

# VX-820 Series

## VHF Band Service Manual

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## Introduction

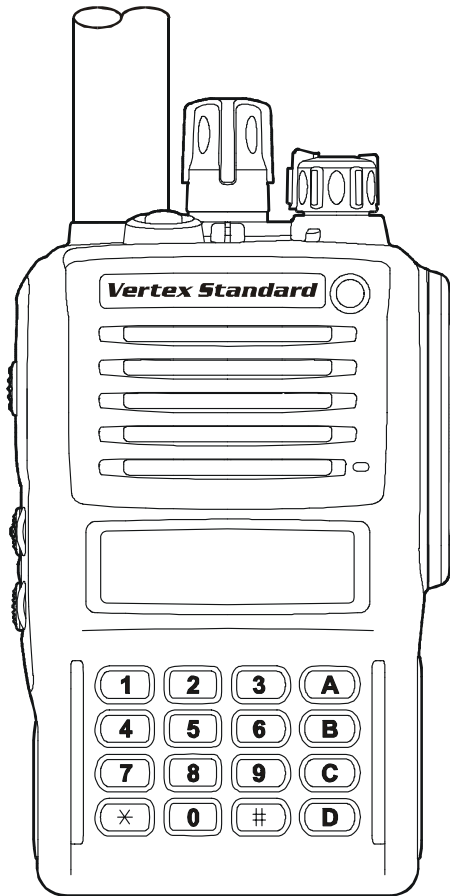
This manual provides the technical information necessary for servicing the VX-820 Series Transceiver.

Servicing this equipment requires expertise in handling surface-mount chip components. Attempts by non-qualified persons to service this equipment may result in permanent damage not covered by the warranty, and may be illegal in some countries.

Two PCB layout diagrams are provided for each double-sided board in this transceiver. Each side of the board is referred to by the type of the majority of components installed on that side ("Side A" or "Side B"). In most cases one side has only chip components (surface-mount devices), and the other has either a mixture of both chip and leaded components (trimmers, coils, electrolytic capacitors, ICs, etc.), or leaded components only.

As described in the pages to follow, the advanced microprocessor design of the VX-820 Series Transceiver allows a complete alignment of this transceiver to be performed without opening the case of the radio; all adjustments can be performed from the front panel, using the "Alignment Mode" menu.

While we believe the information in this manual to be correct, VERTEX STANDARD assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.



## Contents

<b>Specifications .....</b>	<b>2</b>
<b>Exploded View &amp; Miscellaneous Parts .....</b>	<b>3</b>
<b>Block Diagram .....</b>	<b>5</b>
<b>Circuit Description .....</b>	<b>7</b>
<b>Alignment .....</b>	<b>11</b>
<b>Board Units (Schematics, Layouts &amp; Parts)</b>	
Main Unit .....	15
Display Unit .....	33
Cable Unit .....	41

# Specifications

## General

Frequency range:	134-174 MHz
Channel / Group:	16 CH / 1 Group (w/o LCD version) 512 CH / 32 Groups (w/ LCD version)
Channel Spacing:	12.5/15/20/25/30 kHz
PLL Stepping:	1.25/2.5/5/6.25/7.5 kHz
Power Supply Voltage:	7.4 V
Current Consumption:	30 mA (Standby w/saver) (Approx. @7.4 V) 75 mA (Standby) 200 mA (Receive) 1.7 A (Transmit)
Battery Life (Approx.):	7 hours (w/ FNB-V86LI) 12 hours (w/ FNB-V87LI)
Operating Temperature Range:	-22 °F to +140 °F (-30 °C to +60 °C)
Frequency Stability:	±2.5ppm
Case Size (W x H x D):	2.2" x 3.8" x 1.48" (56 x 96.5 x 37.5 mm)
Weight (Approx.):	10.9 oz (310g) (w/FNB-V86LI, ATV-8B, CLIP-920)

## Receiver (Measurement per TIA/EIA-603)

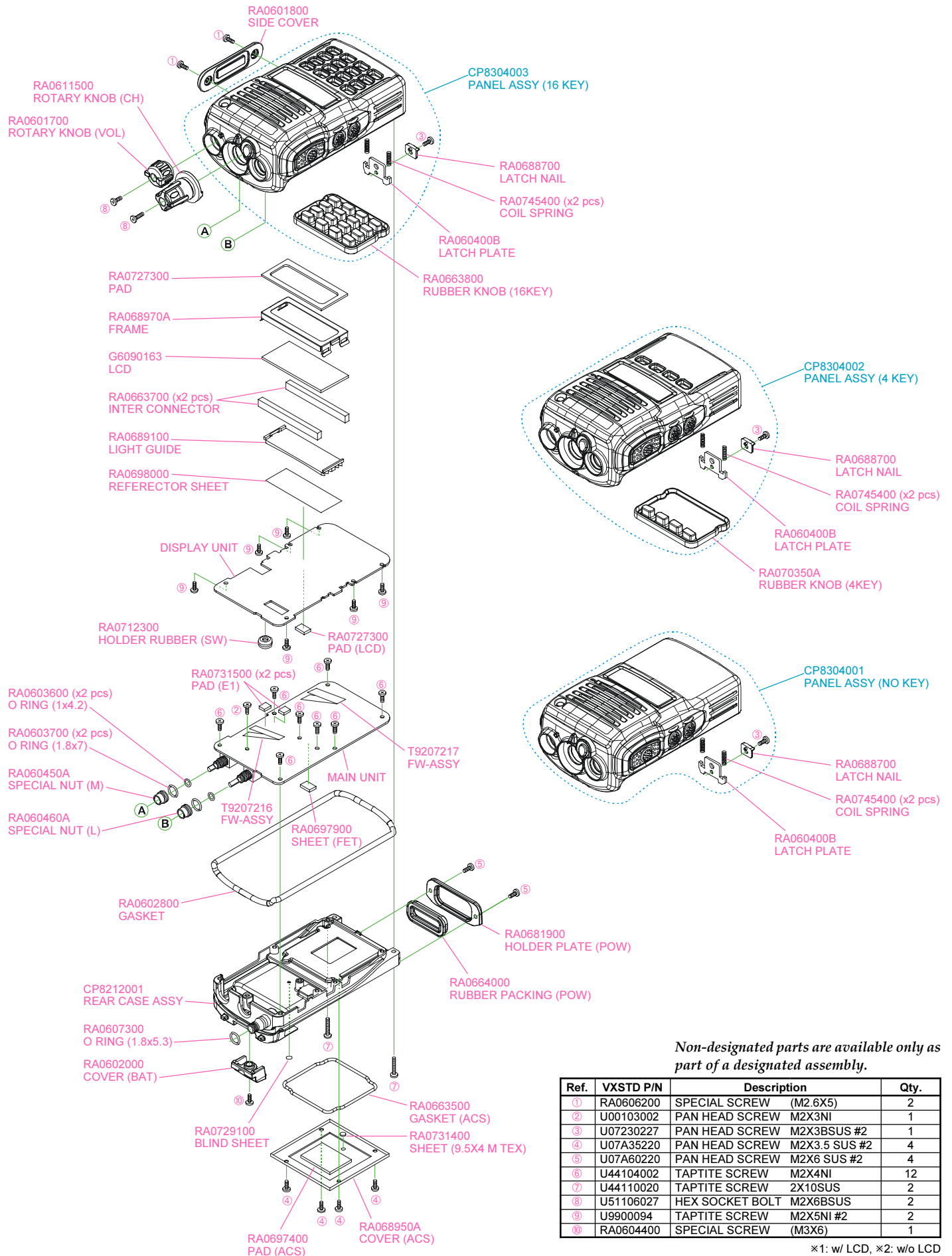
Circuit Type:	Double Conversion Super-heterodyne
Sensitivity (12dB SINAD):	0.25 µV/0.32 µV(W/N)
Adjacent Channel Selectivity:	75/70 dB (W/N)
Intermodulation:	75/70 dB (W/N)
Spurious Response Rejection:	75 dB
Num & Noise:	48/42 dB (W/N)
Audio output:	700 mW @ 16 ohms 5% THD
Spurious Emissions:	-57 dBm

## Transmitter (Measurement per TIA/EIA-603)

RF Power Output:	5/2.5/1/0.25 W
Modulation Type:	Direct FM (16K0F3E/11K0F3E)
Maximum Frequency Deviation:	±2.5/±4.0/±5.0 kHz
FM Hum & Noise:	45/40 dB (W/N)
Audio Distortion:	Less than 3% @ 1kHz
Spurious Emissions:	-36 dBm @under 1 GHz -30 dBm @above 1 GHz

Specifications subject to change without notice or obligation.

# Exploded View & Miscellaneous Parts



Non-designated parts are available only as part of a designated assembly.

Ref.	VXSTD P/N	Description	Qty.
①	RA0606200	SPECIAL SCREW (M2.6X5)	2
②	U00103002	PAN HEAD SCREW M2X3NI	1
③	U07230227	PAN HEAD SCREW M2X3BSUS #2	1
④	U07A35220	PAN HEAD SCREW M2X3.5 SUS #2	4
⑤	U07A60220	PAN HEAD SCREW M2X6 SUS #2	4
⑥	U44104002	TAPTITE SCREW M2X4NI	12
⑦	U44110020	TAPTITE SCREW 2X10SUS	2
⑧	U51106027	HEX SOCKET BOLT M2X6BSUS	2
⑨	U9900094	TAPTITE SCREW M2X5NI #2	2
⑩	RA0604400	SPECIAL SCREW (M3X6)	1

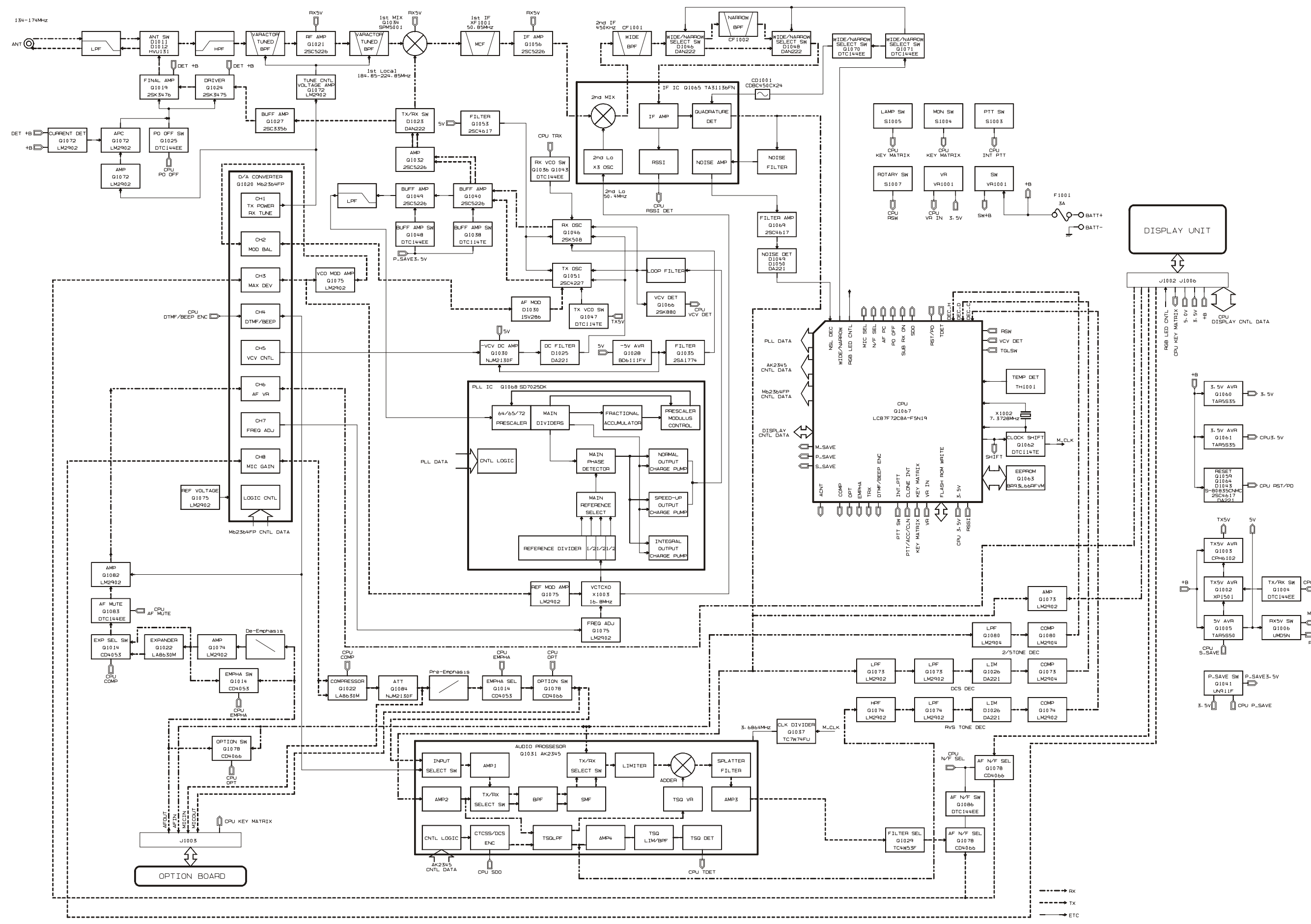
※1: w/ LCD, ※2: w/o LCD

# *Exploded View & Miscellaneous Parts*

*Note*

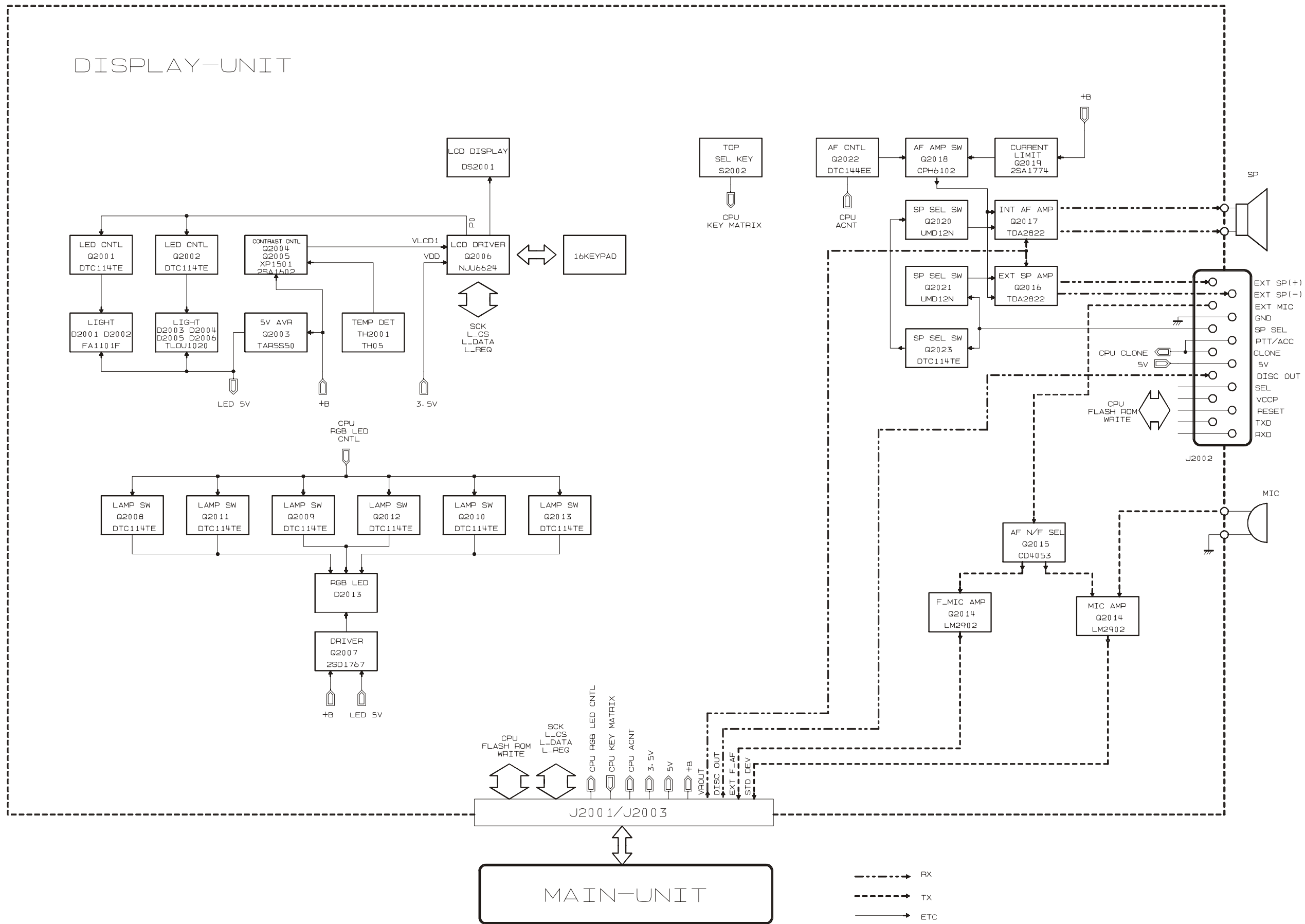
# Block Diagram

## Main Unit



# Block Diagram

## Display Unit



## 1. Circuit Configuration by Frequency

The receiver is a double-conversion superheterodyne type, with a first Intermediate Frequency (IF) of 50.85 MHz and a second IF of 450 kHz. Incoming signals from the antenna are mixed with the local signal from the VCO/PLL to produce the first IF of 50.85 MHz. The signals are then mixed with the 50.4 MHz second local oscillator output to produce the 450 kHz second IF. This is detected to give the demodulated signal. The transmit signal frequency is generated by the PLL VCO, and modulated by the signal from the microphone. It is then amplified and sent to the antenna.

