ICOM

SERVICE MANUAL

UHF REPEATER

IC-UR8050

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the **IC-UR8050** UHF REPEATER.

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

DANGER

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

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

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

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

ORDERING PARTS

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

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<SAMPLE ORDER>

1130002390	S.IC	µPD4049UBG	IC-UR8050 MAIN UNIT	5 pieces
8810008660	Screw	PH B0 M3x6 NI-ZU	IC-UR8050 Top cover	10 pieces

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

REPAIR NOTES

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

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency range : 400–430 MHz
- Mode : FM (F3)
- Frequency Resolution : 5 or 12.5 kHz (Selectable)
- Antenna impedance : 50 Ω
- Power supply requirement : DC 13.8 V ± 15 % (negative ground)
- Current drain (at 13.8 V DC) :

Transmit		15 A
Receive	Standby	0.7 A
	Max power	2.0 A

- Usable temperature range : – 20 ˚C to + 60 ˚C (– 4 ˚F to + 140 ˚F)
- Frequency stability : ± 2.5 ppm (– 20 ˚C to + 60 ˚C; – 4 ˚F to + 140 ˚F)
- Dimensions : 425 (W) × 149 (H) × 368 (D) mm; 16.7 (W) × 5.9 (H) × 14.5 (D) inch
  (Projections not included)
- Weight : 12 kg (26.5 lb)

■ TRANSMITTER

- Output power : 45 W (Typical)
- Modulation system : Variable reactance modulation and reference modulation
- Max. frequency deviation : 2.5 kHz (Narrow)
  5.0 kHz (Wide)
- Spurious emissions : less than – 70 dB
- Microphone impedance : 600 Ω

■ RECEIVER

- Receiving system : Double conversion superheterdyne
- Intermediate frequency : 1st 30.875 MHz
  2nd 455 kHz
- Sensitivity : less than 0.32 µV for 12 dB SINAD
- Squelch sensitivity : less than 0.32 µV
- Sprious and image rejection : more than 70 dB
- Audio output power : 1.7 W at 10 % distortion with an 8 Ω load
- Audio output impedance : 8 Ω

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

SECTION 2 CIRCUIT DESCRIPTION

2-1 RECEIVER CIRCUITS

2-1-1 RF CIRCUIT (RF UNIT)

Received signal enter the antenna connector (J3) and pass through a band-pass filter (C4–C7, C11–C13, D3, D4, L1, L2). The filtered signals are applied to an PRE-amplifier (Q2).The RF signals are applied to a band-pass filter (C17, C18, C23, C31, C36–C38, D5, D7, L6, L24), and applied to an RF amplifier (Q3). The amplified signal passes through a band-pass filter (C44–C47, C51–C53, D8, D9, L7, L9), and then applied to the 1st mixer circuit.

2-1-2 1ST MIXER AND 1ST IF CIRCUITS (RF UNIT)

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

The filtered signals are applied to a 1st mixer (IC6, pin 4) and are then mixed with a 1st LO signal from the PLL circuit to produce a 30.875 MHz 1st IF signal.

The 30.875 MHz 1st IFsignal is applied to crystal band-pass filter (FI1). FI1 is an MCF (Monolithic Crystal Filter) which suppresses out-of-band signal. The 1st IF signal is applied to the 2nd mixer circuit (IC5, pin 16) via the buffer amplifier (Q8)

2-1-3 2ND IF AND DEMODULATOR CIRCUITS (RF 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 amplified signal is applied to a 2nd mixer (IC5, pin 16) and is then mixed with a 2nd LO signal to produce a 455 kHz 2nd IF signal.

The 455 kHz 2nd IF signal is applied to a ceramic band-pass filter (FI2) where unwanted signals are suppressed and then to a limiter amplifier section in system IC (IC5, pin 5).

IC5 contains the local oscillator circuit, quadrature detector circuit, noise filter circuit, IF amplifier, limiter amplifier, noise amplifier, and so on. The local oscillator section and X1 generate 30.42 MHz for the 2nd LO signal.

The 2nd LO signal from the limiter amplifier (IC5, pin 5) is applied to the quadrature detector section (IC5, pin 11 and ceramic discriminator X2) to demodulate the 2nd IF signal into an AF signal. The AF signal is output from pin 9 of IC5.

2-1-4 SQUELCH CIRCUIT (RF AND LOGIC UNITS)

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

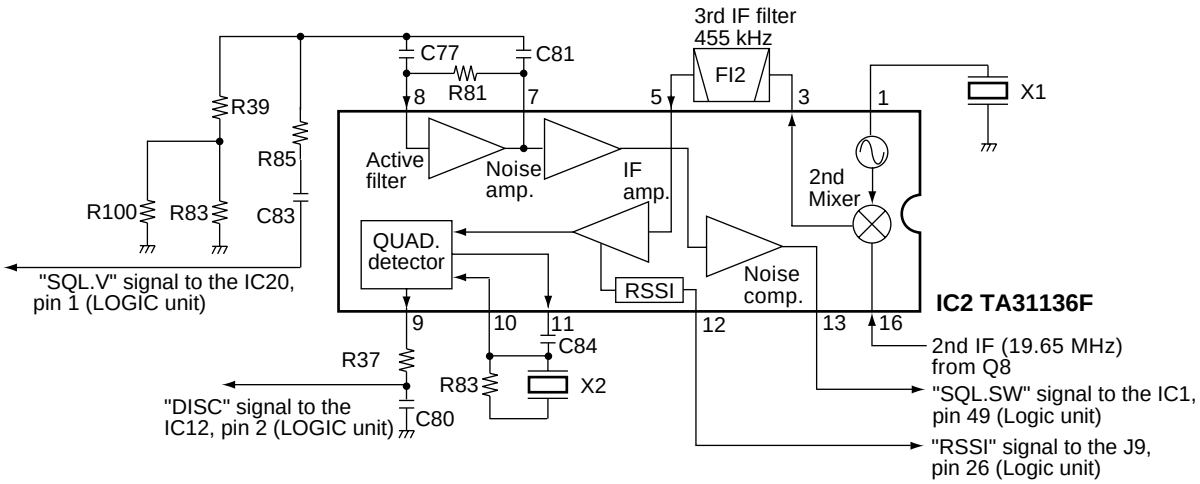
The squelch switching signal from IC5, pin 13 is applied to the [SQL] select switch (LOGIC unit; IC1, pin49). Thselects squelch switch of R2 (on FRONT unit) or R91 (on LOGIC unit) to set the squelch level by the [LOCAL INHIBIT] switch (SW board; S1–3). The switch is selected to use IC20 (on LOGIC unit).

If the [LOCAL INHIBIT] switch is “OFF”, the squelch switch is selected R2 (on LOGIC unit). And the [LOCAL INHIBIT] switch is “ON”, the squelch switch is selected R91 (on FRONT unit).

2-1-5 AF AMPLIFIER CIRCUIT (RX AND LOGIC UNITS)

The AF signal outputs from pin 9 of IC5 (RX unit) is applied to pin 2 of IC12 (LOGIC unit), and then applied to pin 3 of IC13 (LOGIC unit) which functions as a high-pass and low-pass filter via a de-emphasis circuit. The filtered signal is output from pin 7 of IC13 (LOGIC unit) and is the applied to the [VOLUME] control (R1) on the FRONT PANEL through an AF mute switch (LOGIC unit; Q10 and Q11). When the squelch is closed, Q10 and Q11 cuts off the AF signal as an AF mute switch. The AF signal is power-amplified at an AF power amplifier (LOGIC unit; IC15) to drive a speaker.

• 2nd IF AND DEMODULATOR CIRCUITS



2-2 TRANSMITTER CIRCUITS

2-2-1 MICROPHON AMPLIFIER CIRCUIIT (LOGIC UNIT)

The microphone amplifier circuit (IC16) amplifies the audio signals from the microphone. The amplified signal is mixed with the “LI” signal from IC16 (on the LOGIC unit) and “MOD–MUTE” signal from Q12 and Q13 (on the LOGIC unit) at the mixer amplifier (IC17). The mixed signal passes through the high-pass filter (IC18) and low-pass filter (IC18) via the pre-emphasis circuit (IC17), within +6 dB/octave pre-emphasis characteristics (300 Hz–3 kHz), to a level needed for the modulation circuit.

The filtered signal is applied to the mixer amplifier, and is then mixed with the “DI” signal from IC19. The mixed signal is applied to the limiter amplifier (TX unit; IC5, pin 3).

2-2-2 MODULATION CIRCUIT (TX UNIT)

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

The “MOD” signal from pin 7, J1 is applied to the limiter amplifier (IC5, pin 3) via the pin 1, J5. The amplified signal passes through the modulating controller (Q13) and low-pass filter (IC5). The filtered signal is adjusted to input level by the R50, and is then applied to the VCO circuit (D2, D3, Q2).

2-2-3 YGR-AMPLIFIER CIRCUIT (TX UNIT)

The YGR-amplifier circuit includes the buffer-amplifier (Q4), pre-driver (Q5) and YGR-amplifier (Q6). The buffer-amplified signal from the VCO circuit is amplified at the YGR-amplifier circuit. The YGR-amplified signal is applied to the power amplifier (PA unit; IC1, pin 1).

The “APCV” signal from the APC control circuit (PA unit) is applied to the YGR-amplifier (Q6) to stable RF output power.

2-2-4 RF POWER AMPLIFIER CIRCUIT (PA UNIT)

IC1 is a power module which provides a stable 45 W of output power.

The amplified signal from the TX unit passes through the low-pass filter (C16, C17, L6), and is then applied to power amplifier (IC1). The amplified signal is applied to the RF detector circuit (D1, D2), and passes through the low-pass filter (L1–L4, C1, C2, C5, C6, C9, C10). Then, the filtered signal is applied to the TX antenna connector via the RF detector circuit (D1 and D2) to control APC circuit.

2-2-5 APC CIRCUIT (PA UNIT)

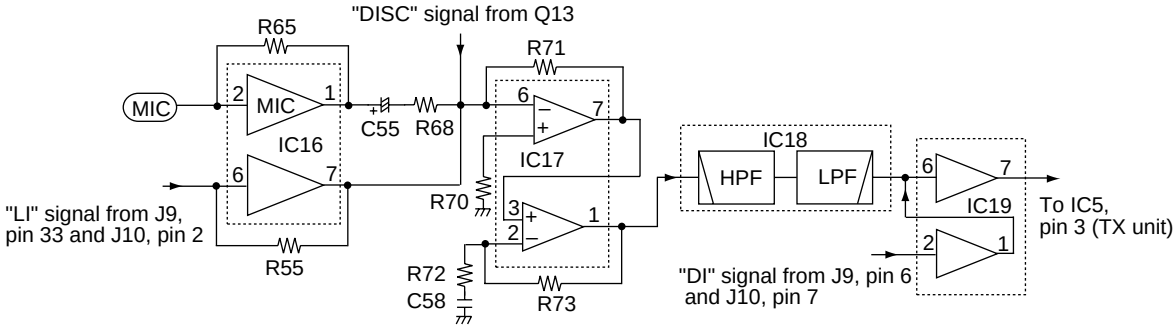
This circuit controls a current of the power module’s first stage and a current of the driver amplifier to obtain stable RF output power.

