

MODEL JST-135 SERVICE MANUAL

For Service Manuals
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JRC

Japan Radio Co. Ltd.

HF TRANSCEIVER

Introduction

This manual contains information required for maintenance and/or repairment of the JST-135 HF Transceiver. For operating procedures, refer to the instruction manuals for JST-135 and optional equipment.

The JST-135 can be fitted with the following optional units:

TONE SQ Unit	CCL-212
BWC Unit	CFL-243
NOTCH FOLLOW Unit	CDD-366
ECSS Unit	CMF-78
RS-232C INTERFACE Unit	CMH-741
DAUGHTER BOARD Unit	CMH-742

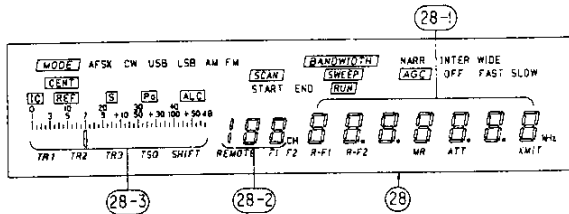
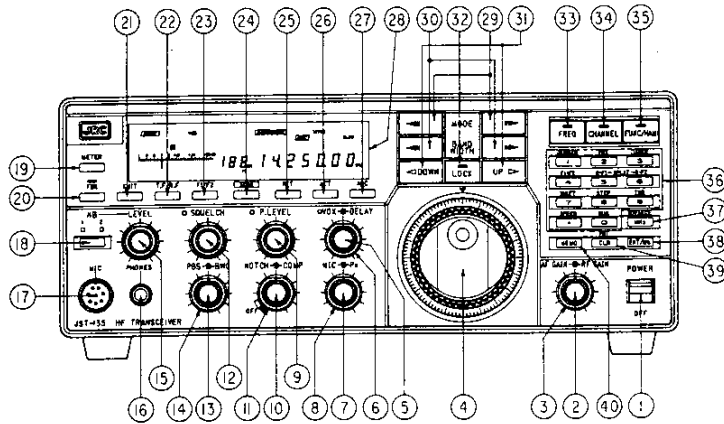
This manual, however, describes the standard operation of the JST-135 without optional units, and the description of those optional units is followed. (excluding Daughter Board Unit CMH-742).

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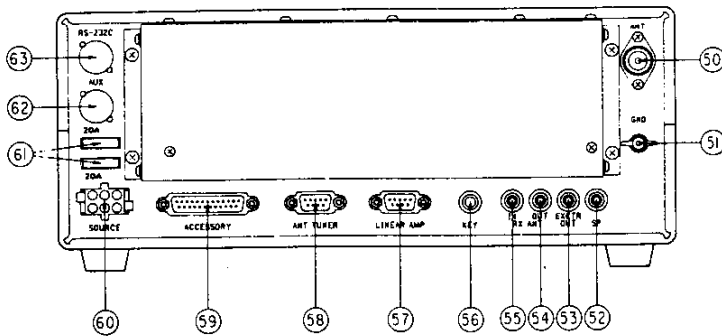
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Parts Identification



Front Panel

- ① POWER switch
- ② AF GAIN control
- ③ RF GAIN control
- ④ TUNING control
- ⑤ VOX gain control
- ⑥ DELAY (VOX delay) control
- ⑦ MIC (microphone gain) control
- ⑧ Po (power) control
- ⑨ P LEVEL (pause level) control
- ⑩ NOTCH control
- ⑪ COMP (voice compressor) control
- ⑫ SQUELCH control
- ⑬ PBS (pass band shift) control
- ⑭ BWC (bandwidth) control
- ⑮ NB LEVEL (noise blanker level) control
- ⑯ PHONES (headphones) jack
- ⑰ MIC (microphone) connector
- ⑱ NB (noise blanker) control
- ⑲ METER switch
- ⑳ FBK (full-brake-in) switch
- ㉑ XMIT (standby) switch
- ㉒ T.F/R.F (transmit frequency/receive frequency) switch
- ㉓ F1/F2 (VFO select) switch
- ㉔ SCAN switch
- ㉕ RIT (receiver increment tuning) switch
- ㉖ ATT (attenuator) switch
- ㉗ AGC switch
- ㉘ Display
- ㉘-1 Frequency display
- ㉘-2 Channel display
- ㉘-3 Meter
- ㉙ MODE switch
- ㉚ BANDWIDTH switch
- ㉛ UP/DOWN switches
- ㉜ LOCK switch
- ㉝ FREQ (frequency) switch
- ㉞ CHANNEL switch
- ㉟ FUNC/HAM (function/harm band) switch
- ㊱ Ten keys
- ㊲ MHz switch
- ㊳ ENT/kHz (enter/kHz) switch
- ㊴ CLR (clear) switch
- ㊵ MEMO (memory) switch



Rear Panel

- ⑤① ANT (antenna) connector
- ⑤② GND (ground) terminal
- ⑤③ SP (external speaker) jack
- ⑤④ EXCTR OUT (exciter output) jack
- ⑤⑤ RX ANT OUT (receiving antenna output) jack
- ⑤⑥ RX ANT IN (receiving antenna input) jack
- ⑤⑦ KEY jack
- ⑤⑧ LINEAR AMP (linear amplifier) connector
- ⑤⑨ ANT TUNER (antenna tuner) connector
- ⑤⑩ ACCESSORY connector
- ⑤⑪ SOURCE (DC power) connector
- ⑤⑫ FUSES (DC fuse)
- ⑤⑬ AUX (auxiliary) connector
- ⑤⑭ RS-232C connector

1. SPECIFICATIONS

General

Transmitting

frequency range: 1.8 MHz band 1.8 to 2.0 MHz
 3.5 MHz band 3.5 to 4.0 MHz
 7 MHz band 7.0 to 7.3 MHz
 10 MHz band 10.1 to 10.15 MHz
 14 MHz band 14.0 to 14.35 MHz
 18 MHz band 18.068 to 18.168 MHz
 21 MHz band 21.0 to 21.45 MHz
 24 MHz band 24.89 to 24.99 MHz
 28 MHz band 28.0 to 29.7 MHz

Receiving frequency range:

100 kHz to 30 MHz

Operating mode: SSB (LSB, USB)

CW
 AME (Single Side band with full carrier)

FM

AFSK

Frequency stability: Less than ± 10 PPM from 5-minute warm-up to 60 minutes
 Less than ± 2 PPM per hour after 60 minutes

Frequency increment: 10 Hz

Number of memory channels: 200 channels

Antenna impedance: 50Ω (unbalanced)

Input voltage: 13.8 VDC $\pm 10\%$ (nominal 13.8V)
 Negative grounded

Power consumption: Approx. 1.5A (receiving with no signal)
 Approx. 33A (transmitting at 150W output)

Dimensions: 330 (330)W x 130 (142)H x 280 (391) Dmm
 Dimensions written in () include projecting parts and controls

Weight: Approx. 8.5 kg

Transmitter

Power output: 10 to 150W (continuously adjustable)

Carrier suppression: 50 dB or more

Undersired sideband suppression: 60 dB or more (at 1.5 kHz modulation)

Intermodulation: 3rd order: -38 dB or less

Frequency response: 400 to 2600 Hz (within 6 dB, SSB)

Microphone

impedance: 600Ω

Modulation system: SSB, AME, AFSK:
 Balanced modulation
 FM: Reactance modulation

Maximum frequency deviation (FM): ± 5 kHz

Receiver

Receiving system: SSB, CW, AM, AFSK:
 Triple superheterodyne
 FM: Double superheterodyne

Intermediate

frequency: 1st IF : 70.455 MHz
 2nd IF : 455 kHz
 3rd IF : 98 kHz

Sensitivity:

	SSB, CW, AFSK	AM	FM
0.1-0.5 MHz	14 dB μ	24 dB μ	-
0.5-1.6 MHz	6 dB μ	16 dB μ	-
1.6-30 MHz	-10 dB μ	6 dB μ	-6 dB μ

(at 12 dB SINAD for FM, at 10 dB S/N for other modes)

Image rejection: 70 dB or more

IF rejection: 70 dB or more

Selectivity:

	- 6 dB	-60 dB
SSB, CW(W), AFSK (INTER)	2 kHz or more	6 kHz or less
FM (WIDE)	12 kHz or more	-
AM (INTER)	6 kHz or more	-40 dB, 18 kHz or less

Note: Maximum two optional filters can be mounted.

RIT range: ± 20 kHz

PBS range: ± 1 kHz

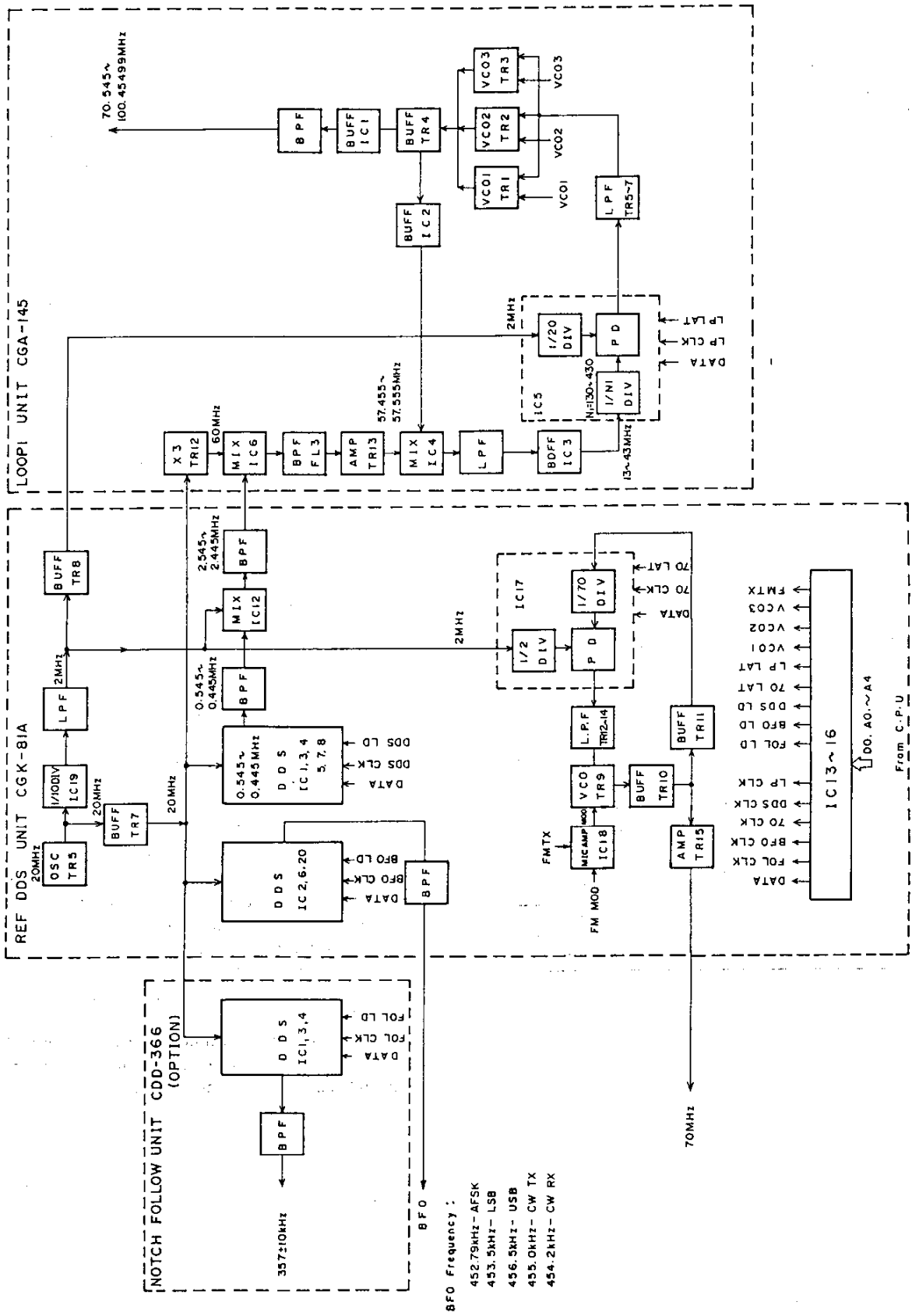
BWC minimum bandwidth: Approx. 800 Hz (when mounting optional BWC unit)

NOTCH filter

attenuation: Approx. 40 dB

AF output: 1W or more (at 4Ω load and with less than 10% distortion)

2.2 Synthesizer System



3. CIRCUIT DESCRIPTION

3.1 General

The JST-135 consists of the six blocks: panel, receiver, transmitter, synthesizer, control and chassis blocks. Each block consists of the units listed in Table 3.1.

Table 3.1 Block & Units

Block	Unit	
Panel	DISPLAY UNIT	CDE-576
	DISPLAY (VR) UNIT	CDE-576
Receiver	RF TUNE UNIT	CFL-244
	IF FILTER UNIT	CHF-38A
	IF AMP UNIT	CAE-227
	AF AMP UNIT	CBD-894L
Transmitter	12V PA UNIT	CAH-301L-2
	LPF UNIT	CFJ-122-2
Synthesizer	LOOP 1 UNIT	CGA-145
	REF DDS UNIT	CGK-81A
Control	CPU UNIT	CDC-493A
Chassis	MOTHER BOARD	CFQ-2625A
	CHASSIS	JST-135
Option	TONE SQ UNIT	CCL-212
	BWC UNIT	CFL-243
	NOTCH FOLLOW UNIT	CDD-366
	ECSS UNIT	CMF-78
	RS-232C UNIT	CMH-741

The panel is equipped with switches and controls to operate the transceiver, and with a large custom-Fluorescent Indication Panel (FIP) to indicate the operating condition, frequency, mode, etc..

The receiver employs the triple superheterodyne configuration: 1st IF of 70.455 MHz, 2nd IF of 455 kHz, and 3rd IF of 97 kHz. The input circuit employs the electronic tuning to improve two-signal characteristic. The electronic tuning circuit is also used for transmitter to suppress the spurious emission. The circuit tunes according to the control voltage from the CPU Unit CDC-493A.

The transmitter converts the audio signal from a microphone into 455 kHz (BAL MOD), 70.455 MHz (TX MIX1) and desired frequency (TX MIX2).

The desired signal is amplified by the PA Unit up to the rated power, filtered by the LPF Unit and fed to the ANT terminal. The PA Unit employs the newly developed cooling system to enable continuous transmission.

The synthesizer employs the highly stable reference oscillator of 20 MHz to generate 70.545 to 100.45499 MHz, 70 MHz, and BFO signal used in the transmitter and receiver blocks. Of these, 70.545-100.45499 MHz local and BFO signals are generated by the newly developed Direct Digital Synthesizer (DDS). The DDS features:

- (1) Vibration resistant since no VCO is used.
- (2) Quick response since no feedback loop is used.
- (3) Simple circuit configuration.

The control block employs two CPUs: MAIN CPU and SUB CPU. The MAIN CPU is located on the CPU Unit to control and switch the transmitter, receiver and synthesizer circuits. The SUB CPU is located on the DISPLAY Unit to drive the FIP and to process the ten-key entry. The two CPUs communicate each other with 4800 bps serial data.

The chassis block employs the Mother Board for interconnection of the plug-in units to ensure high reliability and easy maintenance.

3.2 Description of Units

3.2.1 RF TUNE UNIT (CFL-244)

This unit includes the RF tuning circuit mainly, and is used in both transmission and reception. It consists of the circuits that receive the incoming signal through the antenna terminal and convert it into the 70.455 MHz receiver IF signal, and the circuits that convert and amplify the 70.455 MHz transmitter IF signal into the desired transmit frequency.

The RF tuning, which is the main circuit in this unit, consists of six frequency bands. One of the bands is selected according to the operating frequency by the decoder (IC2) and TR7. For each band, a variable parallel tuning circuit is formed by the variable capacitors and transformers, and the variable double tuning method is employed to assure more sharp tuning characteristic. (except for the 100 kHz-400 kHz band)

Table 3.2 Band Classification in RF Tuning Circuit

Class	Frequency	Remarks
1	100 kHz-0.4 MHz	LPF method
2	0.4 MHz-1.6 MHz	Variable double tuning method
3	1.6 MHz-4.4 MHz	
4	4.4 MHz-12.3 MHz	
5	12.3 MHz-20.5 MHz	
6	20.5 MHz-30 MHz	

The tuning frequency of the circuit is controlled by the tuning voltage from the CPU. The tuning voltage is generated in the CPU Unit according to the operating frequency in 100 kHz steps. This tuning circuit is used in both transmission and reception.

The incoming signal received through the antenna terminal passes through the 20 dB attenuator switching circuit (K1), excessive input protection diodes (CD6-CD9), and enters the RF tuning circuit. The unwanted components among the incoming signals are eliminated by the RF tuning circuit, and the desired signal passes through the 35 MHz LPF and is applied to the receiver RF amplifier (TR9 and TR10). The receiver RF amplifier is composed of the gate-grounded low noise junction FETs to amplify the wide frequency range with high reliability and low noise. The output signal of the RF amplifier is mixed with the local signal by the mixer (TR11 and TR12), and converted into the 70.455 MHz receiver IF signal. The mixer employs the

balanced type circuit and assures high receiver performance with the aid of the RF tuning circuit and receiver RF amplifier. The 70.545-100.45499 MHz local signal supplied by the Loop 1 Unit is amplified to the required level by TR13, and supplied to the receiver mixer circuit (TR11 and TR12) and to the transmitter mixer circuit (IC3).

In transmission, the 70.455 MHz transmitter IF signal from the IF FIL Unit is mixed with the local signal by the double balanced mixer IC3 and converted into the desired transmit frequency signal. This signal passes through the buffer amplifier (TR14), and the unwanted spurious components are eliminated by the 35 MHz LPF and the RF tuning circuit, which are also used for reception. The transmit signal through the RF tuning circuit is applied to the wide band amplifier IC (IC1), and fed to the step attenuator circuit (TR1 through TR4). The step attenuator circuit compensates the loss of the RF tuning circuit and maintains the transmitter response within ± 0.5 dB at the antenna terminal. The circuit can control the attenuation up to 8 dB in 0.5 dB steps. With the aid of the CPU, the circuit controls in 100 kHz steps. Then, the transmit signal is amplified by TR5 and TR6 to the level suitable for driving the PA Unit. The TR6 output is switched to either the PA Unit side or the rear panel EXCTR OUT side by the relay K2.

3.2.2 IF FIL UNIT (CFH-38A)

The IF Filter Unit is mainly composed of the IF filters to determine the bandwidth in both transmission and reception. In reception, the received 70.455 MHz IF signal from the RF TUNE Unit is converted to the 455 kHz IF signal. The 455 kHz IF signal passes through the noise blanker (NB) and one of the IF filter selected to secure the required selectivity. In transmission, the voice signal from the DISPLAY Unit is converted into the 455 kHz SSB signal. The signal is also converted into the 70.455 MHz IF signal to drive the RF TUNE Unit. In this unit, the carrier injection circuit for AME, CW and FM modes is also installed.

The filter circuit consisting of FL3 through FL6 determines the IF bandwidth in both transmission and reception. IC1 decodes the IF filter selection data from the CPU Unit to select the desired filter. Only for reception in FM mode, CD8 and CD9 are activated to pass through the filter circuit. Therefore, the selectivity for FM mode is determined by the 70.455 MHz IF filter FL1 and NB circuit filter FL2.

The 70.455 MHz receiver IF signal from the RF TUNE Unit passes through the monolithic filter (MCF) FL1 and is amplified by TR17. TR17 is the dual gate MOS FET and with the satisfactory AGC characteristic. TR17 output is mixed with the local signal (70 MHz) from the REF/DDS Unit by the balanced FET mixer (TR15 and TR16), and converted into the 455 kHz receiver IF signal.

This local signal is amplified by TR18, and supplied to the receiver mixer (TR15 and TR16) and the transmitter mixer (IC4). The NB circuit consists of the gate circuit and noise amplifier circuit. The 455 kHz receiver IF signal is applied to these two circuits. The signal directed to the gate circuit side passes through FL2 and the balance type gate circuit (CD21 and CD22). On the other hand, the signal directed to the noise amplifier circuit is amplified by the noise amplifier (TR12, TR13, and TR14). The gain of this noise amplifier is automatically controlled by the AGC circuit (CD20, TR10, and TR11). The time constant of AGC (R80, C92) is so chosen that a relatively slow variation of amplitude as an SSB voice is compensated by the AGC, then constant amplitude appears at TP6. However, the AGC does not follow very quick variation and impulsive noise appears at TP6 as it is. The impulsive noise components contained in the IF signal are detected by the noise detector circuit (CD18, CD19, TR7, TR8 and TR9). The detected impulsive noise turns on and off the gate circuit to blank the noise components contained in the 455 kHz IF signal. The signal from the NB gate is fed to the IF filter group (FL3 through FL6) and the desired selectivity is secured. Then, the signal is sent to the IF AMP Unit.

The voice signal from the DISPLAY Unit and the line input signal from the rear panel are mixed and the level is adjusted by IC2. Then, the signal is sent to IC3 and to the REF/DDS Unit for FM modulation. IC3 is a balanced modulator which generates the 455 kHz DSB signal by mixing the BFO signal and the voice signal. The DSB signal is changed into the SSB signal as it passes through the FL4 in the filter group, and applied to the 455 kHz amplifier (TR2). To TR2 the carrier is injected for AME, CW and FM modes. TR2 amplifies the input signal and the gain is automatically controlled by the APC voltage from the LPF Unit to maintain the power output constant. The output of TR2 is mixed with the 70 MHz local signal by the double balanced mixer (IC4), and converted into 70.455 MHz transmitter IF signal. The IF signal passes through the IF amplifier (TR3) and the unwanted component is eliminated

by the monolithic filter (FL1), and the signal is sent to the RF TUNE Unit.

3.2.3 IF AMP UNIT (CAE-227)

This unit includes the receiver local OSC block, IF AMP block, demodulator, AGC circuit, squelch circuit, and line out amplifiers.

The local OSC block consists of the 358 kHz oscillator (TR9), buffer amplifier (TR10), and mixer (IC4). The 358 kHz oscillator (TR9) utilizes the ceramic oscillator (X1). CD2 and CD28 are the variable capacitor diodes for adjusting the X1 oscillator frequency. The frequency is controlled by the control voltage from TR11. The output signal from TR9 passes through the buffer amplifier (TR10), and is supplied to the gate 2 of TR3 and Pin 2 on IC4. The mixer (IC4) mixes the 358 kHz signal and the BFO signal, and its output signal is used as the carrier signal for the product detection. The frequency of the carrier signal is allocated according to the mode as follows:

Table 3.3 BFO and Product Detection Frequencies

Mode	BFO Frequency	Carrier frequency for product detection
CW	454.2 kHz	96.2 kHz
AFSK	456.7 kHz	98.7 kHz
LSB	453.5 kHz	95.5 kHz
USB	456.5 kHz	98.5 kHz

The IF AMP block consists of the 455 kHz IF amplifier (TR1 and TR2), mixer (TR3), and nominal 97 kHz IF amplifier (TR7). The 455 kHz IF signal is amplified by TR1 and TR2. The output of TR2 is mixed with the 358 kHz local signal supplied from TR10 and converted into the 97 kHz IF signal by TR3. The 97 kHz IF signal is fed to the NOTCH circuit consists of TR4 to TR6 and T4. When NOTCH function is ON, the signal passes through TR4 and filtered by the T-NOTCH (T4). Since the notch frequency is fixed, the filtering frequency is controlled by adjusting the 358 kHz local oscillator frequency. When NOTCH function is OFF, the signal passes through TR7 to bypass the NOTCH circuit. The signal from the NOTCH circuit is amplified by TR7 to a level suitable for the demodulator circuit in the next stage.

The demodulator except for FM mode consists of IC2. IC2 operates as the synchronous detector in AM mode, and as the product detector in other modes. The carrier for synchronous detection is supplied to Pin 2 on IC2 from the limiter circuit (TR17). The carrier for product detection is supplied to Pin 2 on IC2 from IC4. FM signal is demodulated by IC8, which includes limiter, Quadrature Discriminator, etc..

The AGC circuit consists of the rectifiers (CD5, CD6, TR19, and TR20), time constant circuit (C103, R105), analog switches (IC5 and IC6), and operational amplifier (IC7). Two AGC rectifiers are employed. One is for peak detection and the other is for average detection. The peak detection consists of CD6 and TR19, and is used in SSB, CW, and AFSK modes. The average detection consists of CD5, R98, C100, and TR20, and is used in AM mode. These rectifiers are switched by the analog switch (IC5). IC6 switches the AGC time constant. The AGC voltage is output from Pin 7 on IC7, and controls the gate 2 of TR1 and TR2. The AGC voltage passes through R115 and also controls TR17 in the IF FIL Unit.

The squelch circuit consists of a comparator (IC9) and a muting circuit (TR35). This squelch circuit is effective in all modes. The AGC voltage from Pin 7 on IC7 is applied to Pin 5 on IC9. The control voltage to adjust the squelch level is also applied to Pin 6 on IC7 from the DISPLAY Unit. These two voltages are compared by IC9. When the voltage at Pin 5 on IC9 is higher than the voltage at Pin 6 on IC9, TR35 is turned on to mute the AF output.

The line out amplifiers consist of IC11 1/2 and IC12 1/2. IC12 1/2 is an amplifier for LINE OUT 1. The LINE OUT 1 is off while the squelch is closed. IC11 1/2 is an amplifier for LINE OUT 2. The LINE OUT 2 is on regardless of the squelch.

In this unit, the beep sound oscillator (TR14) and the side tone oscillator (TR26) are also provided. The former generates approximately 2 kHz short sound when the switch on the panel is operated. The later generates approximately 800 Hz monitoring sound when the Morse key is pressed in CW mode. The outputs from these oscillators are applied to the AF AMP Unit to drive the speaker.

3.2.4 PA UNIT (CAH-301L-2)

The desired frequency transmit output signal from the CFL-244 RF TUNE Unit TR6 is amplified to 150W PEP in the PA UNIT CAH-301L-2. This unit contains three stages of amplification. First and second stages are Class A amplifiers and the third is Class AB push-pull.

Bias currents for TR1 and TR11 are supplied by TR52 while those for TR31 and TR32 are supplied by the bias circuit made up of TR53 and IC51. The idle currents of TR31 and TR32 are adjusted by RV51 to total about 300 mA. CD53 cathode is thermally coupled to the flange of TR31 which controls the bias according to the temperature of the transistors.

The PA Unit, together with the LPF Unit, is cooled with a fan to allow the continuous transmission. The fan is switched on and off by the IC81 and TR81 circuit according to the heatsink temperature. When the temperature rises up to approximately 60°C, the fan is activated. If the temperature rises up to approximately 90°C, the protect signal is generated by IC81 and fed to the CPU to reduce the power output. This protection is not released until the radio is turned off and on.

Two voltage regulators are physically located on this board; IC72 and TR71, which are a 9 Vdc source for analog circuits throughout the transceiver, and IC71 which is a 5 Vdc source for digital circuits throughout the transceiver.

3.2.5 LPF UNIT (CFJ-122-2)

The LPF Unit consists of six filters to attenuate harmonics from the power amplifier. The filters are selected by relays which are driven by relay driver IC1 which is controlled by a 3 bit code through IC2. The relationship between the frequencies, coded signal, and filters is as follows:

Table 3.4 Filter Selection Code, LPF Unit

Frequency Range (MHz)	FIL SEL			Filter
	4	2	1	
1.6000 - 2.5999	0	0	1	2.6 MHz LPF
2.6000 - 4.1999	0	1	0	4.2 MHz LPF
4.2000 - 6.7999	0	1	1	6.8 MHz LPF
6.8000 - 11.0999	1	0	0	11.1 MHz LPF
11.1000 - 18.0999	1	0	1	18.1 MHz LPF
18.1000 - 29.9999	1	1	0	30 MHz LPF

The sample of the transmit forward power is rectified by CD152, which composes the SWR detector together with CD151 and T151, and amplified by IC4 and IC3 to generate the APC voltage. The APC voltage controls the gain of TR2 in the IF FIL Unit to remain the transmitter

output at 150W PEP. The sample of the transmit reflected power is also rectified by CD151 and amplified by IC4. If the higher reflected power is detected, IC3 generates the APC voltage to protect the power amplifier by reducing the output.

The full power level (150W PEP) is adjusted by RV191, reduced power (50W PEP) by RV192, and coupler tuning power by RV193.

The transmit signal is fed to the antenna terminal through the antenna current detector. The antenna current is detected and rectified by T152 and CD153 to indicate the power output (Po) on the meter.

The received signal from the antenna is fed to the RF TUNE Unit through the TR switching relays K1 and K2. These relays are controlled by the CPU so that they can not be activated at the same time.

3.2.6 REF/DDS UNIT (CGK-81A)

The REF/DDS Unit includes the address decoder, 20 MHz standard oscillator (STD OSC), two Direct Digital Synthesizers (DDS), and 70 MHz PLL synthesizer.

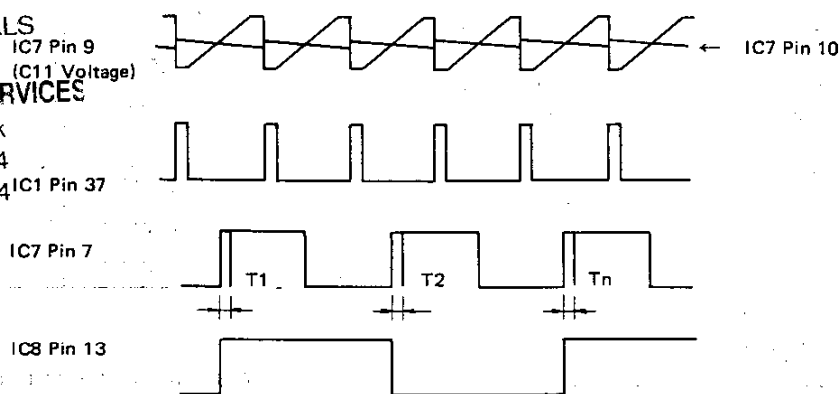
The address decoder consists of the NAND (IC13), addressable latch (IC14), and 3 to 8 line decoders (IC15 and IC16). It transfers the data from MAIN CPU to the individual synthesizers.

The 20 MHz STD OSC consists of the 20 MHz crystal oscillator (TR5), buffer (TR6-TR8), and 1/10 divider (IC9). The STD OSC supplies all the reference frequencies to the synthesizers. The 20 MHz output signal from TR5 is supplied to Pin 14

on IC19 and Pin 16 on IC1 and IC2. The output from IC19 (1/10 divider) is 2 MHz. The waveform of this signal is shaped by the LPF, and the signal is supplied to Pin 10 on IC12 and Pin 5 on IC17, and TR8. The signal amplified by TR8 is supplied to the Loop 1 Unit.

Two DDSes generate a part of the frequencies in the local frequency synthesizer and the BFO signal. The local frequency synthesizer consists of the PLL synthesizer and DDS. The PLL synthesizer on the Loop1 Unit generates 70.545-100.45499 MHz in 100 kHz steps, and the DDS on the REF/DDS Unit generates 0.545-0.445 MHz in 10 Hz steps. The DDS circuit consists of the DDS IC (IC1), level converter (IC3 and IC4), D-A converter (RA1 and RA2), constant current circuit (IC5 and TR1), comparator (IC7), and flip flop (IC8). The frequency data is serially written to IC1 by the CPU. The data is supplied to Pin 18 on IC1, and the clock signal is supplied to Pin 19 on IC1. When 24-bit data is supplied to the IC, the latch signal is applied to Pin 17 on IC1, and writes the frequency data to complete one-cycle operation. IC1 converts the serial data into parallel. According to the data, IC1 directly synthesizes the frequency from the 20 MHz reference signal supplied to Pin 16 on IC1. The output frequency from Pin 37 on IC1 is equivalent to two times the written frequency data. This output signal, containing an error, drives TR2 and discharges C11. The output data with an error is fed to Pins 38 to 47 on IC1. The data is D-A converted and supplied to Pin 10 on IC7. The following figure illustrates the waveforms at some pins described above.

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T1 - Tn varies in the range of 0 to 50 ns according to the error.

Figure 3.1 DDS Waveforms

The frequency data is output to Pins 26-35 on IC1, and the data is D-A converted by the ladder (RA2), and supplied to the constant current circuit to IC5. IC1 has the frequency compensatory circuit which assures the low phase jitter in the frequency range of 0.545-0.455 MHz of the DDS. The output signal (Pin 12 on IC8) from the DDS passes through the 0.545-0.445 MHz BPF and is supplied to Pin 1 on the mixer (IC12), where it is mixed with 2 MHz supplied to Pin 10 on IC12, and converted into 2.545-2.445 MHz. The unwanted components of the converted signal (at Pin 6 on IC12) are eliminated by the 2.545-2.445 MHz BPF, and the signal is supplied to the Loop 1 Unit.

The BFO signal synthesizer consists of the DDS (IC2), D-A converter (RA3), constant current circuit (TR3), comparator (IC6), and flip flop (IC20). The BFO synthesizer is the same circuit

configuration as the DDS block mentioned above. This DDS covers the output frequency range of 453.5-456.7 kHz in 10 Hz steps. Because the frequency range in the BFO synthesizer is so narrow that the DDS frequency compensation is not required. For this reason, Pins 26-35 on IC2 are not used. The waveform of the BFO signal (Pin 13 on IC20) from the DDS is shaped by the LPF, and then the signal is supplied to the transceiver block as the BFO signal.

The 70 MHz PLL synthesizer consists of the VCO (TR9), buffer amplifier (TR10, TR11, and TR15), PLL IC (IC17), and active LPF (TR12-TR14). The VCO output frequency from TR9 is 70 MHz. This signal passes through the buffer amplifier (TR10 and TR11), and is supplied to Pin 11 on IC17.

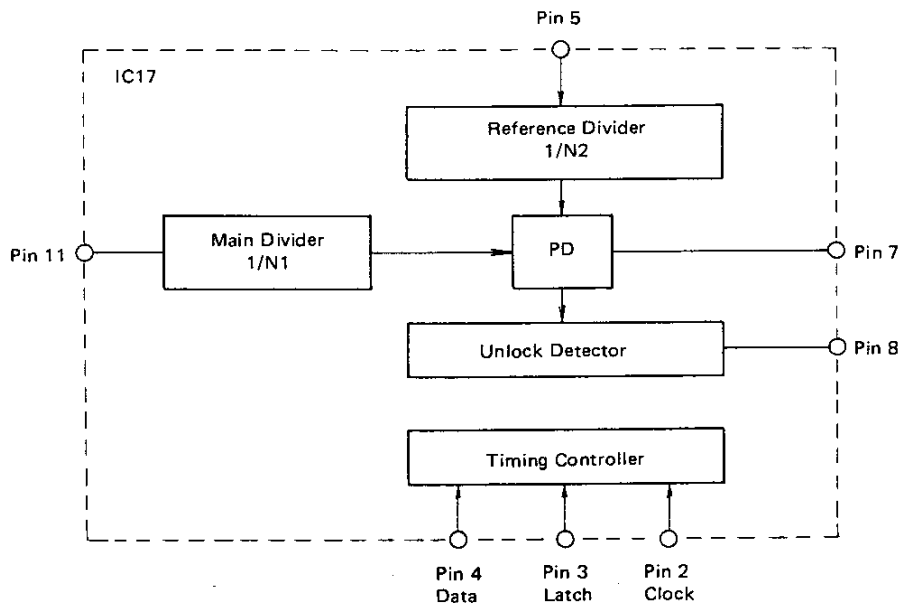


Figure 3.2 PLL IC Configuration (IC17)

Since the output frequency from this synthesizer is fixed to 70 MHz, the division number N1 and N2 are set to 70 and 2, respectively. The reference frequency of the phase detector is 1 MHz. So, 2 MHz from the 20 MHz STD OSC is supplied to Pin 5 on IC17. The data of N1 for the main divider and N2 for the reference divider is serially written to IC17 by supplying the data,

latch and clock signals from the CPU to the Pins 4, 3, and 2. The phase detector output (Pin 7 on IC17) is converted into the DC signal by the active LPF to control the frequency according to the phase error. This output from Pin 8 on IC17 goes high if the PLL is unlocked, and drives TR17 to illuminate the UNLOCK indicator CD7. CD4 and IC18 constitute the FM modulator circuit.

3.2.7 LOOP1 UNIT (CGA-145)

The Loop 1 Unit is a PLL type synthesizer and generates 70.545-100.45499 MHz frequency in 100 kHz steps. The Loop 1 Unit consists of the frequency converter (TR12, IC6, FL3, and TR13), VCO (TR1, TR2, and TR3), and PLL IC (IC5). TR12 in the frequency converter is the multiplying circuit. It multiplies 20 MHz by 3 to produce 60 MHz, and supplies it to Pin 11 on IC6. IC6 is a mixer which converts 2.545-2.445 MHz signal from DDS into 57.455-57.555 MHz signal. The unwanted components are eliminated by the SAW filter (FL3). The signal is amplified by TR13 and supplied to Pin 11 on IC4. The three VCOs in the VCO block cover the frequency range of 70.545-100.45499 MHz as follows:

TR1 VCO1	70.545- 80.45499 MHz
TR2 VCO2	80.455- 90.45499 MHz
TR3 VCO3	90.455-100.45499 MHz

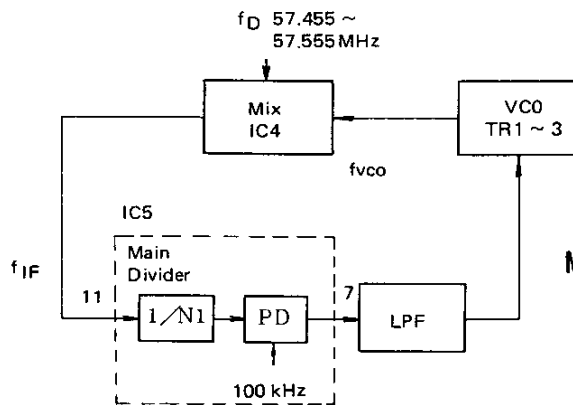
TR9, TR10, and TR11 are the switching transistors of VCO1, VCO2, and VCO3. One of these transistors is turned on according to frequency

selected. The output signal from VCO passes through the buffer amplifier (TR4), and is supplied to local amplifiers (IC1 and IC2). The output from IC1 passes through the BFP, and is supplied to the transceiver block as the 70.545-100.45499 MHz local signal. On the other hand, the output from IC2 is converted into 13-43 MHz by the mixer (IC4), passes through the LPF and buffer amplifier (IC3), and is supplied to PLL IC (IC5). The PLL IC (IC5) is the same as IC17 used in the REF/DDS Unit. The dividers has the following division range:

$$N1 = 130-430$$

$$N2 = 20$$

The division number is serially set by the CPU. The reference frequency of this PLL is 100 kHz. So, 2 MHz is supplied to Pin 5 of IC5. The relations among the transmit/receive frequency (f_{TR}), VCO frequency (f_{VCO}), frequency at IC5 Pin 11 (f_{IF}), and the division number ($N1$) for the main divider are as follows:



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Figure 3.3 Loop 1 PLL Configuration

Assume the 100 kHz digit and more of the transmit/receive frequency (f_{TR}) as F1, and the 10 kHz digit and less as F2. For instance, when the transmit/receiver frequency is 2.154 MHz, F1 is 2.1 MHz, and F2 is 0.054 MHz.

$$f_{VCO} = 70.455 + f_{TR}$$

$$f_{VCO} = f_{IF} + f_D$$

$$N1 = 10 \times (13 + F1)$$

$$f_{IF} = N1 \times 0.1 \text{ MHz}$$

$$f_D = 57.455 \text{ MHz} + F2$$

When $f_{TR} = 12.354$ MHz, then $N1$, f_{IF} , f_D , and f_{VCO} are as follows:

$$f_{TR} = \underbrace{12.354}_{F1} \text{ MHz}$$

$$f_{VCO} = 70.455 \text{ MHz} + 12.345 \text{ MHz}$$

$$= 82.809 \text{ MHz}$$

$$N1 = 10 \times (13 + 12.3) = 253$$

$$f_{IF} = 253 \times 0.1 \text{ MHz} = 25.3 \text{ MHz}$$

$$f_D = 57.455 \text{ MHz} + 0.054 \text{ MHz} = 57.509 \text{ MHz}$$

3.2.8 CPU UNIT (CDC-493A)

The major part of this unit is an 8-bit CPU (IC1). The program for the CPU is stored in the 32-kilobyte EP-ROM (IC3). The frequency of the memory channel and the various control data are stored in the 8-kilobyte CMOS RAM (IC4), and they are backed up by a lithium battery (BT1). The analog circuits are controlled by the I/O controller (IC5 and IC6) and the synthesizer circuits by IC14. IC12 is a USART for serial data communication with the antenna coupler (NFG-230), and operates at asynchronous 1200 bps. IC13 is a USART for serial data communication with the DISPLAY Unit, and operates at asynchronous 4800 bps. IC17 constitutes the tuning voltage generator circuit for the RF TUNE Unit.

When the 5V is supplied to the unit, IC16 release the reset of the CPU. Then, the CPU starts control according to the program stored in the ROM (IC3). The major control items are as follows: First, the CPU checks the RAM (IC4) if memory channel frequency and the operating data of the last power off is normally backed up. To reproduce the status before power off, the CPU controls the analog circuits through the I/O controller (IC5 and IC6), and the synthesizer circuits through IC14. The CPU sends the display data to the DISPLAY Unit through the USART (IC12). When the antenna coupler (NFG-230) is connected at this time, CPU sends the operating frequency data through the USART (IC13). When the CPU completes the above operations, it waits the next control request. The next control request occurs when:

- (1) The panel switch is operated.
- (2) The PTT switch on the microphone is operated.
- (3) The Morse key is operated in CW mode.

When the CPU detects any one of these control requests, it controls the analog and/or synthesizer circuits according to the request. When control is over, the CPU waits the next control request again.

The tuning voltage generator circuit consists of the DC/DC converter (IC17, diodes, and capacitors), D/A converter (IC8 and RA4), and control circuit (IC7, TR1, RV1, and RV2). The CPU outputs the proper data to the D/A converter according to the operating frequency. The output from the D/A converter is fed to the control circuit. The control circuit controls the DC/DC converter voltage (approx. 35V) to maintain it at 5.47V to 20V. Thus, the tuning voltage is generated and supplied to the RF TUNE Unit.

3.2.9 AF AMP UNIT (CBD-894L)

This unit consists of the AF power amplifier, collector current detection circuit, and the over current detection circuit.

The AF power amplifier amplifies the demodulated signal which is level adjusted by AF GAIN control on the DISPLAY Unit, the beep and the side tone signal from the IF AMP Unit to drive the speaker.

The collector current detection circuit detects the collector current of the final power amplifier. The collector current passes through L22 and L23, where the current is converted into magnetic flux. The magnetic flux is converted into the DC voltage by the Hall device (CD31). The DC voltage is amplified by IC31 1/2, and converted into digital signal by the A/D converter (IC14) on the DISPLAY Unit. The digital signal is processed by CPU (IC1) on the DISPLAY Unit, and displayed on the FIP.

The overcurrent detection circuit consists of the other IC31 1/2. The circuit detects the overcurrent of the collector current to protect the final transistors. If the overcurrent is detected by IC31 1/2, the \overline{PTCT} signal goes "0" and the CPU reduces the output power to approx. 50W. This protection is not released until the radio is turned off and on.

3.2.10 DISPLAY UNIT (CDE-576)

This unit includes SUB CPU, microphone amplifier, and VOX circuits. The SUB CPU consists of an 8-bit CPU (IC1), 8-kilobyte EP-ROM (IC4), and I/O controllers (IC6 and IC11). IC6 drives the FIP and LEDs to indicate the operating condition. IC11 also drives the FIP, and detects the switch operation on the panel to inform the condition to the SUB CPU. IC12 processes the data from the rotary encoder coupled to the TUNING control. IC14 is an A/D converter, which takes in the position data of the NOTCH, PBS, BWC controls, and the data for meter indication. IC2 is a USART for serial data communication with the MAIN CPU on the CPU Unit.

