OICOM

SERVICE MANUAL

144 MHz FM TRANSCEIVER

IC-T21A IC-T21E IC-S21A IC-S21E

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the IC-T21A/E, IC-S21A/E 144 MHz FM TRANS-CEIVER at the time of publication.

7 versions of the IC-T21A/E and 6 versions of the IC-S21 A/E have been designed. This service manual covers each version.

MODEL	VERSION NO.	VERSION	SYMBOL
	#05	U.S.A.	USA
IC-T21A	#07	Australia	AUS
	#09	Asia	SEA
	#04	Europe	EUR
10 7045	#06	Taiwan	TPE
IC-T21E	#08	Denmark	DEN
	#14	Italy	ITA
	#05	U.S.A.	USA
IC-S21A	#07	Australia	AUS
	#09	Asia	SEA
	#04	Europe	EUR
IC-S21E	#06	Taiwan	TPE
	#14	Italy	ITA

To upgrade quality, any electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. This will ruin the transceiver.

DO NOT expose the transceiver to rain, snow or any liquids.

DO NOT reverse the polarities of the power supply when connecting the transceiver.

DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.

ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

- 10-digit order numbers
- 2. Component part number and name
- 3. Equipment model name and unit name
- Quantity required

(SAMPLE ORDER)

1150003370 IC SC-1257 IC-T21A 1F UNIT 5 pieces 8810004370 Screw PH B0 M2 × 10 ZK IC-T21A Rear panel 10 pieces

Addresses are provided on the inside back cover for your convenience.



REPAIR NOTES

- Make sure a problem is internal before disassembling the transceiver.
- DO NOT open the transceiver until the transceiver is disconnected from its power source.
- DO NOT force any of the variable components. Turn them slowly and smoothly.
- DO NOT short any circuits or electronic parts. An insulated tuning tool MUST be used for all adjustments.
- DO NOT keep power ON for a long time when the transceiver is defective.
- DO NOT transmit power into a signal generator or a sweep generator.
- ALWAYS connect a 40 dB 50 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
- READ the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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SECTION 1 SPECIFICATIONS

GENERAL

• Frequency coverage

MODEL	VERSION	FREQUENCY COVERAGE
	U.S.A.	144-148 MHz (TX); 144-148, 440-450 MHz (RX)
IC-T21A	Australia	144-148 MHz (TX); 144-148, 430-440 MHz (RX)
	Asia	144~148 MHz (TX); 138-174, 430-440 MHz (RX)
	Europe	144-146 MHz (TX); 144-146, 430-440 MHz (RX)
IC-T21F	Taiwan	145-146 MHz (TX); 145-146, 430-432 MHz (RX)
10-1216	Denmark	144-146 MHz (TX); 144-146, 432-438 MHz (RX)
	Italy	144-148 MHz (TX); 138-174, 430-440 MHz (RX)
	U.S.A.	144-148 MHz (TX/RX)
IC-S21A	Australia	144-148 MHz (TX/RX)
	Asia	144-148 MHz (TX); 138-174 (RX)
	Europe	144-146 MHz (TX); 144-146, 430-440 MHz (RX)
IC-T21E	Taiwan	145-146 MHz (TX/RX)
	Italy	144-148 MHz (TX); 138-174 (RX)

• Mode : FM (F3E)

• Tuning steps : 5, 10, 12.5, 15, 20, 25, 30 or 50 kHz

• Number of memory channels : 100 plus 12 scan edge, 1 call, 1 repeat memory channels

Antenna impedance : 50 Ω (unbalanced)

• Usable battery packs/case : BP-151, BP-152, BP-153, 4 dry cell batteries with BP-159

• External DC power : 4-16 V DC (negative ground)

Current drain (at 13.5 V, typical)

	HIGH	1.8 A	
Transmit	LOW 1	1.0 A	
	E LOW	90 mA	
Receive	Power saved	8 mA (average)	
neceive	Rated audio output	160 mA	

Usable temperature range : −10°C to +60°C (+14°F to +140°F)

• Frequency stability : ± 10 ppm (at 0°C to +50°C; +32°F to +122°F)

• Dimensions (with BP-151) : $54(W) \times 111(H) \times 35.5(D)$ mm (Projections not included) : $2.1(W) \times 4.4(H) \times 1.4(D)$ in

• Weight (with BP-151) : 315 g (11.1 oz)

TRANSMITTER

Output power (at 13.5 V)
 6 W (HIGH), 4 W (LOW 3), 1.4 W (LOW 2), 1.0 (LOW 1), 15 mW (E LOW)

• Modulation system : Variable reactance frequency modulation

Max. frequency deviation* : ±5.0 kHz

• Spurious emissions* : Less than -60 dB (HIGH), Less than -40 dB (E LOW)

• Microphone impedance : $2 k\Omega$

■ RECEIVER

• Receive system : Double-conversion superheterodyne

• Intermediate frequency : 1st 30.85 MHz

2nd 455 kHz

• Sensitivity* (for 12 dB SINAD) : Less than 0.16 µV for VHF; Less than 0.22 µV for UHF (IC-T21A/E only)

Squelch sensitivity (threshold) : Less than 0.13 μV

• Selectivity : More than 15 kHz/-6 dB

Less than 30 kHz/-60 dB

• Spurious response rejection : More than 60 dB

ratio* (Except half of image frequency)

• Audio output power* (at 13.5 V) : More than 300 mW (at 10% distortion with an 8 Ω load)

• Audio output impedance : 8 Ω

^{*}Specifications guaranteed at a transceiver temperature of 25°C (+77°F).

All stated specifications are subject to change without notice or obligation.

SECTION 2 DISASSEMBLY INSTRUCTIONS

Fig. 1 Removing the front panel

1. Remove 2 screws (A), 2 screws (B) and 2 screws (C), to open the front panel.

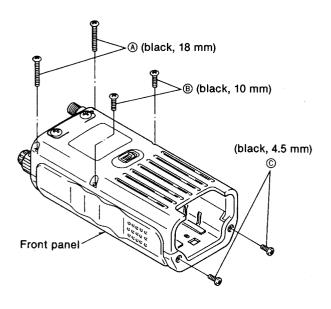


Fig. 2 Removing the 3F unit

- 1. Remove 2 screws (1), and disconnect J3.
- 2. Unplug J1 to remove the 3F unit.

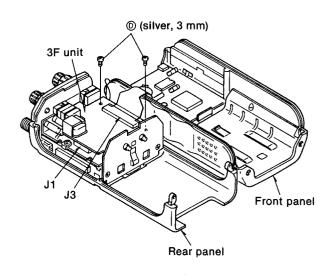


Fig. 3 Removing the 2F unit

- 1. Remove 1 screws © and SW lug.
- 2. Remove 2 stand-offs (a), then unplug J1 to remove the 2F unit.

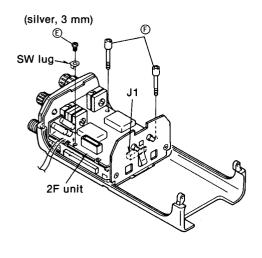
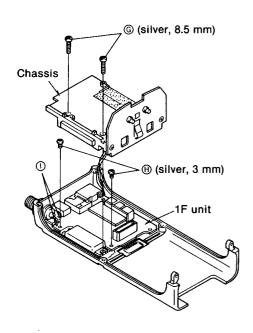


Fig. 4 Removing the 1F unit

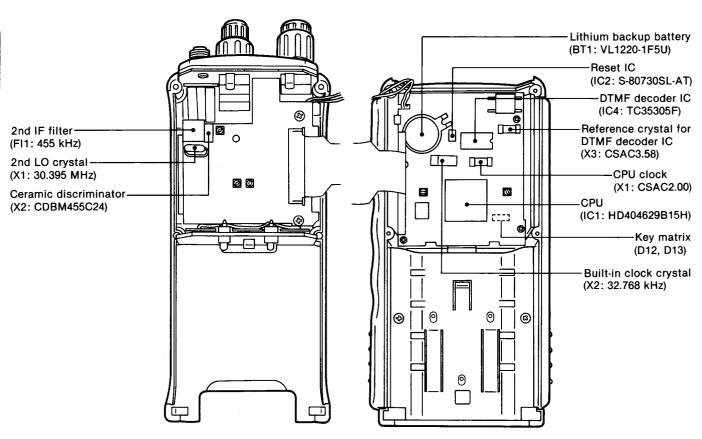
- 1. Remove 2 screws ©, to remove the chassis.
- 2. Remove 2 screws (11), and unsolder 2 points (1) to remove the 1F unit.

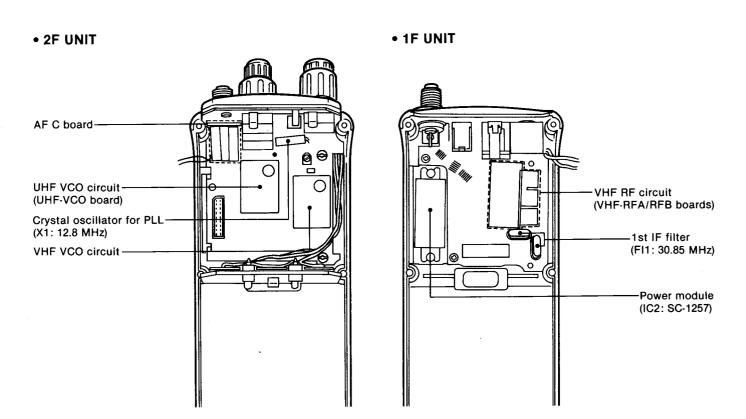


SECTION 3 INSIDE DESCRIPTIONS

3-1 IC-T21A/E



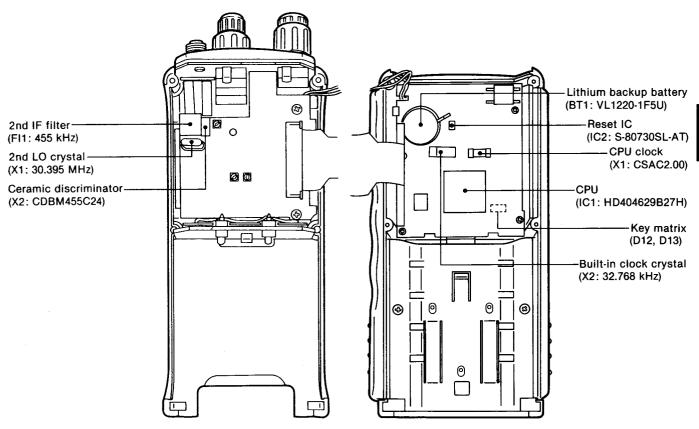


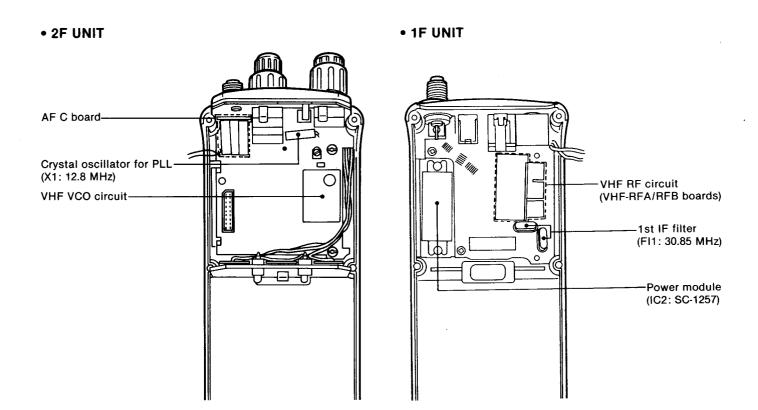


3-2 IC-S21A/E

• 3F UNIT

• LOGIC UNIT





CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

SECTION 4

4-1-1 DUPLEXER CIRCUIT (1F UNIT) [IC-T21A/E only]

The IC-T21A/E has a duplexer (low-pass and high-pass filters) on the first stage from the antenna connector to separate the signals into VHF and UHF signals. The low-pass filter (L1-L3, C1-C5) for VHF signals and high-pass filter (C12-C16, L6, L7) for UHF signals. The separated signals are applied to each RF circuit.

4-1-2 VHF ANTENNA SWITCHING CIRCUIT (1F UNIT)

The antenna switching circuit functions as a low-pass filter while receiving and a resonator circuit while transmitting. The circuit does not allow transmit signals to enter receiver circuits.

Received signals pass through a low-pass filter to suppress out-of-band signals. The filtered signals are applied to the two-stage $\lambda/4$ type antenna switching circuit (D1, D20, D2, D12), and then to the VHF-RFA board.

4-1-3 VHF RF CIRCUIT (VHF-RFA/RFB BOARDS)

The RF circuit amplifies signals within the range of frequency coverage and filters out-of-band signals.

The signals from the antenna switching circuit pass through a band-pass filter (L1, D2) and are then applied to the RF amplifier (Q1, Q2). The amplified signals enter a two-stage band-pass filter (L2, L3, D4, D5, C12, C14, C16) to suppress unwanted signals. The filtered signals are applied to the VHF 1st mixer circuit on the 1F unit.

D2, D4 and D5 employ varactor diodes that track the bandpass filters and are controlled by the PLL lock voltage. The voltage is current amplified at Q13 on the 2F unit and is then applied to the varactor diodes. These diodes tune the center frequency of an RF passband for wide bandwidth receiving and good image response rejection.

4-1-4 VHF 1ST MIXER AND IF CIRCUITS (1F UNIT)

The 1st mixer circuit converts the received signal to fixed frequency of the 1st IF signal with the PLL output frequency. By changing the PLL frequency, only the desired frequency will be passed through a pair of crystal filters at the next stage of the 1st mixer.

The signals from the VHF RF circuit are mixed at Q7 with the 1st LO signal coming from the 2F unit to produce a 30.85 MHz 1st IF signal. After passing through the matching circuit (L15), the 1st IF signal is applied to a pair of crystal filters (FI1) to suppress out-of-band signals. The filtered signal is applied to a 1st IF amplifier (Q18), and then to the 3F unit through the 2F unit.

4-1-5 UHF RF CIRCUIT (1F UNIT) [IC-T21A/E only]

Received signals are divided between VHF signals and UHF signals at the duplexer.

The UHF signals are passed through a low-pass filter (L8, L9, C17-C19) to suppress out-of-band signals. The signals are then amplified at the RF amplifiers (Q1, Q2) and pass through a band-pass filter. The filtered signals are amplified at Q22, and applied to the UHF 1st mixer circuit.

4-1-6 UHF 1ST MIXER AND IF CIRCUITS (1F UNIT) [IC-T21A/E only]

The signals from the UHF RF circuit are mixed at Q21 with the 1st LO signal coming from the 2F unit to produce a 30.85 MHz 1st IF signal. The 1st IF signal is applied to a pair of crystal filters (FI1) to suppress out-of-band signals. The filtered signal is applied to a 1st IF amplifier (Q18), and then to the 3F unit through the 2F unit.

4-1-7 2ND IF AND DEMODULATOR CIRCUITS (3F UNIT)

The 2nd mixer circuit converts the 1st IF signal to a 2nd IF signal. A double superheterodyne system (which converts receive signals twice) improves the image rejection ratio and obtains stable receiver gain.

The 1st IF signal from the 1F unit is applied to the 2nd mixer section of IC1 (pin 16), and is mixed with the 2nd LO signal to be converted to a 455 kHz 2nd IF signal.

IC1 contains the 2nd mixer, local oscillator, limiter amplifier, quadrature detector and S-meter circuits. The local oscillator section and X1 generate 30.395 MHz for the 2nd LO signal.

The 2nd IF signal from the 2nd mixer (IC1, pin 3) passes through the ceramic filter (FI1) where unwanted signals are suppressed. It is then amplified at the limiter amplifier section (IC1, pin 5) and applied to the quadrature detector section (IC1, pin 10 and ceramic discriminator X2) to demodulate the 2nd IF signal into AF signals.

AF signals output from IC1 (pin 9) are applied to the deemphasis circuit (R10, C14). This de-emphasis circuit is an integrated circuit with frequency characteristics of -6 dB/octave. The resulting signals are applied to the AF amplifier (through BPF, AF mute switch, VOL) , DTMF decoder (IC-T21A/E only) and TSQL unit (U.S.A. version only or optional UT-81).

• 2ND IF AND DEMODULATOR CIRCUITS

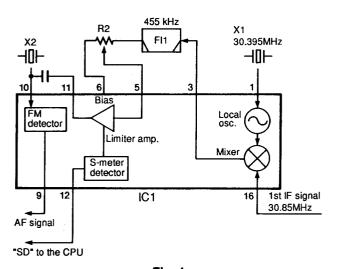


Fig. 1

4-1-8 AF AMP CIRCUIT (2F AND 3F UNITS)

The AF amplifier circuit, including an AF mute switch, amplifies the demodulated signal to drive a speaker.

AF signals are applied to Q5 and Q6 on the 3F unit. Q5 is an active filter that functions as a high-pass filter to suppress subaudible tone signals for tone squelch operation. Q6 is also an active filter that functions as a low-pass filter to suppress higher noise signals.

The filtered signal is applied to the [VOL] control (R15) on the 2F unit via the AF mute switch (IC3) on the 3F unit. When the squelch is closed, IC3 cuts the AF signal. The AF signal is power-amplified at the AF power amplifier (IC1) on the 2F unit to drive the speaker.

The voltage regulator (2F unit Q4, Q5) supplies power to the AF power amplifier. The AFON signal from the data expander (2F unit IC2) controls Q5 to reduce the current drain while the squelch is closed.

4-1-9 NOISE SQUELCH CIRCUIT (3F UNIT)

A noise squelch circuit cuts off AF signals when no RF signal is received. By detecting noise components in the AF signal, the squelch circuit switches the AF mute switch.

Some of the noise components in the AF signal from IC1 (pin 9) is applied to IC1 (pin 8) via C57. The [SQL] control (R15) on the 2F unit adjusts the pin 8 input level.

IC1 (pin 13) outputs the squelch signal. The signal is then applied to the CPU (IC1, pin 24) on the LOGIC unit through the BUSY signal line and the CPU outputs the RMUTE and BUSY LED signals.

The RMUTE signal activates the AF mute switch (IC3) to cut the AF signal. The BUSY LED signal is applied to Q9 on the LOGIC unit, turning OFF the RX indicator.

4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHONE AMPLIFIER (3F UNIT)

The microphone amplifier circuit amplifies audio signals with +6 dB/octave pre-emphasis from the microphone to a level needed for the modulation circuit.

The AF signals from the built-in condenser microphone, or from the [MIC] jack, are applied to IC9 (pin 16), and are preemphasized to +6 dB/octave. IC9 functions as the microphone amplifier and limiter.

The output signals from IC9 (pin 8) pass through the frequency deviation pot (R46) and are applied to the modulation circuit on the 2F unit.

4-2-2 MODULATION CIRCUIT (2F UNIT)

The modulation circuit modulates the VCO oscillating signal (RF signal) using the microphone audio signals.

The "MOD" signal changes the reactance of a varactor diode (D3) to modulate the oscillated signal at the VHF VCO circuit (Q14, Q15). The VCO output is buffer-amplified at Q17 and Q18, and is then applied to the transmit/receive switching circuit (D6, D7) on the 1F unit.

4-2-3 DRIVE AMPLIFIER (1F UNIT)

The drive amplifier circuit amplifies the VCO oscillating signal to the needed level at the power amplifier.

The signal from the transmit/receive switching circuit (D7) is amplified at the pre-drive amplifier (Q10) and is then reamplified at the drive amplifier (Q11) to obtain approx. 15 mW.

An RF signal from the drive amplifier (Q11) passes through the output miser switching circuit (D8) and is then applied to the RF power amplifier.

When E LOW (output miser) is selected, the output of the drive amplifier (Q11) bypasses the RF power amplifier through D8-D10. The signal is passed through the π -filter, low-pass filter, and is then applied to the antenna connector. At this time, a half of the antenna switching circuit (D2) activates to prevent the output power from entering the receiver circuit.

4-2-4 RF POWER AMPLIFIER (1F UNIT)

IC2 is a power module which provides more than 6 W of output power with a 13.5 V DC power source.

An RF signal from the drive amplifier (Q11) is applied to IC2 (terminal PI). The amplified signal is output from terminal PO, and applied to the antenna connector through the APC detector, antenna switching circuit (D12) and low-pass filter.

4-2-5 APC CIRCUIT (1F UNIT)

The APC circuit protects the power module (IC2) from a mismatched output load and selects HIGH, LOW 3, LOW 2 or LOW 1 output power.

The output power level from the power module (IC2) is detected at the APC detector (L20, C56, C57, D13, D14). When antenna impedance is matched at 50 Ω , the detected level is at the minimum. However, when antenna impedance is mismatched, the detected voltage is higher than when matched.

When the antenna impedance is mismatched, the base voltage of Q15 (R41 side) is higher than the other base voltage of Q15 (R40 side, APC reference voltage). Q15 (R40 side) decreases the collector voltage of Q16. Collector current of Q16 is used at the power module (IC2) as VGG. Hence, when the antenna impedance is mismatched, the output power is decreased. A thermistor (R37) controls the base voltage of Q15 (R40 side, APC reference voltage) to reduce the output power when the temperature is increased.

The output power setting, except for E LOW, uses the APC circuit. The "PCON" voltage from the CPU (LOGIC unit IC1) shifts the reference voltage, selecting the four output power levels (HIGH, LOW 3, LOW 2 or LOW 1).

APC CIRCUIT

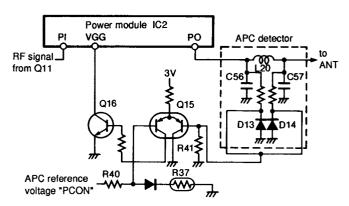


Fig. 2

4-3 PLL CIRCUITS

4-3-1 GENERAL (2F UNIT)

PLL circuits provide stable oscillation of the transmit frequency and the receive local frequency. The PLL circuit compares the phase of divided VCO frequency to the PLL reference signal. The PLL output frequency is controlled by a crystal oscillator and the divided ratio of the programmable divider.

The PLL circuit, using a one-chip PLL IC (IC3) that contains a dual modulus prescaler, a programmable divider, a phase detector and a charge pump, directly generates the transmit frequency and receive 1st LO frequency with a VCO. The PLL IC sets the divided ratio based on serial data from the CPU (LOGIC unit IC1) and compares the phases of a VCO signal and the PLL reference signal. The PLL IC detects the off-phase components and output them from pin 13 (from pin 8 for the IC-T21A/E UHF VCO).

4-3-2 REFERENCE OSCILLATOR CIRCUIT (2F UNIT)

12.8 MHz reference frequency is oscillated at the crystal oscillator (X1), and is input to IC3 (pin 15). The reference frequency is divided by 2560 to obtain 5 kHz (PLL reference signal).

4-3-3 VHF VCO CIRCUIT (2F UNIT)

VHF VCO circuit (Q14, Q15) generates the transmit frequency and the receive 1st LO frequency. The frequency shift signal "VSHIFT" from the data expander (IC2 pin 14) turns Q8 and D2 ON or OFF to switch the VCO frequency between transmitting and receiving.

The VCO genarated signal is buffer-amplified at Q17, and is then applied to the transmit/receive switching circuit (1F unit D6, D7) through buffer circuit (Q18). The signal from Q17 is also applied to the programmable divider (IC3 pin 19) through buffer circuit (Q16).

4-3-4 UHF VCO CIRCUIT (UHF-VCO BOARD) [IC-T21A/E only]

UHF VCO circuit (Q1, Q2) generates the receive 1st LO frequency.

Output signal from the UHF-VCO board is buffer-amplified at Q10 on the 2F unit, and is then applied the UHF 1st mixer (1F unit Q21) through buffer circuit (2F unit Q11, Q12). The signal from Q10 is also applied to the programmable divider (IC3 pin 2) through buffer circuit (2F unit Q9).

4-3-5 PROGRAMMABLE DIVIDER AND PHASE DETECTOR CIRCUITS (2F UNIT)

The programmable divider in PLL IC (IC3) shifts the dividing ratio, depending on the operating frequency, with a prescaler and determines the VCO oscillating frequency.

The phase detector in PLL IC detects the off-phase components of the VCO frequency using the PLL reference signal (5 kHz) and outputs the out-of-phase signal (pulse signal) from pin 13 (for VHF) and pin 8 (for UHF).

4-3-6 LOOP FILTER CIRCUIT (2F UNIT)

The out-of-phase signal from IC3 (pins 13, 8) is converted to DC voltage by the lag-lead loop filter (R33, R34, C33, C34 for VHF; R18, R19, C12, C13 for UHF).

The converted DC voltage (PLL lock voltage) is applied to VCO circuits to control the oscillation. Q13 provides VHF RF circuit (band-pass filters on the VHF-RFA/RFB boards) tuning.

• PLL CIRCUIT

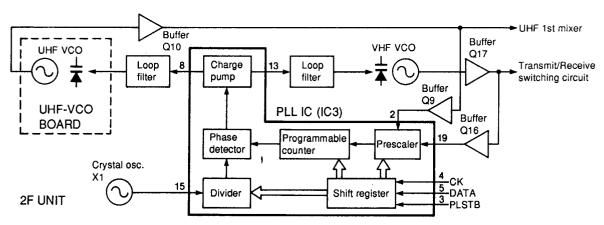


Fig. 3

4-4 POWER SUPPLY CIRCUITS

4-4-1 VOLTAGE LINES

LINE	DESCRIPTION
Vcc	The attached battery pack voltage or external DC power voltage.
+3	Continuous 3 V converted from the Vcc line at IC4 on the 3F unit. This voltage is supplied even when the power is turned OFF.
+3M	+3 V controlled by "PSC" and "SEND" signal lines. This voltage is supplied while the power saver is OFF or during transmitting. This voltage is converted from the Vcc line at Q11 and Q12 on the 3F unit using IC4 output as the reference voltage.
+3C	Common 3 V controlled by the CPU. This voltage is supplied during power ON. This voltage is converted from the Vcc line at Q6 and Q7 on the LOGIC unit.
+3S	+3 V controlled by "PSC" signal line. This voltage is supplied while the power saver is OFF. This voltage is converted from the Vcc line at Q9 and Q10 on the 3F unit using the AND gate (IC6) output as the reference voltage.
R+3	Receive 3 V controlled by "PSC" and "RCON" signal lines. This voltage is supplied while receiving and the power saver is OFF. This voltage is converted from the Vcc line at Q7 and Q8 on the 3F unit using the AND gate (IC7) output as the reference voltage.
3V	Transmit 3 V controlled by "TMUTE" signal line. This voltage is supplied during transmitting. This voltage is converted from the Vcc line at Q14 and Q13 on the 1F unit using "T3C" from the 3F unit as the reference voltage.
5V	+5 V converted from the +3M line at IC4 on the 2F unit.

4-4-2 CPU POWER SUPPLY CIRCUIT (LOGIC UNIT)

When no external power source is applied and the battery pack is discharged, voltage is applied to the CPU (IC1, pin 97) from the lithium backup battery (BT1) installed in the transceiver to keep the CPU on stand-by.

