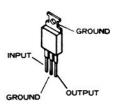


M5223FP (Q1028)

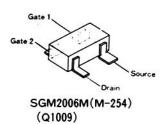


μPD4066BG (Q1020)

TDA2003 (Q1025)



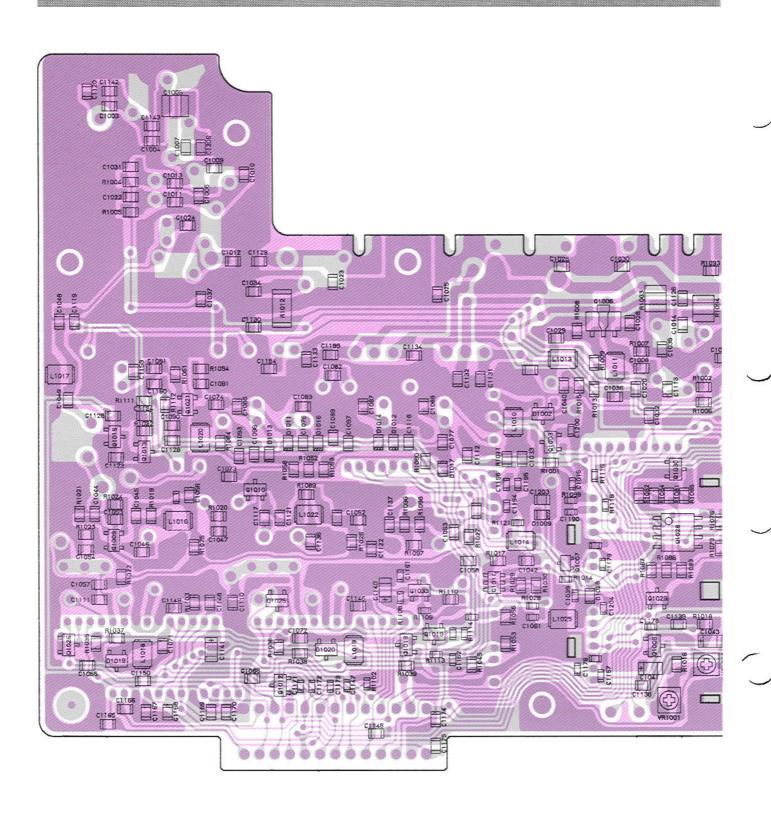
#PC7805H (Q1024) #PC7808H (Q1016)

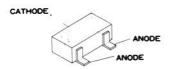


Gate 2
Gate 1
Drain

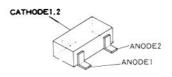
3SK131(V11) (Q1011)

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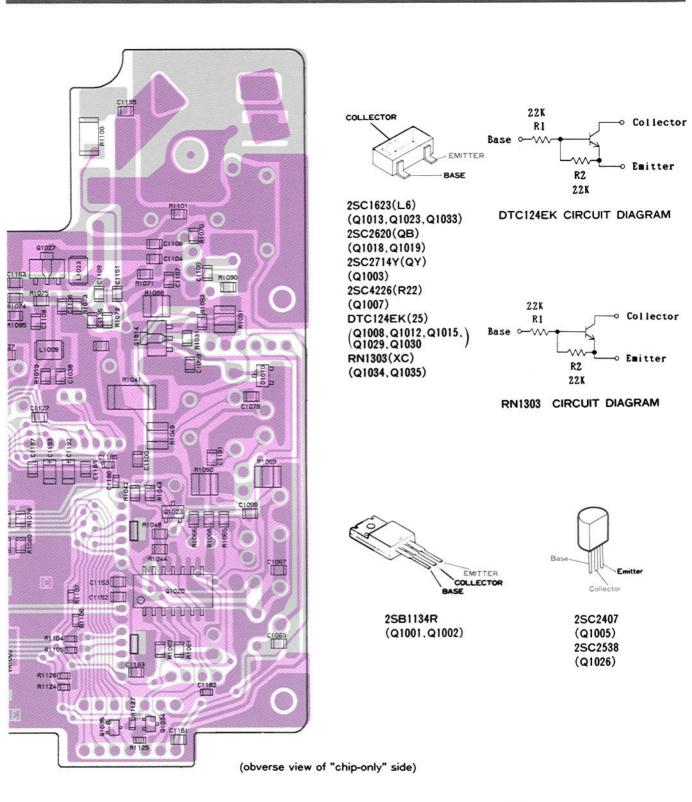


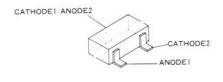


HZM11B(25) (D1010)



1SS184(B3) (D1002, D1025, D1026)

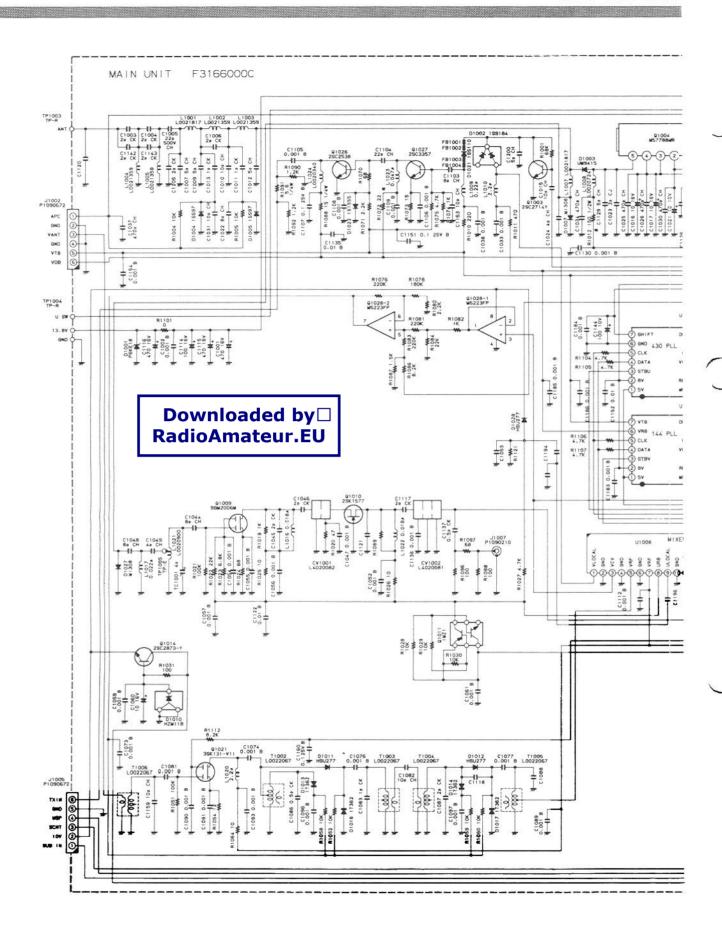


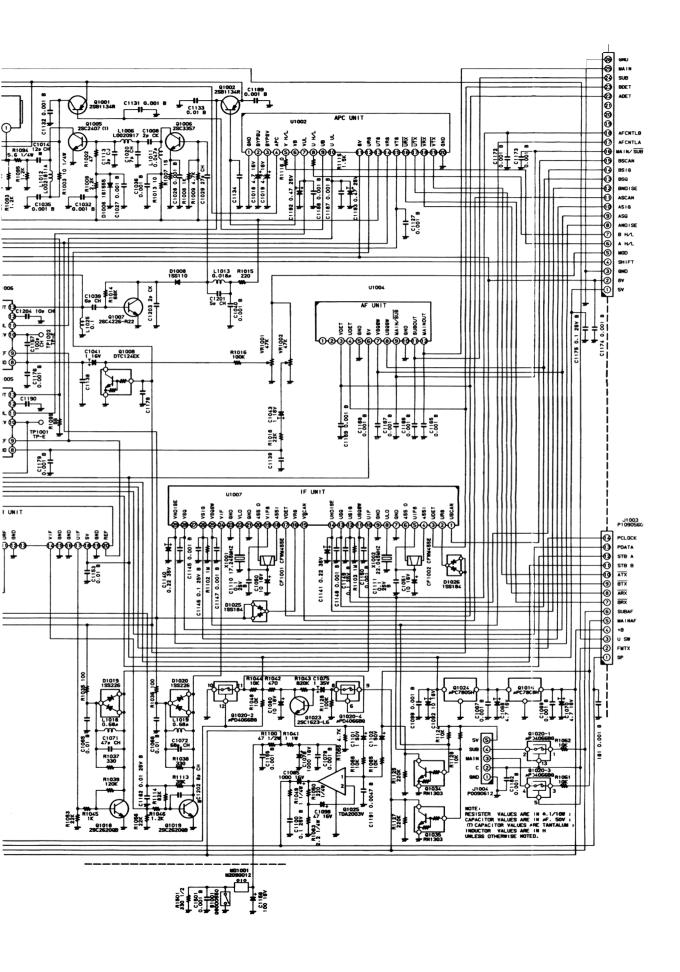


1SS226(C3) (D1019, D1020)



2SC2873(MO) (Q1014) 2SC3357(RK) (Q1006,Q1027)





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		P.C.B. W COMP.					DST EXP
	CS0972003	P.C.B. W COMP.					DST USA
	F3172101C						
BT4001	Q9000552	LITHIUM BATTERY	CR2016-TS1				
C 4001	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF		В	
C 4002	K22144803	CHIP CAP. CHIP CAP.	GRM40R104M25PT	0.01uF 0.1uF		B B	
C 4004	K78120011	TANTALUM CHIP CAP.	TESVC1C106M12R	10nF·	16V	b	
C 4005	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 4006	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50 V	В	
C 4007	K78080019	TANTALUM CHIP CAP.	TEMSVB20J106M-8R	10uF	6.3V		
C 4008 C 4009	K7812UU11	TANTALUM CHIP CAP. TANTALUM CHIP CAP.	TESVCICIO6MIZK	10uF 10uF	16V		
C 4009	K7812000	TANTALUM CHIP CAP.	1EMSVD2UJ1UUM-OR TRSVA1C105M1-8R	luf 1uF	6.3V 16V		
C 4011	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 4013	K22174809	CHIP CAP. CHIP CAP.	GRM39B102M50PT	0.001uF	50V	B	
C 4014	K78080019	TANTALUM CHIP CAP.	TEMSVB20.1106M-8R	1011F	6.3V		
C 4015	K22140811	CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP.	GRM40B104M25PT	0.1uF		В	
C 4016 C 4017	K22174223	CHIP CAP.	GRM39CH330J50PT	33pF 33pF	50V	CH	
C 4017	K22174223	CHIP CAP.	GRM39CH33UJ3UF1	33pr 0.001uF		CH B	
C 4019	K78120009	TANTALUM CHIP CAP.	TESVA1C105M1-8R	1uF	16V	D	
C 4020	K22144803	CHIP CAP.	GRM39B103K25PT	0.01uF	25 V	В	
C 4021	K22144803	CHIP CAP. CHIP CAP.	GRM39B103K25PT	0.01uF		В	
C 4022		TANTALUM CHIP CAP.	TEMSVA1C225M-8R	2. 2uF		n	
C 4024			GRM40B104M25PT	0. 1uF		В	
C 4025 C 4027	K22140811	CHIP CAP.	GRM40B104M25PT	0. 1uF	25 V 50 V	B B	
C 4021	K78120002	CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP.	F951C225MSAAF1Q2	2. 2uF	16 V	ט	
C 4029	K78080019	TANTALUM CHIP CAP.	TEMSVB20J106M-8R	10uF	6.3V		
	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 4031	K22174809		GRM39B102M50PT	0.001uF	50V	В	
C 4032			GRM39B102M50PT	0.001uF	50V	В	
C 4033 C 4034	K22174809 K22174809		GRM39B102M50PT GRM39B102M50PT	0.001uF 0.001uF	50V 50V	B B	
C 4035	K22174809		GRM39B102M50PT	0.001uF	50V	В	
C 4037	K22174809		GRM39B102M50PT	0.001uF	50V	B	
C 4038	K22174235	CHIP CAP.	GRM39CH101J50PT	100pF	50 V	CH	
C 4039	K22174235	CHIP CAP.	GRM39CH101J50PT	100pF	50V	CH	
C 4040	K22174235	CHIP CAP.	GRM39CH101J50PT	100pF	50V	CH	
C 4041 C 4047	K22174809 K22140811	CHIP CAP. CHIP CAP.	GRM39B102M50PT GRM40B104M25PT	0.001uF 0.1uF	50V 25V	B B	
C 4047	K22140811	CHIP CAP.	GRM40B104M25PT	0. 1ur 0. 1uF	25 V 25 V	В	
C 4049		CHIP CAP.	GRM40B104M25PT	0. 1uF	25 V	В	
C 4050	K22144803	CHIP CAP.	GRM39B103K25PT	0.01uF	25 V	В	
C04001	H7900620	CERAMIC OSC	CSA9.83MT				
CS4001	G9090056	CDS	P2137-01				
D 4001	G2070009	DIODE	1SS184 TE85R				

