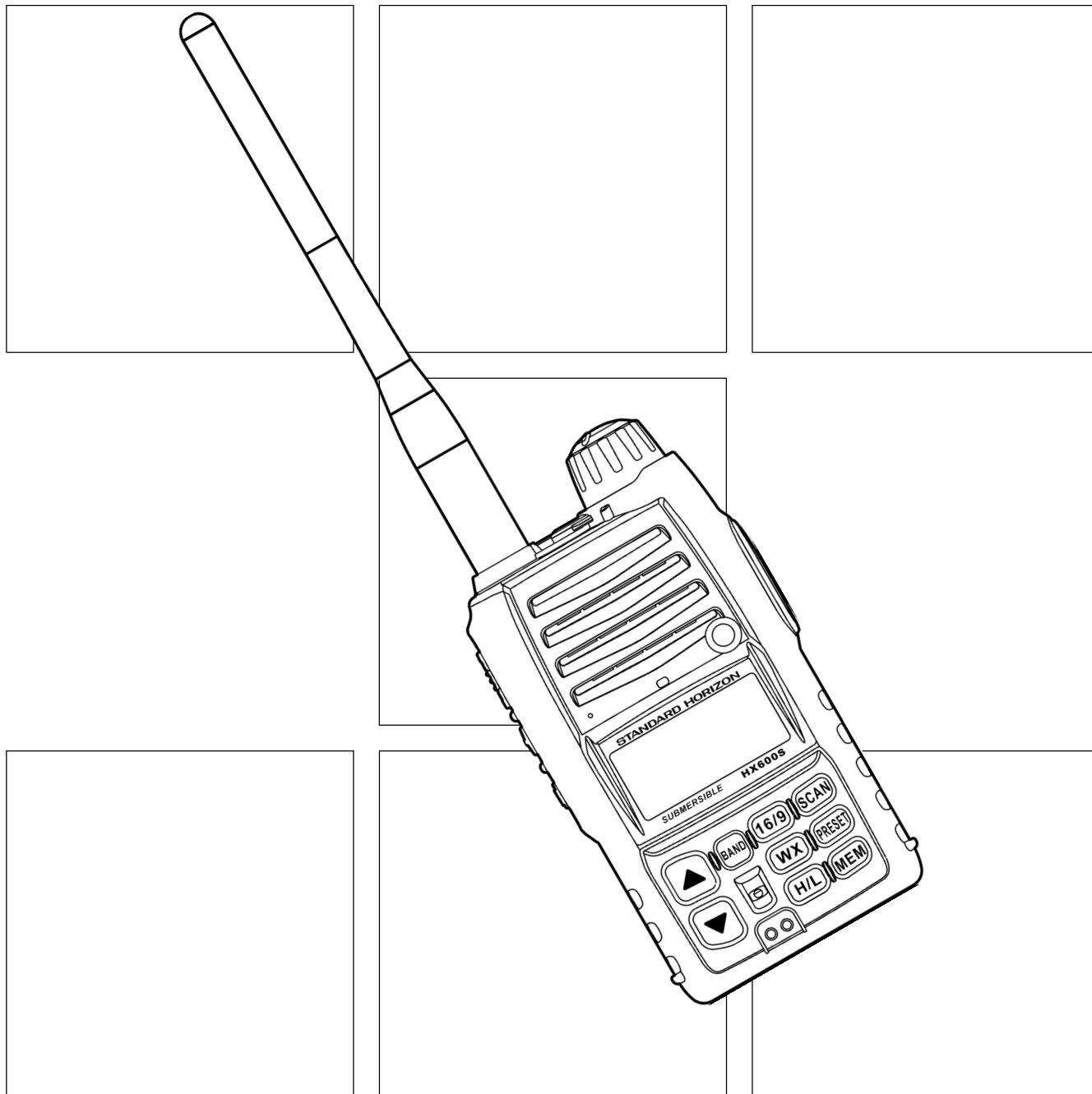


HX600S

SERVICE MANUAL



Specifications

General

Frequency range (MHz):	156 MHz - 163.275 MHz (Marine Band + WX Band) Channel Steps: 25 kHz 88 MHz - 108 MHz (FM Broadcast: Receive only) Channel Steps: 100 kHz 500 kHz - 1800 kHz (AM Broadcast: Receive only) Channel Steps: 10/9 kHz 108 MHz - 137 MHz (AIR Band) Channel Steps: 25 kHz
Frequency stability:	± 10 ppm (−4 °F to +140 °F [−20 °C to +60 °C])
Emission type:	16K0G3E, 16K0G2B
Antenna impedance:	50 Ohms
Supply voltage:	Nominal: 7.2 V DC, Negative Ground (Battery Terminal)
Current consumption:	170 mA (Receive) 50 mA (Standby) 1.45 A (5 W Power transmit) 1.0 A (2.5 W Power transmit) 0.6 A (1 W Power transmit)
Operating Temperature:	−4 °F to +140 °F (−20 °C to +60 °C)
Case Size (W x H x D):	2.36" x 4.09" x 1.2" (60 x 104 x 30.5 mm) w/o knob & antenna
Weight (Approx):	13 oz (370g) with FNB-83, Antenna

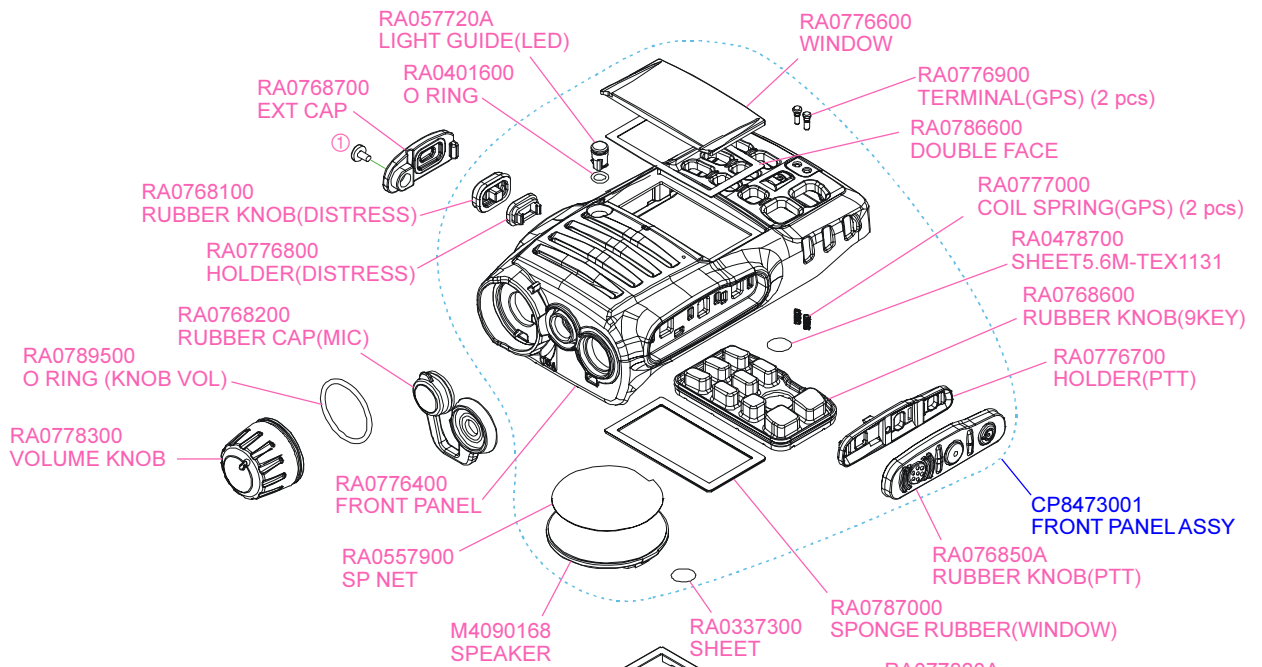
Transmitter

RF output power:	5 W/2.5 W/1 W
Modulation Type:	Variable Reactance
Max deviation:	±5 kHz
Spurious emissions:	At least 65 dB down
Microphone impedance:	2 k-Ohm