The APC mismatch detector circuit consists of C3, C7, D1, D2, L3. When the antenna impedance is matched at 50 Ω, the detected voltage by D1 and D2 is at its minimum. The detected voltage is applied to a differential amplifier (IC3, pin 3). The APC reference voltage is applied to pin 1,of IC3.

When the antenna impedanceis mismatched, the voltage of IC3 (pin 3) exceeds the reference voltage of IC3 (pin 1). The output level from IC3 (pin 4) decreases. Q1 amplifies the current from the differential amplifier (IC3) which controls Q2. Q2 changes the supply voltage to IC1.

This decreases the output power from the power amplifier (IC1) until the input voltage of IC3 (pin 6) reaches the same level as pin 5 of IC2.

• MICROPHONE AMPLIFIER CIRCUITS



2-3 PLL CIRCUITS

2-3-1 GENERAL

Each receiver and transmitter circuit has an independent PLL circuit for controlling frequencies. All PLL circuits are shielded and installed on the RX and TX Units.

PLL circuits steadily oscillate the transmit frequency and the receive local frequency. The PLL output frequency is controlled by the divided ratio (N-data) of the program mable divider.

2-3-2 RECEIVER PLL CIRCUIT (RX UNIT)

The PLL IC (IC3) which includes in the prescaler, the programmable counter and the phase comparator generates the 1st LO frequency with a Colpitts VCO (D10, D11, Q4). The PLL IC sets the dividing ratio based on N-data from the CPU (LOGIC unit; IC1) to control the programmable counter. The PLL IC compares the phases of a VCO signal with the reference oscillator frequency, and is then applied to VCO circuit (D10, D11, Q4) via the charge pump circuit (D14, Q10, Q11).

2-3-3 RECEIVER REFERENCE OSCILLATOR CIRCUIT (RX UNIT)

A 12.8 MHz reference frequency is produced by the oscillator (X3). The frequency is adjusted with R84. The reference frequency is applied to the PLL IC (IC3, pin 1).

2-3-4 RECEIVER VCO CIRCUIT (RX UNIT)

The VCO circuit (D10, D11, Q4) generates the receive frequency. D10, D11, L14 and L15 provide oscillate frequency control. The controlled signal is applied to the buffer amplifier (Q5) to amplify the VCO oscillation. The amplified signal is applied to PLL IC (IC3, pin 8) and the buffer amplifier (Q6). The buffer-amplified signal is applied to the mixer circuit (IC6, pin 3).

2-3-5 TRANSMITTER PLL CIRCUIT (TX UNIT)

The PLL IC (IC3) which includes in the prescaler, the programmable counter and the phase comparator generates the 1st LO frequency with a Colpitts VCO (D2, D3, Q2). The PLL IC sets the dividing ratio based on N-data from the CPU (LOGIC unit; IC1) to control the programmable counter.
The PLL IC compares the phases of a VCO signal with the reference oscillator frequency, and is then applied to VCO circuit (D2, D3, Q2) via the charge pump circuit (D6, Q10, Q11).

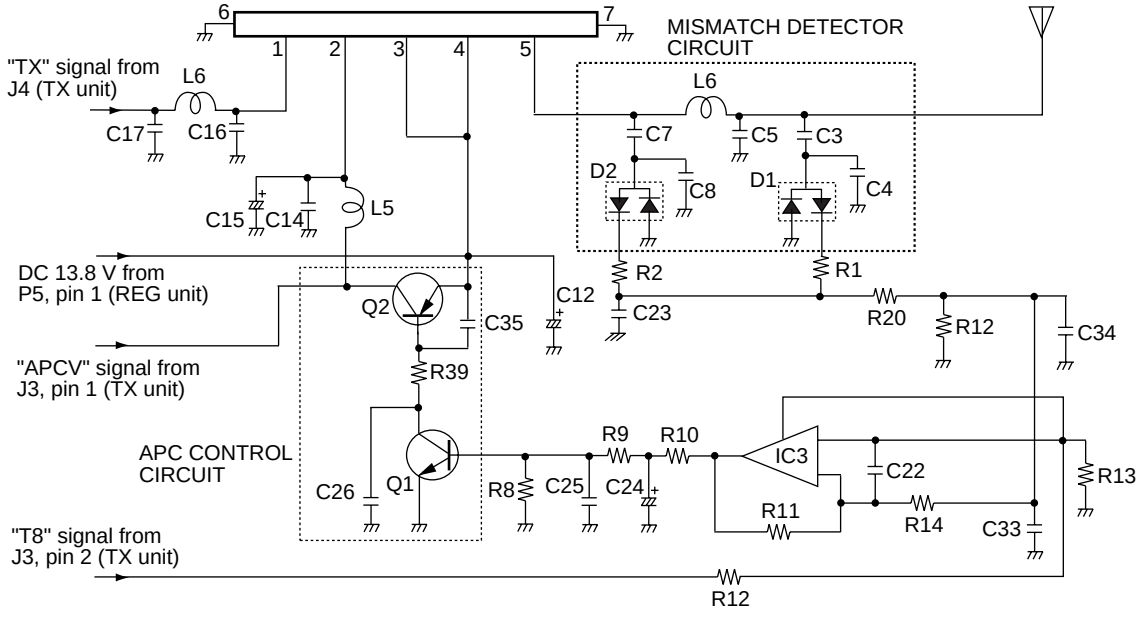
2-3-6 TRANSMITTER REFERENCE OSCILLATOR CIRCUIT (TX UNIT)

A 12.8 MHz reference frequency is produced by the oscillator (X3). The frequency is adjusted with R38. The reference frequency is applied to the PLL IC (IC3, pin 1).

2-3-7 TRANSMITTER VCO CIRCUIT (TX UNIT)

The VCO circuit (D2, D3, Q4) generates the receive frequency. D2, D3, L1 and L2 provide oscillate frequency control. The controlled signal is applied to the buffer amplifier (Q3) to amplify the VCO oscillation. The amplified signal is applied to PLL IC (IC3, pin 8) and the buffer amplifier (Q4). The buffer-amplified signal is applied to the YGR-amplifier circuit (Q4, Q5, Q6).

• APC CIRCUIT



2-4 POWER SUPPLY CIRCUIT

2-4-1 VOLTAGE LINES

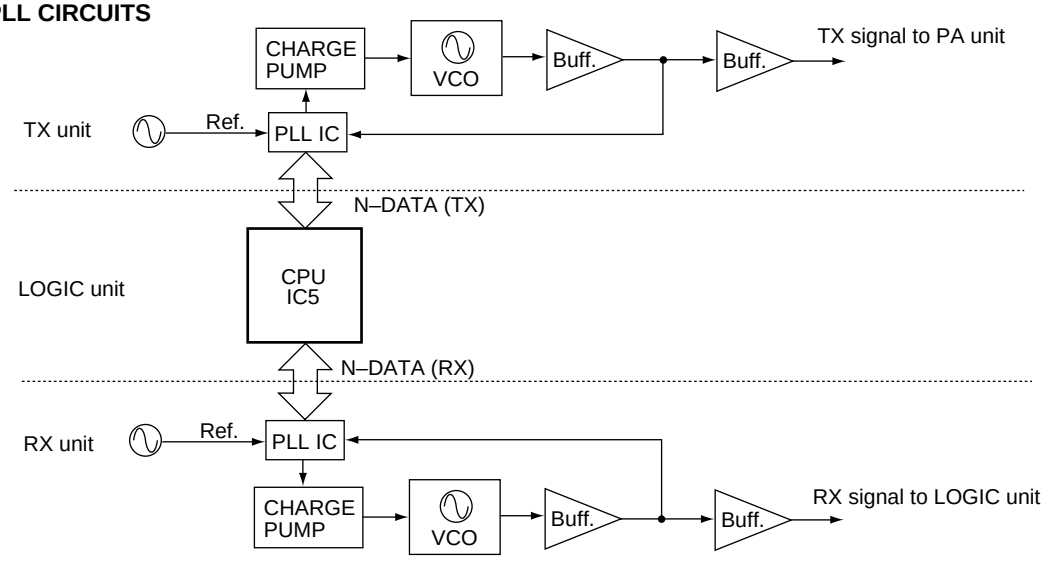
LINE	DESCRIPTION
13.8 V	The voltage from the connected DC power supply. The output voltage is applied to the CPU (LOGIC unit; IC1, pin 45) via the V.DET circuit (LOGIC unit; IC21, pin 3 and 5).
S13.8 V	The same voltage as the 13.8 V line which is controlled by the power switch (FRONT unit; S1). The output voltage is applied to the AF amplifier (LOGIC unit; IC15, pin 5) via the "V13" line.
+ 9 V	Common 9 V converted from the DC power supply by the + 9 V regulator circuit (REG unit; IC1). The output voltage is applied to TX switch, + 5 V regulator, ripple filter on TX unit and + 5 V regulator, ripple filter on RX unit.
+ 5 V	Common 5 V converted from the + 9 V regulator circuit (REG unit; IC1) by the + 5 V regulator circuit (LOGIC unit; IC9). The output voltage is applied to RESET circuit (LOGIC unit).

2-5 PORT ALLOCATIONS

2-5-1 CPU (LOGIC UNIT IC1)

Pin number	Port name	Description
3	P62 / A18	Outputs LOCAL INHIBIT LED control signal .
4	P61 / A17	Outputs COR SIMURATE LED control singal.
5	P60 / A16	Outputs RESET LED control signal.
29	P21 / INTP0	Input port for the transmitting mode from the outside signal.
30	P22 / INTP1	Input port for the STB signal to switch the outside frequency.
31	P23 / INTP2 / C1	Input port for the LOCAL mode from the outside signal.
32	P24 / INTP3	Input port for the RESET signal from the outside signal.
45	P74 / AN4	Input port for the VD, H signal from the DC power supply voltage detecting circuit.
46	P73 / AN3	Input port for the VD, L signal from the DC power supply voltage detecting circuit.
47	P72 / AN2	Input port for the TX unlock signal.
48	P71 / AN1	Input port for the RX unlock signal.
49	P70 / AN0	Input port for the squelch signal.
54	P00	Outputs clock signal to TX and RX PLL IC.
55	P01	Outputs data signal to TX and RX PLL IC.
56	P02	Outputs LE signal to TX PLL IC.
57	P03	Outputs LE signal to RX PLL IC.
58	P04	Outputs control signal for transmitting.