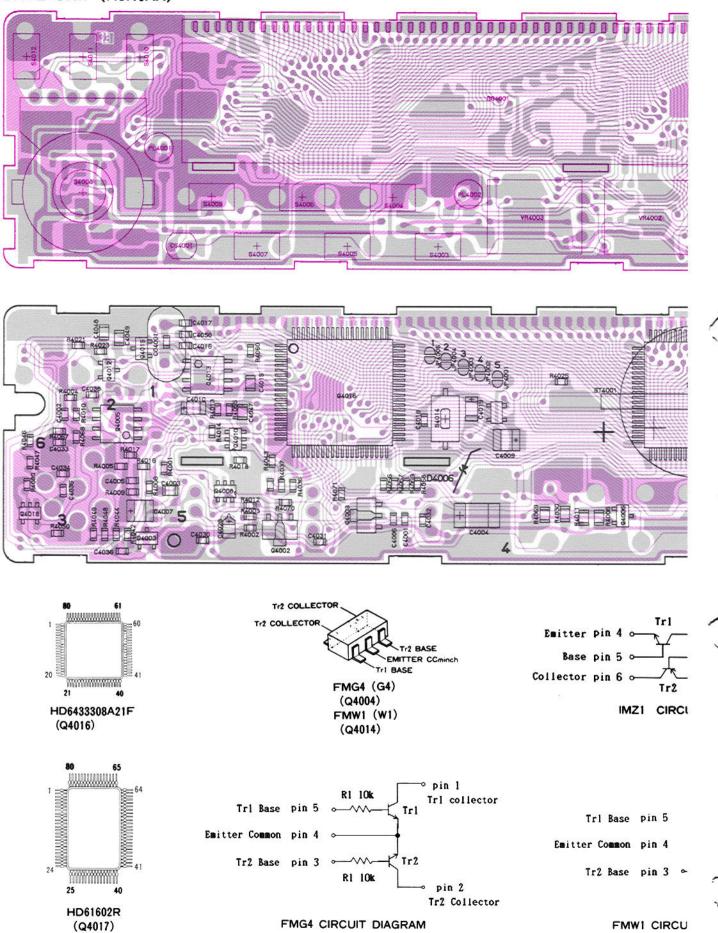
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DS4001 DS4001	G6090088 G6090088	LCD LCD	FTD-8E51AB FTD-8E51AB				DST EXP DST USA
J 4001	P0090742	CONNECTOR	FM214-8SMPT-1				
JP40 06	JP3						
PL4001 PL4002 PL4003	Q1000065 Q1000065 Q1000065	LAMP LAMP LAMP	9V 9V 9V		9 V 9 V 9 V		
Q 4002 Q 4003 Q 4004 Q 4005 Q 4006 Q 4008 Q 4010 Q 4011 Q 4012 Q 4013 Q 4014 Q 4015 Q 4016 Q 4017	G1090922 G1091144 G3070061 G1090589 G3206247D G3070026 G1090887 G3070025 G3070063 G3111627G G1091145 G3070009 G3070034 G1091134 G1091135	IC IC TRANSISTOR IC TRANSISTOR TRANSISTOR IC TRANSISTOR TRANSISTOR TRANSISTOR IC TRANSISTOR IC TRANSISTOR IC TRANSISTOR	RH5VA45AA-T2 NJU7201U50 TE2 FMG4 T148 NJM2904M 2SB624-T2B BV4 IMD2 T108 NJM78L05UA IMZ1 T108 2SB1182-TLQ 2SA1162GR TE85R M51953AFP-32A FMW1 T98 DTC124EK T97 HD6433308A21F HD61602RH				
R 4001 R 4002 R 4003 R 4004 R 4005 R 4008 R 4009 R 4010 R 4011 R 4012 R 4013 R 4014 R 4016 R 4017 R 4018 R 4021 R 4022 R 4023 R 4025 R 4026	J24185103 J24185103 J24185103 J24185103 J24205332 J24185000 J24185822 J24185394 J24205332 J24185472 J24185472 J24185104 J24185472 J24185472 J24185473 J24185473 J24185473 J24185473 J24185473 J24185473 J24185472 J24185472 J24185472 J24185472	CHIP RES.	RMC1/16 103JATP RMC1/16 183JATP RMC1/16 103JATP RMC1/16 122JATP RMC1/16 103JATP RMC1/16 000JATP RMC1/16 822JATP RMC1/16 394JATP RMC1/16 472JATP RMC1/16 104JATP RMC1/16 472JATP RMC1/16 224JATP	10K 18K 10K 1.2K 10K 3.3K 0 8.2K 390K 3.3K 4.7K 100K 4.7K 0 100K 4.7K 100K 4.7K	1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W 1/16W		

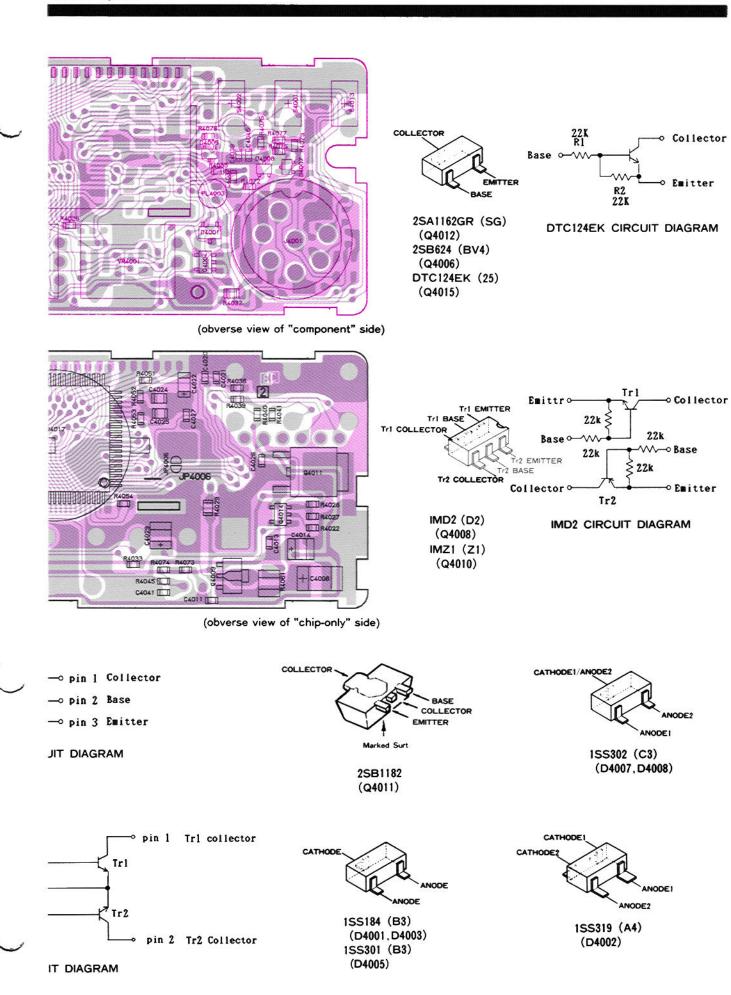
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R 4021		CHIP RES.	RMC1/16 471JATP	47U	1/16W	
R 4029	124103102	CHIP RES.	ጨጣር1/10 10ፊJAIP DMC1/10ጥ 2201	1 N	1/10W 1/10W	
R 4030	124205220	CHIP RES.	RMC1/101 220J	22 22	1/10W 1/10W	
R 4031	J24185105	CHIP RES.	PMC1/101 2203	22 1 M	1/10W 1/16W	
R 4032	J24205220	CHIP RES.	RMC1/10 1030A11	22	1/10W	
R 4033	J24185103	CHIP RES.	RMC1/16 103.IATP	10K	1/16W	
R 4034	J24185223	CHIP RES.	RMC1/16 223.JATP	22K	1/16W	
R 4035	J24185103	CHIP RES.	RMC1/16 103.JATP	10K	1/16W	
R 4036	J24185393	CHIP RES.	RMC1/16 393JATP	39K	1/16W	
R 4037	J24185823	CHIP RES.	RMC1/16 823JATP	82K	1/16W	
R 4038	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	
R 4039	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	
R 4040	J24185104	CHIP RES.	RMC1/16 104JATP	100K	1/16W	
R 4041	J24185104	CHIP RES.	RMC1/16 104JATP	100K	1/16W	
R 4042	J24185223	CHIP RES.	RMC1/16 223JATP	22K	1/16W	
R 4043	J24185224	CHIP RES.	RMC1/16 224JATP	220K	1/16W	
R 4044	J24185223	CHIP RES.	RMC1/16 223JATP	22K	1/16W	
R 4045	J24185225	CHIP RES.	RMC1/16 225JATP	2.2M	1/16W	
R 4046	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4047	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4048	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4049	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4050	J24185105	CHIP RES.	RMC1/16 105JATP	1M	1/16W	
R 4051	J24185222	CHIP KES.	RMCI/I6 ZZZJATP	2. 2K	1/16W	
R 4052 R 4053	124100103	CHIP RES.	KMC1/16 1U3JATP	10K	1/16W	
R 4054		CHIP RES. CHIP RES.	MMCI/ID IUJJATP	IUK	1/16W	
R 4055		CHIP RES.	MMC1/10 334JATP	33UK	1/16W	
R 4056		CHIP RES.	MMC1/10 1U4JAIP	0 0 N	1/16W	
R 4057		CHIP RES.	DMC1/10 022JAIF	0. 4N	1/10W 1/16W	
R 4058		CHIP RES.	PMC1/16 3323KIF	3. 3K	1/10W 1/16W	
R 4059		CHIP RES.	RMC1/16 2223XII	2. 2K	1/10W 1/16W	
		CHIP RES.	RMC1/16 104JATP	100K	1/16W	
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R 4062	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 4063	J24185000	CHIP RES.	RMC1/16 OOOJATP	Ŏ	1/16W	
R 4064	J24185000	CHIP RES.	RMC1/16 OOOJATP	Ö	1/16W	
R 4065	J24185000	CHIP RES.	RMC1/16 000JATP	Ō	1/16W	
R 4066	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 4067	J24185472	CHIP RES.	RMC1/16 472JATP	4.7K	1/16W	
R 4068	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4069	J24205101	CHIP RES.	RMC1/10T 101J	100	1/10W	
R 4070	J24185473	CHIP RES.	RMC1/16 473JATP	47K	1/16W	
R 4071	J24185473	CHIP RES.	RMC1/16 473JATP	47K	1/16W	
R 4072	J24185183	CHIP RES.	RMC1/16 183JATP	18K	1/16W	
R 4073	J24185225	CHIP RES.	RMC1/16 225JATP	2. 2M	1/16W	
R 4074	J24185225	CHIP RES.	RMC1/16 225JATP	2. 2M	1/16W	
R 4075	J24185222	CHIP RES.	RMC1/16 222JATP	2. 2K	1/16W	
R 4076	J24185222	CHIP RES.	RMC1/16 222JATP	2. 2K	1/16W	
R 4077	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 4078	J24185102	CHIP RES.	RMC1/16 102JATP	1K	1/16W	
R 4079 R 4080	J24185103 J24185103	CHIP RES. CHIP RES.	RMC1/16 103JATP RMC1/16 103JATP	10K 10K	1/16W	
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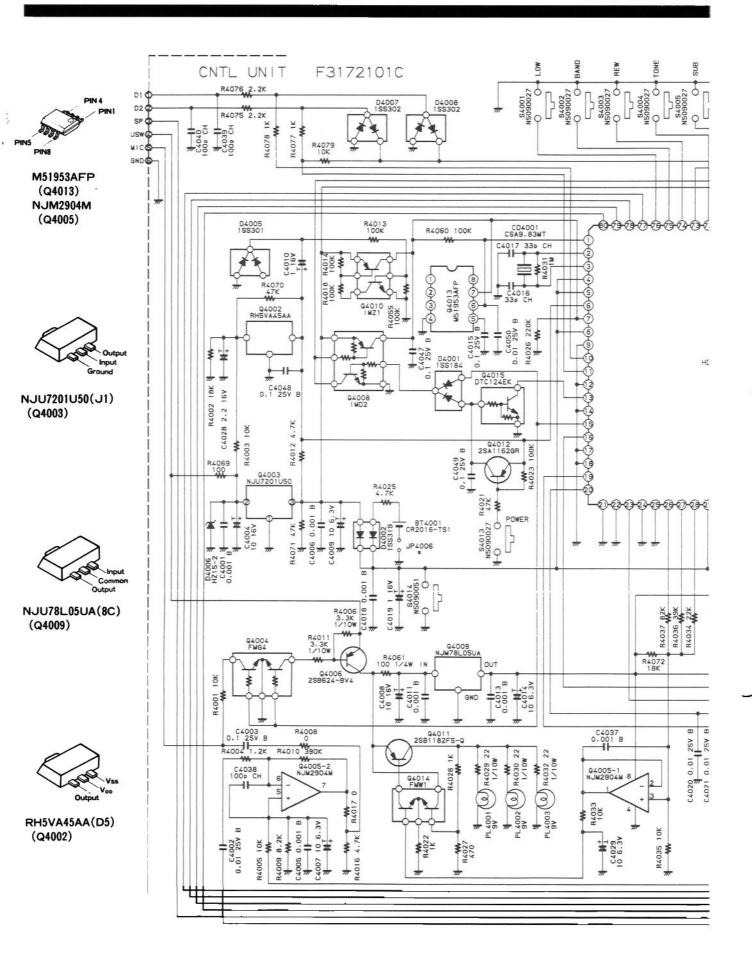
Control Unit Parts List