4-4-3 CHARGING CIRCUIT (PRT UNIT)

Current from the [DC13.5V] jack is applied to the constant current circuit (Q3, R2) through Q1 to charge an attached battery pack.

When a battery pack is attached, the current through D1 charges the attached battery pack. The charging current is determined by the battery pack internal resistance.

4-5 CPU PORT ALLOCATIONS

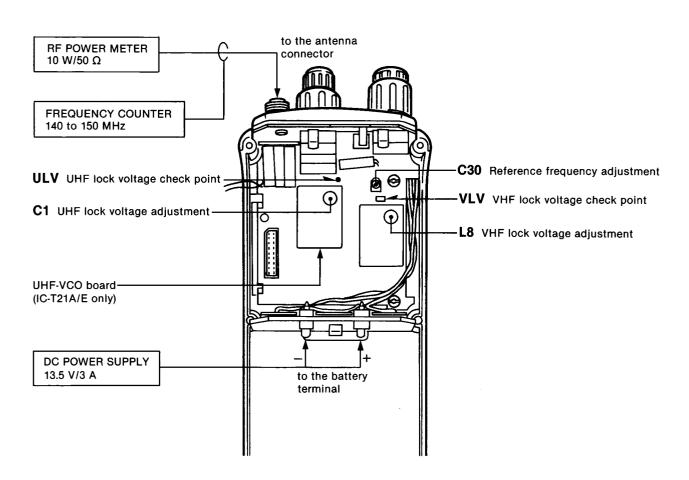
PIN NO. F	PORT NAME	DESCRIPTION
, ,	AVCC	DC voltage input port
2	REMOTE	DATA input port from an optional HM-75
3	SD	S-meter level input port
4	BATT	Battery divided voltage input port
5	UL	PLL unlock signal input
	OL.	"LOW" when unlocked
8, 9	OSC1, OSC2	CPU clock oscillator terminals
10		Reset signal input port
11, 12	X1, X2	Oscillator terminals for clock indication
15	LIGHT O	Outputs LCD backlight control signal "LOW" for lighting
16	BUSYLED	Outputs RX LED control signal "LOW" for lighting
17	CE	Outputs DTMF enable signal
18	PD	Outputs DTMF standby signal
19	PSC	Outputs power save control signal
20	SEND	Outputs TX/RX switching signal "LOW" for transmission
22	TMUTE	Outputs transmit mute signal "HIGH" for mute
23	RMUTE	Outputs receive mute signal "HIGH" for mute
24	BUSY	Receive busy signal input port "LOW" when busy
25	INT0	[POWER] switch input port "LOW" when the switch is pushed
27-29	D CK, D UP, D DN	Used for tuning dial input ports
30	BEEP	Outputs beep tone signal
31	TONE	Outputs 1750 Hz tone call signal
34	KS0 (IOSTB)	Outputs a strobe signal for I/O expander IC (2F unit IC2) via IC5 (pins 9, 8)
35	KS1 (CK)	Outputs a clock signal via IC5 (pins 13, 11)
36	KS2 (PLSTB)	Outputs a strobe signal for PLL IC (2F unit IC3) via IC5 (pins 5, 6)
37	KS3 (DATA)	Outputs serial data for PLL IC, I/O expander, etc.
38	PTT	PTT switch input port "LOW" when the switch is pushed
39	FUNC	[FUNC] switch input port "LOW" when the switch is pushed
40	MONI	[MONI] switch input port "LOW" when the switch is pushed
41	LIGHTSW	[LIGHT] switch input port "LOW" when the switch is pushed
42-46 H	KR0-KR4	Key matrix input ports
47	DV	DTMF decoder input port "HIGH" when detecting a signal
48	TSQL	Tone squelch decoder input port "LOW" when detecting a signal
50, 51	POW1, POW2	Output selecting signal for transmit power
52-96	- 1	Used for driving the LCD
98, 99	DTMFC, DTMFR	Outputs DTMF signal

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PLL ADJUSTMENT

ADJUSTME	NT	ADJUSTMENT CONDITIONS	N	MEASUREMENT VALUE ADJUSTI			
ADJUSTNIE	14 1	ADJUSTMENT COMDITIONS	UNIT	LOCATION	VALUE	UNIT	ADJUST
VHF LOCK VOLTAGE	1	Displayed frequency: 145.00 MHz Receiving or transmitting	2F	Connect the digital multimeter or oscilloscope to VLV.	1.5 V Set the voltage according to which has the lower voltage condition: transmit or receive.	2F	L8
UHF LOCK VOLTAGE (IC-T21A/E) only	1	Displayed frequency: 440.00 MHz (EUR, USA, AUS, SEA, ITA) 432.00 MHz (TPE, DEN) Receiving	2F	Connect the digital multimeter or oscilloscope to ULV.	1.7 V (EUR, USA, AUS, SEA, ITA 1.5 V (TPE, DEN)	UHF-VCO BOARD	C1
REFERENCE FREQUENCY	1	 Displayed frequency: 145.00 MHz Connect the RF power meter or a 50 Ω dummy load to the antenna connector. Transmitting 	2F	Loosely couple the frequency counter to the antenna connector.	145.0000 MHz	2F	C30

• 2F UNIT

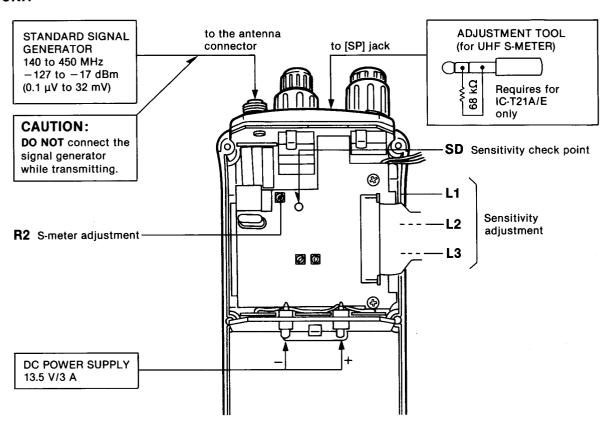


5-2 RECEIVER ADJUSTMENT

ADJUSTME	NIT	ADJUSTMENT CONDITIONS	М	EASUREMENT	VALUE		STMENT
ADJUSTNIE	14 1	ADJUSTMENT CONDITIONS	UNIT	LOCATION	VALUE	UNIT	ADJUST
SENSITIVITY	1	Displayed frequency: 145.00 MHz SQL control: Max. CCW Connect the SSG to the antenna connector and set as: Level: 0.32 µV* (-117 dBm) Modulation: 1 kHz Deviation: ±3.5 kHz Receiving	3F	Connect the DC voltmeter to SD.	Maximum	VHF-RFB BOARD	Adjust in sequence L1, L2, L3
S-METER	1	Displayed frequency: 145.02 MHz Connect the SSG to the antenna connector and set as: Level : 0.50 μV* (-113 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz Receiving	Function display	S/RF indicator	3 dots (S2)	3F	R2
UHF S-METER (IC-T21A/E) only	1	Operating frequency: 440.00 MHz (EUR, USA, AUS, SEA, ITA) 432.00 MHz (TPE, DEN) Connect the SSG to the antenna connector and set as: Level : 0.50 μV* (-113 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz Connect a resistor (68 kΩ) to [MIC] connector as following diagram. Receiving					

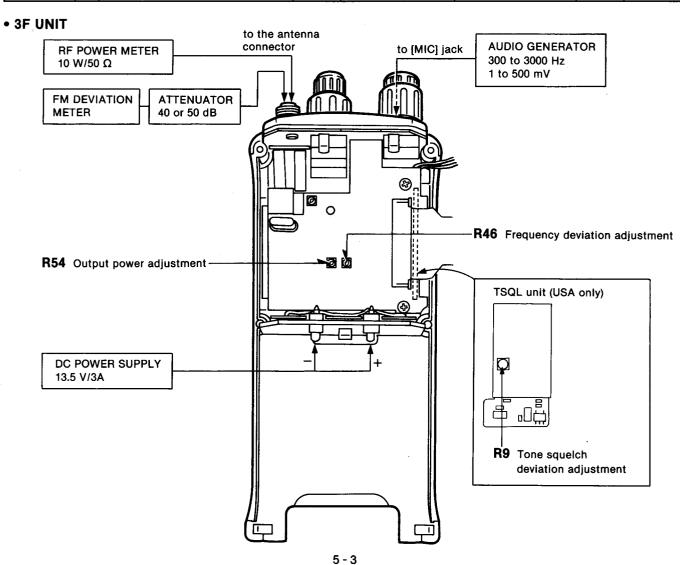
^{*}This output level of the standard signal generator (SSG) is indicated as the SSG's open circuit.

• 3F UNIT



5-3 TRANSMITTER ADJUSTMENT

ADJUSTME	NT	ADJUSTMENT CONDITIONS	N	IEASUREMENT	VALUE		STMENT DINT
ADJUSTME	14 1	ADJUSTMENT CONDITIONS	UNIT	LOCATION	VALUE	UNIT	ADJUST
OUTPUT POWER	1	Displayed frequency: 145.00 MHz Output power : HIGH Transmitting	Top panel	Connect the RF power meter to the antenna connector.	6.0 W	3F	R54
FREQUENCY DEVIATION	1	Displayed frequency: 145.00 MHz Output power : HIGH Connect the audio generator to the [MIC] jack and set as: 170 mV/1.0 kHz (USA version) 85 mV/1.0 kHz (All other versions) Set the FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P-P)/2 Simplex Transmitting	Top panel	Connect the FM deviation meter to the antenna connector via the attenuator.	±4.3 kHz	3F	R46
TONE SQUELCH (USA only)	1	Displayed frequency: 145.00 MHz Tone encoder : ON Tone frequency : 88.5 Hz Transmitting	Top panel	Connect the FM deviation meter to the antenna connector via the attenuator.	0.75 kHz	TSQL	R9



SECTION 6 PARTS LIST

[LOGIC UNIT] (IC-T21A/E)

REF. ORDER PEOCHIPTION						
NO.	NO.		DESCRIPTION			
104	4440004400	6.10	LIDAGAGGGRAFIA			
IC1 IC2	1140004190	S.IC S.IC	HD404629B15H S-80730SL-AT-T1			
1C2	1130003920	s.ic	TC4S69F (TE85R)			
1C4	1130007200	s.ic	TC35305F(TP2)			
1C5	1120002440	S.IC	TC74AC08FS(EL)			
1C6	1190000260	s.ic	24LC08BTI/SN			
١,,	4500004470	C TRANSISTOR	LIMOO42/TV)			
Q1 Q2	1590001470 1530003180	S.TRANSISTOR S.TRANSISTOR	UN9213(TX) 2SC4211-7-TR			
Q2 Q4	1590001840	S.TRANSISTOR	XN4601(TX)			
Q6	1520000460	S.TRANSISTOR	2SB1132 T100 R			
Q7	1530003180	S.TRANSISTOR	2SC4211-7-TR			
Q8	1510000880	S.TRANSISTOR	2SA1622-6-TR			
Q9	1590001830	S.TRANSISTOR	XN1117(TX)			
Q10	1590001140	S.TRANSISTOR	UN9210(TX)			
Q13 Q14	1590001130 1590001950	S.TRANSISTOR S.TRANSISTOR	UN9110(TX) UN9217(TX)			
Q14	1390001930	3.11AN3131011	ONS217(1A)			
D1	1750000260	S.DIODE	1SS352 (TPH3)			
D2	1750000260	S.DIODE	1SS352 (TPH3)			
D3	1750000130	S.DIODE	DA204U T107			
D4 D5	1750000260 1790000820	S.DIODE S.DIODE	1SS352 (TPH3) MA132K(TX)			
D6	1790000320	S.DIODE	MA6S121(TX)			
D7	1790001200	S.DIODE	MA6S121(TX)			
D9	1790001200	S.DIODE	MA6S121(TX)			
D10	1750000260	S.DIODE	1SS352 (TPH3)			
D11	1750000260	S.DIODE	1SS352 (TPH3)			
D12	1790000820	S.DIODE	MA132K(TX) (USA, TPE)			
	1790000830	S.DIODE	MA132HK(TX) (EUR, AUS)			
D13	1790000850 1790000820	S.DIODE S.DIODE	MA132WK(TX) (DEN, SEA) MA132K(TX)			
013	1730000020	J.DIODE	(USA, AUS, SEA, ITA)			
D14	1750000260	S.DIODE	1SS352 (TPH3)			
D15	1790000820	S.DIODE	MA132K(TX)			
D16	1790000860	S.DIODE	MA133(TX)			
D17	1750000340	S.DIODE	1SS357 (TPHR3)			
X1	6060000520	S.CERAMIC	CSAC2.00MGC200-TC			
X2	6050008760	XTAL	CR-462 32.768KHz			
ХЗ	6060000150	S.CERAMIC	CSAC3.58MGC300CD			
R1	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)			
R2	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)			
R3	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)			
R4	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)			
R5	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)			
R6	7030003650 7030003610	S.RESISTOR S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)			
R7 R9	7410000610	S.ARRAY	ERJ3GEYJ 273 V (27 kΩ) EXB-V4V 153JV (15 kΩ)			
R10	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)			
R11	7030003770	S.RESISTOR	ERJ3GEYJ 564 V (560 kΩ)			
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)			
R13	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)			
R14	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)			
R15	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)			
R16 R17	7030003600 7030003410	S.RESISTOR S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ) ERJ3GEYJ 561 V (560 Ω)			
R18	7030003410	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)			
R19	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)			
R21	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)			
R22	7410000750	S.ARRAY	EXB-V4V 104JV (100 kΩ)			
R23	7410000750	S.ARRAY	EXB-V4V 104JV (100 kΩ)			
R24	7410000800	S.ARRAY	EXB-V8V 103JV (10 kΩ)			
R25	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)			
R26	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)			

[LOGIC UNIT] (IC-T21A/E)

REF.	ORDER	· <i>'</i>	
NO.	NO.	D	ESCRIPTION
R27	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R28	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R29	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
l			(EUR, DEN, ITA)
R30	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
D24	7020002580	S.RESISTOR	(EUR, DEN, ITA)
R31	7030003560	3.RE3131UR	ERJ3GEYJ 103 V (10 kΩ) (EUR, DEN, ITA)
R38	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R39	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R40	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R42	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R43	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R44	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R45	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R46	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R47	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R48	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R49	7030003800	S.RESISTOR S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ) ERJ3GEYJ 223 V (22 kΩ)
R50 R51	7030003600	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R52	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R53	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R54	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R55	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R56	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
l	1		
	1		
C1	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C2	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C3	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C4	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C5 C6	4030007060	S.CERAMIC S.CERAMIC	C1608 CH 1H 270J-T-A C1608 CH 1H 560J-T-A
C7	4030007100	S.CERAMIC	C1608 CH 1H 150J-T-A
C8	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C9	4550006320	S.TANTALUM	ECST0JY475R
C10	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C11	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C12	4550006220	S.TANTALUM	TEMSVA 0J 156M-8L
C13	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C14	4550006400	S.TANTALUM	ECST0JP225R
C21	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C23	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C24 C25	4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 JB 1C 473K-T-A
C23	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C28	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C29	4550006150	S.TANTALUM	ECST1CY105R
C30	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C33	4030008560	S.CERAMIC	C1608 CH 1H 300J-T-A
C34	4030008560	S.CERAMIC	C1608 CH 1H 300J-T-A
	0540000555	CDEAKEE	E40 004040
SP1	2510000580	SPEAKER	EAS-2P104D
BT1	3020000240	LITHIUM	VI 1220 1E511
l "''	3020000240	LITTOM	VL1220-1F5U
I			
DS1	5030000970	LCD	LD-B5666J (E-5848)
DS2	5040001110	S.LED	SLM-23VMWS T97B
DS3	5040001790	S.LED	CL-170G-CD-T
DS4	5040001790	S.LED	CL-170G-CD-T
		İ	
l			
S1	2230000900	S.SWITCH	JPM1990-2013R [POWER]
S2	2260001680	S.SWITCH	SKQDPB
S3	2260001680	S.SWITCH	SKQDPB
			S.=Surface mount

[LOGIC UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.	DESCRIPTION				
S4	2260001680	s.switch	SKQDPB			
S201	2260001680	S.SWITCH	SKQDPB			
EP2	0910039914	PCB	B 3954D	(LOGIC)		
EP5	0910039944	FPC	B 3972D			
			(Flexible cable	•		
EP6	8930030370	LCD CONTACT	SRCN-1388 SG	i		
EP204	0910039931	FPC	B 3970A	(PTT)		

[1F UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.		DESCRIPTION
IC1	1110003370	S.IC	μРС2748Т-Е3
IC2	1150001370	IC	SC-1257
Q1	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q2	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q3	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q4 Q5	1590001680 1590002010	S.TRANSISTOR S.TRANSISTOR	XP1110(TX) XP1114(TX)
Q6	1590001140	S.TRANSISTOR	UN9210(TX)
Q7	1560000550	S.FET	2SK882-Y (TE85R)
Q8 Q9	1590001670 1590001850	S.TRANSISTOR S.TRANSISTOR	XP4316(TX) UN9116(TX)
Q10	1530002570	S.TRANSISTOR	2SC4405-3-TR
Q11	1530003170	S.TRANSISTOR	2SC4863-4-TR
Q12 Q13	1590001960 1530003180	S.TRANSISTOR S.TRANSISTOR	XP4311(TX) 2SC4211-7-TR
Q14	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q15	1590001160	S.TRANSISTOR	XP1401-(TX).AB
Q16	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q17 Q18	1540000350 1530002600	S.TRANSISTOR S.TRANSISTOR	2SD2216-S(TX) 2SC4215-O (TE85R)
Q20	1590001130	S.TRANSISTOR	UN9110(TX)
Q21	1530002560	S.TRANSISTOR	2SC4403-3-TR
Q22	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q23	1590001130	S.TRANSISTOR	UN9110(TX)
D1	1790000620	S.DIODE	MA77(TW)
D2 D4	1790000620 1790000840	S.DIODE S.DIODE	MA77(TW) MA132WA(TX)
D6	1790000620	S.DIODE	MA77(TW)
D7	1790000620	S.DIODE	MA77(TW)
D8 D9	1750000360 1790000620	S.DIODE S.DIODE	1SS364(TE85L) MA77(TW)
D10	1790000620	S.DIODE	MA77(TW)
D12	1790000620	S.DIODE	MA77(TW)
D13	1720000360	S.DIODE	HSU88TRF HSU88TRF
D14 D15	1720000360 1750000260	S.DIODE S.DIODE	1SS352 (TPH3)
D16	1750000260	S.DIODE	1SS352 (TPH3)
D17	1790001030	S.DIODE	SB30-03P-TD
D18 D19	1750000260 1750000260	S.DIODE S.DIODE	1SS352 (TPH3) 1SS352 (TPH3)
D20	1790000620	S.DIODE	MA77(TW)
D21	1790000620	S.DIODE	MA77(TW)
D22	1790000620	S.DIODE S.DIODE	MA77(TW)
D23 D24	1790000620 1790000620	S.DIODE S.DIODE	MA77(TW) MA77(TW)
D25	1790000840	S.DIODE	MA132WA(TX)
D26	1750000260	S.DIODE	1SS352 (TPH3)
FI1	2010001610	MONOLITH	FL-202 UM-5 30.850MHz
L1	6110002070	COIL	LA-227
L2	6110002120	COIL	LA-228
L3	6110002120	COIL	LA-228
L4 L5	6200002670 6200002670	S.COIL S.COIL	LL2012-F47NK LL2012-F47NK
L6	6200002460	S.COIL	LL2012-F18NK
	1	L	

[1F UNIT] (IC-T21A/E)

REF.	ORDER NO.		DESCRIPTION
		8 0011	LL 2012 E1CNIV
L7	6200002460	S.COIL S.COIL	LL2012-F18NK LL2012-F22NK
L8 L9	6200002230 6200002230	S.COIL	LL2012-F22NK LL2012-F22NK
L11	6200002450	S.COIL	LL2012-F15NK
L13	6200002440	S.COIL	LL2012-F10NK
L14	6200002440	S.COIL	LL2012-F10NK
L15	6200000860	S.COIL	LQH 3N 1R8M
L16	6200001630	S.COIL	ELJNC R10K-F
L17	6200003670	S.COIL	ELJNC 68NK-F
L18 L19	6200001770 6200001520	S.COIL S.COIL	ELJNC 47NK-F MLF2012D R82K-T
L20	6200001320	S.COIL	LQN 1A 47NJ04
L21	6200002440	S.COIL	LL2012-F10NK
L22	6200002440	S.COIL	LL2012-F10NK
L23	6200002450	S.COIL	LL2012-F15NK
L24	6200002440	S.COIL	LL2012-F10NK
L25	6200002710	S.COIL	ELJFC 1R8K-F
R1	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R2	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R3	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R4	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R6 R7	7030003610 7030003610	S.RESISTOR S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ) ERJ3GEYJ 273 V (27 kΩ)
R8	7030003310	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R9	7030003300	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R10	7030003380	S,RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R12	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R13	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R14	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R15	7030003290	S.RESISTOR	ERJ3GEYJ 580 V (56 Ω)
R16 R17	7030003420 7030003480	S.RESISTOR S.RESISTOR	ERJ3GEYJ 681 V (680 Ω) ERJ3GEYJ 222 V (2.2 kΩ)
R18	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R21	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R22	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R23	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R24	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R25	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R26 R27	7030003200 7030003240	S.RESISTOR S.RESISTOR	ERJ3GEYJ 100 V (10 Ω) ERJ3GEYJ 220 V (22 Ω)
R28	7030003240	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R29	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R30	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R31	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R32	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ) ERJ3GEYJ 100 V (10 Ω)
R35 R36	7030003200 7030003520	S.RESISTOR S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R37	75100003320	S.THERMISTOR	TN20-3U473LT
R38	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R39	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R40	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R41	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R42	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R43	7030003510 7030003560	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ) ERJ3GEYJ 103 V (10 kΩ)
R44 R45	7030003580	S.RESISTOR S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R46	7030003580	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R47	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R48	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R50	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)
R51	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R52	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R53	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R54 R55	7030003440 7030003520	S.RESISTOR S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ) ERJ3GEYJ 472 V (4.7 kΩ)
R56	7030003320	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R57	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R58	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R59	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R60	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R61	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
L			

[1F UNIT] (IC-T21A/E)

REF.	ORDER		DESCRIPTION
NO.	NO.		
R62	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
C1	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C2	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C3	4030007060	S.CERAMIC S.CERAMIC	C1608 CH 1H 270J-T-A C1608 CH 1H 020C-T-A
C4 C5	4030006930	S.CERAMIC	C1608 CH 1H 020C-1-A
C6	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C7	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C8 C9	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C9 C11	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A
C12	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C13	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C14 C15	4030006960	S.CERAMIC S.CERAMIC	C1608 CH 1H 050C-T-A C1608 CH 1H 101J-T-A
C16	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C17	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C18 C19	4030006930 4030006950	S.CERAMIC S.CERAMIC	C1608 CH 1H 020C-T-A C1608 CH 1H 040C-T-A
C19	4030006950	S.CERAMIC	C1608 CH 1H 030C-T-A
C21	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C22	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C23 C26	4030006980 4030006920	S.CERAMIC S.CERAMIC	C1608 CH 1H 070D-T-A C1608 CH 1H 010C-T-A
C27	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C28	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C29	4030006850 4030006950	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 CH 1H 040C-T-A
C30 C31	4030006950	S.CERAMIC	C1608 JB 1H 471K-T-A
C32	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C33	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C35 C37	4030006940 4030006860	S.CERAMIC S.CERAMIC	C1608 CH 1H 030C-T-A C1608 JB 1H 102K-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C40 C42	4030006960 4030007000	S.CERAMIC S.CERAMIC	C1608 CH 1H 050C-T-A C1608 CH 1H 090D-T-A
C42	4030007000	S.CERAMIC	C1608 CH 1H 180J-T-A
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C46	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C47 C48	4030006860 4030007050	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 CH 1H 220J-T-A
C49	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C50	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C51 C53	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C54	4550006210	S.TANTALUM	ECST1CX106R
C56	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C57 C58	4030007030 4030006860	S.CERAMIC S.CERAMIC	C1608 CH 1H 150J-T-A C1608 JB 1H 102K-T-A
C59	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C62 C63	4030006850 4550006170	S.CERAMIC S.TANTALUM	C1608 JB 1H 471K-T-A ECST1AY225R
C64	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C65	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C66	4030006850 4550006200	S.CERAMIC S.TANTALUM	C1608 JB 1H 471K-T-A ECST0JY106R
C67 C68	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C69	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C70	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C71 C72	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C73	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C74	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C75 C76	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C77	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C79	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C80	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C82 C83	4030008630 4030006850	S.CERAMIC S.CERAMIC	C1608 JF 1C 104Z-T-A C1608 JB 1H 471K-T-A
C84	4030006920	S.CERAMIC	C1808 CH 1H 010C-T-A
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[1F UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.		DESCRIPTION
C85	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C86	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C87	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C88	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C89	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C90	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C91	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C92	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C93	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C94	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C95	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C96	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C97	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C98	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C99	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C100	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C104	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
W6	7030003860	S.JUMPER	ERJ3GE JPW V
W7	7030003860	S.JUMPER	ERJ3GE JPW V
J1	6910008140	CONNECTOR	IPS-1324-03A
J2	6510016070	S,CONNECTOR	53264-2690
J2 J3	6450000870	CONNECTOR	HEC2711-01-020 [DC13.5V]
J3 J4	6450001060	CONNECTOR	HSJ1493-01-010 [SP]
J5	6450001000	CONNECTOR	HSJ1102-01-540 [MIC]
		Commediati	11001102 01:040 [mio]
EP1	0910039777	PCB	B 3879G

[2F UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.	C	DESCRIPTION
IC1	1110002810	s.ic	NJM2070M-T1
IC2	1150001100	s.ic	M66321GP-30AD
IC3	1130007480	s.ic	μPD3140GS-E1 (DS5)
IC4	1180000850	S.IC	RH5RC501A-T1
Q1	1510000880	S.TRANSISTOR	
Q2	1590001470	S.TRANSISTOR	UN9213(TX)
Q3	1590001140	S.TRANSISTOR	UN9210(TX)
Q4	1520000650	S.TRANSISTOR	2SB1201-S-TR
Q5	1590001170	S.TRANSISTOR	XP1501-(TX).AB
Q6	1590001130	S.TRANSISTOR	UN9110(TX)
Q7	1590001690	S.TRANSISTOR	UN9115(TX)
Q8	1590001140	S.TRANSISTOR	UN9210(TX)
Q9	1530003170	S.TRANSISTOR	2SC4863-4-TR
Q10	1530003170	S.TRANSISTOR	2SC4863-4-TR
Q11	1530003170	S.TRANSISTOR	
Q12	1530003170	S.TRANSISTOR	2SC4863-4-TR
Q13	1560000540	S.FET	2SK880-Y (TE85R)
Q14	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q15	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q16	1530002560	S.TRANSISTOR	2SC4403-3-TR
Q17	1530002560	S.TRANSISTOR	2SC4403-3-TR
Q18	1530002560	S.TRANSISTOR	2SC4403-3-TR
Q19	1590001970	S.TRANSISTOR	UN921E(TX)
Q20	1590001970	S.TRANSISTOR	UN921E(TX)
Q21	1590001970	S.TRANSISTOR	UN921E(TX)
Q22	1590001910	S.TRANSISTOR	UN911D(TX)
Q23	1590001910	S.TRANSISTOR	UN911D(TX)
D1	1700000000	e DIODE	MAZOO (T\A/)
D1 D2	1790000660 1790000620	S.DIODE S.DIODE	MA728(TW)
			MA77(TW)
D3	1720000370	S.VARICAP	HVU350TRF
X1	6050008730	XTAL	CR-456 CA-303H 12.8 MHz
			S. Surface meaning