## 2. Receiver System

### 2-1. Front-end RF amplifier

Incoming RF signals from the antenna are delivered to the Main Unit and pass through a Low-pass filter, antenna switching diode **D1011 (HVU131)**, and a high pass filter, and undesired out-of-band signals are then removed by a varactor-diode-tuned band-pass filter **D1013, D1014, D1015, and D1016 (all 1SV323)**. The residual signals are amplified by **Q1021 (2SC5226)** and then pass through a varactor-diode-tuned image-stripping band pass filter **D1019, D1020, D1021, and D1022 (all 1SV323)** prior to delivery to the 1st mixer.

### 2-2. First Mixer

The 1st mixer consists of **Q1034 (SPM5001)**, T1001, T1002, and T1003. Buffered output from the VCO is amplified by **Q1032 (2SC5005)** to provide a pure first local signal between 184.85 and 224.85 MHz for injection to the first mixer. The IF signal then passes through monolithic crystal filter **XF1001** ( $\pm 5.5$  kHz BW) to strip away undesired mixing products.

### 2-3. IF Amplifier

The first IF signal is amplified by **Q1056 (2SC5226)**. The amplified first IF signal is applied to FM IF subsystem IC **Q1065 (TA31136FN)** which contains the second mixer, second local oscillator, limiter amplifier, noise amplifier, and S-meter amplifier. The signal from reference oscillator **X1003** is multiplied by three by **Q1065 (TA31136FN)**, and then is mixed with the IF signal to produce a 450 kHz second IF.

The second IF signal then passes through the ceramic

filter **CF1001** (wide channels), **CF1002** (narrow channels) to strip away all but the desired signal, and is applied to the limiter amplifier in **Q1065 (TA31136FN)**, which removes amplitude variations in the 450 kHz IF, before detection of the speech by the ceramic discriminator **CD1001**.

### 2-4. Audio amplifier

Detected audio from **Q1065 (TA31136FN)** is applied to **Q1031 (AK2345)** and is fed to the bandpass filter inside **Q1031 (AK2345)**.

If an optional signaling unit is installed, **Q1078 (CD4066BPWR)** is set to "OFF," and the AF signal from **Q1032 (AK2345)** is fed to the optional unit. If a signaling unit is not installed, **Q1078 (CD4066BPWR)** is switched "ON," and the signal passes through **Q1078 (CD4066BPWR)**. The signal then proceeds through the de-emphasis stage and the expander at **Q1022 (LA8630M)**. When the expander function is off, the signal will be bypassed via **Q1014 (CD4053BPWR)**. The output signal of the expander (or a signal from de-emphasis) goes through AF mute switch **Q1083 (DTC114TE)** and is amplified by **Q1082 (LM2902PWR)**. The output from **Q1082 (LM2902PWR)** is amplified by the AF power amplifier **Q2017 (TDA2822)** after passing through the AF volume control **Q1020 (M62364FP)**. The output of **Q2017 (TDA2822)** drives the internal speaker.

### 2-5. Squelch Circuit

There are 13 levels of squelch setting, from "0" to "12." The level "0" corresponds to an "open" squelch. The level "1" is the lowest squelch threshold setting level, and level "11" means tight squelch. From "2" to "10" are intermediate, increasingly-tight settings. The level "12" represents carrier squelch.

#### 2-5-1. Noise Squelch

The Noise Squelch circuit is composed of the bandpass filter at **Q1065 (TA31136FN)**, noise amplifier **Q1069 (2SC4617)**, and noise detector **D1049/D1050 (both DA221)**. When a carrier is not being received, the noise components passed from demodulator **Q1065 (TA31136FN)** are amplified by **Q1069 (2SC4617)**, fed through bandpass filter **Q1065 (TA31136FN)**, detected as a DC voltage by **D1049/D1050 (both DA221)**, and applied to pin 16 (the A/D

## Circuit Description

port) of **Q1067** (CPU: **LC87F5BP6A**). When a carrier is received, the DC voltage becomes low because the noise is compressed. When the detected voltage to the CPU is high, the CPU stops AF output by setting **Q1083** (**DTC114TE**) “OFF” (by making pin 59 of the CPU “High” level). When the detection voltage is low, the CPU switches **Q1083** (**DTC114TE**) “ON” by making pin 59 “Low,” and the AF signal is allowed to flow.

### 2-5-2. Carrier Squelch

The pin 15 (A/D port) of CPU **Q1067** (**LC87F5BP6A**) detects the RSSI voltage output from **Q1065** (**TA31136FN**) at pin 12, and controls the AF output. The RSSI output voltage changes according to the signal strength of carrier; a stronger signal makes the RSSI voltage higher. The processing of the AF signal control is same as Noise Squelch, except that the switching threshold is adjusted so as to be 3 dB higher than the “tight squelch” sensitivity.

## 3. Transmitter System

### 3-1. MIC Amplifier

The AF signal from the internal microphone (pin 21 of J2002 on the Display Unit) or an external microphone (pin 6 of J2002 on the Display Unit) passes through microphone selection switch **Q2015** (**CD4053BPWR**) and is amplified by microphone amplifier **Q2014** (**LM2904PWR**), thereafter passing through the microphone gain controller, **Q1020** (**M62364FP**). The AF signal then passes through compandor **Q1022** (**LA8630M**). When not using the compandor, the CPU bypasses the compandor circuit and feeds the signal to the pre-emphasis circuit. **Q1078** (**CD4066BPWR**) becomes “OFF” when an optional signaling unit is attached, and the AF signal from **Q1022** (**LA8630M**) is redirected via the signaling unit. If a signaling unit is not installed, **Q1078** (**CD4066BPWR**) becomes “ON,” the signal bypasses **Q1078** (**CD4066BPWR**), and it instead is applied to the pre-emphasis amplifier **Q1031** (**AK2345**). The signal passes through the limiter and splatter filter of **Q1031** (**AK2345**), and is adjusted for proper deviation at **Q1020** (**M62364FP**). The low frequency signal components (CTCSS, DCS, etc.) are then amplified by **Q1075** (**LM2902PWR**) and used for direct modulation of the reference oscillator, TCXO **X1003**.

The high frequency signal components are amplified by **Q1075** (**LM2902PWR**), and their level is set by **Q1020** (**M62364FP**) to establish proper balance of the level between high- and low-frequency components. After that, the signals modulate the transmit carrier via modulator **D1030** (**1SV286**) of the VCO.

### 3-2. Drive and Final Amplifier Stages

The modulated signal from VCO **Q1051** (**2SC4227**) is buffered by **Q1040** (**2SC5005**) and amplified by **Q1032** (**2SC5005**). Then the signal is buffered by **Q1027** (**2SC3356**) for delivery to the final amplifier driver **Q1024** (**2SK3475**). The low-level transmit signal is then applied to **Q1019** (**2SK3476**) for final amplification up to 5 watts output power. The transmit signal then passes through the antenna switch **D1012** (**HVU131**) and is low-pass filtered to suppress harmonic spurious radiation before delivery to the antenna.

### 3-3. Automatic Transmit Power Control

The current detector **Q1072** (**NJM12902V**) detects the current drawn by **Q1019** (**2SK3476**) and **Q1024** (**2SK3475**), and converts the current difference to a voltage difference. The output from the current detector **Q1072** (**NJM12902V**) is compared with the reference voltage and amplified by the power control amplifier **Q1072** (**NJM12902V**). The output from **Q1072** (**NJM12902V**) controls the gate bias of the final amplifier **Q1019** (**2SK3476**) and the driver **Q1024** (**2SK3475**). The reference voltage switches among four values of TX Power (“High,” “Low3,” “Low2,” and “Low1”), as controlled by **Q1020** (**M62364FP**).

### 3-4. PLL Frequency Synthesizer

The frequency synthesizer consists of PLL IC **Q1068** (**SA7025DK**), the VCO, TCXO (**X1003**), and buffer amplifier. The output frequency from the TCXO is 16.8 MHz, and the tolerance is  $\pm 2.5$  ppm (in the temperature range  $-30$  °C to  $+60$  °C).

#### 3-4-1. VCO (Voltage-Controlled Oscillator)

While the radio is receiving, the RX oscillator **Q1046** (**2SK508**) in the VCO generates a programmed frequency between 184.85 and 224.85 MHz as the 1st local signal. While the radio is transmitting, the TX



oscillator **Q1051 (2SC4227)** in the VCO generates a frequency between 134 and 174 MHz (the actual transmitting frequency). The output from the oscillator is amplified by buffer amplifier **Q1040 (2SC5005)** and becomes the output of the VCO. The output from VCO is divided: one part is amplified by **Q1049 (2SC5005)** and fed back to the PLL IC at pin 5. The other is amplified by **Q1032 (2SC5005)** and, in case of the reception, it is fed via **D1023 (DAN222)** to the mixer as the 1st local signal. On transmit, it is fed via **D1023 (DAN222)** to buffer amplifier **Q1027 (2SC3356)**, and passed through the final amplifier driver **Q1024 (2SK2375)** to the final amplifier **Q1019 (2SK2376)**.

### 3-4-2. VCV (Varactor Control Voltage) Control

The tuning voltage (VCV) of the VCO establishes the lock range of the VCO by controlling the anode of a varactor diode using a negative voltage and the control voltage from PLL IC **Q1068 (SA7025DK)**. The negative voltage is fed to the varactor diode after conversion to a negative value at **Q1030 (NJM2130F)**, using the output voltage of the D/A converter, **Q1020 (M62364FP)**.

### 3-4-3. PLL

The PLL IC **Q1068 (SA7025DK)** consists of a reference divider, main divider, phase detector, charge pumps and a fractional accumulator. The reference frequency from TCXO is applied to pin 8 of the PLL

IC **Q1068 (SA7025DK)** and is divided by the reference divider. This IC is a decimal point dividing PLL IC, and the dividing ratio becomes 1/8 of the usual PLL frequency step. Therefore, the output of reference divider is 8 times the frequency of the channel step. For example, when the channel steps are set to 5 kHz, the output of reference divider becomes 40 kHz. The feedback signal from the VCO applied to 5 pin of the PLL IC **Q1068 (SA7025DK)** is divided according to the dividing ratio so as to become the same frequency as that of the output of reference divider. These two signals are compared by the phase detector, and a phase difference pulse is generated. The phase difference pulse and the pulse from the fractional accumulator pass through the charge pumps and low-pass filter, producing a DC voltage (VCV) to control the VCO. The oscillation frequency of the VCO is therefore locked via the control of this DC voltage. The PLL serial data from the CPU **Q1067 (LC87F5BP6A)** is sent with three lines of data: SDO (pin 20), SCK (pin 22) and PSTB (pin 27). The lock condition of the PLL is sent from the UL (pin 17) terminal, and UL becomes "High" at the time of a proper lock condition and becomes "Low" at the time of an unlocked condition. The CPU always watches over the UL condition, and when it becomes "Low" (unlocked condition), the CPU **Q1067 (LC87F5BP6A)** prohibits transmission and reception.

# *Circuit Description*

*Note*

## Introduction

The **VX-820** series is carefully aligned at the factory for the specified performance across the frequency range specified for each version. Realignment should therefore not be necessary except in the event of a component failure, or altering version type. All component replacement and service should be performed only by an authorized *Vertex Standard* representative, or the warranty policy may be void.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently are placed, 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 *Vertex Standard* 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 *Vertex Standard* 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, *Vertex Standard* reserves 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 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)
- In-line Wattmeter with 5 % accuracy at 200 MHz
- 50 Ohm RF Dummy Load with power rating 10 W at 200 MHz
- 16 Ohm AF Dummy Load (**Attention** : Audio output is BTL output)
- Regulated DC Power Supply (standard 7.5 V DC, 3 A)
- Frequency Counter with 0.2 ppm accuracy at 200 MHz
- Audio Generator
- AC Voltmeter
- DC Voltmeter
- VHF Sampling Coupler
- IBM PC / compatible Computer with Microsoft® Windows® 95 or later operating system
- Vertex Standard CE59 (version 2.06 or later) Alignment program and CT-109 PC Programming Cable or FIF-10A\* USB Interface/CT-108 PC Programming Cable

※: When using the FIF-10A USB Interface, requires the Windows® 2000 or Windows® XP

# Alignment

## Alignment Preparation & Precautions

A 50-Ohm RF Dummy Load and in-line 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, in 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 68 and 86 °F (20 ~ 30 °C). When the transceiver is brought into the shop from hot or cold air, it should be allowed time to come to room temperature before alignment.

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

**Note:** Signal levels in dB referred to in the alignment procedure are based on 0 dBm EMF = 1 mV.

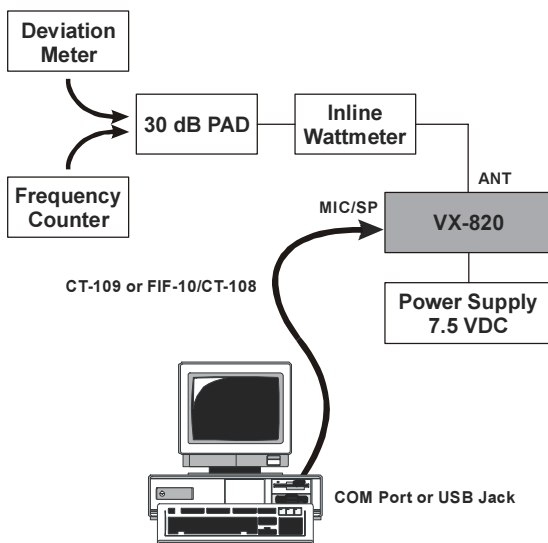
Setup the test equipment as shown for transceiver alignment, apply 7.5 V DC power to the transceiver. Refer to the drawings above for Alignment Points.

The transceiver must be programmed for use in the intended system before alignment is attempted. The RF parameters are loaded from the file during the alignment process.