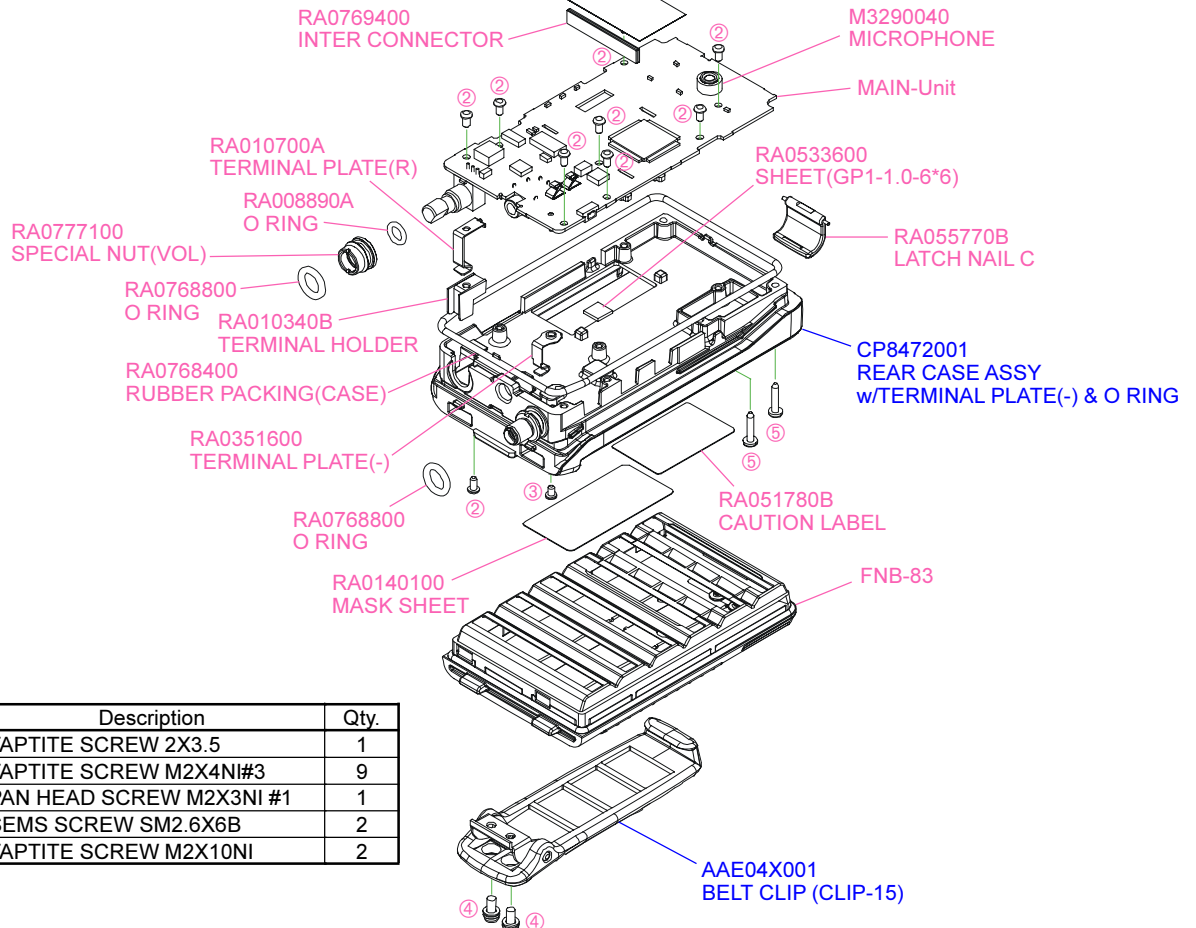
Receiver

Circuit type:	Double-conversion superheterodyne (NFM, AM) Triple-conversion superheterodyne (WFM)	
Intermediate Frequencies:	NFM, AM	WFM
	1st: 47.25 MHz	45.8 MHz
	2nd: 450 kHz	10.7 MHz
	3rd: –	1 MHz
Sensitivity:	0.2 μV for 12 dB SINAD (Marine Band) 0.2 μV for 12 dB SINAD (WX Band) 1 μV for 12 dB SINAD (FM Broadcast) 1 μV for 10 dB S/N (AM Broadcast) 1 μV for 10 dB S/N (AIR Band)	
Adjacent channel selectivity:	65 dB (Typical)	
Intermodulation response:	65 dB (Typical)	
Selectivity:	25 kHz (–60 dB) (NFM, AM) 300 kHz (–20 dB) (WFM)	
AF output:	700 mW @ 16 Ohm for 10 % THD (@7.4 V)	

Exploded View & Miscellaneous Parts



VXSTD P/N	Description	Qty.
AY139X001	ANTENNA CAT460	1
AAD65X001	Ni-MH BATTERY FNB-83	1
AAD88X002	WALL CHARGER NC-88B	1
AAE83X000	CRADLE CD-33	1
AAB31X002	DC CABLE E-DC-19A	1
RA0609300	SPONGE RUBBER (For connecting the optional FVP-31)	1

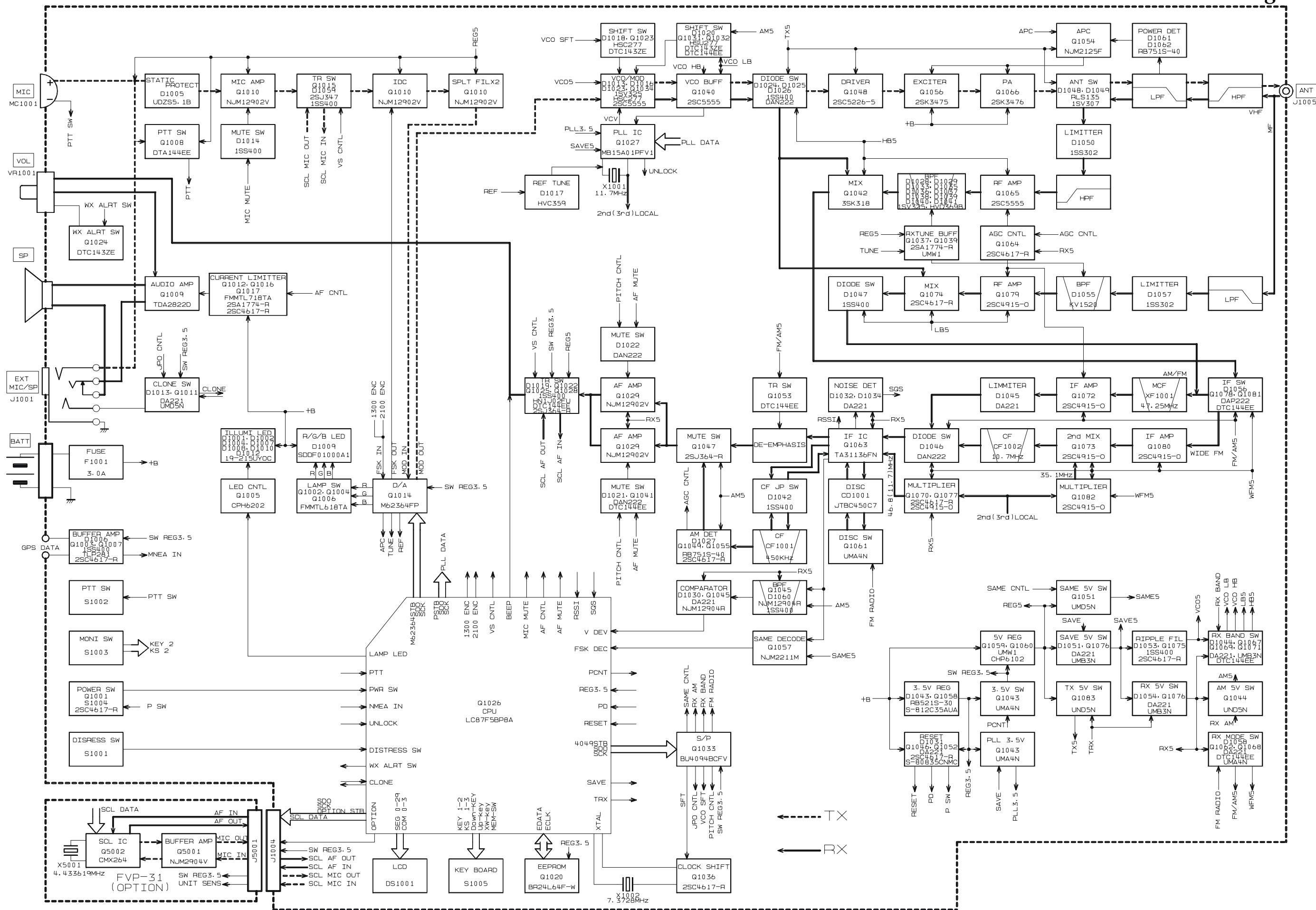


Ref.	VXSTD P/N	Description	Qty.
①	U9900181	TAPTITE SCREW 2X3.5	1
②	U9900068	TAPTITE SCREW M2X4NI#3	9
③	U07230102	PAN HEAD SCREW M2X3NI #1	1
④	U02206007	SEMS SCREW SM2.6X6B	2
⑤	U24110002	TAPTITE SCREW M2X10NI	2

Exploded View & Miscellaneous Parts

Note

Block Diagram



Block Diagram

Note

1. Receive Signal Path

The **HX600S** includes two receiver front ends, each optimized for a particular frequency range and mode combination.

Duplexer

Signals between 0.5 and 1.8 MHz received at the antenna terminal pass through a first low-pass filter composed of L1039, L1040, C1300, and C1301.

Received VHF bands signals, after passing through a low-pass filter to the T/R switch circuit composed of diode switch **D1048 (RLS135)**, **D1049 (1SV307)**.

VHF Bands Reception

Received VHF bands signals pass through the Duplexer circuit, low-pass filter/high-pass filter circuit, T/R switch circuit, and protector diode **D1050 (1SS302)** before additional filtering by a high-pass filter prior to application to RF amplifier **Q1065 (2SC5555)**. The amplified RF signal is passed through the band-pass filter to first mixer **Q1042 (3SK318)**. Meanwhile, VHF output from the VCO is applied through diode Band switch **D1025 (1SS400)** and T/R switch **D1026 (DAN222)** to mixer **Q1042** as the first local signal.

The TUNE-voltage from the D/A converter **Q1014 (M62364PF)** is amplified by DC amplifier **Q1037 (2SA1774-R)** and **Q1039 (UMW1)**, and applied to varactors **D1033, D1035, D1038, and D1039 (HVC369B)**, **D1028, D1029, D1036, D1037, D1040, and D1041 (1SV325)** in the variable frequency band-pass filters. By changing the electrostatic capacitance of the varactors, optimum filter characteristics are provided for each specific operating frequency.

0.5 - 1.8 MHz Reception

Received MW signals pass through the Duplexer circuit, low-pass filter circuit, protector diode **D1057 (1SS302)** before additional filtering by a band-pass filter prior to application to RF amplifier **Q1079 (2SC4915-0)**. The amplified RF signal is pass through the band-pass filter to first mixer **Q1074 (2SC4617-R)**.

Meanwhile, MW output from the VCO is applied through diode Band switch **D1024 (1SS400)** to mixer **Q1074** as the first local signal.

The TUNE-voltage from the D/A converter **Q1034** is amplified by DC amplifier **Q1037, Q1039** and applied to varactor **D1055 (KV1520)** in the variable frequency band-pass filters. By changing the electrostatic capacitance of the varactor, optimum filter characteristics are provided for each specific operating frequency.

First Intermediate Frequency (Narrow FM / AM)

The 47.25 MHz first intermediate frequency from first mixers for AM and FM-narrow signals is passed through NAR/WIDE switch **D1056 (DAP222)** and 47.25 MHz monolithic crystal filter (MCF) XF1001 to narrow IF amplifier **Q1072 (2SC4915-0)** for input to pin 16 of Narrow IF IC **Q1063 (TA31136FN)** after amplitude limiting by **D1045 (DA221)**.

Meanwhile, a portion of the output of 11.7 MHz crystal X1001 is multiplied fourfold by **Q1070 (2SC4617-R)** and **Q1077 (2SC4915-0)** to provide the 46.8 MHz second local signal, applied to the Narrow IF IC. Within the IC, this signal is mixed with the 47.25 MHz first intermediate frequency signal to produce the 450 kHz second intermediate frequency.

This second IF is filtered by ceramic filter **CF1001 (LTWC450F)** and amplified by the limiting amplifier within the Narrow IF IC before quadrature detection by ceramic discriminator **CD1001 (JTBC450C7)**.

