NRD-525
GENERAL COVERAGE RECEIVER
SERVICE MANUAL

JRC Japan Radio Co., Ltd.

TABLE OF CONTENTS

Introduction

This manual describes information necessary for maintenance of the NRD-525 Receiver. We hope the manual will be helpful to you in maintenance and repair.
For the details of operation of the NRD-525, please refer to the instruction manuals for NRD-525 and optional units.
The following units are available as options for the NRD-525 Receiver:

- # VHF/UHF converter CMK-165
- # RTTY demodulator CMH-530
- # RS-232C interface unit CMH-532

First, this manual describes standard information about the NRD-525 not equipped with optional units. Then, it proceeds to description of information about optional units.

1. OPERATION

1-1 Units

The NRD-525 is roughly classified into the five blocks: chassis, receiver, synthesizer, control, and panel.

The chassis block consists of the rear panel, power supply circuit and motherboard which mutually connects plug-in units.

The receiver block consists of the following three units:

1) HF Tuning Unit (CFL-205)

   This unit consists of the electronic double tuning circuit, RF amplifier circuit and 1st mixer circuit.

2) IF filter unit (CFL-36)

   This unit consists of 1st IF filter circuit, 2nd mixer circuit and noise blanker circuit.

3) IF AF amplifier unit (CAE-182)

   This unit consists of the notch filter circuit, IF amplifier circuit, AF amplifier circuit, demodulator circuit, AGC amplifier circuit and squelch circuit.

The synthesizer block consists of the following two units:

1) Loop 1 unit (CAG-131)

   This unit generates 1st local signal by synthesizer. 1st local signal covers 70.543MHz through 104.453MHz in 1kHz steps. (See Table 1-1)

2) Loop 2 unit (CGA-132)

This unit generates 2nd local signal and BF0 signal. 2nd local signal covers 69.99899MHz through 69.99800MHz in 10Hz steps. BF0 signal is determined by the mode. (See Table 1-1 and 1-2).

The control block consists of the following two units:

1) CPU unit (CDC-353)

   This unit includes the microcomputer and its peripheral circuit and control voltage generator circuit. The microcomputer controls the receiver, synthesizer and panel blocks. Voltage generated by the control voltage circuit is used to control the double tuning circuit.

2) Data I/O unit (CMH-632)

   This unit includes the reference signal generator circuit (12.8MHz), counter circuit of synthesizer and peripheral circuit for the microcomputer.

The panel block consists of the following two units:

1) Display unit (CDE-418)

   This unit includes the controls and switches used to operate NRD-525, large Vacuum fluorescent display and microcomputer. The vacuum fluorescent display indicate the frequency, mode, band, etc.

2) Jack unit (CQB-40)

   This unit has the PHONE jack and RECORD jack.

1-2 Details of Blocks

1-2-1 Chassis Block

o Rear Panel:

The following connectors, terminals and jacks are located on the rear panel of NRD-525:

a. MF/HF ANT Lo-Z connector

An antenna with low impedance (inverted-L type, doublet, or Yagi antenna) can be connected to this connector. For connection to the antenna, a coaxial cable (50Ω or 75Ω) should be used.

b. MF/HF ANT Hi-Z terminal

An antenna with high impedance (5 or 6m long copper wire) can be connected to this terminal.

c. ANT switch

This switch is used to select an MF/HF antenna with low or high impedance.

d. GND terminal

A grounding wire is connected to it. Be sure to ground NRD-525 to prevent personal injury due to electric shock and trouble due to interference by other devices.

e. LINE OUT jack

This is a jack for received audio output. The output impedance and output level are respectively set at 600Ω and 0dBm.

f. EXT SP jack

This jack is used to connect an external speaker. When an external speaker is connected, the built-in speaker is automatically turned off.

g. SIDE TONE jack

When signal from another device is entered into this jack, it can be monitored with the speaker for NRD-525.

h. MUTE jack

This jack is used to control on/off of AF output. When the line connected to this jack is grounded, the AF output is muted (OFF).

i. DC OUT jack

This jack is used for 10.8V DC output. Maximum 30mA can be output.

j. TIMER OUT terminal

The signal from the relay contacts used to control an external device with the aid of the timer is output from this jack. The contact capacity is 24V DC, 3A maximum. You should not connect the AC power to this terminal.