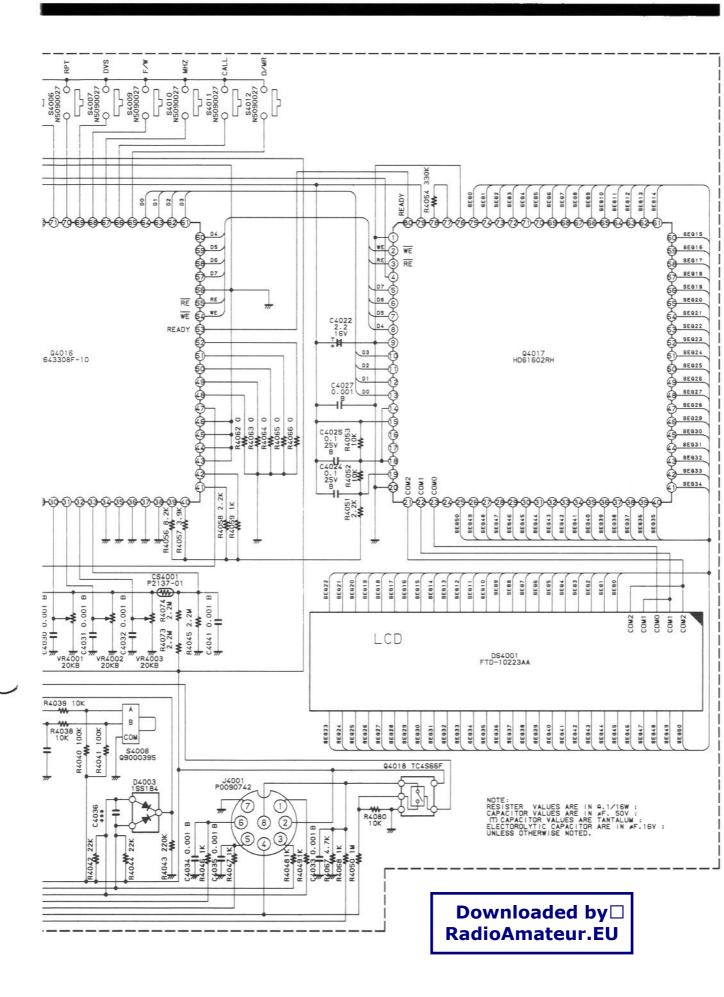
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VR4001 VR4002 VR4003	J60800171 J60800143 J60800143 S2000032 S6000242	POT. POT. POT. RUBBER CONDUCTOR LED SPACER	RK09K1130	20K 20K 20K		B B B	
	R0138710 R3136520 R7118750 R7138420 R7138430	METAL HOLDER LAMP GUIDE SPONGE RUBBER SHEET FIBER					

CNTL UNIT (No.40XX)









REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	CA0274006 CA0274007 CA0274009 CA0274010 CA0274011 CA0274012 CA0274013 CA0274014 CA0274015 CA0274016 CA0274017 CA0274018 CA0274019 CA0274020 CA0274021 CA0274021 CA0274022 CA0274023	P. C. B. W COMP.					TYP A1 TYP A2 TYP A3 TYP B1 TYP B2 TYP B3 TYP B4 TYP B5 TYP C1 TYP C2 TYP C3 TYP C4 TYP C5 TYP D TYP H1 TYP H2 TYP H3 TYP H4 TYP H5
C 5001 C 5003 C 5004 C 5005 C 5006 C 5007 C 5008 C 5010 C 5011 C 5012 C 5013 C 5014 C 5015 C 5016 C 5017 C 5018 C 5020 C 5021 C 5022 C 5023 C 5023 C 5024 C 5025 C 5028 C 5029 C 5030 C 5031 C 5032 C 5033 C 5033 C 5033 C 5033	K22140807 K22141809 K78120009 K78120009 K22174809 K22174809 K78120009 K78120009 K22140807 K22144803 K78080019 K22174809	CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. CHIP CAP.	GRM42-6B104M25PT TESVA1C105M1-8R TESVA1C105M1-8R GRM39B102M50PT GRM39B102M50PT TESVA1C105M1-8R TESVA1C105M1-8R GRM40B223M25PT GRM39B103K25PT TEMSVB20J106M-8R	0. 1uF 1uF 1uF 0. 001uF 0. 001uF 1uF 1uF 0. 022uF	25 V 25 V 16 V 16 V 50 V 16 V 25 V 6. 3 V 50 V 16 V 50 V 16 V 50 V 25 V	B B B B B B B B B B B B B B B B B B B	

F1-5200)	IIILETTA	ice Unit Parts List				
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG			TOL.	VERS.
C 5034	K22174243	CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. CHIP CAP.	GRM39CH221J50PT	220pF	50V	CH	
C 5035	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5036	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5037	K22141809	CHIP CAP.	GRM42-6B104M25PT	0. 1uF	25V	В	
C 5038	K22144802	CHIP CAP.	GRM39B103M25PT	0.01uF	25V	В	
C 5039	K22141809	CHIP CAP.	GRM42-6B104M25PT	0. 1uF	25 V	В	
C 5040	K78140013	TANTALUM CHIP CAP.	TEMSVA1E105M-8R	1uF	25 V		
C 5041	K22141809	CHIP CAP.	GRM42-6B104M25PT	0. 1uF	25 V	В	
0 5042	K221448U2	CHIP CAP.	GRM39B103M25PT	0.01uF	25V	В	
C 5043	K221748U9	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5044	K221410U9	CHIP CAP.	GKM42-6B1U4M25PT	U. luf	25 V	В	
C 5045	K72141003	TANTALIM CUID CAD	TECVC1C10CM12D	0. IUr	25 V	В	
C 5047	K22174800	CHIP CAP	CDM30B103ME0DT	10ur 0 001p	16V	В	
C 5041	K22174003	CHIP CAP	CDM30CH330 IEODT	0.001ur	50V 50V	CH	
C 5049	K22174223	CHIP CAP	GRM39CH330J30F1	33pF	50V	CH	
C 5050	K22174809	CHIP CAP.	GRM39R102M50PT	0 001F	50V	B	
C 5051	K22141809	CHIP CAP.	GRM42-6B104M25PT	O TuF	25 V	В	
C 5052	K70167105	TANTALUM CAP.	DN1V010M1S	1nF	35V	D	
C 5060	K78120011	TANTALUM CHIP CAP.	TESVC1C106M12R	10uF	16V		
C 5061	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5062	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	B	
C 5064	K78140013	TANTALUM CHIP CAP.	TEMSVA1E105M-8R	1uF	25V		
C 5066	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5092	K78080017	TANTALUM CHIP CAP. CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP. TANTALUM CHIP CAP.	TEMSVAOJ475M-8R	4.7uF	6.3V		
C 5093	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5094	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5095	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5096	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF	50V	В	
C 5097 C 5098	K221748U9	TANTALUM CUID CAD	GKM39B1UZM5UPT	0.001uF	50V	В	
C 5099	K22174900	CHID CAD	LP9ABG10392WQK	3. 3UF	16V	n	
C 5101	K72114005	TANTALIM CHID CAD	TECN	0. 001Ur	50V	В	
C 5101	K78080019	TANTALUM CHIP CAP.	TEMSVRID4/4HI-OR	0.47ur 10uF	25V 6.3V		
C 5103	K78080019	TANTALUM CHIP CAP.	TEMSVB20J106M-8R	10ur 10uF	6. 3V		
0 0100		THE THE CHILD	TENDYD200TOON QE	Tour	0. 51		
C05001	H7900620	CERAMIC OSC	CSA9.83MT				
D 5001	G2070120	DIODE	IMP11 T110				
D 5002	G2070120	DIODE	IMP11 T110				
D 5003	G2070120	DIODE	IMP11 T110				
D 5004	G2070120	DIODE	IMP11 T110				
D 5005	G2070120	DIODE	IMP11 T110				
D 5006	G2070003	DIODE	1SS226 TE85R				
D 5007	G2070003	DIODE	1SS226 TE85R				
D 5008	G2060004	DIODE	1SS270TJ				
D 5009	G2060004	DIODE	1SS270TJ				
J 5002	P0090650	CONNECTOR	D0D_7D				
J 5002	P0090649	CONNECTOR	B8B-ZR				
J 5003	P0090648	CONNECTOR	B7B-ZR B3B-ZR				
J 5005	P0090782	CONNECTOR	B12B-ZR				
J 5006	P0090772	CONNECTOR	5532-26A				
J 5007	P0090604	CONNECTOR	5532-14A				
- 550.	2 000001		JJUB III				