The microphone amplifier consists of TR16, TR17, IC20 and IC19 1/2. The voice signal from a microphone is amplified by TR16 and TR17. The output signal from the amplifier is compressed by IC20 and amplified by IC19 1/2. The signal is fed to the modulator on the IF FIL Unit.

The VOX circuit consists of IC18 and IC19 1/2. IC18 operates as the VOX and ANTI-VOX amplifiers. IC19 operates as the VOX comparator and switches transmission/reception.

3.3 Description of Optional Units

3.3.1 TONE SQ UNIT CCL-212

This Tone Squelch unit operates as a CTCSS system tone decoder in reception and as a CTCSS or BURST system tone encoder in transmission for FM mode. The LSI IC3 has the tone encoder and decoder functions, and can generate 37 frequencies from 67.0 to 250.3 Hz. One of the frequencies is selected by the selection data sent from the MAIN CPU. The data is sent in serial format from the CPU, converted into parallel by IC1 and IC2, and applied to IC3. When operating as a tone encoder, either CTCSS or BURST system can be selectable.

- CTCSS system Transmitter is modulated by the voice signal and the continuous tone signal simultaneously.
- BURST system Transmitter is modulated by the tone signal for 1 to 2 seconds at beginning of the every transmission.

This unit is activated only in the FM mode.

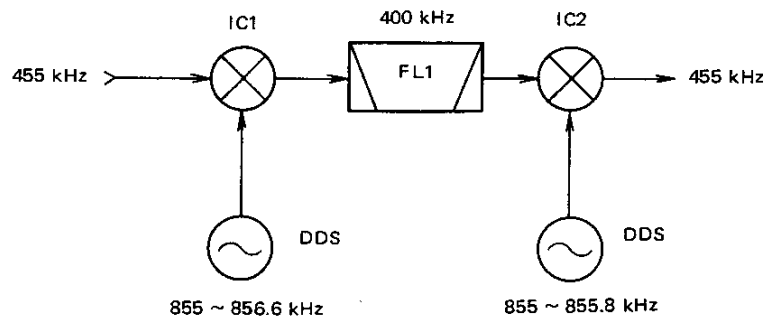


Figure 3.4 Block Diagram of BWC Unit

3.3.3 NOTCH FOLLOW UNIT CDD-366

This Notch Follow Unit allows the JST-135 to follow the notch filter frequency to the interfering signal even when the receiving frequency is changed. This unit consists of DDS IC (IC1), D-A converter (RA1), constant current source (TR1), comparator (IC3) and flip-flop (IC4), and generates 355 kHz \pm 10 kHz local signal. The operation of this circuit is the same as DDS block in the REF/DDS Unit CGK-81 A. The local signal generated is supplied to the IF AMP Unit CAE-227 and substitutes for the 357 kHz oscillator in the IF AMP Unit.

3.3.4 ECSS UNIT CMF-78

This ECSS Unit allows to select either upper or

3.3.2 BWC UNIT CFL-243

This BWC Unit controls the receiver bandwidth continuously. The received 455 kHz signal from the IF FIL Unit is applied to the MIX (IC1) and converted into 400 kHz. The signal passes through the crystal filter (FL1) and enters the MIX (IC2). The signal is reconverted into 455 kHz and fed to the IF AMP Unit. The local signal for MIX1 and MIX2 is generated by DDS in this unit. The receiver bandwidth is controlled by changing the local frequency.

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lower sideband not interfered without using a narrow band filter in the AM reception.

The received AM signal (97 kHz) is supplied to IC1, IC3 and IC4. IC1 limits the signal amplitude and feeds the signal to IC2. IC2 generates the synchronous carrier signal with the received AM signal. The carrier signal is phase-shifted to ± 45 degree and supplied to IC3 and IC4. IC3 and IC4 demodulate the AM signal. The demodulated AF signals are phase-shifted and supplied to IC7. IC7 adds and subtracts the two AF signals to separate LSB and USB components. Thus the LSB or USB component of the AM signal is detected and one of the sidebands can be selected for interferedless AM reception.

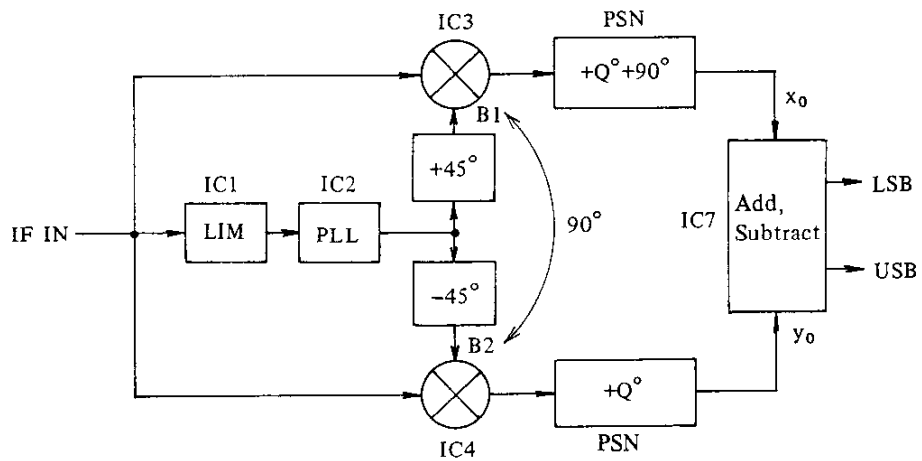


Figure 3.5 ECSS Unit Configuration

3.3.5 RS-232C INTERFACE UNIT CMH-741

This unit allows the remote-control of various functions with a personal computer or other external device having an RS-232C interface.

IC1 is a USART for data communication with

the CPU unit CDC-493A. Photo-couplers (CD1 and CD2) isolates IC1 ports from RS-232C lines.

IC5 generates ± 12 V dc required for RS-232C signal level.

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4. ADJUSTMENT

4.1 Preparation

4.1.1 Presetting

Set the switches and the controls as shown below.

LOCK switch	OFF
RF GAIN	Fully clockwise
NOTCH control	Fully counterclockwise (OFF)
SQUELCH control	Fully counterclockwise
PBS control	Center
NB switch	OFF
ATT switch	OFF
VOX switch	OFF
COMP control	Fully counterclockwise
Po control	Fully counterclockwise
MIC control.....	Fully counterclockwise

4.1.2 Required Measuring Instruments

DC (AC) voltmeter	Digital voltmeter
Frequency counter	10 kHz to 100 MHz
Vacuum tube voltmeter	455 kHz to 150 MHz, (RF voltmeter)
	0.001 to 3 Vrms
VU meter	600 Ω , 0 to 35 dBm
AF level meter.....	600 Ω /10 k Ω , -50 to 30 dBm
Distortion meter	600 Ω /10 k Ω , 0.5 to 30%

AF oscillator	600 Ω , -70 dBm to 20 dBm, 100 Hz to 5 kHz
SSG	50 Ω , -20 to 126 dB μ V, 90 kHz to 150 MHz
	AM, FM modulation, with external modulating input
Tracking scope	50 Ω , 400 kHz to 100 MHz
Spectrum analyzer.....	50 Ω , 400 kHz to 100 MHz
Linear detector	70 MHz, Frequency deviation Max. \pm 10 kHz
Automatic keyer	Being able to switch the RF signal ON for 20 mS and OFF for 100 mS
Oscilloscope	Two channels, DC to 100 MHz
Wattmeter	50 Ω , DC to 30 MHz, Max. 250 W
Directional coupler	Max. 250 W
DC power supply	13.8 V, Max. 40 A
DC ammeter	Max. 10 A, 30 A
Audio transformer	4 Ω : 600 Ω (3W)
Headphones	ST-3 or equivalent
Morse key	KY-3A or equivalent
DC dummy resistor	0.4 to 30 Ω , Max. 400 W

4.1.3 Standard Test Circuit

(1) Sensitivity Measurement

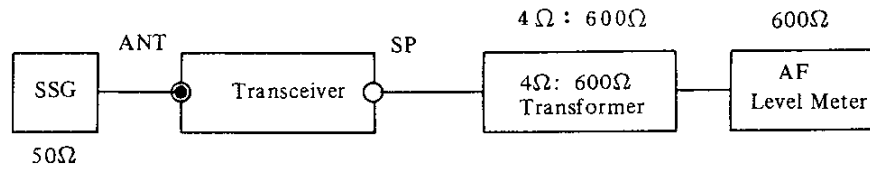


Figure 4.1

(2) Power Output Measurement (SSB)

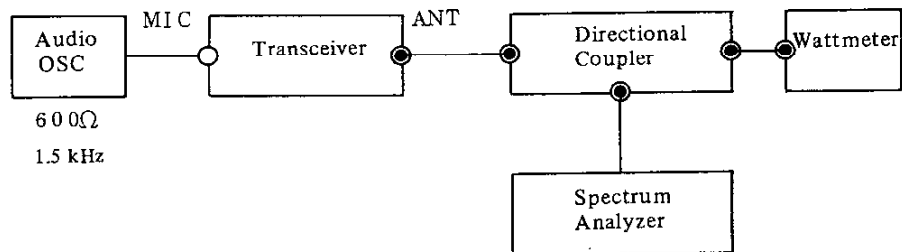


Figure 4.2

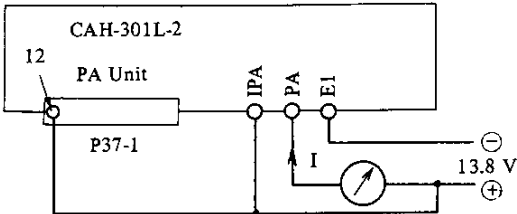
4.1.4 Notes

- (1) "fr" means receiving frequency and "ft" means transmitting frequency.
- (2) SSG level is indicated by "emf".

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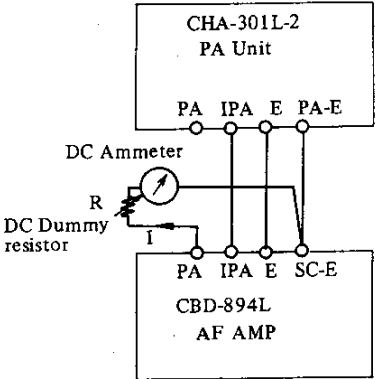
4.2 Unit Adjustment

4.2.1 PA UNIT CAH-301L-2

No.	Item	Adjusting Procedure	Rating (reference)
1	PA idle current adjustment	<p>1 Disconnect P44 and set RV51 fully counterclockwise.</p> <p>2 Connect a power supply (13.8V dc) and an ammeter as shown below:</p>  <p>3 Adjust the idle current by RV51.</p>	300 ±20 mA

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4.2.2 AF AMP UNIT CBD-894L

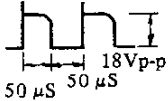
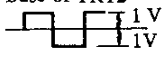
No.	Item	Adjusting Procedure	Rating (reference)
1	IC meter calibration	<p>1 Disconnect P44 and connect an ammeter and a dc dummy resistor as shown below:</p>  <p>2 Transmit and select IC meter display.</p> <p>3 Adjust R so that the ammeter reads 30A.</p> <p>4 Adjust RV32 on the CBD-894L AF AMP Unit so that the IC meter on the panel indicates 30A.</p> <p>5 Adjust R so that the ammeter reads 5A.</p> <p>6 Adjust RV31 on the CBD-894L so that the IC meter indicates 5A.</p> <p>7 Repeat steps 4 to 6 until above two are satisfied.</p> <p>8 IC meter indication should be "0" when I is zero.</p> <p style="text-align: center;">FOR SERVICE MANUALS CONTACT: MAURITRON TECHNICAL SERVICES www.mauritron.co.uk TEL: 01844 - 351694 FAX: 01844 - 352554</p>	<p>30 ± 1 digit</p> <p>5 ± 1 digit</p>

4.2.3 CPU UNIT CDC-493A

No.	Item	Adjusting Procedure	Rating (reference)
1	TUNE voltage adjustment	<ol style="list-style-type: none"> 1 Connect a digital voltmeter to TP1. 2 Set the receiving frequency to 400 kHz and adjust RV2 so that TP1 voltage becomes 5.74V. 3 Set the receiving frequency to 799.9 kHz and adjust RV1 so that TP1 voltage becomes 20 V. 4 Repeat steps 2 and 3 until the above two are satisfied. 	<p>5.72 ~ 5.76 V</p> <p>19.8 ~ 20.2 V</p>

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4.2.4 DISPLAY Unit CDE-576

No.	Item	Adjusting Procedure	Rating (reference)
1	Fluorescent Indication Panel	1 Connect an oscilloscope to the collector of TR12 and check the waveform.	Collector of TR12  18Vp-p 50µs 50µs Base of TR12  1V 1V

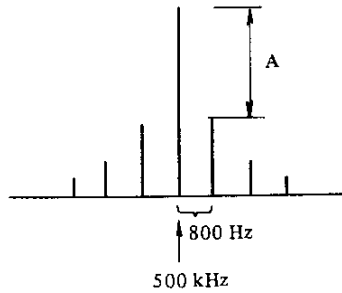
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4.2.5 LOOP1 Unit CGA-145

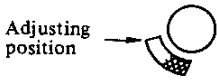
No.	Item	Adjusting Procedure	Rating (reference)												
1	AVR adjustment	<ol style="list-style-type: none"> 1 Connect a digital voltmeter to TP4. 2 Adjust RV1 so that the TP4 voltage becomes 8.5 V. 	8.4 ~ 8.6 V												
2	60 MHz tuning	<ol style="list-style-type: none"> 1 Connect an RF voltmeter to TP5. 2 Adjust T1 so that the TP5 voltage becomes maximum. 													
3	57 MHz tuning	<ol style="list-style-type: none"> 1 Connect an RF voltmeter to TP6. 2 Adjust T2 so that the TP6 voltage becomes maximum. 													
4	VCO adjustment	<ol style="list-style-type: none"> 1 Connect a digital voltmeter to TP1. 2 Set the receiving frequency as shown below and adjust the proper trimmer capacitor so that the TP1 voltage becomes 7.5 V. <table border="1" data-bbox="587 936 1380 1131"> <thead> <tr> <th>Receiving frequency</th> <th>Trimmer capacitor</th> <th>TP1 voltage</th> </tr> </thead> <tbody> <tr> <td>9.999 MHz</td> <td>CV1</td> <td>7.5 ±0.1 V</td> </tr> <tr> <td>19.999 MHz</td> <td>CV2</td> <td>7.5 ±0.1 V</td> </tr> <tr> <td>29.999 MHz</td> <td>CV3</td> <td>7.5 ±0.1 V</td> </tr> </tbody> </table>	Receiving frequency	Trimmer capacitor	TP1 voltage	9.999 MHz	CV1	7.5 ±0.1 V	19.999 MHz	CV2	7.5 ±0.1 V	29.999 MHz	CV3	7.5 ±0.1 V	
Receiving frequency	Trimmer capacitor	TP1 voltage													
9.999 MHz	CV1	7.5 ±0.1 V													
19.999 MHz	CV2	7.5 ±0.1 V													
29.999 MHz	CV3	7.5 ±0.1 V													
5	Operating level check	<ol style="list-style-type: none"> 1 Check the operating level with an RF voltmeter. 3 The PLL (LOOP1) shall not be locked out in the frequency range of 100 kHz to 29.99999 MHz. 	<p>CD11 shall not illuminate continuously.</p> <table border="1" data-bbox="911 1355 1380 1451"> <tbody> <tr> <td>Pin 11 of IC5</td> <td>More than 0.1 Vrms</td> </tr> <tr> <td>TP3</td> <td>More than 0.12 Vrms</td> </tr> </tbody> </table>	Pin 11 of IC5	More than 0.1 Vrms	TP3	More than 0.12 Vrms								
Pin 11 of IC5	More than 0.1 Vrms														
TP3	More than 0.12 Vrms														

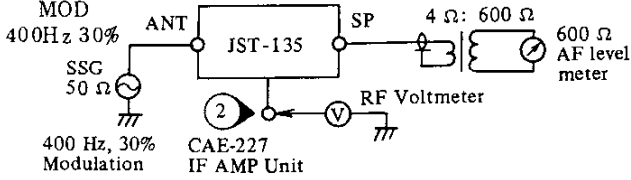
4.2.6 REF DDS Unit CGK-81A

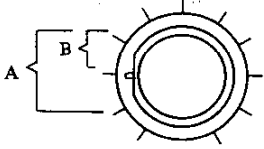
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No.	Item	Adjusting Procedure	Rating (reference)
1	DDS cancellation adjustment	<ol style="list-style-type: none"> 1 Connect a spectrum analyzer to TP1. (center freq. = 500 kHz, span = 10 kHz) 2 Set the receiving frequency to 0.4501 MHz and the mode to AM. 3 Adjust RV1 so that the side spurious becomes minimum. (A = max.) 	
2	2 MHz balance adjustment	<ol style="list-style-type: none"> 1 Connect a spectrum analyzer to TP4. (center freq. = 2.5 MHz, span = 5 MHz) 2 Set the receiving frequency to 0.4501 MHz and the mode to AM. 3 Adjust RV3 so that the 2 MHz component becomes minimum. 	
3	70 MHz PLL adjustment	<ol style="list-style-type: none"> 1 Connect a digital voltmeter to TP8. 2 Adjust CV2 so that the TP8 voltage becomes 3.5 V and check that CD7 is extinct (locked condition). 3 CD7 should illuminate when TP8 is grounded (unlocked condition). 4 Connect an RF voltmeter to TP9 and adjust T1 so that the TP9 voltage becomes maximum. 	3.4 ~ 3.6 V
4	Frequency adjustment	<ol style="list-style-type: none"> 1 Connect a frequency counter to TP9. 2 Adjust CV1 so that the TP9 frequency becomes 70 MHz. 	70.0 MHz
5	FM modulation adjustment	<ol style="list-style-type: none"> 1 Connect a linear detector to TP9. 2 Connect an audio oscillator to MIC connector. (level = -40 dBm, freq. = 2 kHz) 3 Set the COMP control to fully counterclockwise and the MIC control to center. 4 Tune the linear detector to 70 MHz. 5 Adjust RV4 so that the frequency deviation becomes ±5 kHz. 	

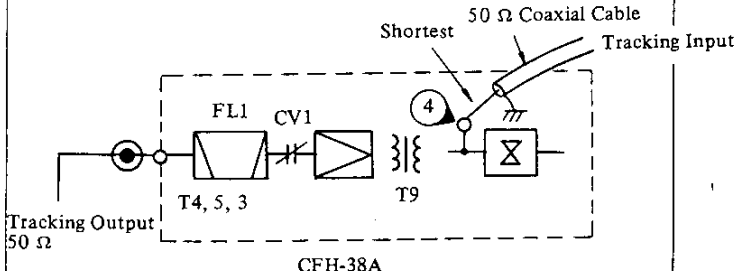
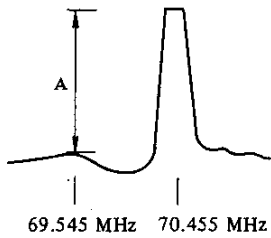
4.2.7 IF AMP Unit CAE-227

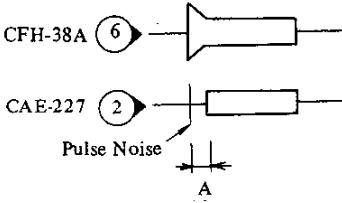
No.	Item	Adjusting Procedure	Rating (reference)
1	Notch frequency adjustment	<ol style="list-style-type: none"> 1 Connect a frequency counter and an RF voltmeter to TP4. 2 Set the NOTCH control to center. 3 Adjust RV2 so that the TP4 frequency becomes 357 kHz. 	
2	IF AMP tuning	<ol style="list-style-type: none"> 1 Set the controls and conditions as follows: <ul style="list-style-type: none"> RF GAIN : fully clockwise NOTCH : fully counterclockwise AGC : OFF MODE : AM NOTCH : OFF BANDWIDTH : INTER ATT : OFF 2 Connect an RF voltmeter to TP2. 3 Connect an SSG (7.1 MHz, 10 dBμ) to ANT connector. 4 Set the receiving frequency to 7.1 MHz. 5 Adjust T1 to T3 and T5 so that the TP2 voltage becomes maximum. 	
3	NOTCH ON/OFF adjustment	<ol style="list-style-type: none"> 1 Adjust RV3 so that CD4 goes off at the OFF position of the NOTCH control and illuminates at the ON position. <div style="text-align: center;">  <p>Adjusting position</p> </div>	
4	NOTCH adjustment	<ol style="list-style-type: none"> 1 Connections and conditions are the same as No. 2. 2 Set the SSG level to 40 dBμ. 3 Set the NOTCH control to center. 4 Adjust RV1 so that the RF voltmeter indication becomes minimum. 	
5	AGC adjustment	<ol style="list-style-type: none"> 1 Set the operating conditions as follows: <ul style="list-style-type: none"> Frequency : 7.1 MHz MODE : AM BANDWIDTH : INTER AGC : ON NOTCH : OFF ATT : OFF 2 Connect measuring instruments as follows: 	

No.	Item	Adjusting Procedure	Rating (reference)						
		 <p>3 Set the SSG level to 100 dBμ.</p> <p>4 Adjust RV4 so that the TP2 voltage becomes 0.07 Vrms.</p> <p>5 Set the MODE to LSB and check the TP2 voltage.</p> <p>☆ Adjusting resistor: R95</p>	0.065 ~ 0.075 Vrms						
6	S-meter adjustment	<p>1 Connect measuring instruments as shown in Figure 4.1.</p> <p>2 Set the operating conditions as follows:</p> <p style="margin-left: 40px;">Frequency : 7.1 MHz AGC : ON ATT : OFF MODE: LSB BANDWIDTH : INTER</p>							
7	Detector carrier level	<p>2 Set the SSG frequency to 7.1 MHz and the level to 40 dBμ.</p> <p>3 Adjust RV5 so that S-meter indicates S9.</p> <p>1 Connections and operating conditions are the same as No. 5. Set the SSG level to 40 dBμ.</p> <p>2 Check the TP3 voltage in both AM and LSB modes.</p> <p>☆ Adjusting resistors</p> <p style="margin-left: 40px;">AM : R90 LSB : R67</p>	<table border="1" data-bbox="1066 1373 1426 1518"> <thead> <tr> <th>MODE</th> <th>TP3 voltage</th> </tr> </thead> <tbody> <tr> <td>AM</td> <td>0.2 ~ 0.3 Vrms</td> </tr> <tr> <td>LSB</td> <td>0.04 ~ 0.06 Vrms</td> </tr> </tbody> </table>	MODE	TP3 voltage	AM	0.2 ~ 0.3 Vrms	LSB	0.04 ~ 0.06 Vrms
MODE	TP3 voltage								
AM	0.2 ~ 0.3 Vrms								
LSB	0.04 ~ 0.06 Vrms								
8	LINE OUT adjustment	<p>1 Connect measuring instruments as shown in Figure 4.1. Set the operating conditions as follows:</p> <p style="margin-left: 40px;">Frequency : 7.1 MHz AGC : SLOW MODE : LSB</p> <p style="text-align: center;">FOR SERVICE MANUALS CONTACT: MAURITRON TECHNICAL SERVICES www.mauritron.co.uk TEL: 01844 - 351694 FAX: 01844 - 352554</p>							

No.	Item	Adjusting Procedure	Rating (reference)									
		<p>Set the SSG level to 40 dBμ.</p> <p>2 Connect an AF level meter (600 Ω) to pin 8 or pin 9 in ACCESSORY connector (J51) located on the rear panel.</p> <p>3 Adjust RV9 or RV8 so that LINE OUT1 or LINE OUT2 level becomes -2 dBm respectively.</p> <table border="1" data-bbox="555 595 1110 741"> <thead> <tr> <th></th> <th>Output</th> <th>Trimmer resistor</th> </tr> </thead> <tbody> <tr> <td>LINE OUT1</td> <td>Pin 8 of J51</td> <td>RV9</td> </tr> <tr> <td>LINE OUT2</td> <td>Pin 9 of J51</td> <td>RV8</td> </tr> </tbody> </table>		Output	Trimmer resistor	LINE OUT1	Pin 8 of J51	RV9	LINE OUT2	Pin 9 of J51	RV8	
	Output	Trimmer resistor										
LINE OUT1	Pin 8 of J51	RV9										
LINE OUT2	Pin 9 of J51	RV8										
9	FM receiving circuit	<p>1 Connect measuring instruments as shown in Figure 4.1. Set the receiving frequency to 7.1 MHz and MODE to FM. Set the SSG frequency to 7.1 MHz, modulation to ± 5 kHz and the level to 40 dBμ.</p> <p>2 Adjust T6 so that the AF output becomes maximum without distortion.</p> <p>3 Select CENTER meter indication.</p> <p>4 Adjust RV7 so that meter indicates the center position.</p>										
10	Squelch adjustment	<p>1 Set the conditions as follows:</p> <p style="margin-left: 40px;">AGC : FAST</p> <p style="margin-left: 40px;">RF GAIN : Fully clockwise</p> <p style="margin-left: 40px;">ANT connector : Open</p> <p style="margin-left: 40px;">MODE : LSB</p> <p>2 Turn the SQUELCH control to check the squelch threshold position.</p> <p style="margin-left: 40px;">☆ Adjusting resistor: R167</p> <p>3 Set the MODE to FM. Adjust RV6 so that the squelch is turned ON or OFF at the assigned position of the SQUELCH control.</p> <div style="text-align: center;">  </div>	<p>In the A range</p> <p>In the B range.</p>									

4.2.8 IF FILTER Unit CFH-38A

No.	Item	Adjusting Procedure	Rating (reference)
1	70.455 MHz Filter (MCF) adjustment	<p>CAUTION: This adjustment requires special tool. The adjustment should be performed only when required.</p> <p>1 Connect a tracking scope as shown below:</p>  <p>2 Adjust CV1 and T9 so that 70.455 MHz point becomes maximum.</p> <p>3 Adjust T3 to T5 so that 6 dB bandwidth becomes more than ± 7.5 kHz. Inband response is flattened by T3 and T4. Bandwidth is adjusted by T5.</p> <p>4 Adjust T3 and T4 so that 69.545 MHz point attenuation becomes more than 70 dB.</p>  <p>A is more than 70 dB</p> <p>FOR SERVICE MANUALS CONTACT: MAURITRON TECHNICAL SERVICES www.mauritron.co.uk TEL: 01844 - 351694 FAX: 01844 - 352554</p>	

No.	Item	Adjusting Procedure	Rating (reference)
		 <p>CFH-38A ⑥</p> <p>CAE-227 ②</p> <p>Pulse Noise</p> <p>A</p>	
	NB-2 check <u>Transmitter</u> <u>Circuit</u>	11 Confirm that A becomes wider when NB-2 is ON.	
5	<u>Tuning</u> <u>adjustment</u>	1 Terminate J44-1 on the RF TUNE Unit CFL-244 with a 50 Ω load and connect an RF voltmeter to the load. 2 Feed the 1.5 kHz, -70 dBm signal to the MIC connector on the panel. 3 Turn the COMP control fully counterclockwise and the MIC control fully clockwise. 4 Set the MODE to LSB and transmit on the frequency of 7.05 MHz. 5 Adjust T2 so that the J44-1 output level becomes maximum. 6 Check the J44-1 output level by changing the MODE to CW and FM respectively.	More than 1 Vrms

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4.2.9 RF TUNE Unit CFL-244

No.	Item	Adjusting Procedure	Rating (reference)																																						
1	Tuning adjustment	<p>1 Connect the tracking scope output to the RX ANT IN connector on the rear panel and the tracking scope input to the TP7.</p> <p>2 Adjust proper parts according to the following table.</p> <table border="1" data-bbox="512 517 1161 1357"> <thead> <tr> <th data-bbox="512 517 852 591">Frequency Range</th> <th data-bbox="852 517 1023 591">Receiving Frequency</th> <th data-bbox="1023 517 1161 591">Adjusting parts</th> <th data-bbox="1161 517 1372 770"></th> </tr> </thead> <tbody> <tr> <td data-bbox="512 591 852 770">400 kHz LPF</td> <td data-bbox="852 591 1023 770">Any of 0.4 MHz or less</td> <td data-bbox="1023 591 1161 770"></td> <td data-bbox="1161 591 1372 770">400 kHz: less than 3 dB 600 kHz: more than 30 dB referenced to 300 kHz level</td> </tr> <tr> <td data-bbox="512 770 676 844" rowspan="2">0.4~1.6 MHz</td> <td data-bbox="676 770 852 844">SUB 0.8~1.599 MHz</td> <td data-bbox="852 770 1023 844">0.8 MHz 1.599 MHz</td> <td data-bbox="1023 770 1161 844">T11, T12 -</td> <td data-bbox="1161 770 1372 1357" rowspan="8">Tuning error: less than 3 dB</td> </tr> <tr> <td data-bbox="676 844 852 916">MAIN 0.4~0.799 MHz</td> <td data-bbox="852 844 1023 916">0.799 MHz 0.4 MHz</td> <td data-bbox="1023 844 1161 916">CV5, CV6 -</td> </tr> <tr> <td data-bbox="512 916 676 990" rowspan="2">1.6~4.4 MHz</td> <td data-bbox="676 916 852 990">SUB 2.65~4.399 MHz</td> <td data-bbox="852 916 1023 990">2.65 MHz 4.399 MHz</td> <td data-bbox="1023 916 1161 990">T9, T10 -</td> </tr> <tr> <td data-bbox="676 990 852 1061">MAIN 1.6~2.649 MHz</td> <td data-bbox="852 990 1023 1061">2.649 MHz 1.6 MHz</td> <td data-bbox="1023 990 1161 1061">CV3, CV4 -</td> </tr> <tr> <td data-bbox="512 1061 676 1135" rowspan="2">4.4~12.3 MHz</td> <td data-bbox="676 1061 852 1135">SUB 7.4~12.299 MHz</td> <td data-bbox="852 1061 1023 1135">7.4 MHz 12.299 MHz</td> <td data-bbox="1023 1061 1161 1135">T7, T8 -</td> </tr> <tr> <td data-bbox="676 1135 852 1207">MAIN 4.4~7.399 MHz</td> <td data-bbox="852 1135 1023 1207">7.399 MHz 4.4 MHz</td> <td data-bbox="1023 1135 1161 1207">CV1, CV2 -</td> </tr> <tr> <td data-bbox="512 1207 852 1281">12.3~20.5 MHz</td> <td data-bbox="852 1207 1023 1281">12.3 MHz 20.499 MHz</td> <td data-bbox="1023 1207 1161 1281">T5, T6 -</td> <td data-bbox="1161 1207 1372 1357"></td> </tr> <tr> <td data-bbox="512 1281 852 1357">20.5~30 MHz</td> <td data-bbox="852 1281 1023 1357">20.5 MHz 29.999 MHz</td> <td data-bbox="1023 1281 1161 1357">T3, T4 -</td> <td data-bbox="1161 1281 1372 1357"></td> </tr> </tbody> </table> <p data-bbox="512 1402 1161 1921">(Example) For adjusting the "SUB 0.8 ~ 1.599 MHz" range:</p> <ol data-bbox="512 1491 1161 1637" style="list-style-type: none"> (1) Set the frequency to 0.8 MHz. (2) Adjust T11 and T12 so that the tuning frequency becomes 0.8 MHz. (3) Set the frequency to 1.599 MHz and check the tuning. If detuned, readjust T11 and T12. 	Frequency Range	Receiving Frequency	Adjusting parts		400 kHz LPF	Any of 0.4 MHz or less		400 kHz: less than 3 dB 600 kHz: more than 30 dB referenced to 300 kHz level	0.4~1.6 MHz	SUB 0.8~1.599 MHz	0.8 MHz 1.599 MHz	T11, T12 -	Tuning error: less than 3 dB	MAIN 0.4~0.799 MHz	0.799 MHz 0.4 MHz	CV5, CV6 -	1.6~4.4 MHz	SUB 2.65~4.399 MHz	2.65 MHz 4.399 MHz	T9, T10 -	MAIN 1.6~2.649 MHz	2.649 MHz 1.6 MHz	CV3, CV4 -	4.4~12.3 MHz	SUB 7.4~12.299 MHz	7.4 MHz 12.299 MHz	T7, T8 -	MAIN 4.4~7.399 MHz	7.399 MHz 4.4 MHz	CV1, CV2 -	12.3~20.5 MHz	12.3 MHz 20.499 MHz	T5, T6 -		20.5~30 MHz	20.5 MHz 29.999 MHz	T3, T4 -		
Frequency Range	Receiving Frequency	Adjusting parts																																							
400 kHz LPF	Any of 0.4 MHz or less		400 kHz: less than 3 dB 600 kHz: more than 30 dB referenced to 300 kHz level																																						
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12.3~20.5 MHz	12.3 MHz 20.499 MHz	T5, T6 -																																							
20.5~30 MHz	20.5 MHz 29.999 MHz	T3, T4 -																																							

No.	Item	Adjusting Procedure	Rating (reference)
<u>Receiver Circuit</u>			
2	1st MIX injection level check	1 Set RV1 to center. 2 Connect an RF voltmeter to TP10. 3 Check the 1st MIX injection level by changing the frequency from 100 kHz to 29.999 MHz in 1 MHz steps. ☆ Adjusting resistor: R119	More than 0.5 Vrms
3	Tuning adjustment	1 Connect measuring instruments as shown in Figure 4.1. Set the frequency to 7.1 MHz, MODE to LSB and AGC to OFF. 2 Connect an RF voltmeter to TP2 on the CAE-227. 3 Set the SSG level to 10 dBμ and adjust T14 so that the RF voltmeter reading becomes maximum.	
<u>Transmitter Circuit</u>			
4	Gain check	1 Terminate J44-1 with a 50 Ω load and connect an RF voltmeter to the load. 2 Feed the 1.5 kHz, -70 dBm signal to the MIC connector. 3 Turn the COMP control fully counterclockwise and the MIC control fully clockwise. 4 Set the MODE to LSB and transmit on the frequency of 7.05 MHz. 5 Check the RF voltmeter reading.	More than 1 Vrms
5	Exciter output level check	1 Terminate J57 on the rear panel with a 50 Ω load and connect an RF voltmeter to the load. 2 Connect P57 to J57-1. 3 Turn ON the exciter output by user definition No. 6. 4 Set the MODE to LSB and transmit on the frequency of 7.05 MHz. Check the RF voltmeter reading. 5 Turn OFF the exciter output by user definition No. 6.	More than 1 Vrms
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4.3 Overall Adjustment

4.3.1 Receiver

No.	Item	Adjusting Procedure	Rating (reference)
1	1st MIX balance adjustment	<ol style="list-style-type: none">1 Set the receiving frequency to 100 kHz and MODE to CW.2 Adjust RV1 on the CFL-244 so that the beat sound level becomes minimum.	

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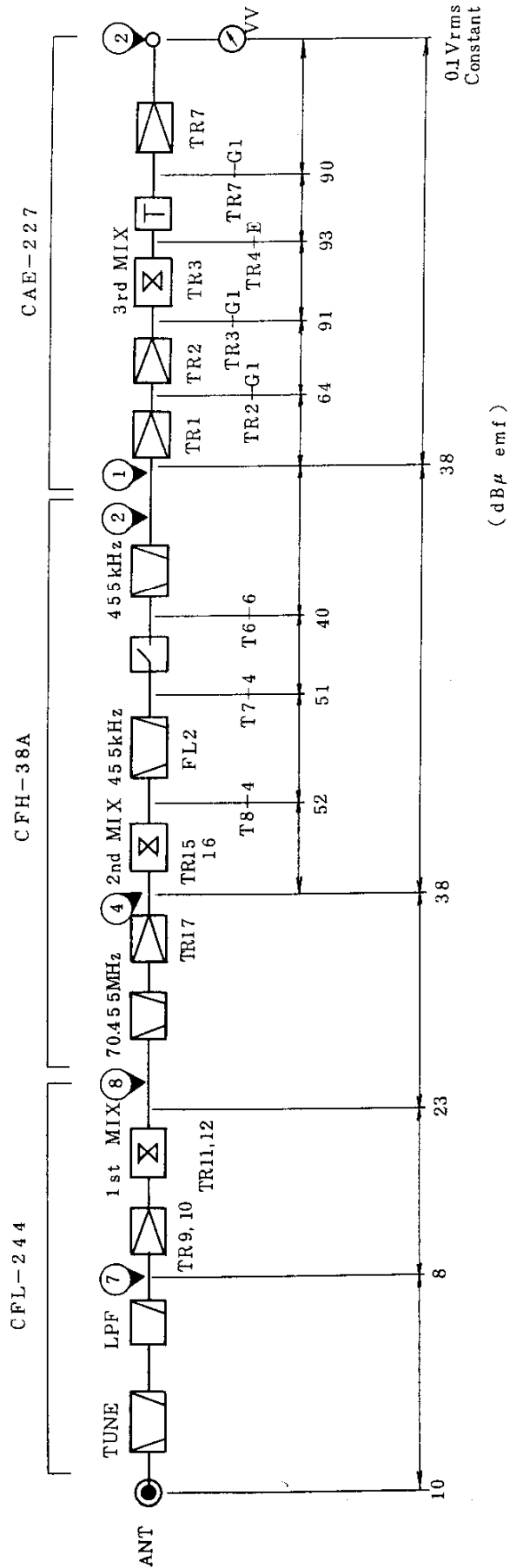
4.3.2 Transmitter

No.	Item	Adjusting Procedure	Rating (reference)
1	APC adjustment	<ol style="list-style-type: none"> 1 Set the frequency to 7.05 MHz, MODE to FM and Po control to fully clockwise. 2 Adjust RV191 on the LPF unit CFJ-122-2 so that the power output becomes 150W. 	
2	AME transmit adjustment Carrier level adjustment	<ol style="list-style-type: none"> 1 Feed the 1.5 kHz, -60 dBm to the MIC connector. 2 Turn the COMP control fully clockwise and the MIC connector fully counterclockwise. 3 Connect an oscilloscope to a directional coupler. 4 Set the MODE to AM and transmit on the frequency of 7.05 MHz. 5 Adjust RV2 (AMC) on the CFH-38A so that the carrier output becomes 50W. 6 Set the MIC control to center and adjust RV1 (AML) so that the modulation depth becomes 100%. 	
3	LINE IN level adjustment LINE IN 1 adjustment LINE IN 2 adjustment	<ol style="list-style-type: none"> 1 Feed the 1.5 kHz, 0 dBm signal to pin 16 in the J51 connector on the rear panel. 2 Turn the Po control fully clockwise. 3 Set the MODE to LSB and transmit on the frequency of 7.05 MHz. 4 Adjust RV1 on the Mother Board so that the power output becomes 150W. 5 Feed the 1.5 kHz signal to pin 17 in the J51 connector and adjust RV2 on the Mother Board so that the power output becomes 150W. 	