[2F UNIT] (IC-T21A/E)

[2F UNIT] (IC-T21A/E)

[2F UNIT] (IC-T21A/E)			
REF. NO.	ORDER NO.		DESCRIPTION
11	6200001650	S.COIL	ELJNC 18NK-F
L1 L2	6200001650	S.COIL S.COIL	ELJNC 18NK-F ELJNC 15NK-F
L3	6200002470	S.COIL	ELJNC 12NK-F
L4	6200001760	S.COIL	ELJNC 22NK-F
L5	6190000690	S.COIL	S152111
L6	6200003620	S.COIL	LQH 3C 331K04
L7	6200001520	S.COIL	MLF2012D R82K-T
L8	6110003000	COIL	LA-486 ELJNC R18K-F
L9 L10	6200002520	S.COIL S.COIL	ELJNC RIOK-F
L10	6200003620	S.COIL	LQH 3C 331K04
R1	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R2	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R3	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R4	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R5	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R6 R7	7030003490	S.RESISTOR S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ) ERJ3GEYJ 100 V (10 Ω)
R8	7030003200	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R10	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R11	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R13	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R14 R15	7030003560 7210002330	S.RESISTOR VARIABLE	ERJ3GEYJ 103 V (10 kΩ) TP96D0014F10KB 10KA [VOL/SQL]
R16	7030003680	S.RESISTOR	[VOL/SQL] ERJ3GEYJ 104 V (100 kΩ)
R18	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R19	7030003480	S.RESISTOR	* ERJ3GEYJ 222 V (2.2 kΩ)
R20	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R21	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R22	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R23 R24	7030003330	S.RESISTOR S.RESISTOR	ERJ3GEYJ 121 V (120 Ω) ERJ3GEYJ 150 V (15 Ω)
R25	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R26	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R27	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R28	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R29	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R30 R31	7030003330 7030003410	S.RESISTOR S.RESISTOR	ERJ3GEYJ 121 V (120 Ω) ERJ3GEYJ 561 V (560 Ω)
R32	7030003410	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R33	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R34	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R35	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R36	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R37	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ) ERJ3GEYJ 470 V (47 Ω)
R38 R39	7030003280	S.RESISTOR S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R40	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R41	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R42	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R43	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R44	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R45	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R46 R47	7030003650 7030003330	S.RESISTOR S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) ERJ3GEYJ 121 V (120 Ω)
R48	7030003330	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R49	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R50	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R51	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R52	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R53	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R54 R55	7030003520 7030003520	S.RESISTOR S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ) ERJ3GEYJ 472 V (4.7 kΩ)
R56	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kQ)
R57	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kQ)
R58	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R61	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
۵.	40000000	0.0551100	0.000 10
C1	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C2	4550006150	S.TANTALUM	ECST1CY105R

REF. NO.	ORDER NO.		DESCRIPTION
СЗ	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C4	4550006160	S.TANTALUM	ECST1CY155R
C5 C6	4030008920 4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1C 473K-T-A C1608 JB 1H 471K-T-A
C7	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C10	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C11 C12	4030006860 4550006150	S.CERAMIC S.TANTALUM	ECST1CY105R
C13	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C14	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C15 C16	4030006850 4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 JB 1H 471K-T-A
C17	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C18	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C19 C20	4030007030 4030006960	S.CERAMIC S.CERAMIC	C1608 CH 1H 150J-T-A C1608 CH 1H 050C-T-A
C21	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C23	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C24	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C25 C26	4030009510 4030006860	S.CERAMIC S.CERAMIC	C1608 CH 1H 010B-T-A C1608 JB 1H 102K-T-A
C27	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L
C28	4550006220	S.TANTALUM	TEMSVA 0J 156M-8L
C29	4030006860	S.CERAMIC S.TRIMMER	C1608 JB 1H 102K-T-A
C30 C31	4610001910 4030007010	S.CERAMIC	CTZ3E-10A-W1 C1608 CH 1H 100D-T-A
C32	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C33	4550006380	S.TANTALUM	ECST1AY225KR
C34 C35	4550000530 4030007050	S.TANTALUM S.CERAMIC	TESVA 1V 104M1-8L C1608 CH 1H 220J-T-A
C36	4030007030	S.CERAMIC	C1608 JB 1H 102K-T-A
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39 C40	4030006860 4030006920	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 CH 1H 010C-T-A
C41	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C42	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C43	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C44 C45	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C46	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C48 C49	4030006860 4030007050	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 CH 1H 220J-T-A
C50	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C52	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C53 C54	4030006970 4550006110	S.CERAMIC S.TANTALUM	C1608 CH 1H 060D-T-A TEMSVB2 0J 336M8L
C55	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C56	4550006340	S.TANTALUM	ECST1AY335R
C57 C58	4030006850 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 JB 1H 102K-T-A
C59	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C62 C63	4550006220 4030006900	S.TANTALUM S.CERAMIC	TEMSVA 0J 156M-8L C1608 JB 1E 103K-T-A
C64	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
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W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	7030003860	S.JUMPER	ERJ3GE JPW V
J1	6510016050	S.CONNECTOR	52357-2690
J2	6510016080	S.CONNECTOR	53281-2490
S 1	7600000160	ENCODER	TP90N00E2014F [DIAL]
EP1	0910039805	РСВ	B 3921E (2F)
EP2	0910039803	PCB	B 3921E (2F) B 3964A (VOL/SQL)
EP3	0910041651	PCB	B 3965A (DIAL)

[3F UNIT] (IC-T21A/E)

-	T] (IC-T21A/I	- <i>,</i>	
REF.	ORDER NO.	ļ	DESCRIPTION
<u> </u>	·	0.10	TAG4400F(*** = ***
IC1	1110003490	S.IC	TA31136FN(D,EL)
IC2	1130004200	S.IC	TC4S66F (TE85R)
IC3	1130004200	S.IC	TC4S68F (TE85R)
IC4	1110003480	S.IC	S-81330HG-KB-T1
IC5	1130004170	S.IC	TC4S01F (TE85R)
IC6	1130003760	S.IC	TC4S81F (TE85R)
IC7	1130003760	S.IC	TC4S81F (TE85R)
IC8	1130003760	S.IC	TC4S81F (TE85R)
IC9	1110003410	S.IC	μPC5023GR-043-GJG-T2
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Q1	1590001920	S.TRANSISTOR	UN911F(TX)
Q2	1590001170	S.TRANSISTOR	XP1501-(TX).AB
Q3	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q4	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q5	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q6	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q7	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q8	1530003180	S,TRANSISTOR	2SC4211-7-TR
Q9	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q10	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q11	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q12	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q13	1590001860	S.TRANSISTOR	UN9215(TX)
Q14	1590001130	S.TRANSISTOR	UN9110(TX)
Q15	1590001140	S.TRANSISTOR	UN9210(TX)
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l			
D1	1750000260	S.DIODE	1SS352 (TPH3)
D2	1750000260	S.DIODE	1SS352 (TPH3)
D3	1750000260	S.DIODE	1SS352 (TPH3)
03	1730000200	O.DIODE	100002 (11110)
FI1	2020000980	CERAMIC	KBF-455PS-15A2C
l ' ''	202000000	OLT I TIMO	1181 4301 0 10/120
ŀ			
X1	6050008920	XTAL	CR-457 UM-5 30.395160MHz
X2	6070000130	DISCRI	CDBM455C24
^2	0070000100	Dioonii	ODB///1-03024
R1	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R2	7310003740	S.TRIMMER	EVM-1XSX50 BE3 (222)
R3	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R4	7030003440	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R5	7030003030	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R6	7030003440	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R7		S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
l .	7030003500 7030003590	1	ERJ3GEYJ 183 V (18 kΩ)
R8		S.RESISTOR	, ,
R9	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R10	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R11	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R12	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R13	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R14	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R15	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R16	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R17	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R18	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R19	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R20	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R21	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R22	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R23	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R24	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R25	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R26	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R27	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R28	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R29	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R30	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R31	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R32	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R33	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R34	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R36	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
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3F UNIT] (IC-T21A/E)			
REF. NO.	ORDER NO.		DESCRIPTION
R37	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) (USA)
	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ) (EUR, TPE, AUS, DEN,
R38	7030003710	S.RESISTOR	SEA, ITA) ERJ3GEYJ 184 V (180 kΩ)
R40	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R41	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R42	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ) (USA, TPE, SEA, AUS)
	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ) (EUR, DEN, ITA)
R43	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ) (USA, TPE, SEA, AUS)
	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ) (EUR, DEN, ITA)
R44	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ) (USA, TPE, SEA, AUS)
	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) (EUR, DEN, ITA)
R45	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R46	7310003630	S.TRIMMER	EVM-1XSX50 BQ4 (473)
R54 R55	7310003580 7030003600	S.TRIMMER S.RESISTOR	EVM-1XSX50 B15 (104) ERJ3GEYJ 223 V (22 kΩ)
R57	7030003800	S.RESISTOR	ERJ3GEYJ 223 V (22 K2) ERJ3GEYJ 471 V (470 Ω)
R58	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C2 .	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C3	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C4	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C5 C6	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C7	4030006860	S.CERAMIC	C1608 JB 1H 102K-1-A
C8	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C10	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C11	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C12	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4030008960 4030006900	S.CERAMIC	C2012 JB 1C 104K-T-A
C15 C16	4030006900	S.CERAMIC S.CERAMIC	C1608 JB 1E 103K-T-A C1608 JB 1E 103K-T-A
C17	4550008170	S.TANTALUM	ECST1AY225R
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4550006140	S.TANTALUM	ECST1EY474R
C20	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C21	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C22	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C23	4030008470	S.CERAMIC	C1608 JB 1H 272K-T-A
C24 C25	4030009580 4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1H 681K-T-A C1608 JB 1H 471K-T-A
C25	4550008170	S.TANTALUM	ECST1AY225R
C27	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C28	4550006170	S.TANTALUM	ECST1AY225R
C29	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C30	4550006170	S.TANTALUM	ECST1AY225R
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4550006320	S.TANTALUM	ECSTOJY475R
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34 C35	4550006200 4550006150	S.TANTALUM S.TANTALUM	ECST0JY106R ECST1CY105R
C35	4030006150	S.CERAMIC	C1608 JB 1H 471K-T-A
C37	4030008940	S.CERAMIC	C2012 JB 1C 683K-T-A
C38	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C39	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A (USA)
	4030008860	S.CERAMIC	C1608 JB 1C 153K-T-A (EUR, TPE, AUS, DEN, SEA, ITA)
C40	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C41	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C42	4550006300	S.TANTALUM	ECST1AY475R
C43	4550006200	S.TANTALUM	ECST0JY106R
		1	

[3F UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.		DESCRIPTION
C44	4020000000	S.CERAMIC	C1608 JB 1H 471K-T-A
C44 C45	4030006850 4550006150	S.TANTALUM	ECST1CY105R
C45	4550006150	S.TANTALUM	ECST1CY105R ECST1CY105R
C47	4030006130	S.CERAMIC	C1608 JB 1H 222K-T-A
L C48	4030008870	S.CERAMIC	(USA, TPE, SEA, AUS)
	4030006880	S.CERAMIC	(USA, 1PE, SEA, AUS) C1608 JB 1H 472K-T-A
	4030006880	S.CERAMIC	
C49	4030008770	S.CERAMIC	(EUR, DEN, ITA) C1608 JB 1H 562K-T-A
C49	4030008770	S.CERAMIC	
ĺ	4030006850	S.CERAMIC	(USA, TPE, SEA, AUS) C1608 JB 1H 471K-T-A
Ī	4030006850	S.CERAMIC	
C50	4030007140	S.CERAMIC	(EUR, DEN, ITA) C1608 CH 1H 121J-T-A
CSU	4030007140	S.CERAWIC	(USA, TPE, SEA, AUS)
	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
	4030000630	3.CENAWIC	(EUR, DEN, ITA)
C51	4030009970	S.CERAMIC	C1608 JB 1H 182K-T-A
C52	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C52	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C54	4030008630	S.CERAMIC	C1608 JF 1C 104K-1-A
C55	4030006860	S.CERAMIC	C1608 JP 1C 1042-1-A
C56	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C57	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
030	403000000	J.CETAMIO	C1000 3D 111 102K-1-A
J1	6510016040	S.CONNECTOR	52357-2490
J2	6510016150	S.CONNECTOR	
J3	6510014450	S.CONNECTOR	
""	33.33.4400	3.331201011	02207 2000
EP1	0910039826	РСВ	B 3953F

[UHF-VCO BOARD] (IC-T21A/E)

REF. NO.	ORDER NO.	1	DESCRIPTION
Q1	1530002920	S.TRANSISTOR	
Q2	1530002920	S.TRANSISTOR	
D1	1720000370	S.VARICAP	HVU350TRF
D2	1720000370	S.VARICAP	HVU350TRF
L1	6200001520	S.COIL	MLF2012D R82K-T
L2	6200002320	S.COIL	LQN 1A 8N8J04
R1	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R2	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R3	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 ㎏)
R4	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R5	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 ㎏)
C1	4610001880	S.TRIMMER S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC	CTZ3E-03A-W1
C2	4030006940		C1608 CH 1H 030C-T-A
C3	4030006920		C1608 CH 1H 010C-T-A
C4	4030006920		C1608 CH 1H 010C-T-A
C5	4030006860		C1608 JB 1H 102K-T-A
C6	4030006860		C1608 JB 1H 102K-T-A
C7	4030006860		C1608 JB 1H 102K-T-A
C8	4030006910		C1608 CH 1H 0R5C-T-A
J1 J2 J3 EP1	6910008020 6910008020 6910008020 0910039812	CONNECTOR CONNECTOR CONNECTOR	IPS-1323 IPS-1323 IPS-1323 B 3922B

[16KEY UNIT] (IC-T21A/E)

REF. NO.	ORDER NO.	DESCRIPTION	
D1	1790000990	S.ZENER	MA8051-H(TX)
C1	1730002320	S.ZENER	MA8051-M(TX)
C101	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
MC101	7700001570	MICROPHONE	KUF3323-010010
EP3	0910039923	FPC	B 3969C

[PRT UNIT] (IC-T21A/E, IC-S21A/E)

	EF. IO.	ORDER NO.	Г	DESCRIPTION
Q1		1520000460	S.TRANSISTOR	2SB1132 T100 R
Q2		1530003180	S.TRANSISTOR	2SC4211-7-TR
Q3	,	1590001930	S.TRANSISTOR	IMX2 T108
Q4		1590001730	S.TRANSISTOR	UN9113(TX)*
		.======		
D1		1750000130	S.DIODE	DA204U T107
D2		1790001030	S.DIODE	SB30-03P-TD
D3		1790000840	S.DIODE	MA132WA(TX)
1				
R1		7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R2		7030000080	S.RESISTOR	MCR10EZHJ 3.3 Ω (3R3)
1				
C1		4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C2		4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C3		4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C4		4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C5		4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C6		4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
W1		7030003860	S.JUMPER	ERJ3GE JPW V
EP	1	0910039862	РСВ	B 3971B

[AF C BOARD] (IC-T21A/E, IC-S21A/E)

REF. NO.	ORDER NO.	DESCRIPTION	
C1	4510005610	ELECTROLITIC	ECA 0JG 101X
C2	4510005610	ELECTROLITIC	ECA 0JG 101X
СЗ	4510005610	ELECTROLITIC	ECA 0JG 101X
EP1	0910039851	РСВ	B 3966A

[VHF-RFA BOARD] (IC-T21A/E, IC-S21A/E)

REF. NO.	ORDER NO.	E	DESCRIPTION
Q1 Q2	1530003170 1530002560	S.TRANSISTOR S.TRANSISTOR	2SC4863-4-TR 2SC4403-3-TR
^u ²	1530002560	5.THANSISTUR	25C4403-3-1R
D1	1790000620	S.DIODE	MA77(TW)
D2	1720000370	S.VARICAP	HVU350TRF
D3	1790000620	S.DIODE	MA77(TW)
D4	1720000370	S.VARICAP	HVU350TRF
D5	1720000370	S.VARICAP	HVU350TRF
D6	1790000620	S.DIODE	MA77(TW)
D7	1790000980	S.DIODE	MA742(TX)
R1	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R2	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R3	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
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[VHF-RFA BOARD] (IC-T21A/E, IC-S21A/E)

[1111-111 A BOARD] (10-121A/E, 10-021A/E)					
REF. NO.	ORDER NO.		DESCRIPTION		
	7	a projetop	ED IOOEVI coo V (co O)		
R4	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)		
R5	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)		
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)		
R7	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)		
R8	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)		
R9	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)		
R10	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)		
R11	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)		
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)		
C1	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A		
C2	4030007030	S.CERAMIC	C1608 JB 1H 102K-T-A		
C3	4030007000	S.CERAMIC	C1808 CH 1H 090D-T-A		
C4	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A		
C5	4030007000	S.CERAMIC	C1608 CH 1H 470J-T-A		
C6	40300076860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C7	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C10	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C11	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A		
C12	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A		
C13	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A		
C14	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A		
C15	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A		
C16	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A		
C17	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A		
		1			
	1				
EP1	6910003420	LEADFRAM	AR1.27-0.7-12.3		
EP2	0910039783	PCB	B 3919C		
		l			

[VHF-RFB BOARD] (IC-T21A/E, IC-S21A/E)

REF. NO.	ORDER NO.	DESCRIPTION		
L1	6150003120	COIL	LS-321	
L2	6150003120	COIL	LS-321	
L3	6150003430	COIL	LS-378	
EP1	0910039793	РСВ	B 3920C	

[TSQL UNIT] (USA version only)

REF. NO.	ORDER NO.		DESCRIPTION
IC1	1130003920	s.ic	TC4S69F (TE85R)
IC2	1130007220	S.IC	AK2341-T
X1	6050008720	XTAL	CR-446 AT-38 3.6864MHz
R1	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R2	7030003770	S.RESISTOR	ERJ3GEYJ 564 V (560 kΩ)
R3	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R4	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R5	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R6	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R7	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R8	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R9	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R10	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R11	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R12	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R13	7030003770	S.RESISTOR	ERJ3GEYJ 564 V (560 kΩ)
R14	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
C1	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C2	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C3	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C4	4550006200	S.TANTALUM	ECST0JY106R
	!		

[TSQL UNIT] (USA version only)

REF. NO.	ORDER NO.	DESCRIPTION	
C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15	4030006850 4030007130 4550006320 4550006150 4550006150 4030007090 4030007090 4030007090 4030007090 4550006150	S.CERAMIC S.CERAMIC S.TANTALUM S.TANTALUM S.TANTALUM S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 CH 1H 101J-T-A ECST0JY475R ECST1CY105R ECST1CY105R C2012 JB 1C 104K-T-A C1608 CH 1H 470J-T-A C1608 CH 1H 470J-T-A C1608 CH 1H 470J-T-A C1608 CH 1H 470J-T-A C1608 CH 1H 470J-T-A ECST1CY105R
J1 EP1	6510016380 0910040052	S.CONNECTOR PCB	52465-1091 B 3979B

[LOGIC UNIT] (IC-S21A/E)

REF. NO.	ORDER NO.		ESCRIPTION
IC1	1140004140	S.IC	HD404629B27H
IC2	1110003380	S.IC	S-80730SL-AT-T1
IC3	1130003920	S.IC	TC4S69F (TE85R)
IC5	1120002440	S.IC	TC74AC08FS(EL)
IC6	1190000260	S.IC	24LC08BTI/SN
Q1	1590001470	S.TRANSISTOR	UN9213(TX)
Q2	1530001470	S.TRANSISTOR	2SC4211-7-TR
Q2 Q4	1590001840	S.TRANSISTOR	XN4601(TX)
			2SB1132 T100 R
Q6	1520000460	S.TRANSISTOR	
Q7	1530003180	S.TRANSISTOR	2SC4211-7-TR
Q8	1510000880	S.TRANSISTOR	2SA1622-6-TR
Q9	1590001830	S.TRANSISTOR	XN1117(TX)
Q10	1590001140	S.TRANSISTOR	UN9210(TX)
Q13	1590001130	S.TRANSISTOR	UN9110(TX)
D1	1750000260	S.DIODE	1SS352 (TPH3)
D2	1750000260	S.DIODE	1SS352 (TPH3)
D3	1750000280	S.DIODE	DA204U T107
D4	1750000260	S.DIODE	1SS352 (TPH3)
D5	1790000820	S.DIODE	MA132K(TX)
D7	1790001200	S.DIODE	MA6S121(TX)
D9	1790001200	S.DIODE	MA6S121(TX)
D10	1750000260	S.DIODE	1SS352 (TPH3)
D11	1750000260	S.DIODE	1SS352 (TPH3)
D12	1790000820	S.DIODE	MA132K(TX) (USA, TPE)
	1790000830	S.DIODE	MA132HK(TX) (EUR, AUS)
	1790000850	S.DIODE	MA132WK(TX) (SEA)
D13	1790000820	S.DIODE	MA132K(TX)
			(USA, AUS, SEA, ITA)
D14	1750000260	S.DIODE	1SS352 (TPH3)
D15	1790000820	S.DIODE	MA132K(TX)
D17	1750000340	S.DIODE	1SS357 (TPHR3)
X1	6060000520	S.CERAMIC	CSAC2.00MGC200-TC
X1 X2	6050008760	XTAL	CR-462 32.768KHz
^2	0030008760	I A I AL	On:402 32.700NHZ
R1	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R2	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R3	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R4	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R5	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R6	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R7	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R13	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
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S.=Surface mount

[LOGIC UNIT] (IC-S21A/E)

	OPPER			
REF. NO.	ORDER NO.		DESCRIPTION	
.,,	110.			
R14	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R15	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R16	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
R17	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)	
R18	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
R19	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R21	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)	
R22	7410000750	S.ARRAY	EXB-V4V 104JV (100 kQ)	
R23 R24	7410000750 7410000800	S.ARRAY S.ARRAY	EXB-V4V 104JV (100 kΩ) EXB-V8V 103JV (10 kΩ)	
R25	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R26	7030003640	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R27	7030003380	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)	
R28	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)	
R29	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)	
			(EUR, ITA)	
R30	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)	
			(EUR, ITA)	
R31	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
			(EUR, ITA)	
R38	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R39	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R40	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)	
R42	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R43	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R44	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R45	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)	
R46	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R47	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R48	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R49	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)	
R50	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
R51	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R52	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R53	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R55	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R56	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
١		0.0554440	04000 15 40 40 47 7 4	
C1	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A	
C2	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A	
C3	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A	
C4	4030008630 4030007060	S.CERAMIC S.CERAMIC	C1608 JF 1C 104Z-T-A	
C5			C1608 CH 1H 270J-T-A C1608 CH 1H 560J-T-A	
C6	4030007100	S.CERAMIC S.CERAMIC	C1608 CH 1H 150J-T-A	
C7	4030007030	S.CERAMIC S.CERAMIC	C1608 CH 1H 150J-T-A	
C8 C9	4030007030 4550006320	S.TANTALUM	ECSTOJY475R	
·	4030006860		C1608 JB 1H 102K-T-A	
C10	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-1-A C1608 JB 1H 102K-T-A	
C11 C12	4550006880	S.TANTALUM	TEMSVA 0J 158M-8L	
C12	4030006220	S.CERAMIC	C1608 JB 1H 471K-T-A	
C13	4550006400	S.TANTALUM	ECSTOJP225R	
C14 C21	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C21	4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A	
C23	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C25	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A	
C29	4550006150	S.TANTALUM	ECST1CY105R	
C30	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
1				
SP1	2510000580	SPEAKER	EAS-2P104D	
n=-			VI 1000 1551	
BT1	3020000240	LITHIUM	VL1220-1F5U	
S1	2230000900	s.switch	JPM1990-2013R [POWER]	
S2	2260001680	S.SWITCH	SKQDPB	
S3	2260001680	S.SWITCH	SKQDPB	
S4	2260001680	S.SWITCH	SKQDPB	
S201	2260001680	S.SWITCH	SKQDPB	
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[LOGIC UNIT] (IC-S21A/E)

REF. NO.	ORDER NO.	DESCRIPTION	
EP2	0910042060	PCB	B 4184 (LOGIC) B 3972D (Flexible cable LOGIC-3F) SRCN-1388 SG B 3970A (PTT)
EP5	0910039944	FPC	
EP6	8930030370	LCD CONTACT	
EP204	0910039931	FPC	
DS1	5030001110	LCD	LD-BU5717J (E-5848-1)
DS2	5040001110	S.LED	SLM-23VMWS T97B
DS3	5040001790	S.LED	CL-170G-CD-T
DS4	5040001790	S.LED	CL-170G-CD-T

[1F UNIT] (IC-S21A/E)

REF. NO.	ORDER NO.	C	DESCRIPTION
IC1	1110003370	S.IC	μPC2748T-E3
IC2	1150001370	IC .	SC-1257
Q1	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q4	1590001680	S.TRANSISTOR	XP1110(TX)
Q5	1590001680	S.TRANSISTOR	XP1110(TX)
Q6	1590001140	S.TRANSISTOR	UN9210(TX)
Q7	1560000550	S.FET	2SK882-Y (TE85R)
Q8	1590001670	S.TRANSISTOR	XP4316(TX)
Q9	1590001850	S.TRANSISTOR	UN9116(TX)
Q10	1530002570	S.TRANSISTOR	2SC4405-3-TR
Q11	1530003170	S.TRANSISTOR	2SC4863-4-TR
Q12 Q13	1590001960 1530003180	S.TRANSISTOR S.TRANSISTOR	XP4311(TX) 2SC4211-7-TR
Q14	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q15	1590001180	S.TRANSISTOR	XP1401-(TX).AB
Q16	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q17	1540000350	S.TRANSISTOR	2SD2216-S(TX)
Q18	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q20	1590001130	S.TRANSISTOR	UN9110(TX)
Q21	1530002560	S.TRANSISTOR	2SC4403-3-TR
1			
D1	1790000620	S.DIODE	MA77(TW)
D2	1790000620	S.DIODE	MA77(TW)
D6	1790000620	S.DIODE	MA77(TW)
D7	1790000620	S.DIODE	MA77(TW)
D8	1750000360	S.DIODE	1SS364(TE85L)
D9	1790000620	S.DIODE	MA77(TW)
D10	1790000620	S.DIODE	MA77(TW)
D12	1790000620	S.DIODE	MA77(TW)
D13	1720000360	S.DIODE	HSU88TRF
D14 D15	1720000360 1750000260	S.DIODE S.DIODE	HSU88TRF 1SS352 (TPH3)
D18	1750000260	S.DIODE	1SS352 (TPH3)
D17	1790001030	S.DIODE	SB30-03P-TD
D18	1750000260	S.DIODE	1SS352 (TPH3)
D19	1750000260	\$.DIODE	1SS352 (TPH3)
D20	1790000620	S.DIODE	MA77(TW)
D26	1750000260	S.DIODE	1SS352 (TPH3)
Fl1	2010001610	MONOLITH	FL-202 UM-5 30.850MHz
L1	6110002070	COIL	LA-227
L2	6110002120	COIL	LA-228
L3	6110002120	COIL	LA-228
L4	6200002670	S.COIL	LL2012-F47NK
L5	6200002670	S.COIL	LL2012-F47NK
L6 L7	6200002460 6200002460	S.COIL S.COIL	LL2012-F18NK LL2012-F18NK
L8	6200002460	S.COIL	LL2012-F10NK
L9	6200002460	S.COIL	LL2012-F18NK
L11	6200002450	S.COIL	LL2012-F15NK
L15	6200000860	S.COIL	LQH 3N 1R8M
L16	6200001630	S.COIL	ELJNC R10K-F
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S.=Surface mount