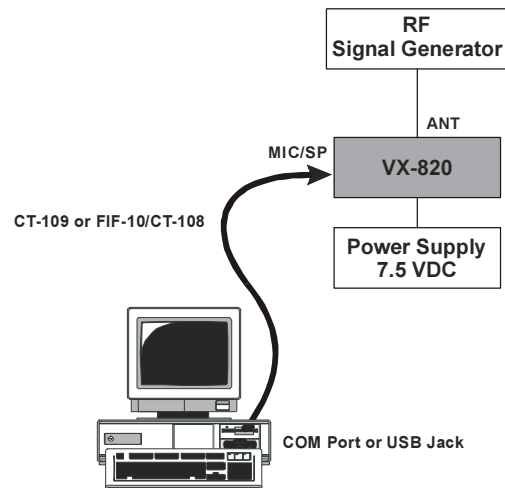
In order to facilitate alignment over the complete switching range of the equipment it is recommended that the channel data in the transceiver is preset as the chart below.

CHANNEL	FREQUENCY
BAND-LOW	134.000 MHz
BAND-MID	154.000 MHz
BAND-HIGH	174.000 MHz

The alignment mode is accessed by "Alignment mode" command from the computer, and the alignment tool operates it automatically. During the alignment mode, normal operation is suspended. Use the alignment tool program running on PC.



**TRANSMITTER SECTION ALINGMENT SETUP**



**RECEIVER SECTION ALINGMENT SETUP**

## The Alignment Tool Outline

### Installation the tool

- ❑ Install the CE59 (version 2.06 or later) to your PC.
- ❑ The re-alignment for **VX-820** series uses the "Alignment" menu of CE59.

### Action of the switches

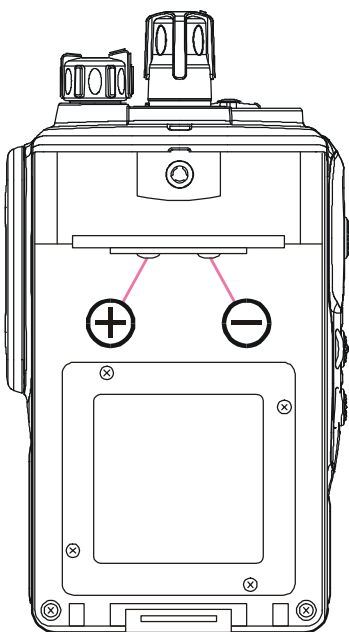
When the transceiver is in the "Alignment mode," the actions of the PTT switch and keys are ignored. All of the commands are remotely controlled by the PC.

### Basic sequence

The data displayed in screen of this tool is temporary data, and you must take care to ensure the preservation of the command sequence which is specified below.

1. Enter the "Alignment mode"
2. Upload data from radio
3. Edit/set alignment data
4. Download data to radio

When you finish one alignment parameter, the tool will ask you "Save the Aligned Data?" If you select "Yes," the temporary data will updated. If you select "No," the tool will not update the temporary data and the setting will return to its original value.



**BATTERY TERMINAL POLARITY**

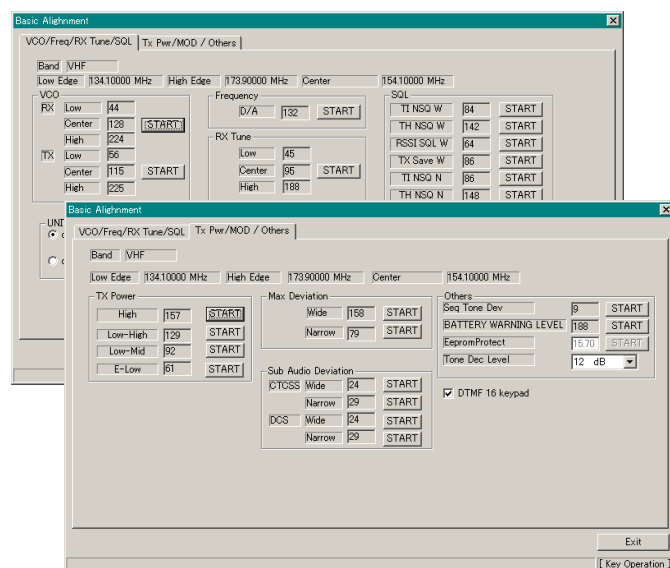
## Basic Alignment Mode

The Basic Alignment mode allows you to align the entire radio. The value of each parameter can be changed to the desired position by use of the "←" / "→" and up/down arrow keys, along with direct number input and dragging of the PC mouse.

To enter the Basic Alignment Mode, select "Basic Alignment" in the main "Radio" menu. It will start to "Upload" the written personalized data from the radio. Pressing the "OK" button will then start the Basic Alignment Mode.

**Note:** when all items are to be aligned, it is strongly recommended to align them according to following sequence. Detailed information for each step may be found in the "Help" file within CE59 (Clone Editor).

1. RX VCO Tune Voltage (RX VCO)
2. TX VCO Tune Voltage (TX VCO)
3. PLL Reference Frequency (Frequency)
4. RX Sensitivity (RX Tune)
5. Squelch (SQL)
6. TX Power
7. Maximum Deviation <Wide>
8. Maximum Deviation <Narrow>
9. Sub Audio Deviation <CTCSS>
10. Sub Audio Deviation <DCS>



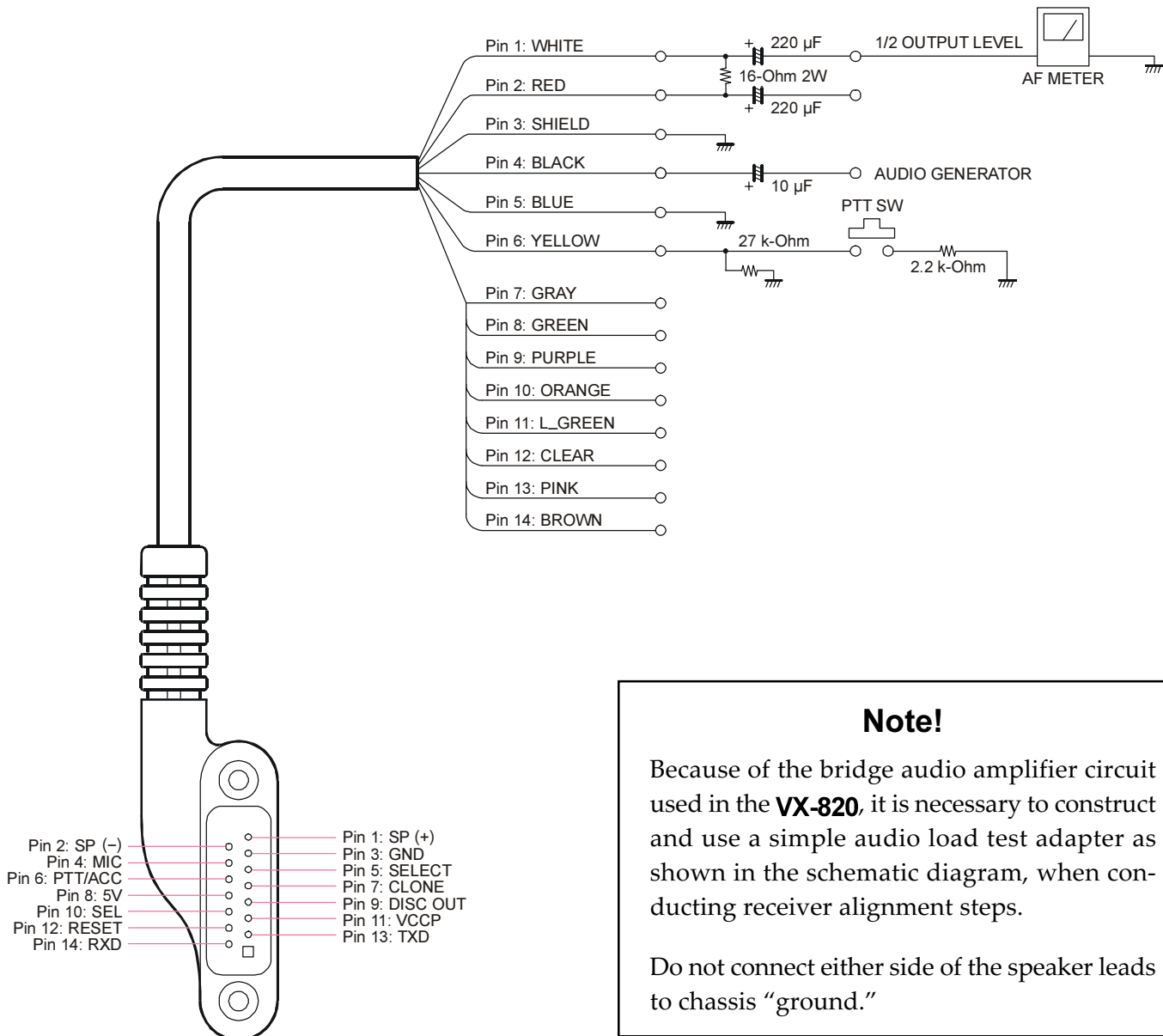
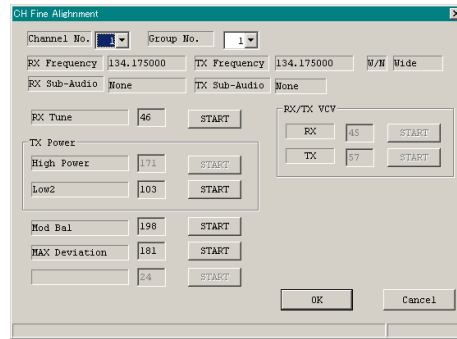
# Alignment

## CH (CHANNEL-BY-CHANNEL) Fine Alignment Mode

The CH Fine Alignment Mode allows you to align the radio separately for every operating channel. The value of each parameter can be changed to the desired position using the “←” / “→” and up/down arrow keys, direct number input, and by dragging the PC mouse.

To enter the CH Fine Alignment Mode, select “CH Fine Alignment” in the main “Radio” menu. It will start to “Upload” the written personalized data from the radio. Pressing the “OK” button will then start the CH Fine Alignment Mode.

*Note:* Detailed information for each step may be found in the “Help” file within CE59 (Clone Editor).



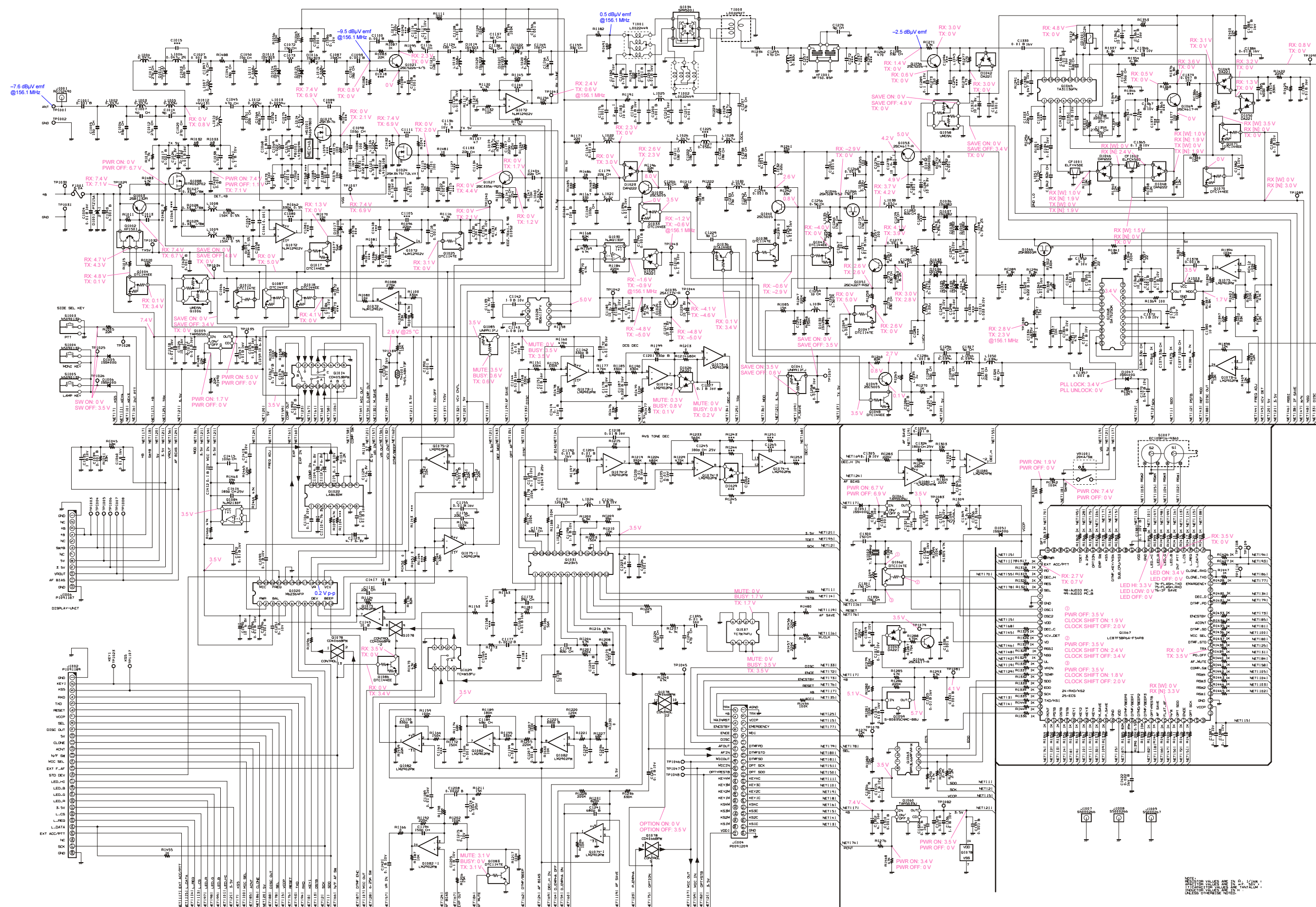
### Note!

Because of the bridge audio amplifier circuit used in the **VX-820**, it is necessary to construct and use a simple audio load test adapter as shown in the schematic diagram, when conducting receiver alignment steps.

Do not connect either side of the speaker leads to chassis “ground.”