4.4 Level Diagram
 4.4.1 Receiver

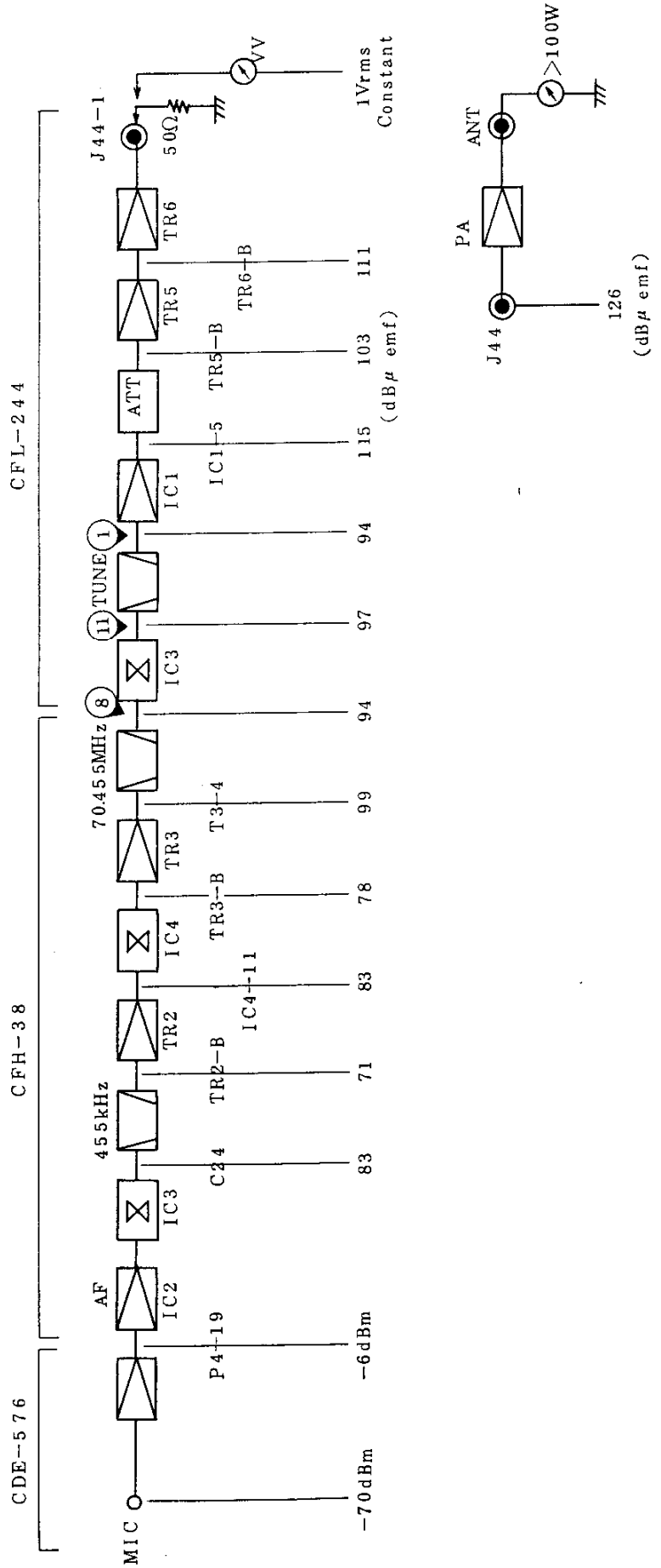
F_r = 7.1MHz
 MODE : LSB
 AGC : OFF

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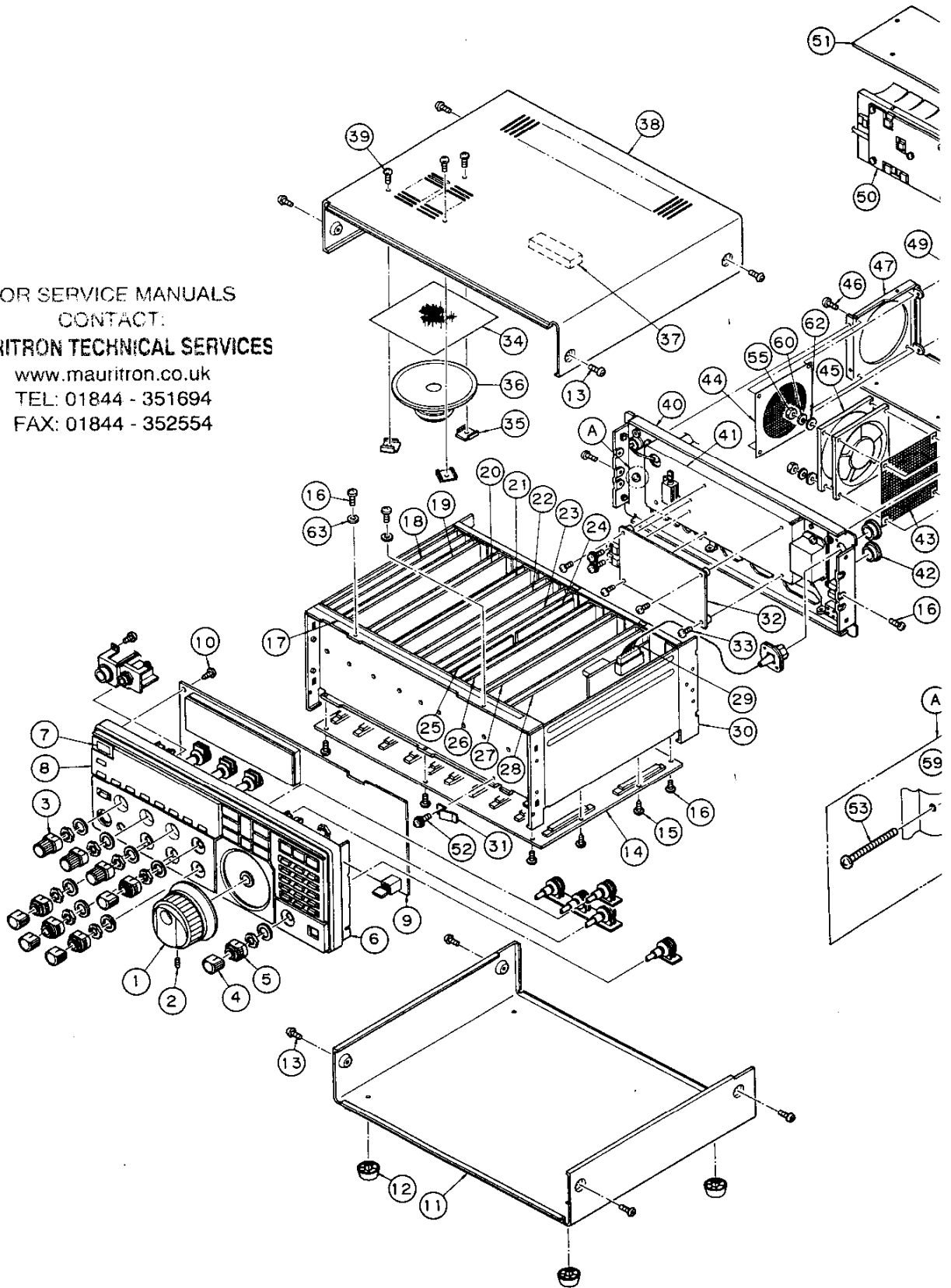
4.4.2 Transmitter

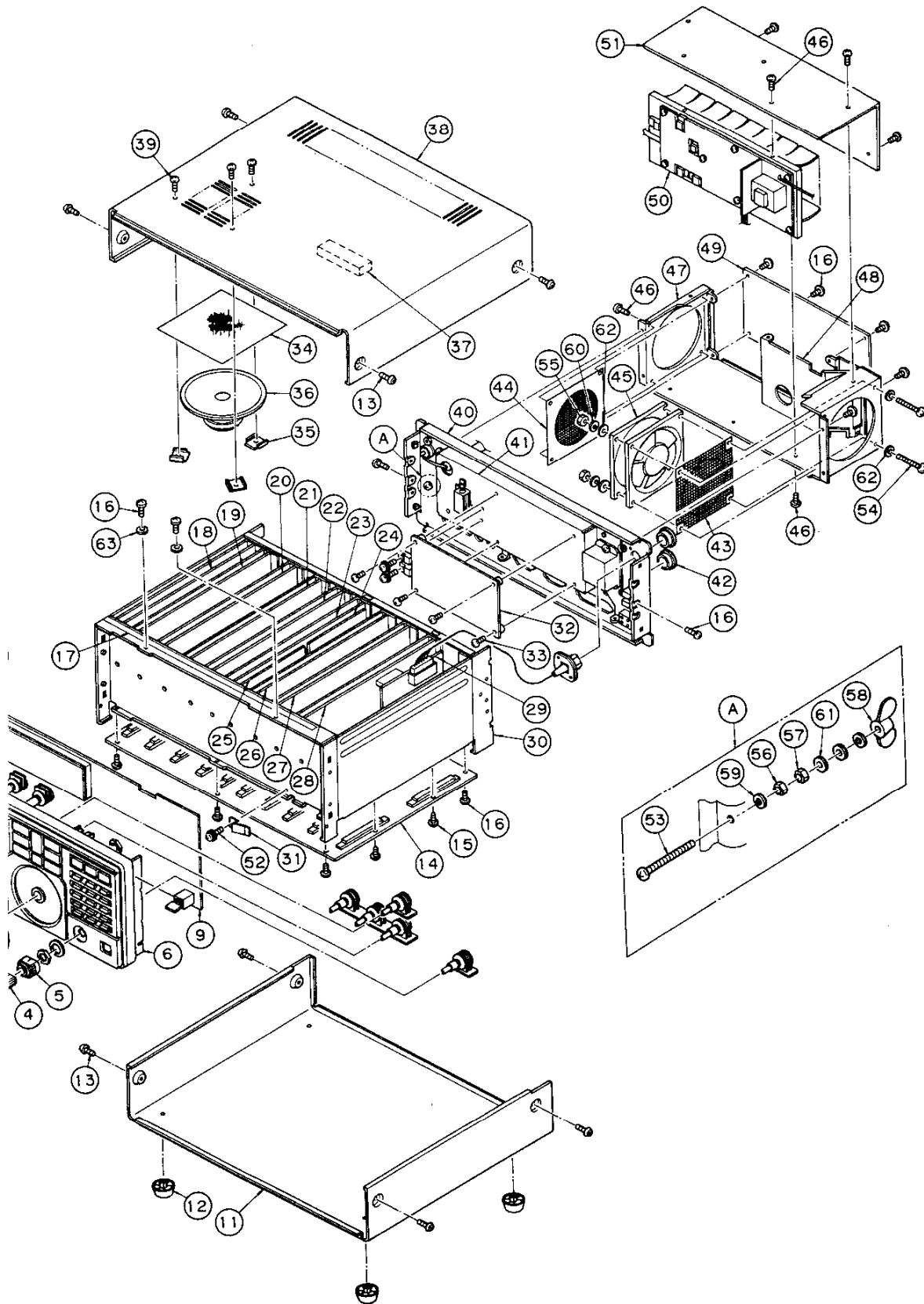
$F_t = 70.5\text{MHz}$
 MODE : LSB
 COMP : Min
 MIC : Max

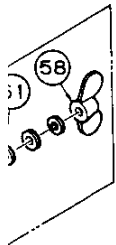
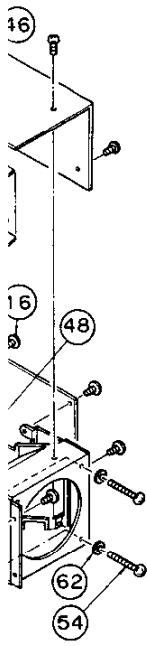


5. ASSEMBLY DRAWING

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LOCATION	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	Diag	MPH001145	1	
2	Screw	BSHT030045	1	3T3x4
3	Kneb	MPH001135	3	
4	Kneb	MTV000317	5	
5	Kneb	MTV000318	5	
6	Panel	MPBC07727	1	
7	JRC badge	MPNL09514	1	
8	Filter	MPDL00926	1	
9	Display unit	CDE-276	1	MDLW03760
10	Screw	BRTG02970	7	M3x8 FE ZMC
11	Cover bottom	MTD004496	1	
12	Leg	BRKU00159	4	NO.1052
13	Screw	BRTG03311	8	M3x8 Bs BNM2
14	Motherboard	CFQ-2625A	1	MDYW02679
15	Screw	BRTG00970	20	M2.6x6 FE ZMC
16	Screw	BRTG01225	16	M3x6 FE ZMC
17	Label	MPNN21126A	1	
18	RF Tune unit	CFL-244	1	MDNW05951
19	IF Filter unit	CFH-38A	1	MDNW05952
20	BWC unit	CFL-243	1	MDNW05954
21	IF AMP unit	CAE-227	1	MDHW00825
22	ECSS unit	CMF-78	1	MDNW01524
23	Daughter Board unit	CMH-742	1	MDYW02680
24	Tone SQ unit	CCL-212	1	MDCW02209
25	Notch Follow unit	CDQ-366	1	MDLW03761
26	REF DDS unit	CGX-81A	1	MDEW00769
27	Loop I unit	CGA-145	1	MDEW00768
28	CPU unit	CDC-493A	1	MDLW03759
29	RS-232C interface unit	CMH-741	1	MDYW02681
30	Chassis assy	MPBC07977	1	
31	Accessory	5ZKAH00006	1	
32	AF AMP	CBO-894L	1	MDRW01698
33	Screw	BRTG01227	4	M3x10 FE ZMC
34	Speaker grill cloth	MTD002537	1	
35	Mounting plate	MTB099587A	3	
36	Speaker	5USAC00028	1	
37	Rubber	MTT021775	1	
38	Cover top	MTD004495	1	
39	Screw	BRTG02145	3	M5x8 Bs BLK
40	Back board	MTD004504	1	
41	Mounting plate	MTD004506	1	
42	Hole plug	BRNG00179	2	DP-625
43	Wire cloth	MPFM00340	1	
44	Wire cloth	MPFM00339	1	
45	Fan Motor	6BFJ00004	1	
46	Screw	BRTG02082	14	M3x6 Bs BNM2
47	Case	MTD004505	1	
48	Draft plate	MTD004508A	1	
49	LFP unit	CEJ-122	1	MDNW05950
50	PA unit(I00W)	CAH-301L-2	1	MDTW00834
	PA unit(I0W)	CAH-301L-1	1	MDTW00833
51	Cover	MTD004507	1	
52	Screw	BSNA03006B	1	ANK3x6 Bs
53	Screw	BSNK04020B	1	NK4x20 Bs
54	Screw	BSNK03025B	4	NK3x25 Bs
55	Nut	BSHN04000B	2	N4 Bs
56	Nut	BSHN03000B	1	N3 Bs
57	Nut	BSLN04000B	1	LN4 Bs
58	Wing Nut	BSBN04000B	1	BN4 Bs
59	Spring Lock Washer	BSSW04000S	1	SW4
60	Spring Lock Washer	BSSW03000S	2	SW3
61	Washer	BSEW04000B	2	W4 Bs
62	Washer	BSELW03000B	6	LW3 Bs
63	Washer	BSEW03000B	2	W3 Bs

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6. CIRCUIT DIAGRAM, COMPONENT LAYOUT AND PARTS LIST

6.1	RF TUNE UNIT	CFL-244
6.2	IF FILTER UNIT	CFH-38A
6.3	IF AMP UNIT	CAE-227
6.4	12 V PA UNIT	CAH-301L-2
6.5	LPF UNIT	CFJ-122-2
6.6	LOOP1 UNIT	CGA-145
6.7	REF DDS UNIT	CGK-81A
6.8	CPU UNIT	CDC-493A
6.9	DISPLAY UNIT	CDE-576
6.10	DISPLAY (VR) UNIT	CDE-576
6.11	AF AMP UNIT	CBD-894L
6.12	TONE SQ UNIT	CCL-212
6.13	BWC UNIT	CFL-243
6.14	NOTCH FOLLOW UNIT	CDD-366
6.15	ECSS UNIT	CMF-78
6.16	RS-232C INTERFACE UNIT	CMH-741
6.17	MOTHER BOARD	CFQ-2625A
	CHASSIS	IST-135

SIGNAL NOMENCLATURE OF UNITS

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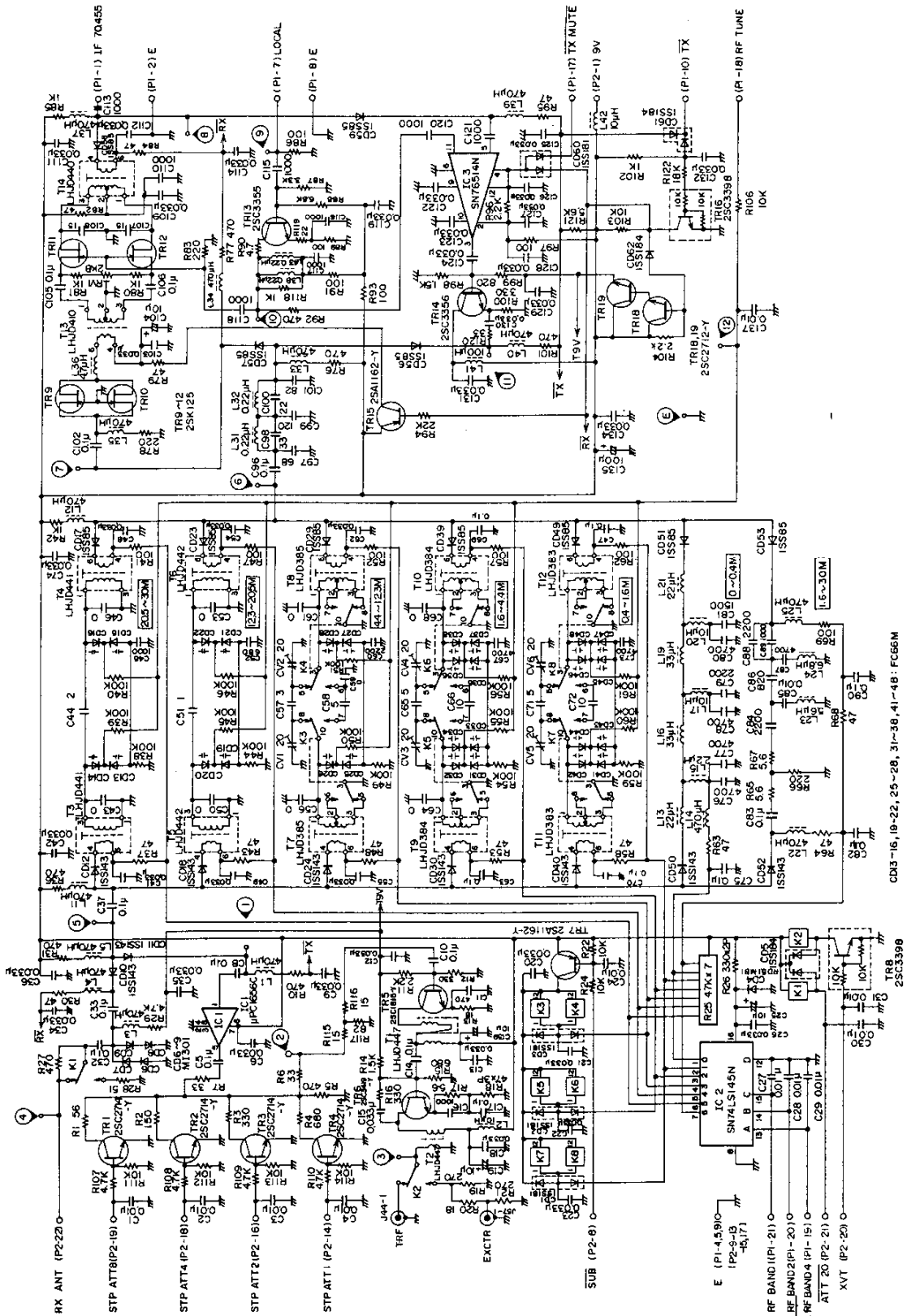


Figure 6.1.1 RF TUNE UNIT CFL-244 Circuit Diagram

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C1	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C2	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C3	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C4	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C5	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C6	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C8	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C9	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C10	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C11	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797		
C12	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C13	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C14	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C15	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C16	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C17	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C18	CAP,FXD CER	C3216X7R1E333K-E-TP	0.033U	5CAAD01203		
C19	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C20	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C21	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C22	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C23	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C24	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C25	CAP,FXD TANTAL	202L1602 106KB		5CSAC00932		
C26	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C27	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C28	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C29	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C30	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C31	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C32	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C33	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C34	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C35	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C36	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C37	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C41	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C42	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C43			*	6ZZAB10000		
C44	CAP,FXD CER	C3216CH1H020C-E-TP	2PF	5CAAD00798		
C45	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C46			*	6ZZAB10000		
C47	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C48	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C49	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C50			*	6ZZAB10000		
C51	CAP,FXD CER	C3216CH1H010C-E-TP	1PF	5CAAD00795		
C52	CAP,FXD CER	C3216CH1H681J-E-TP	680P	5CAAD00788		
C53			*	6ZZAB10000		
C54	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C55	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C56			*	6ZZAB10000		
C57	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796		
C58	CAP,FXD CER	C3216CH1H050C-E-TP	5PF	5CAAD00800		
C60	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792		
C61			*	6ZZAB10000		
C62	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C63	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C64			*	6ZZAB10000		
C65	CAP,FXD CER	C3216CH1H050C-E-TP	5PF	5CAAD00800		
C66	CAP,FXD CER	C3216CH1H100D-E-TP		5CAAD00862		
C67	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C68			*	6ZZAB10000		
C69	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C70	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C71	CAP,FXD CER	C3216CH1H050C-E-TP	5PF	5CAAD00800		
C72	CAP,FXD CER	C3216CH1H100D-E-TP		5CAAD00862		
C73	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C74	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C75	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C76	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C77	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C78	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C79	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792		
C80	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C81	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791		
C82	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C83	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C84	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792		
C85	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C86	CAP,FXD CER	C3216SL1H821J-E-TP		5CAAD01068		
C87	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C88	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792		
C89	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C90	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C96	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C97	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C98	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794		
C99	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931		
C100	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869		
C101	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930		
C102	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C103	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C104	CAP,FXD TANTAL	202L1602 106KB		5CSAC00932		
C105	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C106	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C107	CAP,FXD CER	C3216CH1H150J-E-TP	15PF	5CAAD00787		
C108	CAP,FXD CER	C3216CH1H150J-E-TP	15PF	5CAAD00787		
C109	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C110	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C111	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C112	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C113	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C114	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C115	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C116	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C117	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C118	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C119	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C120	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C121	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C122	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C123	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C124	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C125	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C126	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C127	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C128	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C129	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C130	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C131	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C132	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C134	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C135	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAAD1813		
C137	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C139	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAAD1864		
CD1	DIODE	1SS181 TE85L		5TXAD00356		
CD2	DIODE	1SS181 TE85L		5TXAD00356		
CD3	DIODE	1SS181 TE85L		5TXAD00356		
CD4	DIODE	RD5.1MB1-T1		5TXAAD0515		
CD5	DIODE	1SS184 TE85L		5TXAD00290		
CD6	DIODE	MI301		5TXAR00004		
CD7	DIODE	MI301		5TXAR00004		
CD8	DIODE	MI301		5TXAR00004		
CD9	DIODE	MI301		5TXAR00004		
CD10	DIODE	1SS143T-87		5TXCW00021		
CD11	DIODE	1SS143T-87		5TXCW00021		
CD12	DIODE	1SS143T-87		5TXCW00021		
CD13	DIODE	FC66M-010		5TXAB00035		
CD14	DIODE	FC66M-010		5TXAB00035		

PARTS LIST

		TITLE		SHEET NO.
		RF TUNE	CFL-244	5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD15	DIODE	FC66M-010		5TXAB00035
CD16	DIODE	FC66M-010		5TXAB00035
CD17	DIODE	1SS85RE		5TXAE00590
CD18	DIODE	1SS143T-87		5TXCW00021
CD19	DIODE	FC66M-010		5TXAB00035
CD20	DIODE	FC66M-010		5TXAB00035
CD21	DIODE	FC66M-010		5TXAB00035
CD22	DIODE	FC66M-010		5TXAB00035
CD23	DIODE	1SS85RE		5TXAE00590
CD24	DIODE	1SS143T-87		5TXCW00021
CD25	DIODE	FC66M-010		5TXAB00035
CD26	DIODE	FC66M-010		5TXAB00035
CD27	DIODE	FC66M-010		5TXAB00035
CD28	DIODE	FC66M-010		5TXAB00035
CD29	DIODE	1SS85RE		5TXAE00590
CD30	DIODE	1SS143T-87		5TXCW00021
CD31	DIODE	FC66M-010		5TXAB00035
CD32	DIODE	FC66M-010		5TXAB00035
CD33	DIODE	FC66M-010		5TXAB00035
CD34	DIODE	FC66M-010		5TXAB00035
CD35	DIODE	FC66M-010		5TXAB00035
CD36	DIODE	FC66M-010		5TXAB00035
CD37	DIODE	FC66M-010		5TXAB00035
CD38	DIODE	FC66M-010		5TXAB00035
CD39	DIODE	1SS85RE		5TXAE00590
CD40	DIODE	1SS143T-87		5TXCW00021
CD41	DIODE	FC66M-010		5TXAB00035
CD42	DIODE	FC66M-010		5TXAB00035
CD43	DIODE	FC66M-010		5TXAB00035
CD44	DIODE	FC66M-010		5TXAB00035
CD45	DIODE	FC66M-010		5TXAB00035
CD46	DIODE	FC66M-010		5TXAB00035
CD47	DIODE	FC66M-010		5TXAB00035
CD48	DIODE	FC66M-010		5TXAB00035
CD49	DIODE	1SS85RE		5TXAE00590

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FAX: 01844 - 352554

PARTS LIST

		TITLE		SHEET NO.
		RF TUNE	CFL-244	6
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD50	DIODE	1SS143T-87		5TXCW00021
CD51	DIODE	1SS85RE		5TXAE00590
CD52	DIODE	1SS143T-87		5TXCW00021
CD53	DIODE	1SS85RE		5TXAE00590
CD56	DIODE	1SS85RE		5TXAE00590
CD57	DIODE	1SS85RE		5TXAE00590
CD58	DIODE	1SS85RE		5TXAE00590
CD59	DIODE	1SS85RE		5TXAE00590
CD60	DIODE	1SS181 TE85L		5TXAD00356
CD61	DIODE	1SS184 TE85L		5TXAD00290
CD62	DIODE	1SS184 TE85L		5TXAD00290
CV1	CAPACITOR VAR	TZ03T200FR		5CVAA00166
CV2	CAPACITOR VAR	TZ03T200FR		5CVAA00166
CV3	CAPACITOR VAR	TZ03T200FR		5CVAA00166
CV4	CAPACITOR VAR	TZ03T200FR		5CVAA00166
CV5	CAPACITOR VAR	TZ03T200FR		5CVAA00166
CV6	CAPACITOR VAR	TZ03T200FR		5CVAA00166
IC1	IC	UPC1656C		5DAAA00183
IC2	IC	SN74LS145N		5DDAS00138
IC3	IC	SN76514N		5DDAL00251
J44-1	CONNECTOR	TMP-JD1X-V2		5JDA00009
J57-1	CONNECTOR	TMP-JD1X-V2		5JDA00009
JP1	TIN COATED WIRE	TA-0.6P		2717100001
JP2	TIN COATED WIRE	TA-0.6P		2717100001
JP3	TIN COATED WIRE	TA-0.6P		2717100001
JP4	TIN COATED WIRE	TA-0.6P		2717100001
JP5	TIN COATED WIRE	TA-0.6P		2717100001
JP6	TIN COATED WIRE	TA-0.6P		2717100001
JP7	TIN COATED WIRE	TA-0.6P		2717100001
JP8	TIN COATED WIRE	TA-0.6P		2717100001
JP9	TIN COATED WIRE	TA-0.6P		2717100001
K1	RELAY	HD1-M-DC9V		5KLAB00660
K2	RELAY	HD1-M-DC9V		5KLAB00660
K3	RELAY	DF2-DC9V		5KLAB00578
K4	RELAY	DF2-DC9V		5KLAB00578

PARTS LIST

		TITLE		SHEET NO.
		RF TUNE	CFL-244	7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
K5	RELAY	DF2-DC9V		SKLAD00578
K6	RELAY	DF2-DC9V		SKLAD00578
K7	RELAY	DF2-DC9V		SKLAD00578
K8	RELAY	DF2-DC9V		SKLAD00578
L1	COIL	LAL03VB471K	470UH	5LCAA00270
L2	COIL	LAL03VB100K	10UH	5LCAA00273
L3	COIL	LAL03VB471K	470UH	5LCAA00270
L4	COIL	LAL03VB471K	470UH	5LCAA00270
L5	COIL	LAL03VB471K	470UH	5LCAA00270
L11	COIL	LAL03VB471K	470UH	5LCAA00270
L12	COIL	LAL03VB471K	470UH	5LCAA00270
L13	COIL	LAL03VB220K	22UH	5LCAA00277
L14	COIL	LAL03VB471K	470UH	5LCAA00270
L15	COIL	LAL03VB2R2M	2.2UH	5LCAA00278
L16	COIL	LAL03VB330K	33UH	5LCAA00279
L17	COIL	LAL03VB100K	10UH	5LCAA00273
L19	COIL	LAL03VB330K	33UH	5LCAA00279
L20	COIL	LAL03VB100K	10UH	5LCAA00273
L21	COIL	LAL03VB220K	22UH	5LCAA00277
L22	COIL	LAL03VB471K	470UH	5LCAA00270
L23	COIL	LAL03VB5R6K	5.6UH	5LCAA00275
L24	COIL	LAL03VB6R8K	6.8UH	5LCAA00276
L25	COIL	LAL03VB471K	470UH	5LCAA00270
L31	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L32	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L33	COIL	LAL03VB471K	470UH	5LCAA00270
L34	COIL	LAL03VB471K	470UH	5LCAA00270
L35	COIL	LAL03VB471K	470UH	5LCAA00270
L36	COIL	LAL03VB4R7K		5LCAA00323
L37	COIL	LAL03VB471K	470UH	5LCAA00270
L38	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L39	COIL	LAL03VB471K	470UH	5LCAA00270
L40	COIL	LAL03VB471K	470UH	5LCAA00270
L41	COIL	LAL03VB101K		5LCAA00333
L42	COIL	LAL03VB100K	10UH	5LCAA00273

PARTS LIST

		TITLE		SHEET NO.
		RF TUNE	CFL-244	8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
L43	COIL	LAL03VBR22M	0.22UH	5LCAA00280
P1	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P2	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00258B		6PCJD00258
R1	RESISTOR FXD	ERJ-8GEYJ560V	1/8W 56 OHM	5REAG01723
R2	RESISTOR FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728
R3	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732
R4	RESISTOR FXD	ERJ-8GEYJ681V	1/8W 680 OHM	5REAG01736
R5	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R6	RESISTOR FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720
R7	RESISTOR FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720
R10	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R11	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R12	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732
R13	RESISTOR FXD	ERJ-8GEYJ180V	1/8W 18 OHM	5REAG01717
R14	RESISTOR FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R15	RESISTOR FXD	ERJ-8GEYJ681V	1/8W 680 OHM	5REAG01736
R16	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732
R17	RESISTOR FXD	ERJ-8GEYK5R6V		5REAG02207
R18-1	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R18-2	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R18-3	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R19	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	5REAG01731
R20	RESISTOR FXD	ERJ-8GEYJ180V	1/8W 18 OHM	5REAG01717
R21	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	5REAG01731
R22	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R24	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R25	RESISTOR FXD	RKC1/8B7-47K OHM J		5REAE00172
R26-1	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732
R26-2	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732
R27	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R28	RESISTOR FXD	ERJ-8GEYJ510V	1/8W 51 OHM	5REAG02025
R29	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746
R30	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R31	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						9
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R36	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R37	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R38	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R39	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R40	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R41	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R42	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R43	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R44	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R45	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R46	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R47	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R48	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R49	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R50	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R51	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R52	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R53	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R54	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R55	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R56	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R57	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R58	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R59	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R60	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R61	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R62	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R63	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R64	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R65	RESISTOR FXD	ERJ-8GEYK5R6V		5REAG02207		
R66	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R67	RESISTOR FXD	ERJ-8GEYK5R6V		5REAG02207		
R68	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R69	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R76	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						10
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R77	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R78	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R79	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R80	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R81	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R82	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R83	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R84	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R85	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R86	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R87	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R88	RESISTOR FXD	ERJ-8GEYJ682V		5REAG01748		
R89	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R90	RESISTOR FXD	ERJ-8GEYK4R7V	1/8W 4.7 OHM	5REAG02256		
R91	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R92	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R93	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R94	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R95	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R96	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R97	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R98	RESISTOR FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740		
R99	RESISTOR FXD	ERJ-8GEYJ821V	1/8W 820 OHM	5REAG01737		
R100	RESISTOR FXD	ERJ-8GEYJ331V	1/8W 330 OHM	5REAG01732		
R101	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R102	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R103	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R104	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R106	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R107	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746		
R108	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746		
R109	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746		
R110	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746		
R111	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R112	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		

PARTS LIST

		RF TUNE		TITLE	CFL-244	SHEET NO.
						11
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R113	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R114	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R115	RESISTOR FXD	ERJ-8GEYJ150V	1/8W,15 OHM	5REAG01716		
R116	RESISTOR FXD	ERJ-8GEYJ150V	1/8W,15 OHM	5REAG01716		
R117	RESISTOR FXD	ERJ-8GEYJ820V	1/8W 82 OHM	5REAG01725		
R118	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R119	RESISTOR FXD	ERJ-8GEYJ220V		5REAG01718		
R120	RESISTOR FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720		
R121	RESISTOR FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747		
R122	RESISTOR FXD	ERJ-8GEYJ183V	1/8W,18K OHM	5REAG01753		
RJ1	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ2	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ3	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ4	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ5	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ6	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ7	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ8	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ9	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ10	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ11	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ12	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ13	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ14	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ15	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ16	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ17	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ18	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ19	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ20	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ21	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ22	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ23	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ24	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ25	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		

PARTS LIST

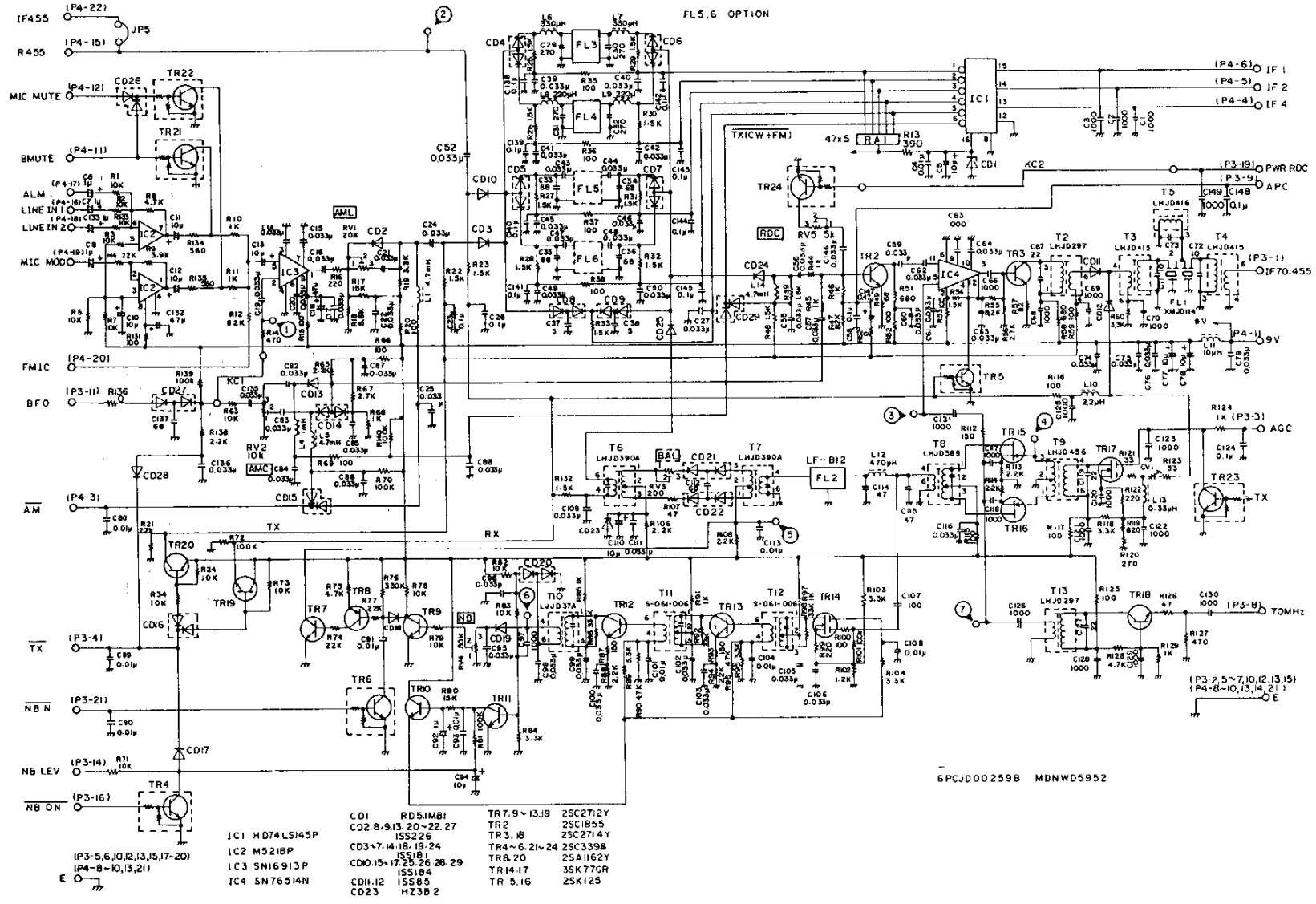
		RF TUNE		TITLE	CFL-244	SHEET NO.
						12
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
RJ26	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ27	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ28	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ29	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ30	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ31	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ32	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ33	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ34	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ35	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ36	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ37	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ38	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ39	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ40	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ41	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ42	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ43	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ44	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ45	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ46	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RJ47	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775		
RV1	RESISTOR VAR	EVN-01AA00B23		5RVAB00323		
T1	RF XFMR	H-6LHJD00447		6LHJD00447		
T2	RF XFMR	H-6LHJD00447		6LHJD00447		
T3	RF XFMR	H-6LHJD00441		6LHJD00441		
T4	RF XFMR	H-6LHJD00441		6LHJD00441		
T5	RF XFMR	H-6LHJD00442		6LHJD00442		
T6	RF XFMR	H-6LHJD00442		6LHJD00442		
T7	RF XFMR	H-6LHJD00385		6LHJD00385		
T8	RF XFMR	H-6LHJD00385		6LHJD00385		
T9	RF XFMR	H-6LHJD00384		6LHJD00384		
T10	RF XFMR	H-6LHJD00384		6LHJD00384		
T11	RF XFMR	H-6LHJD00383		6LHJD00383		
T12	RF XFMR	H-6LHJD00383		6LHJD00383		

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PARTS LIST				
RF TUNE			TITLE	SHEET NO
			CFL-244	13
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
T13	RF XFMR	H-6LHJD00410		6LHJD00410
T14	RF XFMR	H-6LHJD00440		6LHJD00440
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
5 TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP5	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP6	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP7	TEST TERMINAL	PCN6-PEA		5JDAA00364
10 TP8	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP9	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP10	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP11	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP12	TEST TERMINAL	PCN6-PEA		5JDAA00364
15 TP13	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
TR2	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
TR3	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
TR4	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
20 TR5	TRANSISTOR	2SC1815-Y		5TCAF00219
TR6	TRANSISTOR	2SC3419-Y		5TCAF00536
TR7	TRANSISTOR	2SA1162-Y TE85L		5TAA600182
TR8	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR9	TRANSISTOR	2SK125		5TKAH00002
25 TR10	TRANSISTOR	2SK125		5TKAH00002
TR11	TRANSISTOR	2SK125		5TKAH00002
TR12	TRANSISTOR	2SK125		5TKAH00002
TR13	TRANSISTOR	2SC3355		5TCAB01223
TR14	TRANSISTOR	2SC3356-T1B		5TCAB01142
30 TR15	TRANSISTOR	2SA1162-Y TE85L		5TAA600182
TR16	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR18	TRANSISTOR	2SC2712Y TE85L		5TAA600186
TR19	TRANSISTOR	2SC2712Y TE85L		5TAA600186
35				

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Figure 6.2.1 IF FILTER UNIT CFH-38A Circuit Diagram



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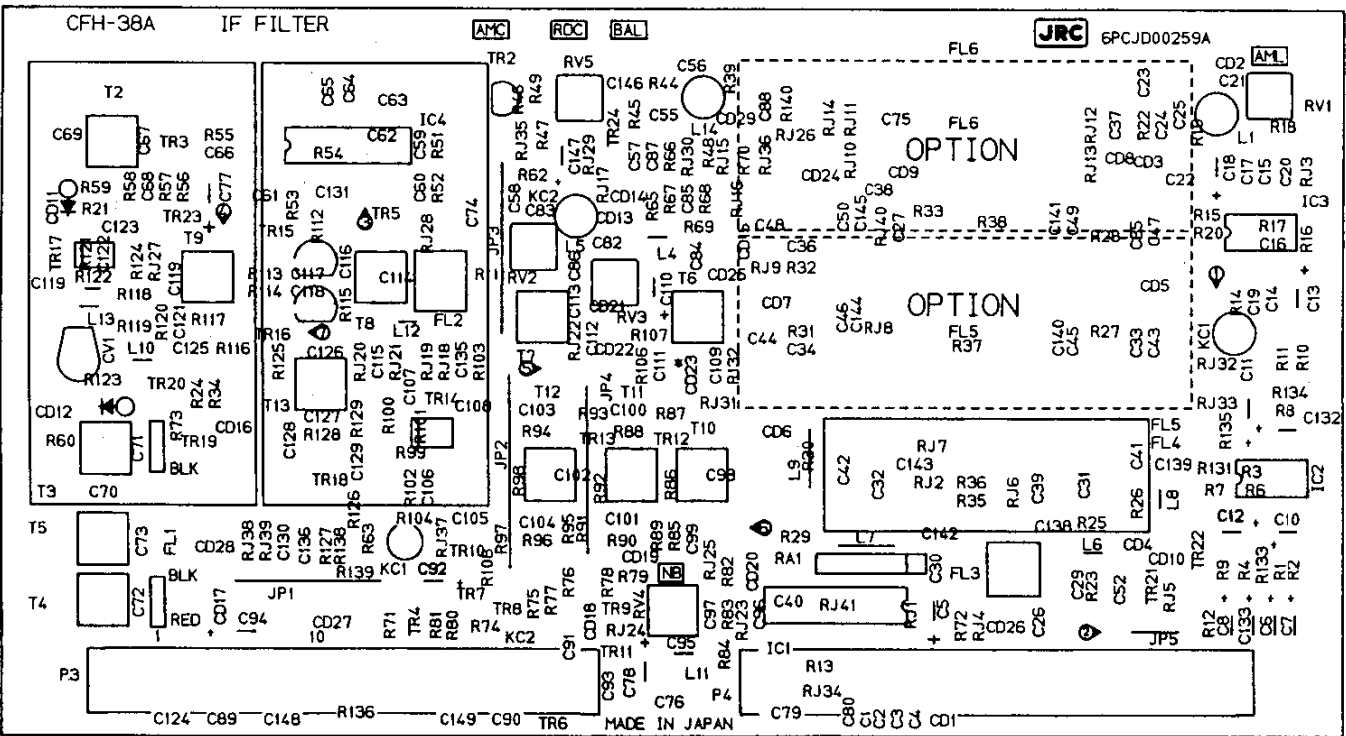


Figure 6.2.2 IF FILTER UNIT CFH-38A Component Layout

PARTS LIST

		IF FILTER		TITLE	CFH-38A	SHEET NO.
						1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C1	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C2	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C4	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C5	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C6	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C7	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C8	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C10	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C11	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C12	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C13	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C14	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C15	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C16	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C17	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C18	CAP,FXD ELCTLT	ECE-A1EU470B	25V 47UF	5CEAA01816		
C19	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C20	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C21	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C22	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C23	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C24	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C25	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C26	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C27	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C29	CAP,FXD CER	C3216CH1H271J-E-TP	50V 270PF	5CAAD00883		
C30	CAP,FXD CER	C3216CH1H271J-E-TP	50V 270PF	5CAAD00883		
C31	CAP,FXD CER	C3216CH1H271J-E-TP	50V 270PF	5CAAD00883		
C32	CAP,FXD CER	C3216CH1H271J-E-TP	50V 270PF	5CAAD00883		
C33	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C34	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C35	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C36	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C37	CAP,FXD CER	C3216CH1H050C-E-TP	5PF	5CAAD00800		

PARTS LIST

		IF FILTER		TITLE	CFH-38A	SHEET NO.
						2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C38	CAP,FXD CER	C3216CH1H050C-E-TP	5PF	5CAAD00800		
C39	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C40	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C41	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C42	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C43	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C44	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C45	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C46	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C47	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C48	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C49	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C50	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C52	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C55	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C56	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C57	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C58	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C59	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C60	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C61	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C62	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C63	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C64	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C65	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C66	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C67	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869		
C68	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C69	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C70	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C71	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785		
C72	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785		
C73	CAP,FXD CER	C3216CH1H020C-E-TP	2PF	5CAAD00798		
C74	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		
C75	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235		

PARTS LIST					
		TITLE		SHEET NO.	
		IF FILTER	CFH-38A	3	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C76	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C77	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C78	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C79	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C80	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C82	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C83	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C84	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C85	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C86	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C87	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C88	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C89	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C90	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C91	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C92	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C93	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C94	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C95	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C96	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C97	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C98	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C99	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C100	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C101	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C102	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C103	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C104	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C105	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C106	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C107	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	SCAAD00780	
C108	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C109	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C110	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C111	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	

PARTS LIST					
		TITLE		SHEET NO.	
		IF FILTER	CFH-38A	4	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C112	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	SCAAD00929	
C113	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	SCAAD01597	
C114	CAP,FXD CER	C3216CH1H470J-E-TP	47PF	SCAAD00864	
C115	CAP,FXD CER	C3216CH1H470J-E-TP	47PF	SCAAD00864	
C116	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C117	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C118	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C119	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	SCAAD00869	
C120	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C121	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C122	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C123	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C124	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	SCAAD01056	
C125	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C126	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C127	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	SCAAD00869	
C128	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C129	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C130	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C131	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	SCAAD00782	
C132	CAP,FXD ELCTLT	ECE-A1EU470B	25V 47UF	5CEAA01816	
C133	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C135	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C136	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C137	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	SCAAD00929	
C138	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C139	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C140	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C141	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C142	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C143	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C144	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C145	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	SCAAD01237	
C146	CAP,FXD CER	C3216JB1E333K-E-TP		SCAAD01235	
C147	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065	

PARTS LIST						SHEET NO.
IF FILTER					TITLE	5
					CFH-38A	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C148	CAP.FXD	CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C149	CAP.FXD	CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
CD1	DIODE		R05.1MB1-T1		5TXAAD0515	
CD2	DIODE		1SS226 TE85L		5TXAD00320	
CD3	DIODE		1SS181 TE85L		5TXAD00356	
CD4	DIODE		1SS181 TE85L		5TXAD00356	
CD5	DIODE		1SS181 TE85L		5TXAD00356	
CD6	DIODE		1SS181 TE85L		5TXAD00356	
CD7	DIODE		1SS181 TE85L		5TXAD00356	
CD8	DIODE		1SS226 TE85L		5TXAD00320	
CD9	DIODE		1SS226 TE85L		5TXAD00320	
CD10	DIODE		1SS184 TE85L		5TXAD00290	
CD11	DIODE		1SS85RE		5TXAEO0590	
CD12	DIODE		1SS85RE		5TXAEO0590	
CD13	DIODE		1SS226 TE85L		5TXAD00320	
CD14	DIODE		1SS181 TE85L		5TXAD00356	
CD15	DIODE		1SS184 TE85L		5TXAD00290	
CD16	DIODE		1SS184 TE85L		5TXAD00290	
CD17	DIODE		1SS184 TE85L		5TXAD00290	
CD18	DIODE		1SS181 TE85L		5TXAD00356	
CD19	DIODE		1SS181 TE85L		5TXAD00356	
CD20	DIODE		1SS226 TE85L		5TXAD00320	
CD21	DIODE		1SS226 TE85L		5TXAD00320	
CD22	DIODE		1SS226 TE85L		5TXAD00320	
CD23	DIODE		HZ3B2	3V	5TXAEO0107	
CD24	DIODE		1SS181 TE85L		5TXAD00356	
CD25	DIODE		1SS184 TE85L		5TXAD00290	
CD26	DIODE		1SS184 TE85L		5TXAD00290	
CD27	DIODE		1SS226 TE85L		5TXAD00320	
CD28	DIODE		1SS184 TE85L		5TXAD00290	
CD29	DIODE		1SS184 TE85L		5TXAD00290	
CV1	CAPACITOR VAR		TZ03T200FR		5CVAA00166	
FL1	CRYSTAL	CKT	H-6XMJD00114	70.455MHZ	6XMJD00114	
FL2	COIL		LF-B12		5LFAE00009	
FL3	COIL		LF-B6		5LFAE00015	
FL4	FILTER		MF-455-10GZ		5NMAA00015	