Demodulated audio is output from pin 9 of the Narrow IF IC through narrow mute analog switch **Q1047 (2SJ364)** before de-emphasis at **Q1053 (DTC144EE)**.

The demodulated audio signal from the **Q1063** passes through a band-pass filter and squelch gate **Q1029 (NJM12902V)**.

The resulting audio is amplified by AF amplifier **Q1009 (TDA2822D)** and output through **MIC/EAR** jack J1001 to internal speaker or an external earphone.

First Intermediate Frequency (Wide FM)

The 45.8 MHz first intermediate frequency from first mixers for Wide FM signals is passed through NAR/WIDE switch **D1056** and IF amplifier **Q1080 (2SC4915-0)** and second mixer **Q1073 (2SC4915-0)**.

The 10.7 MHz intermediate frequency product of the mixer is delivered to the 10.7 MHz ceramic filter CF1002 passed through NAR/WIDE switch **D1046** for input to pin 16 of IF IC **Q1063** after amplitude.

Meanwhile, a portion of the output of 11.7 MHz crystal X1001 is multiplied threefold by **Q1082 (2SC4915-0)** to provide the 35.1 MHz second local signal, applied to the second mixer **Q1073**. Within the second mixer, this signal is mixed with the 45.8 MHz first intermediate frequency signal to produce the 10.7 MHz second intermediate frequency.

Meanwhile, a portion of the output of 11.7 MHz crystal X1001 is amplitude by **Q1070** and **Q1077** to provide the 11.7 MHz third local signal, applied to the IF IC. Within the IC, this signal is mixed with the 10.7 MHz second intermediate frequency signal to produce the 450 kHz third intermediate frequency.

Circuit Description

Demodulated audio is output from pin 9 of the Narrow IF IC through narrow mute analog switch **Q1047** before de-emphasis at **Q1053**.

The demodulated audio signal from the **Q1063** passes through a band-pass filter and squelch gate **Q1029** (**NJM12902V**).

The resulting audio is amplified by AF amplifier **Q1009** and output through **MIC/EAR** jack J1001 to internal speaker or an external earphone.

2. Squelch Control

Signal components in the neighborhood of 15 kHz contained in the discriminator output pass through an active band-pass filter composed of R1226, R1230, R1239, C1176, C1182 and the operational amplifier between pins 7 and 8 within IF IC **Q1063**. They are then rectified by **D1032** and **D1034** (**DA221**) to obtain a DC voltage corresponding to the level of noise. This voltage is input to pin 16 of CPU **Q1026** (**LC87F5BP8A-F56G2**), which compares the input voltage with a previously set threshold. When the input voltage drops below the threshold, normally due to the presence of a carrier, turning on squelch gate **Q1029** and allowing any demodulated audio to pass. At the same time, **Q1002** and/or **Q1004** and/or **Q1006** goes on, causing the BUSY/TX lamp **D1009** (**SDDF01000A**) to light.

3. Transmit Signal Path

Transmit/Receive Switching

Closing PTT switch S1002 pulls the base of **Q1008** (**DTA144EE**) low, causing the collector to go high. This signal is input to pin 22 (PTT) of CPU **Q1026**, allowing the CPU to recognize that the PTT switch has been pushed. When the CPU detects closure of the PTT switch, pin 31 (TX/RX) goes high. This control signal is switches **Q1083** (**UMD5N**). At the same time, PLL division data is input to PLL IC **Q1027** (**MB15A01PFV1**) from the CPU, to disable the receiver power saver. Also, switching **Q1076** (**UMB3N**) to disable the receiver circuits. Then causing the red side of BUSY/TX lamp **D1009** to light.

Modulation

Voice signal input from either built-in microphone **MC1001** (**SKB-2244S**) or external jack J1001 is pre-emphasized by C1020 and R1034, and processed by microphone amplifier **Q1010** (**NJM12902AV**), IDC (instantaneous deviation control) circuit to prevent over-modulation, and active low-pass filter.

Transmission

Modulating audio passes through deviation setting D/A converter **Q1014** to MOD of the VCO. This signal is applied to varactor **D1016** (**HSC277**) in the tank circuit of VCO **Q1034** (**2SC5555**), which oscillates at the desired

transmitting frequency. The modulated VCO signal is buffered by amplifier **Q1040** (**2SC5555**) and delivered through T/R diode switch **D1026**. The modulated low-level transmit signal from the VCO is applied to amplifier **Q1048** (**2SC5226-5**). The modulated transmit signal from the VCO is amplified by **Q1056** (**2SK3475**) and RF power amplifier **Q1066** (**2SK3476**) up to 5 W. The RF output passes through TX diode switch **D1048**. RF output is passed by T/R switch and low-pass filter to suppress harmonics and spurious products before output to the antenna at the antenna terminal.

4. PLL Frequency Synthesizer

PLL IC **Q1027** consists of a data shift register, reference frequency divider, phase comparator, charge pump, intermittent operation circuit, and band selector switch. Serial PLL data from the CPU is converted into parallel data by the shift register in the PLL IC and is latched into the comparative frequency divider and reference frequency divider to set a frequency dividing ratio for each. An 11.7 MHz reference signal produced by X1001 is input to REF pin 1 of the PLL IC. The internal reference frequency divider divides the 11.7 MHz reference by 2,340 (or 1,872) to obtain a reference frequency of 5 kHz (or 6.25 kHz), which is applied to the phase comparator. Meanwhile, a sample of the output of VCO **Q1040** is input to the PLL IC, where it is frequency-divided by the internal comparative frequency divider to produce a comparative frequency also applied to the phase comparator. The phase comparator compares the phase between the reference frequency and comparative frequency to output a pulse corresponding to the phase difference between them. This pulse is input to the charge pump, and the output from the charge pump passes through a loop filter composed of L1005, R1142, C1098, R1143, C1104, R1151, and C1110, which convert the pulse into a corresponding smoothed varactor control voltage (VCV). The VCV is applied to varactor **D1015** (**1SV325**) in the VCO tank circuit to eliminate phase difference between the reference frequency and comparative frequency, and so locking the VCO oscillation frequency to the reference crystal. The VCO frequency is determined by the frequency-dividing ratio sent from the CPU to the PLL IC. During receiver power save operation, the PLL circuit operates intermittently to reduce current consumption, for which the intermittent operation control circuit reduces the lock-up time.

The **HX600S** has been carefully aligned at the factory for the specified performance across the land mobile band.

Realignment should therefore not be necessary except in the event of a component failure.

All component replacement and service should be performed only by an authorized STANDARD HORIZON representative, or the warranty policy may be voided.

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

We recommend that servicing be performed only by authorized STANDARD HORIZON service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized STANDARD HORIZON service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components. Those who do undertake any of the following alignments are cautioned to proceed at their own risk.

Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, STANDARD HORIZON must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners. Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary. The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Have all test equipment ready before beginning, and follow all of the steps in a section in the order presented.

Required Test Equipment

- ☐ RF Signal Generator with calibrated output level at 200 MHz
- ☐ Deviation Meter (linear detector)
- ☐ AF Millivoltmeter
- ☐ SINAD Meter
- ☐ Inline Wattmeter with 5% accuracy at 200 MHz
- ☐ Regulated DC Power Supply: adjustable from 6 to 17 VDC, 3A
- ☐ 50-ohm Non-reactive Dummy Load: 10W at 200 MHz
- ☐ Frequency Counter: >0.1 ppm accuracy at 200 MHz
- ☐ AF Signal Generator
- ☐ DC Voltmeter: high impedance
- ☐ VHF Sampling Coupler
- ☐ AF Dummy Load: 8 ohm, 2W
- ☐ Oscilloscope
- ☐ Spectrum Analyzer

Alignment Preparation & Precautions

A dummy load and inline wattmeter must be connected to the main antenna jack in all procedures that call for transmission, except where specified otherwise. Correct alignment is not possible with an antenna. After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 ~ 86 °F). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization with the environment before alignment. If possible, alignments should be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

Note: Signal levels in dB referred to in this procedure are based on 0 dBm = 0.5 μ V(closed circuit).

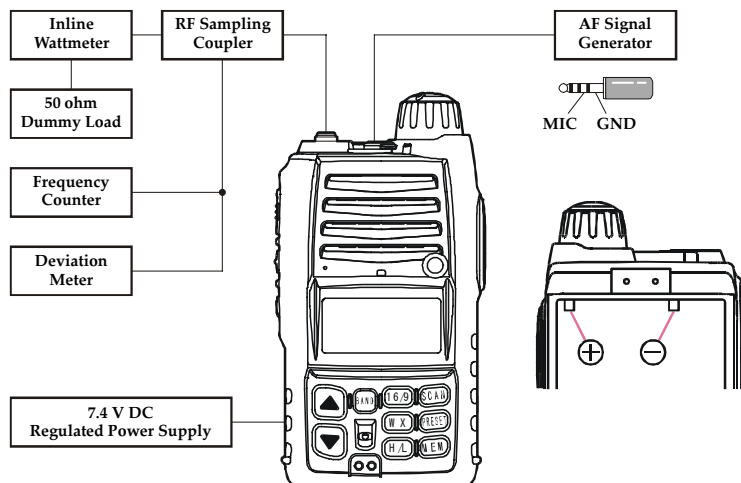
Alignment

Before Alignment

1. Press and hold in the **SQL** switch while turning the transceiver on to enter the Setup Mode.
2. Press the **SQL** switch to select the Menu item "LP".
3. Press the [▲] or [▼] key to select the display to "oFF", then press the **PTT** switch.
4. Set up the test equipment as shown below. Maintain the supply voltage at 7.4V DC for all steps.

PLL Reference Frequency

- ❑ Set the transceiver to CH 12, and select Low power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to "REF." The transceiver now is in the PLL Reference Frequency Alignment Mode.
- ❑ Press the [MEM] key to enable adjustment of the PLL Reference Frequency.
- ❑ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the frequency to 156.600 MHz (± 100 Hz).
- ❑ Press the [MEM] key to exit the PLL Reference Frequency Alignment Mode.