• PLL CIRCUITS



SECTION 3 ADJUSTMENT PROCEDURES

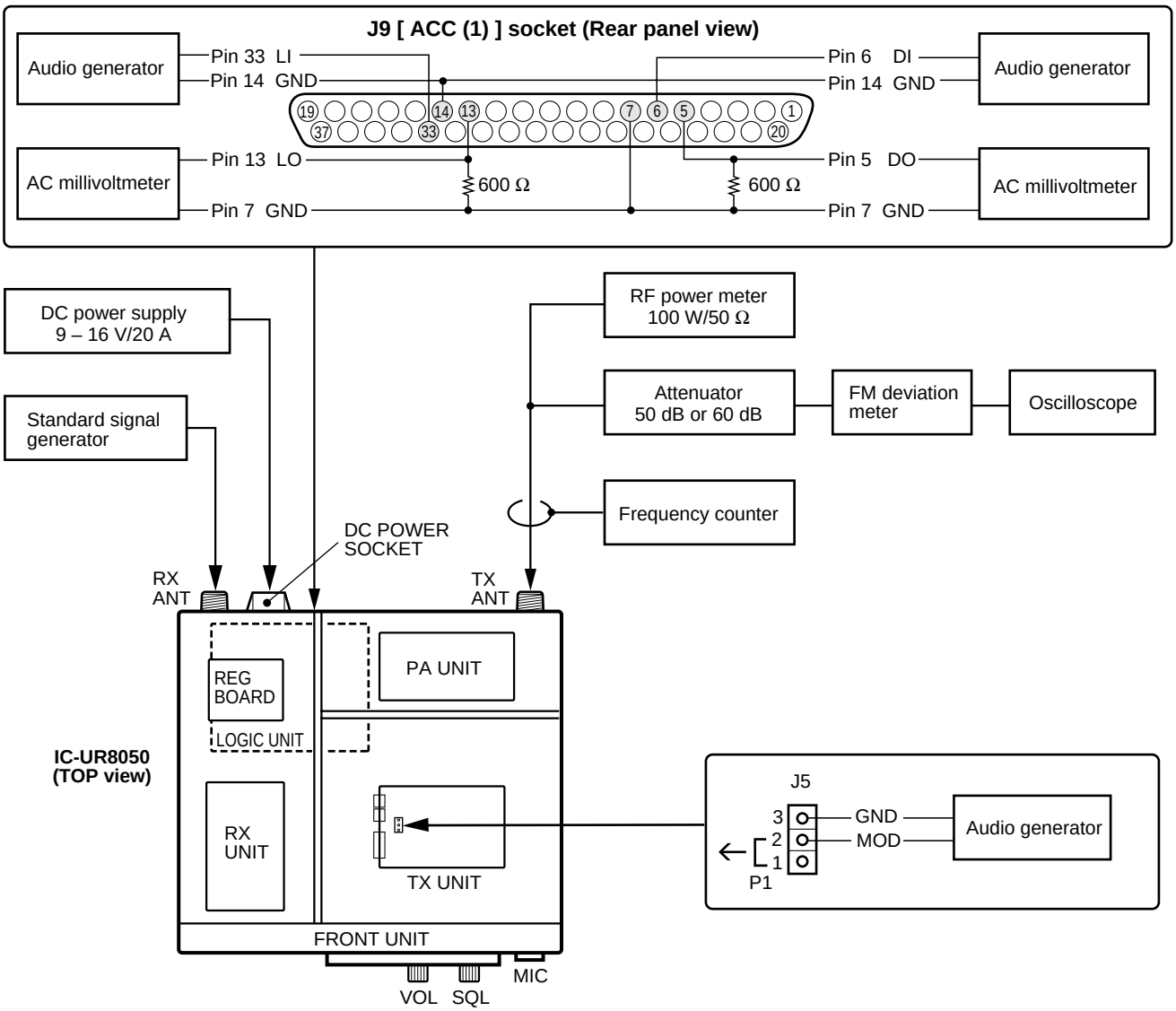
3-1 PREPARATION

■ REQUIRED TEST EQUIPMENT

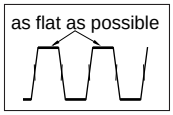
EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 9–16 V DC Current capacity : 20 A or more	Standard signal generator (SSG)	Frequency range : 300–600 MHz Output level : 0.1 µV–32 mV (–127 to –17 dBm)
RF power meter (terminated type)	Measuring range : 1–100 W Frequency range : 300–600 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V
Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	DC voltmeter	Input impedance : 50 kΩ/V DC or better
FM deviation meter	Frequency range : 30–600 MHz Measuring range : 0 to 10 kHz	AC millivoltmeter	Measuring range : 10 mV–10 V
Audio generator (AG)	Frequency range : 300–3000 Hz Measuring range : 1–500 mV	Digital multimeter	Input impedance : 10 MΩ/V DC or better
		Attenuator	Power attenuation : 50 or 60 dB Capacity : 100 W or more
		Terminator	Impedance : 50 Ω Capacity : 100 W or more
			Impedance : 600 Ω dummy

CW: Clockwise CCW: Counterclockwise

■ CONNECTION

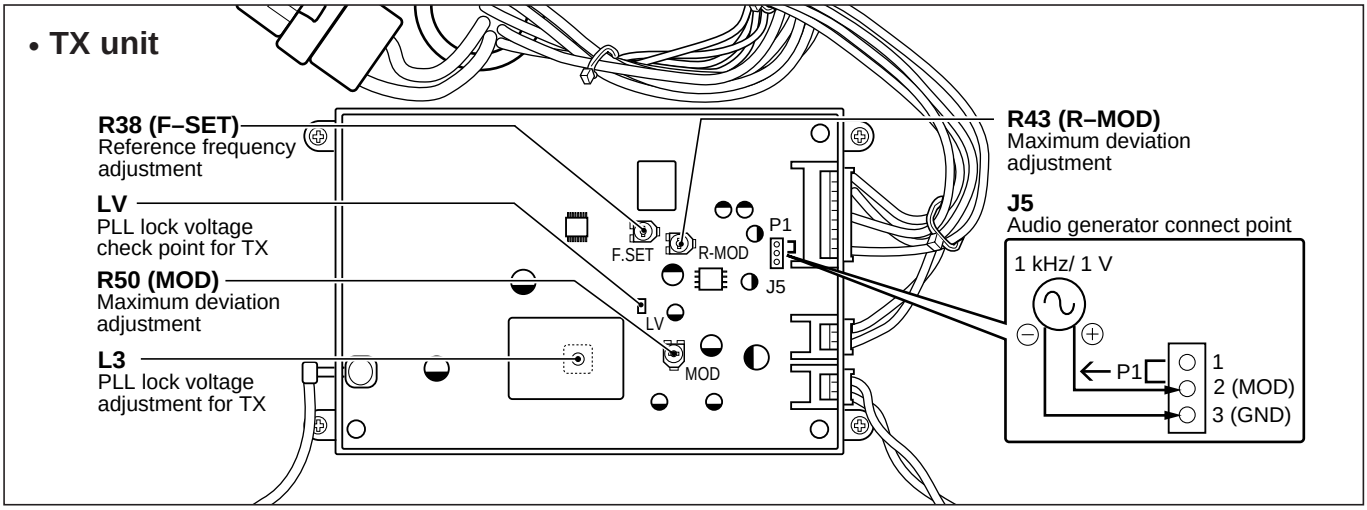


3-2 PLL AND TRANSMITTER ADJUSTMENTS

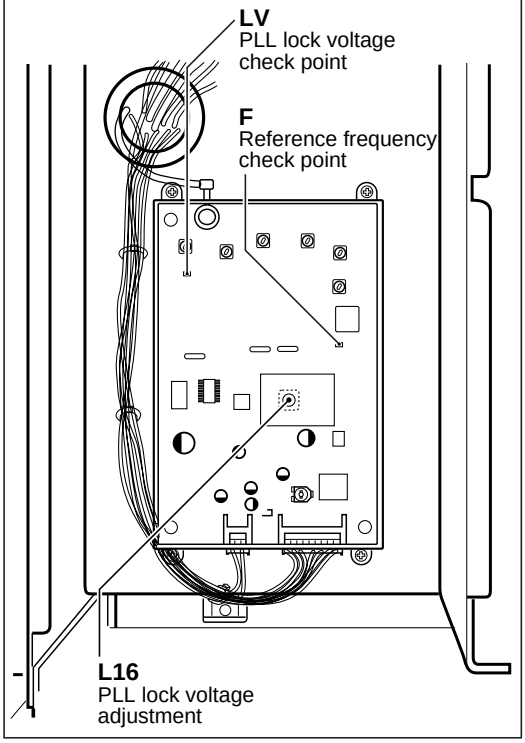
ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
			UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1	• Operating freq. : 415.000 MHz • Apply DC voltage : 13.8 V [VOLUME] : Max. CCW [SQUELCH] : Max. CW • Connect an RF power meter or terminator to the [TX ANT] connector. • Transmitting	TX	Connect a digital multimeter or an oscilloscope to check point [LV].	2.7 V	TX	L3
	2	• [LOCAL INHIBIT] switch : ON • Receiving freq. : 415.050 MHz [VOLUME] : "11 o'clock" position • Receiving	RX	Connect a digital multimeter or an oscilloscope to check point [LV].	2.4 V	RX	L16
REFERENCE FREQUENCY	1	• Operating freq. :415.000 MHz • Transmitting	Rear panel	Loosely couple a frequency counter to the [TX ANT] connector.	414.9999–415.0001 MHz	TX	R38 (F–SET)
OUTPUT POWER	1	• [LOCAL INHIBIT] switch : ON • Operating freq. :415.000 MHz • Apply DC voltage : 13.8 V [VOLUME] : Max. CCW [SQUELCH] : Max. CW • Transmitting	Rear panel	Connect an RF power meter or a terminator to the [TX ANT] connector.	47 W	PA	R16 (Hi)
DEVIATION (MAXIMUM)	1	• [LOCAL INHIBIT] switch : ON • Set an FM deviation meter as : HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Disconnect P1 from J5 on the TX unit, connect an audio generator to J5 and set as : 1 kHz/ 1 V • Transmitting	Rear panel	Connect an FM deviation meter to the [TX ANT] connector through an attenuator.	#03: ±4.7 kHz #04: ±2.3 kHz	TX	R50 (MOD)
	2	• Set an AG as : 50 Hz/ 1 V • Transmitting			Minimum deviation, and a connected oscilloscope to the FM deviation meter as shown below. 		R43 (R–MOD)
	3	After adjustment, connect P1 to J5 on the TX unit.					
(MICROPHONE)	4	• Connect an AG to [MIC] connector and set as : 1 kHz/ 4 mV • Transmitting	Rear panel	Connect an FM deviation meter to the [TX ANT] connector through an attenuator.	#03: ±3.0 kHz #04: ±1.5 kHz	LOGIC	R61 (MIC)
(REPEATER)	5	• [LOCAL INHIBIT] switch : OFF • Connect an SSG to the [RX ANT] connector and set as: Level : 1 mV* (60 dBµ) Deviation : ±3 kHz Modulation : 1 kHz • Receiving					R47 (MOD)
	6	•Set an SSG as Deviation : ±5.0 kHz [#03] : ±2.5 kHz [#04] • Receiving			#03: ±3.0–5.0 kHz #04: ±1.5–2.5 kHz		Verify