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 FAX: 01844 - 352554

PARTS LIST						SHEET NO.
IF FILTER					TITLE	6
					CFH-38A	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
IC1	IC		HD74LS145P		5DDAF00704	
IC2	IC		M5218P		5DDAB00152	
IC3	IC		SN16913P		5DDAL00301	
IC4	IC		SN76514N		5DDAL00251	
JP1	TIN COATED WIRE		TA-0.6P		2717100001	
JP2	TIN COATED WIRE		TA-0.6P		2717100001	
JP3	TIN COATED WIRE		TA-0.6P		2717100001	
JP4	TIN COATED WIRE		TA-0.6P		2717100001	
JP5	TIN COATED WIRE		TA-0.6P		2717100001	
KC1	CABLE		H-6ZCJD35004		6ZCJD35004	
KC2	CABLE		H-6ZCJD44008		6ZCJD44008	
L1	COIL		FL-7H472J	4.7MH	5LCAA00023	
L4	COIL		LAL03VB102K	1UH	5LCAA00318	
L5	COIL		FL-7H472J	4.7MH	5LCAA00023	
L6	COIL		LAL03VB331K	330UH	5LCAA00271	
L7	COIL		LAL03KH331K	330UH	5LCAA00250	
L8	COIL		LAL03VB221K	220UH	5LCAA00272	
L9	COIL		LAL03KH221K		5LCAA00441	
L10	COIL		LAL03VB2R2M	2.2UH	5LCAA00278	
L11	COIL		LAL03VB100K	10UH	5LCAA00273	
L12	COIL		LAL03VB471K	470UH	5LCAA00270	
L13	COIL		LAL03VBR33M	0.33UH	5LCAA00274	
L14	COIL		FL-7H472J	4.7MH	5LCAA00023	
P3	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070	
P4	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070	
PC1	PCB		H-6PCJD00259B		6PCJD00259	
R1	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R2	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R3	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R4	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754	
R6	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R7	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R8	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746	
R9	RESISTOR	FXD	ERJ-8GEYJ392V	1/8W 3.9K OHM	5REAG01745	
R10	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	

PARTS LIST					SHEET NO.
		IF FILTER	TITLE	CFH-38A	7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R11	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R12	RESISTOR	FXD	ERJ-8GEYJ822V		5REAG01749
R13	RESISTOR	FXD	ERJ-8GEYJ391V	1/8W 390 OHM	5REAG01733
R14	RESISTOR	FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R15	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R16	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R17	RESISTOR	FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752
R18	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747
R19	RESISTOR	FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R20	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R21	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R22	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R23	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R24	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R25	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R26	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R27	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R28	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R29	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R30	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R31	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R32	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R33	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R34	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R35	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R36	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R37	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R38	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R39	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R44	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R45	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R46	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R47	RESISTOR	FXD	ERJ-8GEYJ823V		5REAG01761
R48	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R49	RESISTOR	FXD	ERJ-8GEYJ680V	1/8W 68 OHM	5REAG01724

PARTS LIST					SHEET NO.
		IF FILTER	TITLE	CFH-38A	8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R51	RESISTOR	FXD	ERJ-8GEYJ681V	1/8W 680 OHM	5REAG01736
R52	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R53	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R54	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740
R55	RESISTOR	FXD	ERJ-8GEYJ822V		5REAG01749
R56	RESISTOR	FXD	ERJ-8GEYJ272V	1/8W 2.7K OHM	5REAG01743
R57	RESISTOR	FXD	ERJ-8GEYJ820V	1/8W 82 OHM	5REAG01725
R58	RESISTOR	FXD	ERJ-8GEYJ681V	1/8W 680 OHM	5REAG01736
R59	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R60	RESISTOR	FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R62	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775
R63	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R65	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R66	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R67	RESISTOR	FXD	ERJ-8GEYJ272V	1/8W 2.7K OHM	5REAG01743
R68	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R69	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R70	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R71	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R72	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R73	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R74	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R75	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746
R76	RESISTOR	FXD	ERJ-8GEYJ334V	1/8W 330K OHM	5REAG01768
R77	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R78	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R79	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R80	RESISTOR	FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752
R81	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R82	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R83	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R84	RESISTOR	FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R85	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R86	RESISTOR	FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756
R87	RESISTOR	FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728

PARTS LIST

		IF FILTER		TITLE	CFH-38A	SHEET NO.
						9
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R88	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R89	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R90	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746		
R91	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R92	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756		
R93	RESISTOR FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728		
R94	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R95	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R96	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746		
R97	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R98	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756		
R99	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R100	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R101	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R102	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739		
R103	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R104	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R106	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R107	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R108	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R111	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
R112	RESISTOR FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728		
R113	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R114	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R115	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R116	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R117	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R118	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R119	RESISTOR FXD	ERJ-8GEYJ821V	1/8W 820 OHM	5REAG01737		
R120	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R121	RESISTOR FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720		
R122	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329		
R123	RESISTOR FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720		
R124	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R125	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		

PARTS LIST

		IF FILTER		TITLE	CFH-38A	SHEET NO.
						10
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R126	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R127	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R128	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746		
R129	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R131	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R132	RESISTOR FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740		
R133	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R134	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735		
R135	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735		
R136	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
R138	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R139	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R140	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
RA1	RESISTOR FXD	RKC1/8B5-47K OHM J		5REAE00173		
RJ1	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ2	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ3	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ4	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ5	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ6	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ7	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ8	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ9	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ10	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ11	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ12	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ13	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ14	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ15	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ16	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ17	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ18	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ19	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ20	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		
RJ21	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775		

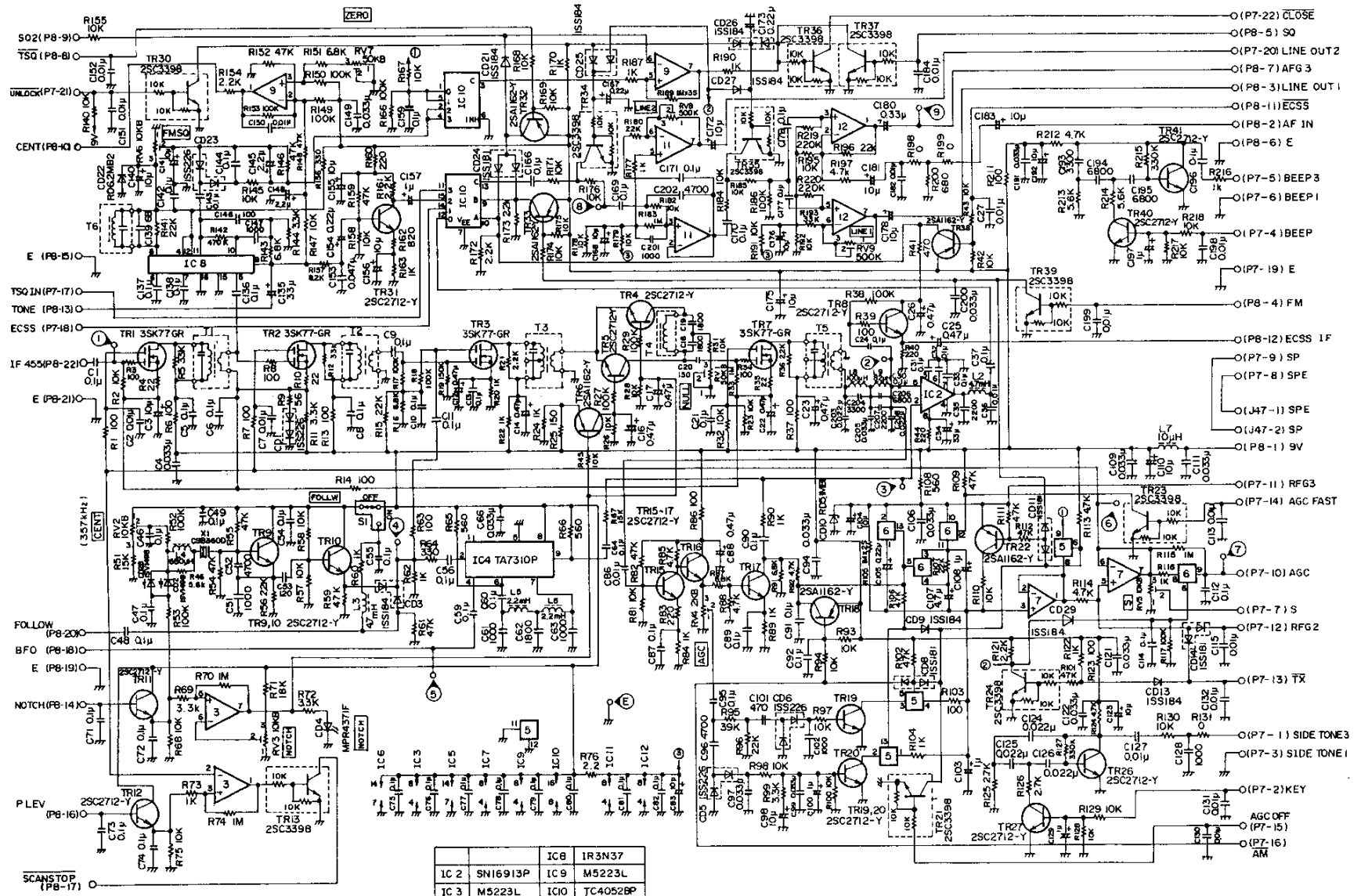
PARTS LIST					SHEET NO.
IF FILTER		TITLE		CFH-38A	11
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
RJ22	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ23	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ24	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ25	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ26	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ27	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ28	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ29	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ30	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ31	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ32	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ33	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ34	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ35	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ36	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ37	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ38	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ39	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ40	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RJ41	RESISTOR FXD	ERJ-8GEYOR00V	0 OHM	5REAG01775	
RV1	RESISTOR VAR	EVN-D1AA00B24	20K	5RVAB00372	
RV2	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324	
RV3	RESISTOR VAR	EVN-D1AA00B22		5RVAB00320	
RV4	RESISTOR VAR	EVN-D4AA00B54		5RVAB00317	
RV5	RESISTOR VAR	EVN-D1AA00B53		5RVAB00325	
T2	RF XFMR	H-6LHJD00297		6LHJD00297	
T3	RF XFMR	H-6LHJD00415	70.455MHZ	6LHJD00415	
T4	RF XFMR	H-6LHJD00415	70.455MHZ	6LHJD00415	
T5	RF XFMR	H-6LHJD00416	0.95UH	6LHJD00416	
T6	RF XFMR	H-6LHJD00390A		6LHJD00390	
T7	RF XFMR	H-6LHJD00390A		6LHJD00390	
T8	RF XFMR	H-6LHJD00389		6LHJD00389	
T9	RF XFMR	H-6LHJD00456		6LHJD00456	
T10	RF XFMR	H-6LJJD00037A	455KHZ	6LJJD00037	
T11	RF XFMR	S-061-006		5LJAA00006	

PARTS LIST					SHEET NO.
IF FILTER		TITLE		CFH-38A	12
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
T12	RF XFMR	S-061-006		5LJAA00006	
T13	RF XFMR	H-6LHJD00297		6LHJD00297	
TP1	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP2	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP3	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP4	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP5	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP6	TEST TERMINAL	PCN6-PEA		5JDA00364	
TP7	TEST TERMINAL	PCN6-PEA		5JDA00364	
TR2	TRANSISTOR	2SC1855		5TCAA00134	
TR3	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR4	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR5	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR6	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR7	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR8	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182	
TR9	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR10	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR11	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR12	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR13	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR14	TRANSISTOR	3SK77-GR		5TKAA00108	
TR15	TRANSISTOR	2SK125		5TKAH00002	
TR16	TRANSISTOR	2SK125		5TKAH00002	
TR17	TRANSISTOR	3SK77-GR		5TKAA00108	
TR18	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR19	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR20	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182	
TR21	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR22	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR23	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR24	TRANSISTOR	2SC3398-TB		5TCAZ00011	

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FOR SERVICE MANUALS

Figure 6.3.1 IF AMP UNIT CAE-227 Circuit Diagram



IC 2	5N16913P	IC 9	M5223L
IC 3	M5223L	IC 10	TC4052BP
IC 4	TA7310P	IC 11	M5260L
IC 5	TC4066BP	IC 12	M5260L
IC 6	TC4066BP		
IC 7	M5223L		

PARTS LIST

		IF AMP		TITLE	CAE-227	SHEET NO.
						1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C1	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C2	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C3	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C4	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C5	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C6	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C7	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C8	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C9	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C10	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C11	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C12	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C13	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C14	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C16	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C17	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C18	CAP,FXD PLSTC	ECQ-B1H182J23		5CRAA00875		
C19	CAP,FXD PLSTC	ECQ-B1H182J23		5CRAA00875		
C20	CAP,FXD CER	C3216CH1H151J-E-TP	150P	5CAAD00870		
C21	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C22	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C23	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C24	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C25	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C26	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C27	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C30	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C31	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C32	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C33	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C34	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822		
C35	CAP,FXD CER	C3216SL1H222J-E-TP	2200PF	5CAAD00792		
C36	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C37	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C46	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		

PARTS LIST

		IF AMP		TITLE	CAE-227	SHEET NO.
						2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C47	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C48	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C49	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C51	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C52	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C53	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931		
C54	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C55	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C56	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C59	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C60	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C61	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C62	CAP,FXD CER	C3216SL1H182J-E-TP		5CAAD01070		
C63	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C64	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C66	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C71	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C72	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C73	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C74	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C75	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C76	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C77	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C78	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C79	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C80	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C81	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C82	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C83	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C86	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C87	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C88	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C89	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C90	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C91	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		

PARTS LIST						SHEET NO.
					CAE-227	3
IF AMP	TITLE					
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C92	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C94	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C95	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C96	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C97	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C98	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C99	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C100	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C101	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797		
C102	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C103	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C104	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C105	CAP,FXD TANTAL	202L3502 224KB	0.22UF 35V	5CSAC00988		
C106	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C107	CAP,FXD TANTAL	202L2502 475KB		5CSAC00934		
C108	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C109	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C110	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C111	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C112	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C113	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C114	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C115	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C121	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C122	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C123	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C124	CAP,FXD CER	C3216B1H223K-E-TP	0.022UF	5CAAD01109		
C125	CAP,FXD CER	C3216B1H223K-E-TP	0.022UF	5CAAD01109		
C126	CAP,FXD CER	C3216B1H223K-E-TP	0.022UF	5CAAD01109		
C127	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C128	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C129	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C130	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C131	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C132	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		

PARTS LIST						SHEET NO.
					CAE-227	4
IF AMP	TITLE					
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C135	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822		
C136	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C137	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C138	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C139	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C140	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C141	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C142	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C143	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C144	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C145	CAP,FXD TANTAL	202L2502 225KB	2.2UF 25V	5CSAC01129		
C146	CAP,FXD CER	C3216CH1H101J-E-TP	50V 100PF	5CAAD00780		
C147	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C148	CAP,FXD TANTAL	202L3502 225KB		5CSAC01069		
C149	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C150	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C151	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C152	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C153	CAP,FXD CER	C3216JB1E473K-E-TP		5CAAD01131		
C154	CAP,FXD TANTAL	202L3502 224KB	0.22UF 35V	5CSAC00988		
C155	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C156	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C157	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C159	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C166	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C167	CAP,FXD TANTAL	202L3502 224KB	0.22UF 35V	5CSAC00988		
C168	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C169	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C170	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C171	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		
C172	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C173	CAP,FXD TANTAL	202L3502 224KB	0.22UF 35V	5CSAC00988		
C175	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C176	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C177	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237		

PARTS LIST

		TITLE		SHEET NO.	
		IF AMP	CAE-227	5	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C178	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C179	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C180	CAP,FXD TANTAL	202L3502 334KB	35V 0.33U	5CSAC01151	
C181	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C182	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C183	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C184	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C191	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C192	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C193	CAP,FXD CER	C3216B1H332K-E-TP	3300PF	5CAA001020	
C194	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C195	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C196	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C197	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C198	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C199	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C200	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C201	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C202	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783	
C203	CAP,FXD CER	C3216JB1H223K-E-TP		5CAAD01645	
C204	CAP,FXD CER	C3216JB1H332K-E-TP	3300PF	5CAAD01599	
C205	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C206	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C207	CAP,FXD CER	C3216SL1H222J-E-TP	2200PF	5CAAD00792	
C208	CAP,FXD CER	C3216JB1H223K-E-TP		5CAAD01645	
CD1	DIODE	1SS226 TE85L		5TXAD00320	
CD2	DIODE	1SV149B		5TXAD00332	
CD3	DIODE	1SS184 TE85L		5TXAD00290	
CD4	DIODE	MPR4371F		5TXBG00037	
CD5	DIODE	1SS226 TE85L		5TXAD00320	
CD6	DIODE	1SS226 TE85L		5TXAD00320	
CD8	DIODE	1SS181 TE85L		5TXAD00356	
CD9	DIODE	1SS184 TE85L		5TXAD00290	
CD10	DIODE	RD5.1MB1-T1		5TXAA00515	
CD11	DIODE	1SS181 TE85L		5TXAD00356	

PARTS LIST

		TITLE		SHEET NO.	
		IF AMP	CAE-227	6	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
CD13	DIODE	1SS184 TE85L		5TXAD00290	
CD14	DIODE	1SS181 TE85L		5TXAD00356	
CD21	DIODE	1SS184 TE85L		5TXAD00290	
CD22	DIODE	RD6.2MB2-T1		5TXAA00455	
CD23	DIODE	1SS226 TE85L		5TXAD00320	
CD24	DIODE	1SS181 TE85L		5TXAD00356	
CD25	DIODE	1SS184 TE85L		5TXAD00290	
CD26	DIODE	1SS184 TE85L		5TXAD00290	
CD27	DIODE	1SS184 TE85L		5TXAD00290	
CD28	DIODE	1SV149B		5TXAD00332	
CD29	DIODE	1SS184 TE85L		5TXAD00290	
IC2	IC	SN16913P		5DDAL00301	
IC3	IC	M5223L		5DDAB00164	
IC4	IC	TA7310P		5DAAD00091	
IC5	IC	TC4066BP		5DDAE00078	
IC6	IC	TC4066BP		5DDAE00078	
IC7	IC	M5223L		5DDAB00164	
IC8	IC	1R3N37		5DDBN00049	
IC9	IC	M5223L		5DDAB00164	
IC10	IC	TC4052BP		5DDAE00208	
IC11	IC	M5260L		5DDAB00312	
IC12	IC	M5260L		5DDAB00312	
J1	CONNECTOR	IL-G-2P-S3L2-E		5JWAD00094	
JP1	TIN COATED WIRE	TA-0.6P		2717100001	
JP2	TIN COATED WIRE	TA-0.6P		2717100001	
JP3	TIN COATED WIRE	TA-0.6P		2717100001	
L2	COIL	FL-7H472J	4.7MH	5LCAA00023	
L3	COIL	FL-7H472J	4.7MH	5LCAA00023	
L4	COIL	LAL03VB681K		5LCAA00442	
L5	COIL	FL7H-222J	2.2MH	5LCAA00021	
L6	COIL	FL7H-222J	2.2MH	5LCAA00021	
L7	COIL	LAL03VB100K	10UH	5LCAA00273	
L8	COIL	LAL03VB101K		5LCAA00333	
L9	COIL	LAL03VB820K		5LCAA00388	
P7	CONNECTOR	EC1C-22P-2.50SA	22P	5JWBS00070	

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PARTS LIST				
IF AMP		TITLE		SHEET NO.
		CAE-227		7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
P8	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00260A		6PCJD00260
R1	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R2	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R3	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R4	RESISTOR FXD	ERJ-8GEYJ220V	1/8W 22 OHM	5REAG01718
R5	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756
R6	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R7	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R8	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R9	RESISTOR FXD	ERJ-8GEYJ560V	1/8W 56 OHM	5REAG01723
R10	RESISTOR FXD	ERD-25UJ220	1/4W 22 OHM	5RDAAD1305
R11	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R12	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756
R13	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R14	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R15	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R16	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAG01748
R17	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R18	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R19	RESISTOR FXD	ERJ-8GEYJ154V	1/8W 150K OHM	5REAG01764
R20	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R21	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R22	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R23	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R24	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R25	RESISTOR FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728
R26	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R27	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R28	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R29	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R31	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R32	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R33	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R34	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726

PARTS LIST				
IF AMP		TITLE		SHEET NO.
		CAE-227		8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R35	RESISTOR FXD	ERJ-8GEYJ220V	1/8W 22 OHM	5REAG01718
R36	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R37	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R38	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R39	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R40	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R41	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R42	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R43	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R44	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R45	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R46	RESISTOR FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747
R51	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752
R52	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R53	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R54	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R55	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R56	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R57	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R58	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R59	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R60	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R61	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R62	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R63	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R64	RESISTOR FXD	ERJ-8GEYJ331V	1/8W 330 OHM	5REAG01732
R65	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735
R66	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735
R67	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752
R68	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R69	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R70	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R71	RESISTOR FXD	ERJ-8GEYJ183V	1/8W 18K OHM	5REAG01753
R72	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R73	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738

PARTS LIST

				TITLE	SHEET NO.
IF AMP				CAE-227	9
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R74	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAGD1774	
R75	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R76	RESISTOR FXD	ERJ-8GEYK2R2V		5REAGD2210	
R81	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R82	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R83	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAGD1730	
R84	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R85	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R86	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R87	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAGD1748	
R88	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R89	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R90	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R91	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAGD1748	
R92	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R93	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R94	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R95	RESISTOR FXD	ERJ-8GEYJ393V	1/8W 39K OHM	5REAGD1757	
R96	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAGD1754	
R97	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R98	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R99	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAGD1744	
R100	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R101	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R102	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R103	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R104	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R105-1	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAGD1774	
R105-2	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAGD1774	
R106	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R107	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAGD1754	
R108	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAGD1735	
R109	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R110	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R111	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	

PARTS LIST

				TITLE	SHEET NO.
IF AMP				CAE-227	10
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R112	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R113	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R114	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R115	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAGD1774	
R116	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R117	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAGD1762	
R121	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGD1742	
R122	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R123	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R124	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R125	RESISTOR FXD	ERJ-8GEYJ272V	1/8W 2.7K OHM	5REAGD1743	
R126	RESISTOR FXD	ERJ-8GEYJ272V	1/8W 2.7K OHM	5REAGD1743	
R127	RESISTOR FXD	ERJ-8GEYJ334V	1/8W 330K OHM	5REAGD1768	
R128	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R129	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R130	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R131	RESISTOR FXD	ERJ-8GEYDRO0V	0 OHM	5REAGD1775	
R140	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R141	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAGD1754	
R142	RESISTOR FXD	ERJ-8GEYJ474V	1/8W 470K OHM	5REAGD1770	
R143	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAGD1748	
R144	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAGD1744	
R145	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R146	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R147	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R148	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R149	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAGD1762	
R150	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAGD1762	
R151	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAGD1748	
R152	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R153	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAGD1762	
R154	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGD1742	
R155	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R156	RESISTOR FXD	ERJ-8GEYJ331V	1/8W 330 OHM	5REAGD1732	
R157	RESISTOR FXD	ERJ-8GEYJ822V		5REAGD1749	

PARTS LIST					SHEET NO.
		IF AMP	TITLE	CAE-227	11
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R158	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R159	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	SREAGO1758
R160	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	SREAGO1730
R161	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAGO1742
R162	RESISTOR	FXD	ERJ-8GEYJ821V	1/8W 820 OHM	SREAGO1737
R163	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R166	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762
R167	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R168	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R169	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R170	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R171	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R172	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAGO1742
R173	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAGO1742
R174	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R175	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R176	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R177	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R178	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R179	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R180	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	SREAGO1754
R182	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R183	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	SREAGO1774
R184	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R185	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R186	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762
R187	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R189-1	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	SREAGO1774
R189-2	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	SREAGO1774
R189-3	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	SREAGO1774
R190	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R191	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R192	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R193	RESISTOR	FXD	ERJ-8GEYJ333V	1/8W 33K OHM	SREAGO1756
R195	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750

PARTS LIST					SHEET NO.
		IF AMP	TITLE	CAE-227	12
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R196	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	SREAGO1754
R197	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	SREAGO1746
R198	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
R199	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
R200	RESISTOR	FXD	ERJ-8GEYJ681V	1/8W 680 OHM	SREAGO1736
R211	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	SREAGO1726
R212	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	SREAGO1746
R213	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	SREAGO1747
R214	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	SREAGO1747
R215	RESISTOR	FXD	ERJ-8GEYJ334V	1/8W 330K OHM	SREAGO1768
R216	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAGO1738
R217	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R218	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750
R219	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	SREAGO1766
R220	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	SREAGO1766
RJ1	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ2	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ3	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ4	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ5	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ6	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ7	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ8	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ9	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ10	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ11	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ12	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ13	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ14	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ15	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ16	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ17	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ19	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ20	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775
RJ21	RESISTOR	FXD	ERJ-8GEYOR00V	0 OHM	SREAGO1775

PARTS LIST

		TITLE		SHEET NO.	
		IF AMP	CAE-227	13	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
RJ23	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ24	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ25	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ27	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ28	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ29	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ30	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ31	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ32	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ33	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ34	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ35	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ36	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ37	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ38	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ39	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ40	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ41	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ42	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ43	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ44	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ45	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ46	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ47	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ48	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ49	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ50	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ51	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ52	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ53	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ54	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ55	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ56	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ57	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ58	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	

PARTS LIST

		TITLE		SHEET NO.	
		IF AMP	CAE-227	14	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
RJ59	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ60	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ61	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ62	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ63	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ64	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ65	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ66	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ67	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ68	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ69	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ70	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ71	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ72	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ73	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ74	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ75	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ76	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ77	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ78	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ79	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ80	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ81	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ82	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ83	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ85	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ86	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RJ87	RESISTOR FXD	ERJ-8GEYDROOV	0 OHM	5REAG01775	
RV1	RESISTOR VAR	EVN-D1AA00B54	50K OHM	5RVAB00380	
RV2	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
RV3	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
RV4	RESISTOR VAR	EVN-D1AA00B23		5RVAB00323	
RV5	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324	
RV6	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
RV7	RESISTOR VAR	EVN-D4AA00B54		5RVAB00317	

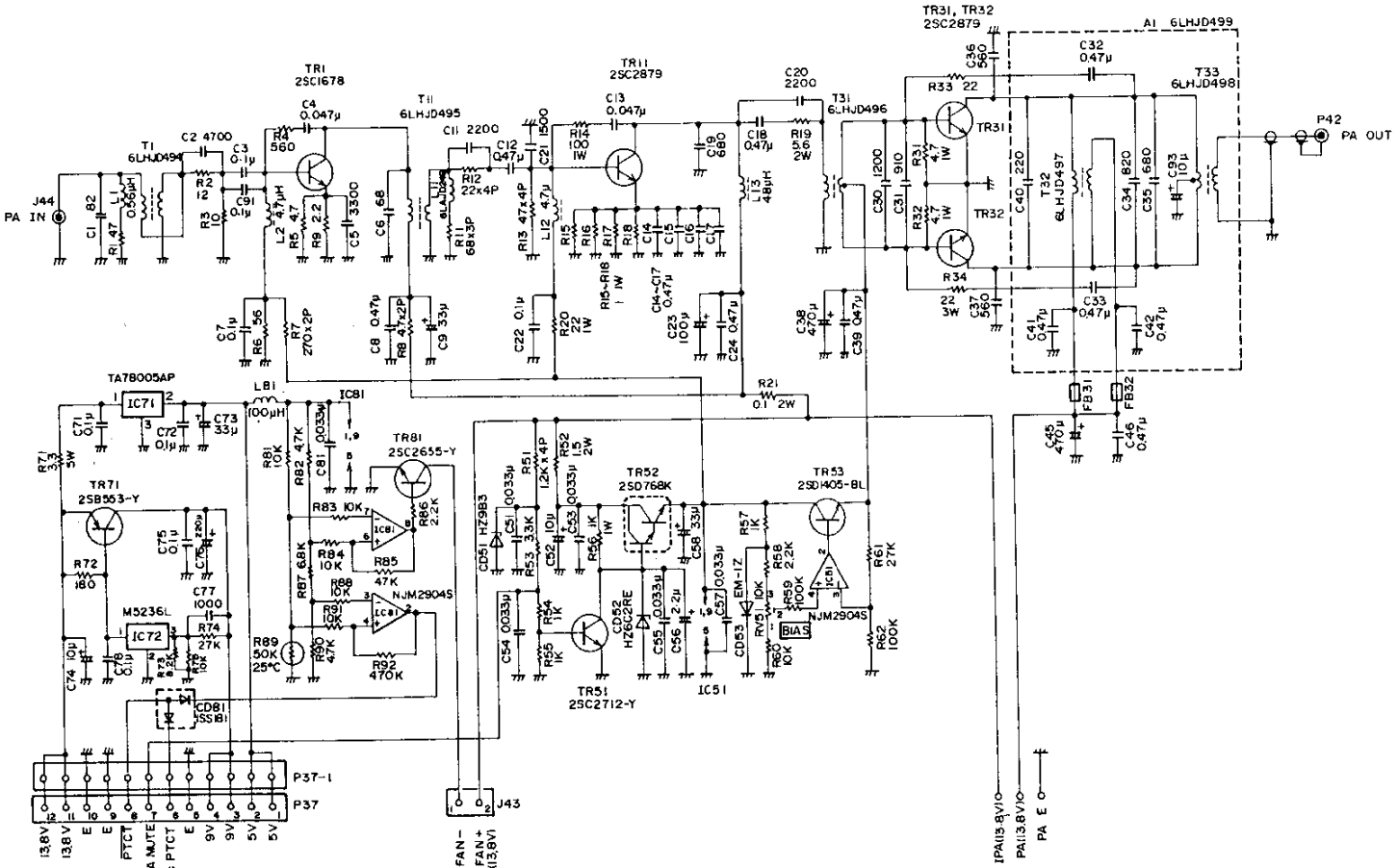
PARTS LIST				
IF AMP		TITLE		SHEET NO.
		CAE-227		15
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RV8	RESISTOR VAR	EVN-D1AA00B55		5RVAB00389
RV9	RESISTOR VAR	EVN-D1AA00B55		5RVAB00389
S1	TERMINAL	A2-3PA-2.54DSA(01)		5JTBX00010
S1P	CONNECTOR	HIF3GA-2.54SP		5JFAA01151
5 T1	RF XFMR	S-061-006		5LJAA00006
T2	RF XFMR	S-061-006		5LJAA00006
T3	RF XFMR	H-6LHJD00489	100KHZ	6LHJD00489
T4	RF XFMR	H-6LHJD00490	100KHZ	6LHJD00490
T5	RF XFMR	H-6LHJD00489	100KHZ	6LHJD00489
10 T6	COIL	5D-ELD19A-41		6LAFD00018
TP	TEST TERMINAL	PCN6-PEA		5JDA000364
TR1	TRANSISTOR	3SK77-GR		5TKAA00108
TR2	TRANSISTOR	3SK77-GR		5TKAA00108
TR3	TRANSISTOR	3SK77-GR		5TKAA00108
15 TR4	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR5	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR6	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR7	TRANSISTOR	3SK77-GR		5TKAA00108
TR8	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
20 TR9	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR10	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR11	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR12	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR13	TRANSISTOR	2SC3398-TB		5TCAZ00011
25 TR15	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR16	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR17	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR18	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR19	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
30 TR20	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR21	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR22	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR23	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR24	TRANSISTOR	2SC3398-TB		5TCAZ00011
35 TR26	TRANSISTOR	2SC2712Y TE85L		5TAAG00186

PARTS LIST				
IF AMP		TITLE		SHEET NO.
		CAE-227		16
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
TR27	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR30	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR31	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR32	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
5 TR33	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR34	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR35	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR36	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR37	TRANSISTOR	2SC3398-TB		5TCAZ00011
10 TR38	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR39	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR40	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR41	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
X1	RESONATOR	CSB360D		5NRAA00198

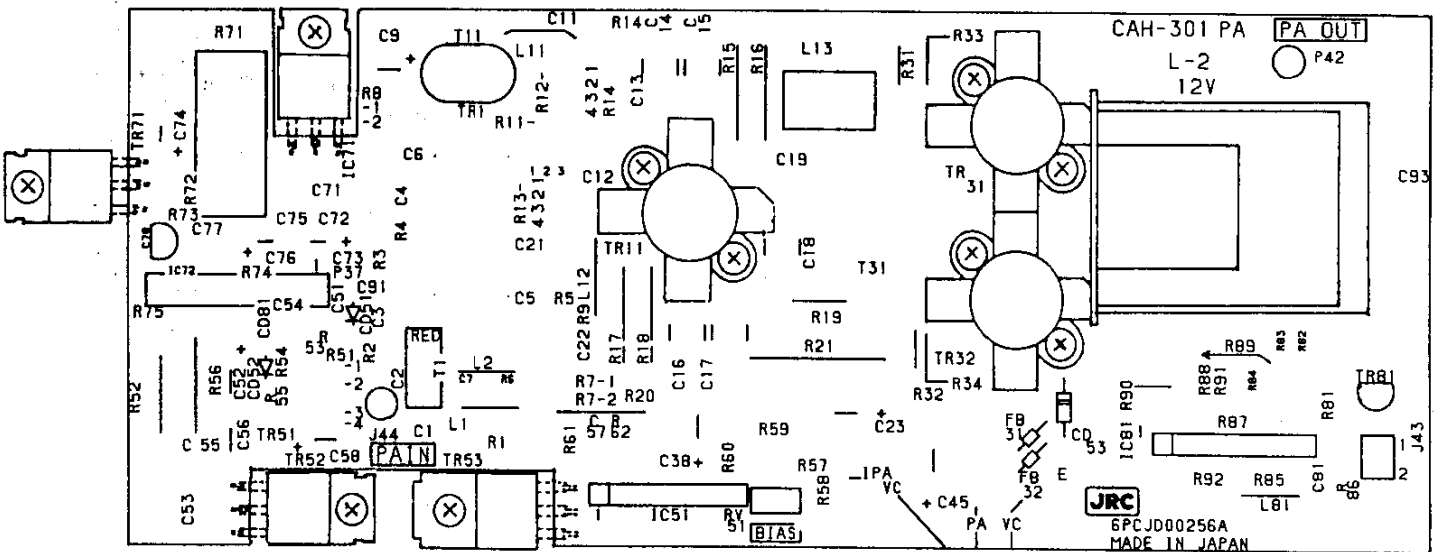
FOR SERVICE MANUALS
CONTACT:
MURPHISON TECHNICAL SERVICES
WWW.MURPHISON.CO.UK
TEL: 01844 351894
FAX: 01844 352554

Figure 6.4.1

12 V PA UNIT CAH-3011.2 Circuit Diagram



H-6PCJDO0256A
M0TW00834



FOR SERVICE MANUALS
 CONTACT:
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 www.mauritron.co.uk
 TEL: 01844 - 351694
 FAX: 01844 - 352554

Figure 6.4.2 12 V PA UNIT CAH-301L-2 Component Layout

PARTS LIST

		12V PA		TITLE	CAH-301L-2	SHEET NO.
						1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
A1	RF XFMR	H-6LHJD00499		6LHJD00499		
C1	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930		
C2	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783		
C3	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C4	CAP,FXD CER	C3216X7R1H473K-E-TP	0.047UF 50V	5CAAD01082		
C5	CAP,FXD CER	C3216B1H332K-E-TP	3300PF	5CAAD01020		
C6	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		
C7	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C8	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C9	CAP,FXD ELCTLT	ECEA1HU330B	50V 33U	5CEAA02305		
C11	CAP,FXD MICA	DM19C222J5	500WV 2200PF	5CMAB00149		
C12	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C13	CAP,FXD CER	C3216X7R1H473K-E-TP	0.047UF 50V	5CAAD01082		
C14	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C15	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C16	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C17	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C18	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C19	CAP,FXD MICA	DM15C6B1J1	100WV 680PF	5CMAB00039		
C20	CAP,FXD MICA	DM19C222J5	500WV 2200PF	5CMAB00149		
C21	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791		
C22	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C23	CAP,FXD ELCTLT	ECEA1HU101B	50V 100U	5CEAA02306		
C24	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C30	CAP,FXD MICA	DM19C122J5	500WV 1200PF	5CMAB00146		
C31	CAP,FXD MICA	DM19C911J5	500WV 910PF	5CMAB00277		
C32	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C33	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C34	CAP,FXD MICA	DM19C821J5	500WV 820PF	5CMAB00144		
C35	CAP,FXD MICA	DM19C6B1J5	500WV 680PF	5CMAB00143		
C36	CAP,FXD MICA	DM19C561J5	500WV 560PF	5CMAB00142		
C37	CAP,FXD MICA	DM19C561J5	500WV 560PF	5CMAB00142		
C38	CAP,FXD ELCTLT	ECE-A1CU471B	470UF	5CEAA01829		
C39	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C40	CAP,FXD MICA	DM15C221J5	500WV 220PF	5CMAB00137		

PARTS LIST

		12V PA		TITLE	CAH-301L-2	SHEET NO.
						2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C41	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C42	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C45	CAP,FXD ELCTLT	ECE-A1HU471B	470UF 50V	5CEAA01835		
C46	CAP,FXD CER	C5650X7R1H474K		5CAAD00588		
C51	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C52	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184		
C53	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C54	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C55	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C56	CAP,FXD TANTAL	202L2502 225KB	2.2UF 25V	5CSAC01129		
C57	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C58	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822		
C71	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C72	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C73	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822		
C74	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C75	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C76	CAP,FXD ELCTLT	ECE-A1EU221B	25V 220UF	5CEAA01786		
C77	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C78	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C81	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C91	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C93	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184		
CD51	DIODE	HZ9B3		5TXAE00224		
CD52	DIODE	HZ6C2RE		5TXAE00630		
CD53	DIODE	EM1Z	200V 1A	5TXAN00061		
CD81	DIODE	1SS181 TE85L		5TXAD00356		
FB31	CORE	FB-801		5MBAD00005		
FB32	CORE	FB-801		5MBAD00005		
IC51	IC	NJM2904S		5DAAN00239		
IC71	IC	TA78005AP		5DAAD00082		
IC71Z	SILICON SHEET	TC-30A (T0-220)		5ZZK00002		
IC72	IC	MS236L		5DDAB00170		
IC81	IC	NJM2904S		5DAAN00239		
J43	CONNECTOR	IL-S-2P-S2T2-EF		5JWAD00121		

PARTS LIST				
12V PA		TITLE		SHEET NO.
		CAH-301L-2		3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
J44	CONNECTOR	TMP-J01X-V2		5JDAX00009
L1	COIL	LAL03KHR56M	0.56UF	5LCAAD0443
L2	COIL	LAL03KHR4R7K	4.7UF	5LCAAD0444
L11	COIL	H-6LAJD00249		6LAJD00249
L12	COIL	LAL04KB4R7K		5LCAA00317
L13	COIL	SK-5M-4	48UH	5LWAJ00001
L81	COIL	LAL03KH101K	100UH	5LCAA00331
P37	CONNECTOR	H-6ZCJD4303D		6ZCJD4303D
P42	CABLE	H-6ZCJD37015	L=150	6ZCJD37015
PC1	PCB	H-6PCJD00256A		6PCJD00256
R1	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R2	RESISTOR FXD	ERJ-8GEYJ120V	1/8W 12 OHM	5REAG01715
R3	RESISTOR FXD	ERJ-8GEYJ100V	1/8W 10 OHM	5REAG01714
R4	RESISTOR FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735
R5	RESISTOR FXD	ERJ-8GEYK4R7V	1/8W 4.7 OHM	5REAG02256
R6	RESISTOR FXD	ERJ-8GEYJ560V	1/8W 56 OHM	5REAG01723
R7-1	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	5REAG01731
R7-2	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	5REAG01731
R8-1	RESISTOR FXD	ERJ-8GEYK4R7V	1/8W 4.7 OHM	5REAG02256
R8-2	RESISTOR FXD	ERJ-8GEYK4R7V	1/8W 4.7 OHM	5REAG02256
R9	RESISTOR FXD	ERJ-8GEYK2R2V		5REAG02210
R11-1	RESISTOR FXD	ERJ-8GEYJ680V	1/8W 68 OHM	5REAG01724
R11-2	RESISTOR FXD	ERJ-8GEYJ680V	1/8W 68 OHM	5REAG01724
R11-3	RESISTOR FXD	ERJ-8GEYJ680V	1/8W 68 OHM	5REAG01724
R12-1	RESISTOR FXD	ERJ-8GEYJ220V		5REAG01718
R12-2	RESISTOR FXD	ERJ-8GEYJ220V		5REAG01718
R12-3	RESISTOR FXD	ERJ-8GEYJ220V		5REAG01718
R12-4	RESISTOR FXD	ERJ-8GEYJ220V		5REAG01718
R13-1	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R13-2	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R13-3	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R13-4	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722
R14	RESISTOR FXD	ERG-1ANJ101	1W 100 OHM	5REAG00011
R15	RESISTOR FXD	ERX-1ANJ1R0	1 OHM 1W	5REAG00030
R16	RESISTOR FXD	ERX-1ANJ1R0	1 OHM 1W	5REAG00030