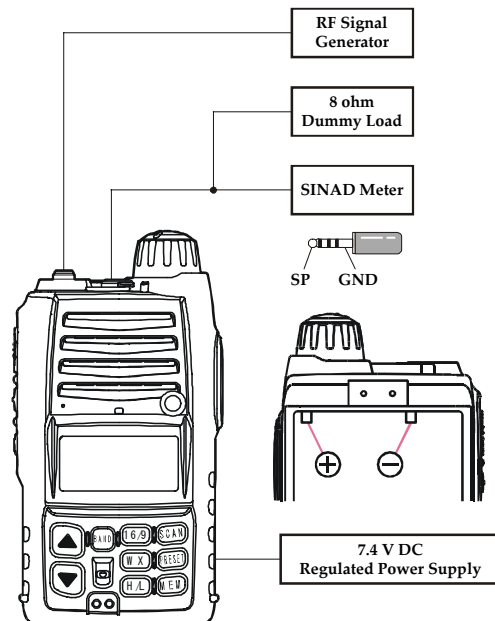


PLL & TRANSMITTER SECTION ALIGNMENT SETUP

Transmitter Power Output

Low Power Adjustment

- ❑ Set the transceiver to CH 12, and select Low power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to "LPOW." The transceiver now is in the Low power output Alignment Mode.
- ❑ Press the [MEM] key to enable adjustment of the Transmitter Low Power Output.
- ❑ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 0.8 W (± 0.05 W).
- ❑ Press the [MEM] key to exit the Transmitter Low Power Output Alignment Mode.



RECEIVER SECTION ALIGNMENT SETUP

Mid Power Adjustment

- ❑ Set the transceiver to CH 12, and select Mid power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to “MPOW.” The transceiver now is in the Mid power output Alignment Mode.
- ❑ Press the [MEM] key to enable adjustment of the Transmitter Mid Power Output.
- ❑ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 2.5 W (± 0.1 W).
- ❑ Press the [MEM] key to exit the Transmitter Mid Power Output Alignment Mode.

High Power Adjustment

- ❑ Set the transceiver to CH 12, and select High power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to “HPOW.” The transceiver now is in the High power output Alignment Mode.
- ❑ Press the [MEM] key to enable adjustment of the Transmitter High Power Output.
- ❑ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the output power to 5.0 W (± 0.1 W).
- ❑ Press the [MEM] key to exit the Transmitter High Power Output Alignment Mode.

Transmitter Modulation

- ❑ Set the transceiver to CH 12, and select High power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to “MOD.” The transceiver now is in the Transmitter Modulation Alignment Mode.
- ❑ Set the AF generator output to 50 mV rms @ 1 kHz.
- ❑ Press the [MEM] key to enable adjustment of the Transmitter Modulation.
- ❑ Press the **PTT** key to cause the transceiver to transmit; if necessary, press the [▲] or [▼] key to adjust the deviation to 4.2 kHz (± 0.1 kHz).
- ❑ Press the [MEM] key to exit the Transmitter Modulation Alignment Mode.

ATIS FSK Modulation

- ❑ Set the transceiver to CH 12, and select Low power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to “AT FSK.” The transceiver now is in the ATIS FSK Modulation Alignment Mode.
- ❑ Press the [MEM] key twice, then press the [▲] or [▼] key to select the display to “FSK 2.”
- ❑ Press the **PTT** key to cause the transceiver to transmit; confirm that the ATIS FSK Modulation is 2.1 kHz ± 0.3 kHz.
- ❑ If necessary, press the [▲] or [▼] key to select the display to “AT FSK”, then press the [MEM] key.
- ❑ Press the [▲] or [▼] key to adjust the ATIS FSK Modulation is 2.1 kHz ± 0.3 kHz.
- ❑ Press the [MEM] key to exit the ATIS FSK Modulation Alignment Mode.

DISTRESS FSK Modulation

- ❑ Set the transceiver to CH 12, and select Low power output.
- ❑ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ❑ Press the [▲] or [▼] key to select the display to “DS FSK.” The transceiver now is in the DISTRESS FSK Modulation Alignment Mode.
- ❑ Press the [MEM] key twice, then press the [▲] or [▼] key to select the display to “FSK 2.”
- ❑ Press the **PTT** key to cause the transceiver to transmit; confirm that the DISTRESS FSK Modulation is 3.5 kHz ± 0.3 kHz.
- ❑ If necessary, press the [▲] or [▼] key to select the display to “DS FSK”, then press the [MEM] key.
- ❑ Press the [▲] or [▼] key to adjust the DISTRESS FSK Modulation is 3.5 kHz ± 0.3 kHz.
- ❑ Press the [MEM] key to exit the DISTRESS FSK Modulation Alignment Mode.

Alignment

Squelch Threshold and Tight Squelch Adjustment

N-FM Squelch Level Adjustment

- ☐ Set the transceiver to CH 12.
- ☐ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ☐ Press the [▲] or [▼] key to select the display to “FMHS.” The transceiver now is in the N-FM Squelch Hysteresis Alignment Mode.
- ☐ Press the [MEM] key to enable adjustment of the N-FM Squelch Hysteresis.
- ☐ Press the [▲] or [▼] key to select the display to “00.”
- ☐ Press the [MEM] key.
- ☐ Set the RF signal generator output to 156.600 MHz, at a level of -12 dBμV with ±3 kHz deviation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “FMTH.” The transceiver now is in the N-FM Squelch Threshold Alignment Mode.
- ☐ Press the [MEM] key twice.
- ☐ Set the RF signal generator output to 156.600 MHz, at a level of -4 dBμV with ±3 kHz deviation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “FMTI.” The transceiver now is in the N-FM Squelch Tight Alignment Mode.
- ☐ Press the [MEM] key twice.

AM Squelch Level Adjustment

- ☐ Set the transceiver to 1100 kHz.
- ☐ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ☐ Press the [▲] or [▼] key to select the display to “AMHS.” The transceiver now is in the AM Squelch Hysteresis Alignment Mode.
- ☐ Press the [MEM] key to enable adjustment of the AM Squelch Hysteresis.
- ☐ Press the [▲] or [▼] key to select the display to “00.”
- ☐ Press the [MEM] key.
- ☐ Set the RF signal generator output to 1100 kHz, at a level of -8 dBμV with 30 % modulation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “AMTH.” The transceiver now is in the AM Squelch Threshold Alignment Mode.
- ☐ Press the [MEM] key twice.
- ☐ Set the RF signal generator output to 1100 kHz, at a level of +3 dBμV with 30 % modulation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “AMTI.” The transceiver now is in the AM Squelch Tight Alignment Mode.
- ☐ Press the [MEM] key twice.

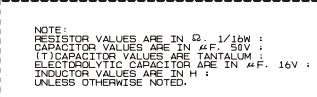
Squelch Threshold and Tight Squelch Adjustment

W-FM Squelch Level Adjustment

- ☐ Set the transceiver to 98.000 MHz.
- ☐ Press and hold in the **PTT**, **SQL**, [▲] and [▼] key while turning the transceiver on to enter the Alignment Mode.
- ☐ Press the [▲] or [▼] key to select the display to “WFMHS.” The transceiver now is in the W-FM Squelch Hysteresis Alignment Mode.
- ☐ Press the [MEM] key to enable adjustment of the W-FM Squelch Hysteresis.
- ☐ Press the [▲] or [▼] key to select the display to “00.”
- ☐ Press the [MEM] key.
- ☐ Set the RF signal generator output to 98.000 MHz, at a level of +5 dBμV with ±22.5 kHz deviation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “WFMTH.” The transceiver now is in the W-FM Squelch Threshold Alignment Mode.
- ☐ Press the [MEM] key twice.
- ☐ Set the RF signal generator output to 98.000 MHz, at a level of +15 dBμV with ±22.5 kHz deviation with a 1 kHz audio tone.
- ☐ Press the [▲] or [▼] key to select the display to “WFMTI.” The transceiver now is in the W-FM Squelch Tight Alignment Mode.
- ☐ Press the [MEM] key twice.