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

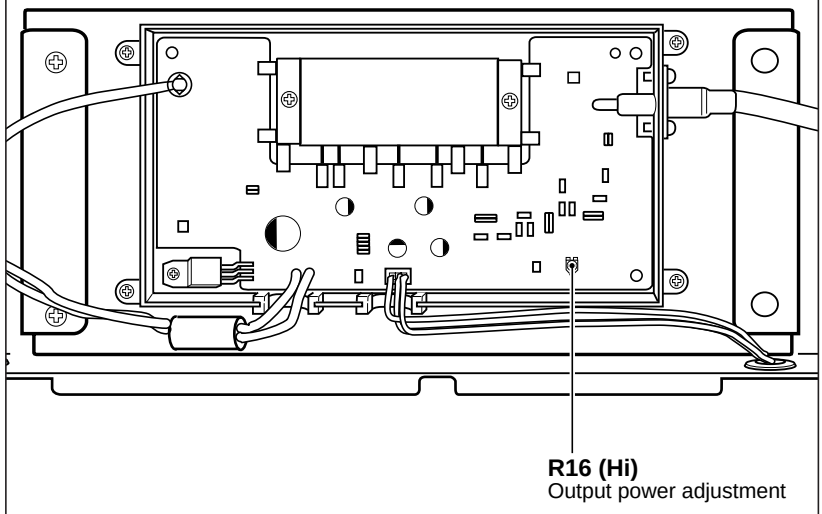
• TX unit



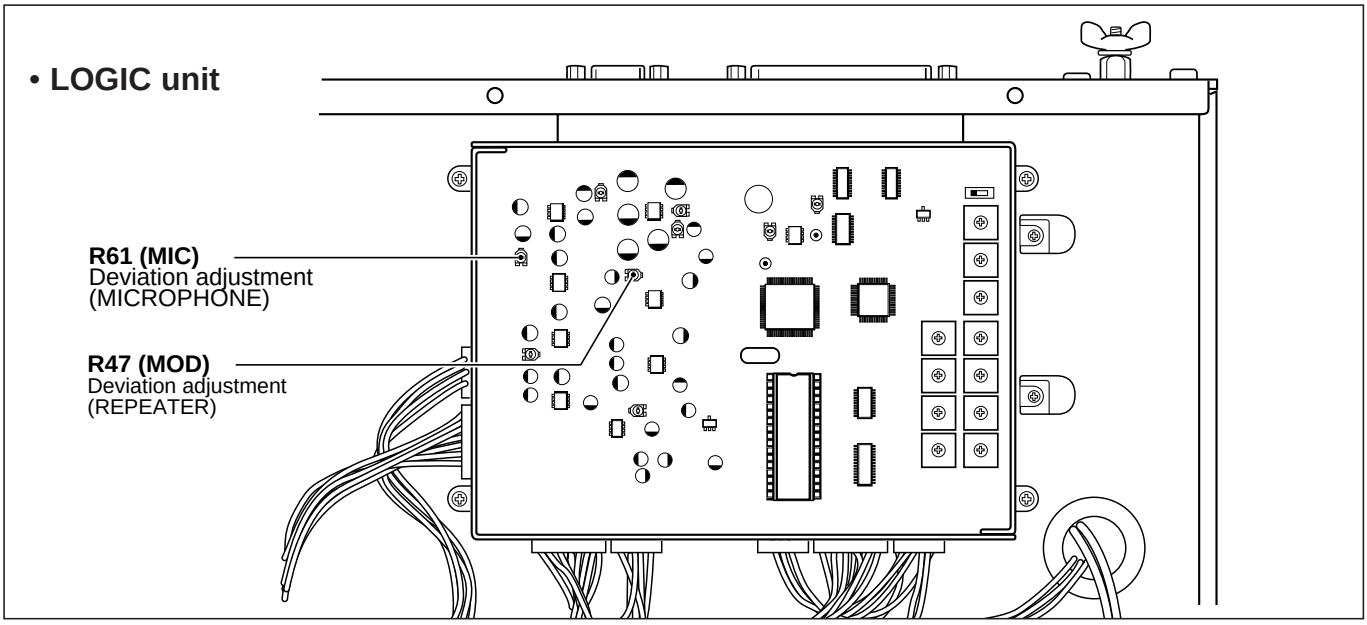
• RX unit



• PA unit



• LOGIC unit

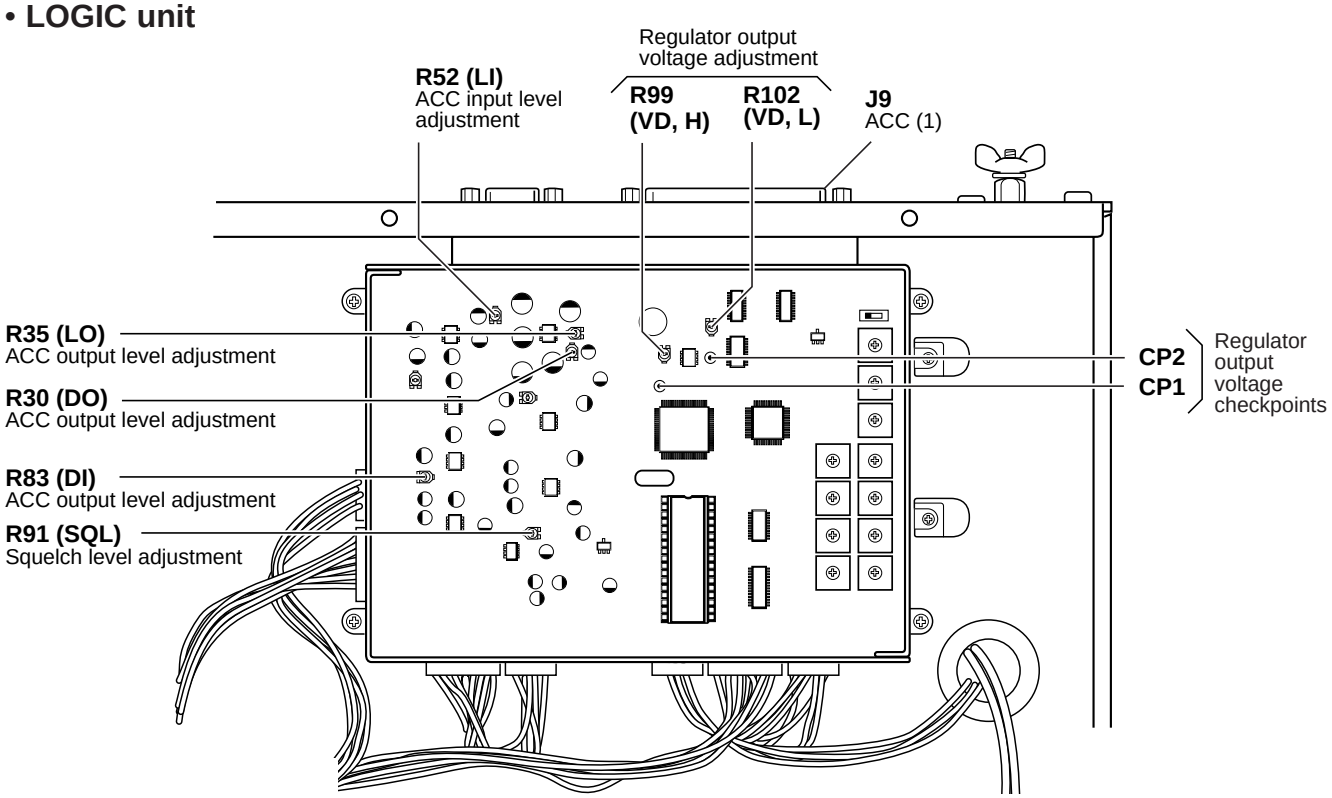


3-3 ACC LEVELS, REGULATOR OUTPUT AND RECEIVER ADJUSTMENTS

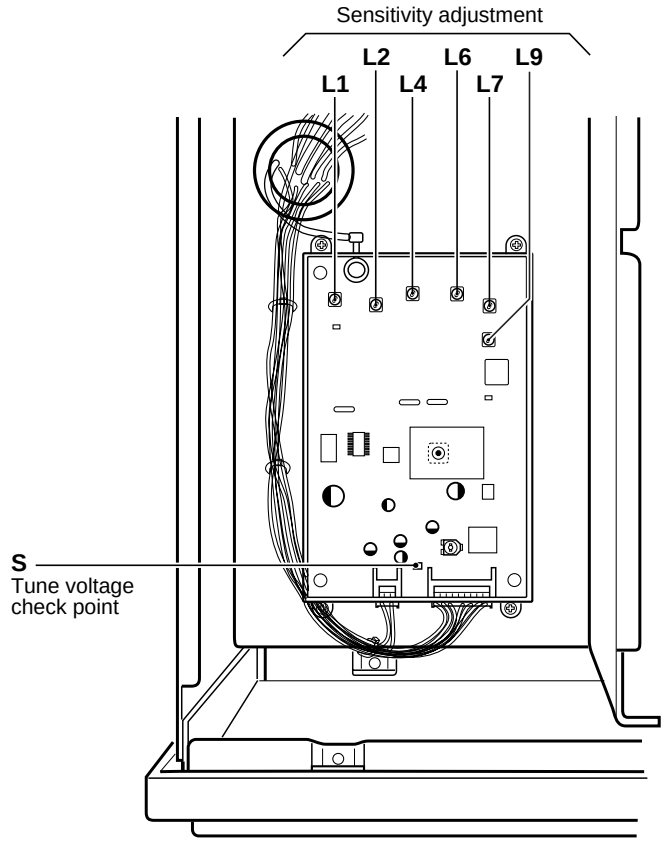
ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
			UNIT	LOCATION		UNIT	ADJUST
ACC OUPUT LEVEL (DO)	1	• [LOCAL INHIBIT] switch : ON • Connect an SSG to the [RX ANT] connector and set as : Level : 1 mV* (–60 dBμ) Deviation : ±3.0 kHz (#03) ±1.5 kHz (#04) Modulation : 1 kHz • Receiving	Rear panel	Connect a millivoltmeter and 600 Ω terminator in parallel to [ACC1] socket (J9 pin 5, 7).	0 dBm	LOGIC	R30 (DO)
ACC OUPUT LEVEL (LO)	2			(J9 pin 13, 7)	0 dBm		R35 (LO)
ACC INPUT LEVEL (LI)	1	• [LOCAL INHIBIT] switch : ON • Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Connect an AG to [ACC1] socket (J9 pin 33, 14) and set as : 1 kHz/ 100 mV • Transmitting	Rear panel	Connect an FM deviation meter to the [TX ANT] connector through an attenuator.	#03: ±3.0 kHz #04: ±1.5 kHz	LOGIC	R52 (LI)
ACC INPUT LEVEL (DI)	2	• Connect an AG to [ACC1] socket (J9 pin 6, 14) and set as Level : 1 kHz/100 mV • Transmitting			±3 kHz		R83 (DI)
REGULATOR OUTPUT VOLTAGE	1	• Connect an RF power meter or a terminator to the [TX ANT] connector. • R99, R102 (LOGIC unit) : Max. CCW • Apply DC voltage : 11 V	LOGIC	Connect a digital multimeter to check point CP1.	At the point where the voltage just switches H (5 V) to L (0 V).	LOGIC	R99 (VD, H)
	2	• Apply DC voltage : 10 V		Connect a digital multimeter to check point CP2.			R102 (VD, L)
	3	• Decrease applied DC voltage 13.8 V to 9 V. • Transmitting	Rear	Connect a DC voltmeter between the + and – terminals at DC power socket.	Turns off [TX] LED at 10 V. (stop transmitting)	Front	Verify
	4	• Increase applied DC voltage 9 V to 13.8 V. • Transmitting			Turns on [TX] LED at 11 V. (start transmitting)		
SENSITIVITY	1	• [LOCAL INHIBIT] switch : ON • Receiving freq. : 415.000 MHz • Connect an SSG to the [RX ANT] connector and set as : Level : 3.2 μV* (–97 dBm) Deviation : ±3.0 kHz [#03] : ±1.5 kHz [#04] Modulation : 1 kHz • Receiving	RX	Connect a digital multimeter to check point CP.S.	Maximum voltage	RX	Adjust in sequence L1, L2, L4, L6, L7, L9
SQUELCH LEVEL	1	• [LOCAL INHIBIT] switch : ON • Receiving freq : 415.000 MHz • Connect an SSG to the [RX ANT] connector and set as : Level : 0.32 μV* (–10 dBμ) Modulation : OFF • Receiving	FRONT	[BUSY] LED	At the point where the [BUSY] LED just turns on.	FRONT	[SQUELCH] control
	2	• [LOCAL INHIBIT] switch : OFF • R91 (LOGIC unit) : Max. CW • Set an SSG as: Level : 0.22 μV* (–13 dBμ) • Receiving		Speaker output	At the point where the audio signal just appears.	LOGIC	R91 (SQL)