		1116	chace office and Elst			11-020
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV TOL.	VERS.
Q 5002 Q 5005 Q 5006 Q 5007 Q 5008 Q 5010 Q 5015 Q 5016 Q 5017 Q 5018 Q 5019 Q 5020 Q 5023	G1090854 G1091136 G1091137 G1091033 G1091131 G3112137Y G3070047 G1090908 G1090908 G1090893 G1090893 G3112137Y G3070047 G3113437	IC IC IC IC IC IC TRANSISTOR TRANSISTOR IC IC IC IC TC TRANSISTOR TRANSISTOR TRANSISTOR	2SA1213Y TE12R DTA114EK T97 NJM2902M NJM2902M TC4S66F TE85R TC4S66F TE85R 2SA1213Y TE12R DTA114EK T97 2SA1343-TA			
R 5001 R 5002 R 5003 R 5004 R 5005 R 5006 R 5008 R 5010 R 5011 R 5012 R 5014 R 5017 R 5018 R 5019 R 5020 R 5021 R 5022 R 5023 R 5024 R 5025 R 5026 R 5027 R 5028 R 5027 R 5030 R 5031 R 5031 R 5031 R 5032 R 5033 R 5034 R 5035 R 5037 R 5038 R 5037 R 5038 R 5039 R 5040 R 5041	J24185101 J24185393 J24185393 J24185103 J24185104 J24185472 J24185225 J24185561 J24185561 J24185472 J24185333 J24185562 J24185154 J24185824 J24185823	CHIP RES.	RMC1/16 331JATP RMC1/16 101JATP RMC1/16 393JATP RMC1/16 103JATP RMC1/16 104JATP RMC1/16 472JATP RMC1/16 225JATP RMC1/16 561JATP RMC1/16 684JATP RMC1/16 472JATP RMC1/16 472JATP RMC1/16 472JATP RMC1/16 472JATP RMC1/16 824JATP RMC1/16 824JATP RMC1/16 823JATP RMC1/16 472JATP RMC1/16 103JATP RMC1/16 103JATP RMC1/16 104JATP	330 100 39K 39K 10K 100K 4.7K 10K 2.2M 560 680K 100K 4.7K 33K 5.6K 150K 820K 82K 2.2M 4.7K 4.7K 4.7K 4.7K 10K 11K 82K 100K 100K 100K 100K 100K 100K 100K 10	1/16W	
R 5041 R 5042 R 5043	J24185472 J24185333	CHIP RES. CHIP RES.	RMC1/16 823JATP RMC1/16 472JATP RMC1/16 333JATP	82K 4.7K 33K	1/16W 1/16W 1/16W	

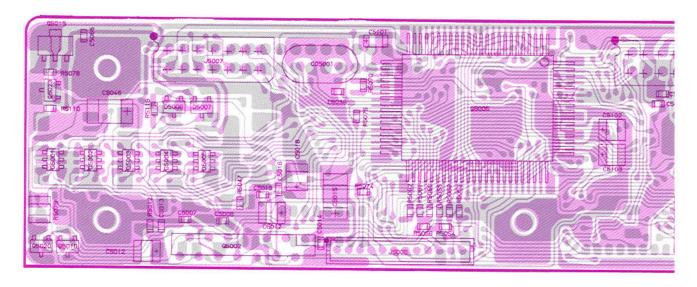
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R 5044	J24185562	CHIP RES.	RMC1/16 562JATP			
R 5045		CHIP RES.	RMC1/16 472JATP	4.7K	1/16W	
R 5046	J24185472	CHIP RES.	RMC1/16 472JATP	4.7K	1/16W	
R 5047		CHIP RES.	RMC1/16 223JATP	22K	1/16W	
R 5048	J24185225	CHIP RES.	RMC1/16 225JATP	2.2M	1/16W	
R 5049	J24185223	CHIP RES.	RMC1/16 223 IATD	22K	1/16W	
R 5050	J24185472	CHIP RES.	RMC1/16 472JATP	4.7K	1/16W	
R 5051	J24185333	CHIP RES.	RMC1/16 333JATP	33K	1/16W	
R 5052	J24185225		RMC1/16 225JATP	2.2M	1/16W	
R 5053	J24185473		RMC1/16 473JATP	47K	1/16W	
R 5054	J24185000		RMC1/16 000JATP	0	1/16W	
R 5055	J24185105	CHIP RES.	RMC1/16 105JATP	1M	1/16W	
R 5056	J24185103	CHIP RES.	KMC1/16 1U3JATP	IUK	1/16W	
R 5057	J24185225		RMC1/16 225JATP	2.2M	1/16W	
R 5058	J24185472		RMC1/16 472JATP	4.7K	1/16W	
R 5059	J24185000		RMC1/16 000JATP	0	1/16W	
R 5060	J24185474		RMC1/16 474JATP	470K	1/16W	
R 5061	J24185000		RMC1/16 000JATP	0	1/16W	
R 5062	J24185224		RMC1/16 224JATP	220K	1/16W	
R 5063	J24185472		RMC1/16 472JATP RMC1/16 472JATP RMC1/16 000JATP RMC1/16 000JATP RMC1/16 224JATP RMC1/16 472JATP RMC1/4 471JATP	4.7K	1/16W	
R 5064	J24245471		RMC1/4 471JATP	470	1/4W	
R 5065	J24185103		RMC1/16 103JATP RMC1/16 225JATP	10K	1/16W	
R 5066		CHIP RES.	RMC1/16 225JATP	2.2M	1/16W	
R 5067	J24185104		KMC1/16 1U4JATP	100K	1/16W	
R 5068	J24185472		RMC1/16 104JATP RMC1/16 472JATP RMC1/16 105JATP RMC1/16 331JATP	4.7K	1/16W	
R 5070		CHIP RES.	KMC1/16 1U5JATP	1M.	1/16W	
R 5071		CHIP RES.	RMC1/16 331JATP RMC1/16 223JATP	330	1/16W	
R 5074 R 5075	J24185223		RMC1/16 223JATP RMC1/16 104JATP	22K	1/16W	
R 5076	124100104	CHIP RES. CHIP RES.	RMC1/10 104JA1F	1001	1/16W	
R 5078	124105104	CHIP RES.	RMC1/16 104JATP RMC1/16 472JATP	100K	1/16W 1/16W	
R 5079	J24245471	AHID DDA	DMA1 / 4 451 TABB	450	1/10W 1/4W	
R 5080	J24185104	CHIP RES	RMC1/4 471JATP RMC1/16 104JATP RMC1/16 104JATP	100%	1/16W	
	J24185104	CHIP RES	RMC1/16 104JATP	100K	1/16W	
R 5086		CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5087	J24185000	CHIP RES.	RMC1/16 000JATP	Ŏ	1/16W	
R 5088	J24185000	CHIP RES.	RMC1/16 000JATP	Ŏ	1/16W	
R 5089	J24185000	CHIP RES.	RMC1/16 000JATP	Ö	1/16W	
R 5090	J24185000	CHIP RES.	RMC1/16 000JATP	Ö	1/16W	
R 5091	J24185000	CHIP RES.	RMC1/16 000JATP	Ō	1/16W	
R 5092	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5093	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5094	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5095	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5096	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5097	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5098	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5099	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5100	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5102	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5103	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5104	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5105	J24185000	CHIP RES.	RMC1/16 000JATP	0	1/16W	
R 5107	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	

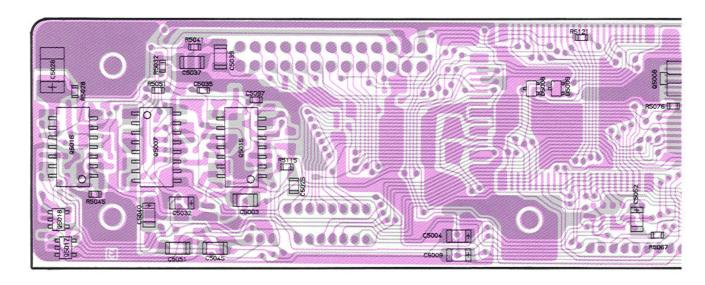
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R 5108	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	
R 5109	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	
R 5110	J24185682	CHIP RES.	RMC1/16 682JATP	6.8K	1/16W	
R 5111	J24185222	CHIP RES.	RMC1/16 222JATP	2.2K	1/16W	
R 5115	J24185333	CHIP RES.	RMC1/16 333JATP	33K	1/16W	
R 5116	J24185222	CHIP RES.	RMC1/16 222JATP	2.2K	1/16W	
R 5117	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 5118	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16W	
R 5119	J24185222	CHIP RES.	RMC1/16 222JATP	2.2K	1/16W	
R 5120	J24185102	CHIP RES.	RMC1/16 102JATP	1 K	1/16W	
R 5121	J24185471	CHIP RES.	RMC1/16 471JATP	470	1/16W	

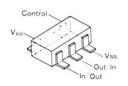
Notes

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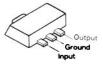
INTERFACE UNIT (No.50XX)



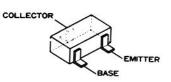




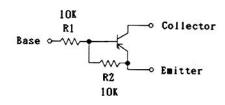
TC4S66F(C9) (Q5017,Q5018)



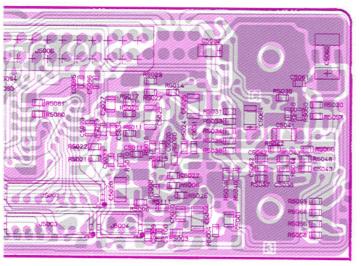
M51951AML(51) (Q5008)



2SA1343(DL) (Q5023) DTA114EK(14) (Q5010,Q5020)



DTA114EK CIRCUIT DIAGRAM

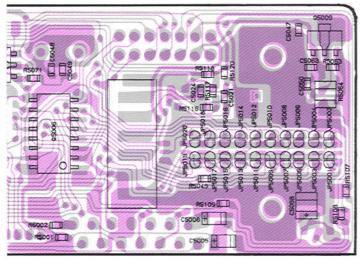


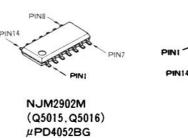
80 65 1 64 24 41 25 40 M37450M2

(Q5005)