[1F UNIT] (IC-S21A/E)

[1F UNIT] (IC-S21A/E)

[TF UNIT] (IC-S2TA/E)				
REF.	ORDER		DESCRIPTION	
NO.	NO.			
L17	6200003670	S.COIL	ELJNC 68NK-F	
L18	6200001770	S.COIL	ELJNC 47NK-F	
L19 L20	6200001520 6200002820	S.COIL S.COIL	MLF2012D R82K-T LQN 1A 47NJ04	
L25	6200002820	S.COIL	ELJFC 1R8K-F	
		0.00.2		
l		• PE01070P	ED 1005//1 400 1/ // 101	
R1 R2	7030003440 7030003450	S.RESISTOR S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ) ERJ3GEYJ 122 V (1.2 kΩ)	
R3	7030003430	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)	
R5	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)	
R12	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R13 R14	7030003650 7030003610	S.RESISTOR S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) ERJ3GEYJ 273 V (27 kΩ)	
R15	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)	
R16	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)	
R17 R18	7030003480 7030003400	S.RESISTOR S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ) ERJ3GEYJ 471 V (470 Ω)	
R21	7030003400	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)	
R22	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R23	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)	
R24 R25	7030003540 7030003290	S.RESISTOR S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ) ERJ3GEYJ 560 V (56 Ω)	
R26	7030003290	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)	
R27	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)	
R28	7030003490	S.RESISTOR S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)	
R29 R30	7030003490 7030003450	S.RESISTOR S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ) ERJ3GEYJ 122 V (1.2 kΩ)	
R31	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R32	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R33 R34	7030003640 7030003520	S.RESISTOR S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ) ERJ3GEYJ 472 V (4.7 kΩ)	
R35	7030003320	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)	
R36	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R37	7510000200	S.THERMISTOR	TN20-3U473LT	
R38 R39	7030003550	S.RESISTOR S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ) ERJ3GEYJ 183 V (18 kΩ)	
R40	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R41	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)	
R42 R43	7030003520 7030003510	S.RESISTOR S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ) ERJ3GEYJ 392 V (3.9 kΩ)	
R44	7030003510	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R45	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)	
R46	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)	
R47 R48	7030003530 7030003380	S.RESISTOR S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ) ERJ3GEYJ 331 V (330 Ω)	
R50	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)	
R51	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
R52 R56	7030003290	S.RESISTOR S.RESISTOR	ERJ3GEYJ 560 V (56 Ω) ERJ3GEYJ 470 V (47 Ω)	
R60	7030003200	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R61	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	
R62	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
C1	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A	
C2	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A	
C3 C4	4030007060 4030006930	S.CERAMIC S.CERAMIC	C1608 CH 1H 270J-T-A C1608 CH 1H 020C-T-A	
C5	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C6	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C7 C8	4030007070 4030006860	S.CERAMIC S.CERAMIC	C1608 CH 1H 330J-T-A C1608 JB 1H 102K-T-A	
C9	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A	
C11	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C12	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A	
C13 C14	4030007080 4030006960	S.CERAMIC S.CERAMIC	C1608 CH 1H 390J-T-A C1608 CH 1H 050C-T-A	
C15	4030000300	S.CERAMIC	C1608 CH 1H 101J-T-A	
C16	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A	
C17	4030007010 4030006940	S.CERAMIC S.CERAMIC	C1608 CH 1H 100D-T-A C1608 CH 1H 030C-T-A	
C18 C19	4030006940	S.CERAMIC S.CERAMIC	C1608 CH 1H 050C-T-A	
C20	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A	
C21	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A C1608 JB 1H 471K-T-A	
C22	4030006850	S.CERAMIC	01000 JD 1H 47 IN-1-A	
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	T] (IC-S21A/I		
REF.	ORDER NO.	ŀ	DESCRIPTION
NO.	NO.		
C23	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C29	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C31	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C33	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C35	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39 C40	4030006900 4030006960	S.CERAMIC S.CERAMIC	C1608 JB 1E 103K-T-A C1608 CH 1H 050C-T-A
C40	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C44	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C46	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C48	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C49	4030007040 4030007040	S.CERAMIC S.CERAMIC	C1608 CH 1H 180J-T-A C1608 CH 1H 180J-T-A
C50 C51	4030007040	S.CERAMIC	C1608 JB 1H 102K-T-A
C53	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C54	4550006210	S.TANTALUM	ECST1CX106R
C56	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C57	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C59 C60	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C61	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A
C62	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C63	4550006170	S.TANTALUM	ECST1AY225R
C64	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C65	4030008850	S.CERAMIC	C1608 JB 1H 471K-T-A
C66	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C67	4550006200	S.TANTALUM	ECSTOJY106R
C68 C69	4030006850 4030006850	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 JB 1H 471K-T-A
C70	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C71	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C72	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C73	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C74	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C75 C76	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A
C77	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C79	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C80	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C82	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C83	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C89 C90	4030006850 4030007050	S.CERAMIC S.CERAMIC	C1608 JB 1H 471K-T-A C1608 CH 1H 220J-T-A
C91	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C97	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C98	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C100	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C104	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A C1608 JB 1H 102K-T-A
C105 C106	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-1-A C1608 JB 1H 102K-T-A
1 -,		3.02.7	2.000 00 111 102N 1 M
W6	7030003860	S.JUMPER	ERJ3GE JPW V
1			
J ₁	6910008140	CONNECTOR	IPS-1324-03A
J2	6510016070	S.CONNECTOR	53264-2690
J3	6450000870	CONNECTOR	HEC2711-01-020 [DC13.5V]
J4	6450001060	CONNECTOR	HSJ1493-01-010 [SP]
J5	6450000130	CONNECTOR	HSJ1102-01-540 [MIC]
EP1	0910041874	PCB	B 4166D
""	0010041074	, 00	D 4100D
L	<u></u>	L	
			S -Surface mount

[2F UNIT] (IC-S21A/E)

ORDER DESCRIPTION NO. NO. IC1 1110002810 S.IC NJM2070M-T1 1150001100 M66321GP-30AD IC2 S.IC μPD3140GS-E1 (DS5) 1130007480 S.IC IC3 1180000850 RH5RC501A-T1 IC4 S.IC 1510000880 S.TRANSISTOR 2SA1622-6-TR Q1 1590001470 S.TRANSISTOR Q2 UN9213(TX) 04 1520000650 S.TRANSISTOR 2SB1201-S-TR 1590001170 S.TRANSISTOR Q5 XP1501-(TX).AB S.TRANSISTOR UN9110(TX) Q6 1590001130 O8 1590001140 S.TRANSISTOR UN9210(TX) Q13 1560000540 S.FET 2SK880-Y (TE85R) S.TRANSISTOR 2SC4228-T2 R25 Q14 1530002920 1530002920 S.TRANSISTOR 2SC4226-T2 R25 Q15 1530002560 S.TRANSISTOR 2SC4403-3-TR 016 Q17 1530002560 S.TRANSISTOR 2SC4403-3-TR Q18 1530002560 S.TRANSISTOR 2SC4403-3-TR Q19 1590001970 S.TRANSISTOR UN921E(TX) Q20 1590001970 S.TRANSISTOR UN921E(TX) 1590001970 S.TRANSISTOR UN921E(TX) Q21 UN911D(TX) 022 1590001910 S.TRANSISTOR Q23 1590001910 S.TRANSISTOR UN911D(TX) 1790000660 S.DIODE D1 MA728(TW) D2 1790000620 S.DIODE MA77(TW) S.VARICAP HVU350TRF 1720000370 D3 6050008730 **XTAL** CR-456 CA-303H 12.8 MHz X1 6190000690 S.COIL 1.5 S152111 LQH 3C 331K04 6200003620 16 S.COIL L7 6200001520 S.COIL MLF2012D R82K-T 6110003000 COIL LA-486 L8 S.COIL 6200002520 ELJNC R18K-F L9 6200003300 S.COIL **ELJNC R22K-F** L10 LQH 3C 331K04 6200003620 S.COIL 111 7030003400 S.RESISTOR ERJ3GEYJ 471 V (470 Ω) R1 R2 7030003400 S.RESISTOR ERJ3GEYJ 471 V (470 Ω) RЗ 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) 7030003450 S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) R4 ERJ3GEYJ 102 V (1 kΩ) 7030003440 S.RESISTOR R5 R6 7030003490 S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) R7 7030003200 S.RESISTOR ERJ3GEYJ 100 V (10 Ω) 7030003570 S.RESISTOR ERJ3GEYJ 123 V (12 kΩ) R10 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) R11 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) R12 ERJ3GEYJ 122 V (1.2 kΩ) R13 7030003450 S.RESISTOR R14 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) 7210002330 **VARIABLE** TP96D0014F10KB 10KA R15 IVOL/SQL1 R16 7030003680 S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) 7030003650 S.RESISTOR ERJ3GEYJ 563 V (56 kΩ) R32 7030003470 S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ) R33 R34 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) R35 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) 7030003500 S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) R36 R37 7030003720 S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) ERJ3GEYJ 470 V (47 Ω) 7030003280 S.RESISTOR R38 ERJ3GEYJ 221 V (220 Ω) S.RESISTOR R39 7030003360 R40 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) R41 7030003560 S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) S.RESISTOR R42 7030003360 ERJ3GEYJ 221 V (220 Ω) R43 7030003660 S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) 7030003310 S.RESISTOR ERJ3GEYJ 820 V (82 Ω) R44 R45 7030003360 S.RESISTOR ERJ3GEYJ 221 V (220 Ω) R46 7030003650 S.RESISTOR ERJ3GEYJ 563 V (56 kΩ) R47 7030003330 S.RESISTOR ERJ3GEYJ 121 V (120 Ω) R48 7030003220 S.RESISTOR ERJ3GEYJ 150 V (15 Ω) 7030003220 S.RESISTOR ERJ3GEYJ 150 V (15 Ω) R49 **R50** 7030003220 S.RESISTOR ERJ3GEYJ 150 V (15 Ω)

[2F UNIT] (IC-S21A/E)

[2F UNI	[2F UNIT] (IC-S21A/E)						
REF. NO.	ORDER NO.	DESCRIPTION					
R51	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)				
R52	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)				
R53	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)				
R54	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)				
R55	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)				
R56	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)				
R57	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ) ERJ3GEYJ 474 V (470 kΩ)				
R58 R60	7030003760	S.RESISTOR S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)				
1100	700000000	O.HEOIOTOTT	2.10042.10001.7 (000 32)				
C1 C2	4030006850 4550006150	S.CERAMIC S.TANTALUM	C1608 JB 1H 471K-T-A ECST1CY105R				
C3	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A				
C4	4550006160	S.TANTALUM	ECST1CY155R				
C5	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A				
C6	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A				
C7	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A				
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C10 C11	4030006860 4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A				
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C27	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L				
C28	4550006220	S.TANTALUM	TEMSVA 0J 156M-8L				
C29	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C30	4610001910	S.TRIMMER	CTZ3E-10A-W1				
C31	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A				
C32 C33	4030007070 4550006380	S.CERAMIC S.TANTALUM	C1608 CH 1H 330J-T-A ECST1AY225KR				
C34	4550000530	S.TANTALUM	TESVA 1V 104M1-8L				
C35	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A				
C36	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C39	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C40 C41	4030006920	S.CERAMIC S.CERAMIC	C1608 CH 1H 010C-T-A C1608 CH 1H 010C-T-A				
C42	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C43	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A				
C44	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C46	4030006930	S.CERAMIC	C1608 CH 1H 020C-T-A				
C47 C48	4030006860	S.CERAMIC S.CERAMIC	C1608 JB 1H 102K-T-A C1608 JB 1H 102K-T-A				
C49	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A				
C50	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C51	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C52	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A				
C53	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A				
C54	4550006110	S.TANTALUM S.CERAMIC	TEMSVB2 0J 336M8L C2012 JB 1C 104K-T-A				
C55 C56	4030008960 4550006340	S.CERAMIC S.TANTALUM	C2012 JB 1C 104K-1-A ECST1AY335R				
C57	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A				
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C59	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A				
C62 C63	4550006220 4030006900	S.TANTALUM S.CERAMIC	TEMSVA 0J 156M-8L C1608 JB 1E 103K-T-A				
C64	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A				
W1	7030003860	S.JUMPER	ERJ3GE JPW V				
W3	7030003860	S.JUMPER	ERJ3GE JPW V				
W4	7030003860	S.JUMPER	ERJ3GE JPW V				
J1	6510016050	S.CONNECTOR	52357-2690				
J2	6510016080	S.CONNECTOR					
S1	7600000160	ENCODER	TP90N00E2014F [DIAL]				
EP1	·	PCB	• •				
EP2	0910042011 0910042171	PCB	B 4167A (2F) B 3964A (VOL/SQL)				
EP3	0910042171	PCB	B 3965A (DIAL)				
1 ,			= seed (Dint)				
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[3F UNIT] (IC-S21A/E)

[3F UNIT] (IC-S21A/E)

[3F UN	[3F UNIT] (IC-S21A/E)						
REF. NO.	ORDER NO.		DESCRIPTION				
IC1 IC2 IC3 IC4 IC5 IC6 IC7	1110003490 1130004200 1130004200 1110003480 1130004170 1130003760 1130003760	S.IC S.IC S.IC S.IC S.IC S.IC S.IC	TA31136FN(D,EL) TC4S66F (TE85R) TC4S66F (TE85R) S-81330HG-KB-T1 TC4S01F (TE85R) TC4S81F (TE85R) TC4S81F (TE85R) TC4S81F (TE85R)				
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14	113003760 1110003410 1590001920 1590001170 1530003180 1530003180 1530003180 1520000460 1530003180 1520000460 1530003180 1520000460 1530003180 1520000460 1530003180 1590001130	S.IC S.IC S.TRANSISTOR	UN911F(TX) XP1501-(TX).AB 2SC4211-7-TR 2SC4211-7-TR 2SC4211-7-TR 2SB1132 T100 R 2SC4211-7-TR UN9215(TX) UN9110(TX)				
Q14 Q15 D1 D2 D3	17500001140 1750000260 1750000260 1750000260	S.TRANSISTOR S.DIODE S.DIODE S.DIODE S.DIODE	UN9210(TX) 1SS352 (TPH3) 1SS352 (TPH3) 1SS352 (TPH3)				
FI1 X1 X2	2020000980 6050009100 6070000130	CERAMIC XTAL DISCRI	KBF-455PS-15A2C CR-484 UM-5 30.395MHz CDBM455C24				
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R36	7030003510 7310003740 7030003440 7030003440 7030003560 7030003560 7030003560 7030003560 7030003560 7030003500 7030003500 7030003550 7030003500 7030003550 7030003550 7030003550 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003500 7030003560 7030003560 7030003560 7030003560 7030003560 7030003560 7030003560 7030003560 7030003550 7030003560 7030003550 7030003560 7030003550	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kQ) EVM-1XSX50 BE3 (222) ERJ3GEYJ 102 V (1 kQ) ERJ3GEYJ 102 V (1 kQ) ERJ3GEYJ 103 V (10 kQ) ERJ3GEYJ 103 V (10 kQ) ERJ3GEYJ 332 V (3.3 kQ) ERJ3GEYJ 332 V (3.3 kQ) ERJ3GEYJ 183 V (18 kQ) ERJ3GEYJ 183 V (10 kQ) ERJ3GEYJ 152 V (1.5 kQ) ERJ3GEYJ 152 V (1.5 kQ) ERJ3GEYJ 163 V (47 kQ) ERJ3GEYJ 181 V (180 Q) ERJ3GEYJ 181 V (180 Q) ERJ3GEYJ 181 V (180 Q) ERJ3GEYJ 102 V (1 kQ) ERJ3GEYJ 183 V (18 kQ) ERJ3GEYJ 184 V (180 kQ) ERJ3GEYJ 185 V (1 kQ) ERJ3GEYJ 185 V (1 kQ) ERJ3GEYJ 183 V (18 kQ) ERJ3GEYJ 394 V (390 kQ) ERJ3GEYJ 394 V (390 kQ) ERJ3GEYJ 393 V (39 kQ) ERJ3GEYJ 103 V (10 kQ) ERJ3GEYJ 104 V (100 kQ) ERJ3GEYJ 104 V (100 kQ) ERJ3GEYJ 104 V (100 kQ)				

REF. ORDER NO. NO.	_	[3F UNIT] (IC-S21A/E)						
R38	REF. NO.			DESCRIPTION				
R38	R 37	7030003810	S.RESISTOR					
R38		7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)				
R41	R38	7030003710	S.RESISTOR	` '				
R42 7030003630 S.RESISTOR		1	i .					
	ŧ			, ,				
R43	H42	7030003830	S.RESISTUR	• 1				
R43		7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)				
R44	R43	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)				
T030003650 S.RESISTOR		7030003640		(EUR, ITA				
CEUR, ITA FRIJAGEY J 683 V (88 kΩ)	R44			(USA, AUS, SEA, TPE)				
R46				(EUR, ITA)				
R54 7310003580 S.TRIMMER EVM-1XSX50 B15 (104) R55 7030003400 S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) R58 7030003740 S.RESISTOR ERJ3GEYJ 334 V (330 kΩ) R59 7030003580 S.CERAMIC C1608 CH 1H 070D-T-A C2 4030006800 S.CERAMIC C1608 JB 1H 150J-T-A C3 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C5 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C6 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C7 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C8 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C9 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C1 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C12 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C15 40300			I .					
R55 7030003520 S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) R58 7030003400 S.RESISTOR ERJ3GEYJ 471 V (470 Ω) R59 7030003560 S.RESISTOR ERJ3GEYJ 471 V (470 Ω) C1 4030006800 S.CERAMIC C1608 CH 1H 150J-T-A C2 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C3 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C4 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C5 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C6 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C7 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C8 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C9 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C11 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C12 4030008800 S.CERAMIC C1608 JB 1H 102X-T-A C13 4030008800 S.CERAMIC C1608 JB 1E 103X-T-A C14 40300			l ·	, ,				
R57 7030003400 S.RESISTOR ERJ3GEYJ 471 V (470 Ω) S.RESISTOR ERJ3GEYJ 334 V (330 KΩ) S.RESISTOR ERJ3GEYJ 103 V (10 kQ) S.RESISTOR ERJ3GEYJ 334 V (330 KΩ) S.CERAMIC C1608 JB 11 C104Z-T-A C1608 JB 11 C104Z-T-A C1608 JB 11 H 102X-T-A S.CERAMIC C1608 JB 11 H 102K-T-A S.CERAMIC C1608 JB 11 H 103K-T-A S.CERAMIC C1608 J		1	1	, ,				
R59	1	i	E .					
C1 4030006980 S.CERAMIC C1608 CH 1H 150J-T-A S.CERAMIC C1608 JF 1C 104Z-T-A S.CERAMIC C1608 J	R58	7030003740	S.RESISTOR					
C2 4030007030 S.CERAMIC C1608 CH 1H 150J-T-A C3 4030008850 S.CERAMIC C1608 JF 1C 104Z-T-A C4 403000880 S.CERAMIC C1608 JB 1H 471K-T-A C5 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C6 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C7 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C8 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C9 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C15 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C16 4030008800 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550008170 S.TANTALUM ECST14Y225R C21 4030008800 S.C	R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)				
C2 4030007030 S.CERAMIC C1608 CH 1H 150J-T-A C3 4030008850 S.CERAMIC C1608 JF 1C 104Z-T-A C4 403000880 S.CERAMIC C1608 JB 1H 471K-T-A C5 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C6 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C7 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C8 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C9 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C15 4030008800 S.CERAMIC C1608 JB 1H 102K-T-A C16 4030008800 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550008170 S.TANTALUM ECST14Y225R C21 4030008800 S.C	Ct	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A				
C3 4030008830 S.CERAMIC C1608 JF 1C 104Z-T-A C4 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C5 4030008860 S.CERAMIC C1608 JB 1H 102K-T-A C6 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C7 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C9 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C10 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C13 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C15 403000890 S.CERAMIC C1608 JB 1E 103K-T-A C16 403000880 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1AY225R C18 403000880 S.CERAMIC C1608 JB 1H 272K-T-A C21 403000890 S.CER		t .	ì					
C5 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C6 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C7 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C8 403000690 S.CERAMIC C1608 JB 1H 102K-T-A C9 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C10 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C13 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C14 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C15 403000690 S.CERAMIC C1608 JB 1E 103K-T-A C16 403000680 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1EY474R C20 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006170 S.CERAMIC C1608 JB 1E 103K-T-A C21 403000680 S.CERAMIC C1608 JB 1H 471K-T-A C22 4030006850 S.CER		1	S.CERAMIC	C1608 JF 1C 104Z-T-A				
C6 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C7 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C8 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C9 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C10 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C13 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C14 403000890 S.CERAMIC C1608 JB 1E 103K-T-A C15 403000890 S.CERAMIC C1608 JB 1E 103K-T-A C16 403000890 S.CERAMIC C1608 JB 1H 102K-T-A C17 4550006170 S.TANTALUM ECST1AY225R C21 403000890 S.CERAMIC C1608 JB 1H 102K-T-A C22 403000890 S.CERAMIC C1608 JB 1E 103K-T-A C21 403000890 S.CERAMIC C1608 JB 1H 102K-T-A C22 403000880 S.CERA	C4	4030006850	S.CERAMIC					
C7 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C8 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C9 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C10 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C11 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C12 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030008900 S.CERAMIC C1608 JB 1H 102K-T-A C15 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C16 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006170 S.CERAMIC C1608 JB 1H 102K-T-A C21 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008900 S.CERAMIC C1608 JB 1H 681K-T-A C24 4030008850 </td <td>i</td> <td>1</td> <td>ľ</td> <td></td>	i	1	ľ					
C8 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C9 4030008860 S.CERAMIC C1608 JB 1H 102K-T-A C10 4030008960 S.CERAMIC C2012 JB 1C 104K-T-A C12 4030008860 S.CERAMIC C1608 CH 1H 101J-T-A C13 4030008960 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030008900 S.CERAMIC C1608 JB 1H 102K-T-A C15 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C16 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1AY225R C18 4030008900 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C21 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C24 403000850 S.CERAMIC C1608 JB 1E 103K-T-A C25 403000850 <td< td=""><td></td><td></td><td></td><td></td></td<>								
C9 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C10 4030008960 S.CERAMIC C2012 JB 1C 104K-T-A C11 403000680 S.CERAMIC C1608 CH 1H 101J-T-A C12 403000680 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030008960 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C15 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C16 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1E 103K-T-A C21 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C24 4030008800 S.CERAMIC C1608 JB 1E 103K-T-A C25 4030008800 S.CERAMIC C1608 JB 1H 471K-T-A C26 403000850			l .					
C10 4030008960 S.CERAMIC C2012 JB 1C 104K-T-A C11 4030007130 S.CERAMIC C1608 JB 1H 102K-T-A C12 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030008960 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C15 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C16 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006170 S.CERAMIC C1608 JB 1H 102K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1H 272K-T-A C23 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C24 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006	B	ł .	I '					
C12 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C13 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C14 4030006900 S.CERAMIC C2012 JB 1C 104K-T-A C15 403006900 S.CERAMIC C1608 JB 1E 103K-T-A C16 403006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST14Y225R C18 4030006800 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008900 S.CERAMIC C1608 JB 1H 03K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1H 272K-T-A C23 4030006800 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERA	ľ	1	j .					
C13 4030008860 S.CERAMIC C1808 JB 1H 102K-T-A C14 4030008960 S.CERAMIC C2012 JB 1C 104K-T-A C15 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.CERAMIC C1608 JB 1E 103K-T-A C18 4030006800 S.CERAMIC C1608 JB 1E 103K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C24 4030006900 S.CERAMIC C1608 JB 1H 272K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C29 403006850	C11	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A				
C14 4030008960 S.CERAMIC C2012 JB 1C 104K-T-A C15 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C16 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1AY225R C18 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C21 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1H 603K-T-A C22 4030008900 S.CERAMIC C1608 JB 1H 603K-T-A C22 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C25 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C29 4030008860 S.CERAMIC C1608 JB 1H 471K-T-A C31 4030008860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006170 S.TANT	1	1						
C15 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.CERAMIC C1608 JB 1E 103K-T-A C18 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C29 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006170 S.TANTALUM ECST0JY106R C33 4030006850 S.CERAMIC </td <td>1</td> <td>1</td> <td>1</td> <td></td>	1	1	1					
C16 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C17 4550006170 S.TANTALUM ECST1AY225R C18 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1E 103K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C23 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C24 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006170 S.TANTALUM ECST0JY106R C33 4030006850 S.CERAMIC								
C18 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C23 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C29 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006170 S.TANTALUM ECST1AY225R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006320 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC								
C19 4550006140 S.TANTALUM ECST1EY474R C20 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008470 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030009580 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C32 4550006170 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006320 S.TANTALUM ECST0JY106R C35 455000650 S.CERAMIC C	C17	4550006170	S.TANTALUM	ECST1AY225R				
C20 4030008920 S.CERAMIC C1808 JB 1C 473K-T-A C21 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 477K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C29 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY106R C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C36 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008850 S.CERAMIC </td <td>1</td> <td>1</td> <td>1</td> <td></td>	1	1	1					
C21 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C22 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006150 S.TANTALUM ECST0JY106R C35 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C36 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030006850 S.CERAMIC	1	3	1					
C22 4030006900 S.CERAMIC C1608 JB 1E 103K-T-A C23 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 471K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006150 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C38 403000890 S.CERAMIC C1608 JB 1C 153K-T-A C39 403000890 S.CERAMIC	•	I	1					
C23 4030008470 S.CERAMIC C1608 JB 1H 272K-T-A C24 4030009580 S.CERAMIC C1608 JB 1H 681K-T-A C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030008860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006150 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C36 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C37 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C38 403000850 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC	1	1						
C25 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C29 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006200 S.TANTALUM ECST1CY105R C36 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C37 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C38 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C39 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C16								
C26 4550006170 S.TANTALUM ECST1AY225R C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 471K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.TANTALUM ECST1CY105R C36 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C1608 JB 1H 471K-T-A C38 403000890 S.CERAMIC C1608 JB 1H 103K-T-A C39 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C1608 JB 1C 153K-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006200 S.TANTALUM E	C24	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A				
C27 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C28 4550006170 S.TANTALUM ECST1AY225R C29 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C36 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C1608 JB 1H 471K-T-A C39 403000890 S.CERAMIC C1608 JB 1H 471K-T-A C40 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A (EUR, AUS, SEA, ITA, TPE) C1608 JB 1C 473K-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006300 S.TANTALUM ECST1AY475R		1	t					
C28 4550006170 S.TANTALUM ECST1AY225R C29 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 403000880 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C36 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C1608 JB 1H 471K-T-A C39 403000850 S.CERAMIC C1608 JB 1H 03K-T-A C40 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM	i	1						
C29 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.CERAMIC C1608 JB 1H 471K-T-A C36 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030008950 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030008900 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030008850 S.CERAMIC	1	1	Į.					
C30 4550006170 S.TANTALUM ECST1AY225R C31 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C32 4550006320 S.TANTALUM ECST0JY475R C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.TANTALUM ECST1CY105R C36 403000850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C38 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A C39 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A	1	1	i	- 1				
C32 4550006320 S.TANTALUM ECST0JY475R C33 4030008860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.TANTALUM ECST1CY105R C36 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030006850 S.CERAMIC C1608 JB 1H 103K-T-A C39 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A C40 4030007150 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A			1					
C33 4030006860 S.CERAMIC C1608 JB 1H 102K-T-A C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.TANTALUM ECST1CY105R C36 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C2012 JB 1C 683K-T-A C38 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030008900 S.CERAMIC C1608 JB 1C 153K-T-A (USA) 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A (EUR, AUS, SEA, ITA, TPE) C40 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C41 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 403000850 S.CERAMIC C1608 JB 1H 471K-T-A	2	1	ł					
C34 4550006200 S.TANTALUM ECST0JY106R C35 4550006150 S.TANTALUM ECST1CY105R C36 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C2012 JB 1C 683K-T-A C38 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030008900 S.CERAMIC C1608 JB 1C 153K-T-A (USA) 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A (EUR, AUS, SEA, ITA, TPE) C40 4030008920 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A	1		I .					
C35 4550006150 S.TANTALUM ECST1CY105R C36 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C37 4030008940 S.CERAMIC C2012 JB 1C 683K-T-A C38 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A C39 4030008900 S.CERAMIC C1608 JB 1E 103K-T-A (USA) (USA) S.CERAMIC C1608 JB 1C 153K-T-A (EUR, AUS, SEA, ITA, TPE) C1608 CH 1H 151J-T-A C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030008850 S.CERAMIC C1608 JB 1H 471K-T-A	i	1	1	1				
C36	ı	i .	1					
C37	3	1	1					
C39	i	1	1	i i				
(USA) 4030008860 S.CERAMIC C1608 JB 1C 153K-T-A (EUR, AUS, SEA, ITA, TPE) C40 4030007150 S.CERAMIC C1608 CH 1H 151J-T-A C41 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C42 4550008300 S.TANTALUM ECST1AY475R C43 4550008200 S.TANTALUM ECST0JY106R C44 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A				· ·				
C40				(USA)				
C41 4030008920 S.CERAMIC C1608 JB 1C 473K-T-A C42 4550006300 S.TANTALUM ECST1AY475R C43 4550006200 S.TANTALUM ECST0JY106R C44 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A	C40	4030007150	S.CERAMIC					
C43 4550006200 S.TANTALUM ECST0JY106R C44 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A	B	I .	1					
C44 4030006850 S.CERAMIC C1608 JB 1H 471K-T-A								
			L					
1400000100 OTANIALOM EGGITOTION	1	I .	1					
	~	7550000150	S. IAMIALUM	2007.107.1007.				