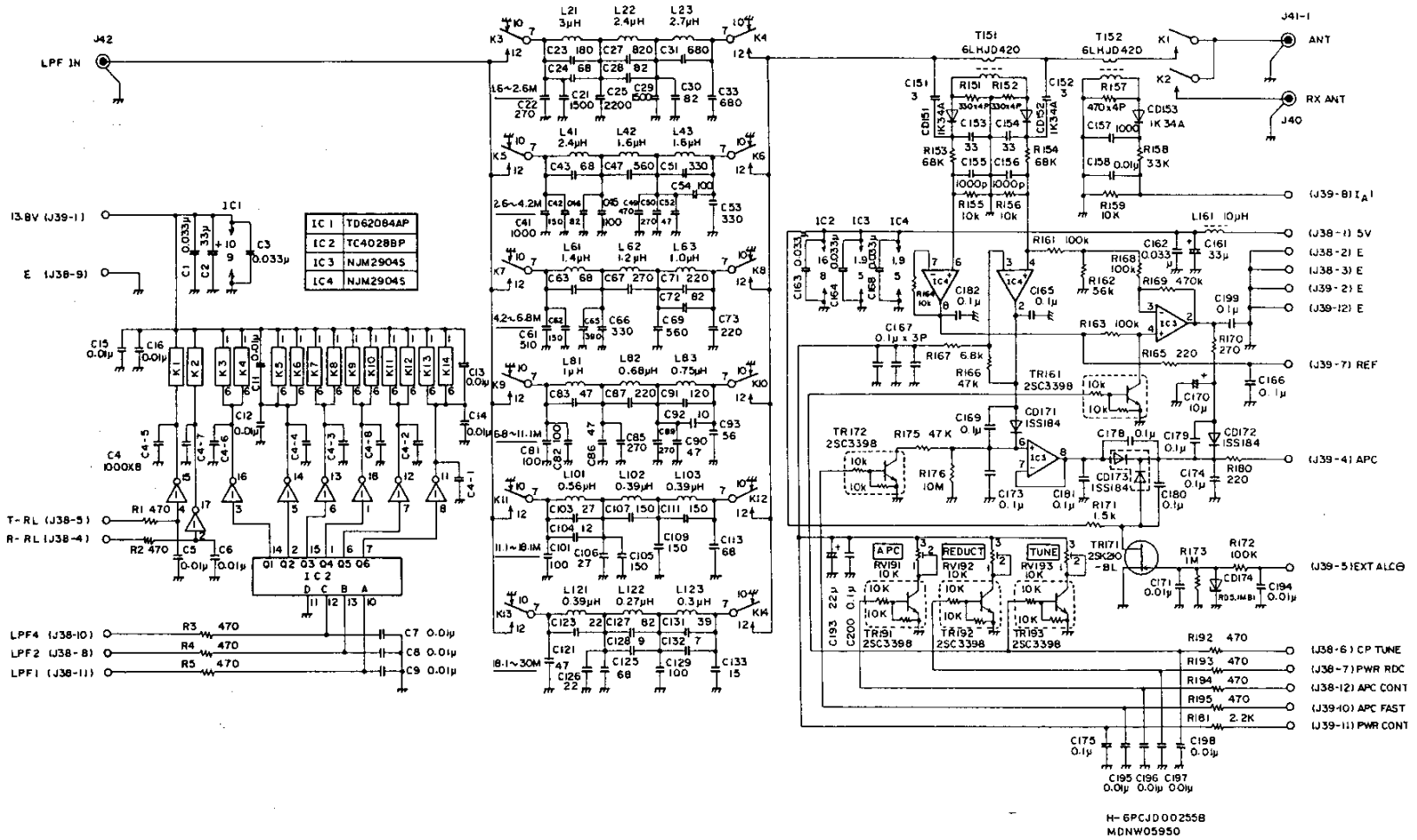
PARTS LIST				
12V PA		TITLE		SHEET NO.
		CAH-301L-2		4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R17	RESISTOR FXD	ERX-1ANJ1R0	1 OHM 1W	5REAG00030
R18	RESISTOR FXD	ERX-1ANJ1R0	1 OHM 1W	5REAG00030
R19	RESISTOR FXD	ERX-2ANJ5R6	5.6 OHM 2W	5REAG00033
R20	RESISTOR FXD	ERG-1ANJ220	1W 22 OHM	5REAG00028
R21	RESISTOR FXD	2SG0.1 OHM K		5RHAAD2566
R31	RESISTOR FXD	ERX-1ANJ4R7	1W 4.7 OHM	5REAG00412
R32	RESISTOR FXD	ERX-1ANJ4R7	1W 4.7 OHM	5REAG00412
R33	RESISTOR FXD	ERG-3ANJ220		5REAG01462
R34	RESISTOR FXD	ERG-3ANJ220		5REAG01462
R51-1	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739
R51-2	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739
R51-3	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739
R51-4	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739
R52	RESISTOR FXD	ERX-2ANJ1R5	2W 1.5 OHM	5REAG00388
R53	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R54	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R55	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R56	RESISTOR FXD	ERG-1ANJ102	1W 1K OHM	5REAG00100
R57	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R58	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742
R59	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R60	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R61	RESISTOR FXD	ERJ-8GEYJ273V		5REAG01755
R62	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R71	RESISTOR FXD	5SG3.3 OHM K		5RHAAD2611
R72	RESISTOR FXD	ERJ-8GEYJ181V	1/8W 180 OHM	5REAG01729
R73	RESISTOR FXD	ERJ-8GEYJ822V		5REAG01749
R74	RESISTOR FXD	ERJ-8GEYJ273V		5REAG01755
R75	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R81	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R82	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746
R83	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R84	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R85	RESISTOR FXD	ERJ-8GEYJ473V		5REAG01758
R86	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742

PARTS LIST

		TITLE		SHEET NO.
12V PA		CAH-301L-2		5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R87	RESISTOR FXD	ERJ-8GEYJ682V		5REAG01748
R88	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R89	THERMISTOR	150-503-00(5)	50K OHM	5RXAB00091
R90	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746
R91	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R92	RESISTOR FXD	ERJ-8GEYJ474V		5REAG01770
RV51	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324
T1	RF XFMR	H-6LHJD00494		6LHJD00494
T11	RF XFMR	H-6LHJD00495		6LHJD00495
T31	RF XFMR	H-6LHJD00496		6LHJD00496
T32	RF XFMR	H-6LHJD00497		6LHJD00497
T33	RF XFMR	H-6LHJD00498		6LHJD00498
TR1	TRANSISTOR	2SC1678		5TCAF00173
TR12-1	SILICON SHEET	TC-30A (TO-22D)		5ZZKB00002
TR12-2	BUSHING	YC-40B		5ZZDY00005
TR12-3	ACCESSORY	RH-14		5ZKAH00006
TR11	TRANSISTOR	2SC2879		5TCAF00359
TR31	TRANSISTOR	2SC2879		5TCAF00359
TR32	TRANSISTOR	2SC2879		5TCAF00359
TR51	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR52	TRANSISTOR	2SD768K		5TDAAD00034
TR522-1	SILICON SHEET	TC-30A (TO-22D)		5ZZKB00002
TR522-2	BUSHING	YC-40B		5ZZDY00005
TR53	TRANSISTOR	2SD1405-BL		5TDAE00145
TR532	SILICON SHEET	TC-30A (TO-22D)		5ZZKB00002
TR71	TRANSISTOR	2SB553-Y		5TBAE00036
TR712-1	SILICON SHEET	TC-30A (TO-22D)		5ZZKB00002
TR712-2	BUSHING	YC-40B		5ZZDY00005
TR81	TRANSISTOR	2SC2655-Y		5TCAF00246

FOR SERVICE MANUALS
CONTACT:
MURTIHAN TECHNICAL SERVICES
WWW.MURTIHAN.CO.UK
TEL: 01844 - 351694
FAX: 01844 - 352554

Figure 6.5.1 LPF UNIT CFJ-122-2 Circuit Diagram



FOR SERVICE MANUALS
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 MAURITRON TECHNICAL SERVICES
 www.mauritron.co.uk
 TEL: 01844 - 351694
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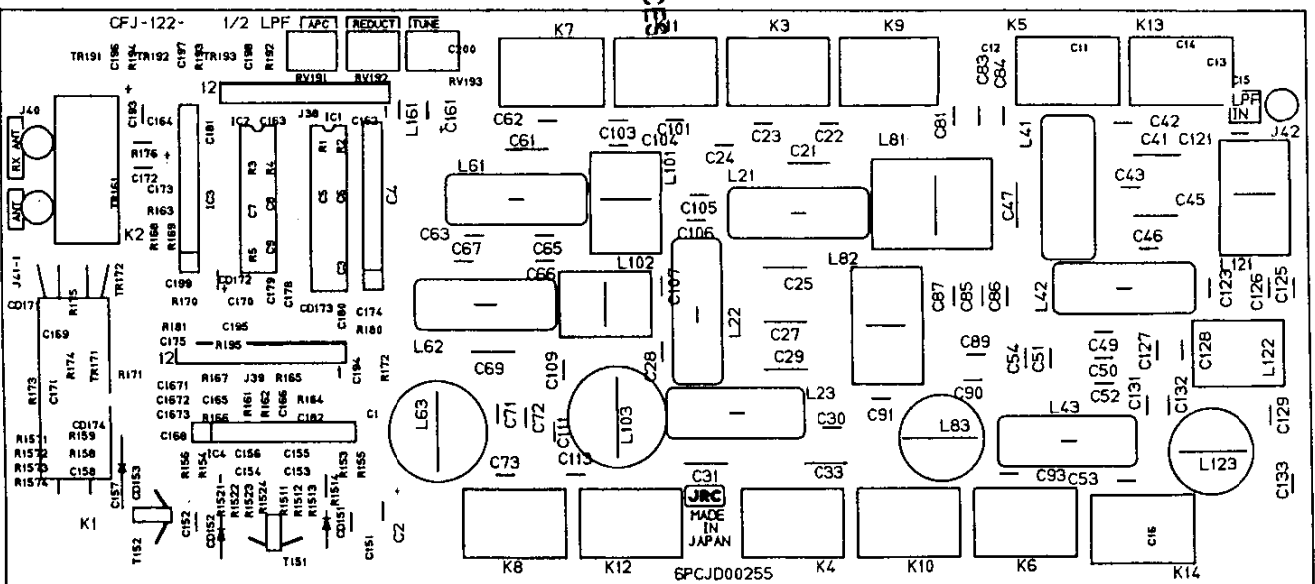


Figure 6.5.2 LPF UNIT CFJ-122-2 Component Layout

PARTS LIST						SHEET NO.	
LPP		TITLE			CFJ-122-2		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE			
C1	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357			
C2	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822			
C3	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357			
C4	CAP,FXD CER	EXF-P81022W	1000PFX8	5CXAD00008			
C5	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C6	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C7	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C8	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C9	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C11	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C12	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C13	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C14	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C15	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C16	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789			
C21	CAP,FXD MICA	DM19C152J5	500WV 1500PF	5CMAB00147			
C22	CAP,FXD CER	CC45SL2H271JYP-FP		5CAAB01900			
C23	CAP,FXD CER	CC45SL2H181JYP-FP		5CAAB01896			
C24	CAP,FXD CER	CC45SL2H680JYP-FP		5CAAB01897			
C25	CAP,FXD MICA	DM19C222J5	500WV 2200PF	5CMAB00149			
C27	CAP,FXD MICA	DM19C821J5	500WV 820PF	5CMAB00144			
C28	CAP,FXD CER	CC45SL2H820JYP-FP		5CAAB01898			
C29	CAP,FXD MICA	DM19C152J5	500WV 1500PF	5CMAB00147			
C30	CAP,FXD CER	CC45SL2H820JYP-FP		5CAAB01898			
C31	CAP,FXD MICA	DM19C681J5	500WV 680PF	5CMAB00143			
C33	CAP,FXD MICA	DM19C681J5	500WV 680PF	5CMAB00143			
C41	CAP,FXD MICA	DM19C102J5	500WV 1000PF	5CMAB00145			
C42	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C43	CAP,FXD CER	CC45SL2H680JYP-FP		5CAAB01897			
C45	CAP,FXD MICA	DM19C112J5	500WV 1100PF	5CMAB00256			
C46	CAP,FXD CER	CC45SL2H820JYP-FP		5CAAB01898			
C47	CAP,FXD MICA	DM19C561J5	500WV 560PF	5CMAB00142			
C49	CAP,FXD CER	CC45SL2H471JYP-FP		5CAAB01901			
C50	CAP,FXD CER	CC45SL2H271JYP-FP		5CAAB01900			
C51	CAP,FXD CER	CC45SL2H331JYP-FP		5CAAB01902			

PARTS LIST						SHEET NO.	
LPP		TITLE			CFJ-122-2		2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE			
C52	CAP,FXD CER	CC45SL2H470JYP-FP		5CAAB01903			
C53	CAP,FXD CER	CC45SL2H331JYP-FP		5CAAB01902			
C54	CAP,FXD CER	CC45SL2H101JYP-FP		5CAAB01910			
C61	CAP,FXD MICA	DM15C511J5	510PF 500WV	5CMAB00175			
C62	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C63	CAP,FXD CER	CC45SL2H680JYP-FP		5CAAB01897			
C65	CAP,FXD CER	CC45SL2H391JYP-FP		5CAAB01904			
C66	CAP,FXD CER	CC45SL2H331JYP-FP		5CAAB01902			
C67	CAP,FXD CER	CC45SL2H271JYP-FP		5CAAB01900			
C69	CAP,FXD MICA	DM19C561J5	500WV 560PF	5CMAB00142			
C71	CAP,FXD CER	CC45SL2H221JYP-FP		5CAAB01905			
C72	CAP,FXD CER	CC45SL2H820JYP-FP		5CAAB01898			
C73	CAP,FXD CER	CC45SL2H221JYP-FP		5CAAB01905			
C81	CAP,FXD CER	CC45SL2H101JYP-FP		5CAAB01910			
C82	CAP,FXD CER	CC45SL2H101JYP-FP		5CAAB01910			
C83	CAP,FXD CER	CC45SL2H470JYP-FP		5CAAB01903			
C85	CAP,FXD CER	CC45SL2H271JYP-FP		5CAAB01900			
C86	CAP,FXD CER	CC45SL2H470JYP-FP		5CAAB01903			
C87	CAP,FXD CER	CC45SL2H221JYP-FP		5CAAB01905			
C89	CAP,FXD CER	CC45SL2H271JYP-FP		5CAAB01900			
C90	CAP,FXD CER	CC45SL2H470JYP-FP		5CAAB01903			
C91	CAP,FXD CER	CC45SL2H121JYP-FP		5CAAB01908			
C92	CAP,FXD CER	CC45SL2H100JYP-FP		5CAAB01913			
C93	CAP,FXD CER	CC45SL2H560JYP-FP		5CAAB01909			
C101	CAP,FXD CER	CC45SL2H101JYP-FP		5CAAB01910			
C103	CAP,FXD CER	CC45SL2H270JYP-FP		5CAAB01911			
C104	CAP,FXD CER	CC45SL2H120JYP-FP		5CAAB01912			
C105	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C106	CAP,FXD CER	CC45SL2H270JYP-FP		5CAAB01911			
C107	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C109	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C111	CAP,FXD CER	CC45SL2H151JYP-FP		5CAAB01899			
C113	CAP,FXD CER	CC45SL2H680JYP-FP		5CAAB01897			
C121	CAP,FXD CER	CC45SL2H470JYP-FP		5CAAB01903			
C123	CAP,FXD CER	CC45SL2H220JYP-FP		5CAAB01907			

PARTS LIST

		TITLE		SHEET NO.	
LPF		CFJ-122-2		3	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C125	CAP,FXD CER	CC45SL2H68DJYP-FP		5CAAB01897	
C126	CAP,FXD CER	CC45SL2H220JYP-FP		5CAAB01907	
C127	CAP,FXD CER	CC45SL2H820JYP	500V 82P	5CAAB01824	
C128	CAP,FXD CER	CC45SL2H090DYP-FP		5CAAB01919	
C129	CAP,FXD CER	CC45SL2H101JYP-FP		5CAAB01910	
C131	CAP,FXD CER	CC45SL2H390JYP-FP		5CAAB01915	
C132	CAP,FXD CER	CC45SL2H070DYP-FP		5CAAB01916	
C133	CAP,FXD CER	CC45SL2H150JYP-FP		5CAAB01917	
C151	CAP,FXD CER	CC45SL2H030DYP-FP		5CAAB01918	
C152	CAP,FXD CER	CC45SL2H030DYP-FP		5CAAB01918	
C153	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794	
C154	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794	
C155	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C156	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C157	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C158	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C161	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822	
C162	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C163	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C164	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C165	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C166	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C168	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C169	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C170	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C171	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C173	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C174	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C175	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C178	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C179	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C180	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C181	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C182	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	

PARTS LIST

		TITLE		SHEET NO.	
LPF		CFJ-122-2		4	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C193	CAP,FXD TANTAL	202L1602 226KB		5CSAC00939	
C194	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C195	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C196	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C197	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C198	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C199	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C200	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C1671	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C1672	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C1673	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
CD151	DIODE	1K34A		5TXCH00001	
CD152	DIODE	1K34A		5TXCH00001	
CD153	DIODE	1K34A		5TXCH00001	
CD171	DIODE	1SS184 TE85L		5TXAD00290	
CD172	DIODE	1SS184 TE85L		5TXAD00290	
CD173	DIODE	1SS184 TE85L		5TXAD00290	
CD174	DIODE	RD5.1MB1-T1		5TXAAD0515	
IC1	IC	TD62084AP		5DDAE00546	
IC2	IC	TC40288P		5DDAE00069	
IC3	IC	NJM2904S		5DAAND0239	
IC4	IC	NJM2904S		5DAAND0239	
J38	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156	
J39	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156	
J40	CONNECTOR	TMP-J01X-V2		5JDAX00009	
J41-1	CONNECTOR	TMP-J01X-V2		5JDAX00009	
J42	CONNECTOR	TMP-J01X-V2		5JDAX00009	
K1	RELAY	UAM-22912		5KRAL00057	
K2	RELAY	TC-112M		5KRAK00027	
K3	RELAY	G6E-184P DC12V	12V	5KLBM00005	
K4	RELAY	G6E-184P DC12V	12V	5KLBM00005	
K5	RELAY	G6E-184P DC12V	12V	5KLBM00005	
K6	RELAY	G6E-184P DC12V	12V	5KLBM00005	
K7	RELAY	G6E-184P DC12V	12V	5KLBM00005	
K8	RELAY	G6E-184P DC12V	12V	5KLBM00005	

PARTS LIST

		TITLE			SHEET NO.
LPF		CFJ-122-2			5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
K9	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
K10	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
K11	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
K12	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
K13	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
K14	RELAY	G6E-184P DC12V	12V	5KLBMO0005	
L21	COIL	H-6LFJD30300	3.0UH	6LFJD30300	
L22	COIL	H-6LFJD30240	2.4UH	6LFJD30240	
L23	COIL	H-6LFJD30270	2.7UH	6LFJD30270	
L41	COIL	H-6LFJD30240	2.4UH	6LFJD30240	
L42	COIL	H-6LFJD30160	1.6UH	6LFJD30160	
L43	COIL	H-6LFJD30160	1.6UH	6LFJD30160	
L61	COIL	H-6LFJD30140		6LFJD30140	
L62	COIL	H-6LFJD30120	1.2UH	6LFJD30120	
L63	COIL	H-6LFJD82110	1.1UH	6LFJD82110	
L81	COIL	H-6LFJD30100	1UH	6LFJD30100	
L82	COIL	H-6LFJD81068	0.68UH	6LFJD81068	
L83	COIL	H-6LFJD82075	0.75UH	6LFJD82075	
L101	COIL	H-6LFJD81056	0.56UH	6LFJD81056	
L102	COIL	H-6LFJD81039	0.39UH	6LFJD81039	
L103	COIL	H-6LFJD82039	0.39UH	6LFJD82039	
L121	COIL	H-6LFJD60039		6LFJD60039	
L122	COIL	H-6LFJD60027	0.27UH	6LFJD60027	
L123	COIL	H-6LFJD70030		6LFJD70030	
L161	COIL	LAL03VB100K	10UH	5LCAA00273	
PC1	PCB	H-6PCJD00255B		6PCJD00255	
R1	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R2	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R3	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R4	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R5	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R153	RESISTOR FXD	ERJ-8GEYJ683V	1/8W 68K OHM	SREAGO1760	
R154	RESISTOR FXD	ERJ-8GEYJ683V	1/8W 68K OHM	SREAGO1760	
R155	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750	

PARTS LIST

		TITLE			SHEET NO.
LPF		CFJ-122-2			6
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R156	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750	
R158	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	SREAGO1756	
R159	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750	
R161	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762	
R162	RESISTOR FXD	ERJ-8GEYJ563V		SREAGO1759	
R163	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762	
R164	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAGO1750	
R165	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	SREAGO1730	
R166	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	SREAGO1758	
R167	RESISTOR FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	SREAGO1748	
R168	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762	
R169	RESISTOR FXD	ERJ-8GEYJ474V	1/8W 470K OHM	SREAGO1770	
R170	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	SREAGO1731	
R171	RESISTOR FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	SREAGO1740	
R172	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	SREAGO1762	
R173	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	SREAGO1774	
R175	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	SREAGO1758	
R176	RESISTOR FXD	HMGL1/4A-10M OHM J		SREAA05607	
R180	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	SREAGO1730	
R181	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAGO1742	
R192	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R193	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R194	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R195	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R1511	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1512	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1513	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1514	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1521	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1522	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1523	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1524	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	SREAGO1732	
R1571	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	
R1572	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	SREAGO1734	

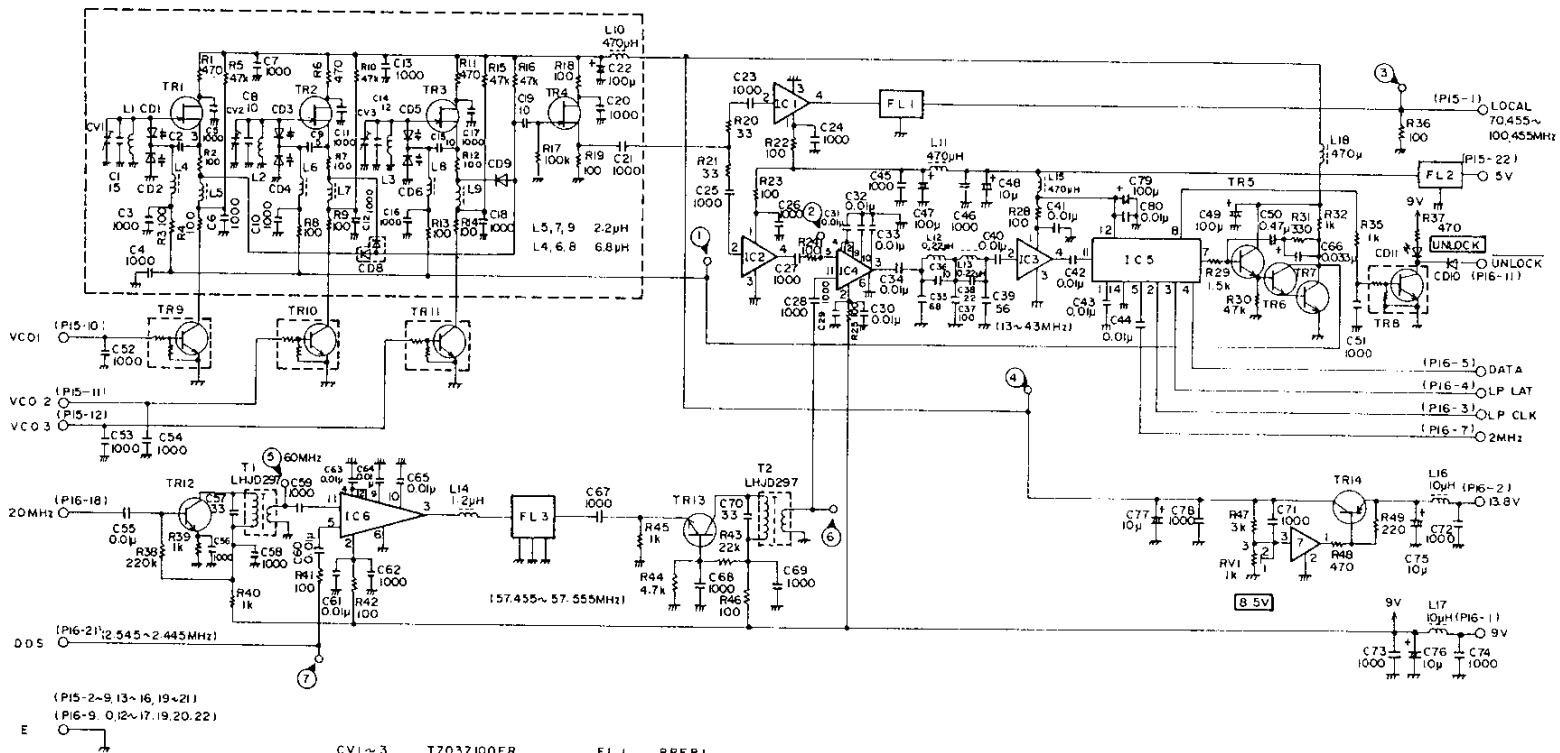
PARTS LIST

		TITLE		SHEET NO.
LPP		CFJ-122-2		7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R1573	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
R1574	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734
RV191	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324
RV192	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324
RV193	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324
T151	RF XFMR	H-6LHJD00420		6LHJD00420
T152	RF XFMR	H-6LHJD00420		6LHJD00420
TR161	TRANSISTOR	2SC3398-TB		5TCA200011
TR171	TRANSISTOR	2SK210BL-TE85L		5TKAA00189
TR172	TRANSISTOR	2SC3398-TB		5TCA200011
TR191	TRANSISTOR	2SC3398-TB		5TCA200011
TR192	TRANSISTOR	2SC3398-TB		5TCA200011
TR193	TRANSISTOR	2SC3398-TB		5TCA200011

FOR SERVICE MANUALS
 CONTACT:
MAURITRON TECHNICAL SERVICES
 www.mauritron.co.uk
 TEL: 01844 351694
 FAX: 01844 352554

Figure 6.6.1

LOOP1 UNIT CGA-145 Circuit Diagram



CV1~3	TZ032100FR	FL1	BPEB1
CD1~6	1SV203	FL2	DS310-55B222M
CD8,9	HSM2694	FL3	SAF58MH702
CD10	1SS226	IC1~3	μPC1651G
CD11	MPR4371F	IC4,6	SN76514N
TR1~4	2SK210-BL	IC5	CX79258
TR5~7	2SC3324-GR	LC7	M5236L
TR8~11	2SC3398	L1	SC2-55T
TR12,13	2SC2714-Y	L2	SC2-45T
TR14	2SA1015-Y	L3	SC2-35T

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 FAX: 01844 - 352554

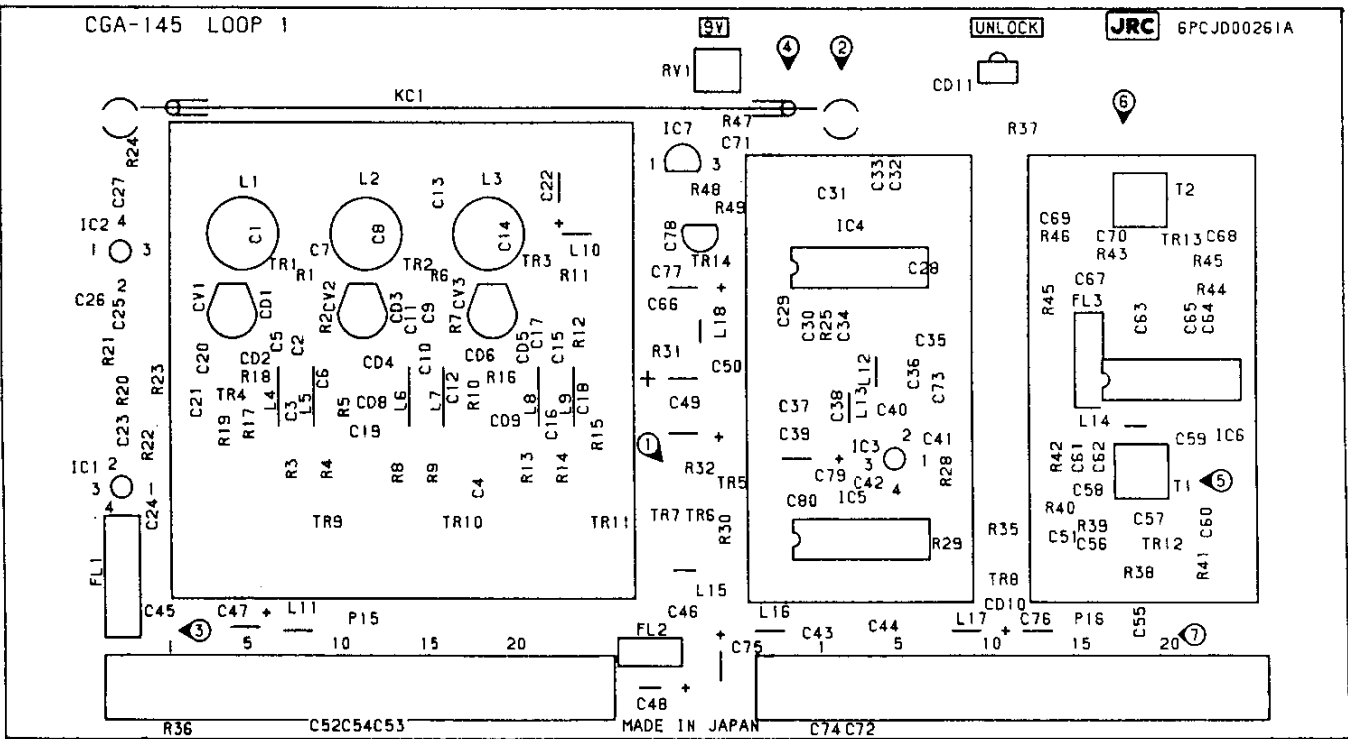


Figure 6.6.2 LOOP1 UNIT CGA-145 Component Layout

PARTS LIST						
LOOP1		TITLE		CGA-145		SHEET NO.
LOOP1		TITLE		CGA-145		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C1	CAP,FXD CER	C3216CH1H150J-E-TP	15PF	5CAAD00787		
C2	CAP,FXD CER	C3216CH1H030C-E-TP	50V 3PF	5CAAD00796		
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C4	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C6	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C7	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C8	CAP,FXD CER	C3216CH1H100D-E-TP		5CAAD00862		
C9	CAP,FXD CER	C3216CH1H050C-E-TP	50V 5PF	5CAAD00800		
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C12	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C13	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C14	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784		
C15	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785		
C16	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C17	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C18	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C19	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785		
C20	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C21	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C22	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C23	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C24	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C25	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C26	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C27	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C28	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C29	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C30	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C31	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C32	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C33	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C34	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C35	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929		

PARTS LIST						
LOOP1		TITLE		CGA-145		SHEET NO.
LOOP1		TITLE		CGA-145		2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C36	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785		
C37	CAP,FXD CER	C3216CH1H101J-E-TP	50V 100PF	5CAAD00780		
C38	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869		
C39	CAP,FXD CER	C3216CH1H560J-E-TP		5CAAD00863		
C40	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C41	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C42	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C43	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C44	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C45	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C46	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C47	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C48	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C49	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C50	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065		
C51	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C52	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C53	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C54	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C55	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C56	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C57	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794		
C58	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C59	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C60	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C61	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C62	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C63	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C64	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C65	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789		
C66	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C67	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C68	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C69	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782		
C70	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794		

PARTS LIST

		TITLE		SHEET NO.	
LOOP1		CGA-145		3	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C71	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C72	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C73	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C74	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
5 C75	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C76	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C77	CAP,FXD TANTAL	202L1602 106KB		5CSAC00932	
C78	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C79	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
10 C80	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
CD1	DIODE	1SV203-7TLC		5TXAE00678	
CD2	DIODE	1SV203-7TLC		5TXAE00678	
CD3	DIODE	1SV203-7TLC		5TXAE00678	
CD4	DIODE	1SV203-7TLC		5TXAE00678	
15 CD5	DIODE	1SV203-7TLC		5TXAE00678	
CD6	DIODE	1SV203-7TLC		5TXAE00678	
CD8	DIODE	HSM2694TLC		5TXAE00627	
CD9	DIODE	HSM2694TLC		5TXAE00627	
CD10	DIODE	1SS226 TEB5L		5TXAD00320	
20 CD11	DIODE	MPR4371F		5TXBG00037	
CV1	CAPACITOR VAR	TZ03Z100FR	10PF	5CVAA00190	
CV2	CAPACITOR VAR	TZ03Z100FR	10PF	5CVAA00190	
CV3	CAPACITOR VAR	TZ03Z100FR	10PF	5CVAA00190	
FL1	FILTER	BPEB1		5NBAG00011	
25 FL2	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002	
FL3	FILTER	SAF58MH70Z		5NRAA00191	
IC1	IC	UPC1651G		5DAAA00171	
IC2	IC	UPC1651G		5DAAA00171	
IC3	IC	UPC1651G		5DAAA00171	
30 IC4	IC	SN76514N		5DDAL00251	
IC5	IC	CX7925B		5DZCJ00008	
IC6	IC	SN76514N		5DDAL00251	
IC7	IC	M5236L		5DDAB00170	
KC1	CABLE	H-6ZCJD35003		6ZCJD35003	
35 L1	COIL	SC2-55T 3779		5LZNL00001	

PARTS LIST

		TITLE		SHEET NO.	
LOOP1		CGA-145		4	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
L2	COIL	SC2-45T		5LZNL00002	
L3	COIL	SC2-35T 3779		5LZNL00003	
L4	COIL	LAL03KH6R8K		5LCAA00437	
L5	COIL	LAL03KH2R2M	2.2UH	5LCAA00326	
5 L6	COIL	LAL03KH6R8K		5LCAA00437	
L7	COIL	LAL03KH2R2M	2.2UH	5LCAA00326	
L8	COIL	LAL03KH6R8K		5LCAA00437	
L9	COIL	LAL03KH2R2M	2.2UH	5LCAA00326	
L10	COIL	LAL03VB471K	470UH	5LCAA00270	
10 L11	COIL	LAL03VB471K	470UH	5LCAA00270	
L12	COIL	LAL03VBR22M	0.22UH	5LCAA00280	
L13	COIL	LAL03VBR22M	0.22UH	5LCAA00280	
L14	COIL	LAL03VB1R2M		5LCAA00334	
L15	COIL	LAL03VB471K	470UH	5LCAA00270	
15 L16	COIL	LAL03VB100K	10UH	5LCAA00273	
L17	COIL	LAL03VB100K	10UH	5LCAA00273	
L18	COIL	LAL03VB471K	470UH	5LCAA00270	
P15	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070	
P16	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070	
20 PC1	PCB	H-6PCJD00261A		6PCJD00261	
R1	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734	
R2	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R3	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R4	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
25 R5	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758	
R6	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734	
R7	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R8	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R9	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
30 R10	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758	
R11	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734	
R12	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R13	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R14	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
35 R15	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758	

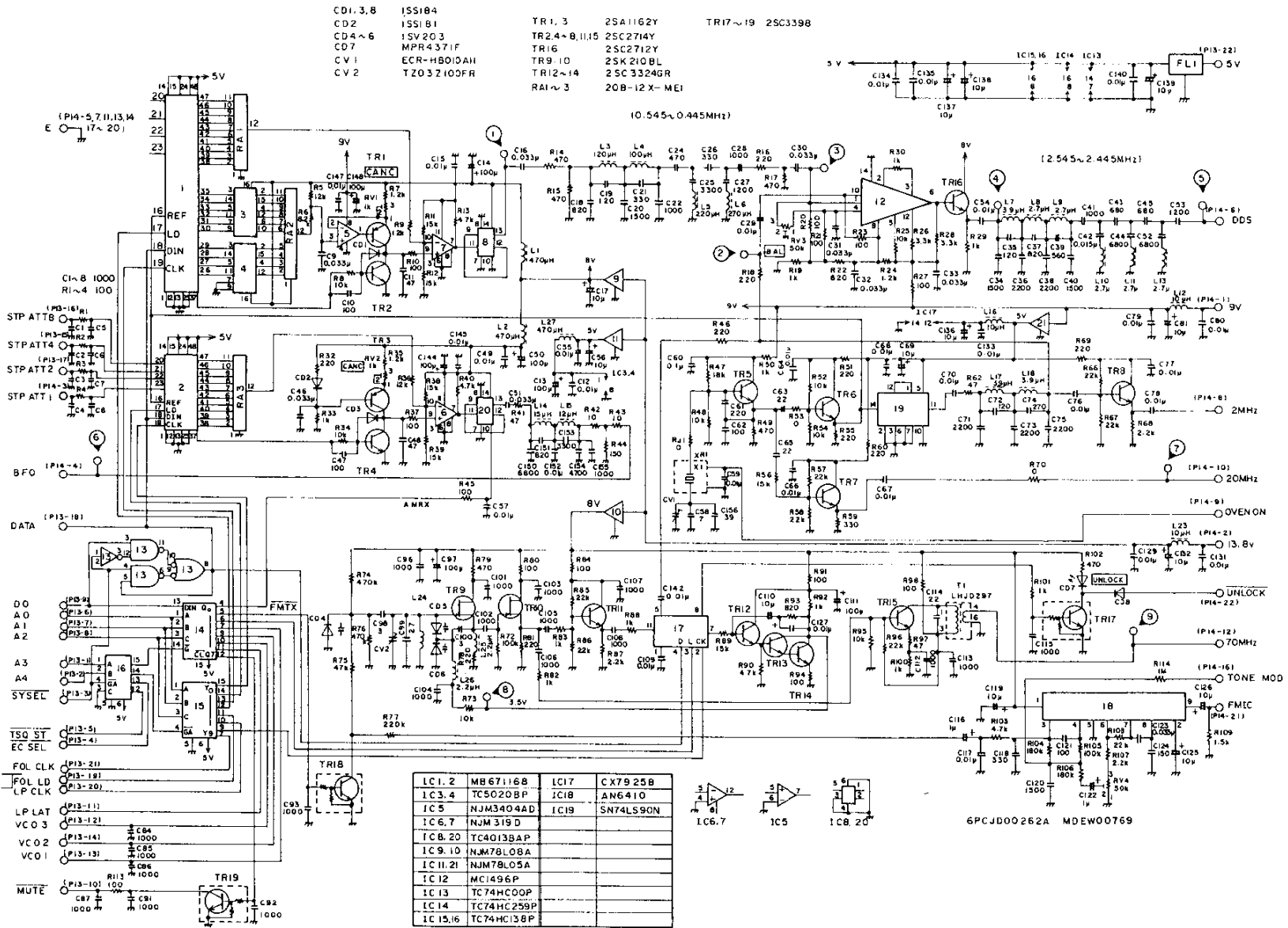
PARTS LIST					SHEET NO.	
TITLE				CGA-145		5
LOOP1						
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R16	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758	
R17	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762	
R18	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R19	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R20	RESISTOR	FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720	
R21	RESISTOR	FXD	ERJ-8GEYJ330V	1/8W 33 OHM	5REAG01720	
R22	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R23	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R24	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R25	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R28	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R29	RESISTOR	FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAG01740	
R30	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758	
R31	RESISTOR	FXD	ERJ-8GEYJ331V	1/8W 330 OHM	5REAG01732	
R32	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	
R35	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	
R36	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R37	RESISTOR	FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734	
R38	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	5REAG01766	
R39	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	
R40	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	
R41	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R42	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R43	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754	
R44	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746	
R45	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738	
R46	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R47	RESISTOR	FXD	ERJ-8GEYJ302V	1/8W 3K OHM	5REAG02211	
R48	RESISTOR	FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734	
R49	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730	
RV1	RESISTOR	VAR	EVN-D1AA00B13	1K OHM	5RVAB00313	
T1	RF XFMR		H-6LHJD00297		6LHJD00297	
T2	RF XFMR		H-6LHJD00297		6LHJD00297	
TP1	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TP2	TEST TERMINAL		PCN6-PEA		5JDAAD00364	

PARTS LIST					SHEET NO.	
TITLE				CGA-145		6
LOOP1						
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
TP3	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TP4	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TP5	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TP6	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TP7	TEST TERMINAL		PCN6-PEA		5JDAAD00364	
TR1	TRANSISTOR		2SK210BL-TE85L		5TKAA00189	
TR2	TRANSISTOR		2SK210BL-TE85L		5TKAA00189	
TR3	TRANSISTOR		2SK210BL-TE85L		5TKAA00189	
TR4	TRANSISTOR		2SK210BL-TE85L		5TKAA00189	
TR5	TRANSISTOR		2SC3324GR TE85L		5TCAF00711	
TR6	TRANSISTOR		2SC3324GR TE85L		5TCAF00711	
TR7	TRANSISTOR		2SC3324GR TE85L		5TCAF00711	
TR8	TRANSISTOR		2SC3398-TB		5TCAZ00011	
TR9	TRANSISTOR		2SC3398-TB		5TCAZ00011	
TR10	TRANSISTOR		2SC3398-TB		5TCAZ00011	
TR11	TRANSISTOR		2SC3398-TB		5TCAZ00011	
TR12	TRANSISTOR		2SC2714Y TE85L		5TCAF00436	
TR13	TRANSISTOR		2SC2714Y TE85L		5TCAF00436	
TR14	TRANSISTOR		2SA1015-Y		5TAAG00070	

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Figure 6.7.1

REF DDS UNIT CGK-81A Circuit Diagram



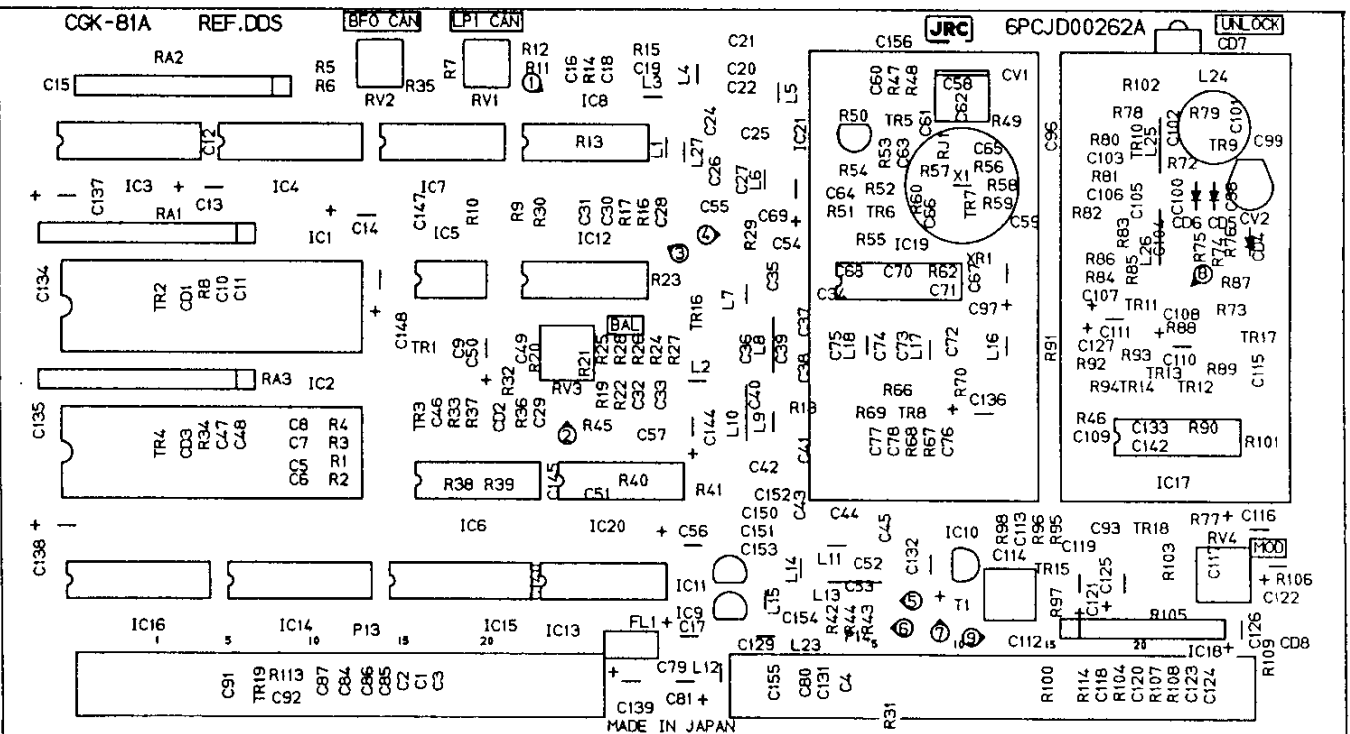


Figure 6.7.2 REF.DDS UNIT CGK-81A Component Layout

PARTS LIST

REF DDS		TITLE		SHEET NO.	
		CGK-81A		1	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C1	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C2	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C4	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C6	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C7	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C8	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C9	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C10	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780	
C11	CAP,FXD CER	C3216CH1H470J-E-TP	47PF	5CAAD00864	
C12	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C13	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C14	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C15	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C16	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C17	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C18	CAP,FXD CER	C3216SL1H821J-E-TP		5CAAD01068	
C19	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931	
C20	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791	
C21	CAP,FXD CER	C3216CH1H331J-E-TP	330PF	5CAAD01066	
C22	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C24	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797	
C25	CAP,FXD CER	C3216JB1H332K-E-TP	3300PF	5CAAD01599	
C26	CAP,FXD CER	C3216CH1H331J-E-TP	330PF	5CAAD01066	
C27	CAP,FXD CER	C3216SL1H122J-E-TP		5CAAD01069	
C28	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C29	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C30	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C31	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C32	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C33	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C34	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791	
C35	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931	
C36	CAP,FXD CER	C3216SL1H222J-E-TP	2200PF	5CAAD00792	