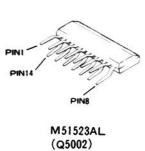


(obverse view of "component" side)

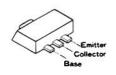




(Q5007)



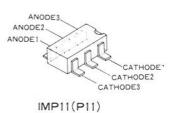
(obverse view of "chip-only" side)



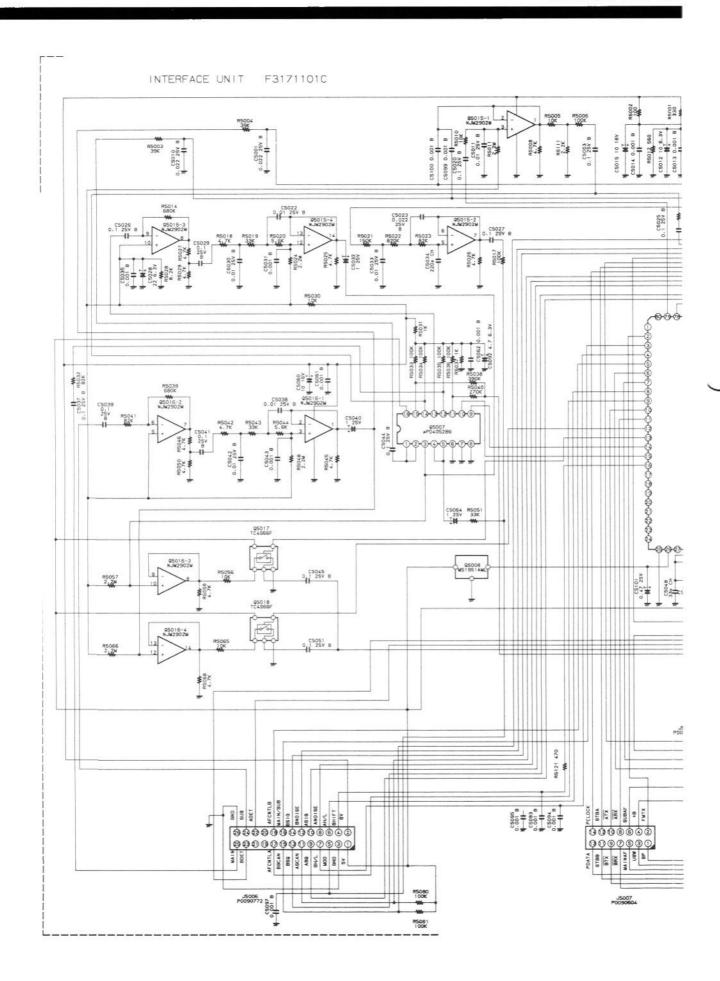
2SA1213Y(NO) (Q5009, Q5019)

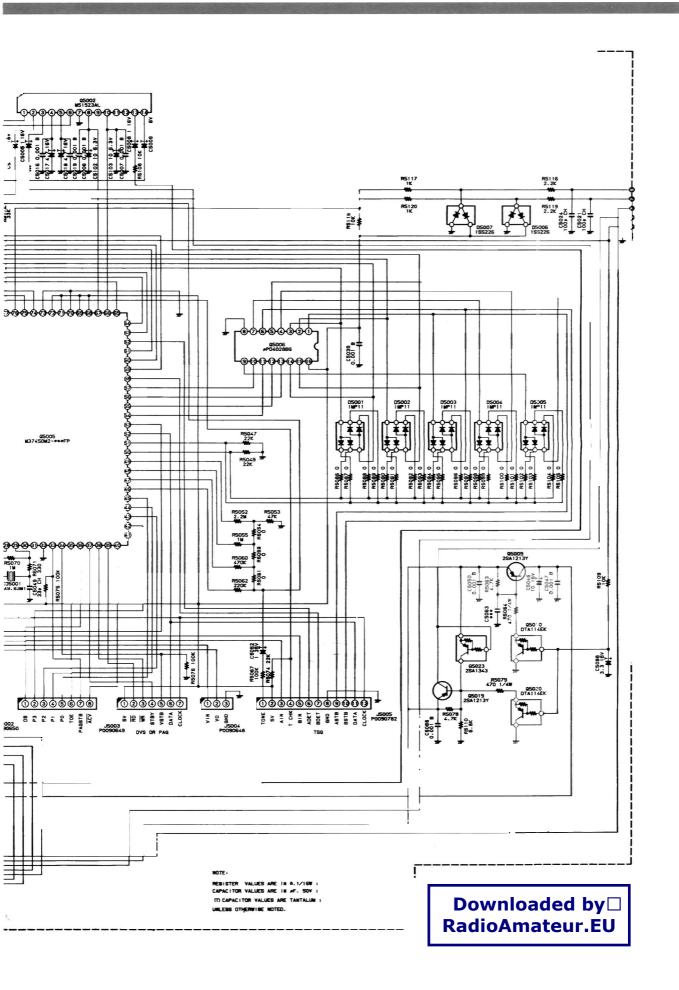


1SS226 (C3) (Q5006, Q5007)

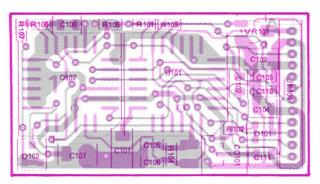


(D5001, D5002, D5003, D5004, D5005)

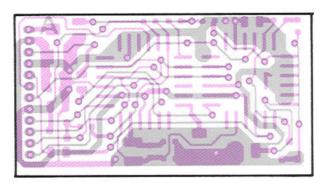




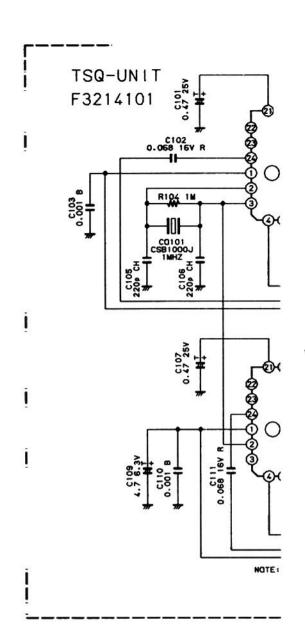
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
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C 0101	K78140012	TANTALUM CHIP CAP.	F951E474MRAAF1Q2	0.47uF	25V		
C 0102	K22120805	TANTALUM CHIP CAP. CHIP CAP.	GRM40R683M16PT	0.068uF		R	
C 0103	K22174809	CHIP CAP.		0.001uF	50V	В	
C 0104	K22141005	CHIP CAP.	GRM40F104Z25PT	0.1uF	25V	F	
C 0105	K22174243		GRM39CH221J50PT			CH	
C 0106	K22174243		GRM39CH221J50PT			CH	
C 0107		TANTALUM CHIP CAP.					
C 0108	K22141005	CHIP CAP.	GRM40F104Z25PT	0.1uF		F	
C 0109	K78080002	TANTALUM CHIP CAP.	F950J475MSAAF1Q2	4.7uF			
C 0110	K22174809	CHIP CAP.	GRM39B102M50PT	0.001uF		В	
C 0111	K22120805	CHIP CAP. CHIP CAP.	GRM40R683M16PT	0.068uF	16V	R	
C00101	Н7900550	CERAMIC OSC	CSB1000J221T	1MHZ			
D 0101	G2070009	DIODE	1SS184 TE85R				
D 0102	G2070009	DIODE	1SS184 TE85R				
JP0101	T9206058	WIRE-ASSY					
Q 0101	G1090897	IC	MX365LH				
Q 0102	G1090897	IC	MX365LH				
R 0101	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16\	ł	
R 0102	J24185334	CHIP RES.	RMC1/16 334JATP	330K	1/16\	ŀ	
R 0103	J24185225	CHIP RES.	RMC1/16 225JATP	2.2M	1/16	İ	
R 0104	J24185105	CHIP RES.	RMC1/16 105JATP	1M	1/16\	ì	
R 0105	J24185103	CHIP RES.	RMC1/16 103JATP	10K	1/16	i	
R 0106	J24185334	CHIP RES.	RMC1/16 334JATP	330K	1/16	i	
R 0107	J24185225	CHIP RES.	RMC1/16 225JATP	2.2M	1/16W	İ	
VR0101	J51778473	POT.	RHO3AYAS4X 47K	47K			

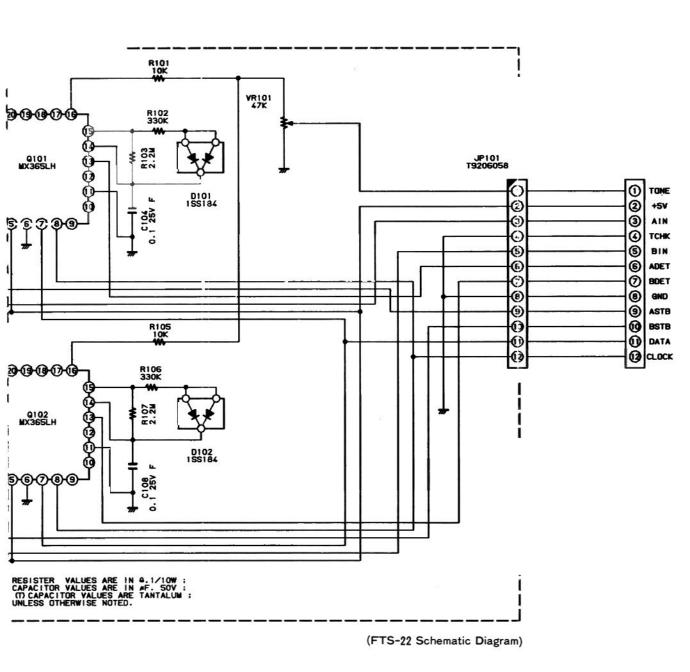


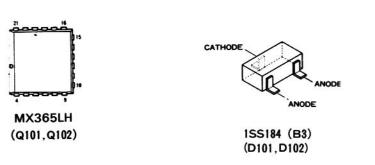
(obverse view of "component" side)



(obverse view of "solder" side)

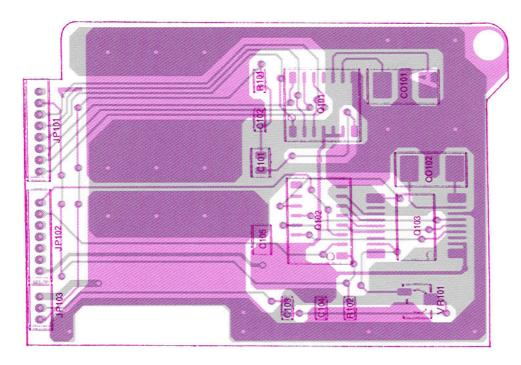




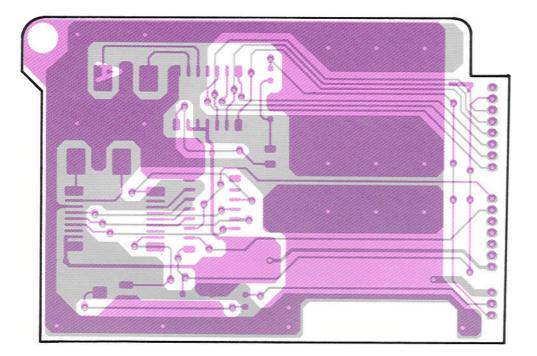


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REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	F3216101	P.C.B.					
C 0101 C 0102 C 0103 C 0104 C 0105	K22140811 K22144803 K22144803 K22174821 K22140811		GRM39B103K25PT GRM39B102K50PT	0.1uF 0.01uF 0.01uF 0.001uF 0.1uF	25V 25V 25V 50V 25V	B B B B	
C00101 C00102	H7900510 H7900510	CERAMIC OSC CERAMIC OSC	CSA3.58MG CSA3.58MG				
JP0101 JP0102 JP0103	T9206059 T9206060 T9206061	WIRE-ASSY WIRE-ASSY WIRE-ASSY					
Q 0101 Q 0102 Q 0103	G1091177 G1090696 G1090731	IC IC IC	TC35305F-11 TP2 UPD4094BG LR40872				
R 0101 R 0102	J24185123 J24185472	CHIP RES. CHIP RES.	RMC1/16 123JATP RMC1/16 472JATP				
VR0101	J51778473	POT	RHO3AYAS4X	47K			