[3F UNIT] (IC-S21A/E)

REF.	ORDER NO.		DESCRIPTION
C47	4550006150	S.TANTALUM	ECST1CY105R
C48	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
			(USA, AUS, SEA, TPE)
	4030006880	S.CERAMIC	C1608 JB 1H 102K-T-A
			(EUR, ITA)
C49	4030008770	S.CERAMIC	C1608 JB 1H 562K-T-A
			(USA, AUS, SEA, TPE)
	4030009970	S.CERAMIC	C1608 JB 1H 182K-T-A
			(EUR, ITA)
C50	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
			(USA, AUS, SEA, TPE)
	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
		·	(EUR, ITA)
C51	4030009970	S.CERAMIC	C1608 JB 1H 182K-T-A
C52	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C53	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C54	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C55	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C56	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C57	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
	0540040040	0.0011150705	50057.0400
J1	6510016040	S.CONNECTOR	
J2	6510016150	S.CONNECTOR	
J3	6510014450	S.CONNECTOR	52204-2990
EP1	0910042020	РСВ	B 4168
EF1	0910042020	FOD	D 4100

[MIC UNIT] (IC-S21A/E)

REF. NO.	ORDER NO.	DESCRIPTION			
D1	1790000990	S.ZENER	MA8051-H(TX)		
C101	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A		
EP3	0910042140	FPC	B 4172		

SECTION 7 **MECHANICAL PARTS**

• CHASSIS PARTS

LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.	LABEL Number	ORDER NO.	DESCRIPTION	QTY.
	8210010230	1454 front panel (A) (IC-S21A)	1	26	8930029021	1388 PW button-1 [POWER]	1
1	8210010240	1454 front panel (B) (IC-S21E)	1	27	8930029010	1388 top seal	1
2	8930030800	1454 MIC holder (IC-S21A/E only)	1	28	8930028960	1388 top plate	1
	8210009530	1388 front panel (A) (IC-T21A)	1	29	8930030510	1388 top shield	1
3	8210009540	1388 front panel (B) (IC-T21E)] ' .	30	8930030690	1388 SW lug	1
4	8930028920	1388 10-key (IC-T21A/E only)	1	31)	8810005860	Screw PH No. 0 M2 × 3 NI	5
(5)	2510000580	Speaker EAS-2P104D	1	32	8930029200	Stand-off (E)	2
(6)	8930028930	1388 3-button (IC-T21A/E)	1	33	8810007930	Screw PH No. 0 M2.6 × 8.5 NI	2
	8930031200	1388 3-button (A) (IC-S21A/E)] '	34	8950003300	Electrical tape No. 1245 20 × 13	1
7	0910039931	Flexible cable B 3970A (PTT)	1	35	8010014730	1388 chassis	1
8	8930028980	1388 SW holder	1	36	8930029881	1388 module shield-1	1
9	8930029901	1388 SW sheet-1	1	37)	8930028910	1388 release button	1
10	8810006550	Screw PH B0 No. 0-3 M1.4×3 NI	5	38	8930029370	Spring (R)	1
11)	8930028970	1388 LCD rubber	1	39	8930029890	1388 PRT shield	1
12	8930028950	1388 LCD holder	1	40	8860000880	E-ring M1.2	2
	5030000970	LCD LD-B5666J (IC-T21A/E)	1	41)	8930028900	1388 contact base	1
13	5030001110	LCD LD-BU5717J (IC-S21A/E)	'	42	8930029380	Spring (S)	2
14	8930030370	LCD contact SRCN-1388 SG	2	43	8930028990	1388 contact pin	2
(15)	8210009000	1388 reflector	1	44	8930029000	1388 contact spring	1
16	7700001570	Microphone KUF3323-010010	1	45	8810007940	Screw FFH No. 0 M2×4.5 ZK	5
17	0910039944	Flexible cableB 3972D (LOGIC-3F)	1	46	8830000880	VR nut (I)	1
18	8810001710	Screw PH B0 No. 0-3 M1.4 × 3.5 ZK	4	47	8930029870	1388 ANT lug	1
19	8930028890	1388 10-key holder	1	48	6510016180	Connector SMA-R203 [ANT]	1
20	8810007920	Screw FFH PT No. 0 M2×6 ZK	2	49	8210008980	1388 rear panel	1
2 1)	8610008720	Knob N205 [VOL]	1	50	8930029090	1388 jack cover	1
22	8610008710	Knob N204 [SQL]	1	(51)	8010014982	Hole bushing (B)-2	2
23	8610008700	Knob N203 [DIAL]	1	52	8810007910	Screw PH B0 M2 × 18 ZK	2
24	8830000790	VR nut (H)	2	53	8810004370	Screw PH B0 M2 × 10 ZK	2
25	8210008990	1388 top panel	1				

Screw abbreviations

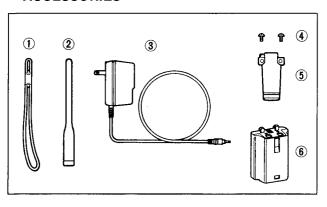
B0: Self-tapping

PH: Pan head FFH: Flat filister head

NI: Nickel

ZK: Black

• ACCESSORIES

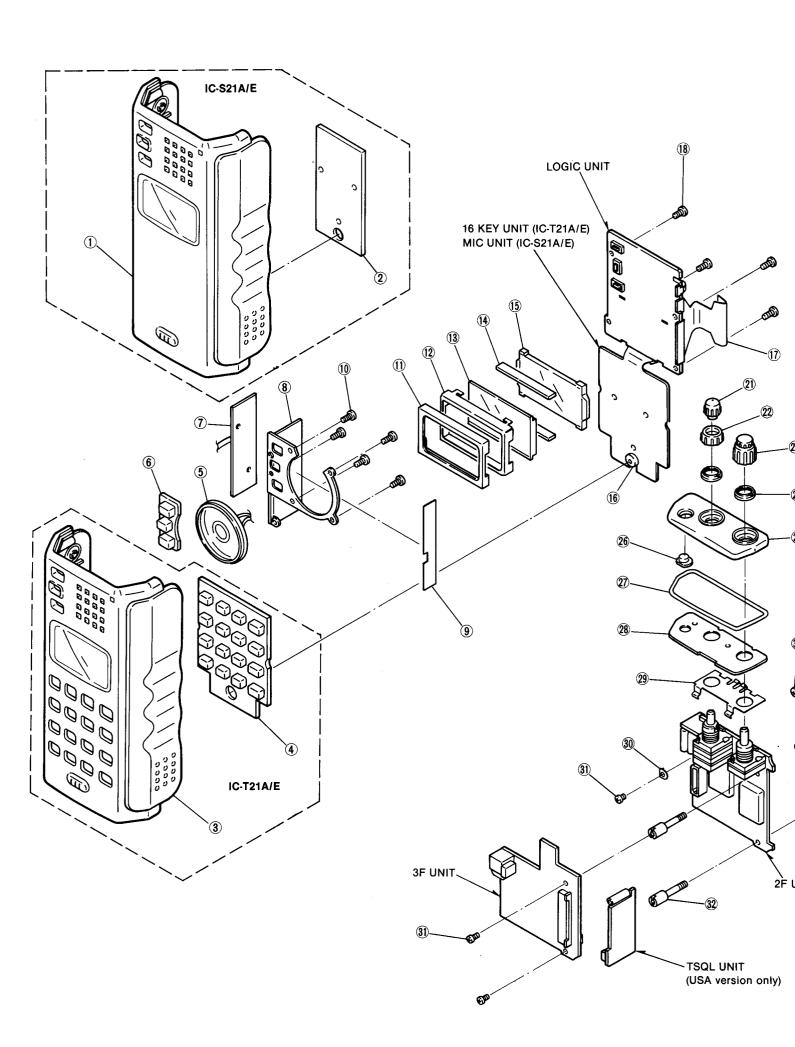


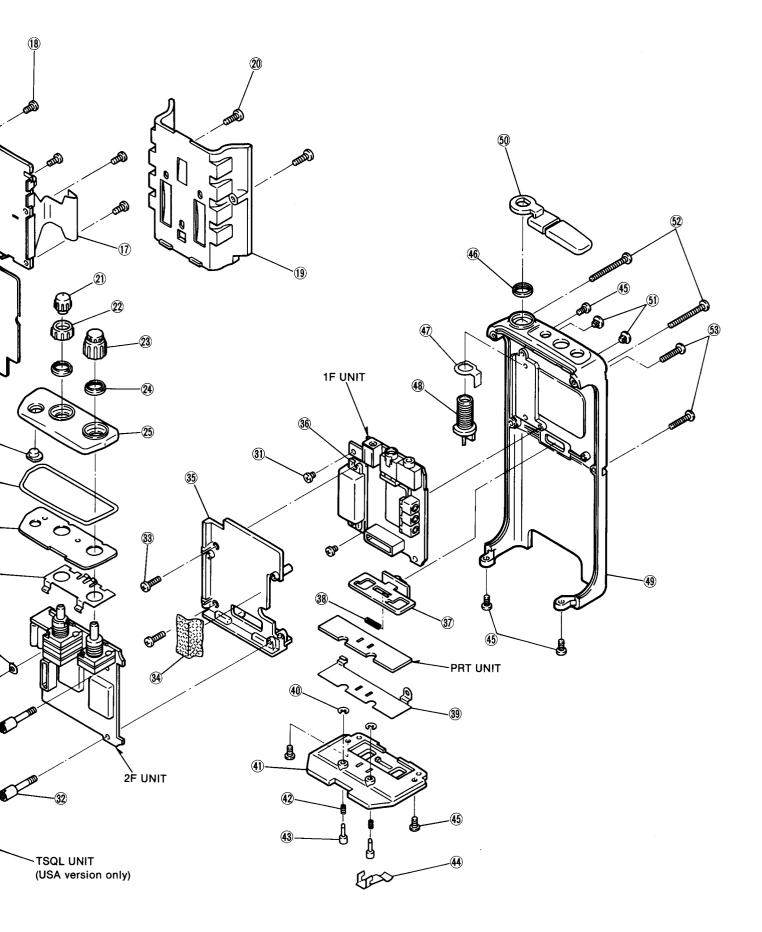
LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
1	8010015080	Handstrap	1
2	Optional product	FA-S270A ANTENNA	1
3	Optional product	BC-74D WALL CHARGER (EUR, DEN, ITA)	
		BC-74V WALL CHARGER (AUS)	ן י [
		BC-74A WALL CHARGER (USA)]
4	8810005730	Screw BuH M3×3 ZK BS	2
5	8930028940	1388 belt clip	1
6	Optional product	BP-151 BATTERY PACK (EUR, USA, AUS, DEN, ITA)	1
		BP-159 BATTERY CASE (TPE, SEA)	

Screw abbreviations

BuH: Button head BS: Brass

ZK: Black





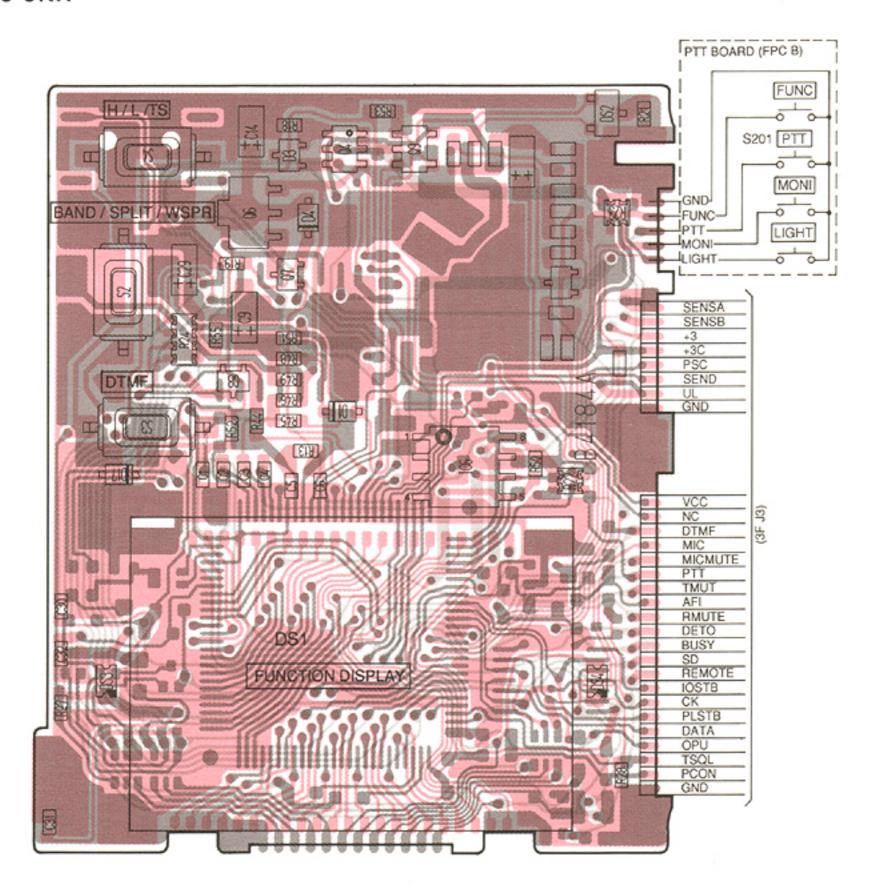
SECTION 8 **BOARD LAYOUTS**

IC-T21A/E

8-1 LOGIC UNIT

LOGIC UNIT

The combination of this page and the next page show the unit layout in the same configuration as the actual P.C. Board.







2SB1132 R



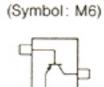


2SC4211 7

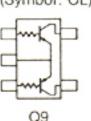




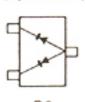
2SA1622 6



XN1117 (Symbol: OL)



DA204U (Symbol: K)



UN9213

(Symbol: 8C)



Q1

2SC4211 7

(Symbol: L7)



Q2

UN9210

(Symbol: 8L)



Q10

UN9110

(Symbol: 6L)



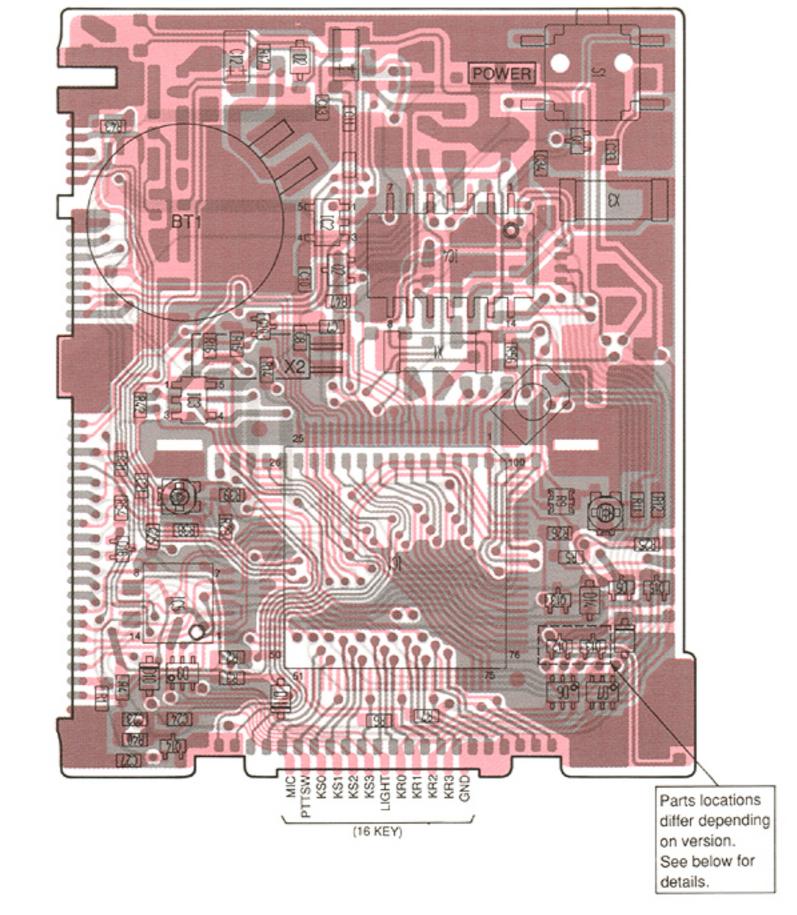
Q13

UN9217

(Symbol: 8H)

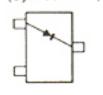


Q14



MA132K

(Symbol: M1)



D5, D12 (USA, TPE), D13 (USA, AUS, SEA, ITA), D15

MA6S121

(Symbol: M2D)



D6, D7, D9

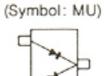
MA132HK

(Symbol: M3N)



D12 (EUR, AUS)

MA132WK



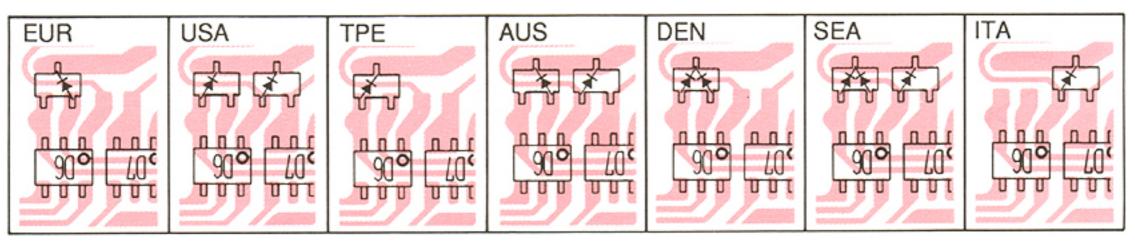
D12 (DEN, SEA)

MA133



(Symbol: MP)

D16



UN9116

(Symbol: 6F)

Q9

2SB1132 R (Symbol: BARR)

Q14

(Symbol: 6L)

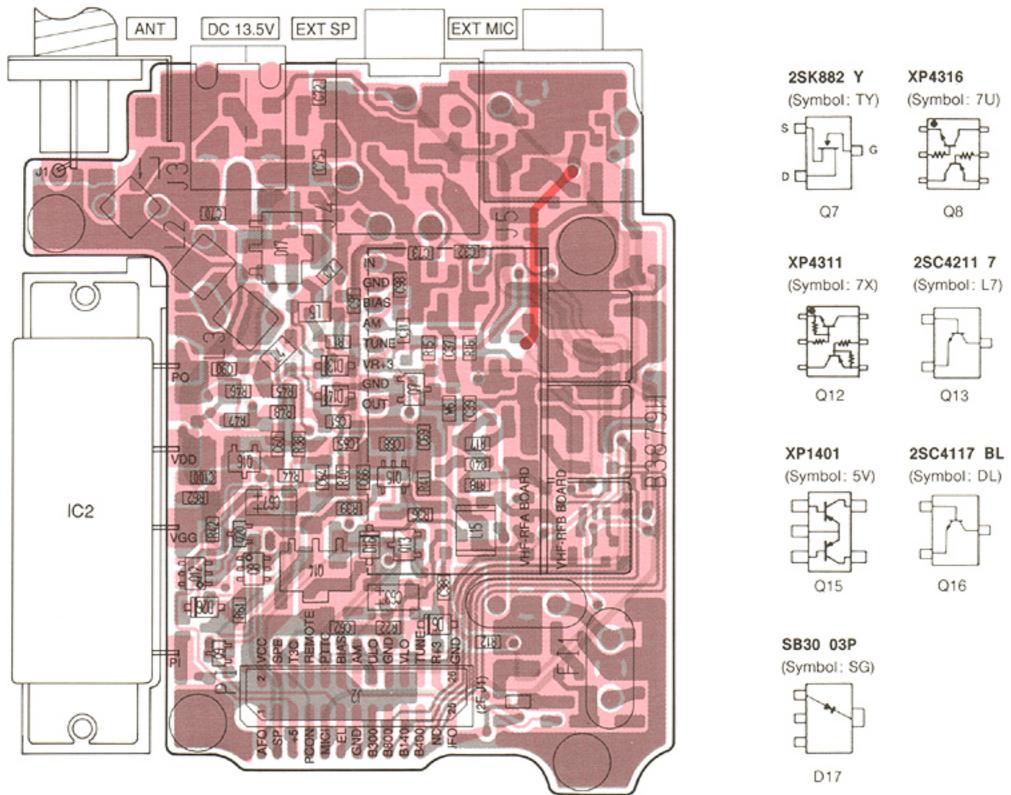
Q20

UN9110

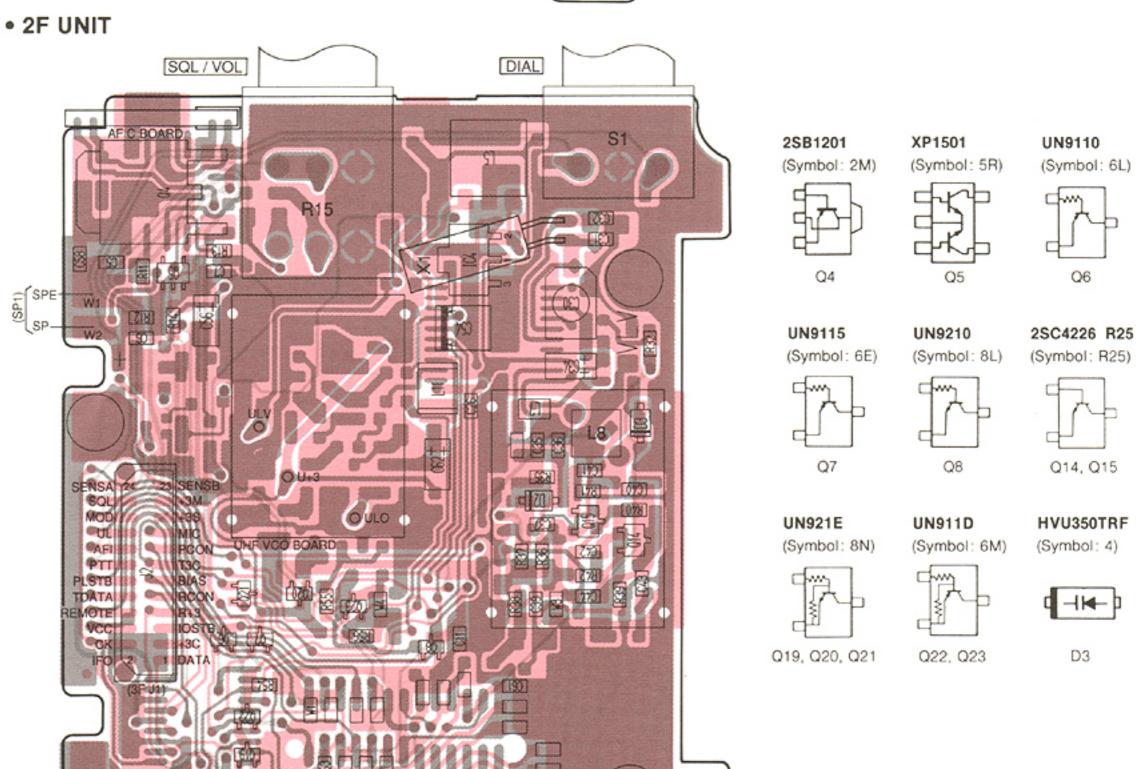
8-2 1F AND 2F UNITS

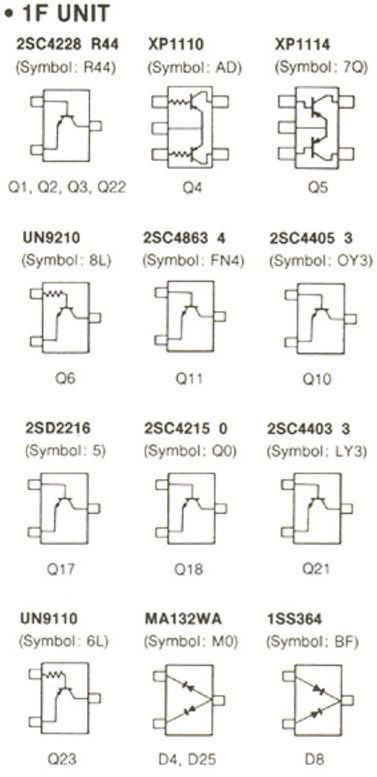
• 1F UNIT

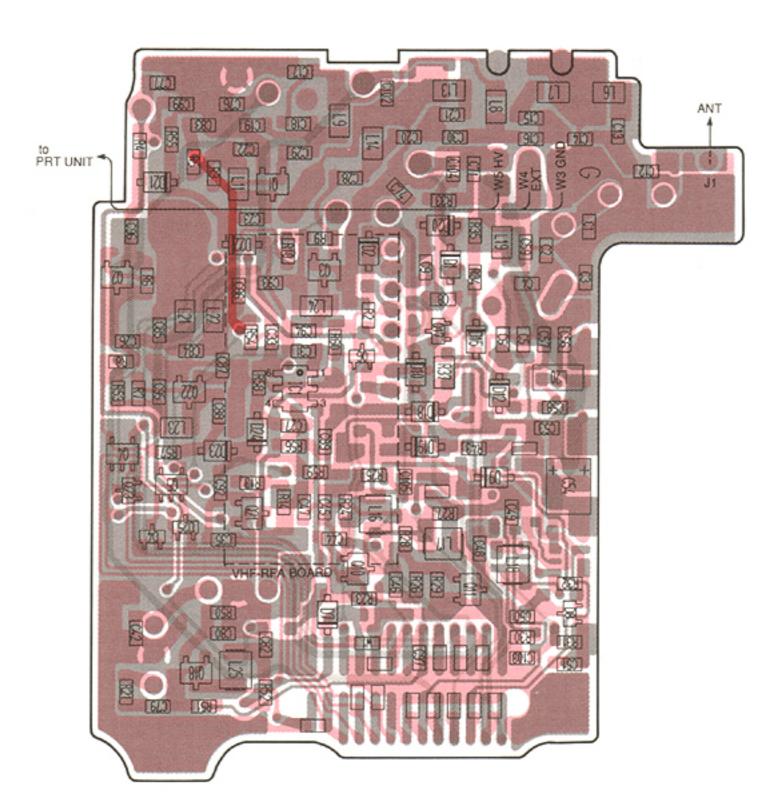
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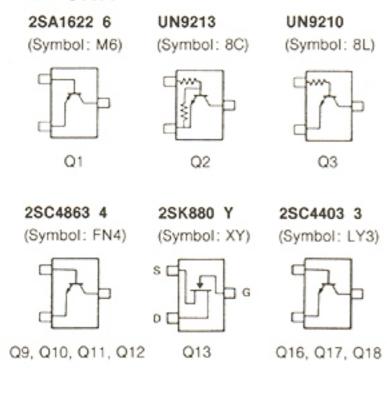