PARTS LIST

REF DDS		TITLE		SHEET NO.	
		CGK-81A		2	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C37	CAP,FXD CER	C3216SL1H821J-E-TP		5CAAD01068	
C38	CAP,FXD CER	C3216SL1H222J-E-TP	2200PF	5CAAD00792	
C39	CAP,FXD CER	C3216CH1H561J-E-TP		5CAAD01067	
C40	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791	
C41	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C42	CAP,FXD CER	C3216JB1H153K-E-TP		5CAAD01600	
C43	CAP,FXD CER	C3216CH1H681J-E-TP	680P	5CAAD00788	
C44	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C45	CAP,FXD CER	C3216CH1H681J-E-TP	680P	5CAAD00788	
C46	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C47	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780	
C48	CAP,FXD CER	C3216CH1H470J-E-TP	47PF	5CAAD00864	
C49	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C50	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C51	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C52	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C53	CAP,FXD CER	C3216SL1H122J-E-TP		5CAAD01069	
C54	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C55	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C56	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C57	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C58	CAP,FXD CER	C3216CH1H070D-E-TP	7PF	5CAAD00977	
C59	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C60	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C61	CAP,FXD CER	C3216CH1H221J-E-TP	220PF	5CAAD00790	
C62	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780	
C63	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869	
C64	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C65	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869	
C66	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C67	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C68	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C69	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C70	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C71	CAP,FXD CER	C3216SL1H222J-E-TP	2200PF	5CAAD00792	

PARTS LIST					
REF		TITLE		SHEET NO.	
DDS		CGK-81A		3	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C72	CAP,FXD CER	C3216CH1H21J-E-TP	120PF	5CAAD00931	
C73	CAP,FXD CER	C3216SL1H22J-E-TP	2200PF	5CAAD00792	
C74	CAP,FXD CER	C3216CH1H271J-E-TP	50V 270PF	5CAAD00883	
C75	CAP,FXD CER	C3216SL1H22J-E-TP	2200PF	5CAAD00792	
C76	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C77	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C78	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C79	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C80	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C81	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C84	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C85	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C86	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C87	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C91	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C92	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C93	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C96	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C97	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C98	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796	
C99	CAP,FXD CER	C3216CH1H270J-E-TP	27P	5CAAD00793	
C100	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796	
C101	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C102	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C103	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C104	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C105	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C106	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C107	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C108	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C109	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C110	CAP,FXD TANTAL	202L2502 106KB	25V 10UF	5CSAC00950	
C111	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C112	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C113	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	

PARTS LIST					
REF		TITLE		SHEET NO.	
DDS		CGK-81A		4	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C114	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869	
C115	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C116	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C117	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C118	CAP,FXD CER	C3216SL1H331J-E-TP	330PF	5CAAD00918	
C119	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C120	CAP,FXD CER	C3216SL1H152J-E-TP	1500PF	5CAAD00791	
C121	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780	
C122	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C123	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C124	CAP,FXD CER	C3216CH1H151J-E-TP	150P	5CAAD00870	
C125	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C126	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C127	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C129	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C131	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C132	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C133	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C134	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C135	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C136	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C137	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C138	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C139	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C140	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C142	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C144	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C145	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C147	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C148	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C150	CAP,FXD CER	C3216JB1H682K-E-TP		5CAAD01137	
C151	CAP,FXD CER	C3216SL1H821J-E-TP		5CAAD01068	
C152	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C153	CAP,FXD CER	C3216JB1H332K-E-TP	3300PF	5CAAD01599	
C154	CAP,FXD CER	C3216JB1H472K-E-TP	4700PF	5CAAD01138	

PARTS LIST					SHEET NO.
REF		DDS	TITLE	C6K-81A	5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C155	CAP,FXD	CER	C3216SL1H102J-E-TP	1000PF	5CAA00782
C156	CAP,FXD	CER	DD105TH390J50		5CBAB02366
CD1	DIODE		1SS184 TE85L		5TXAD00290
CD2	DIODE		1SS181 TE85L		5TXAD00356
CD3	DIODE		1SS184 TE85L		5TXAD00290
CD4	DIODE		1SV203-7TLC		5TXAE00678
CD5	DIODE		1SV203-7TLC		5TXAE00678
CD6	DIODE		1SV203-7TLC		5TXAE00678
CD7	DIODE		MPR4371F		5TXBG00037
CD8	DIODE		1SS184 TE85L		5TXAD00290
CV1	CAPACITOR VAR		ECR-HB010A11		5CVAC00134
CV2	CAPACITOR VAR		TZ03Z100FR	10PF	5CVAA00190
FL1	FILTER		DS310-55B222M	100V D.0022UF	5NXAA00002
IC1	IC		H-6DDJD00018 MB67116		6DDJD00018
IC2	IC		H-6DDJD00018 MB67116		6DDJD00018
IC3	IC		TC5020BP		5DDAE00235
IC4	IC		TC5020BP		5DDAE00235
IC5	IC		NJM3404AD		5DAAN00161
IC6	IC		NJM319D		5DAAN00206
IC7	IC		NJM319D		5DAAN00206
IC8	IC		TC4013BAP		5DDAE00817
IC9	IC		NJM78L08A	8V 100MA	5DAAN00079
IC10	IC		NJM78L08A	8V 100MA	5DAAN00079
IC11	IC		NJM78L05A	5V 100MA	5DAAN00046
IC12	IC		MC1496P		5DAAJ00083
IC13	IC		TC74HC00P		5DDAE00439
IC14	IC		TC74HC259P		5DDAE00609
IC15	IC		TC74HC138P		5DDAE00440
IC16	IC		TC74HC138P		5DDAE00440
IC17	IC		CX7925B		5DZCJ00008
IC18	IC		AN6410		5DAAR00057
IC19	IC		SN74LS90N		5DDAL00116
IC20	IC		TC4013BAP		5DDAE00817
IC21	IC		NJM78L05A	5V 100MA	5DAAN00046
L1	COIL		LAL03VB471K	470UH	5LCAA00270

PARTS LIST					SHEET NO.
REF		DDS	TITLE	C6K-81A	6
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
L2	COIL		LAL03VB471K	470UH	5LCAA00270
L3	COIL		LAL03VB121K		5LCAA00440
L4	COIL		LAL03VB101K		5LCAA00333
L5	COIL		LAL03VB221K	220UH	5LCAA00272
L6	COIL		LAL03VB271K		5LCAA00438
L7	COIL		LAL03VB3R9K		5LCAA00338
L8	COIL		LAL03KH2R7M		5LCAA00439
L9	COIL		LAL03VB2R7M		5LCAA00329
L10	COIL		LAL03KH2R7M		5LCAA00439
L11	COIL		LAL03VB2R7M		5LCAA00329
L12	COIL		LAL03VB100K	10UH	5LCAA00273
L13	COIL		LAL03KH2R7M		5LCAA00439
L14	COIL		LAL03VB150K		5LCAA00324
L15	COIL		LAL03VB120K		5LCAA00386
L16	COIL		LAL03VB100K	10UH	5LCAA00273
L17	COIL		LAL03VB3R9K		5LCAA00338
L18	COIL		LAL03VB3R9K		5LCAA00338
L23	COIL		LAL03VB100K	10UH	5LCAA00273
L24	COIL		SC2-45T		5LZNL00002
L25	COIL		LAL03KH2R2M	2.2UH	5LCAA00326
L26	COIL		LAL03KH2R2M	2.2UH	5LCAA00326
L27	COIL		LAL03VB471K	470UH	5LCAA00270
P13	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070
P14	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB		H-6PCJD00262A		6PCJD00262
R1	RESISTOR FXD		ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R2	RESISTOR FXD		ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R3	RESISTOR FXD		ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R4	RESISTOR FXD		ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R5	RESISTOR FXD		ERJ-8GEYJ123V	1/8W 12K OHM	5REAG01751
R6	RESISTOR FXD		ERJ-8GEYJ822V		5REAG01749
R7	RESISTOR FXD		ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739
R8	RESISTOR FXD		ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R9	RESISTOR FXD		ERJ-8GEYJ123V	1/8W 12K OHM	5REAG01751
R10	RESISTOR FXD		ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726

PARTS LIST

		REF DDS		TITLE	CGK-81A	SHEET NO.
						7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R11	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752		
R12	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752		
R13	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746		
R14	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R15	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R16	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R17	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R18	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R19	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R20	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R21	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R22	RESISTOR FXD	ERJ-8GEYJ821V	1/8W 820 OHM	5REAG01737		
R23	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R24	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739		
R25	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R26	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R27	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R28	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744		
R29	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R30	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R32	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R33	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R34	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R35	RESISTOR FXD	ERJ-8GEYJ122V	1/8W 1.2K OHM	5REAG01739		
R36	RESISTOR FXD	ERJ-8GEYJ123V	1/8W 12K OHM	5REAG01751		
R37	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R38	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752		
R39	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752		
R40	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAG01746		
R41	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R42	RESISTOR FXD	ERJ-8GEYJ100V	1/8W 10 OHM	5REAG01714		
R43	RESISTOR FXD	ERJ-8GEYJ100V	1/8W 10 OHM	5REAG01714		
R44	RESISTOR FXD	ERJ-8GEYJ151V	1/8W 150 OHM	5REAG01728		
R45	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R46	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		

PARTS LIST

		REF DDS		TITLE	CGK-81A	SHEET NO.
						8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R47	RESISTOR FXD	ERJ-8GEYJ183V	1/8W.18K OHM	5REAG01753		
R48	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R49	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R50	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R51	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R52	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R53	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775		
R54	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R55	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R56	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752		
R57	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R58	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R59	RESISTOR FXD	ERJ-8GEYJ331V	1/8W.330 OHM	5REAG01732		
R60	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R62	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAG01722		
R66	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R67	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R68	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R69	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R70	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775		
R72	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762		
R73	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R74	RESISTOR FXD	ERJ-8GEYJ474V	1/8W 470K OHM	5REAG01770		
R75	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758		
R76	RESISTOR FXD	ERJ-8GEYJ474V	1/8W 470K OHM	5REAG01770		
R77	RESISTOR FXD	ERJ-8GEYJ224V	1/8W 220K OHM	5REAG01766		
R78	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R79	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAG01734		
R80	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R81	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730		
R82	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R83	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R84	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726		
R85	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		
R86	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754		

PARTS LIST

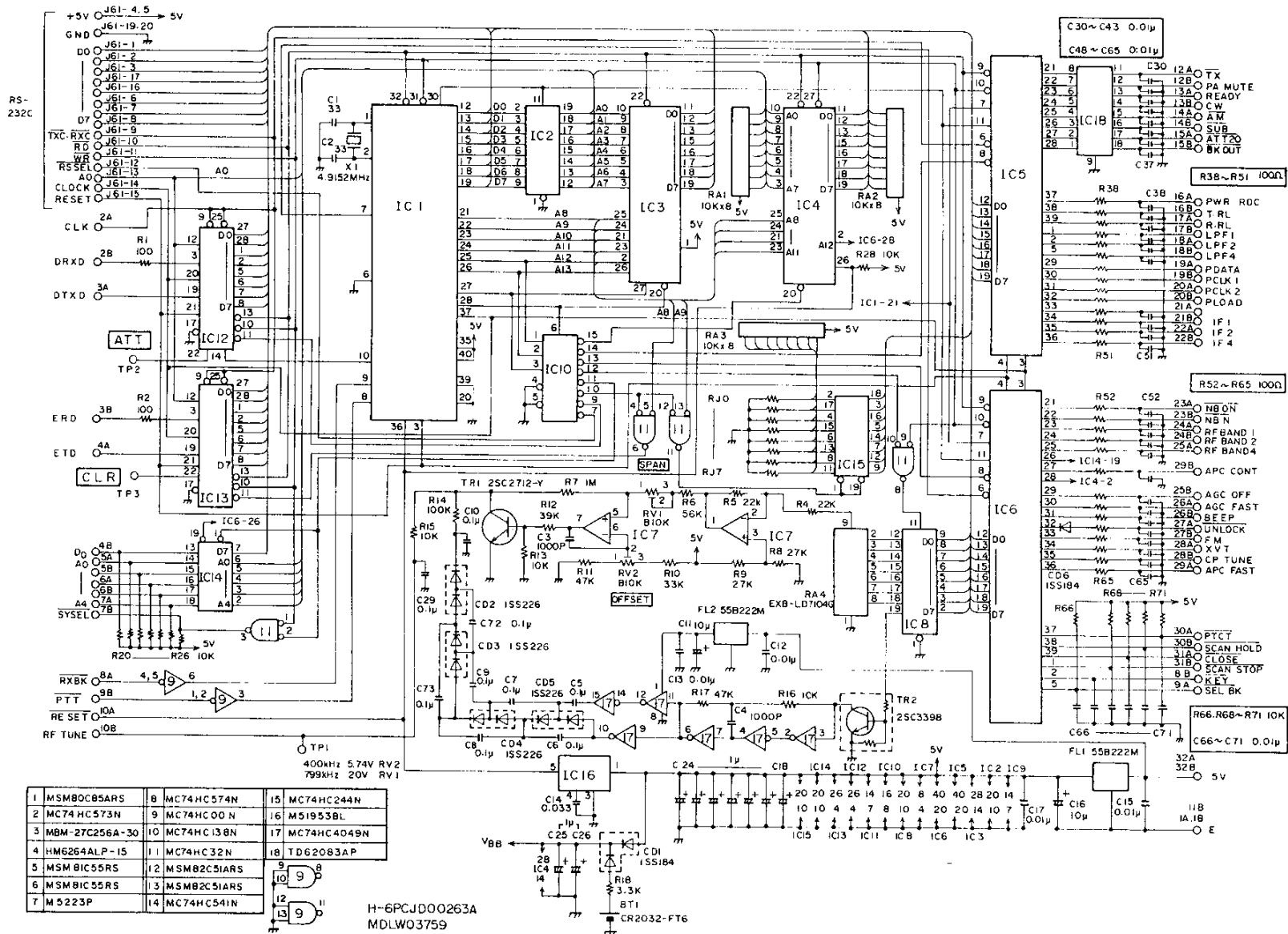
REF DDS				TITLE	SHEET NO
				CGK-81A	9
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R87	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGD1742	
R88	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R89	RESISTOR FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAGD1752	
R90	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAGD1758	
R91	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R92	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R93	RESISTOR FXD	ERJ-8GEYJ821V	1/8W 820 OHM	5REAGD1737	
R94	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R95	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGD1750	
R96	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAGD1754	
R97	RESISTOR FXD	ERJ-8GEYJ470V	1/8W 47 OHM	5REAGD1722	
R98	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R100	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R101	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAGD1738	
R102	RESISTOR FXD	ERJ-8GEYJ471V	1/8W 470 OHM	5REAGD1734	
R103	RESISTOR FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	5REAGD1746	
R104	RESISTOR FXD	ERJ-8GEYJ184V	1/8W 180K OHM	5REAGD1765	
R105	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAGD1762	
R106	RESISTOR FXD	ERJ-8GEYJ184V	1/8W 180K OHM	5REAGD1765	
R107	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGD1742	
R108	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAGD1754	
R109	RESISTOR FXD	ERJ-8GEYJ152V	1/8W 1.5K OHM	5REAGD1740	
R113	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAGD1726	
R114	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAGD1774	
RA1	RESISTOR FXD	20B-12X-ME1		5READD00716	
RA2	RESISTOR FXD	20B-12X-ME1		5READD00716	
RA3	RESISTOR FXD	20B-12X-ME1		5READD00716	
RJ1	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAGD1775	
RJ2	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAGD1775	
RV1	RESISTOR VAR	EVN-D1AA00B13	1K OHM	5RVAB00313	
RV2	RESISTOR VAR	EVN-D1AA00B13	1K OHM	5RVAB00313	
RV3	RESISTOR VAR	EVN-D4AA00B54		5RVAB00317	
RV4	RESISTOR VAR	EVN-D4AA00B54		5RVAB00317	
T1	RF XFMR	H-6LHJD00297		6LHJD00297	
TP1	TEST TERMINAL	PCN6-PEA		5JDAAD00364	

PARTS LIST

REF DDS				TITLE	SHEET NO
				CGK-81A	10
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
TP2	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP3	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP4	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP5	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP6	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP7	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP8	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP9	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TR1	TRANSISTOR	2SA1162-Y TE85L		5TAAGD00182	
TR2	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR3	TRANSISTOR	2SA1162-Y TE85L		5TAAGD00182	
TR4	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR5	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR6	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR7	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR8	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR9	TRANSISTOR	2SK210BL-TE85L		5TKAA00189	
TR10	TRANSISTOR	2SK210BL-TE85L		5TKAA00189	
TR11	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR12	TRANSISTOR	2SC3324GR TE85L		5TCAF00711	
TR13	TRANSISTOR	2SC3324GR TE85L		5TCAF00711	
TR14	TRANSISTOR	2SC3324GR TE85L		5TCAF00711	
TR15	TRANSISTOR	2SC2714Y TE85L		5TCAF00436	
TR16	TRANSISTOR	2SC2712Y TE85L		5TAAGD00186	
TR17	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR18	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR19	TRANSISTOR	2SC3398-TB		5TCAZ00011	
X1	CRYSTAL	H-6XHJD00199		6XHJD00199	

MANUFACTURER TECHNICAL SERVICES
 CONTACT:
 WWW.MANUFACTURER.COM
 TEL: 01844 - 351694
 FAX: 01844 - 352554

Figure 6.8.1 CPU UNIT CDC-493A Circuit Diagram



FOR SERVICE MANUALS
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MAURITRON TECHNICAL SERVICES
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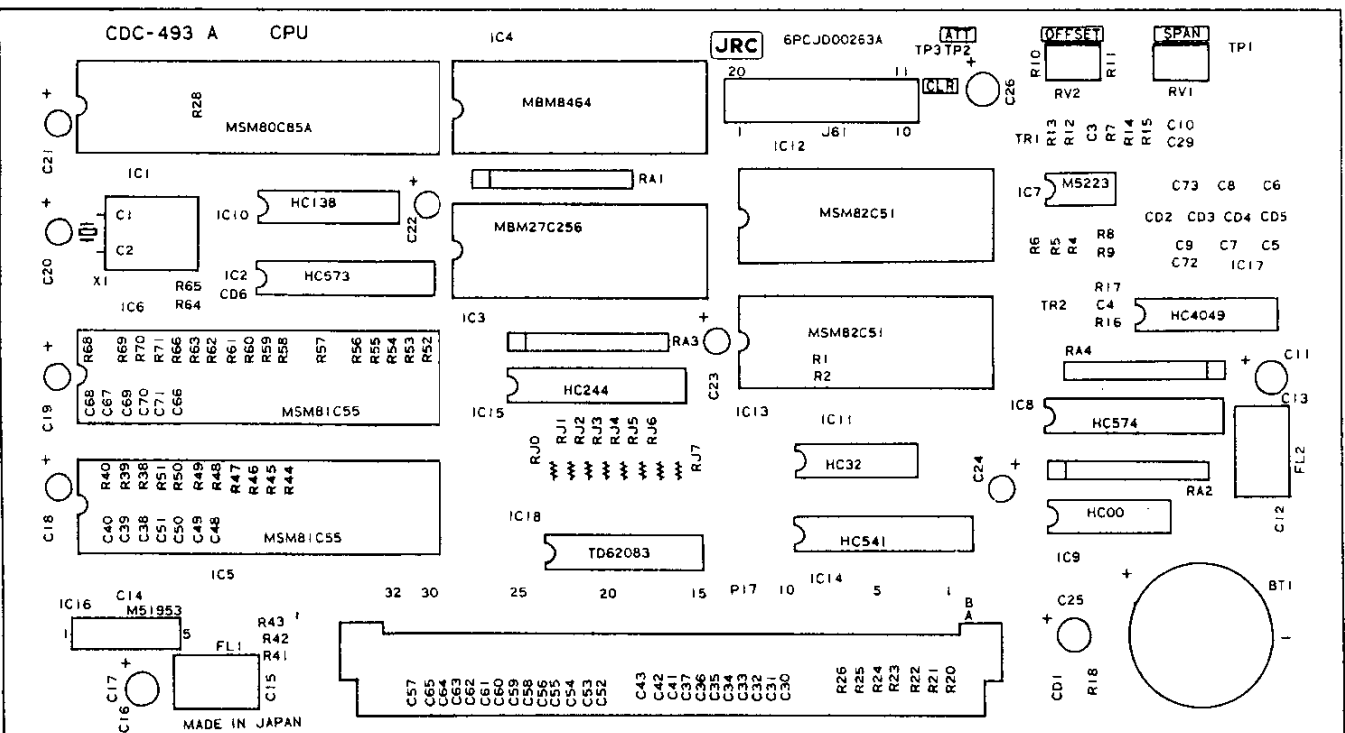


Figure 6.8.2 CPU UNIT CDC-493A Component Layout

PARTS LIST				
TITLE				SHEET NO.
CPU CDC-493A				1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
BT1	BATTERY	CR-2032FT6	3V 190MAH	5ZBAD00067
C1	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794
C2	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAAD00794
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782
C4	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782
C5	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C6	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C7	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C8	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C9	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C10	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C11	CAP,FXD TANTAL	202L1602 106KB		5CSAC00932
C12	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C13	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C14	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357
C15	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C16	CAP,FXD TANTAL	202L1602 106KB		5CSAC00932
C17	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C18	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C19	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C20	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C21	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C22	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C23	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C24	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C25	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C26	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
C29	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C30	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C31	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C32	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C33	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C34	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C35	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C36	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789

PARTS LIST				
TITLE				SHEET NO.
CPU CDC-493A				2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C37	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C38	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C39	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C40	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C41	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C42	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C43	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C48	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C49	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C50	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C51	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C52	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C53	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C54	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C55	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C56	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C57	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C58	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C59	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C60	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C61	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C62	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C63	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C64	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C65	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C66	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C67	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C68	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C69	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C70	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C71	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789
C72	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C73	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
CD1	DIODE	1SS184 TE85L		5TXAD00290
CD2	DIODE	1SS226 TE85L		5TXAD00320

PARTS LIST

		TITLE		SHEET NO.
		CPU CDC-493A		3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD3	DIODE	1SS226 TE85L		5TXAD00320
CD4	DIODE	1SS226 TE85L		5TXAD00320
CD5	DIODE	1SS226 TE85L		5TXAD00320
CD6	DIODE	1SS184 TE85L		5TXAD00290
FL1	FILTER	DS310-55B222M	100V 0.0022UF	5NXA00002
FL2	FILTER	DS310-55B222M	100V 0.0022UF	5NXA00002
IC1	IC	MSM80C85ARS		5DDAG00062
IC2	IC	MC74HC573N		5DAAJ00229
IC3	IC	H-7DEJ00102	MBM27C256A-30	7DEJ00102
IC4	IC	HM6264ALP-15		5DAA000380
IC5	IC	MSM81C55RS		5DDAG00081
IC6	IC	MSM81C55RS		5DDAG00081
IC7	IC	M5223P		5DDAB00171
IC8	IC	MC74HC574N		5DAAJ00230
IC9	IC	MC74HC00N		5DAAJ00142
IC10	IC	MC74HC138N		5DAAJ00174
IC11	IC	MC74HC32N		5DAAJ00160
IC12	IC	MSM82C51ARS		5DDAG00110
IC13	IC	MSM82C51ARS		5DDAG00110
IC14	IC	MC74HC541N		5DAAJ00226
IC15	IC	MC74HC244N		5DAAJ00138
IC16	IC	M51953BL		5DAA000150
IC17	IC	MC74HC4049N		5DAAJ00247
IC18	IC	TD62083AP		5DDAE00507
IC93	SOCKET	ICCO5-028-360TP		5ZJCK00056
J61	CONNECTOR	HKP-20FD2		5JJA000085
P17	CONNECTOR	ME03-64P-D4LT1-81		5JBAF00457
PC1	PCB	H-6PCJD00263A		6PCJD00263
R1	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R2	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R4	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R5	RESISTOR FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R6	RESISTOR FXD	ERJ-8GEYJ563V		5REAG01759
R7	RESISTOR FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R8	RESISTOR FXD	ERJ-8GEYJ273V	1/8W 27K OHM	5REAG01755
R9	RESISTOR FXD	ERJ-8GEYJ273V	1/8W 27K OHM	5REAG01755

PARTS LIST

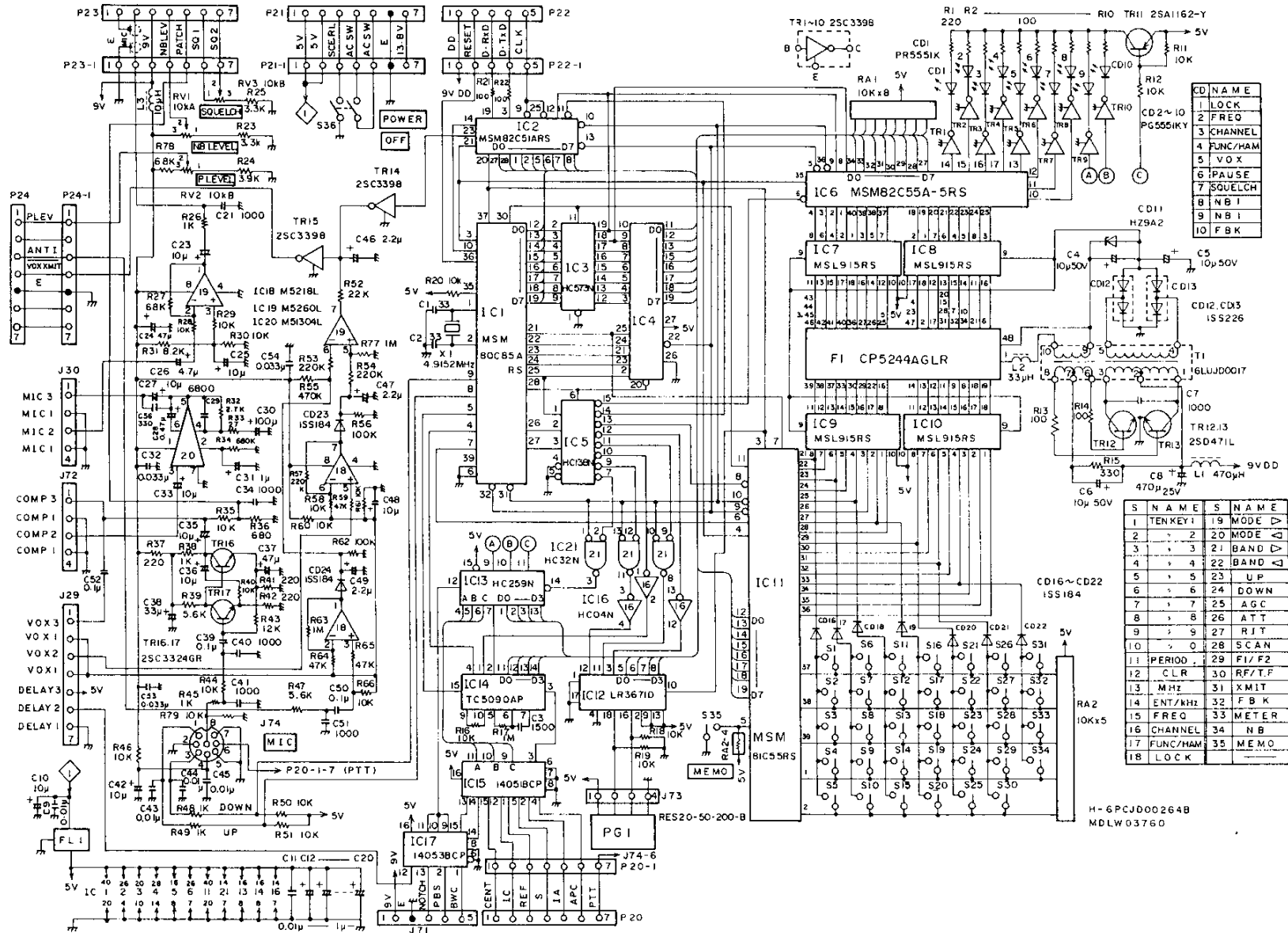
		TITLE		SHEET NO.
		CPU CDC-493A		4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R10	RESISTOR FXD	ERJ-8GEYJ333V	1/8W 33K OHM	5REAG01756
R11	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R12	RESISTOR FXD	ERJ-8GEYJ393V	1/8W 39K OHM	5REAG01757
R13	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R14	RESISTOR FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R15	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R16	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R17	RESISTOR FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R18	RESISTOR FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R20	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R21	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R22	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R23	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R24	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R25	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R26	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R28	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R38	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R39	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R40	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R41	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R42	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R43	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R44	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R45	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R46	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R47	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R48	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R49	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R50	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R51	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R52	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R53	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R54	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R55	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726

PARTS LIST

		TITLE		SHEET NO.	
		CPU		5	
		CDC-493A			
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R56	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R57	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R58	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R59	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R60	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R61	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R62	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R63	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R64	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R65	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726	
R66	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R68	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R69	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R70	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R71	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
RA1	RESISTOR	EXB-F9E103JY		5RZAS00499	
RA2	RESISTOR	EXB-F9E103JY		5RZAS00499	
RA3	RESISTOR	EXB-F9E103JY		5RZAS00499	
RA4	RESISTOR	EXB-LD7104G		5RZAS00180	
RJ0	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ1	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ2	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ3	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ4	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ5	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ6	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RJ7	RESISTOR FXD	ERD-25UJ1R0T	1 OHM	5RDAA01733	
RV1	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324	
RV2	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324	
TP1	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP2	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP3	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TR1	TRANSISTOR	2SC2712Y TE85L		5TAAG00186	
TR2	TRANSISTOR	2SC3398-TB		5TCAZ00011	
X1	CRYSTAL	LN-X-0008 F=4.9152MH		5XHAAD0422	
Z1	ROM LABEL	MPNN21183		MPNN21183	

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FAX: 01844 - 352554

Figure 6.9.1 DISPLAY UNIT CDE-576 Circuit Diagram



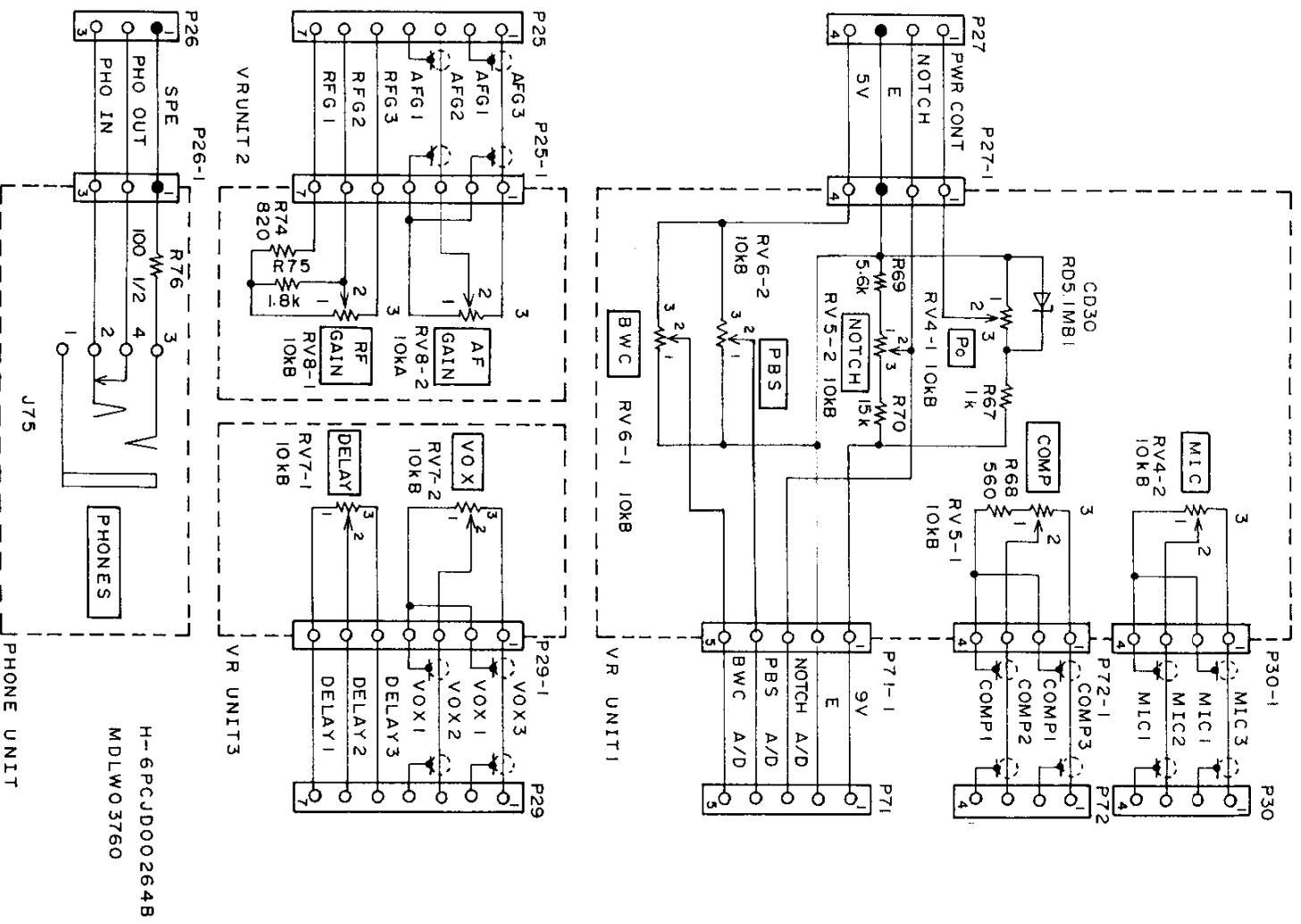
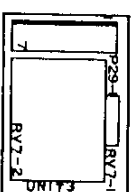
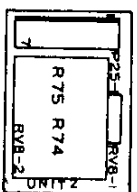
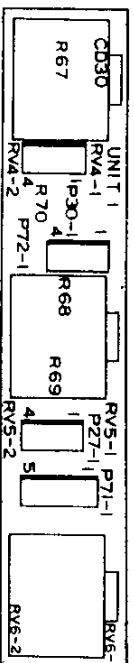


Figure 6.10.1 DISPLAY (VR) UNIT CDE-576 Circuit Diagram

H-6PCJDD00264B
MDLW03760



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Figure 6.10.2 DISPLAY (VR) UNIT CDE-576 Component Layout

PARTS LIST

PARTS LIST					SHEET NO.
DISPLAY				TITLE	1
				CDE-576	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C1	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAA000794	
C2	CAP,FXD CER	C3216CH1H330J-E-TP	33PF	5CAA000794	
C3	CAP,FXD PLSTC	ECC-B1H152JZ3		5CRAA00727	
C4	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184	
C5	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184	
C6	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184	
C7	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C8	CAP,FXD ELCTLT	ECE-A1EU471B		5CEAA01865	
C9	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C10	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C11	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C12	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C13	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C14	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C15	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C16	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C17	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C18	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C19	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C20	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C21	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C23	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C24	CAP,FXD ELCTLT	ECE-A1EU470B	25V 47UF	5CEAA01816	
C25	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C26	CAP,FXD TANTAL	202L2502 475KB		5CSAC00934	
C27	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C28	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065	
C29	CAP,FXD CER	C3216B1H682K-E-TP	6800PF	5CAAD00990	
C30	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813	
C31	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982	
C32	CAP,FXD CER	C3216JB1E333K-E-TP		5CAAD01235	
C33	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C34	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C35	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C36	CAP,FXD TANTAL	202L2502 106KB	25V 10UF	5CSAC00950	

PARTS LIST

PARTS LIST					SHEET NO.
DISPLAY				TITLE	2
				CDE-576	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C37	CAP,FXD ELCTLT	ECE-A1EU470B	25V 47UF	5CEAA01816	
C38	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822	
C39	CAP,FXD CER	C3216X7R1E104Z-E-TP	0.1U	5CAAD01007	
C40	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C41	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C42	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C43	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C44	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C45	CAP,FXD CER	C3216JB1H103K-E-TP	50V 0.01UF	5CAAD00789	
C46	CAP,FXD TANTAL	202L2502 225KB	2.2UF 25V	5CSAC01129	
C47	CAP,FXD TANTAL	202L2502 225KB	2.2UF 25V	5CSAC01129	
C48	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C49	CAP,FXD TANTAL	202L2502 225KB	2.2UF 25V	5CSAC01129	
C50	CAP,FXD CER	C3216X7R1E104Z-E-TP	0.1U	5CAAD01007	
C51	CAP,FXD CER	C3216SL1H102J-E-TP	1000PF	5CAAD00782	
C52	CAP,FXD CER	C3216X7R1E104Z-E-TP	0.1U	5CAAD01007	
C53	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C54	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C56	CAP,FXD CER	C3216CH1H331J-E-TP	330PF	5CAAD01066	
CD1	LED	PR5551K		5TZAW00035	
CD2	LED	PG5551KY		5TZAW00055	
CD3	LED	PG5551KY		5TZAW00055	
CD4	LED	PG5551KY		5TZAW00055	
CD5	LED	PG5551KY		5TZAW00055	
CD6	LED	PG5551KY		5TZAW00055	
CD7	DIODE	AA5551K		5TZAW00037	
CD8	LED	PG5551KY		5TZAW00055	
CD9	LED	PG5551KY		5TZAW00055	
CD10	LED	PG5551KY		5TZAW00055	
CD11	DIODE	HZ9A2RE		5TXAE00592	
CD12	DIODE	1SS226 TE85L		5TXAD00320	
CD13	DIODE	1SS226 TE85L		5TXAD00320	
CD16	DIODE	1SS184 TE85L		5TXAD00290	
CD17	DIODE	1SS184 TE85L		5TXAD00290	
CD18	DIODE	1SS184 TE85L		5TXAD00290	

PARTS LIST				
DISPLAY		TITLE		SHEET NO.
		CDE-576		3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD19	DIODE	1SS184 TE85L		5TXAD00290
CD20	DIODE	1SS184 TE85L		5TXAD00290
CD21	DIODE	1SS184 TE85L		5TXAD00290
CD22	DIODE	1SS184 TE85L		5TXAD00290
CD23	DIODE	1SS184 TE85L		5TXAD00290
CD24	DIODE	1SS184 TE85L		5TXAD00290
CD30	DIODE	RD5.1MB1-T1		5TXAAD0515
F1	VFD	CP5244A GLR		5NZBE00003
FL1	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
IC1	IC	MSM80C85ARS		5DDAG00062
IC2	IC	MSM82C51ARS		5DDAG00110
IC3	IC	MC74HC573N		5DAAJ00229
IC4	IC	H-7DEJD0103	MBM27C64-30	7DEJD0103
IC5	IC	MC74HC138N		5DAAJ00174
IC6	IC	MSM82C55A-SRS		5DDAG00102
IC7	IC	MSL915RS		5DDAG00052
IC8	IC	MSL915RS		5DDAG00052
IC9	IC	MSL915RS		5DDAG00052
IC10	IC	MSL915RS		5DDAG00052
IC11	IC	MSM81C55RS		5DDAG00081
IC12	IC	LR3671D		5DDBN00037
IC13	IC	MC74HC259N		5DAAJ00207
IC14	IC	TC5090AP		5DDAE00396
IC15	IC	MC14051BCP		5DAAJ00348
IC16	IC	MC74HC04N		5DAAJ00141
IC17	IC	MC14053BCP		5DDAS00052
IC18	IC	MS218L		5DDAB00158
IC19	IC	MS260L		5DDAB00312
IC20	IC	MS1304L		5DAA800144
IC21	IC	MC74HC32N		5DAAJ00160
ICS4	SOCKET	ICC05-028-360TP		5ZJCK00056
J29	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083
J30	CONNECTOR	IL-S-4P-S2T2-EF	4PIN	5JWAD00183
J71	CONNECTOR	IL-S-5P-S2T2-EF		5JWAD00141
J72	CONNECTOR	IL-S-4P-S2T2-EF	4PIN	5JWAD00183

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PARTS LIST				
DISPLAY		TITLE		SHEET NO.
		CDE-576		4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
J73	CONNECTOR	B4P-SHF-1AA		5JWAP00089
J74	CONNECTOR	FM214-BS	8P	5JJB400001
J75	CONNECTOR	HLJ4305-01-090		5JJAM00032
L1	COIL	FL-9H471J		5LCAA00089
L2	COIL	LAL04NA330K		5LCAA00196
L3	COIL	LAL03VB100K	10UH	5LCAA00273
P20	CONNECTOR	H-6ZCJD43028		6ZCJD43028
P21	CONNECTOR	H-6ZCJD43028		6ZCJD43028
P22	CONNECTOR	H-6ZCJD43015		6ZCJD43015
P23	CONNECTOR	H-6ZCJD00222	7P L=150	6ZCJD00222
P24	CONNECTOR	H-6ZCJD43028		6ZCJD43028
P25	CONNECTOR	H-6ZCJD00224		6ZCJD00224
P26	CONNECTOR	H-6ZCJD43040		6ZCJD43040
P27	CONNECTOR	H-6ZCJD43029		6ZCJD43029
P29	CONNECTOR	H-6ZCJD00217	7P L=100	6ZCJD00217
P30	CONNECTOR	H-6ZCJD00215		6ZCJD00215
P71	CONNECTOR	H-6ZCJD43001	5P L=250	6ZCJD43001
P72	CONNECTOR	H-6ZCJD00215		6ZCJD00215
PC1	PCB	H-6PCJD00264B		6PCJD00264
PG1	PULSE MOTOR	RES20-50-200-B		5BP4F00004
R1	RESISTOR FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R2	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R3	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R4	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R5	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R6	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R7	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R8	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R9	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R10	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R11	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R12	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R13	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R14	RESISTOR FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R15	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732

PARTS LIST

DISPLAY		TITLE		SHEET NO.	
		CDE-576		5	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R16	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R17	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R18	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R19	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R20	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R21	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R22	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	5REAG01726
R23	RESISTOR	FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R24	RESISTOR	FXD	ERJ-8GEYJ392V	1/8W 3.9K OHM	5REAG01745
R25	RESISTOR	FXD	ERJ-8GEYJ332V	1/8W 3.3K OHM	5REAG01744
R26	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R27	RESISTOR	FXD	ERJ-8GEYJ683V	1/8W 68K OHM	5REAG01760
R28	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R29	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R30	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R31	RESISTOR	FXD	ERJ-8GEYJ822V		5REAG01749
R32	RESISTOR	FXD	ERJ-8GEYJ272V	1/8W,2.7K OHM	5REAG01743
R33	RESISTOR	FXD	ERJ-8GEYJ270V		5REAG01719
R34	RESISTOR	FXD	ERJ-8GEYJ684V		5REAG01772
R35	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R36	RESISTOR	FXD	ERJ-8GEYJ681V	1/8W 680 OHM	5REAG01736
R37	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R38	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R39	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747
R40	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R41	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R42	RESISTOR	FXD	ERJ-8GEYJ221V	1/8W 220 OHM	5REAG01730
R43	RESISTOR	FXD	ERJ-8GEYJ123V	1/8W 12K OHM	5REAG01751
R44	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R45	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R46	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R47	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747
R48	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R49	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R50	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750