Exit from the Alignment Mode

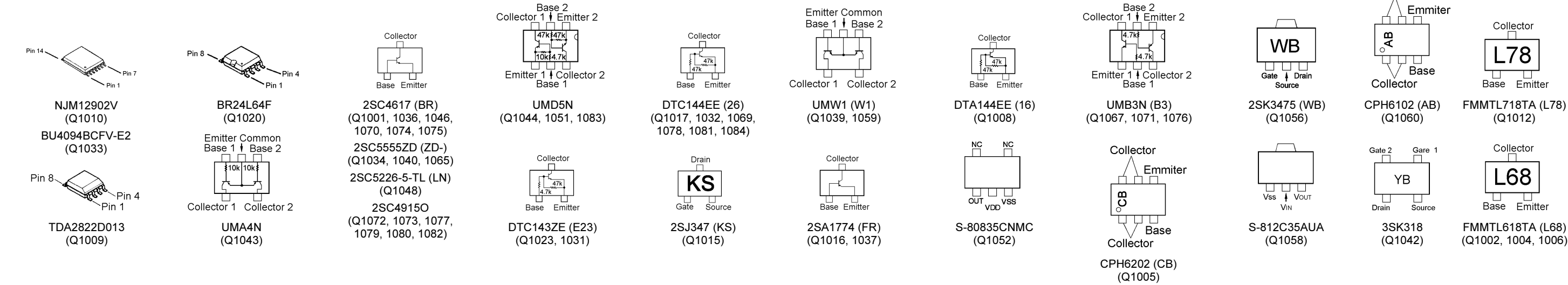
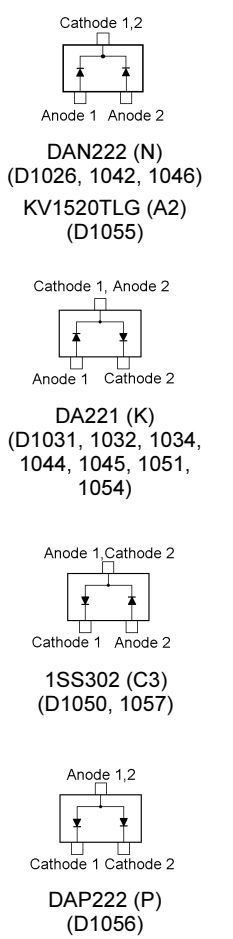
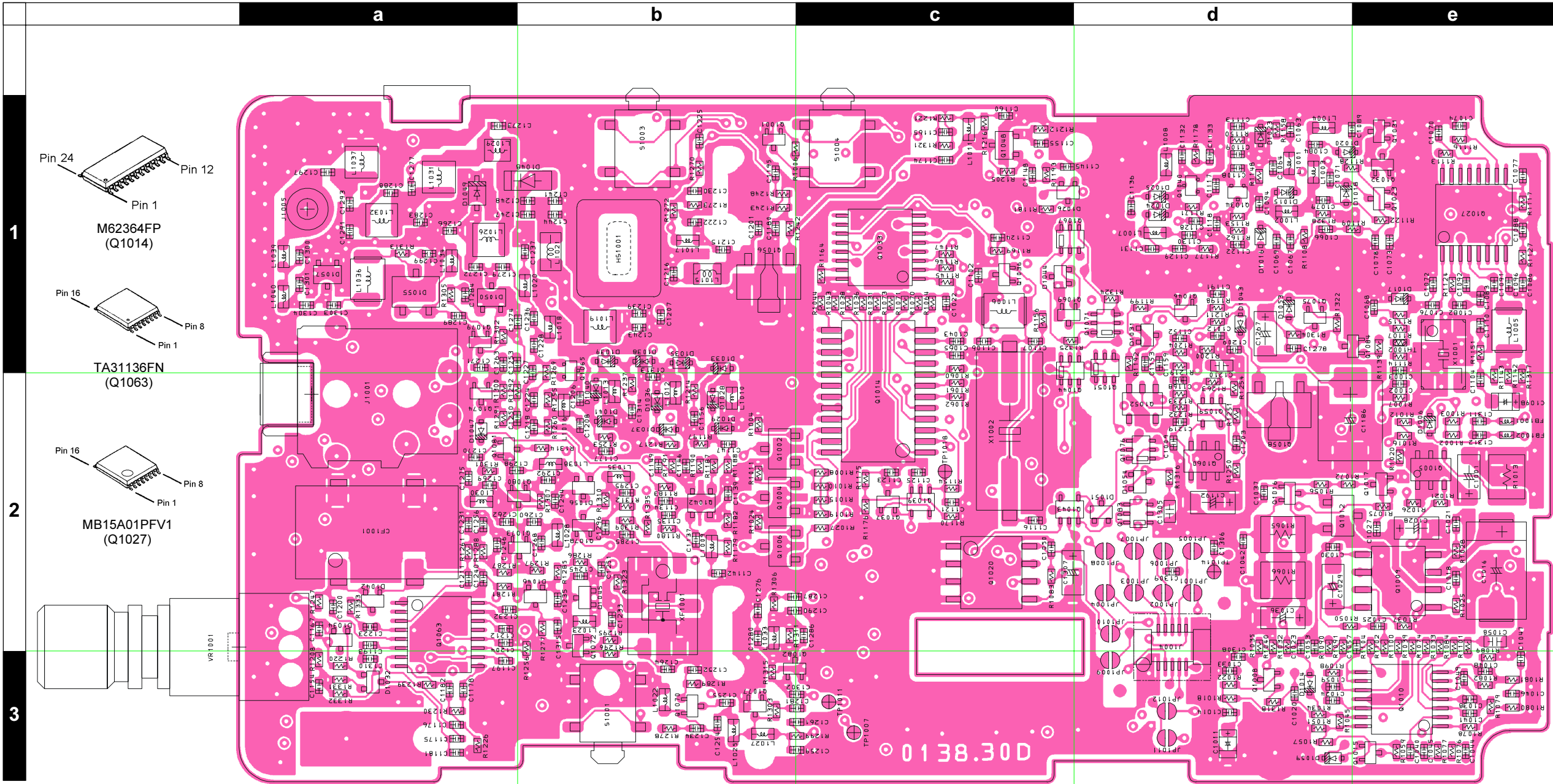
To close the Alignment mode, just press and hold in the **POWER** switch for 2 seconds (to turn the power off). The next time the transceiver is turned on, normal operation may resume.





MAIN Unit

Parts Layout (Side B)



REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY	ADR
PCB with Components						CB3300001					
Printed Circuit Board						FR013830D		1-			
C 1001	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B		e2
C 1002	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		e2
C 1003	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		e1
C 1005	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A		E2
C 1006	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A		D3
C 1008	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	A		E1
C 1009	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d2
C 1010	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	A		E1
C 1011	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	B		d3
C 1012	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d1
C 1013	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A		E2
C 1014	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d3
C 1015	CHIP CAP.	2.2uF	10V	B	GRM188B31A225KE18D	K22104805		1-	A		D1
C 1016	CHIP TA.CAP.	100uF	16V		TEMSVD1C107M-12R	K78120059		1-	B		e2
C 1017	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	A		D2
C 1018	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		e2
C 1019	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A		D2
C 1020	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B		d3
C 1021	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		e2
C 1022	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		c1
C 1023	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d2
C 1024	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d3
C 1027	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		e2
C 1028	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	B		e2
C 1029	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	B		d2
C 1030	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		d2
C 1033	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		d3
C 1036	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B		d2
C 1037	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d2
C 1040	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B		e3
C 1041	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		e3
C 1042	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d2
C 1043	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		c1
C 1044	CHIP CAP.	0.0015uF	50V	B	GRM155B11H152KA01D	K22178811		1-	B		e3
C 1045	CHIP CAP.	180pF	25V	CH	GRM36CH181J25PT	K22148201		1-	B		e3
C 1046	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		e3
C 1047	CHIP CAP.	0.0033uF	50V	B	GRM155B11H332KA01D	K22178815		1-	B		e3
C 1048	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	B		e3
C 1049	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	B		e3
C 1050	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		c2
C 1052	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A		C2
C 1053	CHIP CAP.	0.0033uF	50V	B	GRM155B11H332KA01D	K22178815		1-	B		d2
C 1054	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A		B2
C 1055	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A		B2
C 1056	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A		C1
C 1057	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		e2
C 1058	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B		e2
C 1059	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	B		d3
C 1060	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A		C2
C 1061	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A		B1
C 1062	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A		D1
C 1063	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d1
C 1064	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	B		d1
C 1066	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		d1
C 1067	CHIP CAP.	1pF	50V	CK	GRM1554C1H1R0CZ01D	K22178202		1-	B		d1
C 1068	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		e1
C 1069	CHIP CAP.	1pF	50V	CK	GRM1554C1H1R0CZ01D	K22178202		1-	B		d1
C 1071	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		d1
C 1073	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B		e1
C 1075	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A		E2
C 1076	CHIP CAP.	220pF	50V	B	GRM155B11H221KA01D	K22178801		1-	B		e1
C 1078	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		e1
C 1079	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		d1
C 1080	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A		E2
C 1082	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B		e1
C 1083	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B		e1
C 1084	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B		d1
C 1085	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A		D2
C 1086	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		e1
C 1087	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A		E2
C 1088	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B		e1