## AF TEST ADAPTER SCHEMATIC

# Main Unit Circuit Diagram

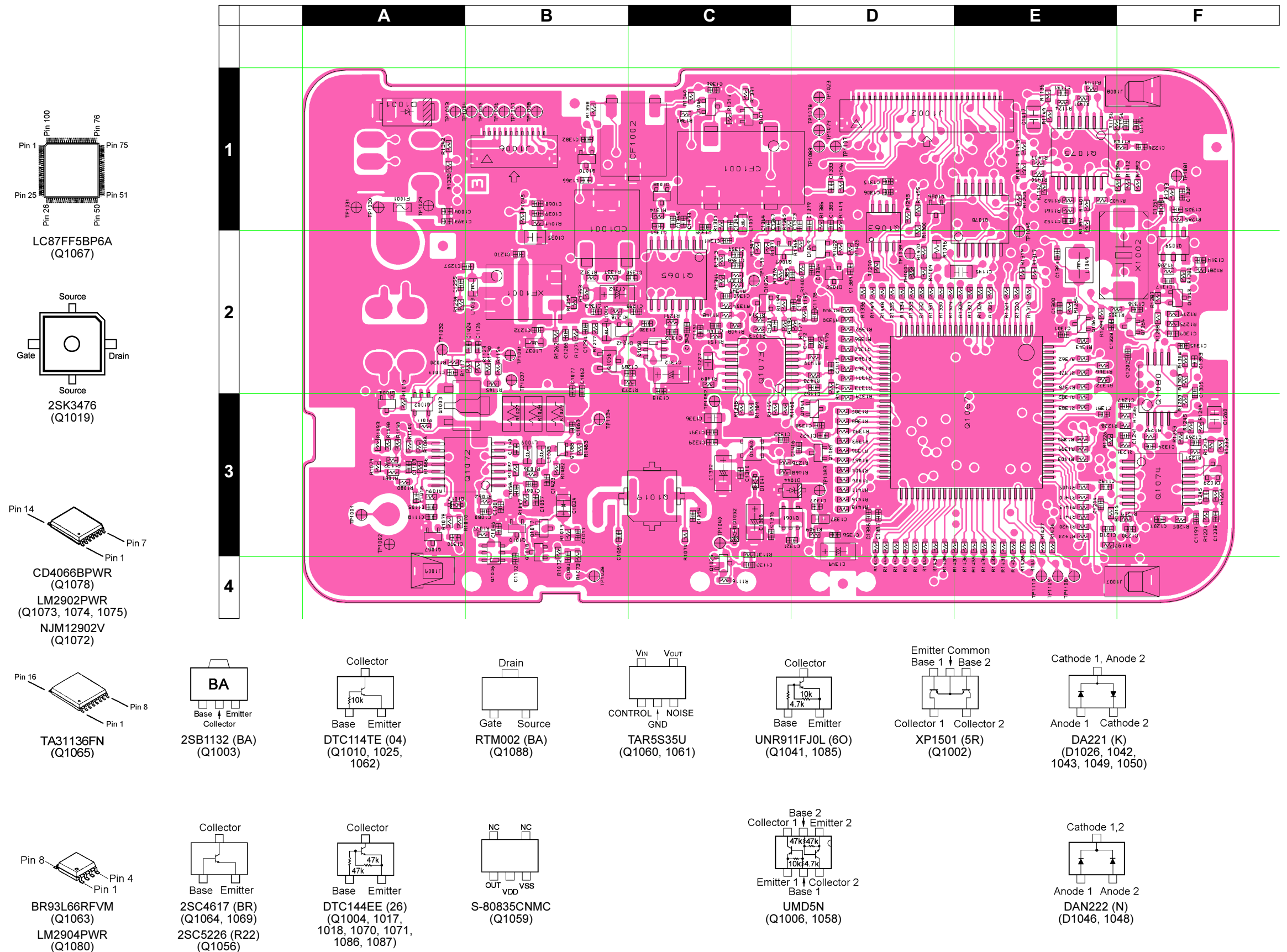






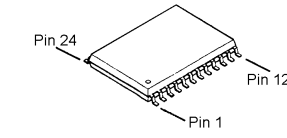
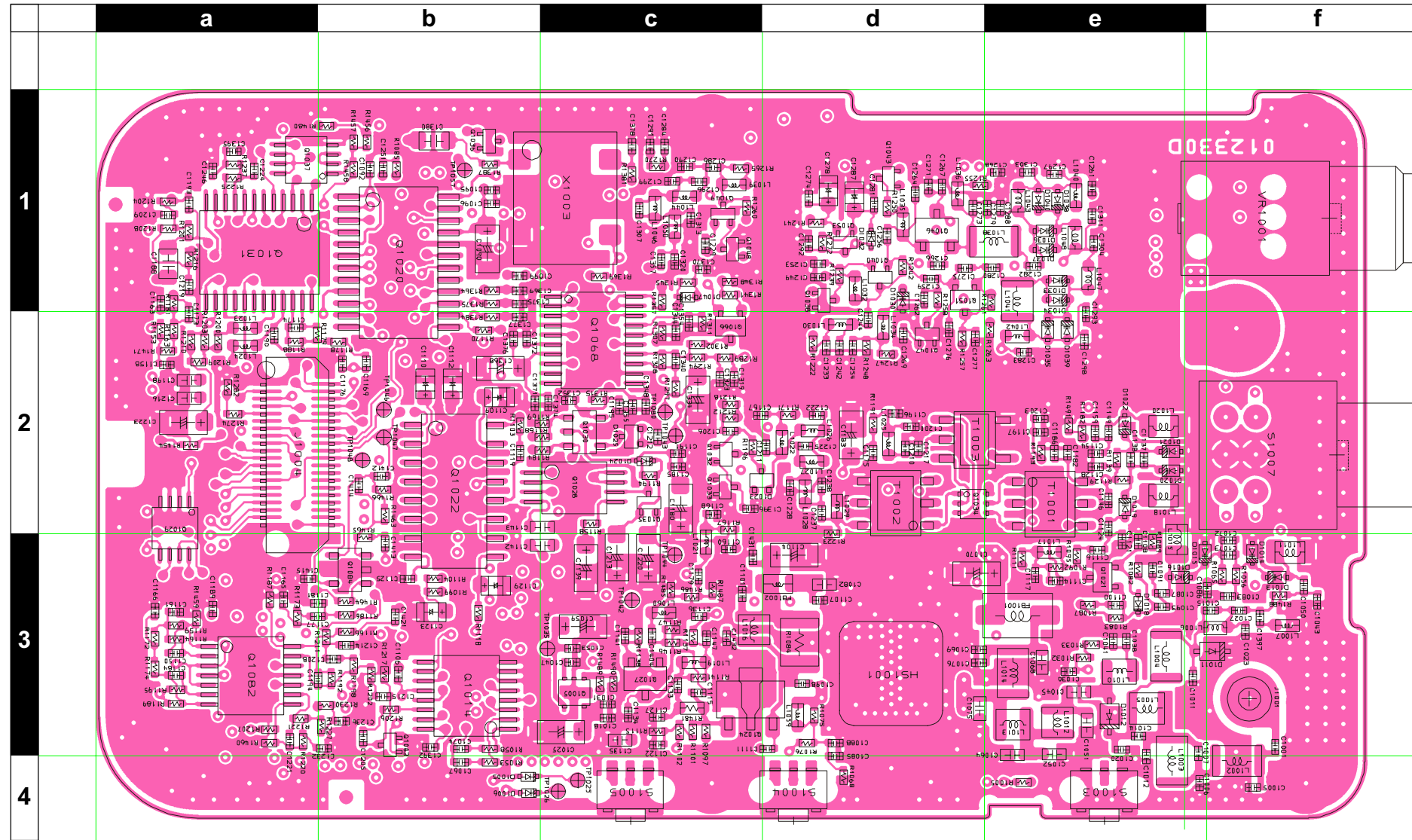
# Main Unit

## Parts Layout (Side A)

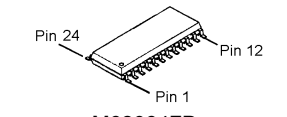


# Main Unit

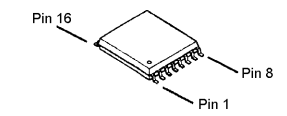
## Parts Layout (Side B)



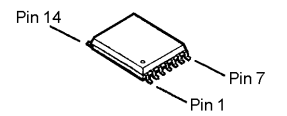
**AK2345 (Q1031)**



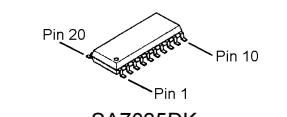
**M62364FP (Q1020)**



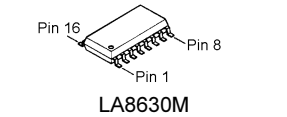
**CD4053BPWR (Q1014)**



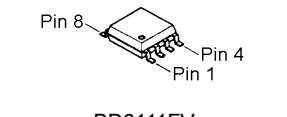
**LM2902PWR (Q1082)**



**SA7025DK (Q1068)**



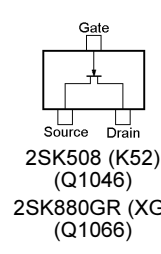
**LA8630M (Q1022)**



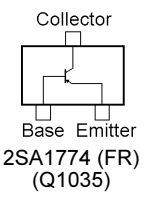
**BD6111FV (Q1028)**

**TC4W53FU (Q1029)**

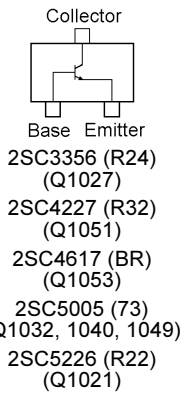
**TC7W74FU (Q1037)**



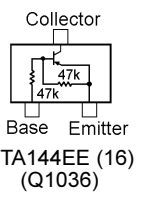
**2SK508 (K52) (Q1046)**  
**2SK880GR (XG) (Q1066)**



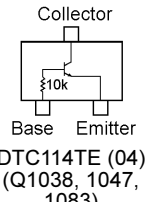
**2SA1774 (FR) (Q1035)**



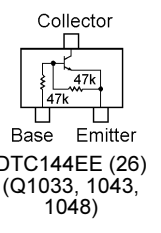
**2SC3356 (R24) (Q1027)**  
**2SC4227 (R32) (Q1051)**  
**2SC4617 (BR) (Q1053)**  
**2SC5005 (73) (Q1032, 1040, 1049)**  
**2SC5226 (R22) (Q1021)**



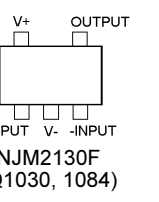
**DTA144EE (16) (Q1036)**



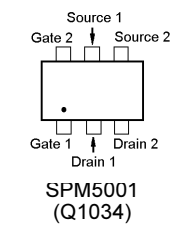
**DTC114TE (04) (Q1038, 1047, 1083)**



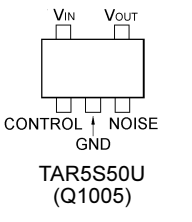
**DTC144EE (26) (Q1033, 1043, 1048)**



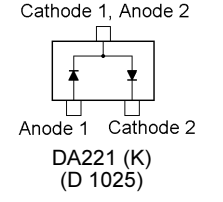
**NJM2130F (Q1030, 1084)**



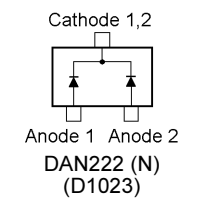
**SPM5001 (Q1034)**



**TAR5S50U (Q1005)**



**DA221 (K) (D1025)**



**DAN222 (N) (D1023)**

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
PCB with Components						CS1839001				
Printed Circuit Board						AC058N000	FR0123300	1-		
C 1001	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	f3
C 1004	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	A1
C 1005	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	f4
C 1006	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	e4
C 1007	CHIP CAP.	4pF	50V	CH	GRM1552C1H4R0CZ01D	K22178206		1-	B	e3
C 1011	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	e3
C 1012	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	e3
C 1014	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	e3
C 1017	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	B3
C 1018	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1020	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	e3
C 1023	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	f3
C 1024	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	A	B3
C 1025	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	B	c3
C 1027	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	f3
C 1030	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e3
C 1031	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1035	CHIP CAP.	1uF	10V	B	GRM40B105K10PT	K22100802		1-	A	B2
C 1038	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e3
C 1039	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	B1
C 1041	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e3
C 1043	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JA01D	K22178218		1-	B	f3
C 1045	CHIP CAP.	47pF	50V	CH	GRM1882C1H470JA01D	K22174227		1-	B	e3
C 1047	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1050	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	f3
C 1051	CHIP CAP.	10pF	50V	CH	GRM1882C1H100JA01D	K22174211		1-	B	e3
C 1052	CHIP CAP.	39pF	50V	CH	GRM1882C1H390JA01D	K22174225		1-	B	e3
C 1053	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c3
C 1059	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c3
C 1060	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B1
C 1061	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	B3
C 1064	CHIP CAP.	39pF	50V	CH	GRM1882C1H390JA01D	K22174225		1-	B	e3
C 1067	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b4
C 1068	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	e3
C 1069	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	d3
C 1070	CHIP TA.CAP.	10uF	16V		TEESVA1C106M8R	K78120077		1-	B	d3
C 1072	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	f3
C 1074	CHIP CAP.	0.0018uF	50V	B	GRM36B182K50PT	K22178812		1-	B	b3
C 1075	CHIP CAP.	22pF	50V	CH	GRM1882C1H220JA01D	K22174219		1-	B	d3
C 1076	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d3
C 1077	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	B2
C 1080	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	A	B3
C 1082	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	B	d3
C 1083	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	f3
C 1084	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	B3
C 1085	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	d3
C 1086	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e3
C 1087	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	e3
C 1088	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d3
C 1090	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	b1
C 1091	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JZ01D	K22178218		1-	B	e3
C 1092	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1093	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e3
C 1095	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b1
C 1096	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b1
C 1098	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	d3
C 1099	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b1
C 1100	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e3

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
C 1101	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	B	c3
C 1102	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B3
C 1103	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	A3
C 1106	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b3
C 1107	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d3
C 1108	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e3
C 1109	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	b2
C 1110	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	b2
C 1112	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	b2
C 1114	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e3
C 1116	CHIP CAP.	9pF	50V	CH	GRM1552C1H9R0DZ01D	K22178211		1-	B	e3
C 1117	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e3
C 1118	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	A3
C 1119	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1121	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	e3
C 1122	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c3
C 1123	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	b3
C 1124	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	e2
C 1125	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	b3
C 1126	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 1127	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	c3
C 1128	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1129	CHIP TA.CAP.	4.7uF	6.3V		TESVSP0J475M-8R	K78080053		1-	B	b3
C 1130	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C4
C 1131	CHIP CAP.	2pF	50V	CK	GRM1554C1H2R0CZ01D	K22178204		1-	A	E1
C 1133	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	c3
C 1135	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	B	c3
C 1136	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c3
C 1137	CHIP CAP.	6pF	50V	CH	GRM1552C1H6R0DZ01D	K22178208		1-	B	e2
C 1138	CHIP CAP.	4pF	50V	CH	GRM1552C1H4R0CZ01D	K22178206		1-	B	e2
C 1139	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c3
C 1141	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	B	c3
C 1142	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	B	b3
C 1143	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	B	b2
C 1144	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1145	CHIP CAP.	10uF	6.3V	B	JMK212BJ106KG-T	K22080802		1-	A	D2
C 1146	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1147	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	B	c3
C 1149	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	e2
C 1151	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1152	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	E1
C 1154	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JZ01D	K22178218		1-	B	e2
C 1155	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	F1
C 1156	CHIP CAP.	2pF	50V	CK	GRM1554C1H2R0CZ01D	K22178204		1-	A	F1
C 1159	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	e2
C 1160	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c3
C 1162	CHIP CAP.	330pF	50V	B	GRM155B11H331KA01D	K22178803		1-	A	D2
C 1163	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	a1
C 1167	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c2
C 1168	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	c2
C 1169	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1172	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1173	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JZ01D	K22178218		1-	B	a1
C 1174	CHIP CAP.	68pF	50V	CH	GRM1552C1H680JZ01D	K22178232		1-	B	a2
C 1175	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1176	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	b2
C 1177	CHIP CAP.	0.0012uF	50V	B	GRM36B122K50PT	K22178810		1-	B	a3
C 1178	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1179	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	c3
C 1180	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c2