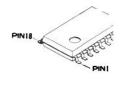


(obverse view of "component" side)

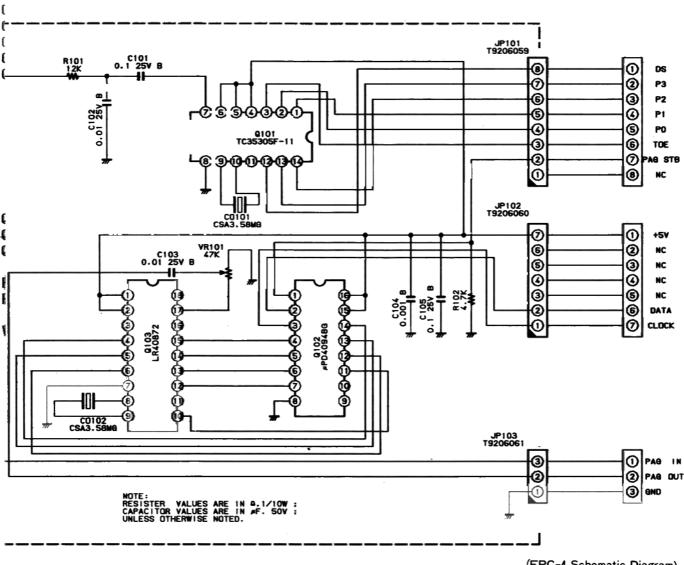


(obverse view of "solder" side)

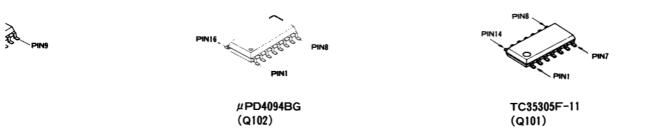




LR40872 (Q103)



(FRC-4 Schematic Diagram)

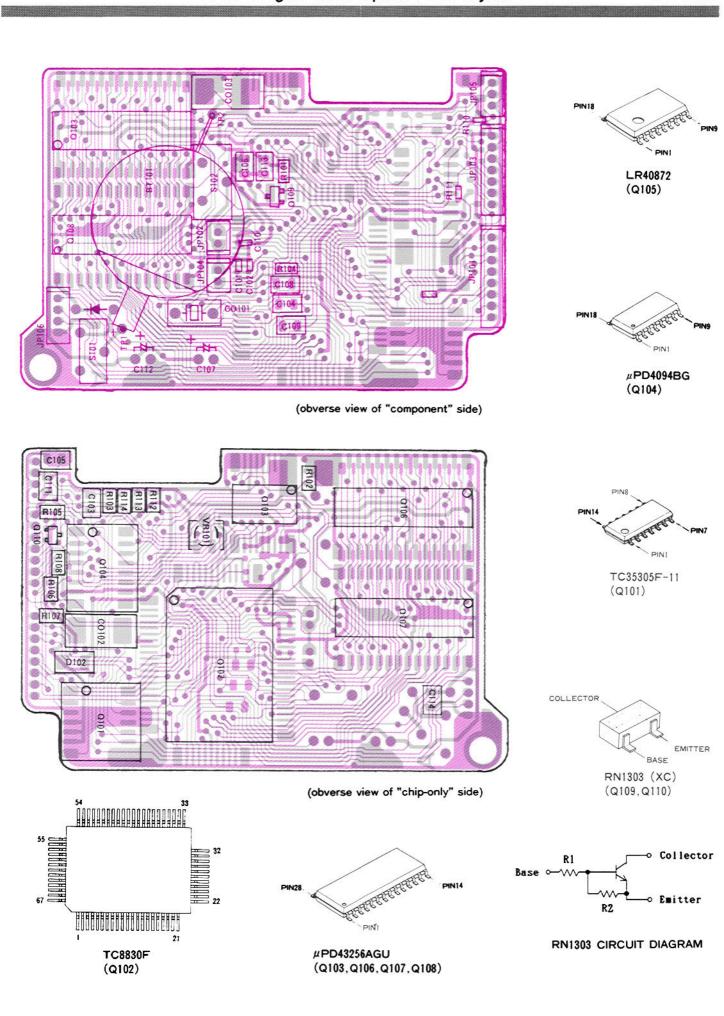


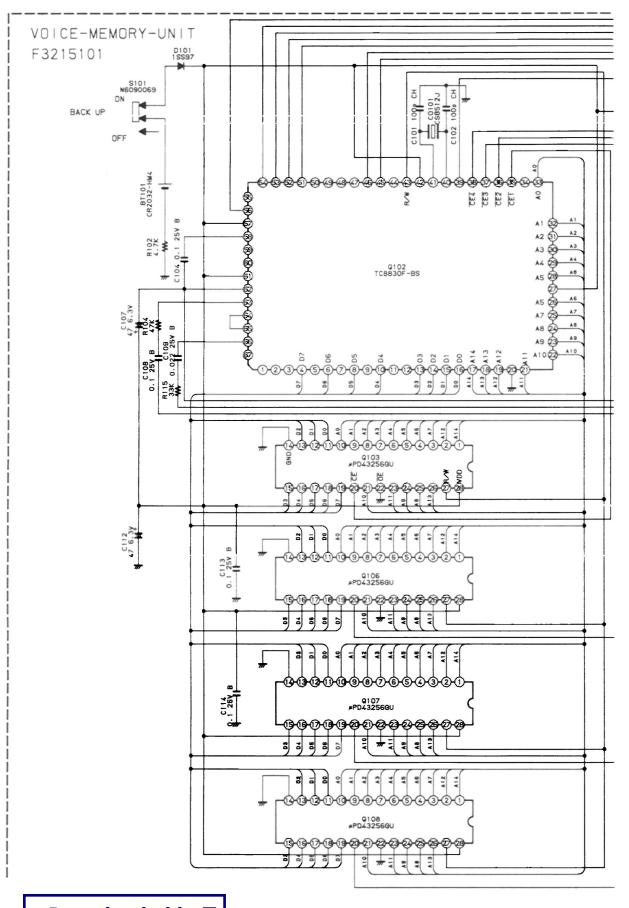
REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
	F3215101	P. C. B.					
BT0101	Q9000268	LITHIUM BATTERY	CR2032-HM4				
C 0101 C 0102 C 0103 C 0104 C 0105 C 0106 C 0107 C 0108 C 0109 C 0110 C 0111 C 0112 C 0113 C 0114	K22174235 K22174235 K22140811 K22140811 K22170817 K22140811 K40089023 K22140811 K22140812 K22174821 K22170817 K40089023 K22140811 K22140811	CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. AL. ELECTRO. CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. CHIP CAP. AL. ELECTRO. CAP. CHIP CAP.	GRM39CH101J50PT GRM39CH101J50PT GRM40B104M25PT GRM40B104M25PT GRM40B103M50PT GRM40B104M25PT RC2-6V470MS (4X7) GRM40B104M25PT GRM40B223K25PT GRM40B223K25PT GRM40B103M50PT RC2-6V470MS (4X7) GRM40B103M50PT RC2-6V470MS (4X7) GRM40B104M25PT GRM40B104M25PT	100pF 100pF 0. 1uF 0. 1uF 0. 01uF 0. 1uF 0. 022uF 0. 001uF 47uF 0. 1uF 0. 1uF	50V 50V 25V 25V 50V 25V 6.3V 25V 50V 6.3V 25V	CH CH B B B B B B B	
C00101 C00102 C00103	H7900660 H7900510 H7900510	CERAMIC OSC CERAMIC OSC CERAMIC OSC	CSB512J CSA3.58MG CSA3.58MG				1
D 0101 D 0102	G2090118 G2090118	DIODE DIODE	1SS i 1SS97 F	Downloa RadioAm		-	
JP0101 JP0103 JP0105	T9206059 T9206060 T9206061	WIRE-ASSY WIRE-ASSY WIRE-ASSY					
Q 0101 Q 0102 Q 0103 Q 0104 Q 0105 Q 0106 Q 0107 Q 0108 Q 0109 Q 0110	G1091177 G1090841 G1090863 G1090696 G1090731 G1090863 G1090863 G1090863 G3070037	IC IC IC IC IC IC IC IC IC TC IC TRANSISTOR TRANSISTOR	TC35305F-11 TP2 TC8830F-BS UPD43256AGU-12LL UPD4094BG LR40872 UPD43256AGU-12LL UPD43256AGU-12LL UPD43256AGU-12LL RN1303 RN1303				
R 0101 R 0102 R 0103 R 0104 R 0105 R 0106 R 0107 R 0108 R 0109 R 0110 R 0111 R 01112 R 01113 R 0114 R 0115	J24185224 J24185472 J24185123 J24185473 J24185103 J24185104 J24185104 J24185472 J24185472 J24185222 J24185222 J24185222 J24185222 J24185222 J24185222 J24185222 J24185222	CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES. CHIP RES.	RMC1/16 224JATP RMC1/16 472JATP RMC1/16 123JATP RMC1/16 473JATP RMC1/16 103JATP RMC1/16 104JATP RMC1/16 104JATP RMC1/16 472JATP RMC1/16 472JATP RMC1/16 222JATP RMC1/16 223JATP RMC1/16 222JATP RMC1/16 222JATP RMC1/16 222JATP RMC1/16 222JATP RMC1/16 222JATP RMC1/16 222JATP	220K 4.7K 12K 47K 10K 10K 100K 100K 4.7K 4.7K 2.2K 2.2K 2.2K 33K	1/16h 1/16h 1/16h 1/16h 1/16h 1/16h 1/16h 1/16h 1/16h 1/16h 1/16h		