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

• LOGIC unit



• RX unit



SECTION 4 PARTS LIST

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210000140	VARIABLE	RK1631110D9DA (10KA)
R2	7210000690	VARIABLE	RK1631110D9CA (10KB)
S1	2260001260	SWITCH	SW-118 (SDDFA3)
SP1	2510000040	SPEAKER	C065K12I0810
W1	8900008620	CABLE	OPC-844
WS1	8600033720	M.OTHER	FX1623 P02FR
WS2	8600033730	M.OTHER	FX1623 P03FR

[MIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C3	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
J1	6510004820	CONNECTOR	FM14RS-7SS
J2	6510003410	CONNECTOR	B05B-EH-S
WS1	8600036390	M.OTHER	FX2169 P01*P02MI
EP1	0910050531	PCB	B 5201A

[SWITCH UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510003430	CONNECTOR	B07B-EH-S
J2	6510003390	CONNECTOR	B03B-EH-S
S1	2230000380	SWITCH	SPUE44067A
W8	6910001030	JUMPER	IPS-1041-4
WS1	8600036400	M.OTHER	FX2169 P01*P02SW
EP1	0910051070	PCB	B 5251

[LED UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R2	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R3	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R4	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R5	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R6	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R7	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
J1	6510003440	CONNECTOR	B08B-EH-S
DS1	5040002450	LED	TLG208
DS2	5040002450	LED	TLG208
DS3	5040002460	LED	TLR208
DS4	5040000650	LED	TLY205
DS5	5040000640	LED	TLR205
DS6	5040000650	LED	TLY205
DS7	5040001360	LED	TLG205
WS1	8600036410	M.OTHER	FX2169 P01*P02LE
EP1	0910050541	PCB	B 5202A

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1140001480	S.IC	µPD78213GC-AB8
IC2	1130004080	S.IC	µPD71055GB-3B4
IC4	1130004712	IC	NM27C256Q150
IC5	1130004790	S.IC	TC74HC374AF
IC6	1130004011	S.IC	TC74HC138AF
IC7	1130004921	S.IC	TC74HC04AF(TP1)
IC8	1110001501	S.IC	S-80845ALUP-EA9-T2
IC9	1180000970	S.IC	AN78L05M-(E1)
IC10	1130002390	S.IC	µPD4049UBG
IC11	1130002390	S.IC	µPD4049UBG
IC12	1110000960	S.IC	NJM4558M-T1
IC13	1110000960	S.IC	NJM4558M-T1
IC14	1110002420	S.IC	NJM2073M-T1
IC15	1110003090	IC	LA4425A
IC16	1110000960	S.IC	NJM4558M-T1
IC17	1110000960	S.IC	NJM4558M-T1
IC18	1110000960	S.IC	NJM4558M-T1
IC19	1110000960	S.IC	NJM4558M-T1
IC20	1130005640	S.IC	TC4W53F (TE12L)
IC21	1110001590	S.IC	TA75393F (TP1)
Q1	1590000680	S.TRANSISTOR	DTC114EUA T106
Q3	1590000680	S.TRANSISTOR	DTC114EUA T106
Q4	1590000680	S.TRANSISTOR	DTC114EUA T106
Q5	1590001600	S.TRANSISTOR	UMD3 TL
Q6	1590000680	S.TRANSISTOR	DTC114EUA T106
Q7	1590000680	S.TRANSISTOR	DTC114EUA T106
Q8	1590000680	S.TRANSISTOR	DTC114EUA T106
Q9	1590000680	S.TRANSISTOR	DTC114EUA T106
Q10	1590000680	S.TRANSISTOR	DTC114EUA T106
Q11	1590001450	S.FET	2SJ144-GR (TE85R)
Q12	1590000680	S.TRANSISTOR	DTC114EUA T106
Q13	1590001450	S.FET	2SJ144-GR (TE85R)
Q14	1590000680	S.TRANSISTOR	DTC114EUA T106
D1	1790001200	S.DIODE	MA6S121(TX)
D2	1790001200	S.DIODE	MA6S121(TX)
D3	1790001200	S.DIODE	MA6S121(TX)

S.=Surface mount

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D4	1790001200	S.DIODE	MA6S121(TX)
D5	1790001200	S.DIODE	MA6S121(TX)
D6	1790001200	S.DIODE	MA6S121(TX)
D7	1790001200	S.DIODE	MA6S121(TX)
D8	1790001200	S.DIODE	MA6S121(TX)
D9	1790001200	S.DIODE	MA6S121(TX)
D10	1790001200	S.DIODE	MA6S121(TX)
D11	1790001200	S.DIODE	MA6S121(TX)
D12	1790001200	S.DIODE	MA6S121(TX)
D13	1790001200	S.DIODE	MA6S121(TX)
D14	1790001200	S.DIODE	MA6S121(TX)
D15	1790001200	S.DIODE	MA6S121(TX)
D16	1790001200	S.DIODE	MA6S121(TX)
D17	1750000290	S.DIODE	1SS300 (TE85R)
D18	1750000550	S.DIODE	1SS355 TE-17
D19	1160000060	S.DIODE	DAN202U T107
X1	6050009300	S.XTAL	CR-505 (4 MHz)
L1	6170000140	COIL	LW-15
R1	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R2	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R3	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R4	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R5	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R6	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R7	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R8	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R9	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R10	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R11	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R12	7410000720	S.ARRAY	EXB-V8V 473JV (47 KΩ)
R13	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R14	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 KΩ)
R15	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R16	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R17	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 KΩ)
R18	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R19	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R20	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R21	7030003820	S.RESISTOR	ERJ3GEYJ 155 V (1.5 MΩ)
R22	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 KΩ)
R23	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 KΩ)
R24	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 KΩ)
R25	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R26	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R27	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R28	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R29	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R30	7310002760	S.TRIMMER	RV-152 (RH03A3AJ4X0HA) 223
R31	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R32	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R34	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R35	7310002760	S.TRIMMER	RV-152 (RH03A3AJ4X0HA) 223
R36	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R37	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R39	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R40	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 KΩ)
R41	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R42	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R43	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R44	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 KΩ)
R45	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R46	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R47	7310002760	S.TRIMMER	RV-152 (RH03A3AJ4X0HA) 223
R48	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R49	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 KΩ)
R50	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 KΩ)
R51	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R52	7310002670	S.TRIMMER	RV-143 (RH03A3AS2) 471
R53	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R54	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R55	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 KΩ)
R56	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R57	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R58	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R59	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R60	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R61	7310002670	S.TRIMMER	RV-143 (RH03A3AS2) 471
R62	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 KΩ)
R63	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R65	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 KΩ)
R66	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R67	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R68	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R69	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R70	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R71	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R72	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 KΩ)
R73	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 KΩ)
R74	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R75	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 KΩ)
R76	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 KΩ)
R77	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R78	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R79	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 KΩ)
R80	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R81	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R82	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R83	7310002670	S.TRIMMER	RV-143 (RH03A3AS2) 471
R84	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R85	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R86	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 KΩ)
R87	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 KΩ)
R88	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 KΩ)
R89	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R90	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 KΩ)
R91	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R92	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 KΩ)
R93	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 KΩ)
R94	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 KΩ)
R97	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 KΩ)
R98	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R99	7310002770	S.TRIMMER	RV-153 (RH03A3AN4X02A) 333
R100	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 KΩ)
R101	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 KΩ)
R102	7310002770	S.TRIMMER	RV-153 (RH03A3AN4X02A) 333
R103	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R104	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 KΩ)
R105	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R106	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R107	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R108	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R109	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R110	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R111	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R112	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R113	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R114	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R115	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R116	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R117	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R118	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R119	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R120	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R121	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R122	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R123	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R124	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R125	7410000950	S.ARRAY	EXB-V8V 102JV
R126	7410000950	S.ARRAY	EXB-V8V 102JV
R127	7410000950	S.ARRAY	EXB-V8V 102JV
R128	7410000950	S.ARRAY	EXB-V8V 102JV
R129	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 KΩ)
R130	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 KΩ)
R131	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 KΩ)
R132	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 KΩ)
R133	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 KΩ)
R134	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 KΩ)
C1	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C2	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C3	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C4	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C6	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C7	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C8	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C9	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C10	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A