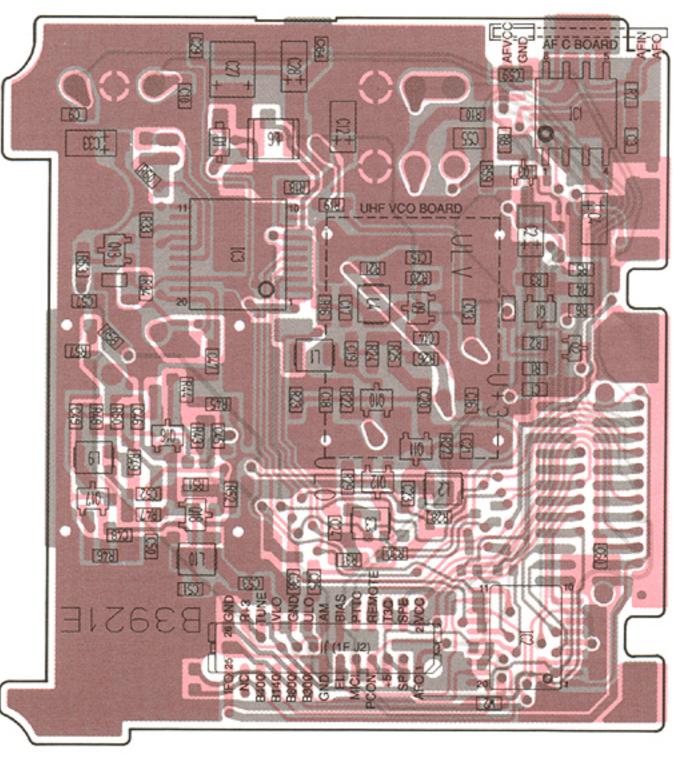






2F UNIT

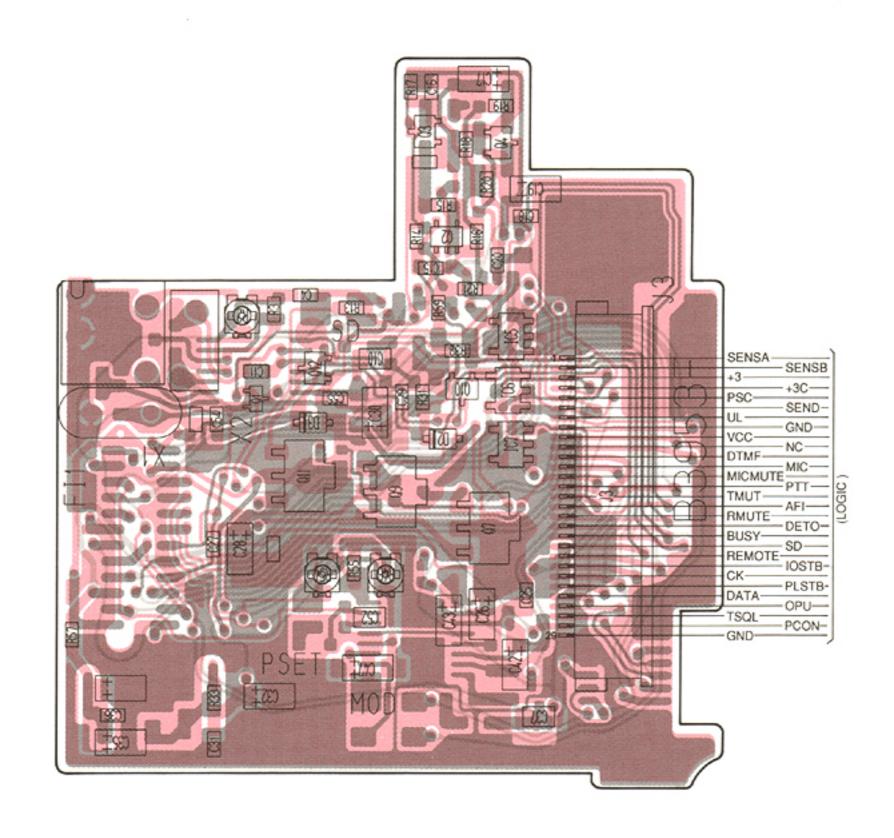


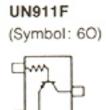


8-3 3F UNIT AND UHF-VCO BOARD

• 3F UNIT

The combination of this page and the next page show the unit layout in the same configuration as the actual P.C. Board.





Q1

XP1501 (Symbol: 5R)

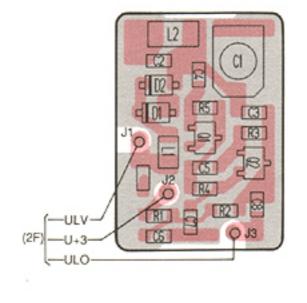
2SC4211 7 (Symbol: L7) Q3, Q4, Q10, Q12

2SB1132 R (Symbol: BARR)

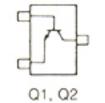


Q7, Q9, Q11

UHF-VCO BOARD



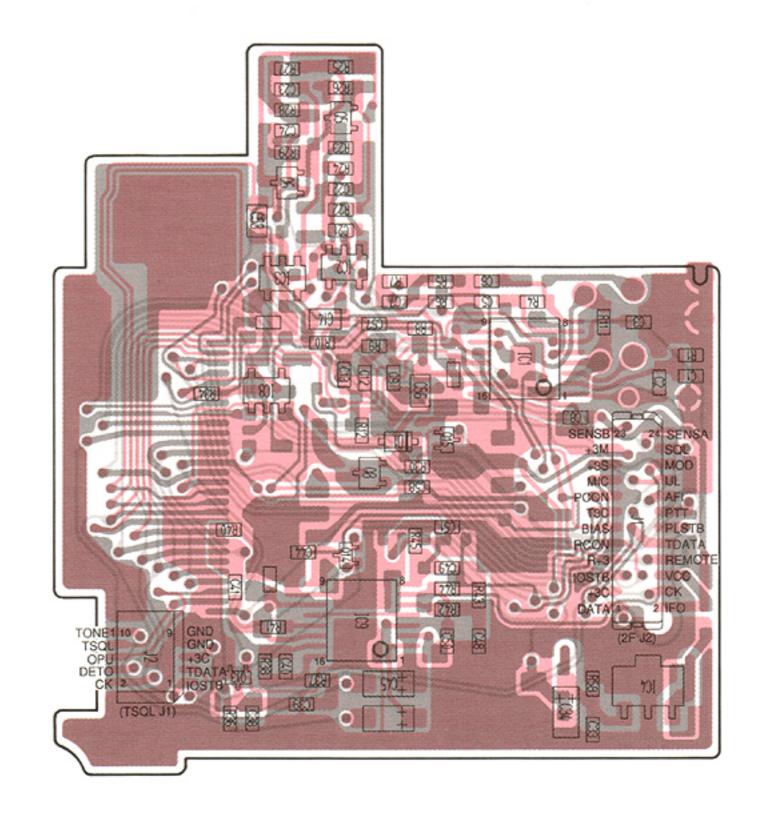
2SC4226 R25 (Symbol: R25)

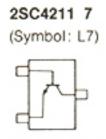


HVU350TRF (Symbol: 4)

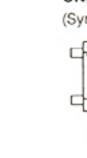


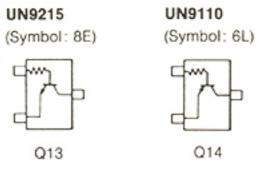
D1, D2

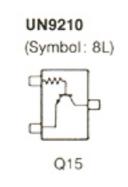




Q5, Q6, Q8





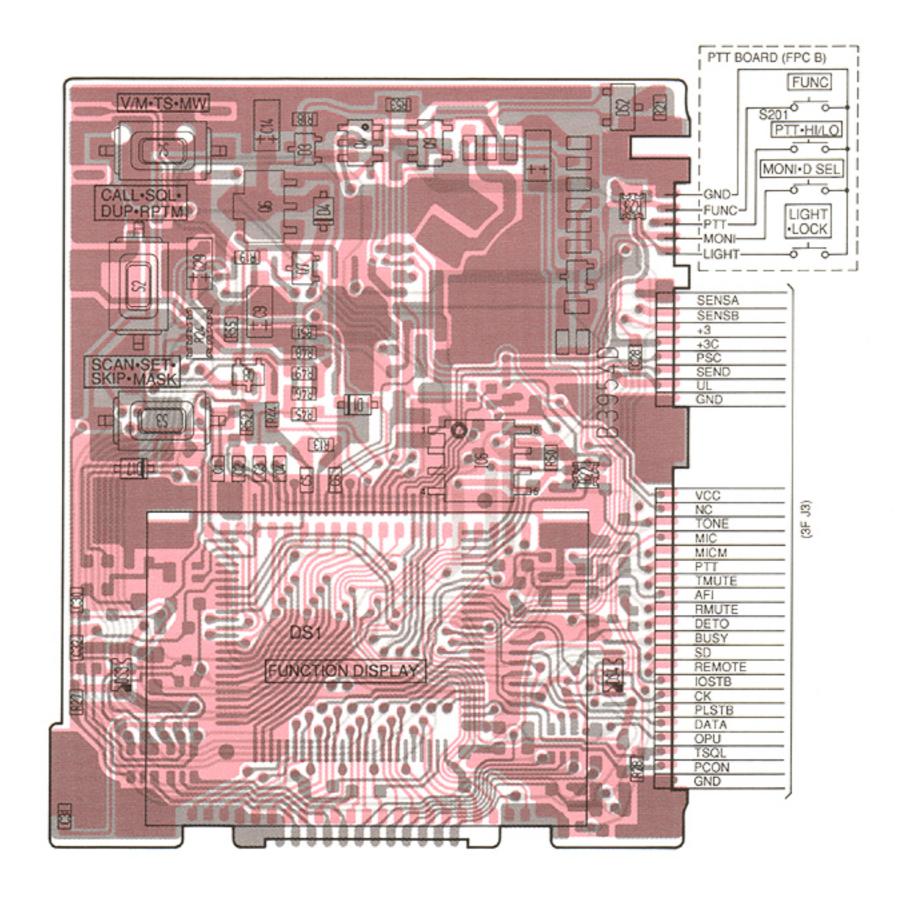


IC-S21A/E

8-4 LOGIC UNIT

LOGIC UNIT

The combination of this page and the next page show the unit layout in the same configuration as the actual P.C. Board.



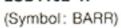






Q4

2SB1132 R





Q6

2SC4211 7





Q7

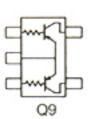
2SA1622 6

(Symbol: M6)



Q8

XN1117 (Symbol: OL)



DA204U (Symbol: K)



D3

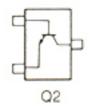
UN9213

(Symbol: 8C)



2SC4211 7

(Symbol: L7)



UN9210

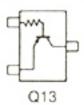
(Symbol: 8L)

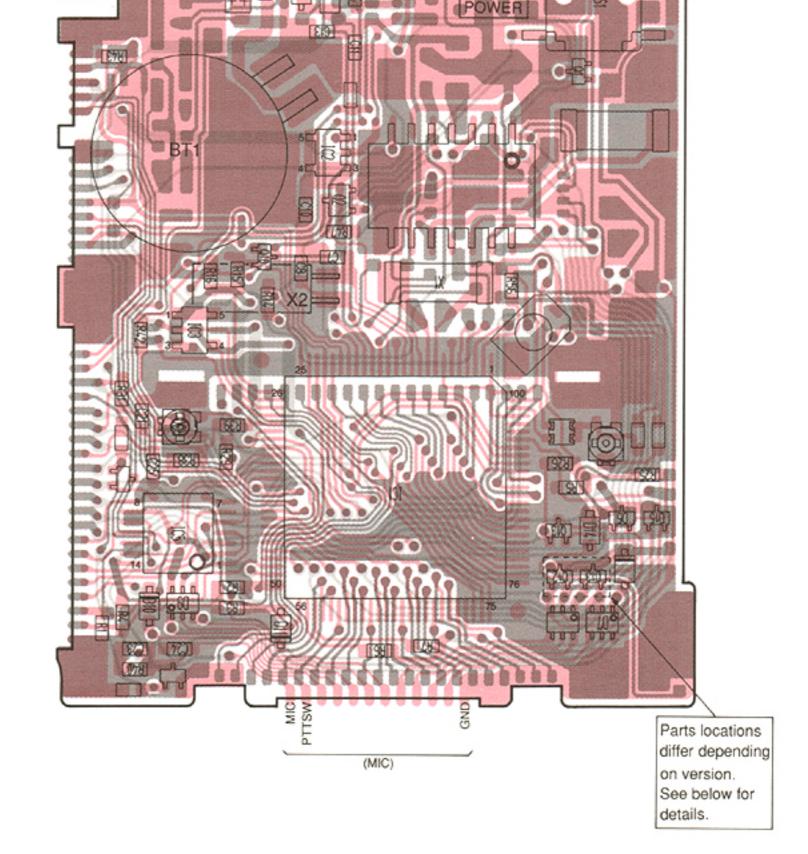


Q10

UN9110

(Symbol: 6L)





MA132K

(Symbol: M1)



D5, D12 (USA, TPE), D13 (USA, AUS, SEA, ITA), D15

MA6S121

(Symbol: M2D)



D7, D9

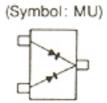
MA132HK

(Symbol: M3N)

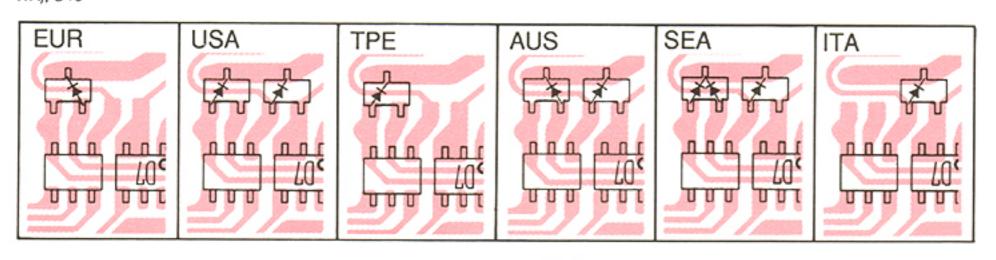


D12 (EUR, AUS)

MA132WK

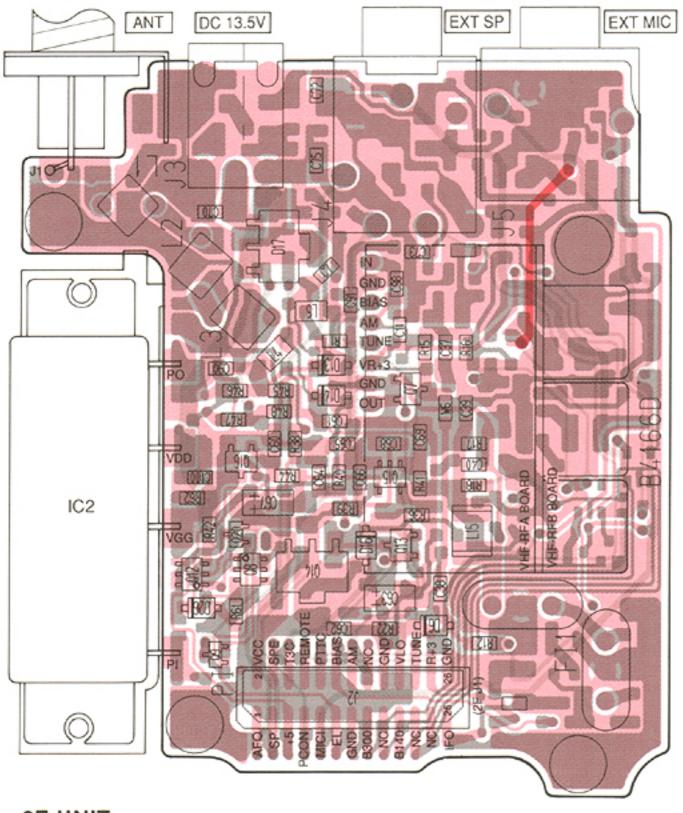


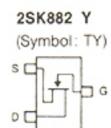
D12 (SEA)



8-5 1F AND 2F UNITS • 1F UNIT

The combination of this page and the next page show the unit layout in the same configuration as the actual P.C. Board.





XP4316 (Symbol: 7U)

UN9116 (Symbol: 6F)

XP4311

Q7

(Symbol: 7X)

2SC4211 7 (Symbol: L7)

(Symbol: BARR)

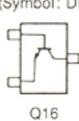
2SB1132 R

XP1401

(Symbol: 5V)

2SC4117 BL (Symbol: DL)

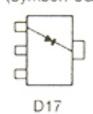
Q13



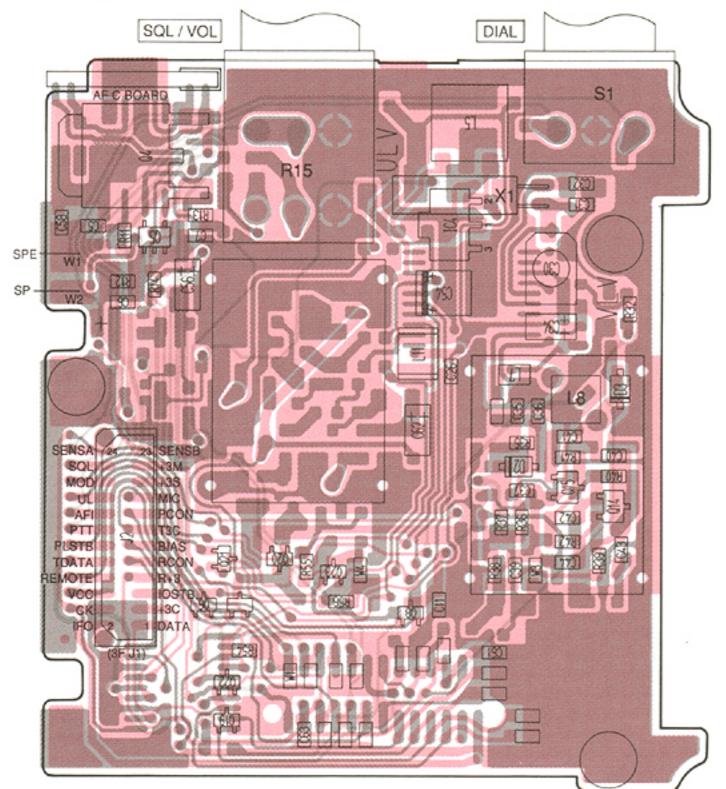
UN9110 (Symbol: 6L)

Q20

SB30 03P (Symbol: SG)







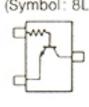
2SB1201 (Symbol: 2M)



XP1501 (Symbol: 5R)

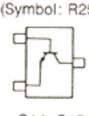
UN9110 (Symbol: 6L) Q6

UN9210 (Symbol: 8L)

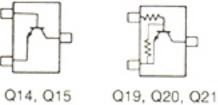


Q8

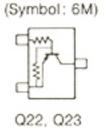
2SC4226 R25 (Symbol: R25)



UN921E (Symbol: 8N)



UN911D HVU350TRF

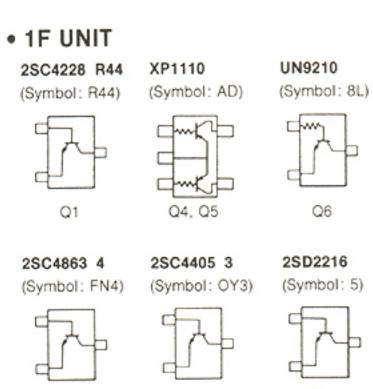


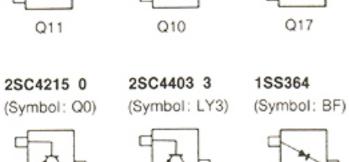


⊣⊌-

D3

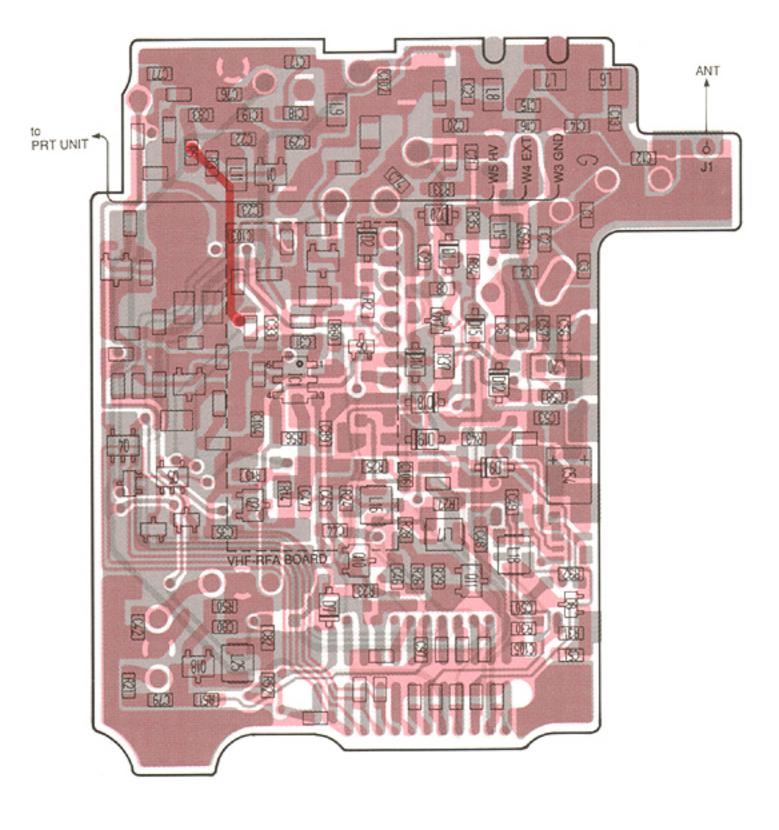
(Symbol: 4)





Q21

D8

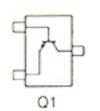


2F UNIT



Q18

UN9213 (Symbol: M6)

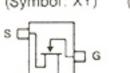


(Symbol: 8C)

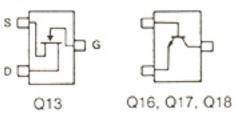


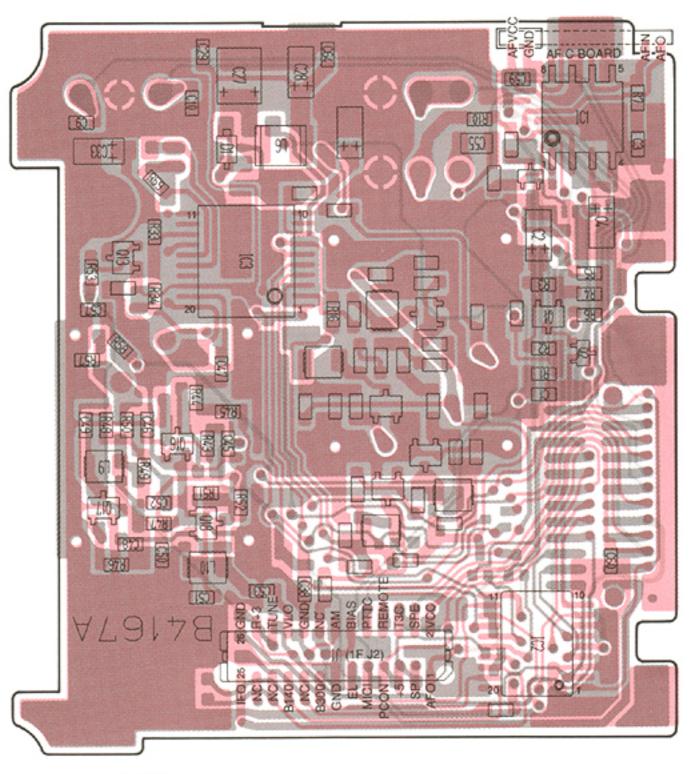
2SC4403 3

2SK880 Y



(Symbol: LY3) (Symbol: XY)

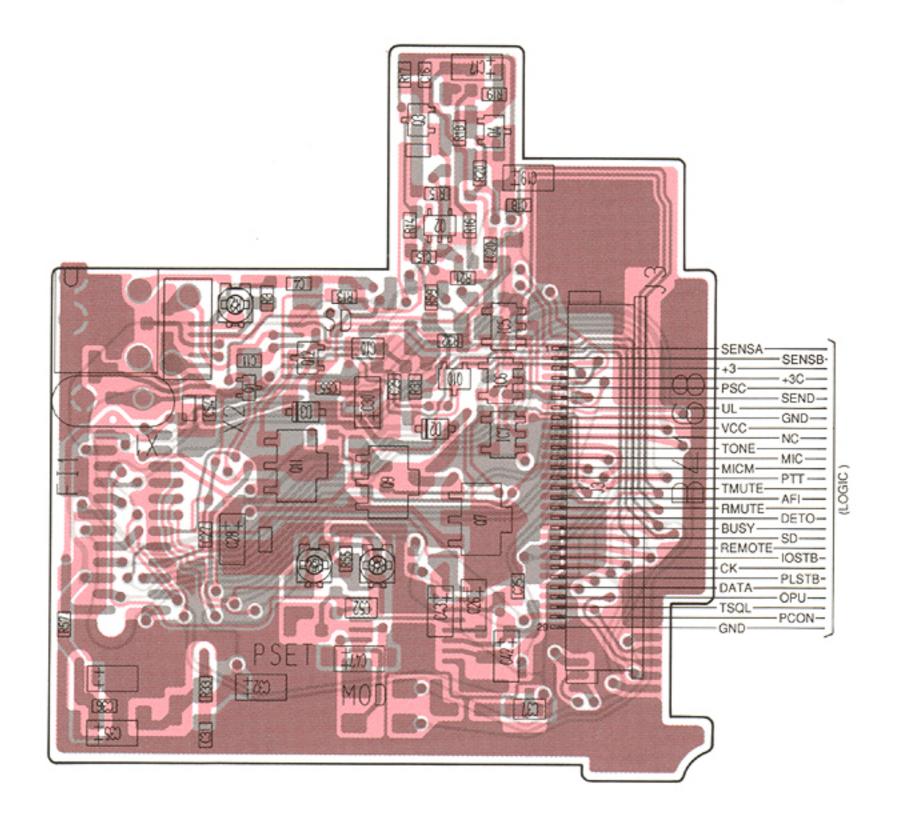




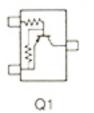
8-6 3F UNIT

• 3F UNIT

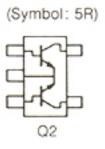
The combination of this page and the next page show the unit layout in the same configuration as the actual P.C. Board.