FT-5200

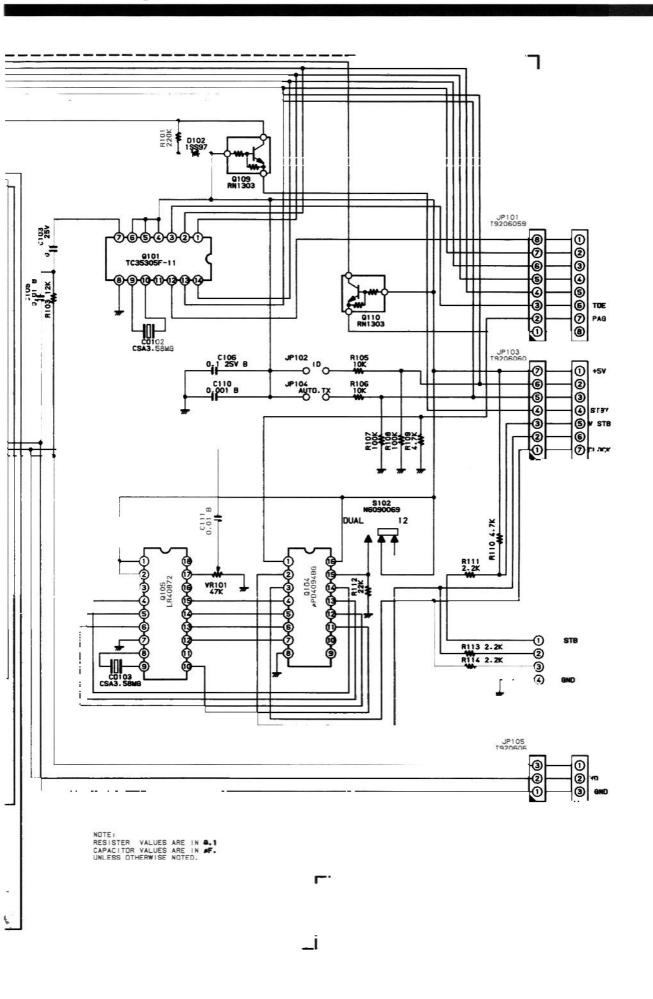
DVS-3 Digital Voice Option Parts List

REF.	YAESU P/N	DESCRIPTION	MFGR'S DESIG	VALUE	WV	TOL.	VERS.
		SLIDE SWITCH SLIDE SWITCH	SSSS21 SSSS21				
VR0101	J51778473	POT.	RHO3AYAS4X 47K	47K			



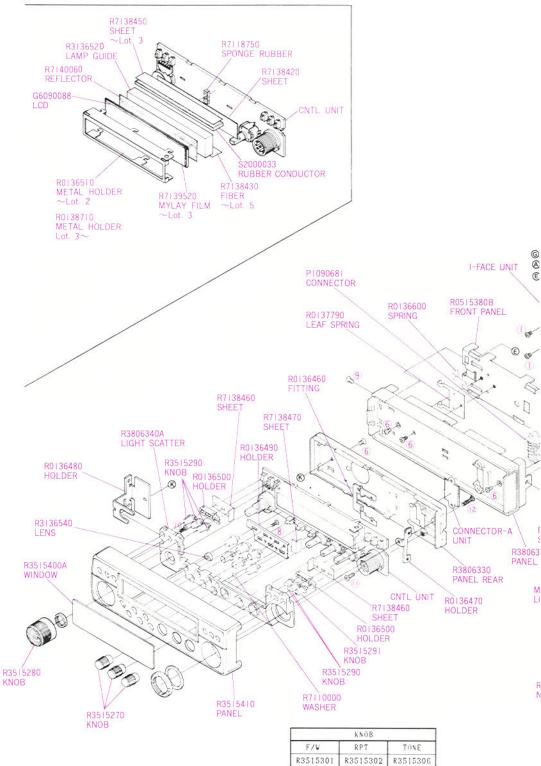


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		SCREW LIST	
Ret No.	YAESU P/N	Description	qty
0	U20205001	BINDING HEAD SCREW M2.6X5	18
2	U20205002	BINDING HEAD SCREW MZ. 6x5N1	2
3	U20205007	BINDING HEAD SCREW M2. 6X5B	6
(U20306001	BINDING HEAD SCREW M3X6	4
(5)	U20215007	BINDING HEAD SCREW M2.6X15B	4
6	U30204007	FLAT HEAD SCREW M2.6X4B	4
7	U31204007	OVAL HEAD SCREW M2.6X4B	12
(8)	U43106001	TAPTITE SCREW M2X6	1
9	U30104001	FLAT HEAD SCREW M2X4	2
10	U9900024	TAPTITE SCREW M1.4X1.5B	1
00	U9900004	TAPTITE SCREW M1.4X5	1
9	U24214007	TAPTITE SCREW M2.6X14B	1

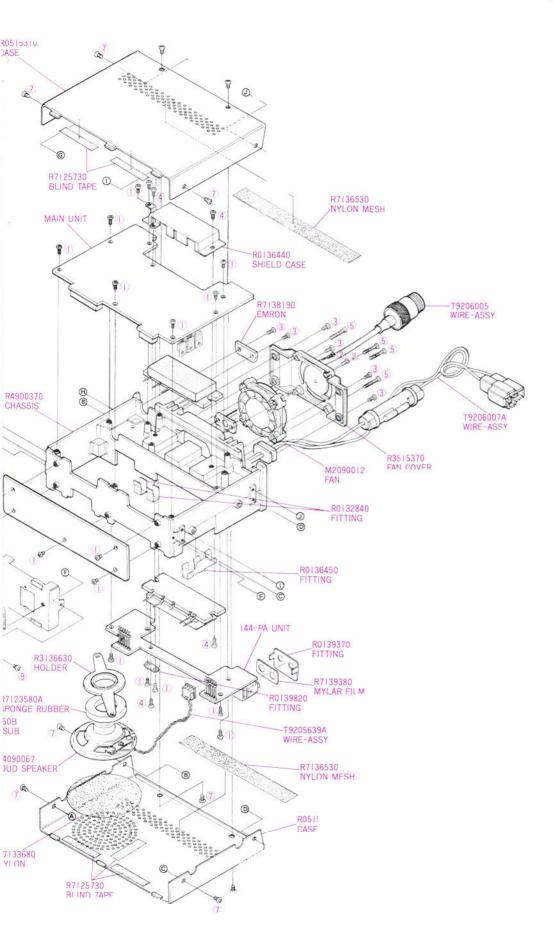


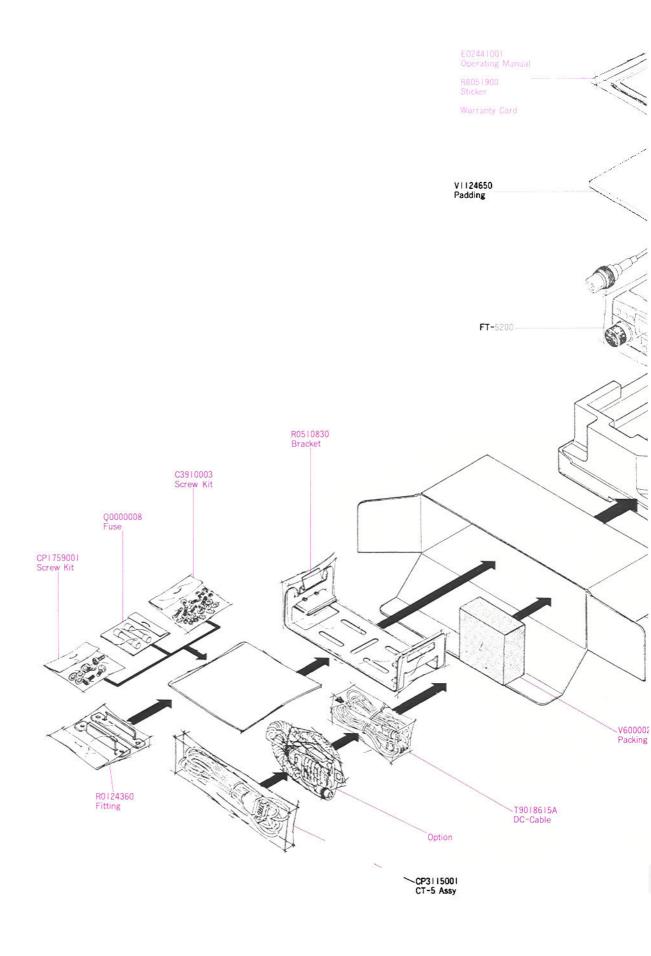
DVS

SUB

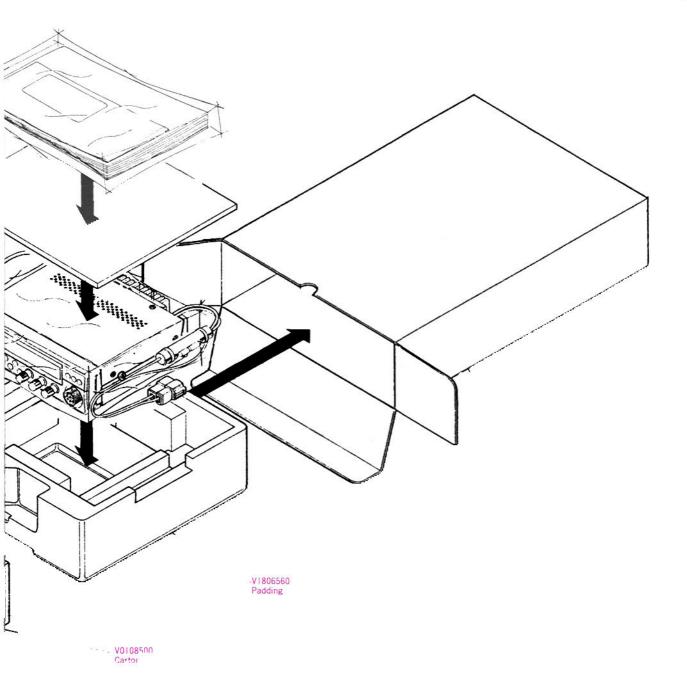
REV

Exploded View





Packaging



FT-5200 Operator's Quick Reference Charts

Key & Button Function Table

Key/ Button	Normal Function	Alternate Function (after ⊝) "FUNC" displayed for 5 seconds	DTMF Code Setting Function* (while 4-digit Code Memory displayed)	DVS Function** (with 4/5-digit Voice System Display)
D/MR O SKIP	Toggle Dial/Memory Modes	Toggle Scan Skip (Memory Mode only)	Toggle Dial/Memory Modes, and show 100's-of-MHz digit temporarily (press twice).	Toggle Dial/Memory Modes, and show operating freq temporarily (2 seconds).
CALL O PAGE	Jump to CALL Channel	Toggle SelCall/Sql Modes: Paging → Code Squelch → CTCSS Bell → off	Jump to CALL Channel	Jump to CALL Channel
MHz O PRI	Activate 1-MHz Tuning Steps	Dial: toggle 1-MHz steps Mem: enable Mem Tuning ("MT" displayed)	Select next digit to right	Toggles Record Locking ("L" displayed when locked)
	Momentary: enables alternate funcs of other keys. Hold ½-sec. to store display into memory.	Cancel alternate functions of other keys (also automatic after 5 seconds).	On Code Memories 2 - 6, toggles DTMF decoder (1st digit underlined if on).	Enables alternate functions of other keys.
RESET	Toggles Repeater Shift di- rection: -/+/off (simplex)	Toggle Display of Repeater Offset and ARS state ("A" = enabled)	Quit Code Setting, return to operating (code/frequency) display	same as Normal Function
I. SET	Toggles CTCSS Mode: ENC/(ENC/DEC=)/off	Toggle Display of CTCSS tone freq. and "b" if key/button beeper enabled	none	Toggle Speaker/Microphone ("S"/"M") recording source.
MUTE	Toggle Digital Voice on/off**	Toggle Selective Band Receiver Muting: primary/secondary/off	none	Toggle Digital Voice on primary/secondary band/off
OP SUB	Toggle Secondary Band on/off	Make following key/button functions act on Secondary Band. ("ALT" blinks on display)	same as Normal Function	same as Normal Function
STEP	In split operation only: Toggle Reversed Tx/Rx Frequencies. Direction sign blinks while reversed.	Dial: Toggle Display of Tuning Steps & Scan Resume Mode ("5" or "P" in Memory Box) Memory: Hide Memory	none	Activates/Deactivates Bit Rate selection by selector knob (5-sec. time out)
BAND	Swap Primary & Secondary Bands	Toggle Alternating Band Memory Selection	none	same as Normal Function
LOW	Toggle High/Low Transmit Power	Enable/Disable Key/Button Lock	same as Normal Function	same as Normal Function
0	Switch transceiver on/off (hold1/2-sec. to switch off)	same as Normal Function	same as Normal Function	same as Normal Function

^{*} only if FRC-4 or DVS-3 option is installed.

only if FTS-22 option is installed.