PARTS LIST

DISPLAY		TITLE		SHEET NO.	
		CDE-576		6	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R51	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R52	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	5REAG01754
R53	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	5REAG01766
R54	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	5REAG01766
R55	RESISTOR	FXD	ERJ-8GEYJ474V	1/8W 470K OHM	5REAG01770
R56	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R57	RESISTOR	FXD	ERJ-8GEYJ224V	1/8W 220K OHM	5REAG01766
R58	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R59	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R60	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R61	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R62	RESISTOR	FXD	ERJ-8GEYJ104V	1/8W 100K OHM	5REAG01762
R63	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R64	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R65	RESISTOR	FXD	ERJ-8GEYJ473V	1/8W 47K OHM	5REAG01758
R66	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
R67	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738
R68	RESISTOR	FXD	ERJ-8GEYJ561V	1/8W 560 OHM	5REAG01735
R69	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747
R70	RESISTOR	FXD	ERJ-8GEYJ153V	1/8W 15K OHM	5REAG01752
R74	RESISTOR	FXD	ERJ-8GEYJ821V	1/8W 820 OHM	5REAG01737
R75	RESISTOR	FXD	ERJ-8GEYJ182V	1/8W 1.8K OHM	5REAG01741
R76	RESISTOR	FXD	ERD-50TJ101	1/2W 100 OHM	5RDA00811
R77	RESISTOR	FXD	ERJ-8GEYJ105V	1/8W 1M OHM	5REAG01774
R78	RESISTOR	FXD	ERJ-8GEYJ682V	1/8W 6.8K OHM	5REAG01748
R79	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750
RA1	RESISTOR		EXB-F9E103JY		5RZAS00499
RA2	RESISTOR		EXB-F9E103JY		5RZAS00499
RV1	RESISTOR	VAR	EVH-0XA009A14		5RVAB00261
RV2	RESISTOR	VAR	EVH-0XA009B14		5RVAB00262
RV3	RESISTOR	VAR	EVH-0XA009B14		5RVAB00262
RV4	RESISTOR	VAR	EWJ-CGAS05B14		5RVAB00377
RV5	RESISTOR	VAR	EWJ-CGAS05B14		5RVAB00377
RV6	RESISTOR	VAR	EWJ-CGAS05B14		5RVAB00377
RV7	RESISTOR	VAR	EWJ-CGAS05B14		5RVAB00377

PARTS LIST				
DISPLAY		TITLE		SHEET NO.
		CDE-576		7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RV8	RESISTOR VAR	EWJ-CGAS05 10S		SRVAB00392
S1	SWITCH	B3F-1022S		SSCAP00036
S2	SWITCH	B3F-1022S		SSCAP00036
S3	SWITCH	B3F-1022S		SSCAP00036
S4	SWITCH	B3F-1022S		SSCAP00036
S5	SWITCH	B3F-1022S		SSCAP00036
S6	SWITCH	B3F-1022S		SSCAP00036
S7	SWITCH	B3F-1022S		SSCAP00036
S8	SWITCH	B3F-1022S		SSCAP00036
S9	SWITCH	B3F-1022S		SSCAP00036
S10	SWITCH	B3F-1022S		SSCAP00036
S11	SWITCH	B3F-1022S		SSCAP00036
S12	SWITCH	B3F-1022S		SSCAP00036
S13	SWITCH	B3F-1022S		SSCAP00036
S14	SWITCH	B3F-1022S		SSCAP00036
S15	SWITCH	B3F-1022S		SSCAP00036
S16	SWITCH	B3F-1022S		SSCAP00036
S17	SWITCH	B3F-1022S		SSCAP00036
S18	SWITCH	B3F-1022S		SSCAP00036
S19	SWITCH	B3F-1022S		SSCAP00036
S20	SWITCH	B3F-1022S		SSCAP00036
S21	SWITCH	B3F-1022S		SSCAP00036
S22	SWITCH	B3F-1022S		SSCAP00036
S23	SWITCH	B3F-1022S		SSCAP00036
S24	SWITCH	B3F-1022S		SSCAP00036
S25	SWITCH	B3F-1022S		SSCAP00036
S26	SWITCH	B3F-1022S		SSCAP00036
S27	SWITCH	B3F-1022S		SSCAP00036
S28	SWITCH	B3F-1022S		SSCAP00036
S29	SWITCH	B3F-1022S		SSCAP00036
S30	SWITCH	B3F-1022S		SSCAP00036
S31	SWITCH	B3F-1022S		SSCAP00036
S32	SWITCH	B3F-1022S		SSCAP00036
S33	SWITCH	B3F-1022S		SSCAP00036
S34	SWITCH	B3F-1022S		SSCAP00036

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PARTS LIST				
DISPLAY		TITLE		SHEET NO.
		CDE-576		8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
S35	SWITCH	B3F-1022S		SSCAP00036
S36	SWITCH	M-2022NB AT-451	(BLACK)	5SAAB00733
T1	TRANSFORMER	H-6LUJD00017		6LUJD00017
TR1	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR2	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR3	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR4	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR5	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR6	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR7	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR8	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR9	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR10	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR11	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR12	TRANSISTOR	2SD471L	HFE135-270	5TDAB00020
TR13	TRANSISTOR	2SD471L	HFE135-270	5TDAB00020
TR14	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR15	TRANSISTOR	2SC3398-TB		5TCAZ00011
TR16	TRANSISTOR	2SC3324GR TE85L		5YCAF00711
TR17	TRANSISTOR	2SC3324GR TE85L		5YCAF00711
X1	CRYSTAL	LN-X-0008	F=4.9152MH	5XHAA00422
Z1	ROM LABEL	MPNN21185		MPNN21185

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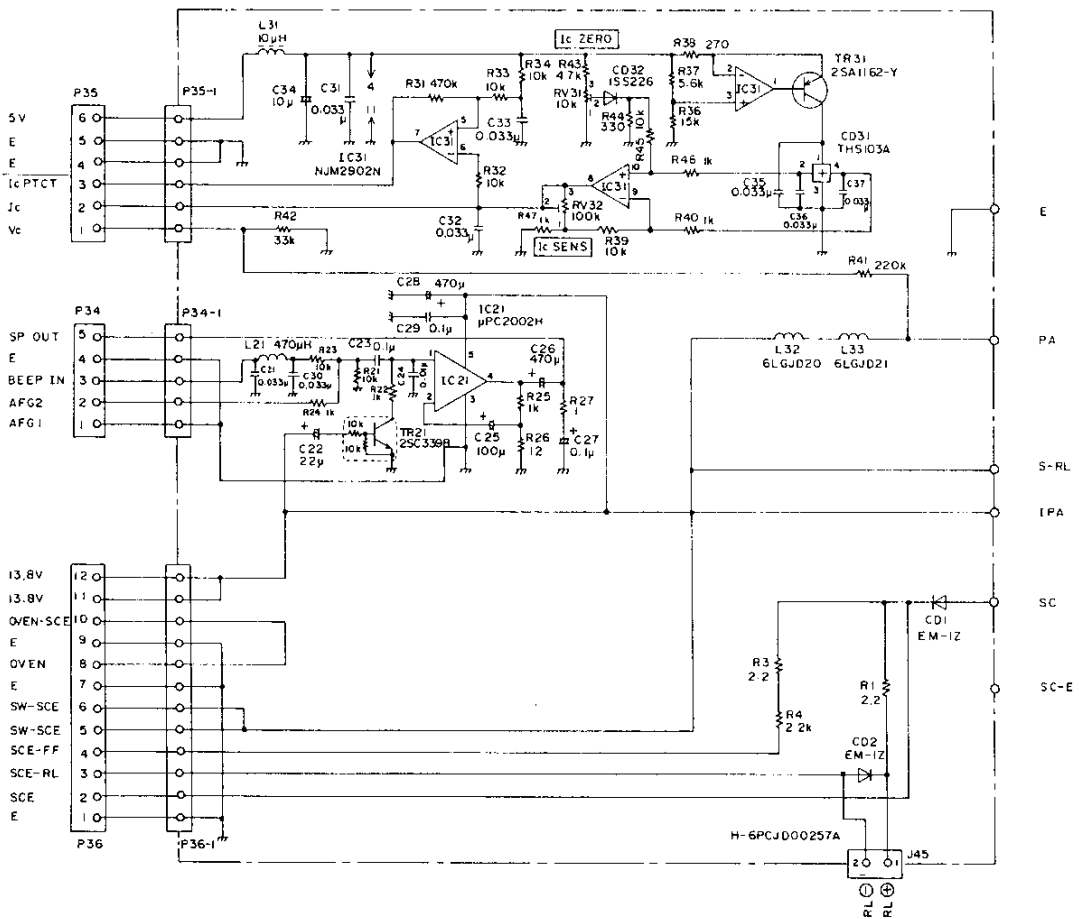


Figure 6.11.1 AF AMP UNIT CHD-894L Circuit Diagram

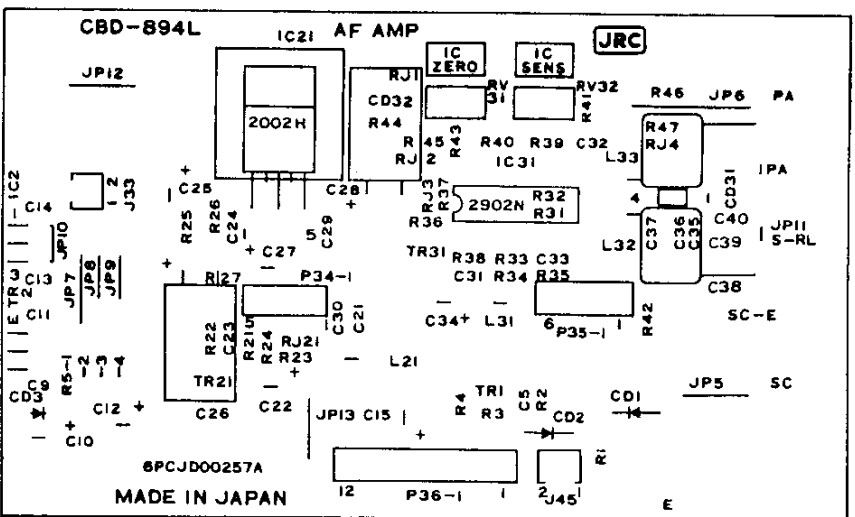


Figure 6.11.2 AF AMP UNIT CBD-894L Component Layout

PARTS LIST

PARTS LIST					TITLE	SHEET NO.
AF AMP					CBD-894L	1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C21	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C22	CAP,FXD ELCTLT	ECEA1EU220B		5CEAA02323		
C23	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C24	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789		
C25	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C26	CAP,FXD ELCTLT	ECEA1EU471	25V 470UF	5CEAA01756		
C27	CAP,FXD TANTAL	202L3502 104KB		5CSAC01068		
C28	CAP,FXD ELCTLT	ECEA1EU471	25V 470UF	5CEAA01756		
C29	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1U	5CAAD01237		
C30	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C31	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C32	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C33	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C34	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C35	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C36	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
C37	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357		
CD1	DIODE	EM1Z	200V 1A	5TXAN00061		
CD2	DIODE	EM1Z	200V 1A	5TXAN00061		
CD31	MAGNETIC SENSOR	THS103A		5ZJAR00033		
CD32	DIODE	1SS226 TEB5L		5TXAD00320		
IC21	IC	UPC2002H		5DAAA00109		
IC21Z-1	SILICON SHEET	TC-30A (T0-220)		5ZZKB00002		
IC21Z-2	HEAT SINK	6073B		5ZKAG00169		
IC31	IC	NJM2902N		5DAAN00004		
J45	CONNECTOR	IL-S-2P-S2T2-EF		5JWAD00121		
JP6			*	6ZZAB10000		
JP7	TIN COATED WIRE	TA-D.6P		2717100001		
JP8			*	6ZZAB10000		
JP9			*	6ZZAB10000		
JP10			*	6ZZAB10000		
JP11			*	6ZZAB10000		
JP12	TIN COATED WIRE	TA-0.6P		2717100001		
JP13	TIN COATED WIRE	TA-0.6P		2717100001		
L21	COIL	LALD3VB471K	470UH	5LCAA00270		

PARTS LIST

PARTS LIST					TITLE	SHEET NO.
AF AMP					CBD-894L	2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
L31	COIL	LAL03VB100K	10UH	5LCAA00273		
L32	COIL	H-6LGJDD00020		6LGJDD00020		
L33	COIL	H-6LGJDD00021		6LGJDD00021		
P34	CONNECTOR	H-6ZCJD00216	5P L=200	6ZCJD00216		
P35	CONNECTOR	H-6ZCJD43009	6P L=200	6ZCJD43009		
P36	CONNECTOR	H-6ZCJD43011	12P L=200	6ZCJD43011		
PC1	PCB	H-6PCJDD00257A		6PCJDD00257		
R1	RESISTOR FXD	ERJ-8GEYK2R2V		5REAG02210		
R3	RESISTOR FXD	ERJ-8GEYK2R2V		5REAG02210		
R4	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAG01742		
R21	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R22	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R23	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R24	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R25	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R26	RESISTOR FXD	ERJ-8GEYJ120V	1/8W 12 OHM	5REAG01715		
R27	RESISTOR FXD	ERJ-8GEYK1R0V		5REAG02208		
R31	RESISTOR FXD	ERJ-8GEYJ474V		5REAG01770		
R32	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R33	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R34	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R36	RESISTOR FXD	ERJ-8GEYJ153V		5REAG01752		
R37	RESISTOR FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747		
R38	RESISTOR FXD	ERJ-8GEYJ271V	1/8W 270 OHM	5REAG01731		
R39	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R40	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R41	RESISTOR FXD	ERJ-8GEYJ224V		5REAG01766		
R42	RESISTOR FXD	ERJ-8GEYJ333V		5REAG01756		
R43	RESISTOR FXD	ERJ-8GEYJ472V		5REAG01746		
R44	RESISTOR FXD	ERJ-8GEYJ331V	1/8W,330 OHM	5REAG01732		
R45	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750		
R46	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
R47	RESISTOR FXD	ERJ-8GEYJ102V	1/8W 1K OHM	5REAG01738		
RJ1	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775		

PARTS LIST

		TITLE		SHEET NO.	
AF AMP		CBD-894L		3	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
RJ2	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775	
RJ3	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775	
RJ4	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775	
RJ21	RESISTOR FXD	ERJ-8GEY0R00V	0 OHM	5REAG01775	
RV31	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324	
RV32	RESISTOR VAR	EVN-D1AA00B15	100K	5RVAB00314	
TR21	TRANSISTOR	2SC3398-TB		5TCAZ00011	
TR31	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182	

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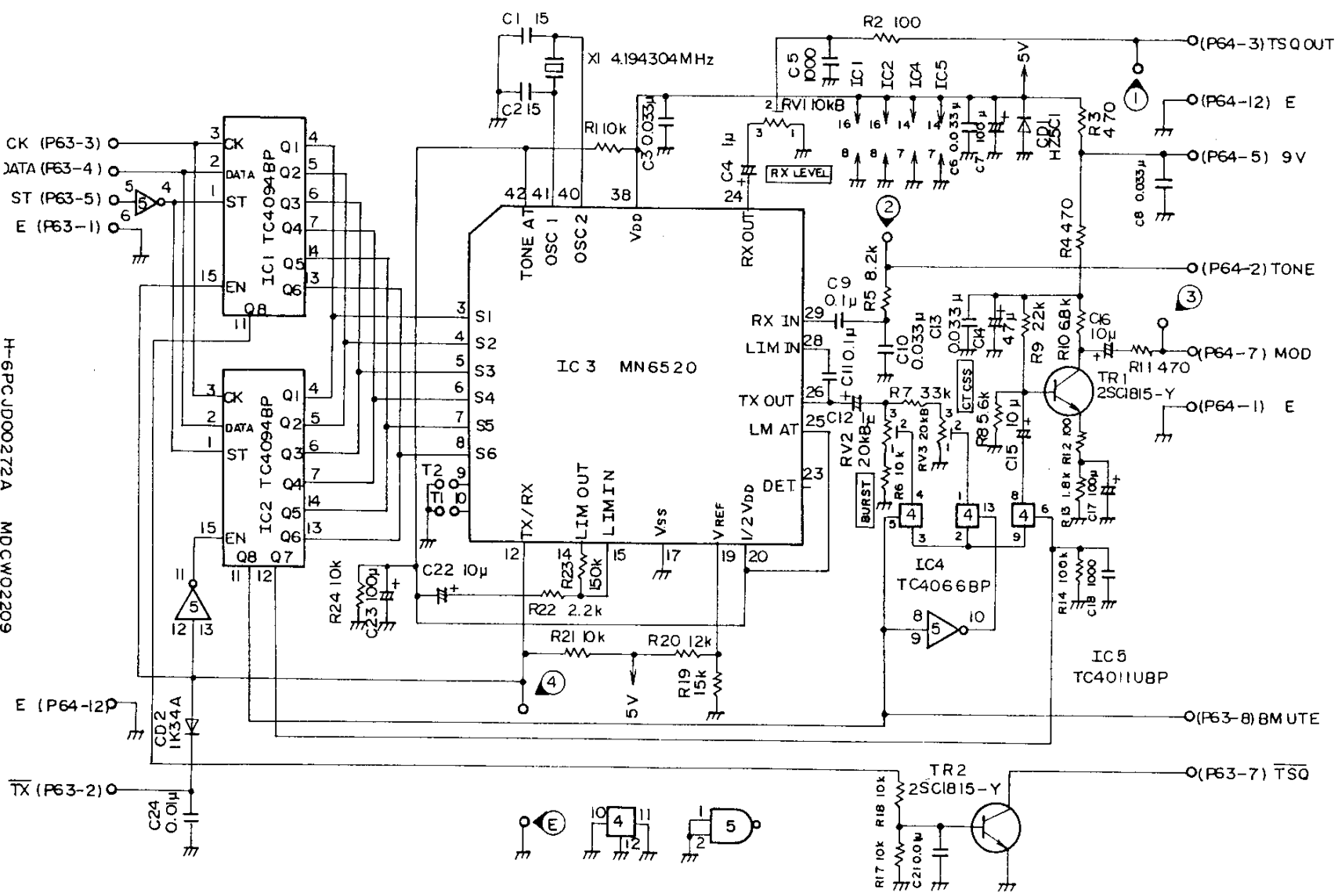
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Figure 6.12.1 H-6PCJDOO272A MDCW02209 TONE SQ UNIT CCL-212 Circuit Diagram



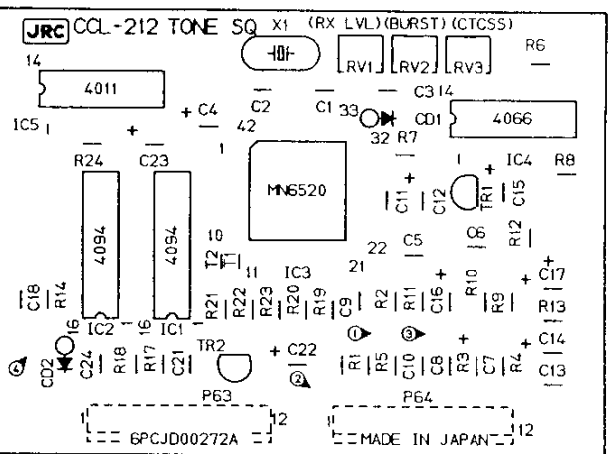


Figure 6.12.2 TONE SQ UNIT CCL-212 Component Layout

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PARTS LIST					SHEET NO.	
TONE SQ		TITLE		CCL-212		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
C1	CAP,FXD CER	DD104-979CH150J50		5CAAA02580		
C2	CAP,FXD CER	DD104-979CH150J50		5CAAA02580		
C3	CAP,FXD PLSTC	ECQ-V1H333JZ3		5CRAA00804		
C4	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C5	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031		
C6	CAP,FXD PLSTC	ECQ-V1H333JZ3		5CRAA00804		
C7	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C8	CAP,FXD PLSTC	ECQ-V1H333JZ3		5CRAA00804		
C9	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617		
C10	CAP,FXD PLSTC	ECQ-V1H333JZ3		5CRAA00804		
C11	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617		
C12	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982		
C13	CAP,FXD PLSTC	ECQ-V1H333JZ3		5CRAA00804		
C14	CAP,FXD ELCTLT	ECE-A1EU470B	25V 47UF	5CEAA01816		
C15	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C16	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C17	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C18	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031		
C21	CAP,FXD PLSTC	ECQ-B1H103JZ3		5CRAA00587		
C22	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864		
C23	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813		
C24	CAP,FXD PLSTC	ECQ-B1H103JZ3		5CRAA00587		
CD1	DIODE	HZ5C1RE	1/2W 5V	5TXAE00568		
CD2	DIODE	1K34A		5TXCH00001		
IC1	IC	TC4094BP		5DDAE00337		
IC2	IC	TC4094BP		5DDAE00337		
IC3	IC	MN6520		5DZAH00024		
IC4	IC	TC4066BP		5DDAE00078		
IC5	IC	TC4011UBP		5DDAE00129		
P63	CONNECTOR	XK2B-1241		5JBAR00023		
P64	CONNECTOR	XK2B-1241		5JBAR00023		
PC1	PCB	H-6PCJ000272A		6PCJ000272		
R1	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
R2	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599		

PARTS LIST					SHEET NO.	
TONE SQ		TITLE		CCL-212		2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE		
R3	RESISTOR FXD	ERD-25UJ471T	470 OHM 1/4W	5RDAA01541		
R4	RESISTOR FXD	ERD-25UJ471T	470 OHM 1/4W	5RDAA01541		
R5	RESISTOR FXD	ERD-25UJ822T	1/4W,8.2K OHM	5RDAA01821		
R6	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
R7	RESISTOR FXD	ERD-25UJ333T	1/4W 33K OHM	5RDAA01591		
R8	RESISTOR FXD	ERD-25UJ562T	1/4W 5.6K OHM	5RDAA01597		
R9	RESISTOR FXD	ERD-25UJ223T	22K OHM 1/4W	5RDAA01545		
R10	RESISTOR FXD	ERD-25UJ682T		5RDAA01713		
R11	RESISTOR FXD	ERD-25UJ471T	470 OHM 1/4W	5RDAA01541		
R12	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599		
R13	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	5RDAA01617		
R14	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623		
R17	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
R18	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
R19	RESISTOR FXD	ERD-25UJ153T	1/4W 15K OHM	5RDAA01594		
R20	RESISTOR FXD	ERD-25UJ123T	1/4W 12K OHM	5RDAA01592		
R21	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
R22	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	5RDAA01548		
R23	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807		
R24	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547		
RV1	RESISTOR VAR	EVN-D1AA00B14	10K OHM	5RVAB00324		
RV2	RESISTOR VAR	EVN-D1AA00B24	20K	5RVAB00372		
RV3	RESISTOR VAR	EVN-D1AA00B24	20K	5RVAB00372		
TP	TEST TERMINAL	PCN6-PEA		5JDAA00364		
TR1	TRANSISTOR	2SC1815-Y		5TCAF00219		
TR2	TRANSISTOR	2SC1815-Y		5TCAF00219		
X1	CRYSTAL	AT-51 4.194304MHZ		5XHAA00896		

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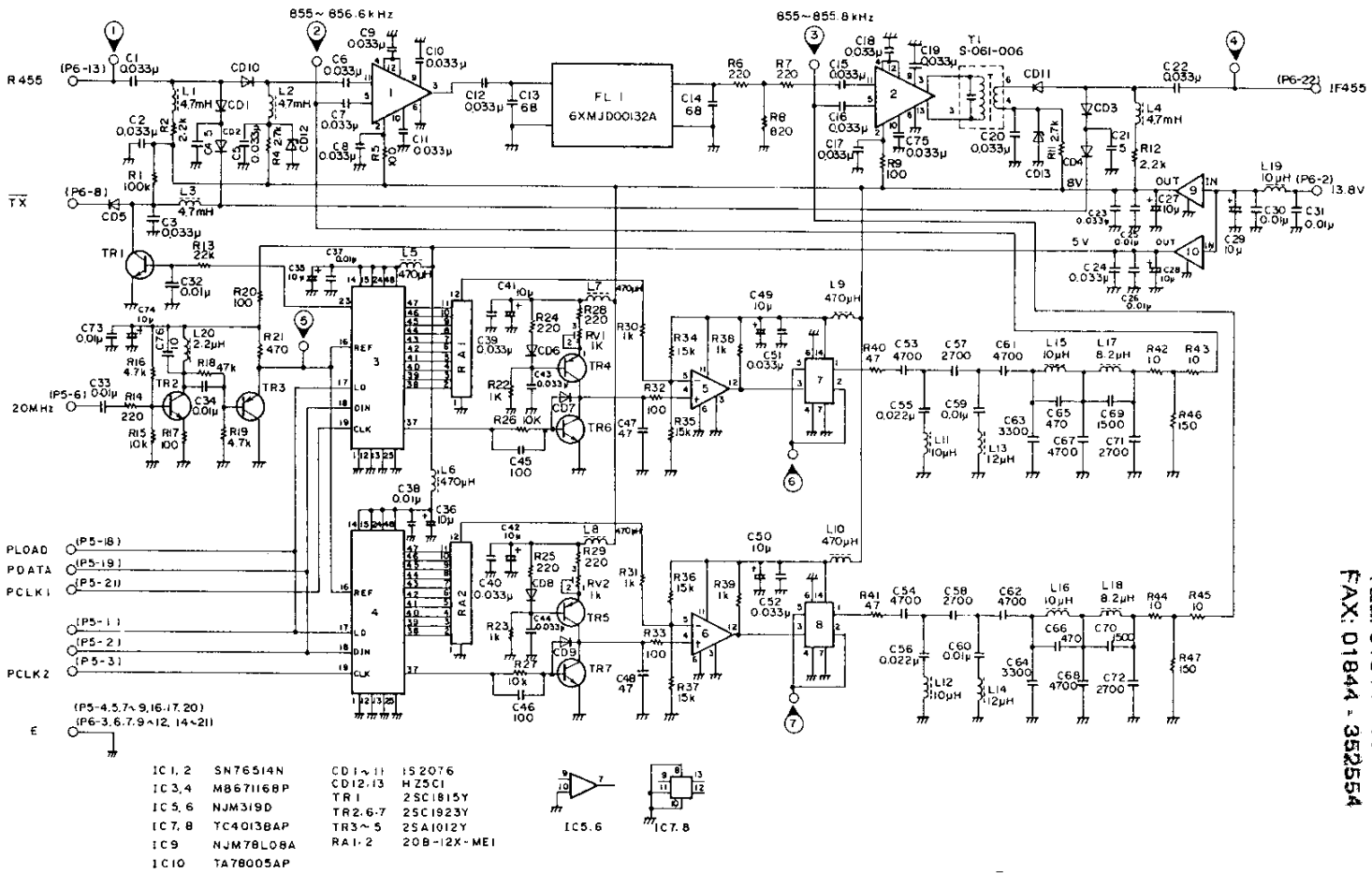


Figure 6.13.1 BWC UNIT CFL-243 Circuit Diagram

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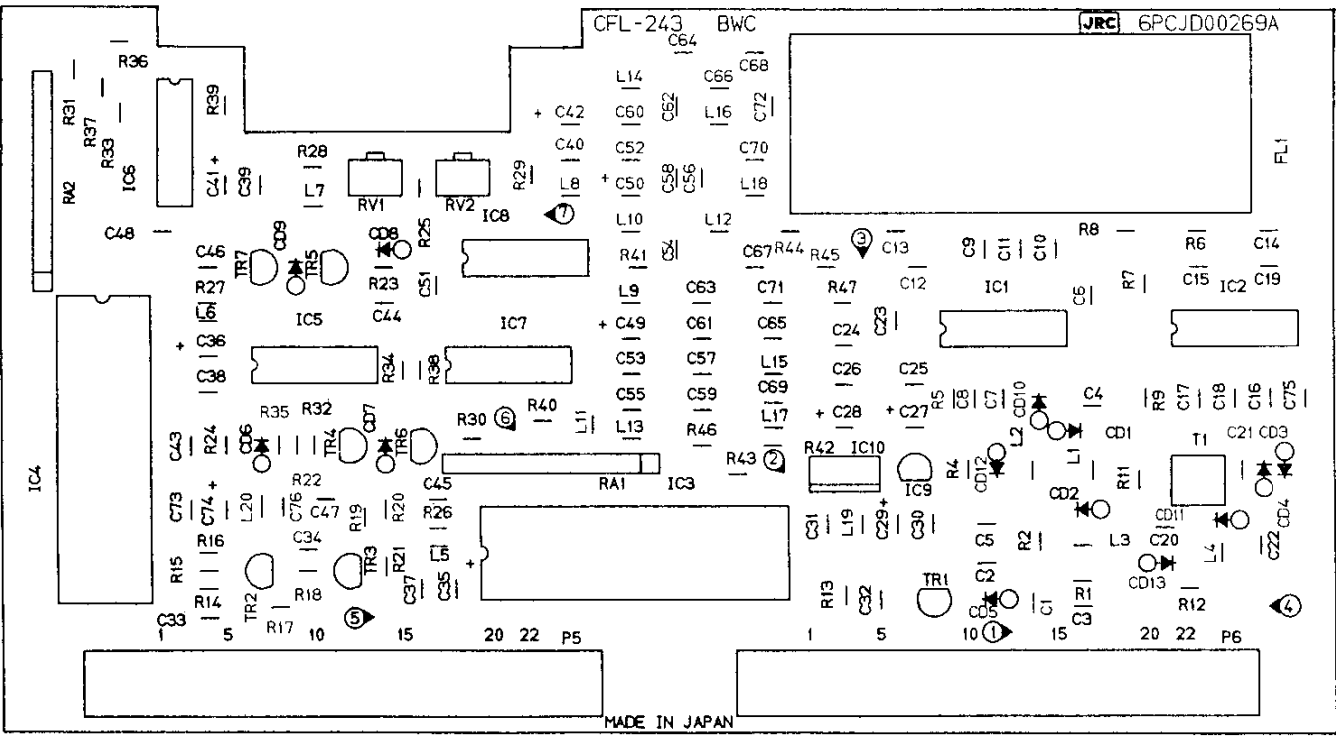


Figure 6.13.2 BWC UNIT CFL-243 Component Layout

PARTS LIST					
BWC				TITLE	SHEET NO.
				CFL-243	1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C1	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C2	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C3	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C4	CAP,FXD	CER	DD104-979CH05DC50	5CAA02688	
C5	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C6	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C7	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C8	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C9	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C10	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C11	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C12	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C13	CAP,FXD	CER	DD107-979CH680J50	5CAA02599	
C14	CAP,FXD	CER	DD107-979CH680J50	5CAA02599	
C15	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C16	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C17	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C18	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C19	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C20	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C21	CAP,FXD	CER	DD104-979CH050C50	5CAA02688	
C22	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C23	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C24	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C25	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C26	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C27	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C28	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C29	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C30	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C31	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C32	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C33	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C34	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C35	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	

PARTS LIST					
BWC				TITLE	SHEET NO.
				CFL-243	2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C36	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C37	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C38	CAP,FXD	CER	DD806-979F103Z50	5CAA02929	
C39	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C40	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C41	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C42	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C43	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C44	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C45	CAP,FXD	CER	DD107-979CH101J50	100PF,50V	5CAA02783
C46	CAP,FXD	CER	DD107-979CH101J50	100PF,50V	5CAA02783
C47	CAP,FXD	CER	DD106-979CH470J50	5CAA02754	
C48	CAP,FXD	CER	DD106-979CH470J50	5CAA02754	
C49	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C50	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
C51	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C52	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C53	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C54	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C55	CAP,FXD	PLSTC	ECQ-B1H223JZ3	5CRAA00834	
C56	CAP,FXD	PLSTC	ECQ-B1H223JZ3	5CRAA00834	
C57	CAP,FXD	PLSTC	ECQ-B1H272JZ3	5CRAA00835	
C58	CAP,FXD	PLSTC	ECQ-B1H272JZ3	5CRAA00835	
C59	CAP,FXD	PLSTC	ECQ-B1H103JZ3	5CRAA00587	
C60	CAP,FXD	PLSTC	ECQ-B1H103JZ3	5CRAA00587	
C61	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C62	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C63	CAP,FXD	PLSTC	ECQ-B1H332JZ3	3300PF 50V	5CRAA00586
C64	CAP,FXD	PLSTC	ECQ-B1H332JZ3	3300PF 50V	5CRAA00586
C65	CAP,FXD	CER	DD109-979SL471J50	5CAA02755	
C66	CAP,FXD	CER	DD109-979SL471J50	5CAA02755	
C67	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C68	CAP,FXD	PLSTC	ECQ-B1H472JZ3	5CRAA00833	
C69	CAP,FXD	PLSTC	ECQ-B1H152JZ3	5CRAA00727	
C70	CAP,FXD	PLSTC	ECQ-B1H152JZ3	5CRAA00727	

PARTS LIST				
TITLE				SHEET NO.
BWC CFL-243				3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C71	CAP,FXD	PLSTC	ECQ-B1H272J23	5CRAA00835
C72	CAP,FXD	PLSTC	ECQ-B1H272J23	5CRAA00835
C73	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929
C74	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864
C75	CAP,FXD	PLSTC	ECQ-V1H333J23	5CRAA00804
C76	CAP,FXD	CER	DD104-979CH100D50	5CAAA02689
CD1	DIODE		1S2076RE	5TXAE00588
CD2	DIODE		1S2076RE	5TXAE00588
CD3	DIODE		1S2076RE	5TXAE00588
CD4	DIODE		1S2076RE	5TXAE00588
CD5	DIODE		1S2076RE	5TXAE00588
CD6	DIODE		1S2076RE	5TXAE00588
CD7	DIODE		1S2076RE	5TXAE00588
CD8	DIODE		1S2076RE	5TXAE00588
CD9	DIODE		1S2076RE	5TXAE00588
CD10	DIODE		1S2076RE	5TXAE00588
CD11	DIODE		1S2076RE	5TXAE00588
CD12	DIODE		HZ5C1	5TXAE00130
CD13	DIODE		HZ5C1	5TXAE00130
FL1	CRYSTAL	CKT	H-6XMJD00132A	6XMJD00132
IC1	IC		SN76514N	5DDAL00251
IC2	IC		SN76514N	5DDAL00251
IC3	IC		H-6DDJD00018 MB67116	6DDJD00018
IC4	IC		H-6DDJD00018 MB67116	6DDJD00018
IC5	IC		NJM319D	5DAAN00206
IC6	IC		NJM319D	5DAAN00206
IC7	IC		TC40138AP	5DDAE00817
IC8	IC		TC40138AP	5DDAE00817
IC9	IC		NJM78L08A	5DAAN00079
IC10	IC		TA78005AP	5DAAD00082
L1	COIL		FL-7H472J	5LCAA00023
L2	COIL		FL-7H472J	5LCAA00023
L3	COIL		FL-7H472J	5LCAA00023
L4	COIL		FL-7H472J	5LCAA00023
L5	COIL		LAL03VB471K	5LCAA00270

PARTS LIST				
TITLE				SHEET NO.
BWC CFL-243				4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
L6	COIL		LAL03VB471K	5LCAA00270
L7	COIL		LAL03VB471K	5LCAA00270
L8	COIL		LAL03VB471K	5LCAA00270
L9	COIL		LAL03VB471K	5LCAA00270
L10	COIL		LAL03VB471K	5LCAA00270
L11	COIL		LAL03VB100K	5LCAA00273
L12	COIL		LAL03VB100K	5LCAA00273
L13	COIL		LAL03VB120K	5LCAA00386
L14	COIL		LAL03VB120K	5LCAA00386
L15	COIL		LAL03VB100K	5LCAA00273
L16	COIL		LAL03VB100K	5LCAA00273
L17	COIL		LAL03VB8R2K	5LCAA00335
L18	COIL		LAL03VB8R2K	5LCAA00335
L19	COIL		LAL03VB100K	5LCAA00273
L20	COIL		LAL03VB2R2M	5LCAA00278
P5	CONNECTOR		EC1C-22P-2.5DSA	5JWBS00070
P6	CONNECTOR		EC1C-22P-2.5DSA	5JWBS00070
PC1	PCB		H-6PCJD00269A	6PCJD00269
R1	RESISTOR	FXD	ERD-25UJ104T	5RDAA01623
R2	RESISTOR	FXD	ERD-25UJ222T	5RDAA01548
R4	RESISTOR	FXD	ERD-25UJ272T	5RDAA01546
R5	RESISTOR	FXD	ERD-25UJ101T	5RDAA01599
R6	RESISTOR	FXD	ERD-25UJ221T	5RDAA01543
R7	RESISTOR	FXD	ERD-25UJ221T	5RDAA01543
R8	RESISTOR	FXD	ERD-25UJ821T	5RDAA01604
R9	RESISTOR	FXD	ERD-25UJ101T	5RDAA01599
R11	RESISTOR	FXD	ERD-25UJ272T	5RDAA01546
R12	RESISTOR	FXD	ERD-25UJ222T	5RDAA01548
R13	RESISTOR	FXD	ERD-25UJ223T	5RDAA01545
R14	RESISTOR	FXD	ERD-25UJ221T	5RDAA01543
R15	RESISTOR	FXD	ERD-25UJ103T	5RDAA01547
R16	RESISTOR	FXD	ERD-25UJ472T	5RDAA01549
R17	RESISTOR	FXD	ERD-25UJ101T	5RDAA01599
R18	RESISTOR	FXD	ERD-25UJ473T	5RDAA01618
R19	RESISTOR	FXD	ERD-25UJ472T	5RDAA01549

PARTS LIST					
BWC		TITLE		SHEET NO.	
		CFL-243		5	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R20	RESISTOR	FXD	ERD-25UJ101T	1/4W 100 OHM	SRDAA01599
R21	RESISTOR	FXD	ERD-25UJ471T	470 OHM 1/4W	SRDAA01541
R22	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R23	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R24	RESISTOR	FXD	ERD-25UJ221T	220 OHM 1/4	SRDAA01543
R25	RESISTOR	FXD	ERD-25UJ221T	220 OHM 1/4	SRDAA01543
R26	RESISTOR	FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547
R27	RESISTOR	FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547
R28	RESISTOR	FXD	ERD-25UJ221T	220 OHM 1/4	SRDAA01543
R29	RESISTOR	FXD	ERD-25UJ221T	220 OHM 1/4	SRDAA01543
R30	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R31	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R32	RESISTOR	FXD	ERD-25UJ101T	1/4W 100 OHM	SRDAA01599
R33	RESISTOR	FXD	ERD-25UJ101T	1/4W 100 OHM	SRDAA01599
R34	RESISTOR	FXD	ERD-25UJ153T	1/4W 15K OHM	SRDAA01594
R35	RESISTOR	FXD	ERD-25UJ153T	1/4W 15K OHM	SRDAA01594
R36	RESISTOR	FXD	ERD-25UJ153T	1/4W 15K OHM	SRDAA01594
R37	RESISTOR	FXD	ERD-25UJ153T	1/4W 15K OHM	SRDAA01594
R38	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R39	RESISTOR	FXD	ERD-25UJ102T	1K OHM 1/4	SRDAA01542
R40	RESISTOR	FXD	ERD25UJ470T		SRDAA01551
R41	RESISTOR	FXD	ERD25UJ470T		SRDAA01551
R42	RESISTOR	FXD	ERD-25UJ100T	1/4W 10 OHM	SRDAA01576
R43	RESISTOR	FXD	ERD-25UJ100T	1/4W 10 OHM	SRDAA01576
R44	RESISTOR	FXD	ERD-25UJ100T	1/4W 10 OHM	SRDAA01576
R45	RESISTOR	FXD	ERD-25UJ100T	1/4W 10 OHM	SRDAA01576
R46	RESISTOR	FXD	ERD-25UJ151T	150 OHM 1/4W	SRDAA01601
R47	RESISTOR	FXD	ERD-25UJ151T	150 OHM 1/4W	SRDAA01601
RA1	RESISTOR	FXD	20B-12X-ME1		SREAD00716
RA2	RESISTOR	FXD	20B-12X-ME1		SREAD00716
RV1	RESISTOR	VAR	EVN-D1AA00B13	1K OHM	SRVAB00313
RV2	RESISTOR	VAR	EVN-D1AA00B13	1K OHM	SRVAB00313
T1	RF XFMR		S-061-006		SLJAA00006
TP1	TEST TERMINAL		PCN6-PEA		SJDAA00364
TP2	TEST TERMINAL		PCN6-PEA		SJDAA00364

PARTS LIST					
BWC		TITLE		SHEET NO.	
		CFL-243		6	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
TP3	TEST TERMINAL		PCN6-PEA		SJDAA00364
TP4	TEST TERMINAL		PCN6-PEA		SJDAA00364
TP5	TEST TERMINAL		PCN6-PEA		SJDAA00364
TP6	TEST TERMINAL		PCN6-PEA		SJDAA00364
TP7	TEST TERMINAL		PCN6-PEA		SJDAA00364
TR1	TRANSISTOR		2SC1815-Y		STCAF00219
TR2	TRANSISTOR		2SC1923Y		STCAF00386
TR3	TRANSISTOR		2SA1015-Y		STAAG00070
TR4	TRANSISTOR		2SA1015-Y		STAAG00070
TR5	TRANSISTOR		2SA1015-Y		STAAG00070
TR6	TRANSISTOR		2SC1923Y		STCAF00386
TR7	TRANSISTOR		2SC1923Y		STCAF00386

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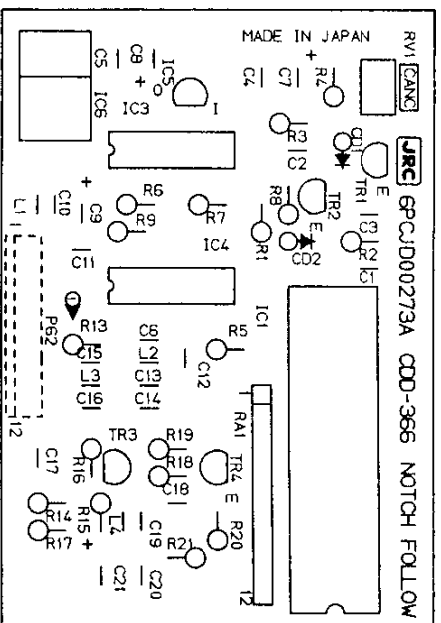


Figure 6.14.2 NOTCH FOLLOW UNIT CDD-366 Component Layout

PARTS LIST					SHEET NO.
NOTCH FOLLOW		TITLE	CDD-366		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C1	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C2	CAP,FXD	CER	DD107-979CH101J50 100PF,50V	5CAAA02783	
C3	CAP,FXD	CER	DD106-979CH470J50	5CAAA02754	
C4	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C5	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C6	CAP,FXD	PLSTC	ECQ-V1H333JZ3	5CRAA00804	
C7	CAP,FXD	ELCTLT	ECE-A1EU470B 25V 47UF	5CEAA01816	
C8	CAP,FXD	ELCTLT	ECE-A1EU470B 25V 47UF	5CEAA01816	
C9	CAP,FXD	ELCTLT	ECE-A1EU470B 25V 47UF	5CEAA01816	
C10	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929	
C11	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929	
C12	CAP,FXD	PLSTC	ECQ-B1H152JZ3	5CRAA00727	
C13	CAP,FXD	CER	DD106-979SL151J50	5CAAA02991	
C14	CAP,FXD	PLSTC	ECQ-B1H152JZ3	5CRAA00727	
C15	CAP,FXD	CER	DD108-979SL391J50	5CAAA03040	
C16	CAP,FXD	PLSTC	ECQ-B1H122JZ3	5CRAA00903	
C17	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929	
C18	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929	
C19	CAP,FXD	CER	DD104-979CH100D50	5CAAA02689	
C20	CAP,FXD	CER	DD806-979F103Z50	5CAAA02929	
C21	CAP,FXD	ELCTLT	ECE-A1EU100B	5CEAA01864	
CD1	DIODE		1S2076RE	5TXAE00588	
CD2	DIODE		1S2076RE	5TXAE00588	
IC1	IC		H-6DDJD00018 MB67116	6DDJD00018	
IC3	IC		BP NJM319D	5DAAN00206	
IC4	IC		TC4013BAP	5DDAE00817	
IC5	IC		NJM78L08A 8V 100MA	5DAAN00079	
IC6	IC		TA78005AP	5DAAD00082	
L1	COIL		LAL03VB471K 470UH	5LCAA00270	
L2	COIL		LAL03VB151K	5LCAA00460	
L3	COIL		LAL03VB121K	5LCAA00440	
L4	COIL		LAL03VB2R2M 2.2UH	5LCAA00278	
P62	CONNECTOR		XK2B-1241	5JBAR00023	
PC1	PCB		H-6PCJD00273A	6PCJD00273	