S.=Surface mount

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C11	4550006360	S.TANTALUM	ECST1VY104R
C12	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C15	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C16	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C17	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C18	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A
C19	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C20	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C21	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C22	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C25	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C26	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C27	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C28	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C29	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C30	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C31	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C32	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C33	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C34	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C35	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C36	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C37	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C38	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C39	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C40	4510004600	ELECTROLYTIC	16 MV 1000 HC
C41	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C42	4510006260	S.ELECTROLYTIC	ECEV1AA471UP
C43	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C44	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C45	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C46	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C48	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C49	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C50	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C51	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C52	4510005740	S.ELECTROLYTIC	ECEV1HAR22SR
C53	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C54	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C55	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C56	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C57	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C58	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C60	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C61	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C62	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C63	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C64	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C65	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C66	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C67	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C68	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C69	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C70	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C71	4510004430	S.ELECTROLYTIC	ECEV1CV220WR
C72	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C73	4510004430	S.ELECTROLYTIC	ECEV1CV220WR
C74	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C75	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C76	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C77	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C78	4030006890	S.CERAMIC	C1608 JF 1H 103Z-T-A
C79	4030006890	S.CERAMIC	C1608 JF 1H 103Z-T-A
C80	4030006890	S.CERAMIC	C1608 JF 1H 103Z-T-A
C81	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C82	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C83	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C84	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C85	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C86	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C87	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C88	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C89	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C90	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C91	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C92	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C93	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C94	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C95	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C96	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C97	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C98	4030006890	S.CERAMIC	C1608 JF 1H 103Z-T-A
C99	4030006890	S.CERAMIC	C1608 JF 1H 103Z-T-A
C100	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C101	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
J1	2610000200	CONNECTOR	ICC05-028 360T
J2	6510017850	CONNECTOR	S09B-EH
J3	6510003560	CONNECTOR	S08B-EH-S
J4	6510003550	CONNECTOR	S07B-EH-S
J5	6510003530	CONNECTOR	S05B-EH-S
J6	6510003560	CONNECTOR	S08B-EH-S
J8	6510003530	CONNECTOR	S05B-EH-S
J9	6510020970	CONNECTOR	DCLC-J37SAF-20L9
J10	6510017990	CONNECTOR	DELC-J9SAF-20L9
J11	6510003540	CONNECTOR	S06B-EH-S
S1	2260002220	SWITCH	S-1010A
S2	2260002220	SWITCH	S-1010A
S3	2260002220	SWITCH	S-1010A
S4	2260002220	SWITCH	S-1010A
S5	2260002220	SWITCH	S-1010A
S6	2260002220	SWITCH	S-1010A
S7	2260002220	SWITCH	S-1010A
S8	2260002220	SWITCH	S-1010A
S9	2260002220	SWITCH	S-1010A
S10	2260002220	SWITCH	S-1010A
S11	2260002220	SWITCH	S-1010A
S12	2220000460	SWITCH	ESD-11V220
WS1	8600033830	M.OTHER	FX1623 P01*02CR-W
WS2	8600033840	M.OTHER	FX1623 P03*04CR-W
EP1	0910045481	PCB	B 4575A

[RX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180000970	S.IC	AN78L05M-(E1)
IC2	1110002870	S.IC	AN8003M-(E1)
IC3	1140005990	S.IC	MB15A02PFV1-G-BND-ER
IC4	1110002750	S.IC	TA75S01F (TE85R)
IC5	1110003330	S.IC	TA31136F(EL)
IC6	6910005740	IC	CB424M1R
Q1	1530002840	S.TRANSISTOR	2SC4116-Y (TE85R)
Q2	1580000490	S.FET	3SK166A-2-T7
Q3	1580000480	S.FET	3SK184-S (TX)
Q4	1530003670	S.TRANSISTOR	2SC5186-T1
Q5	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q6	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q7	1580000480	S.FET	3SK184-S (TX)
Q8	1530002360	S.TRANSISTOR	2SC2714-Y (TE85R)
Q9	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q10	1510000820	S.TRANSISTOR	2SA1587-BL (TE85R)
Q11	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
D1	1750000550	S.DIODE	1SS355 TE-17
D3	1790001310	S.VARICAP	1SV270(TPH3)
D4	1790001310	S.VARICAP	1SV270(TPH3)
D5	1790001310	S.VARICAP	1SV270(TPH3)
D7	1790001310	S.VARICAP	1SV270(TPH3)
D8	1790001310	S.VARICAP	1SV270(TPH3)
D9	1790001310	S.VARICAP	1SV270(TPH3)
D10	1790001310	S.VARICAP	1SV270(TPH3)

S.=Surface mount

[RX UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
D11	1790001310	S.VARICAP	1SV270(TPH3)	
D13	1750000550	S.DIODE	1SS355 TE-17	
D14	1790000950	S.ZENER	MA8056-M(TX)	
D15	1790000620	S.DIODE	MA77(TX)	
FI1	2010001600	XTAL	FL-199 (30.875 MHz)	[wide]
	2010001910	FILTER	FL-238 (30.875 MHz)	[narrow]
FI2	2020000490	CERAMIC	CFZM455E10	[wide]
	2020000770	CERAMIC	CFZM455G	[narrow]
X1	6050008810	XTAL	CR-473 (30.41909 MHz)	
X2	6070000150	S.DISCRIMINATOR	CDBC455CX24-TC	
X3	6050010280	S.XTAL	CR-608 (12.800 MHz)	
L1	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L2	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L4	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L6	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L7	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L9	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L11	6200002040	S.COIL	NL 252018T-101J	
L13	6200001830	S.COIL	NL 322522T-100J	
L14	6200003640	S.COIL	MLF1608K 100K-T	
L15	6200003640	S.COIL	MLF1608K 100K-T	
L16	6200004130	S.COIL	MC152-E558ANA-100053	
L17	6200005730	S.COIL	ELJRE 39NG-F	
L18	6200005720	S.COIL	ELJRE 33NG-F	
L19	6200005710	S.COIL	ELJRE 27NG-F	
L21	6200003710	S.COIL	NL 252018T-2R7J	
L22	6200004790	S.COIL	MLF1608D R47K-T	[narrow]
	6200005190	S.COIL	MLF1608D R56K-T	[wide]
L23	6200006970	S.COIL	MLF1608A 3R9K-T	
L24	6200007000	S.COIL	ELJRE 82NG-F	
L25	6200003250	S.COIL	NL 322522T-R39J-3	
R1	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R3	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R4	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R5	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R6	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R7	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R8	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	
R9	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)	
R10	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R12	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R13	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)	
R14	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)	
R15	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)	
R16	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R17	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)	
R19	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R20	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R21	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R22	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)	
R23	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)	
R24	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)	
R25	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	
R27	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)	
R29	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)	[narrow]
	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)	[wide]
R30	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	
R31	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)	
R33	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	
R34	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R36	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)	
R37	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	
R39	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)	
R41	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R42	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R43	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R44	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)	
R45	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 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	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R50	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R51	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	

[RX UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
R52	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R53	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)	
R54	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R55	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	
R56	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R57	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	
R58	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)	
R60	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)	
R62	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)	
R64	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)	
R65	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R66	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)	
R67	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R68	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R70	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	
R71	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)	
R72	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)	
R73	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)	
R74	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)	
R76	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)	
R77	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)	
R79	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)	
R80	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)	
R81	7030003770	S.RESISTOR	ERJ3GEYJ 564 V (560 kΩ)	
R82	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	
R83	7510001090	S.THERMISTOR	NTCCM1608 4BH 102KC	
R84	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103	
R85	7510001090	S.THERMISTOR	NTCCM1608 4BH 102KC	
R86	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)	[wide]
	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)	[narrow]
R88	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R89	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R90	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R91	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	
R92	7030007860	S.RESISTOR	ERJ3GEYJ 8R2V	
R93	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)	
R94	7030003210	S.RESISTOR	ERJ3GEYJ 120 V (12 Ω)	
R95	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	
R96	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	
R100	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	
R101	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)	
C1	4030010780	S.CERAMIC	C1608 CH 1H 1R5C-T-A	
C2	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C4	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C5	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C6	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C7	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C11	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C12	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C13	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A	
C14	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C15	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C16	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C17	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C18	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C19	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C20	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C23	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C31	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C34	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C36	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C37	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C38	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A	
C40	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C41	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C44	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C45	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C46	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C47	4030009470	S.CERAMIC	C1608 CH 1H R75C-T-A	
C51	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A	
C52	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A	
C53	4030010780	S.CERAMIC	C1608 CH 1H 1R5C-T-A	
C54	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C56	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A	
C57	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C59	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A	
C61	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C62	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A	

S.=Surface mount

[RX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C64	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C67	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C68	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C70	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C71	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C72	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C73	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C74	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C75	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C76	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C77	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C78	4510005370	S.ELECTROLYTIC	ECEV1AA221P
C80	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C81	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C83	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C84	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C85	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C88	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C89	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C90	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C91	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C92	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C93	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C94	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C95	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C96	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C97	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L
C98	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C99	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C100	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C101	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C102	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C103	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C104	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C105	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C107	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C108	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C109	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C110	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C113	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C114	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C115	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C116	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C117	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C119	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C120	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C121	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C122	4550006080	S.TANTALUM	TEMSVB2 1C 106M-8L
C123	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A
C124	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C125	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C126	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C128	4030006950	S.CERAMIC	C1608 CH 1H 040C-T-A
C129	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C130	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C131	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C132	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C133	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C134	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C135	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C136	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C137	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C138	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C140	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C141	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C145	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C146	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C149	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C150	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C151	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C153	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C154	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C155	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C156	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C206	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
CP1	6910009670	S.CHECK P	HK3-S-T
CP2	6910009670	S.CHECK P	HK3-S-T

[RX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510003570	CONNECTOR	S09B-EH-S
J2	6510003510	CONNECTOR	S03B-EH-S
J3	6510013350	CONNECTOR	C05-LR-03
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W7	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910050502	PCB	B 5198B

[TX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180000970	S.IC	AN78L05M-(E1)
IC2	1110002870	S.IC	AN8003M-(E1)
IC3	1140005990	S.IC	MB15A02PFV1-G-BND-ER
IC4	1110002750	S.IC	TA75S01F (TE85R)
IC5	1110000960	S.IC	NJM4558M-T1
IC6	1110002750	S.IC	TA75S01F (TE85R)
Q1	1530002850	S.TRANSISTOR	2SC4116-BL (TE85R)
Q2	1530003670	S.TRANSISTOR	2SC5186-T1
Q3	1530002940	S.TRANSISTOR	2SC4228-T2 R44
Q4	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q5	1530000370	S.TRANSISTOR	2SC3356-T2B
Q6	1590002600	S.FET	MRF9745 T1
Q8	1520000450	S.TRANSISTOR	2SB1132 T100 Q
Q9	1590000680	S.TRANSISTOR	DTC114EUA T106
Q10	1510000820	S.TRANSISTOR	2SA1587-BL (TE85R)
Q11	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q12	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q13	1590001390	S.FET	2SJ144-Y (TE85R)
Q14	1560000540	S.FET	2SK880-Y (TE85R)
D1	1750000550	S.DIODE	1SS355 TE-17
D2	1790001310	S.VARICAP	1SV270(TPH3)
D3	1790001310	S.VARICAP	1SV270(TPH3)
D5	1750000550	S.DIODE	1SS355 TE-17
D6	1790000950	S.ZENER	MA8056-M(TX)
X1	6050010280	S.XTAL	CR-608 (12.800 MHz)
L1	6200003640	S.COIL	MLF1608K 100K-T
L2	6200003640	S.COIL	MLF1608K 100K-T
L3	6200004130	S.COIL	MC152-E558ANA-100053
L4	6200005740	S.COIL	ELJRE 47NG-F
L5	6200005720	S.COIL	ELJRE 33NG-F
L6	6200005690	S.COIL	ELJRE 18NG-F
L7	6200005680	S.COIL	ELJRE 15NG-F
L8	6200003450	S.COIL	NL 322522T-082J
L9	6200004170	S.COIL	NL 322522T-012J
L10	6200001830	S.COIL	NL 322522T-100J
R1	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R2	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R3	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R4	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R5	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)
R6	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R7	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R9	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R10	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R11	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R12	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)
R13	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R14	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R17	7030000250	S.RESISTOR	MCR10EZHJ 82 Ω (820)
R18	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R19	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R20	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