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
C 1182	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1183	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	d2
C 1185	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1186	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1187	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A	C2
C 1189	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a3
C 1190	CHIP CAP.	120pF	50V	CH	GRM1552C1H121JA01D	K22178238		1-	B	a2
C 1191	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1192	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E3
C 1193	CHIP CAP.	82pF	50V	CH	GRM1552C1H820JD01D	K22178234		1-	B	a1
C 1194	CHIP CAP.	150pF	50V	CH	GRM1552C1H151JA01D	K22178240		1-	B	a3
C 1195	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c2
C 1196	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 1197	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 1198	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	B	a2
C 1200	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1201	CHIP CAP.	330pF	50V	B	GRM155B11H331KA01D	K22178803		1-	A	C2
C 1202	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	F2
C 1203	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1204	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E3
C 1205	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b3
C 1206	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	c2
C 1208	CHIP CAP.	0.0022uF	50V	B	GRM155B11H222KA01D	K22178813		1-	B	b3
C 1209	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	a1
C 1210	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d2
C 1211	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	d2
C 1212	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1213	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c3
C 1214	CHIP CAP.	0.0047uF	25V	B	GRM36B472K25PT	K22148830		1-	B	b3
C 1215	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b3
C 1216	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	B	a2
C 1217	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1218	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E3
C 1219	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	a1
C 1220	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	c3
C 1222	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JZ01D	K22178218		1-	B	d2
C 1223	CHIP TA.CAP.	4.7uF	6.3V		TEMSVA20J475M-8R	K78080031		1-	B	a2
C 1224	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	a1
C 1226	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	F1
C 1227	CHIP CAP.	0.1uF	16V	B	GRM188B11C104KA01D	K22124805		1-	A	C2
C 1228	CHIP CAP.	18pF	50V	CH	GRM1552C1H180JZ01D	K22178218		1-	B	d2
C 1229	CHIP CAP.	3pF	50V	CJ	GRP1553C1H3R0CZ01E	K22178205		1-	B	c1
C 1230	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	F3
C 1233	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	d2
C 1235	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	F3
C 1237	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B	d2
C 1238	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	d2
C 1241	CHIP CAP.	680pF	50V	B	GRM155B11H681KA01D	K22178807		1-	A	F3
C 1242	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	d2
C 1244	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1245	CHIP CAP.	180pF	25V	CH	GRM36CH181J25PT	K22148201		1-	A	F3
C 1246	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B	a1
C 1247	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	F3
C 1249	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1251	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b1
C 1253	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1255	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	A	A2
C 1256	CHIP CAP.	0.5pF	50V	CK	GRM1554C1HR50BZ01D	K22178285		1-	B	d1
C 1258	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D3
C 1259	CHIP CAP.	1pF	50V	CK	GRM1554C1H1R0BZ01D	K22178287		1-	B	d1

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
C 1261	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e1
C 1262	CHIP CAP.	1.5pF	50V	CK	GRM1554C1H1R5BZ01D	K22178288		1-	B	d1
C 1264	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	d1
C 1266	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	d1
C 1267	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1268	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e1
C 1269	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1270	CHIP CAP.	9pF	50V	CH	GRM1552C1H9R0DZ01D	K22178211		1-	A	B2
C 1271	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	d1
C 1273	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	B	d1
C 1274	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1275	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	d1
C 1276	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	d2
C 1277	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 1278	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	B	d1
C 1279	CHIP CAP.	6pF	50V	CH	GRM1552C1H6R0DZ01D	K22178208		1-	B	d1
C 1280	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	e1
C 1281	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1282	CHIP CAP.	82pF	50V	CH	GRM1552C1H820JD01D	K22178234		1-	B	e1
C 1284	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1285	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	A	B2
C 1286	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1287	CHIP TA.CAP.	10uF	6.3V		TESVSP0J106M-8R	K78080055		1-	B	d1
C 1289	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	B2
C 1290	CHIP CAP.	12pF	50V	CH	GRM1552C1H120JZ01D	K22178214		1-	B	c1
C 1291	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1292	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d1
C 1293	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e1
C 1296	CHIP CAP.	4pF	50V	CH	GRM1552C1H4R0CZ01D	K22178206		1-	B	c1
C 1297	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e1
C 1298	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 1299	CHIP CAP.	27pF	50V	CH	GRM1552C1H270JZ01D	K22178222		1-	B	c1
C 1300	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	A	E2
C 1301	CHIP CAP.	15pF	50V	CH	GRM1552C1H150JZ01D	K22178216		1-	A	E2
C 1302	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	A	C3
C 1303	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e1
C 1305	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	F2
C 1306	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D1
C 1307	CHIP CAP.	5pF	50V	CH	GRM1552C1H5R0CZ01D	K22178207		1-	B	c1
C 1308	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	A	C3
C 1309	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	F2
C 1310	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C3
C 1311	CHIP CAP.	0.033uF	10V	B	GRM36B333K10PT	K22108803		1-	B	e1
C 1312	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	A	C2
C 1313	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	c1
C 1314	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	F2
C 1315	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D1
C 1316	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C3
C 1317	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	F2
C 1318	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C2
C 1320	CHIP CAP.	8pF	50V	CH	GRM1552C1H8R0DZ01D	K22178210		1-	B	c1
C 1321	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C3
C 1322	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C3
C 1323	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	c2
C 1324	CHIP CAP.	180pF	25V	CH	GRM36CH181J25PT	K22148201		1-	A	F3
C 1325	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	F1
C 1327	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	D3
C 1328	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	E2
C 1329	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C3
C 1330	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
C 1331	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	F1
C 1332	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A	C2
C 1333	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	A	D1
C 1334	CHIP TA.CAP.	0.68uF	35V		TEMSVA1V684M-8R	K78160030		1-	B	c2
C 1336	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	A	C3
C 1337	CHIP CAP.	1uF	10V	B	ECJ1VB1A105K	K22104806		1-	A	D3
C 1338	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	F2
C 1340	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 1341	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1342	CHIP CAP.	82pF	50V	CH	GRM1552C1H820JD01D	K22178234		1-	A	C1
C 1343	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1344	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1345	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	F2
C 1348	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c2
C 1349	CHIP TA.CAP.	4.7uF	6.3V		TMCMA0J475MTR	K78080026		1-	A	D3
C 1350	CHIP CAP.	82pF	50V	CH	GRM1552C1H820JD01D	K22178234		1-	A	B2
C 1351	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C1
C 1352	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1354	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1355	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1356	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D3
C 1357	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1358	CHIP CAP.	220pF	25V	CH	GRM36CH221J25PT	K22148203		1-	A	C2
C 1359	CHIP CAP.	270pF	25V	CH	GRM36CH271J25PT	K22148248		1-	A	C2
C 1360	CHIP CAP.	150pF	50V	CH	GRM1552C1H151JA01D	K22178240		1-	A	C2
C 1362	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	A	B2
C 1363	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	B2
C 1365	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C1
C 1366	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	B1
C 1367	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C1
C 1368	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	b2
C 1369	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b1
C 1370	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	B	c1
C 1371	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 1372	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1374	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	c2
C 1375	CHIP CAP.	33pF	50V	CH	GRM1552C1H330JZ01D	K22178224		1-	B	b1
C 1376	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1377	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	B	b2
C 1378	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	c1
C 1379	CHIP CAP.	0.047uF	10V	B	GRM36B473K10PT	K22108801		1-	A	D1
C 1380	CHIP CAP.	10uF	6.3V	B	JMK212BJ106KG-T	K22080802		1-	B	b1
C 1381	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	E3
C 1382	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	B1
C 1383	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	C2
C 1384	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1385	CHIP CAP.	560pF	50V	B	GRM36B561K50PT	K22178806		1-	A	D1
C 1386	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	C1
C 1387	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D3
C 1388	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D3
C 1389	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D2
C 1390	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	A3
C 1391	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	C3
C 1392	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b3
C 1393	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	A1
C 1394	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	A	E2
C 1395	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a1
C 1396	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	c2
C 1397	CHIP CAP.	47pF	50V	CH	GRM1552C1H470JZ01D	K22178228		1-	B	f3
C 1404	CHIP CAP.	22pF	50V	CH	GRM1552C1H220JZ01D	K22178220		1-	B	c3

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
C 1412	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 1413	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b3
C 1415	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	a3
C 1416	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	D3
C 1417	CHIP CAP.	10uF	6.3V	B	JMK212BJ106KG-T	K22080802		1-	A	E1
C 1419	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	A	D2
C 1421	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b3
C 1422	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	A	D3
C 1423	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	B3
C 1424	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	A	A2
CD1001	CERAMIC DISC				ECDA450C24	H7901460		1-	A	B1
CF1001	CERAMIC FILTER				ELFY450E	H3900549		1-	A	C1
CF1002	CERAMIC FILTER				ELFC450G	H3900538		1-	A	B1
D 1001	DIODE				PTZ TE25 15A	G2070692		1-	A	A1
D 1005	DIODE				1SS400G T2R	G2070934		1-	B	b4
D 1006	DIODE				1SS400G T2R	G2070934		1-	B	b4
D 1011	DIODE				HVU131TRF	G2070462		1-	B	f3
D 1012	DIODE				HVU131TRF	G2070462		1-	B	e3
D 1013	DIODE				1SV323(TPH3)	G2071006		1-	B	f3
D 1014	DIODE				1SV323(TPH3)	G2071006		1-	B	f3
D 1015	DIODE				1SV323(TPH3)	G2071006		1-	B	e3
D 1016	DIODE				1SV323(TPH3)	G2071006		1-	B	e3
D 1017	DIODE				1SS400G T2R	G2070934		1-	A	A3
D 1019	DIODE				1SV323(TPH3)	G2071006		1-	B	e2
D 1020	DIODE				1SV323(TPH3)	G2071006		1-	B	e2
D 1021	DIODE				1SV323(TPH3)	G2071006		1-	B	e2
D 1022	DIODE				1SV323(TPH3)	G2071006		1-	B	e2
D 1023	DIODE				DAN222 TL	G2070174		1-	B	c2
D 1024	DIODE				1SS400G T2R	G2070934		1-	B	c2
D 1025	DIODE				DA221 TL	G2070178		1-	B	c2
D 1026	DIODE				DA221 TL	G2070178		1-	A	C2
D 1030	DIODE				1SV286(TPL3)	G2070610		1-	B	d1
D 1032	DIODE				1SS400G T2R	G2070934		1-	B	d1
D 1033	DIODE				1SV286(TPL3)	G2070610		1-	B	e1
D 1034	DIODE				1SV286(TPL3)	G2070610		1-	B	e1
D 1035	DIODE				1SV286(TPL3)	G2070610		1-	B	e2
D 1036	DIODE				1SV282(TPH3)	G2070778		1-	B	e1
D 1037	DIODE				1SV282(TPH3)	G2070778		1-	B	e1
D 1038	DIODE				1SV282(TPH3)	G2070778		1-	B	e1
D 1039	DIODE				1SV286(TPL3)	G2070610		1-	B	e2
D 1040	DIODE				1SV282(TPH3)	G2070778		1-	B	e1
D 1041	DIODE				1SS400G T2R	G2070934		1-	A	C3
D 1042	DIODE				DA221 TL	G2070178		1-	A	B2
D 1043	DIODE				DA221 TL	G2070178		1-	A	F2
D 1044	DIODE				HZU5ALL-TR	G2070754		1-	A	C3
D 1046	DIODE				DAN222 TL	G2070174		1-	A	C1
D 1047	DIODE				1SS400G T2R	G2070934		1-	B	c1
D 1048	DIODE				DAN222 TL	G2070174		1-	A	C1
D 1049	DIODE				DA221 TL	G2070178		1-	A	D2
D 1050	DIODE				DA221 TL	G2070178		1-	A	D2
D 1051	DIODE				1SS400G T2R	G2070934		1-	A	F1
F 1001	CHIP FUSE	3A			0434 003. 3.0A	Q0000107		1-	A	A1
FB1001	FERRITE BEADS				SMB304729	L9190094		1-	B	e3
FB1002	FERRITE BEADS				BLM21A121SPT	L9190108		1-	B	d3
HS1001	HEATSINK PLATE					RA0697800		1-	B	d3
J 1001	SPRING CONNECTOR					R0152490		1-	B	f3
J 1002	CONNECTOR				9636S-28A-TC	P1091189		1-	A	D1
J 1004	CONNECTOR				AXK6S40535P	P0091209		1-	B	a2
J 1006	CONNECTOR				9636S-12Y900	P1091187		1-	A	B1
J 1007	SHIELD FINGER				E01J3028Y	S5000266		1-	A	F4



# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
J 1008	SHIELD FINGER				E01J3028Y	S5000266		1-	A	F1
J 1009	SHIELD FINGER				E01J4032Y	S5000267		1-	A	A4
L 1002	COIL	0.047uH			AS030821-47NJ	L0022824		1-	B	f4
L 1003	COIL	0.047uH			AS030821-47NJ	L0022824		1-	B	e4
L 1004	COIL	0.047uH			AS030821-47NK	L0022588		1-	B	e3
L 1005	COIL	0.033uH			AS030621-33NJ	L0022822		1-	B	e3
L 1006	M.RFC	0.047uH		2%	C1608CB-47NG	L1691040		1-	B	f3
L 1007	M.RFC	0.22uH			LK1608 R22K-T	L1690410		1-	B	f3
L 1008	M.RFC	2.7uH			LK1608 2R7K-T	L1690848		1-	A	B3
L 1009	M.RFC	2.7uH			LK1608 2R7K-T	L1690848		1-	A	B3
L 1010	M.RFC	1uH		5%	C2012C-1R0J	L1691160		1-	B	e3
L 1011	CHIP COIL	0.068uH			LQW2BHN68NJ03L	L1690605		1-	B	f3
L 1012	COIL	0.025uH			AS030521-25NJ	L0022821		1-	B	e3
L 1013	COIL	0.009uH			AS050325-9R0NK	L0022612		1-	B	e3
L 1014	COIL	0.047uH			AS030821-47NJ	L0022824		1-	B	e3
L 1015	CHIP COIL	0.068uH			LQW2BHN68NJ03L	L1690605		1-	B	e3
L 1016	COIL	0.025uH			AS030521-25NJ	L0022821		1-	B	c3
L 1017	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	e3
L 1018	CHIP COIL	0.068uH			LQW2BHN68NJ03L	L1690605		1-	B	e2
L 1019	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	B	c3
L 1020	CHIP COIL	0.068uH			LQW2BHN68NJ03L	L1690605		1-	B	e2
L 1021	M.RFC	0.1uH			HK1608 R10J-T	L1690528		1-	B	c3
L 1022	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	d2
L 1023	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	a2
L 1024	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	a2
L 1025	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	d2
L 1026	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	B	d2
L 1027	M.RFC	0.056uH			HK1608 56NJ-T	L1690525		1-	B	d2
L 1028	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	B	d2
L 1029	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	B	d2
L 1030	M.RFC	0.047uH			HK1608 47NJ-T	L1690524		1-	B	d2
L 1032	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	d1
L 1033	M.RFC	0.82uH			LK1608 R82K-T	L1690417		1-	A	B2
L 1034	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	d2
L 1035	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	d1
L 1036	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	d1
L 1038	COIL	0.051uH			ASF030821-51R0NJ	L0022878		1-	B	e1
L 1039	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	B	c1
L 1040	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	e1
L 1041	COIL	0.0418uH			ASF030721-41R8NJ	L0022877		1-	B	e1
L 1042	M.RFC	0.22uH			HK1608 R22J-T	L1690940		1-	B	e2
L 1043	M.RFC	0.39uH		2%	C1608CB-R39G	L1691107		1-	B	e1
L 1044	M.RFC	0.039uH			HK1608 39NJ-T	L1690523		1-	B	c1
L 1045	M.RFC	1uH			LK1608 1R0K-T	L1690687		1-	A	B2
L 1046	M.RFC	0.039uH			HK1608 39NJ-T	L1690523		1-	B	c1
L 1047	M.RFC	0.39uH		2%	C1608CB-R39G	L1691107		1-	B	e1
L 1048	M.RFC	0.39uH		2%	C1608CB-R39G	L1691107		1-	B	e1
L 1049	CHIP COIL	33uH			LQH32MN330K23L	L1690093		1-	A	E2
L 1050	M.RFC	0.039uH			HK1608 39NJ-T	L1690523		1-	B	c1
L 1051	M.RFC	0.15uH			HK1608 R15J-T	L1690938		1-	A	C1
L 1056	M.RFC	0.018uH			HK1608 18NJ-T	L1690519		1-		
Q 1002	TRANSISTOR				XP1501-(TX)	G3070143		1-	A	A3
Q 1003	TRANSISTOR				2SB1132 T100 R	G3211327R		1-	A	A3
Q 1004	TRANSISTOR				DTC144EE TL	G3070075		1-	A	A3
Q 1005	IC				TAR5S50U	G1094097		1-	B	c3
Q 1006	TRANSISTOR				UMD5NTR	G3070343		1-	A	B3
Q 1010	TRANSISTOR				DTC114TE TL	G3070225		1-	A	B3
Q 1014	IC				CD4053BPWR	G1093864		1-	B	b3
Q 1017	TRANSISTOR				DTC144EE TL	G3070075		1-	A	B3
Q 1018	TRANSISTOR				DTC144EE TL	G3070075		1-	A	B3