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1089	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e1
C 1090	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1091	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e1
C 1092	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e1
C 1093	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	A	D2
C 1094	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1095	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1097	CHIP CAP.	0.0056uF	25V	B	GRM36B562K25PT	K22148802		1-	A	E2
C 1098	CHIP TA.CAP.	1.5uF	10V		TESVSP1A155M-8R	K78100050		1-	B	e2
C 1099	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D2
C 1101	CHIP CAP.	0.0027uF	50V	B	GRM36B272K50PT	K22178814		1-	A	E2
C 1102	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	c1
C 1103	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E2
C 1104	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 1105	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	A	D2
C 1108	CHIP CAP.	56pF	50V	CH	GRM1552C1H560JD01D	K22178230		1-	B	d1
C 1109	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	d1
C 1110	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	e1
C 1111	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1112	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1113	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1114	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	E2
C 1115	CHIP CAP.	0.0027uF	50V	B	GRM36B272K50PT	K22178814		1-	A	D2
C 1116	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	c2
C 1117	CHIP CAP.	3pF	50V	CJ	GRM1553C1H3R0BZ01D	K22178290		1-	B	d1
C 1118	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1119	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	A	E2
C 1120	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1121	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1122	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1123	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1124	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c1
C 1125	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1126	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	A	E2
C 1127	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1128	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	d1
C 1129	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	d1
C 1130	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1131	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	B	d1
C 1132	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1133	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1134	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1135	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1136	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	d1
C 1137	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	b2
C 1138	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1139	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1140	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1141	CHIP CAP.	1uF	6.3V	B	GRM155B30J105KE18D	K22088803		1-	A	D1
C 1142	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1143	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1144	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	A	D1
C 1145	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1147	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	b2
C 1148	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B	c1
C 1149	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	b2
C 1150	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	A	D2
C 1151	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1152	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1153	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d1
C 1154	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	a3
C 1155	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1156	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1157	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	A	D1
C 1158	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1159	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1160	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1161	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1162	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	A	D2
C 1163	CHIP CAP.	0.0039uF	50V	B	GRM36B392K50PT	K22178816		1-	A	D2
C 1164	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1166	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	E1
C 1167	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1168	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1169	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1170	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A	D2
C 1172	CHIP CAP.	0.0082uF	16V	B	GRM36B822K16PT	K22128801		1-	A	D1
C 1173	CHIP CAP.	0.0082uF	16V	B	GRM36B822K16PT	K22128801		1-	A	D1
C 1174	CHIP CAP.	39pF	50V	CH	GRM1552C1H390JZ01D	K22178226		1-	B	c1
C 1175	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a3
C 1176	CHIP CAP.	120pF	50V	CH	GRM1552C1H121JA01D	K22178238		1-	B	a3
C 1177	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1178	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	a3
C 1179	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1180	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1181	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	B	a3
C 1182	CHIP CAP.	120pF	50V	CH	GRM1552C1H121JA01D	K22178238		1-	B	a3
C 1183	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	A	D1
C 1184	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1185	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1186	CHIP TA.CAP.	220uF	4V		SK4-0G227M-RD	K78060014		1-	B	d2
C 1187	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1189	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1191	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1192	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	B	d2
C 1193	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 1194	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D1
C 1195	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1196	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	A	E2
C 1197	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	a3
C 1198	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	A	E2
C 1199	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E2
C 1200	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1201	CHIP CAP.	5pF	50V	CH	GRM1552C1H5R0CZ01D	K22178207		1-	B	b1
C 1202	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	E1
C 1203	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1204	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	a2
C 1205	CHIP CAP.	330pF	50V	B	GRM155B11H331KA01D	K22178803		1-	A	E2
C 1206	CHIP CAP.	8pF	50V	CH	GRM1552C1H8R0DZ01D	K22178210		1-	B	b2
C 1207	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1208	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1209	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1210	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B	d1
C 1211	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1212	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1213	FILM CAP.	0.027uF	16V		ECHU1C273JX5	K57120041		1-	A	D2
C 1214	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1215	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b1
C 1216	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1218	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1219	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 1220	CHIP CAP.	0.0056uF	25V	B	GRM36B562K25PT	K22148802		1-	A	D2
C 1221	CHIP CAP.	0.22uF	10V	B	GRM188B11A224KA01D	K22104801		1-	A	D1
C 1222	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	b1
C 1224	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1225	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1226	CHIP CAP.	0.0068uF	25V	B	GRM36B682K25PT	K22148803		1-	A	D2
C 1227	CHIP CAP.	5pF	50V	CH	GRM1552C1H5R0CZ01D	K22178207		1-	B	b1
C 1228	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1229	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D1
C 1230	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1231	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1232	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1233	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1234	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b3
C 1235	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	b2
C 1236	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	b1
C 1237	CHIP CAP.	82pF	50V	CH	GRM1552C1H820JD01D	K22178234		1-	B	b1
C 1239	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1240	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1241	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b1
C 1242	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1243	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1244	CHIP CAP.	4pF	50V	CH	GRM1552C1H4R0CZ01D	K22178206		1-	B	b1
C 1245	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	b2
C 1246	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1247	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	b1
C 1248	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b1
C 1250	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1251	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1252	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b3
C 1253	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1254	CHIP CAP.	2pF	50V	CK	GRM1554C1H2R0CZ01D	K22178204		1-	B	b3
C 1255	CHIP CAP.	180pF	25V	CH	GRM36CH181J25PT	K22148201		1-	B	b3
C 1257	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D1
C 1258	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D1
C 1259	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1260	CHIP CAP.	39pF	50V	CH	GRM1552C1H390JZ01D	K22178226		1-	B	b2
C 1261	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1262	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	a2
C 1263	CHIP CAP.	5pF	50V	CH	GRM1552C1H5R0CZ01D	K22178207		1-	B	a1
C 1264	CHIP CAP.	8pF	50V	CH	GRM1552C1H8R0DZ01D	K22178210		1-	B	b3
C 1265	CHIP CAP.	0.5pF	50V	CK	GRM1554C1HR50BZ01D	K22178285		1-	A	E1
C 1266	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	a1
C 1267	CHIP TA.CAP.	22uF	6.3V		TEMSVA0J226M-8R	K78080047		1-	B	d1
C 1268	CHIP CAP.	56pF	50V	CH	GRM1552C1H560JD01D	K22178230		1-	B	b2
C 1269	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	a2
C 1270	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1271	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	a1
C 1272	CHIP CAP.	120pF	50V	CH	GRM1552C1H121JA01D	K22178238		1-	B	a1
C 1273	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	a1
C 1274	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1275	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1276	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b2
C 1277	CHIP CAP.	3pF	50V	CJ	GRP1553C1H3R0CZ01E	K22178205		1-	B	a1
C 1278	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1279	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	a1
C 1280	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	b2
C 1281	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c3
C 1282	CHIP CAP.	0.5pF	50V	CK	GRM1554C1HR50BZ01D	K22178285		1-	A	E1
C 1283	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	a1
C 1284	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 1285	CHIP CAP.	1.5pF	50V	CK	GRM1554C1H1R5CZ01D	K22178203		1-	B	b2
C 1286	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	c2
C 1287	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1288	CHIP CAP.	1pF	50V	CK	GRM1554C1H1R0CZ01D	K22178202		1-	B	a1
C 1289	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 1290	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1291	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	a1
C 1292	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1293	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	a1
C 1294	CHIP CAP.	68pF	50V	CH	GRM1552C1H680JZ01D	K22178232		1-	B	b2
C 1295	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	b2
C 1296	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b2
C 1297	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	a1
C 1298	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a2
C 1299	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 1300	CHIP CAP.	0.0015uF	50V	B	GRM155B11H152KA01D	K22178811		1-	B	a1
C 1301	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	a1
C 1302	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c3
C 1303	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 1304	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 1305	CHIP CAP.	1uF	6.3V	B	GRM188B10J105KA01D	K22084801		1-	B	d2
C 1306	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 1308	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d3
C 1309	CHIP CAP.	0.015uF	16V	B	GRM36B153K16PT	K22128807		1-	B	d2
C 1310	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	a3
C 1311	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1312	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1313	CHIP CAP.	1pF	50V	CK	GRM1554C1H1R0CZ01D	K22178202		1-	B	b2
C 1316	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		1-		
C 1317	CHIP CAP.	1uF	6.3V	B	GRM155B30J105KE18D	K22088803		1-		
CD1001	CERAMIC DISC				JTBC450C7	H7901500		1-	A	E3
CF1001	CERAMIC FILTER				LTWC450F	H3900563		1-	B	a2
CF1002	CERAMIC FILTER				SFCEP10M7GA00-R0	H3900514		1-	A	D3
D 1001	LED				SML-512DWT86	G2071116		1-	A	C3
D 1002	LED				SML-512DWT86	G2071116		1-	A	C3
D 1004	LED				SML-512DWT86	G2071116		1-	A	B3
D 1005	DIODE				UDZS TE-17 5.1B	G2070908		1-	A	E2

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Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
D 1006	DIODE				1SS400 TE61	G2070634		1-	B	e2
D 1007	LED				SML-512DWT86	G2071116		1-	A	A1
D 1008	LED				SML-512DWT86	G2071116		1-	A	A2
D 1009	LED				SDDF01000A1	G2071056		1-	A	D3
D 1010	LED				SML-512DWT86	G2071116		1-	A	B2
D 1012	LED				SML-512DWT86	G2071116		1-	A	A2
D 1013	DIODE				DA221 TL	G2070178		1-	A	E1
D 1014	DIODE				1SS400 TE61	G2070634		1-	B	d3
D 1015	DIODE				1SV325(TPH3)	G2070848		1-	B	d1
D 1016	DIODE				HSC277TRF	G2070584		1-	B	d1
D 1017	DIODE				HVC359 TRF	G2070708		1-	B	e1
D 1018	DIODE				HSC277TRF	G2070584		1-	B	d1
D 1019	DIODE				1SS400 TE61	G2070634		1-	A	E2
D 1020	DIODE				HSC277TRF	G2070584		1-	B	d1
D 1021	DIODE				DAN222 TL	G2070174		1-	A	D2
D 1022	DIODE				DAN222 TL	G2070174		1-	A	E2
D 1023	DIODE				1SV325(TPH3)	G2070848		1-	B	d1
D 1024	DIODE				1SS400 TE61	G2070634		1-	B	d1
D 1025	DIODE				1SS400 TE61	G2070634		1-	B	d1
D 1026	DIODE				DAN222 TL	G2070174		1-	B	c1
D 1027	DIODE				RB751S-40TE61	G2070850		1-	A	D2
D 1029	DIODE				HVC350B-TRF	G2070596		1-	B	b2
D 1030	DIODE				DA221 TL	G2070178		1-	A	D1
D 1031	DIODE				DA221 TL	G2070178		1-	B	d1
D 1032	DIODE				DA221 TL	G2070178		1-	B	a3
D 1033	DIODE				HVC369B TRF	G2070872		1-	B	b1
D 1034	DIODE				DA221 TL	G2070178		1-	B	a2
D 1035	DIODE				HVC369B TRF	G2070872		1-	B	b1
D 1036	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1037	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1038	DIODE				HVC369B TRF	G2070872		1-	B	b1
D 1039	DIODE				HVC369B TRF	G2070872		1-	B	b1
D 1040	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1041	DIODE				1SV325(TPH3)	G2070848		1-	B	b2
D 1042	DIODE				DAN222 TL	G2070174		1-	B	a2
D 1043	DIODE				RB521S-30 TE61	G2070642		1-	B	d1
D 1044	DIODE				DA221 TL	G2070178		1-	B	c1
D 1045	DIODE				DA221 TL	G2070178		1-	B	b2
D 1046	DIODE				DAN222 TL	G2070174		1-	B	b2
D 1047	DIODE				1SS400 TE61	G2070634		1-	B	a2
D 1048	DIODE				RLS135 TE-11	G2070128		1-	B	b1
D 1049	DIODE				1SV307(TPH3)	G2070638		1-	B	a1
D 1050	DIODE				1SS302 TE85R	G2070088		1-	B	a1
D 1051	DIODE				DA221 TL	G2070178		1-	B	d2
D 1053	DIODE				1SS400 TE61	G2070634		1-	B	d1
D 1054	DIODE				DA221 TL	G2070178		1-	B	d2
D 1055	DIODE				KV1520-TL-G	G2071102		1-	B	a1
D 1056	DIODE				DAP222-TL	G2070432		1-	B	b2
D 1057	DIODE				1SS302 TE85R	G2070088		1-	B	a1
D 1058	DIODE				DA221 TL	G2070178		1-	A	E3
D 1059	DIODE				1SS400 TE61	G2070634		1-	B	d3
D 1060	DIODE				1SS400 TE61	G2070634		1-	A	D1
D 1061	DIODE				RB751S-40TE61	G2070850		1-	A	E1
D 1062	DIODE				RB751S-40TE61	G2070850		1-	A	E1
DS1001	LCD				TP5428T00	G6090172		1-	A	C2
F 1001	CHIP FUSE	3A			0434 003. 3.0A	Q0000107		1-	A	D3
FB1001	FERRITE BEADS				BLM15BD102SN1D	L9190133		1-	B	e2
FB1002	FERRITE BEADS				BLM15BD102SN1D	L9190133		1-	B	e2
FB1003	FERRITE BEADS				BLM18PG330SN1	L9190141		1-	A	E3
FB1004	FERRITE BEADS				BLM15BD102SN1D	L9190133		1-	A	E2
FB1005	FERRITE BEADS				BLM15BD102SN1D	L9190133		1-	A	E2
FB1006	FERRITE BEADS				BLM15BD102SN1D	L9190133		1-	A	E1
HS1001	HEATSINK PLATE				(FET)	RA0778800		1-	B	b1
J 1001	CONNECTOR				HSJ1594-010055	P1090896		1-	B	a2
J 1002	CONTACT				OG-503040	S5000243		1-	A	D1
J 1003	CONTACT				OG-503040	S5000243		1-	A	E1
J 1004	CONNECTOR				AXK6F10545YJ	P0091423		1-	B	d2
J 1005	SPRING CONNECTOR					R0152490		1-	B	a1
JP1001	WIRE ASSY				GRN 40 2/2	T50504000		1-	B	d2
L 1001	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	d1
L 1002	CHIP COIL	0.018uH			LQW18AN18NG00D	L1690883		1-	B	d1
L 1004	CHIP COIL	0.22uH			LQW18ANR22J00D	L1691271		1-	B	d1
L 1005	M.RFC	470uH			FLC32T-471J	L1690235		1-	B	e1