S.=Surface mount

[TX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R21	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R22	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R23	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R24	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R25	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R26	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R27	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R28	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R29	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R30	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R31	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R32	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R35	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R36	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R37	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R38	7310002760	S.TRIMMER	RV-152 (RH03A3AJ4X0HA) 223
R39	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R40	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R41	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R43	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R44	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R45	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R46	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R47	7510000200	S.THERMISTOR	TN20-3U473LT
R48	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R49	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R50	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R51	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R52	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R53	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R56	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R57	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R58	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R60	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R68	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R69	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R70	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R71	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R72	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R73	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R74	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R75	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R76	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R77	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R78	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ) [wide]
	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ) [narrow]
R79	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R80	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R81	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R82	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R83	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R84	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R85	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R86	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R87	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R88	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R89	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R90	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
C1	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C3	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C5	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C6	4550000510	S.TANTALUM	TESVA 1V 473M1-8L
C7	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C10	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C11	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C13	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C15	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C17	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C18	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C19	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A
C20	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C21	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C22	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A

[TX UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C23	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C24	4550006770	S.TANTALUM	TEMSVD2 1C 476M-12R
C25	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C26	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C28	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C29	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C30	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C35	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C36	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C37	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C41	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C42	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C45	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C46	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C47	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C48	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C49	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C50	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C52	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C53	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C54	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C55	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C56	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C57	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C58	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C59	4510005300	S.ELECTROLYTIC	ECEV1AA330SR
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C62	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C63	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C64	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C65	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C66	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C67	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C68	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C69	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C70	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C72	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C74	4030006950	S.CERAMIC	C1608 CH 1H 040C-T-A
C75	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C76	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C77	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C78	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C79	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C80	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C81	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C83	4030009590	S.CERAMIC	C2012 JF 1C 225Z-T-A
C84	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
CP1	6910009670	S.CHECK P	HK3-S-T
J1	6510003560	CONNECTOR	S08B-EH-S
J2	6510003510	CONNECTOR	S03B-EH-S
J3	6510003510	CONNECTOR	S03B-EH-S
J4	6510013350	CONNECTOR	C05-LR-03
J5	6910004740	CONNECTOR	IMSA-9202B-1-03T
P1	6910003120	CONNECTOR	IMSA-9206H-T
EP1	0910050512	PCB	B 5199B

S.=Surface mount

[REG UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180001320	IC	NJM7809FA
D1	1790000700	DIODE	DSA3A1
R1	7010004680	RESISTOR	
R2	7010004680	RESISTOR	
C1	4550002430	TANTALUM	DN 1V R33M
C2	4550000320	TANTALUM	DN 1V 0R1M
C3	4510004590	ELECTROLYTIC	16 MV 470 HC
C4	4010006880	CERAMIC	HE50SJ YB 102K 50V
J1	6510003390	CONNECTOR	B03B-EH-S
J2	6510003420	CONNECTOR	B06B-EH-S
J3	6510003390	CONNECTOR	B03B-EH-S
J4	6510003390	CONNECTOR	B03B-EH-S
F1	5220000020	HOLDER	S-N5051
F2	5220000020	HOLDER	S-N5051
F3	5210000080	FUSE	FGB 20A
WS1	8600032860	M.OTHER	FX1449 P01RE
WS2	8600036350		FX2169 P02*P07RE
WS3	8600036360		FX2169 P03*P08RE
WS4	8600036370		FX2169 P04*P09RE
WS5	8600033971		FX1624 P05RE-1
WS6	8600036380		FX2169 P06RE
EP1	0910051081	PCB	B 5252A

[PA UNIT]

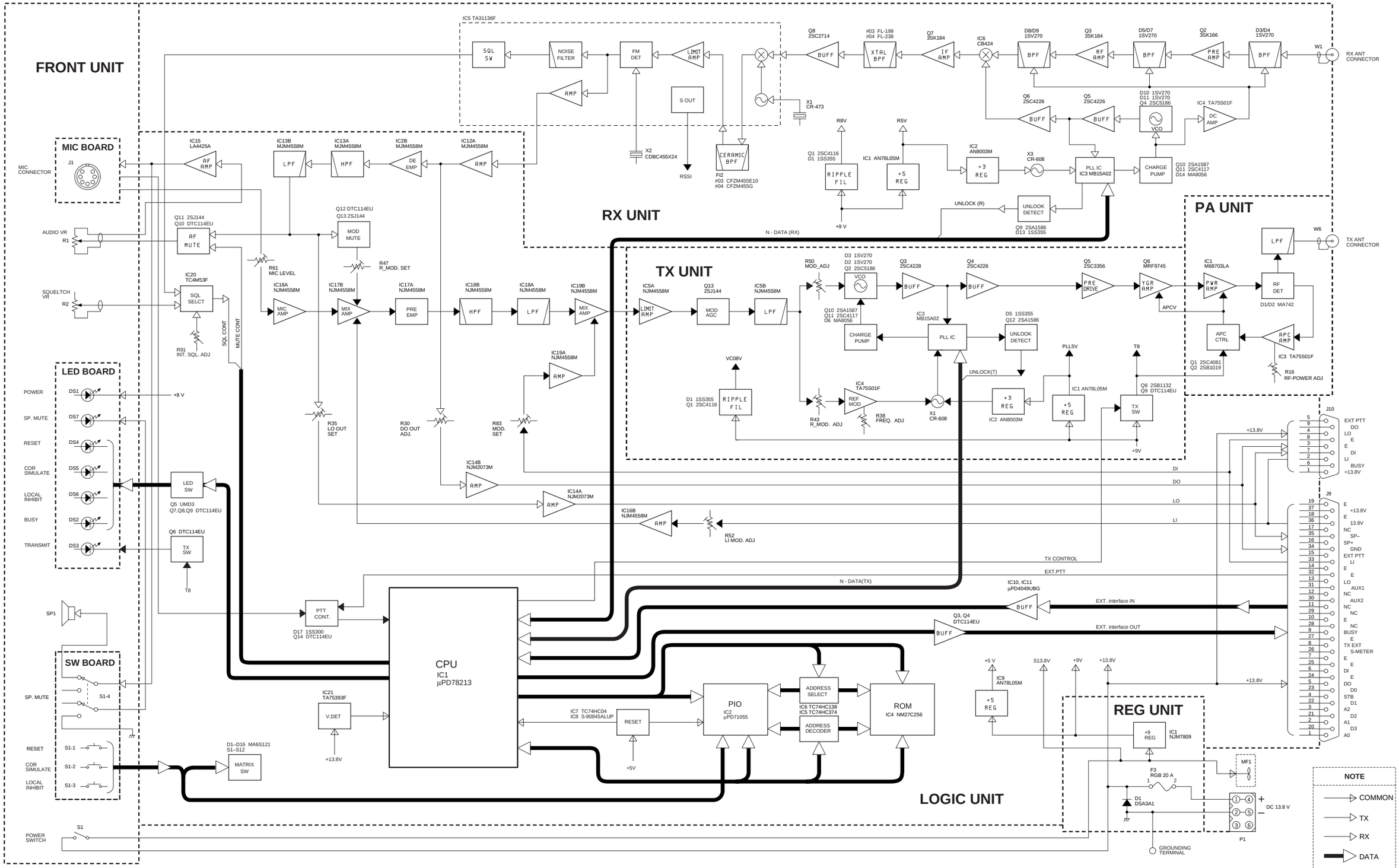
REF NO.	ORDER NO.	DESCRIPTION	
IC1	1150001960	IC	M68703LA
IC3	1110002750	S.IC	TA75S01F (TE85R)
Q1	1530002280	S.TRANSISTOR	2SC4081 T107 S
Q2	1520000220	TRANSISTOR	2SB1019-Y
D1	1790000980	S.DIODE	MA742(TX)
D2	1790000980	S.DIODE	MA742(TX)
L1	6110001660	COIL	LA-252
L2	6110001660	COIL	LA-252
L3	6110001660	COIL	LA-252
L4	6110001660	COIL	LA-252
L5	6200006190	S.COIL	BLM21P300S
L6	6110001990	COIL	LA-223
L7	6110002590	COIL	LA-239
R1	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R2	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R7	7030001180	S.RESISTOR	MCR50JZHJ 270 Ω (271)
R8	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R9	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R10	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R11	7030003790	S.RESISTOR	ERJ3GEYJ 824 V (820 kΩ)
R12	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R13	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R14	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R15	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R16	7310002720	S.TRIMMER	RV-148 (RH03A3AS3X0DA) 472
R17	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R20	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R21	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R22	7510000850	S.THERMISTOR	NTCCF2012 3BH 102KC-T
R23	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
C1	4030011080	S.CERAMIC	GRM42-6 CH 060D 500PT
C2	4030011070	S.CERAMIC	GRM42-6 CH 050C 500PT
C3	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C4	4030011080	S.CERAMIC	GRM42-6 CH 060D 500PT
C5	4030011110	S.CERAMIC	GRM42-6 CH 090D 500PT
C6	4030011050	S.CERAMIC	GRM42-6 CJ 030C 500PT
C7	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C8	4030011080	S.CERAMIC	GRM42-6 CH 060D 500PT
C9	4030011060	S.CERAMIC	GRM42-6 CH 040C 500PT
C10	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C11	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C12	4510006650	S.ELECTROLYTIC	ECEV 1EA 100SR
C13	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C14	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C15	4510006650	S.ELECTROLYTIC	ECEV 1EA 100SR
C16	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C17	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C18	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C19	4510006650	S.ELECTROLYTIC	ECEV 1EA 100SR
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C22	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4510006650	S.ELECTROLYTIC	ECEV 1EA 100SR
C25	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C27	4510006670	S.ELECTROLYTIC	ECEV 1CA 471P
C28	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C32	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C35	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
J1	6510003390	CONNECTOR	B03B-EH-S
W1	8900004930	CABLE	OPC-481
W4	8900008630	CABLE	OPC-845
W6	8900004940	CABLE	OPC-482
WS1	8600036340	M.OTHER	FX2169 P01*P03PA
EP1	0910050522	PCB	B 5200B