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
Q 1019	FET				2SK3476(TE12L)	G3834768		1-	A	C3
Q 1020	IC				M62364FP 600D	G1093033		1-	B	b1
Q 1021	TRANSISTOR				2SC5226-4/5-TL	G3352268Z		1-	B	e3
Q 1022	IC				LA8630M-B-TE-R	G1093452		1-	B	b2
Q 1024	FET				2SK3475(T2LVX)	G3070318		1-	B	c3
Q 1025	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C4
Q 1027	TRANSISTOR				2SC3356-T2B R25	G3333567E		1-	B	c3
Q 1028	IC				BD6111FV-E2	G1093746		1-	B	c2
Q 1029	IC				TC4W53FU TE12L	G1091675		1-	B	a2
Q 1030	IC				NJM2130F-TE1	G1093074		1-	B	c2
Q 1031	IC				AK2345(TAPE)	G1093184		1-	B	a1
Q 1032	TRANSISTOR				2SC5005-T1	G3350058		1-	B	c2
Q 1033	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c2
Q 1034	IC				SPM5001	G1093686		1-	B	d2
Q 1035	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	c2
Q 1036	TRANSISTOR				DTA144EE TL	G3070074		1-	B	b1
Q 1037	IC				TC7W74FU TE12R	G1091788		1-	B	a1
Q 1038	TRANSISTOR				DTC114TE TL	G3070225		1-	B	d1
Q 1040	TRANSISTOR				2SC5005-T1	G3350058		1-	B	d1
Q 1041	TRANSISTOR				UNR911FJ0L	G3070349		1-	A	D3
Q 1043	TRANSISTOR				DTC144EE TL	G3070075		1-	B	d1
Q 1046	FET				2SK508-T2B K52	G3805087B		1-	B	d1
Q 1047	TRANSISTOR				DTC114TE TL	G3070225		1-	B	d2
Q 1048	TRANSISTOR				DTC144EE TL	G3070075		1-	B	c1
Q 1049	TRANSISTOR				2SC5005-T1	G3350058		1-	B	c1
Q 1051	TRANSISTOR				2SC4227-T2 R32	G3342277B		1	B	d1
Q 1051	TRANSISTOR				2SC4227-T1 R32	G3342278B		2-	B	d1
Q 1053	TRANSISTOR				2SC4617 TL R	G3346178R		1-	B	d1
Q 1056	TRANSISTOR				2SC5226-4-TL	G3352268D		1-	A	B2
Q 1058	TRANSISTOR				UMD5N TR	G3070343		1-	A	C2
Q 1059	IC				S-80835CNMC-B8U-T2	G1093606		1-	A	F2
Q 1060	IC				TAR5S35U	G1094096		1-	A	C3
Q 1061	IC				TAR5S35U	G1094096		1-	A	C3
Q 1062	TRANSISTOR				DTC114TE TL	G3070225		1-	A	E2
Q 1063	IC				BR93L66RFVM-WTR	G1093874		1-	A	D1
Q 1064	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	F2
Q 1065	IC				TA31136FN(EL)	G1091605		1-	A	C2
Q 1066	FET				2SK880GR TE85R	G3808807G		1-	B	c2
Q 1067	IC				LC87F5BP6A-F54P8-E	✖		1-	A	E3
Q 1068	IC				SA7025DK	G1093014		1-	B	c2
Q 1069	TRANSISTOR				2SC4617 TL R	G3346178R		1-	A	C2
Q 1070	TRANSISTOR				DTC144EE TL	G3070075		1-	A	B1
Q 1071	TRANSISTOR				DTC144EE TL	G3070075		1-	A	C1
Q 1072	IC				NJM12902V-TE1	G1093592		1-	A	A3
Q 1073	IC				LM2902PWR	G1094009		1-	A	C2
Q 1074	IC				LM2902PWR	G1094009		1-	A	F3
Q 1075	IC				LM2902PWR	G1094009		1-	A	E1
Q 1078	IC				CD4066BPWR	G1093865		1-	A	E1
Q 1080	IC				LM2904PWR	G1094010		1-	A	F2
Q 1082	IC				LM2902PWR	G1094009		1-	B	a3
Q 1083	TRANSISTOR				DTC114TE TL	G3070225		1-	B	b3
Q 1084	IC				NJM2130F-TE1	G1093074		1-	B	b3
Q 1085	TRANSISTOR				UNR911FJ0L	G3070349		1-	A	D3
Q 1086	TRANSISTOR				DTC144EE TL	G3070075		1-	A	D1
Q 1087	TRANSISTOR				DTC144EE TL	G3070075		1-	A	A3
Q 1088	FET				RTM002P02(TAPE)	G3070347		1-	A	B3
R 1005	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	e4
R 1011	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A3
R 1015	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A3
R 1019	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	B3

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1020	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A2
R 1027	CHIP RES.	0.33	1/8W	10%	RMC1/8 R33KTP	J24219001		1-	A	B3
R 1028	CHIP RES.	0.33	1/8W	10%	RMC1/8 R33KTP	J24219001		1-	A	B3
R 1029	CHIP RES.	0.33	1/8W	10%	RMC1/8 R33KTP	J24219001		1-	A	B3
R 1032	CHIP RES.	68	1/16W	5%	RMC1/16S 680JTH	J24189011		1-	B	e3
R 1033	CHIP RES.	68	1/16W	5%	RMC1/16S 680JTH	J24189011		1-	B	e3
R 1036	CHIP RES.	150k	1/16W	0.5%	MCR01MZPD1503	J24189328		1-	A	B3
R 1037	CHIP RES.	150k	1/16W	0.5%	MCR01MZPD1503	J24189328		1-	A	B3
R 1041	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	B1
R 1045	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	B1
R 1047	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	A	B3
R 1053	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b4
R 1056	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f3
R 1058	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	B	b3
R 1062	CHIP RES.	330k	1/16W	0.5%	MCR01MZPD3303	J24189330		1-	A	B3
R 1065	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	f3
R 1070	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A3
R 1072	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	B3
R 1075	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	d3
R 1076	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d3
R 1077	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	A	B3
R 1080	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A3
R 1081	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	A3
R 1083	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	e3
R 1084	CHIP RES.	220	1/4W	5%	RMC1/4 221JATP	J24245221		1-	B	d3
R 1085	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	b1
R 1086	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	A	A3
R 1087	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	e3
R 1088	CHIP RES.	270k	1/16W	5%	RMC1/16S 274JTH	J24189054		1-	A	A3
R 1089	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	e3
R 1093	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	A3
R 1094	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	A3
R 1095	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	e3
R 1096	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	D2
R 1098	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	A3
R 1099	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	b3
R 1100	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	A3
R 1101	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 1102	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c3
R 1103	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 1109	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	D2
R 1111	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	e3
R 1115	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	c3
R 1116	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	C4
R 1117	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	A2
R 1118	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	b3
R 1123	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	B2
R 1124	CHIP RES.	1.2M	1/16W	5%	RMC1/16S 125JTH	J24189062		1-	A	E1
R 1129	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1130	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	B2
R 1131	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	C3
R 1132	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	A3
R 1136	CHIP RES.	820k	1/16W	5%	RMC1/16S 824JTH	J24189060		1-	A	E1
R 1137	CHIP RES.	47	1/16W	5%	RMC1/16S 470JTH	J24189009		1-	B	c3
R 1138	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c3
R 1139	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	e2
R 1140	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	A	A3
R 1142	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E1
R 1145	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	B2
R 1146	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c3

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1147	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c3
R 1148	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 1149	CHIP RES.	680k	1/16W	5%	RMC1/16S 684JTH	J24189059		1-	A	E1
R 1151	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 1153	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a2
R 1154	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	B2
R 1155	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C3
R 1156	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	E1
R 1158	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	c2
R 1159	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1160	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	C3
R 1161	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	E1
R 1162	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	E1
R 1163	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a2
R 1164	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1166	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b3
R 1167	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c2
R 1168	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	B	b2
R 1169	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	b2
R 1170	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	b2
R 1171	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	d2
R 1173	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1177	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	C2
R 1178	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b2
R 1179	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a2
R 1181	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	a1
R 1182	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	e2
R 1184	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	b2
R 1185	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D2
R 1186	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	b3
R 1187	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a3
R 1188	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a2
R 1189	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1190	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	C2
R 1191	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	d2
R 1192	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	b3
R 1193	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	e2
R 1194	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c2
R 1195	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1196	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c2
R 1197	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E3
R 1198	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	b3
R 1199	CHIP RES.	2.2M	1/16W	5%	RMC1/16S 225JTH	J24189065		1-	A	C2
R 1200	CHIP RES.	3.9k	1/16W	5%	RMC1/16S 392JTH	J24189032		1-	B	a2
R 1201	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a1
R 1202	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b3
R 1203	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	a2
R 1204	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	a1
R 1206	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	b3
R 1208	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	a1
R 1209	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a2
R 1210	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	a2
R 1211	CHIP RES.	15k	1/16W	5%	RMC1/16S 153JTH	J24189039		1-	B	b3
R 1212	CHIP RES.	18	1/16W	5%	RMC1/16S 180JTH	J24189004		1-	B	c2
R 1213	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	C2
R 1214	CHIP RES.	680k	1/16W	5%	RMC1/16S 684JTH	J24189059		1-	A	C2
R 1215	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	E3
R 1216	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	a1
R 1217	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	b3
R 1218	CHIP RES.	18	1/16W	5%	RMC1/16S 180JTH	J24189004		1-	B	c2

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1219	CHIP RES.	390k	1/16W	5%	RMC1/16S 394JTH	J24189056		1-	A	F3
R 1220	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1221	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a3
R 1222	CHIP RES.	18	1/16W	5%	RMC1/16S 180JTH	J24189004		1-	B	d2
R 1223	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	d2
R 1224	CHIP RES.	680k	1/16W	5%	RMC1/16S 684JTH	J24189059		1-	A	F3
R 1225	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	B	a1
R 1226	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	E3
R 1228	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	F3
R 1229	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	F3
R 1231	CHIP RES.	820k	1/16W	5%	RMC1/16S 824JTH	J24189060		1-	A	F3
R 1233	CHIP RES.	560k	1/16W	5%	RMC1/16S 564JTH	J24189058		1-	A	F3
R 1234	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	A2
R 1236	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	F3
R 1237	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	a1
R 1239	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	d1
R 1240	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E1
R 1241	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	d1
R 1242	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	d1
R 1245	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	F3
R 1247	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	d2
R 1248	CHIP RES.	150k	1/16W	5%	RMC1/16S 154JTH	J24189051		1-	B	d2
R 1250	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	B	d1
R 1255	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	d1
R 1257	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	d2
R 1258	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	d1
R 1260	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	B	c1
R 1261	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	e1
R 1262	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	B2
R 1263	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	e2
R 1265	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 1270	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	c1
R 1271	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B2
R 1272	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	d1
R 1273	CHIP RES.	150	1/16W	5%	RMC1/16S 151JTH	J24189015		1-	A	B2
R 1274	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	a2
R 1275	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	F2
R 1276	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	C3
R 1277	CHIP RES.	270	1/16W	5%	RMC1/16S 271JTH	J24189018		1-	A	B2
R 1278	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	A	B2
R 1279	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	F2
R 1280	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	F2
R 1281	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	F2
R 1282	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 1283	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	F3
R 1284	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	E2
R 1285	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	F1
R 1286	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	F2
R 1287	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	F2
R 1288	CHIP RES.	470k	1/16W	5%	RMC1/16S 474JTH	J24189057		1-	A	F2
R 1289	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	c2
R 1290	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1292	CHIP RES.	680k	1/16W	5%	RMC1/16S 684JTH	J24189059		1-	A	F3
R 1293	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	F1
R 1294	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	B	c2
R 1295	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	D1
R 1296	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	D1
R 1297	CHIP RES.	150	1/16W	5%	RMC1/16S 151JTH	J24189015		1-	B	c2
R 1299	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E2
R 1300	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	D1

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1302	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	c2
R 1303	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	F2
R 1304	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	F2
R 1305	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E2
R 1307	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	c2
R 1308	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	c2
R 1309	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	D3
R 1311	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	c2
R 1312	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	B2
R 1313	CHIP RES.	680k	1/16W	5%	RMC1/16S 684JTH	J24189059		1-	A	C2
R 1314	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C1
R 1315	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	c2
R 1317	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1318	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1319	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1320	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1321	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1325	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1326	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1327	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1328	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1329	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1330	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1331	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1332	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1333	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1334	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1335	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1336	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1337	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	B2
R 1338	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	A1
R 1339	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	C2
R 1340	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	C1
R 1341	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	B	c1
R 1342	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	A1
R 1343	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1344	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1345	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	B	c1
R 1347	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	C2
R 1348	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	c1
R 1349	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	C2
R 1350	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1352	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1353	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	A	B2
R 1354	CHIP RES.	6.8k	1/16W	5%	RMC1/16S 682JTH	J24189035		1-	A	C2
R 1356	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1357	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	c1
R 1358	CHIP RES.	3.3k	1/16W	5%	RMC1/16S 332JTH	J24189031		1-	A	B1
R 1360	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1362	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1363	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1364	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b1
R 1366	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1367	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1368	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	D2
R 1369	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	c1
R 1370	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1371	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1372	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1373	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2

# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1374	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C1
R 1375	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b1
R 1376	CHIP RES.	6.8k	1/16W	5%	RMC1/16S 682JTH	J24189035		1-	A	C2
R 1377	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	A	C2
R 1378	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E2
R 1379	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1380	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C1
R 1381	CHIP RES.	22	1/16W	5%	RMC1/16S 220JTH	J24189005		1-	B	c1
R 1382	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1383	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1384	CHIP RES.	4.7k	1/16W	5%	RMC1/16S 472JTH	J24189033		1-	B	b2
R 1385	CHIP RES.	82k	1/16W	5%	RMC1/16S 823JTH	J24189048		1-	A	D3
R 1386	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D1
R 1387	CHIP RES.	6.8k	1/16W	5%	RMC1/16S 682JTH	J24189035		1-	B	b1
R 1388	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	A	D3
R 1389	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C3
R 1390	CHIP RES.	20k	1/16W	0.5%	RR0510R-203-D	J24189150		1-	A	D3
R 1391	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034		1-	A	C1
R 1392	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	F1
R 1393	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D3
R 1394	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E1
R 1395	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1396	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1397	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	A	E1
R 1398	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C3
R 1399	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1400	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	A	D2
R 1401	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E1
R 1402	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	E1
R 1403	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1404	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1405	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1406	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1407	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	E1
R 1408	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C2
R 1409	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	C2
R 1410	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1411	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1412	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	F1
R 1413	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	E1
R 1414	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	E1
R 1415	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1416	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1417	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1418	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1419	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	A	D1
R 1420	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1422	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	A	D2
R 1423	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1425	CHIP RES.	1M	1/16W	5%	RMC1/16S 105JTH	J24189061		1-	A	D2
R 1426	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1427	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1428	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1430	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1431	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1433	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1434	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1435	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1436	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1437	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3