k. PRINTER connector

If an output is to be fed to the printer when the optional RTTY demodulator CMH-530 is used for reception of RTTY, the printer must be connected to this connector.

l. MARK/SPACE jack

Output for mark and space signal indicator in case the optional RTTY demodulator is used for reception of RTTY. It can be connected the X and Y axes inputs of an oscilloscope or CKJ-61 attached to the demodulator unit.

m. RS-232C connector

This connector is used when NRD-525 is controlled by another device through the optional RS-232C interface

unit (CMH-532). This connector is attached to the CMH-532, not provided as a standard accessory. It is covered with a cap.

n. DC power connector

This connector is used to supply DC power (standard 13.8V) to NRD-525.

o. AC power connector

This connector is used to supply AC power to NRD-525.

p. AC voltage selector with fuse

This voltage selector has a fuse for AC power source (1A). The source voltage is selected from 100, 120, 220 and 240V AC by this selector.

q. VHF/UHF ANT connector

This antenna connector (50Ω) is used to receive VHF band and UHF band with the aid of the optional VHF/UHF converter (CMK-165). This connector is attached to the CMK-165, not provided as a standard accessory. It is covered with a cap.

o Power Supply Unit

DC10.8V, 9V and 5V are regulated from the AC power (100, 120, 220, or 240V) or 13.8V DC.
10.8V is supplied to the receiver and synthesizer blocks. 10.8V is turned on and off by the microcomputer when the power switch is put to the TIMER position.
With the aid of the regulator IC for the power source, 9V is supplied to the AF amplifier for the speaker and

to the drive voltage generator circuit for the vaccum fluorescent display on the panel. There are two 5V systems. Regulator ICs for power source is used for these two 5V systems. One is mainly supplied as power source for IC in the control block. The other one is used for backup to RAM IC and clock IC in the CPU unit. The 5V backup input to the regulator IC is taken from the line in front of the power switch. So RAM and CLOCK ICs are always powered even when the power switch is turned off as long as the AC or DC power is connected.

1-2-2 Receiver Block

Let us see the flow of signals in this block.
The 90kHz-33.9999MHz signal entered through the antenna is sent to the CFL-205 HF TUNE unit. Further, the signal is sent to the radio frequency input tuning circuit through the arrester diode used for protection of input circuit. The attenuator switch is on at this time, a 20dB attenuator is inserted in the signal route before the received signal is sent to the tuning circuit. The tuning circuit consists of the low-pass filter for 400kHz or less and five double tuning circuits using the variable capacitor diodes, and covers all receiving frequency range. Each tuning circuit covers the following frequency ranges:

RF Band No.	Frequency range (MHz)
Band 1	0.09 - 0.399 (LPF)
Band 2	0.40 - 0.799
Band 2 sub	0.80 - 1.599
Band 3	1.60 - 2.649
Band 3 sub	2.65 - 4.399
Band 4	4.40 - 7.399
Band 4 sub	7.40 - 12.299
Band 5	13.30 - 20.499
Band 6	20.50 - 33.999

Selection of these tuning circuits, and supply of bias voltage to the variable capacitor diodes are controlled by the microcomputer according to the receiving frequency.

The tuning circuit can be bypassed to receive very weak signal which may be affected by the loss in the tuning circuit. In this case, the 1.6MHz high pass filter is used (PASS).

The received signal passing through the tuning circuit is amplified by the wide band radio frequency amplifier through the 35MHz low-pass filter. 1st mixer circuit mixes the amplified signal with 70.543-104.453MHz 1st local signal sent by the synthesizer block, and converts it into the 1st IF signal of 70.45399-70.453MHz.