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Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
L 1006	M.RFC	22uH			FLC32T-220J	L1690219		1-	B	c1
L 1007	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	B	d1
L 1008	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	B	d1
L 1009	M.RFC	0.39uH			LK1608 R39K-T	L1690413		1-	B	b2
L 1010	CHIP COIL	0.12uH			LQW18ANR12J00D	L1691268		1-	B	b2
L 1011	M.RFC	0.068uH			HK1608 68NJ-T	L1690526		1-	B	c1
L 1012	CHIP COIL	0.12uH			LQW18ANR12J00D	L1691268		1-	B	b2
L 1013	CHIP COIL	0.1uH			LQW18ANR10J00D	L1691267		1-	B	b2
L 1014	M.RFC	10uH		2%	KQ1008TE100G	L1691216		1-	A	E2
L 1015	CHIP COIL	0.047uH			LQW2BHN47NJ03L	L1690617		1-	B	b1
L 1016	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	b2
L 1017	M.RFC	0.033uH			HK1608 33NJ-T	L1690522		1-	B	b1
L 1018	M.RFC	0.082uH			HK1608 82NJ-T	L1690527		1-	B	b1
L 1019	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	b1
L 1020	M.RFC	0.15uH			HK1608 R15J-T	L1690938		1-	B	b1
L 1021	COIL				E2 0.3-0.9-7T-R	L0022371		1-	B	b1
L 1022	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	B	b3
L 1023	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	B	b2
L 1024	M.RFC	4.7uH			LK1608 4R7K-T	L1690688		1-	A	D1
L 1025	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	b3
L 1026	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	a1
L 1027	M.RFC	0.47uH			LK1608 R47K-T	L1690414		1-	B	b3
L 1028	M.RFC	0.22uH			LK1608 R22K-T	L1690410		1-	B	b2
L 1029	COIL				E2 0.28-1.0-4.5T-R	L0022395		1-	B	a1
L 1030	M.RFC	0.33uH			LK1608 R33K-T	L1690412		1-	B	a2
L 1031	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	a1
L 1032	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	a1
L 1033	M.RFC	0.22uH			LK1608 R22K-T	L1690410		1-	B	b2
L 1034	M.RFC	33uH			LK1608 330M-T	L1690690		1-	B	a1
L 1035	M.RFC	0.39uH			LK1608 R39K-T	L1690413		1-	B	b2
L 1036	M.RFC	100uH			FLC32T-101J	L1690227		1-	B	a1
L 1037	COIL				E2 0.25-1.9-6.5T-L	L0022401		1-	B	a1
L 1038	M.RFC	0.15uH			LK1608 R15K-T	L1690409		1-	B	b2
L 1039	M.RFC	2.2uH			LK1608 2R2K-T	L1690634		1-	B	a1
L 1040	M.RFC	3.9uH			LK1608 3R9K-T	L1690849		1-	B	a1
MC1001	MICROPHONE ELEMENT				SKB-2244S-C1033MG	M3290040		1-	A	A1
Q 1001	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	b1
Q 1002	TRANSISTOR				FMMTL618TA	G3070334		1-	B	b2
Q 1003	PHOTO COUPLER				TLP281(GB-TP)	G0090037		1-	A	D1
Q 1004	TRANSISTOR				FMMTL618TA	G3070334		1-	B	b2
Q 1005	TRANSISTOR				CPH6202-TL	G3070265		1-	B	e2
Q 1006	TRANSISTOR				FMMTL618TA	G3070334		1-	B	b2
Q 1007	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	D1
Q 1008	TRANSISTOR				DTA144EE TL	G3070074		1-	B	d3
Q 1009	IC				TDA2822D013TR	G1091542		1-	B	e2
Q 1010	IC				NJM12902V-TE1	G1093592		1-	B	e3
Q 1011	TRANSISTOR				UMD5N TR	G3070343		1-	A	E1
Q 1012	TRANSISTOR				FMMTL718TA	G3070335		1-	B	d2
Q 1014	IC				M62364FP 600D	G1093033		1-	B	c2
Q 1015	FET				2SJ347 TE85R	G3703477		1-	B	e3
Q 1016	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	d2
Q 1017	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e2
Q 1020	IC				BR24L64F-WE2	G1093876		1-	B	c2
Q 1022	FET				HN1J02FU(TE85L)	G3070221		1-	A	E2
Q 1023	TRANSISTOR				DTC143ZE TL	G3070102		1-	B	e1
Q 1024	TRANSISTOR				DTC143ZE TL	G3070102		1-	A	E3
Q 1025	TRANSISTOR				DTC144EE TL	G3070075		1-	A	E2
Q 1026	IC				LC87F7BC8A-F56G2-E	✖		1-	A	C1
Q 1027	IC				MB15A01PFV1-G-BND-EF	G1092545		1-	B	e1
Q 1028	FET				2SJ364-Q(TX)	G3703648Q		1-	A	E2
Q 1029	IC				NJM12902V-TE1	G1093592		1-	A	D2
Q 1031	TRANSISTOR				DTC143ZE TL	G3070102		1-	B	e1
Q 1032	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e1
Q 1033	IC				BU4094BCFV-E2	G1093527		1-	B	c1
Q 1034	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	B	d1
Q 1036	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	c1
Q 1037	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	c2
Q 1039	TRANSISTOR				UMW1 TR	G3070078		1-	B	c2
Q 1040	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	B	d1
Q 1041	TRANSISTOR				DTC144EE TL	G3070075		1-	A	D2
Q 1042	FET				3SK318 TL	G4803188		1-	B	b2
Q 1043	TRANSISTOR				UMA4N-TR	G3070282		1-	B	c2
Q 1044	TRANSISTOR				UMD5N TR	G3070343		1-	B	c1

✖: Please contact Vertex Standard

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 1045	IC				NJM12904R-TE1	G1093337		1-	A	D1
Q 1046	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	d1
Q 1047	FET				2SJ364-Q(TX)	G3703648Q		1-	A	D2
Q 1048	TRANSISTOR				2SC5226-5-TL	G3352268E		1-	B	c1
Q 1049	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	D2
Q 1051	TRANSISTOR				UMD5N TR	G3070343		1-	B	d1
Q 1052	IC				S-80835CNMC-B8U-T2-G	G1093606		1-	B	d2
Q 1053	TRANSISTOR				DTC144EE TL	G3070075		1-	A	D2
Q 1054	IC				NJM2125F(TAPE)	G1093894		1-	A	D1
Q 1055	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	D2
Q 1056	FET				2SK3475(T2LVX)	G3070318		1-	B	b1
Q 1057	IC				NJM2211M-TE1	G1092943		1-	A	D2
Q 1058	IC				S-812C35AUA-C2P-T2	G1093672		1-	B	d2
Q 1059	TRANSISTOR				UMW1 TR	G3070078		1-	B	d2
Q 1060	TRANSISTOR				CPH6102-TL	G3070223		1-	B	d2
Q 1061	TRANSISTOR				UMA4N-TR	G3070282		1-	A	E3
Q 1062	TRANSISTOR				DTC144EE TL	G3070075		1-	A	E3
Q 1063	IC				TA31136FN(EL)	G1091605		1-	B	a2
Q 1064	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	D1
Q 1065	TRANSISTOR				2SC5555ZD-TR	G3355557		1-	B	b1
Q 1066	FET				2SK3476(TE12L)	G3834768		1-	A	D1
Q 1067	TRANSISTOR				UMB3N TN	G3070158		1-	B	c1
Q 1068	TRANSISTOR				UMA4N-TR	G3070282		1-	A	E2
Q 1069	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c1
Q 1070	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	b3
Q 1071	TRANSISTOR				UMB3N TN	G3070158		1-	B	d1
Q 1072	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	b2
Q 1073	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	b2
Q 1074	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	a2
Q 1075	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	d1
Q 1076	TRANSISTOR				UMB3N TN	G3070158		1-	B	d2
Q 1077	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	b3
Q 1078	TRANSISTOR				DTC144EE TL	G3070075		1-	B	b2
Q 1079	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	a1
Q 1080	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	b2
Q 1081	TRANSISTOR				DTC144EE TL	G3070075		1-	B	a2
Q 1082	TRANSISTOR				2SC4915-O(TE85L)	G3349158O		1-	B	b3
Q 1083	TRANSISTOR				UMD5N TR	G3070343		1-	B	d2
Q 1084	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e1
R 1001	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C3
R 1002	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	e2
R 1003	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	e2
R 1004	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	b2
R 1005	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	C3
R 1006	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	c1
R 1007	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e2
R 1008	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c2
R 1009	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	B3
R 1011	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	b2
R 1012	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	e2
R 1013	CHIP RES.	39	1/4W	5%	RMC1/4 390JATP	J24245390		1-	B	e2
R 1014	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E1
R 1015	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c2
R 1016	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	e2
R 1017	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D1
R 1018	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d3
R 1020	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	e2
R 1021	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e2
R 1022	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d3
R 1023	CHIP RES.	180	1/16W	5%	RMC1/16S 181JTH	J24189016		1-	A	D1
R 1024	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	b2
R 1025	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e2
R 1026	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	e2
R 1027	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	c2
R 1028	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e2
R 1029	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	E1
R 1030	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1031	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1032	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d2
R 1033	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	e2
R 1034	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	d3
R 1035	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d2
R 1036	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1037	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	e2
R 1038	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c1
R 1039	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e2
R 1040	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d2
R 1043	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1045	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	d3
R 1048	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	A	C1
R 1049	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	C1
R 1050	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	d2
R 1051	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d3
R 1052	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	E2
R 1053	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	A	C1
R 1055	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	B1
R 1056	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	d2
R 1057	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d3
R 1060	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1061	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c2
R 1062	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c2
R 1065	CHIP RES.	2.2	1/4W	5%	RMC1/4 2R2JATP	J24245229		1-	B	d2
R 1066	CHIP RES.	2.2	1/4W	5%	RMC1/4 2R2JATP	J24245229		1-	B	d2
R 1070	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1071	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1072	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	d2
R 1073	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1074	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	e2
R 1075	CHIP RES.	27k	1/16W	5%	RMC1/16S 273JTH	J24189042		1-	B	e2
R 1076	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	e3
R 1077	CHIP RES.	180k	1/16W	5%	RMC1/16S 184JTH	J24189052		1-	B	e3
R 1078	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	e3
R 1079	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	B	e3
R 1080	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	e3
R 1081	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e3
R 1082	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	e3
R 1083	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c2
R 1084	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	e2
R 1085	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	C1
R 1086	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B1
R 1087	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B1
R 1089	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e3
R 1090	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	d2
R 1091	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d2
R 1092	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	C2
R 1093	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	C2
R 1094	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	A	B2
R 1095	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	A	B2
R 1096	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	C2
R 1097	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C2
R 1098	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	d3
R 1099	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	A	B2
R 1101	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	e2
R 1102	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e2
R 1103	CHIP RES.	82k	1/16W	0.5%	MCR01MZPD8202	J24189385		1-	A	B1
R 1104	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	e2
R 1105	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	A	B1
R 1106	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D1
R 1107	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	e1
R 1108	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d1
R 1109	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e1
R 1110	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	E2
R 1111	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	E2
R 1112	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	E2
R 1113	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e1
R 1114	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	e1
R 1115	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e1
R 1116	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e1
R 1117	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e1
R 1118	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	E2
R 1119	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	E2
R 1120	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	E2
R 1121	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	E2
R 1122	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e1
R 1123	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B1
R 1124	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	e1