PARTS LIST					SHEET NO.
NOTCH FOLLOW		TITLE	CDD-366		2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R1	RESISTOR	FXD	ERD-25UJ221T 220 OHM 1/4	5RDAAO1543	
R2	RESISTOR	FXD	ERD-25UJ102T 1K OHM 1/4	5RDAAO1542	
R3	RESISTOR	FXD	ERD-25UJ103T 10K OHM 1/4W	5RDAAO1547	
R4	RESISTOR	FXD	ERD-25UJ222T 2.2K OHM 1/4W	5RDAAO1548	
R5	RESISTOR	FXD	ERD-25UJ123T 1/4W 12K OHM	5RDAAO1592	
R6	RESISTOR	FXD	ERD-25UJ153T 1/4W 15K OHM	5RDAAO1594	
R7	RESISTOR	FXD	ERD-25UJ153T 1/4W 15K OHM	5RDAAO1594	
R8	RESISTOR	FXD	ERD-25UJ101T 1/4W 100 OHM	5RDAAO1599	
R9	RESISTOR	FXD	ERD-25UJ472T 4.7K OHM 1/4W	5RDAAO1549	
R13	RESISTOR	FXD	ERD-25UJ102T 1K OHM 1/4	5RDAAO1542	
R14	RESISTOR	FXD	ERD-25UJ221T 220 OHM 1/4	5RDAAO1543	
R15	RESISTOR	FXD	ERD-25UJ472T 4.7K OHM 1/4W	5RDAAO1549	
R16	RESISTOR	FXD	ERD-25UJ101T 1/4W 100 OHM	5RDAAO1599	
R17	RESISTOR	FXD	ERD-25UJ103T 10K OHM 1/4W	5RDAAO1547	
R18	RESISTOR	FXD	ERD-25UJ473T 1/4W 47K OHM	5RDAAO1618	
R19	RESISTOR	FXD	ERD-25UJ472T 4.7K OHM 1/4W	5RDAAO1549	
R20	RESISTOR	FXD	ERD-25UJ471T 470 OHM 1/4W	5RDAAO1541	
R21	RESISTOR	FXD	ERD-25UJ101T 1/4W 100 OHM	5RDAAO1599	
RA1	RESISTOR	FXD	20B-12X-ME1	5READ00716	
RV1	RESISTOR	VAR	EVN-D1AA00B13 1K OHM	5RVAB00313	
TP1	TEST TERMINAL		PCN6-PEA	5JDAA00364	
TR1	TRANSISTOR		2SA1015-Y	5TAAG00070	
TR2	TRANSISTOR		2SC1923Y	5TCAF00386	
TR3	TRANSISTOR		2SC1923Y	5TCAF00386	
TR4	TRANSISTOR		2SA1015-Y	5TAAG00070	

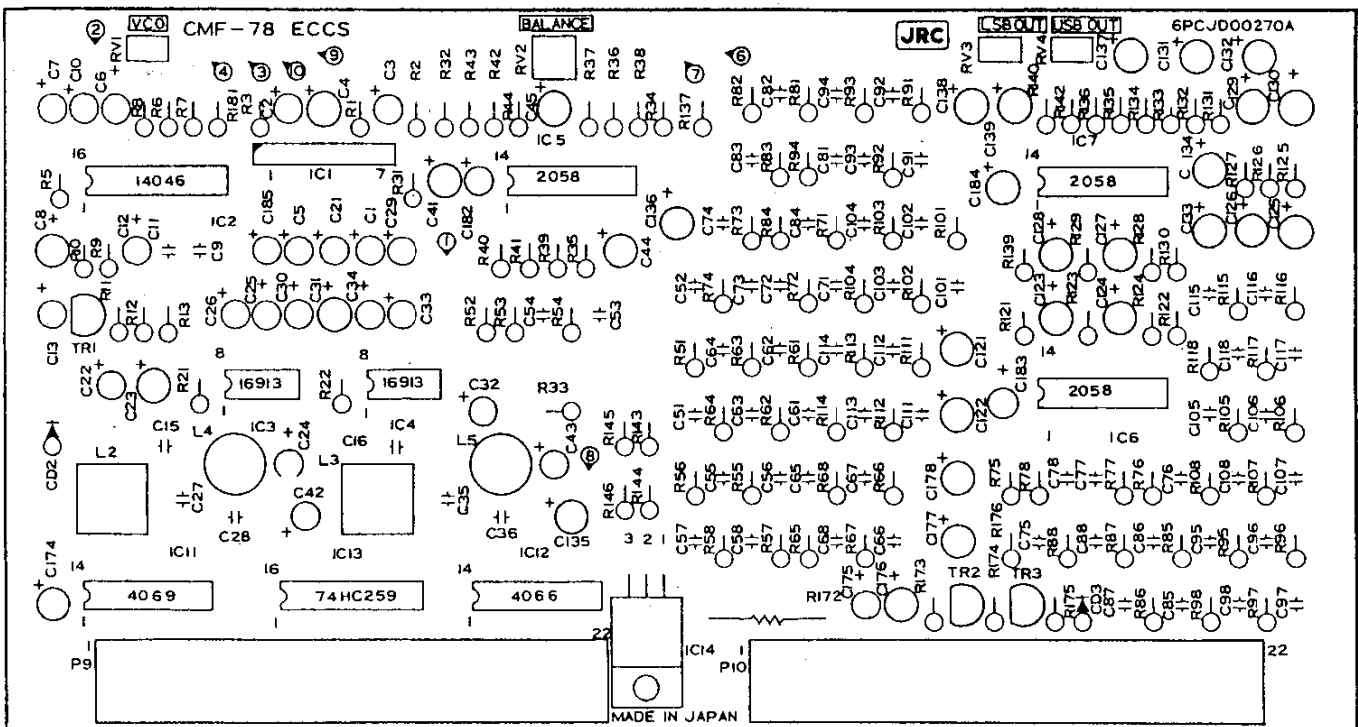


Figure 6.15.2 ECSS UNIT CMF-78 Component Layout

PARTS LIST

		TITLE		SHEET NO.
		ECSS	CHF-78	1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C2	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C3	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C4	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C5	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C6	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C7	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C8	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C9	CAP,FXD CER	DD110-979CH821J50		5CAAA03145
C10	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC0982
C11	CAP,FXD CER	DD106-979CH151J50	150P	5CAAA02702
C12	CAP,FXD TANTAL	202L3502 474MB	35V 0.47UF	5CSAC01283
C13	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C15	CAP,FXD PLSTC	ECQ-B1H332K23	50V 0.0033U	5CRAA00815
C16	CAP,FXD PLSTC	ECQ-B1H102K23	50V 1000P	5CRAA00811
C21	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C22	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C23	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C24	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C25	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C26	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C27	CAP,FXD PLSTC	ECQ-V1H333K23		5CRAA00948
C28	CAP,FXD PLSTC	ECQ-V1H224K23		5CRAA00949
C29	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C30	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C31	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C32	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C33	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C34	CAP,FXD TANTAL	202L3502 474KB		5CSAC01065
C35	CAP,FXD PLSTC	ECQ-V1H333K23		5CRAA00948
C36	CAP,FXD PLSTC	ECQ-V1H224K23		5CRAA00949
C41	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C42	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC0982
C43	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC0982
C44	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864

FOR SERVICE MANUALS
CONTACT:
MAURITRON TECHNICAL SERVICES
www.mauritron.co.uk
TEL: 01844 - 351694
FAX: 01844 - 352554

PARTS LIST

		TITLE		SHEET NO.
		ECSS	CHF-78	2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C45	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C51	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C52	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C53	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C54	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C55	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C56	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C57	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C58	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C61	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C62	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C63	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C64	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C65	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C66	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C67	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C68	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C71	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C72	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C73	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C74	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C75	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C76	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C77	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C78	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C81	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C82	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C83	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C84	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C85	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C86	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C87	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C88	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C91	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771
C92	CAP,FXD PLSTC	ECQ-B1H103K23	0.01UF 50V	5CRAA00771

PARTS LIST

		ECSS		TITLE	SHEET NO.
				CMF-78	3
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C93	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C94	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C95	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C96	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C97	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C98	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C101	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C102	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C103	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C104	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C105	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C106	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C107	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C108	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C111	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C112	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C113	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C114	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C115	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C116	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C117	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C118	CAP,FXD	PLSTC	ECQ-B1H103K23	0.01UF 50V	SCRAA00771
C121	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C122	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C123	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C124	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C125	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C126	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C127	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C128	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C129	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C130	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C131	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C132	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C133	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864

PARTS LIST

		ECSS		TITLE	SHEET NO.
				CMF-78	4
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C134	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C135	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C136	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C137	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C138	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C139	CAP,FXD	ELCTLT	ECE-A1EU100B		5CEAA01864
C174	CAP,FXD	ELCTLT	ECE-A1EU330B		5CEAA01822
C175	CAP,FXD	TANTAL	202L3502 474KB		5CSAC01065
C176	CAP,FXD	ELCTLT	ECE-A1EU330B		5CEAA01822
C177	CAP,FXD	ELCTLT	ECE-A1EU330B		5CEAA01822
C178	CAP,FXD	ELCTLT	ECE-A1EU330B		5CEAA01822
C182	CAP,FXD	TANTAL	202L3502 474MB	35V 0.47UF	5CSAC01283
C183	CAP,FXD	TANTAL	202L3502 474MB	35V 0.47UF	5CSAC01283
C184	CAP,FXD	TANTAL	202L3502 474MB	35V 0.47UF	5CSAC01283
C185	CAP,FXD	TANTAL	202L3502 474MB	35V 0.47UF	5CSAC01283
CD2	DIODE		HZ5C1RE	1/2W 5V	5TXAE00568
CD3	DIODE		1S2076RE		5TXAE00588
IC1	IC		TA7061BP		5DAAD00536
IC2	IC		MC14046BCP		5DDAS00038
IC3	IC		SN16913P		5DDAL00301
IC4	IC		SN16913P		5DDAL00301
IC5	IC		NJM20580		5DAAN00240
IC6	IC		NJM20580		5DAAN00240
IC7	IC		NJM20580		5DAAN00240
IC11	IC		TC4069UBP	MOS	5DDAE00045
IC12	IC		TC4066BP		5DDAE00078
IC13	IC		TC74HC259P		5DDAE00609
IC14	IC		AN6541		5DAAR00021
L2	COIL		H-6LAJD00279	1.6MH	6LAJD00279
L3	COIL		H-6LAJD00279	1.6MH	6LAJD00279
L4	COIL		FL-9H103J	10MH	5LCAA00028
L5	COIL		FL-9H103J	10MH	5LCAA00028
P9	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070
P10	CONNECTOR		EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB		H-6PCJD00270A		6PCJD00270

PARTS LIST

		TITLE			SHEET NO.
		ECSS	CMF-78		5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R1	RESISTOR FXD	ERD-25UJ331T	1/4W 330 OHM	5RDAA01480	
R2	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599	
R3	RESISTOR FXD	ERD-25UJ102T	1K OHM 1/4	5RDAA01542	
R5	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599	
R6	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R7	RESISTOR FXD	ERD-25UJ474T	1/4W 470K OHM	5RDAA01634	
R8	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R9	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R10	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599	
R11	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R12	RESISTOR FXD	ERD-25UJ181T	180 OHM	5RDAA01628	
R13	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627	
R21	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599	
R22	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599	
R31	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R32	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R33	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R34	RESISTOR FXD	ERD-25UJ153T	1/4W 15K OHM	5RDAA01594	
R35	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R36	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R37	RESISTOR FXD	ERD-25UJ223T	22K OHM 1/4W	5RDAA01545	
R38	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549	
R39	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R40	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R41	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R42	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R43	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R44	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547	
R51	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R52	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R53	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R54	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R55	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R56	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R57	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	

PARTS LIST

		TITLE			SHEET NO.
		ECSS	CMF-78		6
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R58	RESISTOR FXD	ERD-25UJ154T	1/4W 150K	5RDAA01807	
R61	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R62	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R63	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R64	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R65	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R66	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R67	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R68	RESISTOR FXD	ERD-25UJ104T	100K OHM 1/4W	5RDAA01623	
R71	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R72	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R73	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R74	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R75	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R76	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R77	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R78	RESISTOR FXD	ERD-25UJ473T	1/4W 47K OHM	5RDAA01618	
R81	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R82	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R83	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R84	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R85	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R86	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R87	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R88	RESISTOR FXD	ERD-25UJ183T	18K OHM 1/4W	5RDAA01605	
R91	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R92	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R93	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R94	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R95	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R96	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R97	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R98	RESISTOR FXD	ERD-25UJ682T		5RDAA01713	
R101	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	5RDAA01544	
R102	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	5RDAA01544	

PARTS LIST

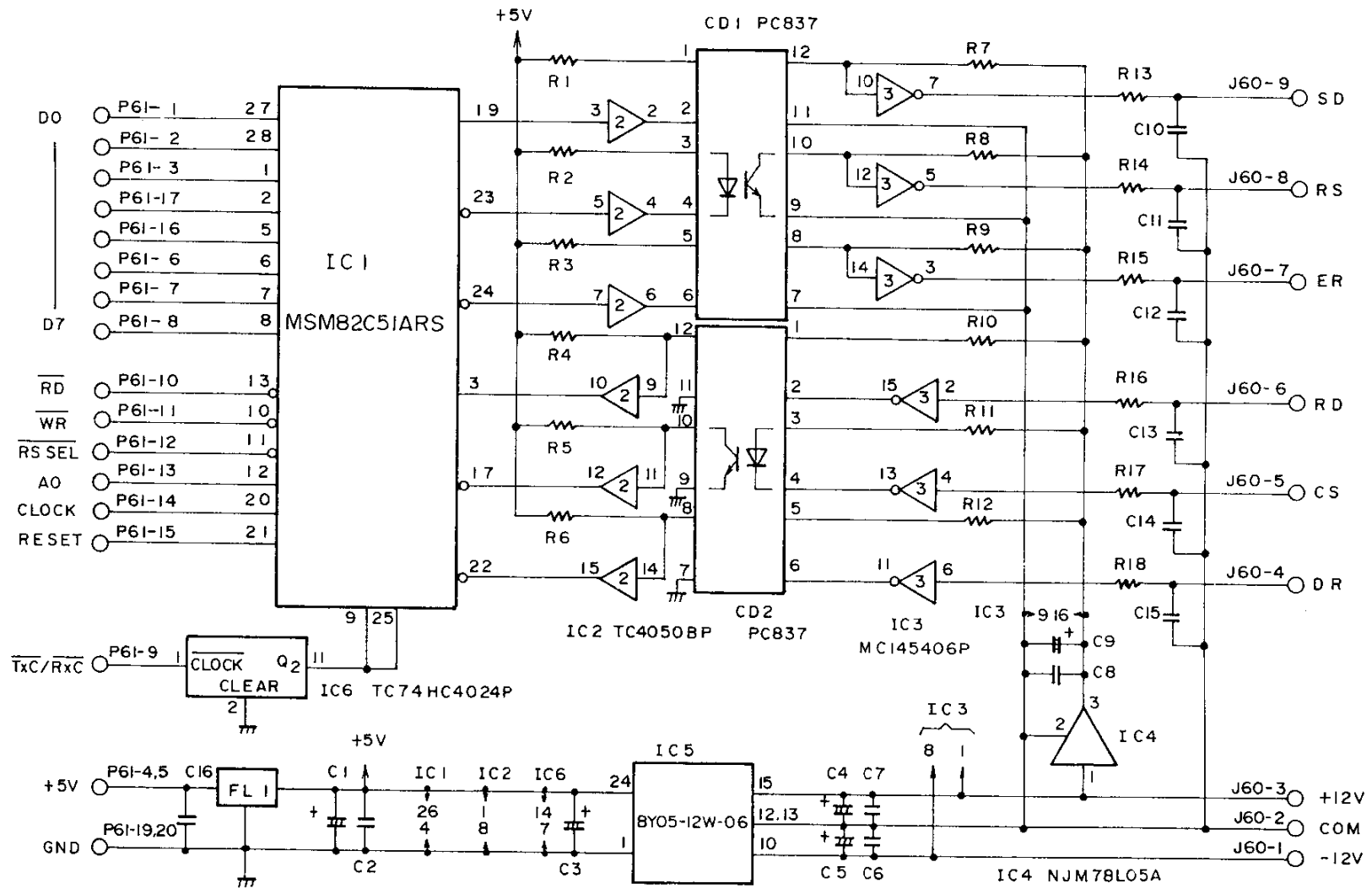
ECSS				TITLE	SHEET NO.
ECSS				CMF-78	7
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R103	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R104	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R105	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R106	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R107	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R108	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R111	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R112	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R113	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R114	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R115	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R116	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R117	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R118	RESISTOR FXD	ERD-25UJ182T	1/4W 1.8K OHM	SRDAA01617	
R121	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R122	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R123	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R124	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R125	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R126	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R127	RESISTOR FXD	ERD-25UJ683T	68K OHM 1/4W	SRDAA01705	
R128	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R129	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R130	RESISTOR FXD	ERD-25UJ333T	1/4W 33K OHM	SRDAA01591	
R131	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R132	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R133	RESISTOR FXD	ERD-25UJ683T	68K OHM 1/4W	SRDAA01705	
R134	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R135	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R136	RESISTOR FXD	ERD-25UJ333T	1/4W 33K OHM	SRDAA01591	
R137	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R139	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R140	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R142	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R143	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	SRDAA01548	

PARTS LIST

ECSS				TITLE	SHEET NO.
ECSS				CMF-78	8
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R144	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R145	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	SRDAA01548	
R146	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	SRDAA01549	
R172	RESISTOR FXD	ERG-1ANJ331	330 OHM 1W	5REAG00031	
R173	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
R174	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	SRDAA01548	
R175	RESISTOR FXD	ERD-25UJ332T	3.3K OHM 1/4W	SRDAA01544	
R176	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	SRDAA01548	
R181	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	SRDAA01547	
RV1	RESISTOR VAR	EVN-D1AA00B53		5RVAB00325	
RV2	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
RV3	RESISTOR VAR	EVN-D1AA00B55	50K	5RVAB00389	
RV4	RESISTOR VAR	EVN-D1AA00B55	50K	5RVAB00389	
TP1	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP2	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP3	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP4	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP6	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP7	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP8	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP9	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TP10	TEST TERMINAL	PCN6-PEA		5JDAAD00364	
TR1	TRANSISTOR	2SK192A-BL		5TKAA00080	
TR2	TRANSISTOR	2SA1020-Y		5TAAG00093	
TR3	TRANSISTOR	2SC1815-Y		5TCAF00219	

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Figure 6.16.1 RS-232C INTERFACE UNIT CMH-741 Circuit Diagram



H-6PCJD00274A
MDLW02681

- C1, C3, C4, C5, C9 — 10µF
- C2, C6, C7, C8, C16 — 0.01µF
- C10 ~ C15 — 0.001µF
- R1 ~ R3, R10 ~ R12 — 680 Ω
- R4 ~ R9 — 4.7 k Ω
- R13 ~ R18 — 100 Ω

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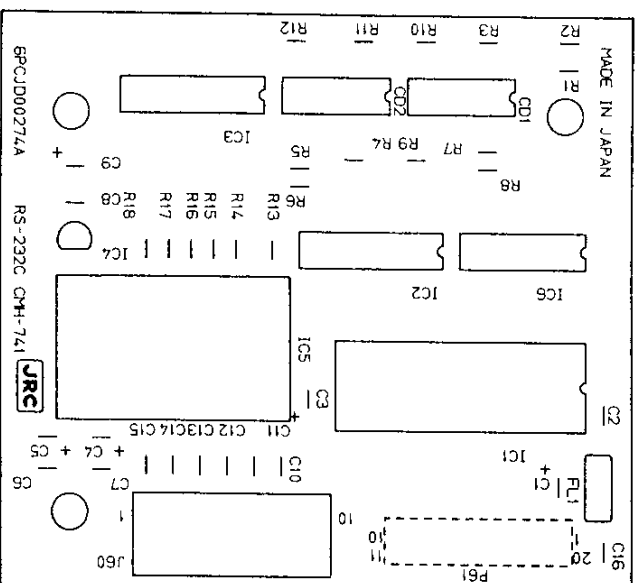


Figure 6.16.2 RS-232C INTERFACE UNIT CMH-741 Component Layout

PARTS LIST				
RS-232C		TITLE		SHEET NO.
		CMH-741		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C2	CAP,FXD CER	DD806-979F103Z50		5CAAA02929
C3	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C4	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C5	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C6	CAP,FXD CER	DD806-979F103Z50		5CAAA02929
C7	CAP,FXD CER	DD806-979F103Z50		5CAAA02929
C8	CAP,FXD CER	DD806-979F103Z50		5CAAA02929
C9	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C10	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C11	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C12	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C13	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C14	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C15	CAP,FXD CER	DD104-979B102K50	1000PF 50V	5CBAB02031
C16	CAP,FXD CER	DD806-979F103Z50		5CAAA02929
CD1	PHOTO COUPLER	PC-837		5TZAHO0050
CD2	PHOTO COUPLER	PC-837		5TZAHO0050
FL1	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
IC1	IC	MSM82C51ARS		5DDAG00110
IC2	IC	TC4050BP	MOS	5DDAE00073
IC3	IC	MC145406P		5DAAJ00329
IC4	IC	NJM78L05A	5V 100MA	5DAAN00046
IC5	CONVERTER	BY05-12W-06		5ECBF00004
IC6	IC	TC74HC4024P		5DDAE00658
J60	CONNECTOR	67095-010	10P	5JWFS00011
J61	SPASER	KGLS-10S		5ZJEB00003
J62	SPASER	KGLS-10S		5ZJEB00003
J63	SPASER	KGLS-10S		5ZJEB00003
KC1	CONNECTOR	H-6ZCJ000141		6ZCJ000141
P61	CONNECTOR	HKP-20M2		5JJAA00109
PC1	PCB	H-6PCJ000274A		6PCJ000274
R1	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627
R2	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627

PARTS LIST				
RS-232C		TITLE		SHEET NO.
		CMH-741		2
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R3	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627
R4	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R5	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R6	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R7	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R8	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R9	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R10	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627
R11	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627
R12	RESISTOR FXD	ERD-25UJ681T	1/4W 680 OHM	5RDAA01627
R13	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R14	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R15	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R16	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R17	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R18	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599

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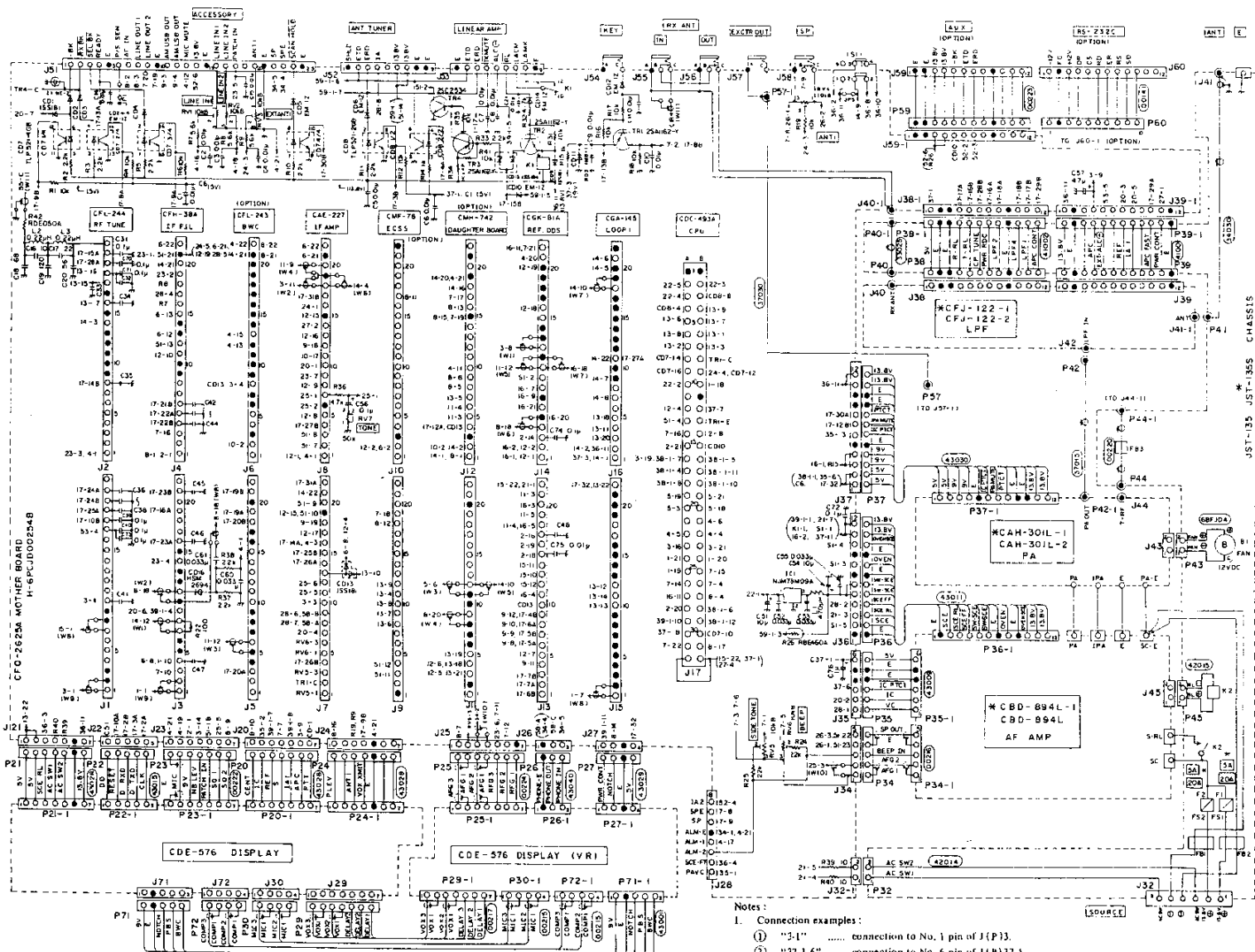
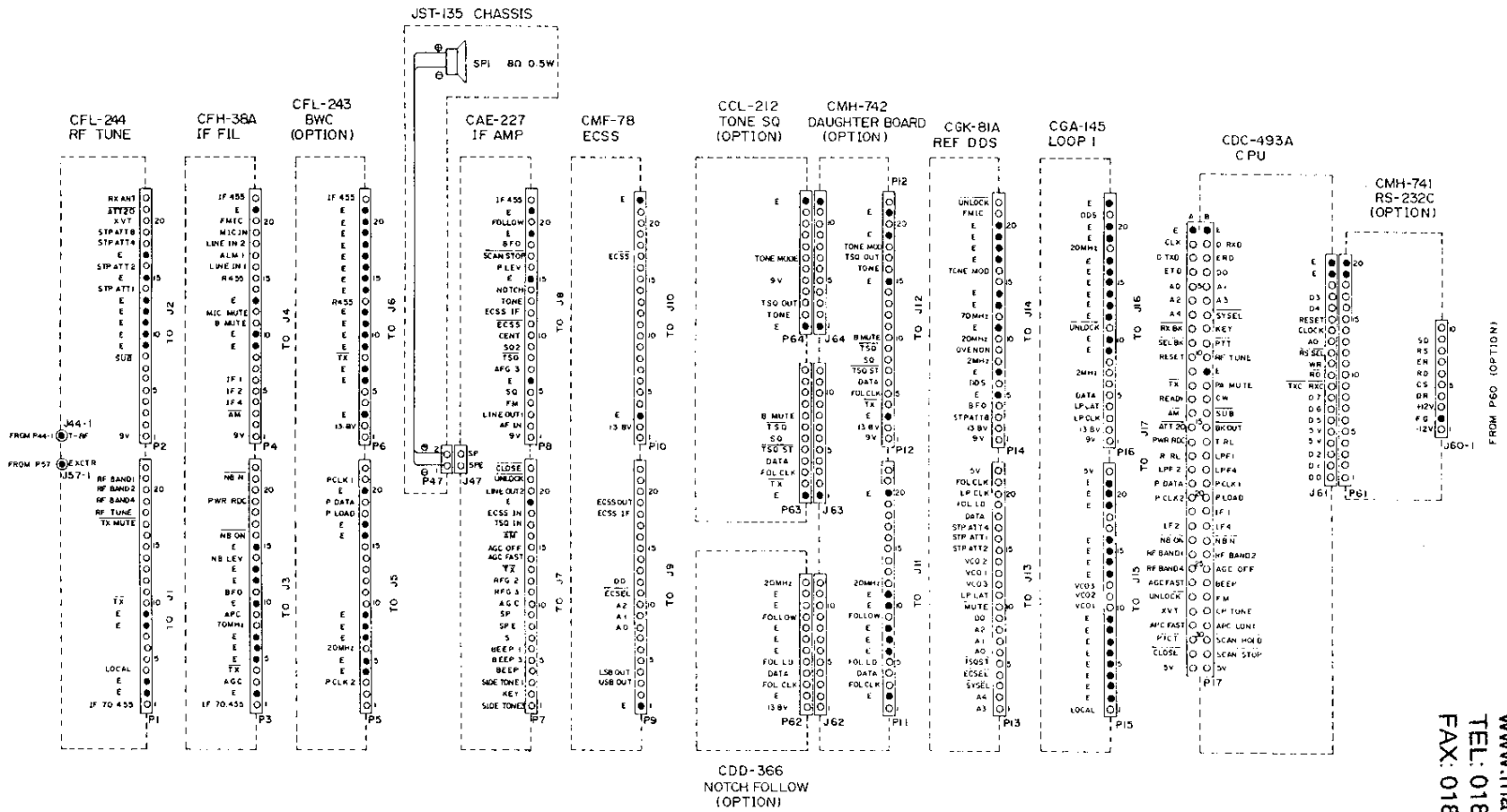


Figure 6.17.1 MOTHER BOARD CFQ-2625A Circuit Diagram
CHASSIS JST-135 Circuit Diagram

- Notes:
1. Connection examples:
 - (1) "3-1" connection to No. 1 pin of J(P)3.
 - (2) "37-1-6" connection to No. 6 pin of J(P)37-1.
 - (3) "R7" connection to R7.
 - (4) "K1-12" connection to No. 12 pin of K1.
 2. Capacitance value not specified is 1000PF.

Figure 6.17.2 Signal Nomenclature of Units



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PARTS LIST					
MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO. 1	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C4	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	5CAAD01597	
C51	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C52	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C53	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
C54	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864	
C55	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357	
CD10	DIODE	EM1Z	200V 1A	5TXAN00061	
IC1	IC	NJM78M09A		5DAAN00034	
IC1Z-1	SILICON SHEET	TC-30A (T0-220)		5ZZK000002	
J5	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J6	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J9	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J10	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J11	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J12	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082	
J24	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083	
J27	CONNECTOR	IL-S-4P-S2T2-EF	4PIN	5JWAD00183	
J32-1	CONNECTOR	IL-S-2P-S2T2-EF		5JWAD00121	
J58	JACK	SQ-3099 #01		5JJAL00043	
J59-1	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156	
JP5	RESISTOR FXD	ERJ-8GEYDR00V	0 OHM	5REAG01775	
L1	COIL	FL-9H471J		5LCAA00089	
R9	RESISTOR FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	5REAG01747	
R19	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAG01750	
R39	RESISTOR FXD	ERJ-8GEYJ100V	1/8W 10 OHM	5REAG01714	
R40	RESISTOR FXD	ERJ-8GEYJ100V	1/8W 10 OHM	5REAG01714	
RV3	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
RV4	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279	
U1	MOTHERBOARD	CFQ-2625		CFQ-2625	

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PARTS LIST					
MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO. 2	
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
C1	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C2	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C3	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C5	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C6	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C7	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C8	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C9	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C10	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C11	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C14	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C15	CAP,FXD CER	C3216JB1H103K-E-TP	0.01UF	5CAAD00789	
C16	CAP,FXD CER	C3216CH1H100D-E-TP		5CAAD00862	
C17	CAP,FXD CER	C3216CH1H220J-E-TP	22PF	5CAAD00869	
C18	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929	
C19	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931	
C20	CAP,FXD CER	C3216CH1H560J-E-TP		5CAAD00863	
C21	CAP,FXD CER	C3216B1H103K-E-TP	0.01U	5CAAD01597	
C31	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C32	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C33	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C34	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C35	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C36	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C37	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C38	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C39	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C40	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237	
C41	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C42	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C43	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C44	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C45	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C46	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	
C47	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073	

PARTS LIST

MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO.
MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO.
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C48	CAP,FXD CER	C3216B1H102K-E-TP	50V 1000PF	5CAAD01073
C56	CAP,FXD TANTAL	202L3502 104KB		5CSAC01068
C57	CAP,FXD TANTAL	202L3502475KB	4.7UF 35V	5CSAC00989
C60	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357
C61	CAP,FXD CER	C3216X7R1H333K-E-TP	50V 0.033U	5CAAD01357
C70	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C71	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C72	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C73	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C74	CAP,FXD CER	C3216X7R1E104K-E-TP	0.1UF	5CAAD01237
C75	CAP,FXD CER	C3216J81H103K-E-TP	0.01UF	5CAAD00789
C76	CAP,FXD TANTAL	202L3502 105KB	35V 1UF	5CSAC00982
CD1	DIODE	1SS181 TE85L		5TXAD00356
CD2	DIODE	EM1Z	200V 1A	5TXAN00061
CD3	DIODE	EM1Z	200V 1A	5TXAN00061
CD4	DIODE	EM1Z	200V 1A	5TXAN00061
CD5	DIODE	EM1Z	200V 1A	5TXAN00061
CD6	DIODE	EM1Z	200V 1A	5TXAN00061
CD7	PHOTO COUPLER	TLP521-4-GB		5TZAD00213
CD8	PHOTOCOUP-LER	TLP521-2-GB		5TZAD00234
CD9	DIODE	1SS181 TE85L		5TXAD00356
CD11	DIODE	RDS.1MB1-T1		5TXAA00515
CD12	DIODE	EM1Z	200V 1A	5TXAN00061
CD13	DIODE	1SS181 TE85L		5TXAD00356
CD14	DIODE	EM1Z	200V 1A	5TXAN00061
CD15	DIODE	1SS184 TE85L		5TXAD00290
CD16	DIODE	HSM2694TLC		5TXAE00627
J1	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J2	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J3	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J4	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J7	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J8	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J13	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J14	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082

PARTS LIST

MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO.
MOTHER BOARD		TITLE	CFQ-2625A	SHEET NO.
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
J15	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J16	CONNECTOR	PCN6-22S-2.5DS		5JDAAD00082
J17	CONNECTOR	ME03-L64S-D4T2-A1		5JBADF00458
J20	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083
J21	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083
J22	CONNECTOR	IL-S-5P-S2T2-EF		5JWAD00141
J23	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083
J25	CONNECTOR	IL-S-7P-S2T2-EF		5JWAD00083
J26	CONNECTOR	IL-S-3P-S2T2-EF		5JWAD00234
J34	CONNECTOR	IL-S-5P-S2T2-EF		5JWAD00141
J35	CONNECTOR	IL-S-6P-S2T2-EF		5JWAD00142
J36	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156
J37	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156
J38-1	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156
J39-1	CONNECTOR	IL-S-12P-S2T2-EF		5JWAD00156
J40-1	CONNECTOR	TMP-J01X-V2		5JDAX00009
J51	CONNECTOR	XM3B-2532-112	25P	5JWCFO0013
J52	CONNECTOR	XM3B-0932-112	9P	5JWCFO0014
J53	CONNECTOR	XM3B-0932-112	9P	5JWCFO0014
J54	CONNECTOR	1806J045		5JJBL00004
J55	JACK	SQ-3099 #01		5JJAL00043
J56	JACK	SQ-3099 #01		5JJAL00043
J57	JACK	SQ-3099 #01		5JJAL00043
K1	RELAY	G6E-184P	DC12V	5KLBM00006
L2	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L3	COIL	LAL03VBR22M	0.22UH	5LCAA00280
P57	CONNECTOR	H-6ZCJD37030	L=300	6ZCJD37030
P57-1			*	6ZZAB10000
PC1	PCB	H-6PCJD00254B		6PCJD00254
R1	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGO1750
R2	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGO1742
R3	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGO1742
R4	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGO1750
R5	RESISTOR FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	5REAGO1742
R6	RESISTOR FXD	ERJ-8GEYJ103V	1/8W 10K OHM	5REAGO1750

PARTS LIST

		MOTHER BOARD		TITLE	SHEET NO.
				CFQ-2625A	5
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
R7	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	SREAG01747
R8	RESISTOR	FXD	ERJ-8GEYJ562V	1/8W 5.6K OHM	SREAG01747
R10	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAG01742
R11	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAG01742
R12	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R14	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R15	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R16	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R17	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R18	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R22	RESISTOR	FXD	ERJ-8GEYJ101V	1/8W 100 OHM	SREAG01726
R24	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	SREAG01754
R25	RESISTOR	FXD	ERJ-8GEYJ223V	1/8W 22K OHM	SREAG01754
R26	RESISTOR		RBE460A		5RZCP00001
R31	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R32	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	SREAG01746
R33	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAG01742
R34-1	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R34-2	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R34-3	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R34-4	RESISTOR	FXD	ERJ-8GEYJ102V	1/8W 1K OHM	SREAG01738
R35	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R36	RESISTOR	FXD	ERJ-8GEYJ472V	1/8W 4.7K OHM	SREAG01746
R37	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAG01742
R38	RESISTOR	FXD	ERJ-8GEYJ222V	1/8W 2.2K OHM	SREAG01742
R41	RESISTOR	FXD	ERJ-8GEYJ103V	1/8W 10K OHM	SREAG01750
R42			RDE050A		5SZCX00004
RV1	RESISTOR	VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV2	RESISTOR	VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV5	RESISTOR	VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV6	RESISTOR	VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV7	RESISTOR	VAR	EVN-D4AA00B54		5RVAB00317
TR1	TRANSISTOR		2SA1162-Y TE85L		5TAAG00182
TR2	TRANSISTOR		2SA1162-Y TE85L		5TAAG00182
TR3	TRANSISTOR		2SA1162-Y TE85L		5TAAG00182

PARTS LIST

		MOTHER BOARD		TITLE	SHEET NO.
				CFQ-2625A	6
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
TR4	TRANSISTOR		2SC2534		5TCAF00329
TR42-2	SILICON SHEET		TC-30A (T0-220)		5ZZKB00002
TRZ4Z-1	BUSHING		YC-40B		5ZZDY00005
Z1	NEON TUBE		NE-38		5WNAC00019

PARTS LIST					SHEET NO.
CHASSIS				TITLE	1
JST-1355					
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
B1	FAN	H-6BFJD00004	DC12V	6BFJD00004	
F1	FUSE	7127-3010 5A		5ZFEX00003	
F2	FUSE	7127-3010 5A		5ZFEX00003	
FB1	CORE	RIB 10X20X15	3A	5MBAK00001	
FB2	CORE	RIB 10X20X15	3A	5MBAK00001	
FB3			*	6ZZAB10000	
FS1	FUSE HOLDER	H0448		5ZJUZ00001	
FS2	FUSE HOLDER	H0448		5ZJUZ00001	
J32	CONNECTOR	1-480705-0		5JWAH00300	
J32Z-1	CONTACT	350547-3		5JWAH00262	
J32Z-2	CONTACT	350690-3		5JWAH00333	
J41	CONNECTOR	FM-203		5JJB00003	
K2	RELAY	VF-12HN	DC12V	5KLAC00110	
P32	CONNECTOR	H-6ZCJD42014	L=100	6ZCJD42014	
P38	CONNECTOR	H-6ZCJD41002	L=400	6ZCJD41002	
P38-1			*	6ZZAB10000	
P39	CONNECTOR	H-6ZCJD41001	L=330	6ZCJD41001	
P39-1			*	6ZZAB10000	
P40	COAX CABLE	H-6ZCJD33025	L=250	6ZCJD33025	
P40-1			*	6ZZAB10000	
P41	CONNECTOR	H-6ZCJD34030	L=300	6ZCJD34030	
P43			*	6ZZAB10000	
P44	CONNECTOR	H-6ZCJD00220		6ZCJD00220	
P44-1			*	6ZZAB10000	
P45	CONNECTOR	H-6ZCJD42015	L=150	6ZCJD42015	
P47	CONNECTOR	H-6ZCJD00100		6ZCJD00100	
SP1	SPEAKER	77F51-1		5USAC00028	

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PARTS LIST					SHEET NO.
CHASSIS				TITLE	1
JST-135					
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE	
B1	FAN	H-6BFJD00004	DC12V	6BFJD00004	
F1	FUSE	7127-3013 20A		5ZFEX00002	
F2	FUSE	7127-3013 20A		5ZFEX00002	
FB1	CORE	RIB 10X20X15	3A	5MBAK00001	
FB2	CORE	RIB 10X20X15	3A	5MBAK00001	
FB3			*	6ZZAB10000	
FS1	FUSE HOLDER	H0448		5ZJUZ00001	
FS2	FUSE HOLDER	H0448		5ZJUZ00001	
J32	CONNECTOR	1-480705-0		5JWAH00300	
J32Z-1	CONTACT	350547-3		5JWAH00262	
J32Z-2	CONTACT	350690-3		5JWAH00333	
J41	CONNECTOR	FM-203		5JJB00003	
K2	RELAY	VF-12HN	DC12V	5KLAC00110	
P32	CONNECTOR	H-6ZCJD42014	L=100	6ZCJD42014	
P38	CONNECTOR	H-6ZCJD41002	L=400	6ZCJD41002	
P38-1			*	6ZZAB10000	
P39	CONNECTOR	H-6ZCJD41001	L=330	6ZCJD41001	
P39-1			*	6ZZAB10000	
P40	COAX CABLE	H-6ZCJD33025	L=250	6ZCJD33025	
P40-1			*	6ZZAB10000	
P41	CONNECTOR	H-6ZCJD34030	L=300	6ZCJD34030	
P43			*	6ZZAB10000	
P44	CONNECTOR	H-6ZCJD00220		6ZCJD00220	
P44-1			*	6ZZAB10000	
P45	CONNECTOR	H-6ZCJD42015	L=150	6ZCJD42015	
P47	CONNECTOR	H-6ZCJD00100		6ZCJD00100	
SP1	SPEAKER	77F51-1		5USAC00028	

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PARTS LIST

		TITLE		SHEET NO.
ACCESSORY		JST135S-ACCES		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
ACC-1	FUSE	7127-3010 5A		5ZFE00003
ACC-2	CONNECTOR	XM2A-2501	25P	5JJCJ00010
ACC-3	CONNECTOR HOOD	XM2S-2501	25P	5JJCJ00013
ACC-5	PLUG	S-H3001		5JWAV00001

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FOR SERVICE MANUALS
CONTACT:
MAURITRON TECHNICAL SERVICES
www.mauritron.co.uk
TEL: 01844 - 351694
FAX: 01844 - 352554

PARTS LIST

		TITLE		SHEET NO.
ACCESSORY		JST135-ACCESS		1
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
ACC-1	FUSE	7127-3013 20A		5ZFE00002
ACC-2	CONNECTOR	XM2A-2501	25P	5JJCJ00010
ACC-3	CONNECTOR HOOD	XM2S-2501	25P	5JJCJ00013
ACC-5	PLUG	S-H3001		5JWAV00001

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