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^{**} only if DVS-3 option is installed.

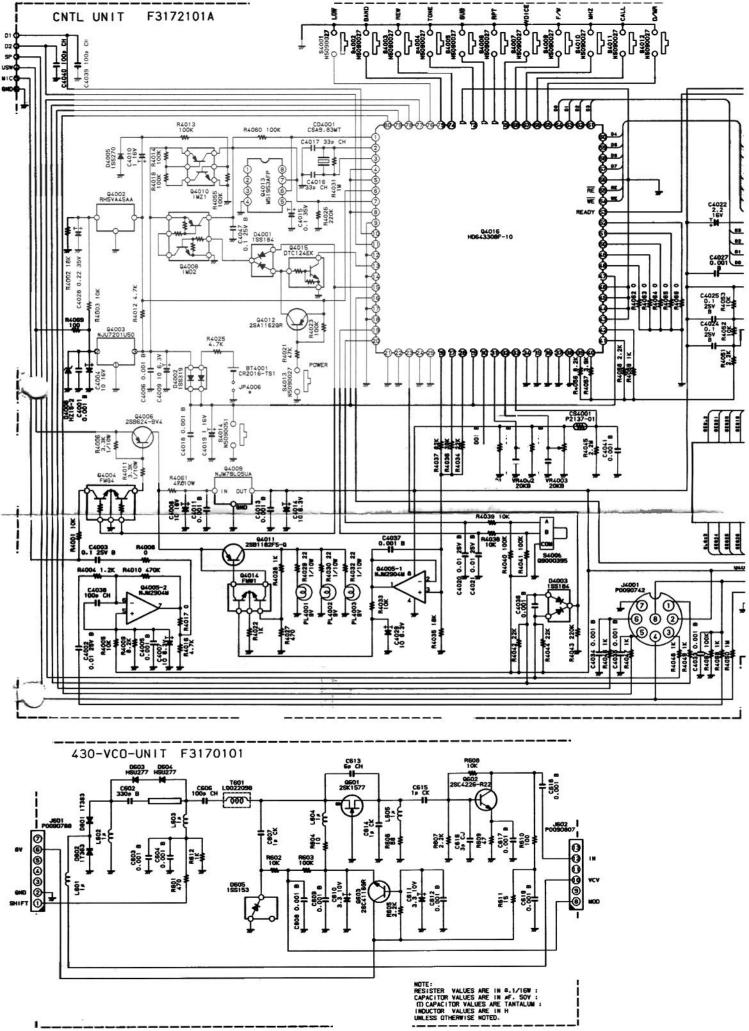
Functional Reference

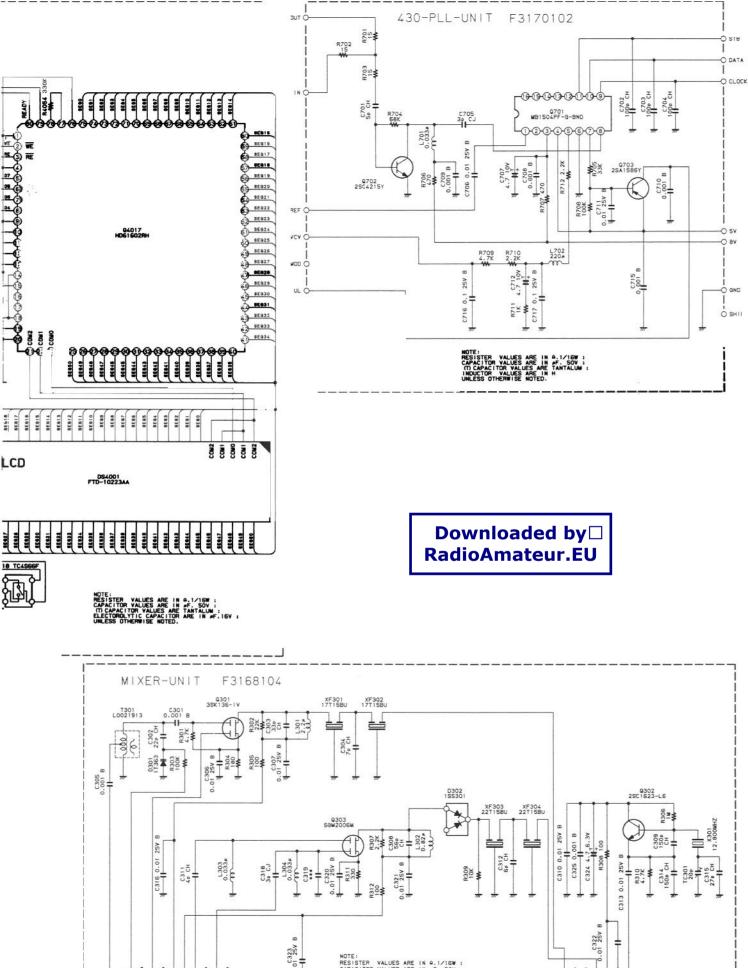
As shown below, each function affects the Primary Band only. However, all functions can also be performed on the Secondary Band by preceeding the indicated keystrokes with $\bigcirc \rightarrow \bigcirc \bigcirc \bigcirc$ (AID), except repeater shift setting. Beeper on/off, key lock and high/low power selection affect both bands together.

Symbols:

"/" = OR
"[]" = hold at least ½-second
"()" = intermediate display
"+" = together (do simultaneously)

Desired Function	Display Mode	Procedure
Beeper on/off	Dial/Mem	$\Theta \rightarrow \Theta^{\iota_{nr}} \rightarrow \Theta \rightarrow \Theta^{\iota_{nr}}$
CALL Memory Recall	Dial/Mem	22 GO 07
Channel Step Select	Dial	⊕→⊕ → ()/DWN UP →⊕
CTCSS Tone Freq. Set	Dial/Mem	
CTCSS Encode/Decode/Off	Dial/Mem	
Hide Current Memory	Memory	
Unhide Memory	Memory	[Θ](-[
Lock/Unlock Keys	Dial/Mem	⊖→□
Memory Recall	Dial	DWN UP
Memory Tune	Memory	Ö → O/DWN UP
Memory Storage	Dial/M Tune	() (DWN UP → (()) (-; -) → () (DWN UP → (())
Memorize Separate Tx Freq.	Dial/M Tune	() (DWN UP → (PT) + (2)
MHz Range Select	Dial/M Tune	Ö → O/DWN UP
Mute Rx Audio	Dial/Mem	⊕→ _{un} ⊕/→ _{un} ⊕
Priority Monitor	Dial/Mem	⊕→⊙
Repeater: Standard Split	Dial/Mem	
Repeater: Disp/Set Split Offset	Dial/Mem	
Reverse Tx/Rx Frequencies	Dial/Mem	(\(\hat{\phi}\))/(\(\hat{\phi}\)
Scanning	Dial/Mem	DWN UP
Scan/Tune Alternate Bands	Dial/Mem	⊕→ (ALT) → DWN UP
Scan Limited Subband	Dial	
Scan Resume Mode Set	Dial/Mem	$\Theta \rightarrow \Box \Theta \rightarrow \Box \Theta$
Scan Skip Memory (Set)	Memory	(C) (DWN UP → (C) → (C) (C) (C) (C) (C) (C) (C) (C) (C) (C)
	Optional DTN	/IF Paging/Selcall & Digital Voice Functions
Paging/Code Squelch/ CTCSS Bell/Off Toggle	Dial/Memory	
Paging/Code Squelch Code Setting	Dial/Mem with Pag/Code	
Toggle Code Memory Decoder (Rx)	DTMF Code	
Quit Code Setting Display	DTMF Code	$\Theta_{\mathbf{r}_{\mathbf{r}}}$
Digital Voice on/off toggle	Dial/M/DVS	 ⊖
Speaker/Mic Recording toggle	DVS Display	Θ^{tsr}
Bit Rate Selection	DVS Display	⊖ → ○ →⊝
Record Locking toggle	DVS Display	○→Ö

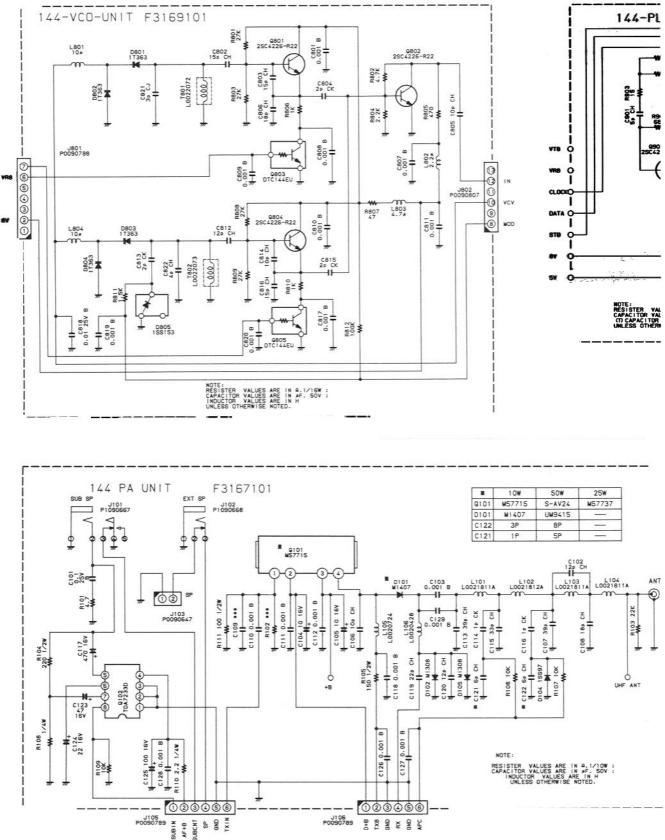


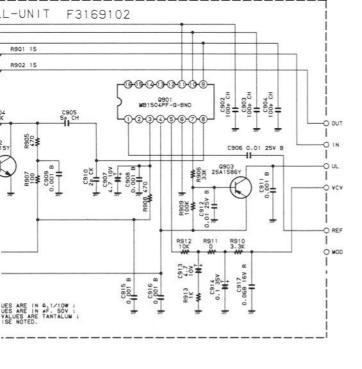


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