MAIN Unit

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1125	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1127	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	e1
R 1128	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e1
R 1129	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E2
R 1130	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1131	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	A	C1
R 1132	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C1
R 1133	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C1
R 1134	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	C1
R 1135	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	D2
R 1136	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E2
R 1137	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	A	D2
R 1138	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1140	CHIP RES.	820k	1/16W	5%	RMC1/16S 824JTH	J24189060		1-	A	E2
R 1141	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1142	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	B	e2
R 1143	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	B	e2
R 1144	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1145	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1146	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1147	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1148	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d1
R 1149	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	E2
R 1150	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	d1
R 1151	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	e1
R 1152	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1153	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d1
R 1154	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c2
R 1155	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E2
R 1156	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	c1
R 1157	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E2
R 1158	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d1
R 1159	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1160	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	A	D2
R 1161	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D2
R 1162	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	d1
R 1163	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D2
R 1164	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c1
R 1165	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1166	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E2
R 1167	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	D2
R 1168	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	D2
R 1169	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1170	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c2
R 1171	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d1
R 1172	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E2
R 1173	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	E2
R 1174	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	E2
R 1175	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	c2
R 1176	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	c2
R 1177	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	d1
R 1178	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	d1
R 1179	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b2
R 1180	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	b2
R 1181	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 1182	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b2
R 1183	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	b2
R 1184	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	A	D2
R 1185	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D1
R 1186	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D1
R 1187	CHIP RES.	33k	1/16W	0.5%	MCR01MZPD3302	J24189380		1-	B	b2
R 1188	CHIP RES.	47k	1/16W	0.5%	MCR01MZPD4702	J24189382		1-	B	b2
R 1189	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1190	CHIP RES.	22k	1/16W	0.5%	MCR01MZPD2202	J24189378		1-	B	b2
R 1191	CHIP RES.	47k	1/16W	0.5%	MCR01MZPD4702	J24189382		1-	B	b2
R 1192	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	d1
R 1193	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c1
R 1194	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	A	D2
R 1195	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D1
R 1196	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1197	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1198	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	d1
R 1199	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d1

MAIN Unit

Parts List

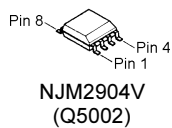
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1200	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d1
R 1201	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	A	D2
R 1202	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D2
R 1203	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	D2
R 1204	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d1
R 1205	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c1
R 1207	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	D2
R 1208	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a3
R 1209	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D1
R 1210	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	D1
R 1211	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d1
R 1212	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	c1
R 1213	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	D1
R 1214	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1215	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E1
R 1216	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c1
R 1217	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1218	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	D2
R 1219	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	d1
R 1220	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a3
R 1221	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	c1
R 1222	CHIP RES.	560k	1/16W	5%	RMC1/16S 564JTH	J24189058		1-	A	D1
R 1223	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D1
R 1224	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D1
R 1225	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1226	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a3
R 1227	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D3
R 1228	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1229	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	D2
R 1230	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	a3
R 1231	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	A	D1
R 1232	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	d2
R 1233	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d2
R 1234	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	D1
R 1235	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1236	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1237	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1239	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	B	a3
R 1240	CHIP RES.	6.8k	1/16W	5%	RMC1/16S 682JTH	J24189035		1-	A	D2
R 1241	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D2
R 1242	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	b1
R 1243	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b1
R 1244	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1245	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	D2
R 1246	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1247	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1248	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	B	b1
R 1249	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	D1
R 1250	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	d2
R 1251	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	d2
R 1253	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1254	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	B	d2
R 1255	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	B	b2
R 1256	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1257	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	A	E2
R 1258	CHIP RES.	6.8k	1/16W	5%	RMC1/16S 682JTH	J24189035		1-	A	D1
R 1259	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1260	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	b2
R 1261	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1262	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D1
R 1263	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d2
R 1264	CHIP RES.	2.7k	1/16W	5%	RMC1/16S 272JTH	J24189030		1-	A	E3
R 1266	CHIP RES.	82k	1/16W	0.5%	MCR01MZPD8202	J24189385		1-	A	D2
R 1267	CHIP RES.	27k	1/16W	5%	RMC1/16S 273JTH	J24189042		1-	A	D1
R 1268	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D1
R 1269	CHIP RES.	120k	1/16W	5%	RMC1/16S 124JTH	J24189050		1-	B	b1
R 1270	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b1
R 1271	CHIP RES.	18k	1/16W	0.5%	MCR01MZPD1802	J24189377		1-	A	D2
R 1272	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b1
R 1273	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b1
R 1274	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D1
R 1277	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 1278	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b3

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Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1279	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	D2
R 1281	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1285	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 1286	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b2
R 1287	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	a2
R 1288	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1289	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b3
R 1290	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	D1
R 1291	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a2
R 1292	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b2
R 1295	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	b2
R 1296	CHIP RES.	820	1/16W	5%	RMC1/16S 821JTH	J24189024		1-	B	b3
R 1297	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	b2
R 1298	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E1
R 1299	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 1300	CHIP RES.	270k	1/16W	5%	RMC1/16S 274JTH	J24189054		1-	B	a2
R 1301	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	a2
R 1302	CHIP RES.	1.5k	1/16W	5%	RMC1/16S 152JTH	J24189027		1-	B	a1
R 1303	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b3
R 1304	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	d1
R 1305	CHIP RES.	120k	1/16W	5%	RMC1/16S 124JTH	J24189050		1-	B	a1
R 1306	CHIP RES.	1.8k	1/16W	5%	RMC1/16S 182JTH	J24189028		1-	B	b2
R 1307	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	B	b2
R 1308	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E1
R 1309	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b2
R 1310	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	b2
R 1313	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a1
R 1314	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 1315	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	b3
R 1316	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	d2
R 1317	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1318	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d3
R 1319	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	E2
R 1320	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D1
R 1321	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	c1
R 1322	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d1
R 1323	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b2
R 1329	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	C1
R 1330	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C1
R 1331	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	a3
R 1332	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a3
R 1333	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1334	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	B2
R 1336	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-		
R 1337	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-		
R 1338	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-		
S 1001	TACT SWITCH				PT-035-C1-T 08-035-120	N5090099		1-	B	b3
S 1002	TACT SWITCH				EVQP4403M	N5090132		1-	A	E1
S 1003	TACT SWITCH				PT-035-C1-T 08-035-120	N5090099		1-	B	b1
S 1004	TACT SWITCH				PT-035-C1-T 08-035-120	N5090099		1-	B	c1
TH1001	THERMISTOR				ERTJ0EV473J	G9090120		1-	A	D1
TH1002	THERMISTOR				ERTJ0EV473J	G9090120		1-	B	e1
TH1003	THERMISTOR				ERTJ0EV473J	G9090120		1-	A	C1
VR1001	POT.				TP76N00 14.5FSK RY7998	J60800255		1-	B	a2
X 1001	XTAL XVNBAL	11.7MHz			11.7MHz	H0103311		1-	B	e1
X 1002	XTAL U3B	7.3728MHz			7.3728MHZ	H0103280		1-	B	c2
XF1001	XTAL FILTER				SF-2118 47213A	H1102397		1-	B	b2
	REFLECTOR SHEET				(LCD)	RA0809200		1-		
	INTER CONNECTOR					RA0769400		1-		
	LIGHT GUIDE					RA0778100		1-		
	LCD HOLDER					RA0778200		1-		
	TERMINAL HOLDER					RA010340B		1-		
	TERMINAL PLATE R					RA010700A		1-		

Circuit Diagram



FVP-31 (Option)

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	Printed Circuit Board				AAD17X000	FR0098300		1-		
C 5001	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
C 5002	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	
C 5003	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
C 5004	CHIP TA.CAP.	22uF	4V		TESVSP0G226M-8R	K78060047		1-	A	
C 5005	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	
C 5006	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	
C 5007	CHIP CAP.	1uF	10V	F	GRM39F105Z10PT	K22105001		1-	A	
C 5008	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		1-	A	
C 5009	CHIP CAP.	0.1uF	16V	B	GRM39B104K16PT	K22124805		1-	A	
J 5001	CONNECTOR				AXK5F10335P	P1091136		1-	A	
Q 5001	IC				NJM2904V-TE1	G1091677		1-	A	
Q 5002	IC				CMX264	G1093777		1-	A	
R 5001	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	
R 5002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	
R 5003	CHIP RES.	33k	1/16W	5%	RMC1/16 333JATP	J24185333		1-	A	
R 5004	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	
R 5005	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	
R 5006	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	
R 5007	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	
R 5008	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	
X 5001	XTAL CSA-309	4.433619MHz			4.433619MHZ	H0103287		1-	A	



STANDARD HORIZON

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