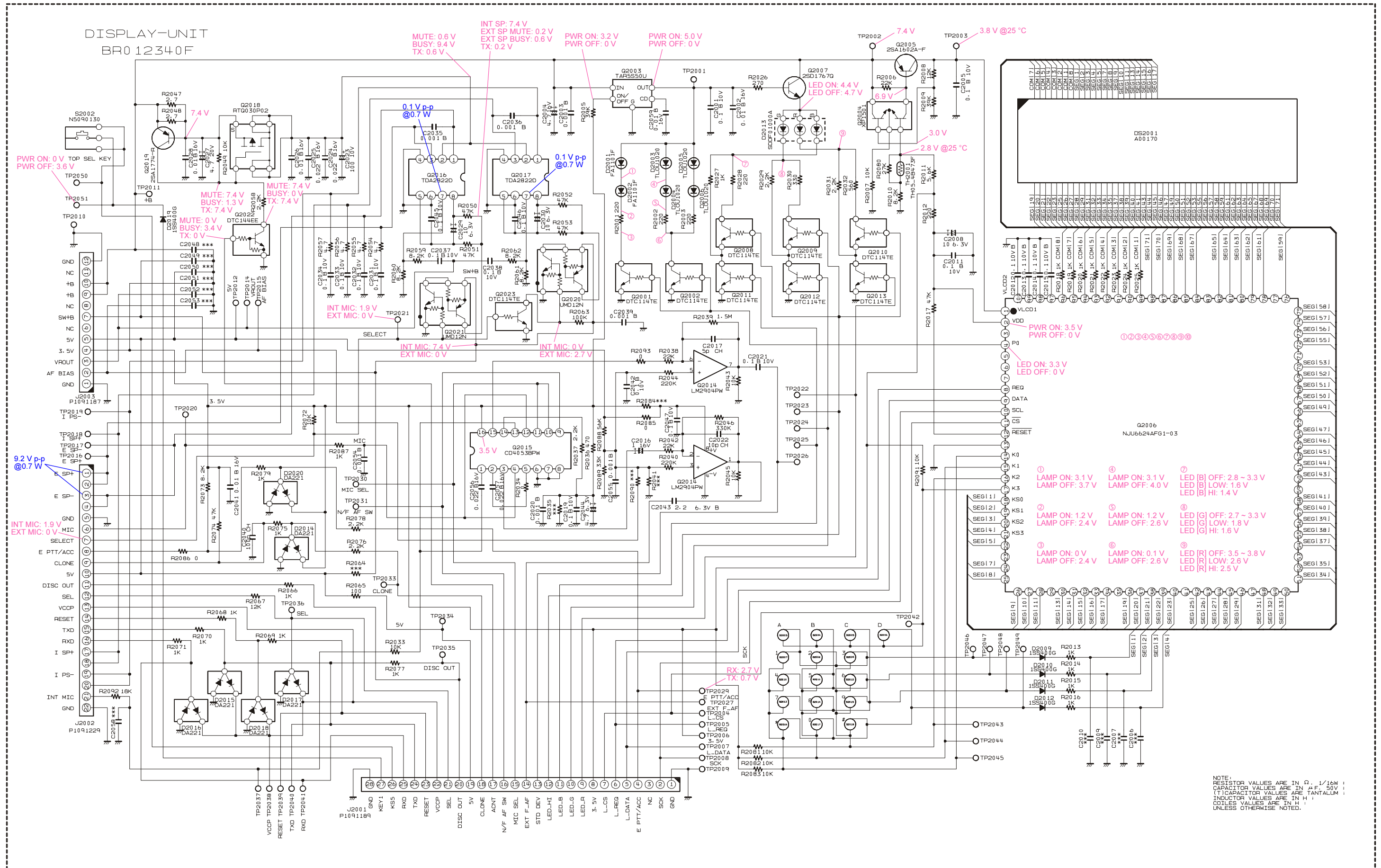
# Main Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 1438	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1439	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1440	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1441	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1442	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1443	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1444	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1445	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1447	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	E3
R 1448	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1449	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D2
R 1450	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	E1
R 1451	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	E1
R 1454	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	a2
R 1455	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D1
R 1456	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	b1
R 1457	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	b1
R 1458	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b1
R 1463	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	B	b2
R 1464	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	b3
R 1465	CHIP RES.	120k	1/16W	5%	RMC1/16S 124JTH	J24189050		1-	B	b3
R 1466	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b2
R 1467	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	D3
R 1468	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	C3
R 1470	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	D2
R 1471	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	a2
R 1476	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	A	D2
R 1477	CHIP RES.	68k	1/16W	5%	RMC1/16S 683JTH	J24189047		1-	A	D2
R 1478	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1479	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	A	D2
R 1480	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b1
R 1482	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	A	B3
R 1483	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B3
R 1485	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c3
R 1486	CHIP RES.	18	1/16W	5%	RMC1/16S 180JTH	J24189004		1-	B	c3
R 1487	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	B	c3
R 1488	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	f3
R 1489	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c3
R 1490	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	c3
R 1491	CHIP RES.	680	1/16W	5%	RMC1/16S 681JTH	J24189023		1-	B	e2
S 1003	TACT SWITCH				SKRTLAE010	N5090130		1-	B	e4
S 1004	TACT SWITCH				SKRTLAE010	N5090130		1-	B	d4
S 1005	TACT SWITCH				SKRTLAE010	N5090130		1-	B	c4
S 1007	ROTARY SWITCH				EC10SP16-93A0	Q9000820		1-	B	f2
T 1001	COIL 04WIDE				3-317197	L0022449		1-	B	e2
T 1002	COIL 04WIDE				3-317197	L0022449		1-	B	d2
T 1003	COIL WIDE-TRANS.				BF3 #281-8007-02	L0022927		1-	B	d2
TH1001	THERMISTOR				TH05 4B473FR	G9090150		1-	A	D2
VR1001	POT.				TP76N1034N A203 RY-7671	J60800281		1-	B	f1
X 1002	XTAL U2G	7.3728MHz			7.3728MHZ	H0103281		1-	A	E2
X 1003	TCXO	16.8MHz			TTS05VS-M1 16.8MHZ	H9500830		1-	B	c1
XF1001	XTAL FILTER				MFT50.85P 50.85MHZ	H1102361		1-	A	B2
	PAD				(E1)	RA0731500		1-		
	SHIELD CASE VCO					RA0699400		1-		



# Display Unit Circuit Diagram

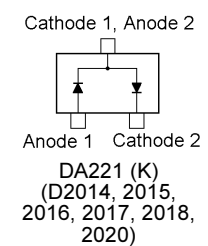
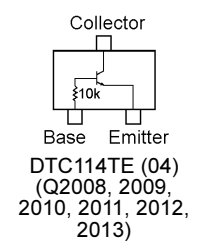
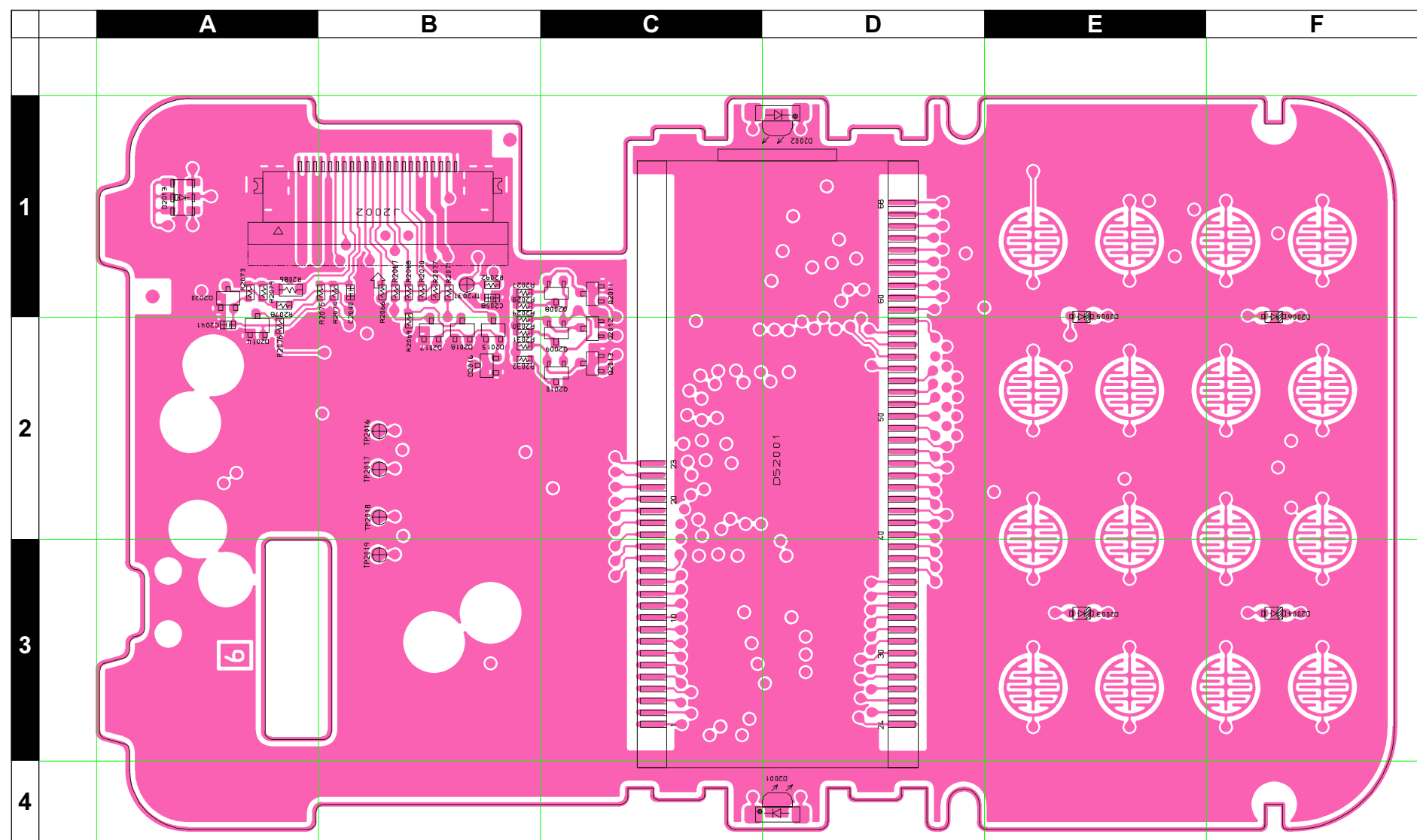


## *Display Unit*

*Note*

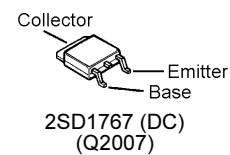
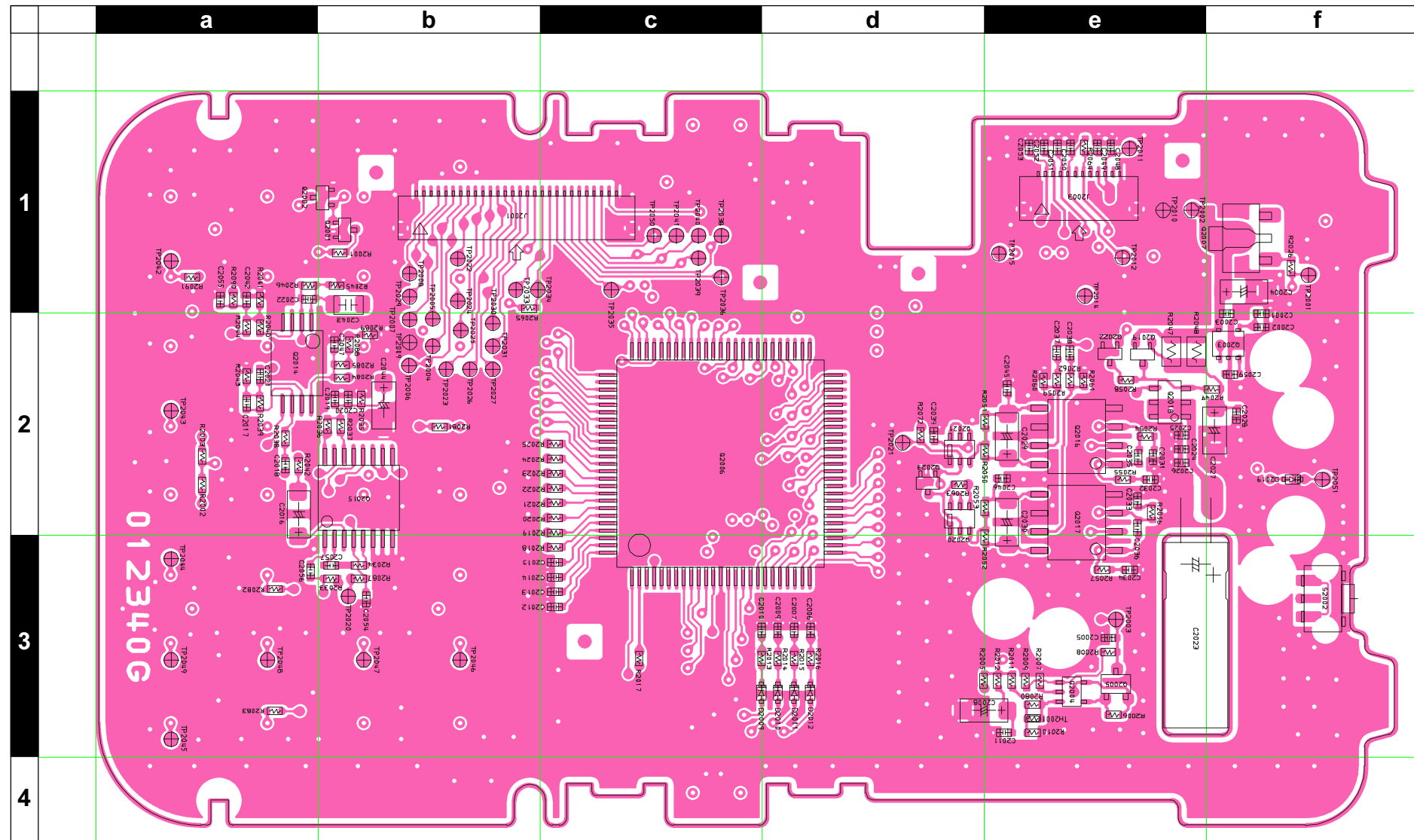
# Display Unit

## Parts Layout (Side A)

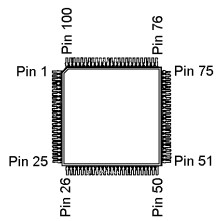


# Display Unit

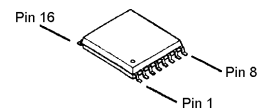
## Parts Layout (Side B)



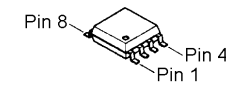
2SD1767 (DC)  
(Q2007)



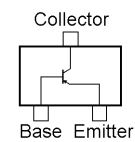
NJU6624AFG  
(Q2006)



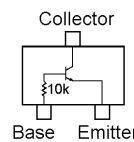
CD4053BPWR  
(Q2015)  
PDTTC114TE  
(Q1023, 1028)



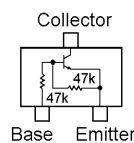
LM2904PWR  
(Q2014)  
TDA2822  
(Q2016, 2017)



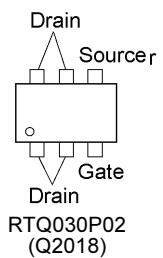
2SA1602 (MF)  
(Q2005)  
2SA1774 (FR)  
(Q2019)



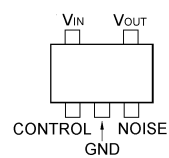
DTC114TE (04)  
(Q2001, 2002, 2023)



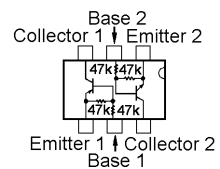
DTC144EE (26)  
(Q2022)



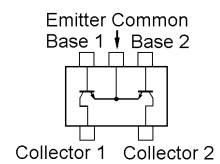
RTQ030P02  
(Q2018)



TAR5S50U  
(Q2003)



UMD12N  
(Q2020, 2021)