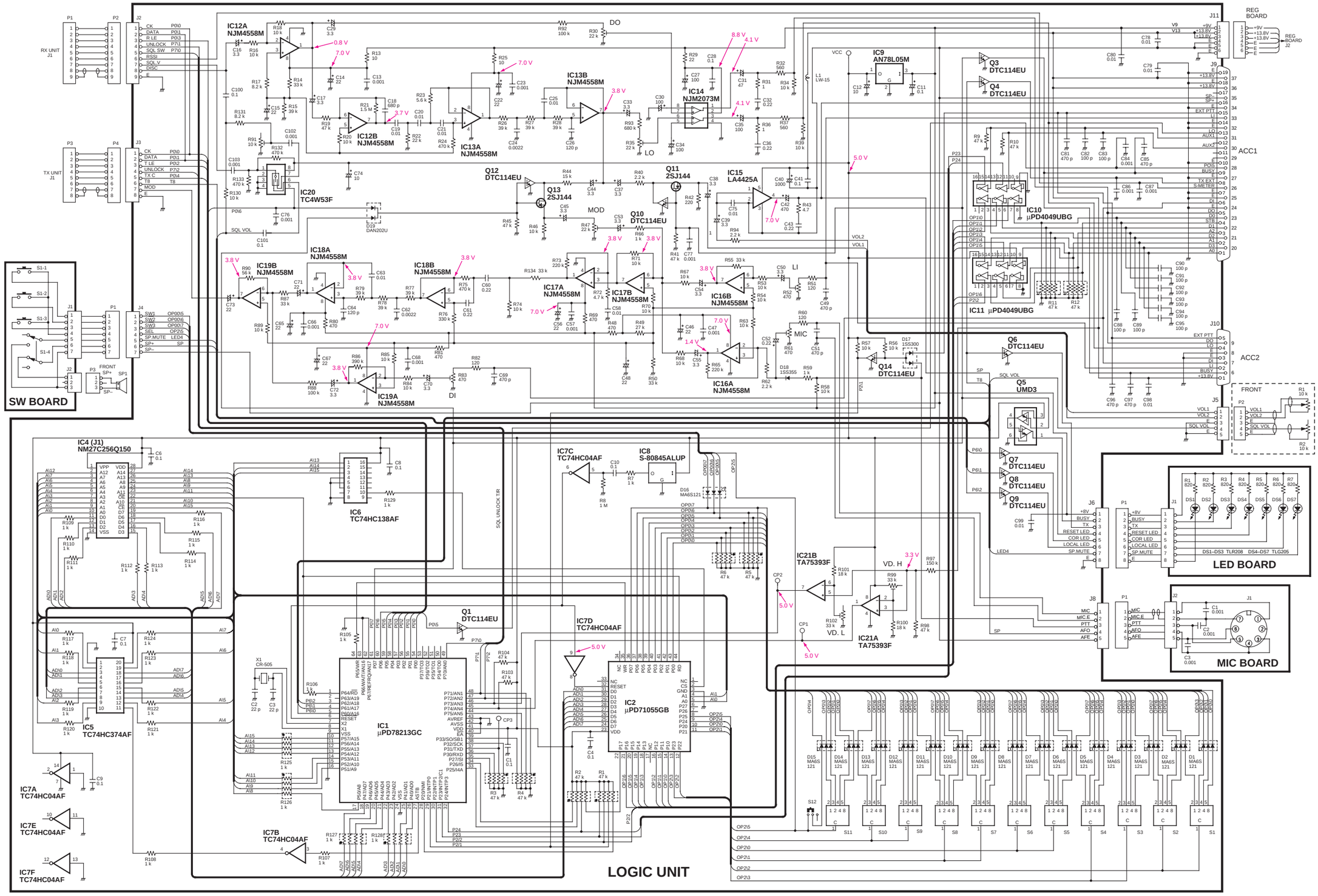
S.=Surface mount

SECTION 5 BLOCK DIAGRAM

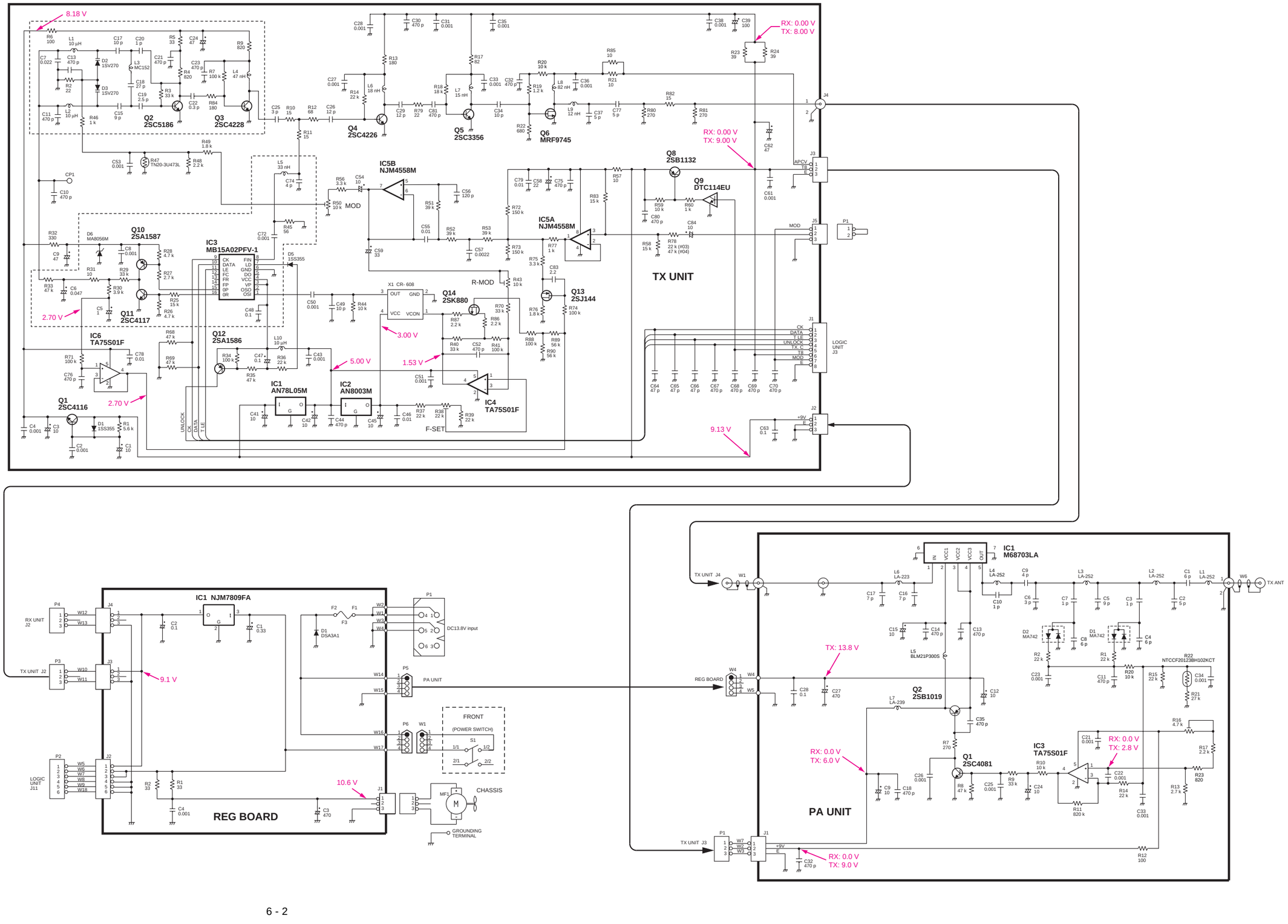


SECTION 6 VOLTAGE DIAGRAM

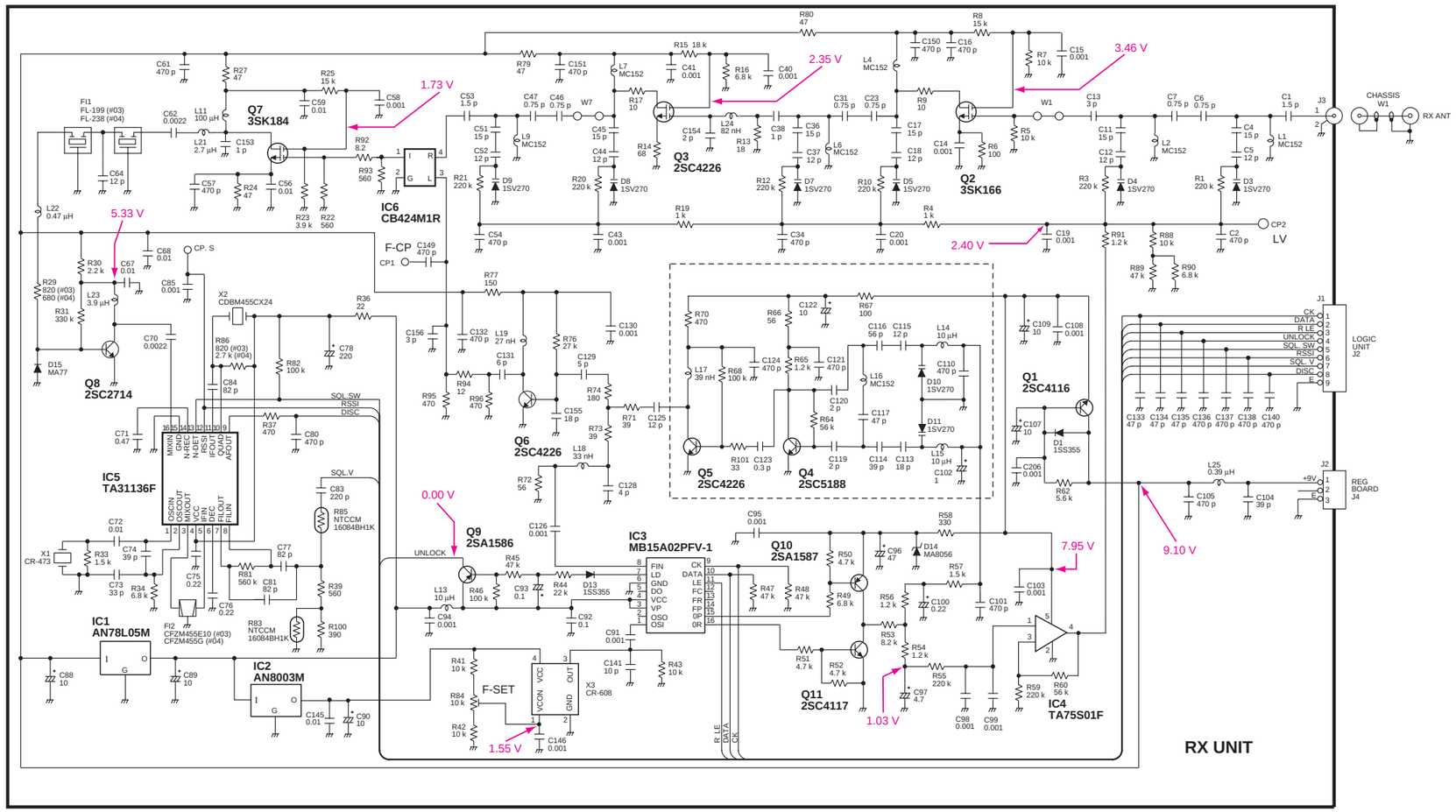
- **LOGIC UNIT**



• TX, PA AND REG UNIT



• **RX UNIT**


1.73 V
2.35 V
3.46 V
5.33 V
2.40 V
0.00 V
7.95 V
9.10 V
1.03 V
1.55 V
Q7 3SK184
Q3 2SC4226
Q2 3SK166
IC6 CB424M1R
Q8 2SC2714
IC5 TA31136F
Q9 2SA1586
IC3 MB15A02PFV-1
Q10 2SA1587
Q1 2SC4116
Q6 2SC4226
Q5 2SC4226
Q4 2SC5188
Q11 2SC4117
IC1 AN78L05M
IC2 AN8003M
IC4 TA75S01F
F-CP
F-SET
CHASSIS
RX ANT
LOGIC UNIT J2
REG BOARD J4
RX UNIT

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