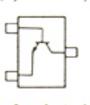




XP1501



2SC4211 7 (Symbol: L7)



Q3, Q4, Q10, Q12





Q7, Q9, Q11

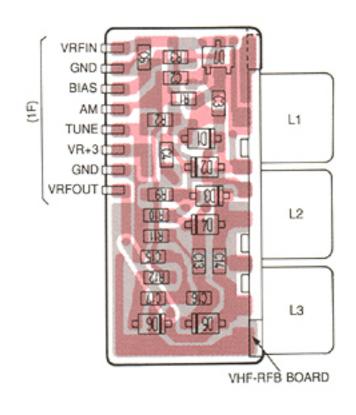
COMMON

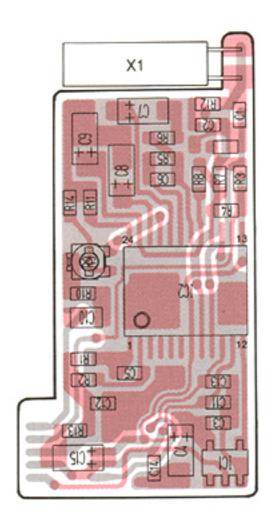
8-7 COMMON BOARDS AND UNITS

VHF-RFA BOARD

TSQL UNIT (USA version only)

T21





HVU350TRF

(Symbol: 4)

(Symbol: M1U)

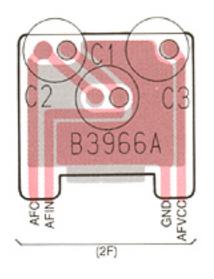
MA742



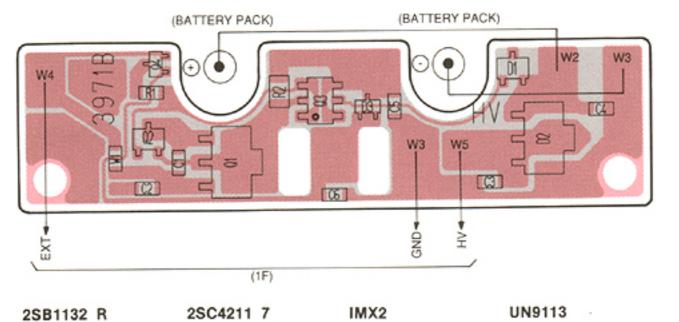
D7

D2, D4, D5

AFC BOARD



PRT UNIT



2SB1132 R

(Symbol: BARR)



2SC4211 7 (Symbol: L7)



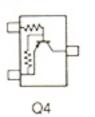
Q2

(Symbol: X2)



Q3

(Symbol: 6C)



DA204U

Q1

(Symbol: K)

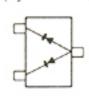


D1

SB30 03P (Symbol: SG)



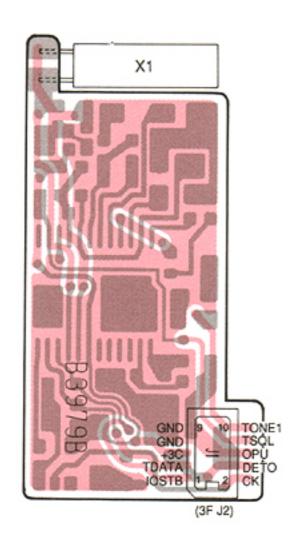
MA132WA (Symbol: MO)



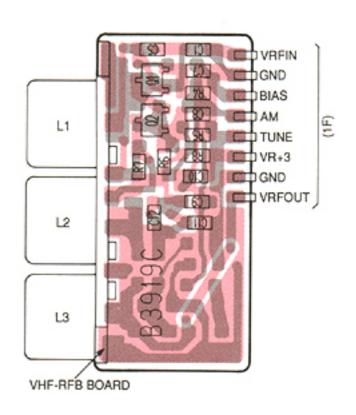
D2

D3

• TSQL UNIT (USA version only)

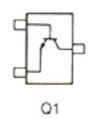


VHF-RFA BOARD



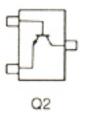
2SC4863 4 TR

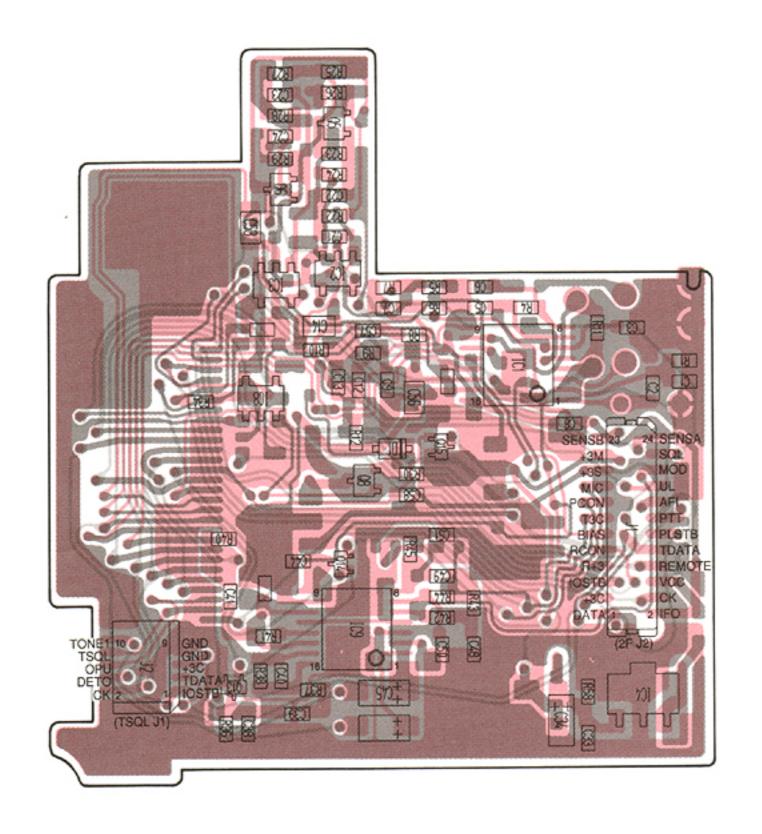
(Symbol: FN4)



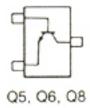
2SC4403 3

(Symbol: LY3)

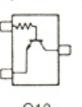




2SC4211 7 (Symbol: L7)

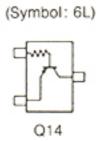


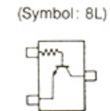
UN9215 (Symbol: 8E)