XP1501 (5R)  
(Q2004)

# Display Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
PCB with Components						CB3074001	LCD: OFF			
						CB3074002	LCD: ON			
Printed Circuit Board					AC058N000	FR0123400		1-		
C 2001	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	f1
C 2002	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	f2
C 2003	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	f1
C 2004	CHIP TA.CAP.	4.7uF	16V		TEMSVA1C475M-8R	K78120031		1-	B	f1
C 2005	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	e3
C 2008	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027	W/LCD	1-	B	d3
C 2011	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	e3
C 2012	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	c3
C 2013	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	c3
C 2014	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	c3
C 2015	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802	W/LCD	1-	B	c3
C 2016	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	B	a2
C 2017	CHIP CAP.	5pF	50V	CH	GRM1552C1H5R0CZ01D	K22178207		1-	B	a2
C 2019	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2020	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b2
C 2021	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a2
C 2022	CHIP CAP.	10pF	50V	CH	GRM1552C1H100JZ01D	K22178212		1-	B	a1
C 2023	AL.ELECTRO.CAP.	100uF	10V		UVR1A101MDA6 100UF	K40109028		1-	B	f2
C 2024	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	e2
C 2025	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	e2
C 2026	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	e2
C 2027	CHIP TA.CAP.	4.7uF	20V		TEMSVA1D475M-8R	K78130048		1-	B	f2
C 2028	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	f2
C 2029	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	e2
C 2030	CHIP TA.CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		1-	B	e2
C 2031	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2032	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2033	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2034	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e3
C 2035	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 2036	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	e2
C 2037	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2038	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2039	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	d2
C 2040	CHIP CAP.	100pF	50V	CH	GRM1552C1H101JD01D	K22178236		1-	A	B1
C 2041	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	A	A2
C 2042	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	a1
C 2043	CHIP CAP.	2.2uF	6.3V	B	GRM40B225K6.3PT	K22080801		1-	B	b1
C 2044	CHIP TA.CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		1-	B	b2
C 2045	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2046	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	e2
C 2047	CHIP CAP.	0.1uF	10V	B	GRM36B104K10PT	K22108802		1-	B	b2
C 2054	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	b3
C 2055	CHIP CAP.	0.001uF	50V	B	GRM155B11H102KA01D	K22178809		1-	B	a1
C 2056	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	a3
C 2057	CHIP CAP.	0.022uF	16V	B	GRM36B223K16PT	K22128806		1-	B	b3
C 2059	CHIP CAP.	0.01uF	16V	B	GRM36B103K16PT	K22128804		1-	B	f2
D 2001	LED				FA1101F-TR	G2070842	W/LCD	1-	A	D4
D 2002	LED				FA1101F-TR	G2070842	W/LCD	1-	A	D1
D 2003	LED				TLOU1020(T14)	G2070990	W/LCD	1-	A	E3
D 2004	LED				TLOU1020(T14)	G2070990	W/LCD	1-	A	F3
D 2005	LED				TLOU1020(T14)	G2070990	W/LCD	1-	A	E1
D 2006	LED				TLOU1020(T14)	G2070990	W/LCD	1-	A	F1
D 2009	DIODE				1SS400G T2R	G2070934	W/LCD	1-	B	c3
D 2010	DIODE				1SS400G T2R	G2070934	W/LCD	1-	B	d3
D 2011	DIODE				1SS400G T2R	G2070934	W/LCD	1-	B	d3
D 2012	DIODE				1SS400G T2R	G2070934	W/LCD	1-	B	d3

# Display Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
D 2013	LED				SDDF01000A1	G2071056		1-	A	A1
D 2014	DIODE				DA221 TL	G2070178		1-	A	A2
D 2015	DIODE				DA221 TL	G2070178		1-	A	B2
D 2016	DIODE				DA221 TL	G2070178		1-	A	B2
D 2017	DIODE				DA221 TL	G2070178		1-	A	B2
D 2018	DIODE				DA221 TL	G2070178		1-	A	B2
D 2019	DIODE				1SS400G T2R	G2070934		1-	B	f2
D 2020	DIODE				DA221 TL	G2070178		1-	A	A1
DS2001	LCD				A00170	G6090163	W/LCD	1-	A	D2
J 2001	CONNECTOR				9636S-28A-TC	P1091189		1-	B	b1
J 2002	CONNECTOR				IMSA-9631S-22Y901	P1091229		1-	A	B1
J 2003	CONNECTOR				9636S-12Y900	P1091187		1-	B	e1
Q 2001	TRANSISTOR				DTC114TE TL	G3070225	W/LCD	1-	B	b1
Q 2002	TRANSISTOR				DTC114TE TL	G3070225	W/LCD	1-	B	b1
Q 2003	IC				TAR5S50U	G1094097		1-	B	f2
Q 2004	TRANSISTOR				XP1501-(TX)	G3070143	W/LCD	1-	B	e3
Q 2005	TRANSISTOR				2SA1602A-T11-1F	G3116028F	W/LCD	1-	B	e3
Q 2006	IC				NJU6624AFG1-03	G1093881	W/LCD	1-	B	c2
Q 2007	TRANSISTOR				2SD1767 T100 Q	G3417677Q		1-	B	f1
Q 2008	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C1
Q 2009	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C2
Q 2010	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C2
Q 2011	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C1
Q 2012	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C2
Q 2013	TRANSISTOR				DTC114TE TL	G3070225		1-	A	C2
Q 2014	IC				LM2904PWR	G1094010		1-	B	a2
Q 2015	IC				CD4053BPWR	G1093864		1-	B	b2
Q 2016	IC				TDA2822D013TR	G1091542		1-	B	e2
Q 2017	IC				TDA2822D013TR	G1091542		1-	B	e2
Q 2018	FET				RTQ030P02	G4070015		1-	B	e2
Q 2019	TRANSISTOR				2SA1774 TL R	G3117748R		1-	B	e2
Q 2020	TRANSISTOR				UMD12N TR	G3070342		1-	B	d2
Q 2021	TRANSISTOR				UMD12N TR	G3070342		1-	B	d2
Q 2022	TRANSISTOR				DTC144EE TL	G3070075		1-	B	e2
Q 2023	TRANSISTOR				DTC114TE TL	G3070225		1-	B	d2
R 2001	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017	W/LCD	1-	B	b1
R 2002	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017	W/LCD	1-	B	a2
R 2003	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017	W/LCD	1-	B	a2
R 2005	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044		1-	B	d3
R 2006	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041	W/LCD	1-	B	e3
R 2007	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/LCD	1-	B	e3
R 2008	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038	W/LCD	1-	B	e3
R 2009	CHIP RES.	39k	1/16W	5%	RMC1/16S 393JTH	J24189044	W/LCD	1-	B	e3
R 2010	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036	W/LCD	1-	B	e3
R 2011	CHIP RES.	5.6k	1/16W	5%	RMC1/16S 562JTH	J24189034	W/LCD	1-	B	e3
R 2012	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017	W/LCD	1-	B	e3
R 2013	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c3
R 2014	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	d3
R 2015	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	d3
R 2016	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	d3
R 2017	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045	W/LCD	1-	B	c3
R 2018	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c3
R 2019	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2020	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2021	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2022	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2023	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2024	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2025	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025	W/LCD	1-	B	c2
R 2026	CHIP RES.	270	1/16W	5%	RMC1/16S 271JTH	J24189018		1-	B	f1

# Display Unit

## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 2027	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2028	CHIP RES.	220	1/16W	5%	RMC1/16S 221JTH	J24189017		1-	A	B1
R 2029	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	B2
R 2030	CHIP RES.	330	1/16W	5%	RMC1/16S 331JTH	J24189019		1-	A	B2
R 2031	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	B2
R 2032	CHIP RES.	560	1/16W	5%	RMC1/16S 561JTH	J24189022		1-	A	B2
R 2033	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b3
R 2034	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b3
R 2036	CHIP RES.	470	1/16W	5%	RMC1/16S 471JTH	J24189021		1-	B	b2
R 2037	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	b2
R 2038	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a2
R 2039	CHIP RES.	1.5M	1/16W	5%	RMC1/16S 155JTH	J24189063		1-	B	a2
R 2040	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a2
R 2042	CHIP RES.	22k	1/16W	5%	RMC1/16S 223JTH	J24189041		1-	B	a2
R 2043	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	a2
R 2044	CHIP RES.	220k	1/16W	5%	RMC1/16S 224JTH	J24189053		1-	B	a2
R 2045	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	b1
R 2046	CHIP RES.	330k	1/16W	5%	RMC1/16S 334JTH	J24189055		1-	B	a1
R 2047	CHIP RES.	2.7	1/10W	5%	RMC1/10T 2R7J	J24205279		1-	B	e2
R 2048	CHIP RES.	2.7	1/10W	5%	RMC1/10T 2R7J	J24205279		1-	B	e2
R 2049	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	f2
R 2050	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d2
R 2051	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d2
R 2052	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d3
R 2053	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	B	d2
R 2054	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e2
R 2055	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e2
R 2056	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e2
R 2057	CHIP RES.	4.7	1/16W	5%	RMC1/16S 4R7JTH	J24189066		1-	B	e3
R 2058	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	B	e2
R 2059	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	e2
R 2060	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	e2
R 2061	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	e2
R 2062	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	B	e2
R 2063	CHIP RES.	100k	1/16W	5%	RMC1/16S 104JTH	J24189049		1-	B	d2
R 2065	CHIP RES.	100	1/16W	5%	RMC1/16S 101JTH	J24189013		1-	B	b1
R 2066	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2067	CHIP RES.	12k	1/16W	5%	RMC1/16S 123JTH	J24189038		1-	A	B1
R 2068	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2069	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B2
R 2070	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2071	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2072	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037		1-	B	d2
R 2073	CHIP RES.	8.2k	1/16W	5%	RMC1/16S 822JTH	J24189036		1-	A	A1
R 2074	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045		1-	A	B1
R 2075	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A1
R 2076	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	A2
R 2077	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	B1
R 2078	CHIP RES.	2.2k	1/16W	5%	RMC1/16S 222JTH	J24189029		1-	A	A1
R 2079	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	A	A1
R 2080	CHIP RES.	27k	1/16W	5%	RMC1/16S 273JTH	J24189042	W/LCD	1-	B	e3
R 2081	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/LCD	1	B	b2
R 2081	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045	W/LCD	2-	B	b2
R 2082	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/LCD	1	B	a3
R 2082	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045	W/LCD	2-	B	a3
R 2083	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/LCD	1	B	a3
R 2083	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045	W/LCD	2-	B	a3
R 2085	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-	B	b2
R 2086	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	A	A1
R 2087	CHIP RES.	1k	1/16W	5%	RMC1/16S 102JTH	J24189025		1-	B	b3

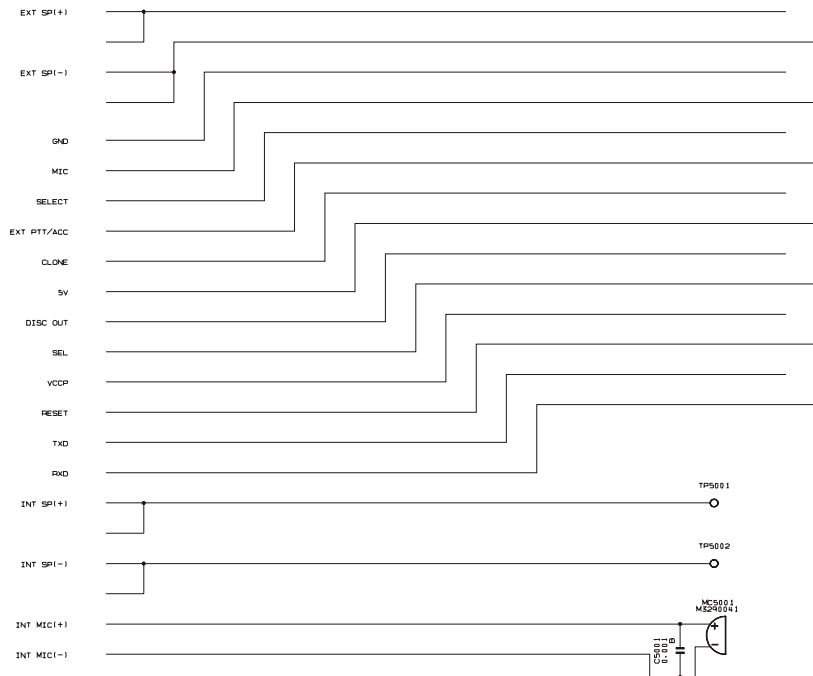
# Display Unit

## Parts List

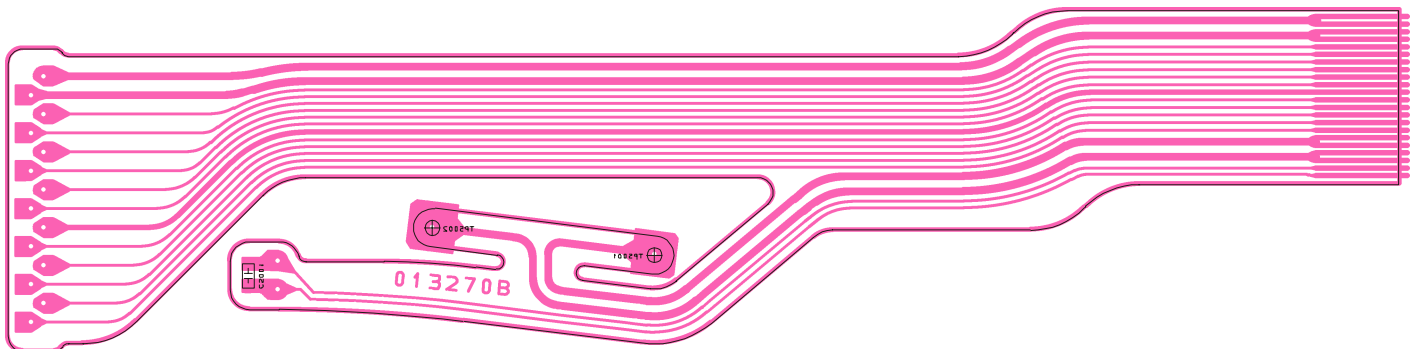
REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
R 2088	CHIP RES.	56k	1/16W	5%	RMC1/16S 563JTH	J24189046		1-	B	b2
R 2089	CHIP RES.	33k	1/16W	5%	RMC1/16S 333JTH	J24189043		1-	B	b2
R 2091	CHIP RES.	10k	1/16W	5%	RMC1/16S 103JTH	J24189037	W/LCD	1	B	a1
R 2091	CHIP RES.	47k	1/16W	5%	RMC1/16S 473JTH	J24189045	W/LCD	2-	B	a1
R 2092	CHIP RES.	18k	1/16W	5%	RMC1/16S 183JTH	J24189040		1-	A	B1
R 2093	CHIP RES.	0	1/16W	5%	RMC1/16S JPTH	J24189070		1-		
S 2002	TACT SWITCH				SKRTLAE010	N5090130		1-	B	f3
TH2001	THERMISTOR				TH05 4B473FR	G9090150	W/LCD	1-	B	e3
	REFLECTOR SHEET					RA0698000	W/LCD	1-		
	LIGHT GUIDE				(LCD)	RA0689100	W/LCD	1-		
	FRAME				(LCD)	RA068970A	W/LCD	1-		
	INTERCONNECTOR					RA0663700	W/LCD	1-		
	PAD				(LCD)	RA0727300		1-		



# Cable Unit Circuit Diagram



## Parts Layout



## Parts List

REF.	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT.	SIDE	LAY ADR
Printed Circuit Board					AC058N000	FR013270B				
C 5001	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	
MC5001	MIC. ELEMENT				EM-140	M3290032		1-	A	
	MIC HOLDER RUBBER				(C)	RA0725900		1-		



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