Q13

UN9110



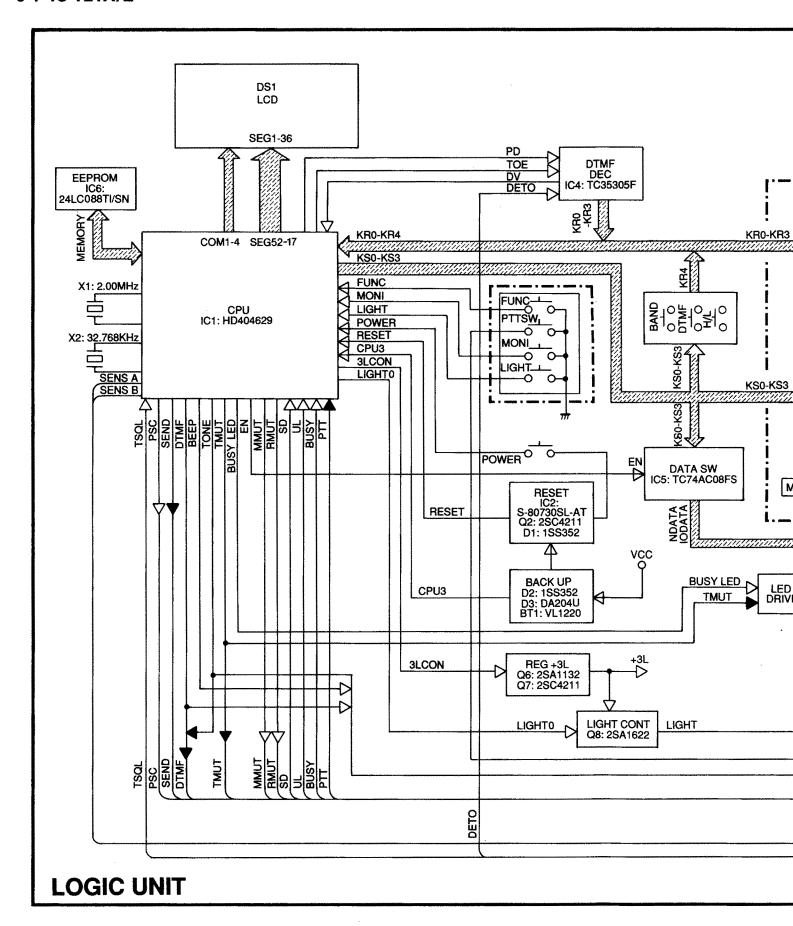


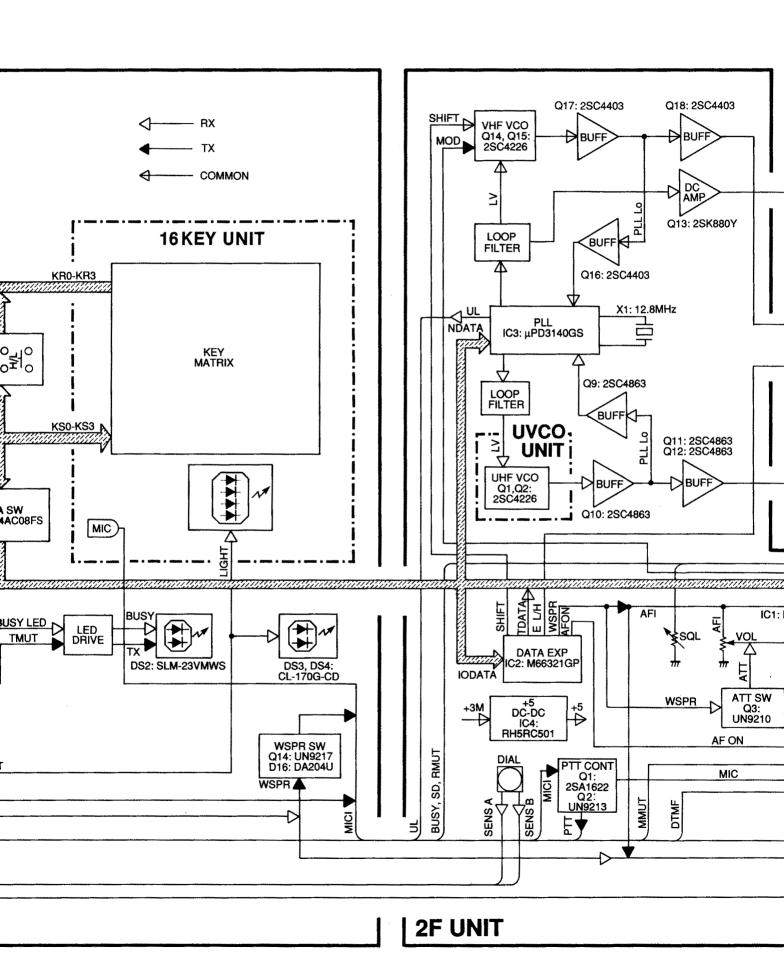
UN9210

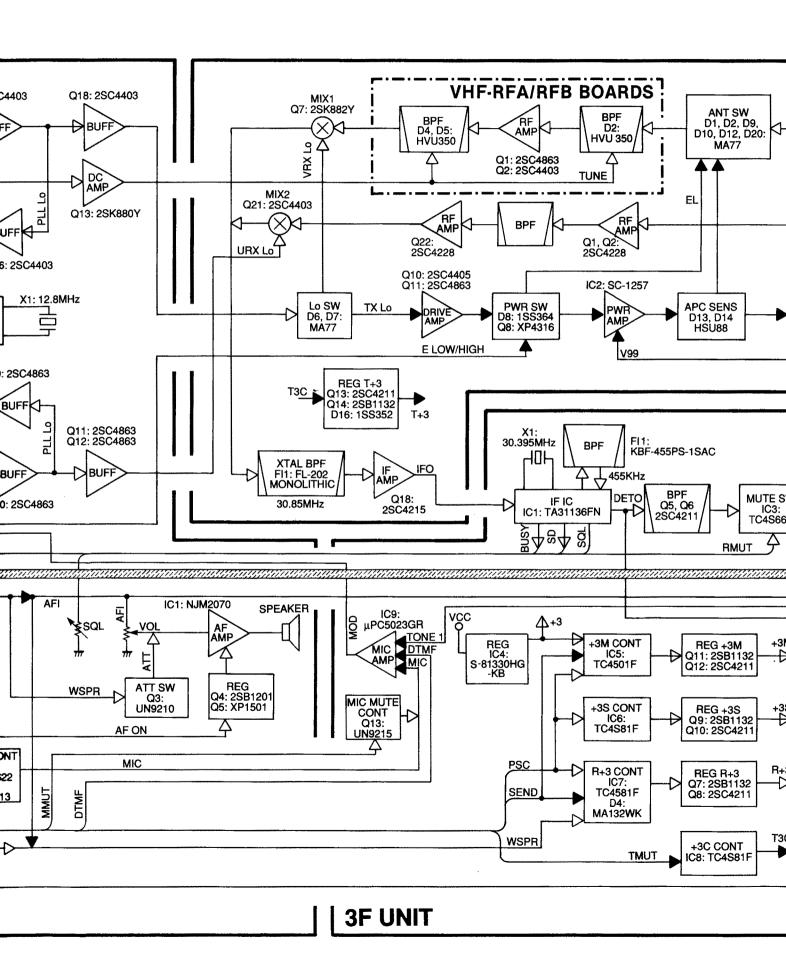
Q15

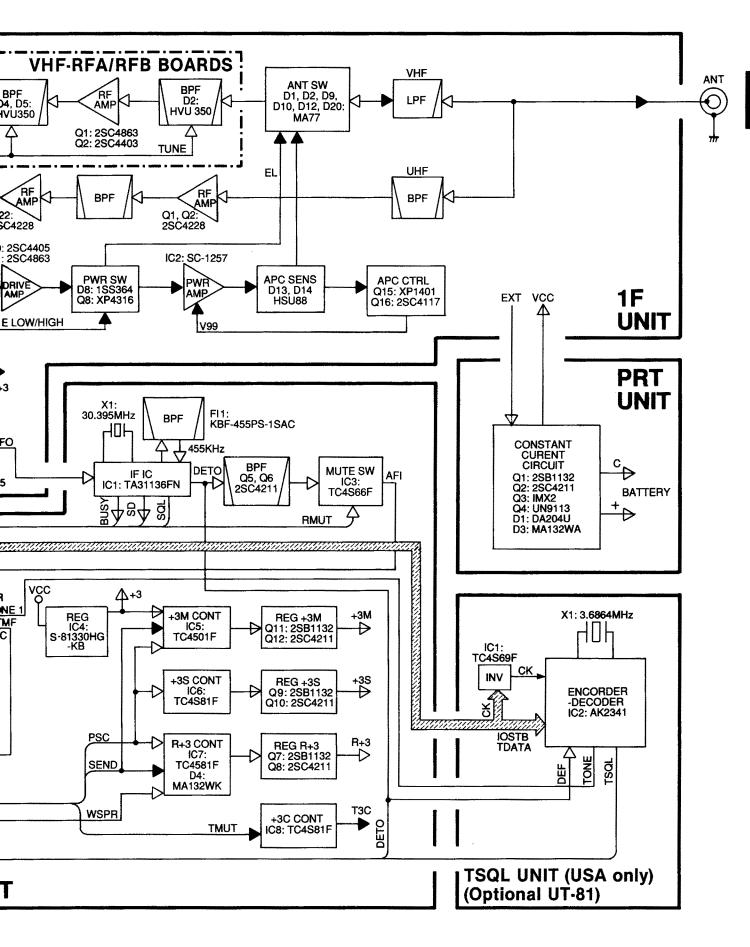
SECTION 9 BLOCK DIAGRAMS

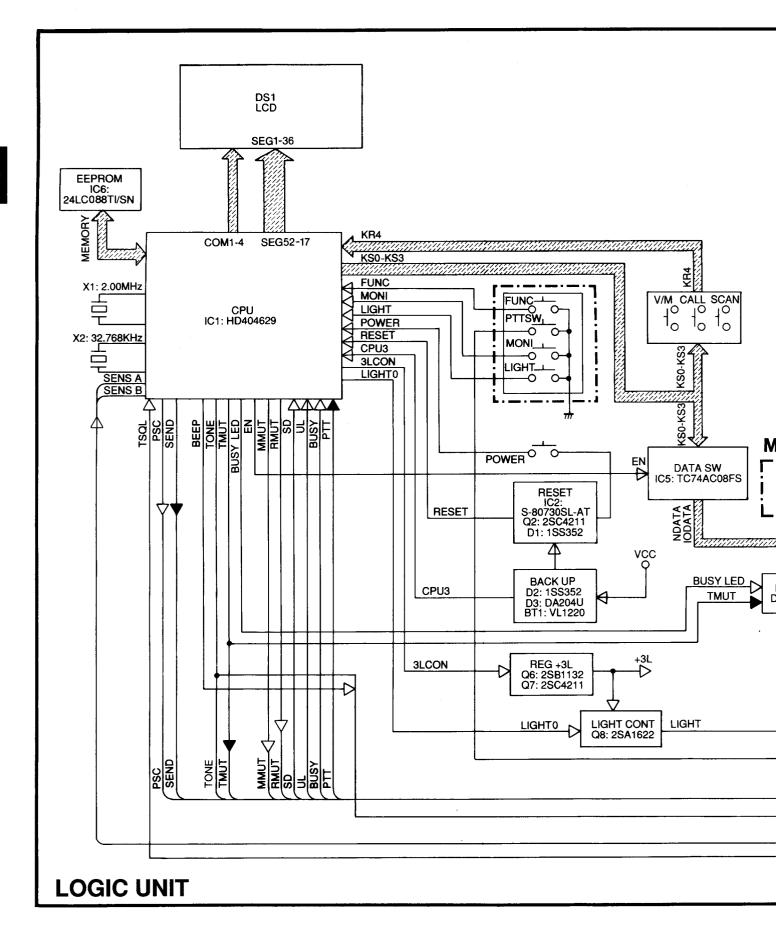
9-1 IC-T21A/E

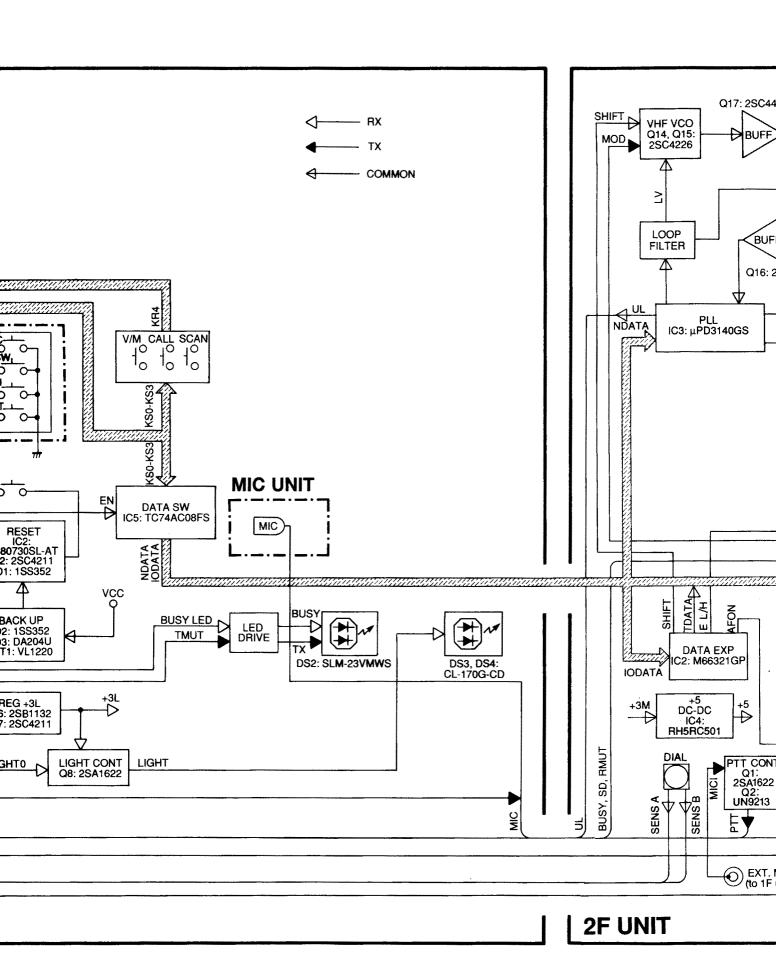


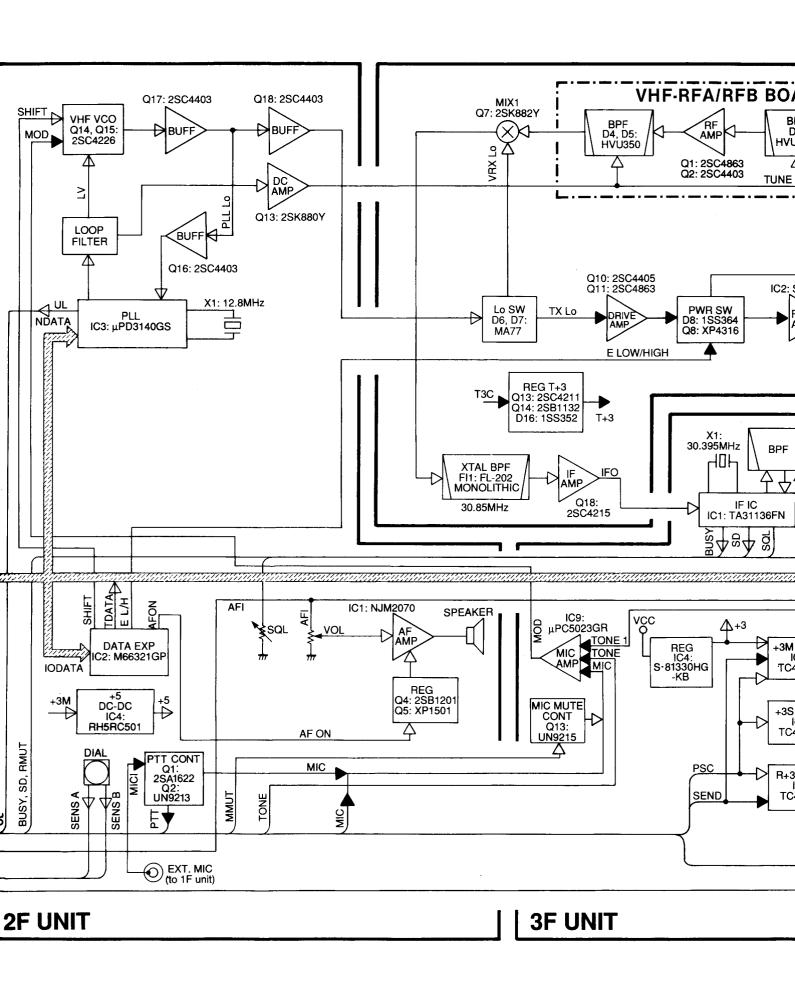


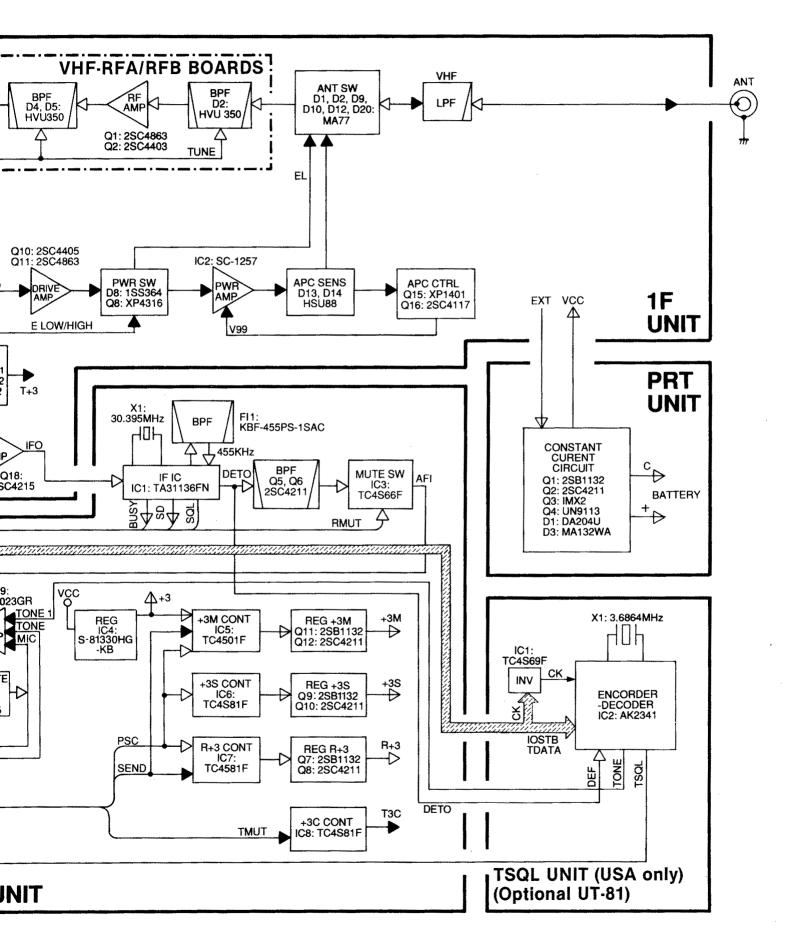






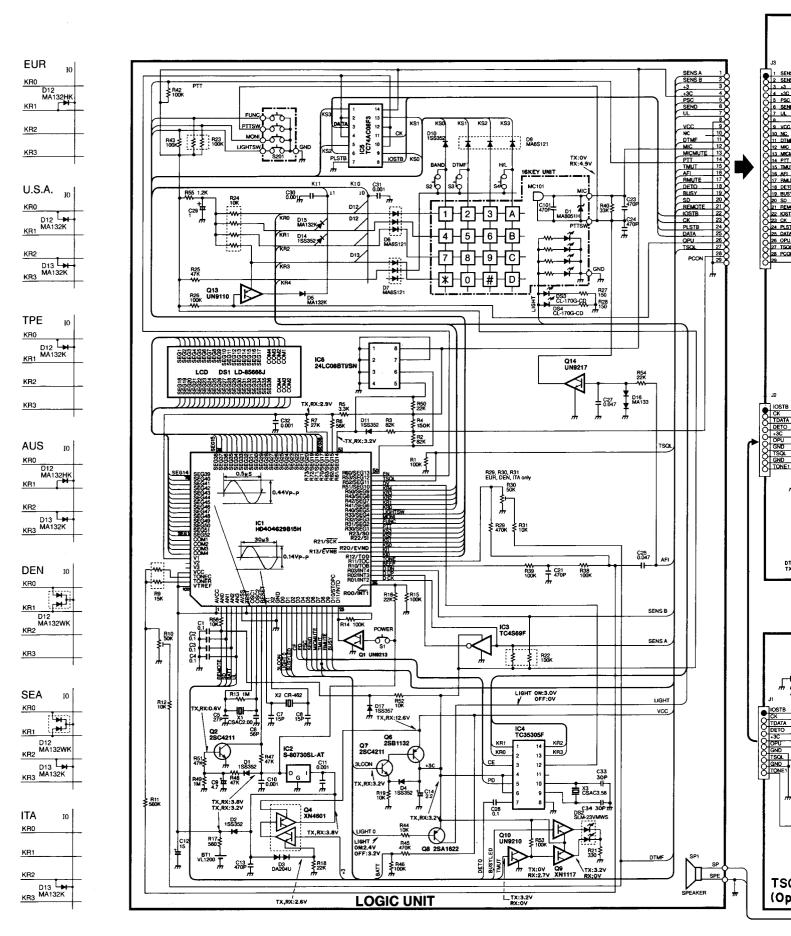


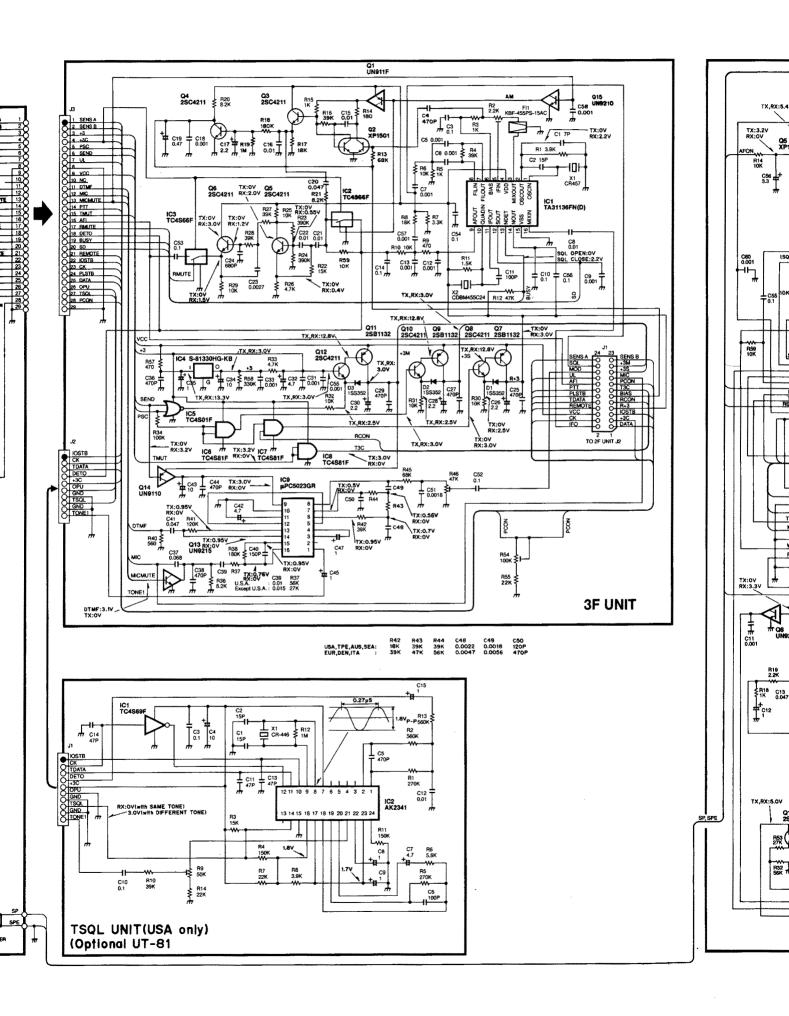


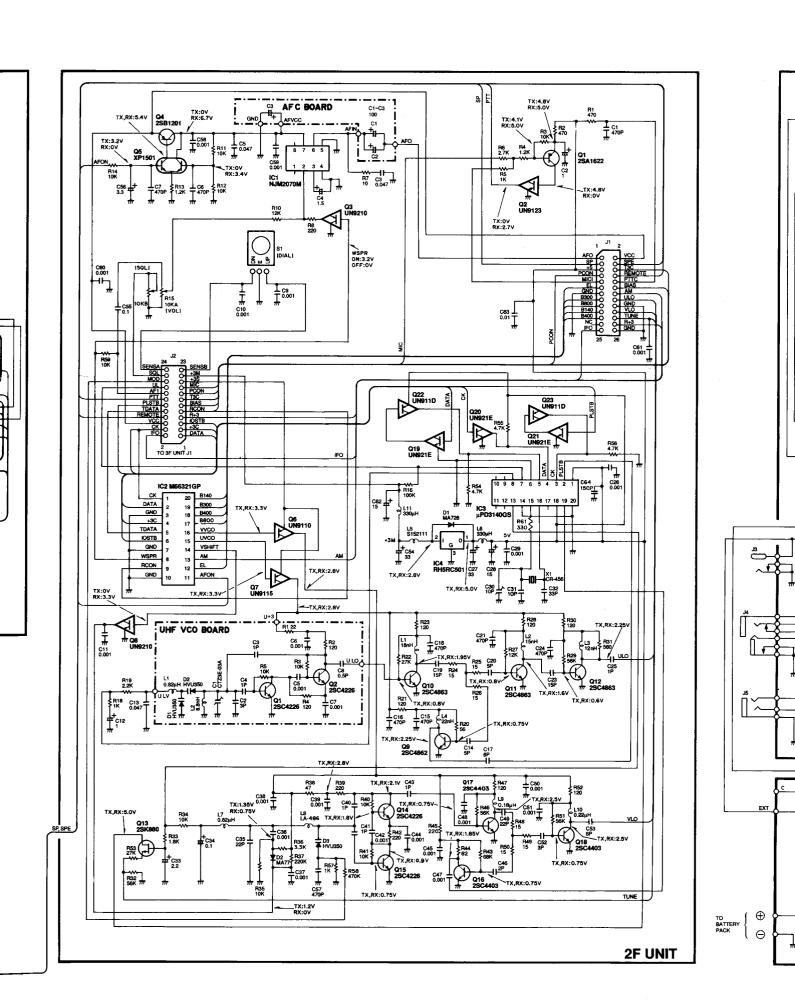


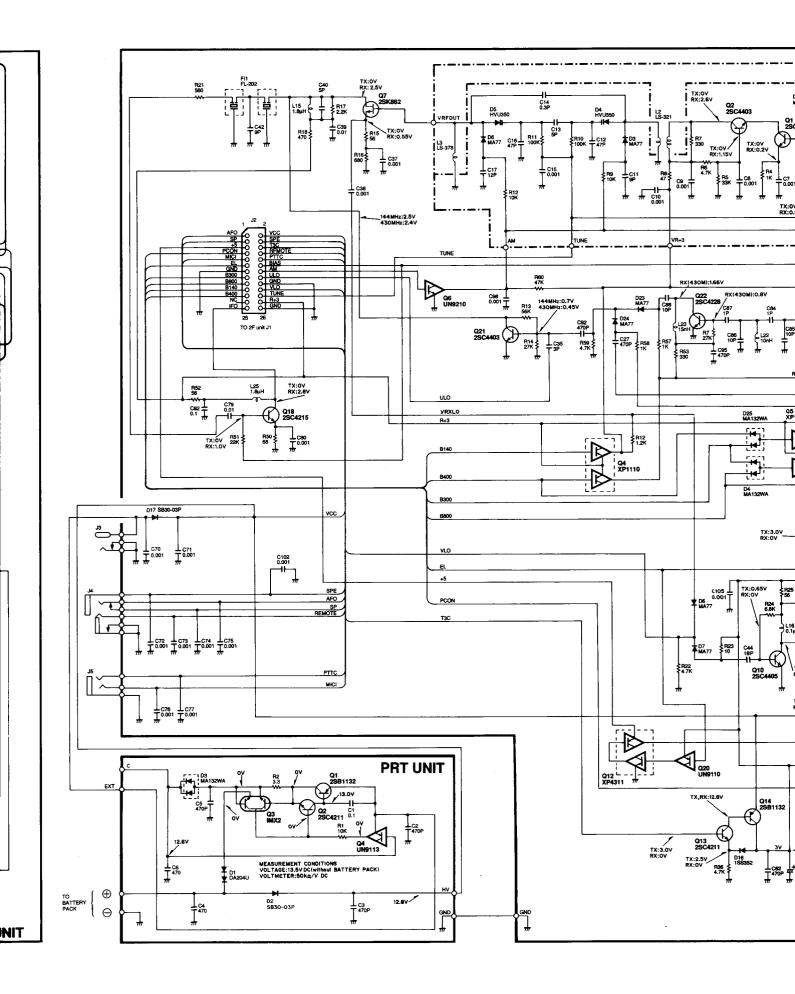
SECTION 10 VOLTAGE DIAGRAMS

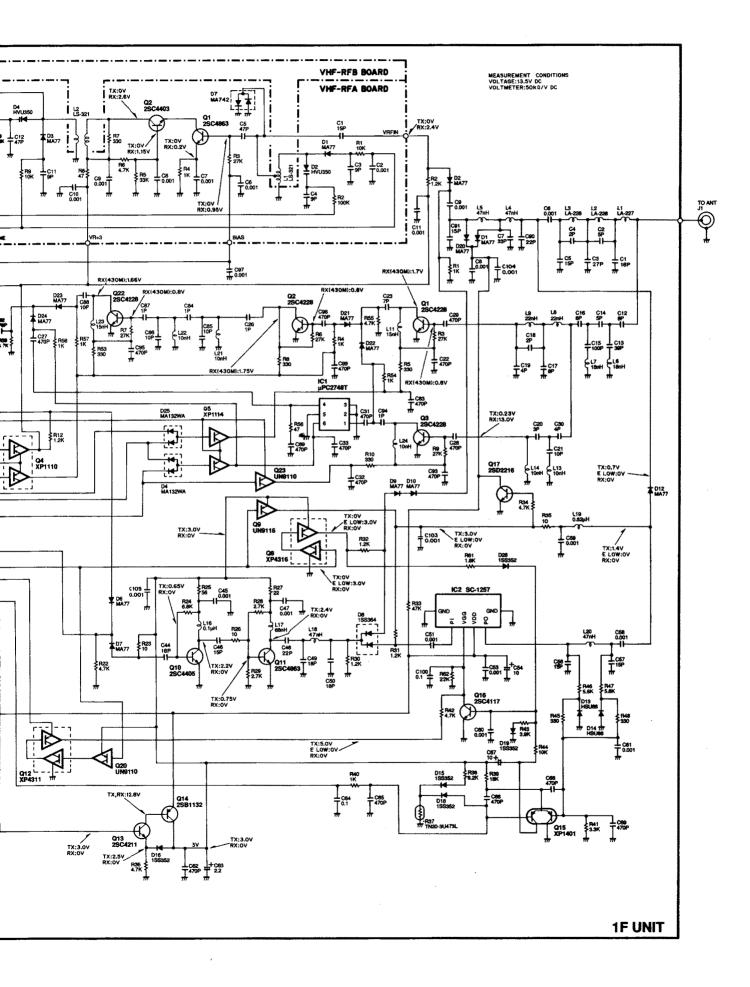
10-1 IC-T21A/E

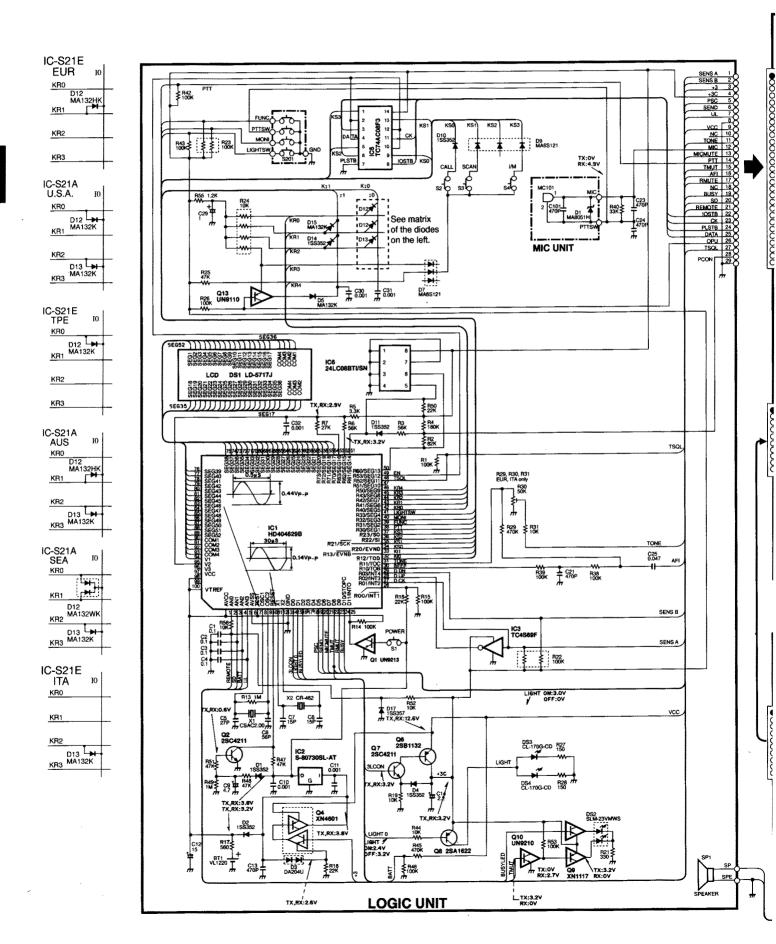


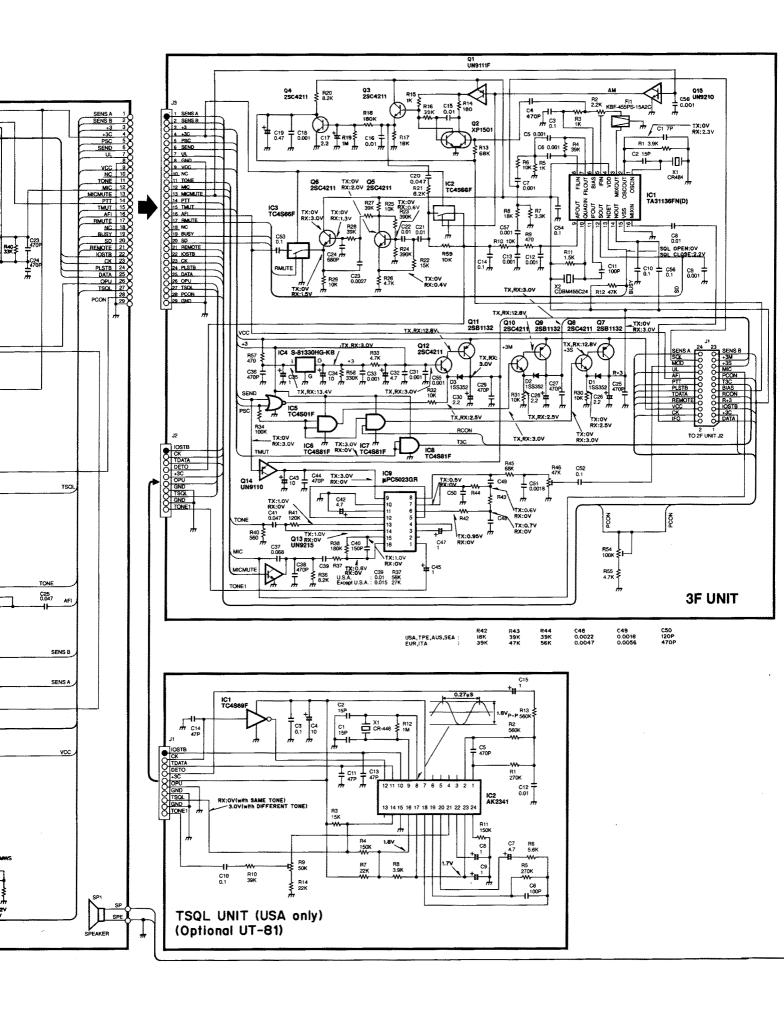


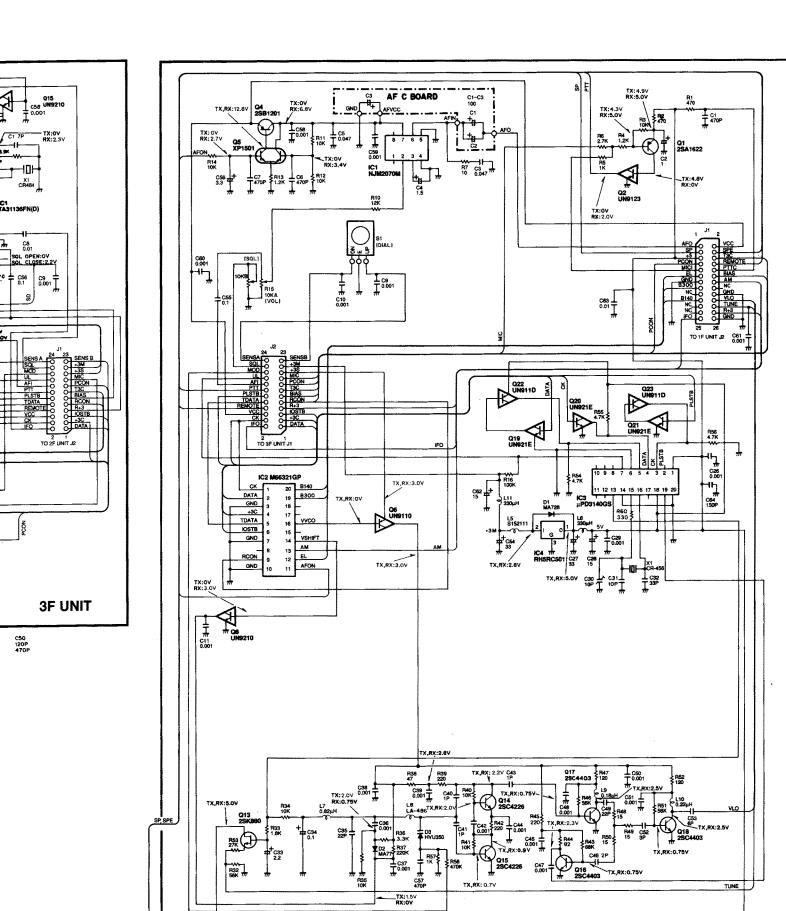




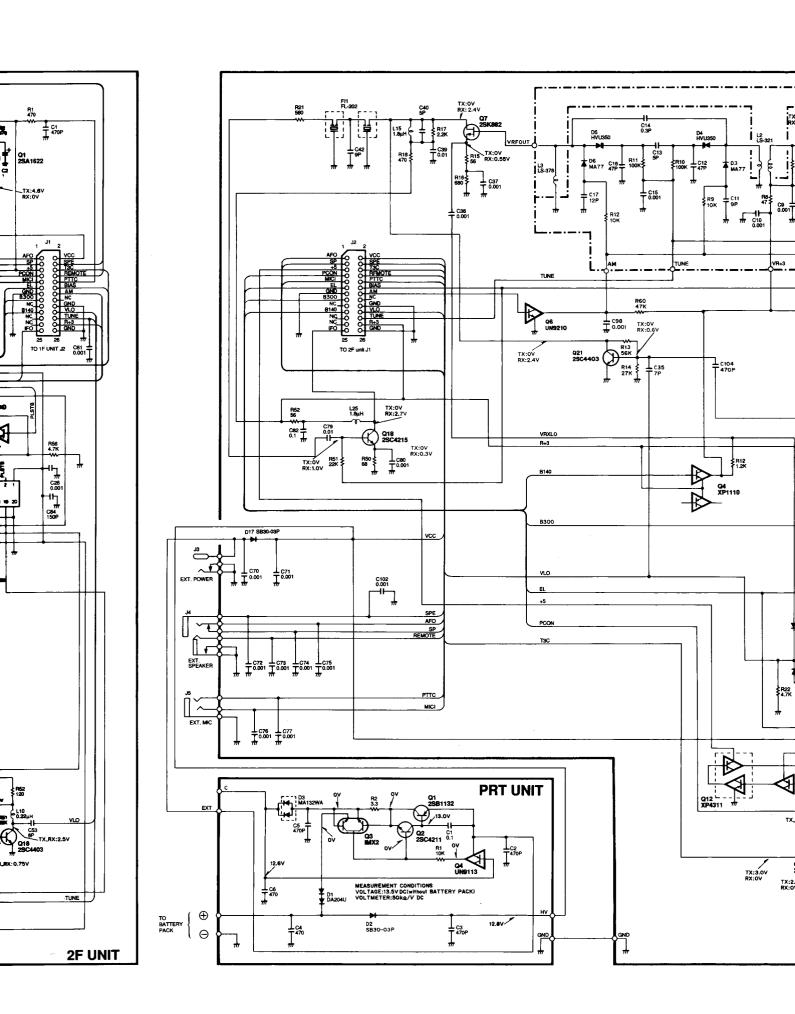


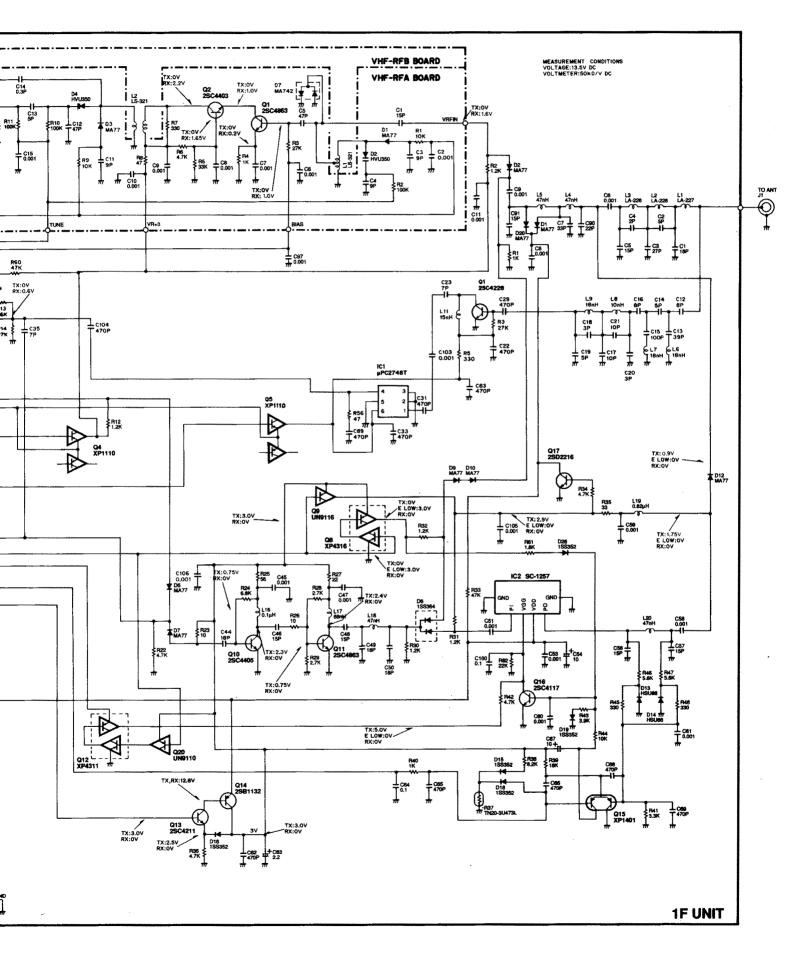






2F UNIT





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