The 1st IF signal which has passed through the crystal filter with the center frequency of 70.455MHz and pass

bandwidth of 12kHz is fed to the 2nd mixer after it is amplified by the 1st IF amplifier.
This signal is mixed with the 2nd local signal of 69.99899 - 69.998MHz and converted into the 2nd IF signal of 455kHz.
The 455kHz signal is sent to the ceramic filter with the center frequency of 455kHz and pass bandwidth of 12kHz and to the noise blanker circuit. The noise blanker circuit consists of the noise amplifier, AGC detector, AGC amplifier and noise blanker gate control. The gain of the AGC amplifier can be adjusted with the NB level control on the panel. Thus, the sensitivity of the noise blanker circuit can be adjusted. If the NB level is pulled to the [W] position, the time constant for the noise blanker circuit becomes greater, and wide noise such as woodpecker noise can be removed.
If the noise blanker circuit detects pulse noise according to the setting of the NB level control, the noise blanker gate works according to the pulse width, and temporarily shuts off the signal passage.
The signal which has passed the noise blanker gate is sent to the notch filter circuit through one of the intermediate frequency IF filters with the rated bandwidth of 6kHz (WIDE), 3kHz (INTER) and 12kHz (AUX) (or any other frequency if optional filter is employed).
If the NOTCH control on the panel is put to the central position, the notch filter circuit attenuates 455kHz

signal by more than 30dB. If the NOTCH control is rotated, the 455kHz signal can be changed by about ±3kHz.

The signal which has passed through the notch filter is supplied to the AGC circuit and demodulator circuit after it is amplified by the IF amplifier. The AGC circuit amplifies the signal and sends it to the AGC detector circuit. The AGC detector circuit consists of the portion operating in the AM mode and that operating in any other mode. The detector output controls the gains of 1st and 2nd IF amplifiers according to the time constant determined by AGC (FAST, SLOW, OFF) on the panel. At the same time, the detector output is also sent to the panel for indication with the S meter.

The demodulator circuit is divided into the FM mode detector and the other modes detector. Detection in the FM mode is performed by the IC with a built-in limitter and detector.

In case of AM detection, the demodulating circuit takes out the carrier component from the receiving signal and operates as a synchronous detector.

In case of other than AM or FM detection, the BFO signal for demodulating is supplied from the synthesizer section and the demodulating circuit operates as a product detector.

The squelch circuit compares the output from the detector IC with the level set with the SQUELCH control on the panel in the FM mode and controls on/off of the squelch gate. In any other mode, the squelch circuit compares the AGC voltage with the setting and controls on/off of the squelch gate. Part of the signal which has passed the squelch gate is supplied to the audio frequency power amplifier through the AF GAIN control on the panel and drives the built-in speaker, external speaker or headphone. The TONE control on the panel allows adjustment of the filter used to cut off the high tone. The other portion of the demodulator signal is sent to the line amplifier through the semi-fixed resistor and fed to the LINE OUT jack on the rear panel and RECORD jack on the front panel.

1-2-3 Synthesizer Block

Refer to Fig. 1-1 Block Diagram.

The synthesizer block of NRD-525 generates 70.543 - 104.453MHz 1st local signal and 69.99899MHz - 69.99800MHz 2nd local signal meeting the 90kHz - 33.9999MHz received signal, and BFO signal for demodulation in the 455kHz band, and supplies them to the receiver block. The synthesizer block uses 100kHz, which is obtained by dividing the 12.8MHz standard signal from the temperature compensating crystal oscillator (TCXO) by 128, as the reference signal. 1st local signal supplied to 1st

mixer circuit in the receiver block is generated in the range of 70.543MHz - 104.453MHz in minimum 1kHz steps according to the set receiving frequency by the phase lock loop (PLL) using 100kHz as reference frequency. The oscillation frequency from the voltage control oscillator (VCO) in the LOOP1 unit is controlled by the set value given to the pulse-swallow counter, consisting of the variable dividers N and A, and accumulator B. Like 1st local signal, 2nd local signal supplied to 2nd mixer circuit is generated in the range of 69.99899MHz - 69.99800MHz in 10Hz steps by the PLL. The oscillation frequency of the VCO in the LOOP2 unit is controlled by the set value given to the accumulator C. The BFO loop which generates the BFO signal sent to the demodulator consists of ICs including the VCO and double balance mixer, and ICs including variable divider and phase frequency detector. The oscillation frequency from VCO is divided by 100 and supplied to the demodulator circuit. The set values given to the pulse-swallow counters and accumulators in loop 1 and loop 2 are set by the microcomputer based on the receiving frequency. According to the receiving mode and setting of the BFO control, the computer determines the set value given to the variable divider in the BFO loop.

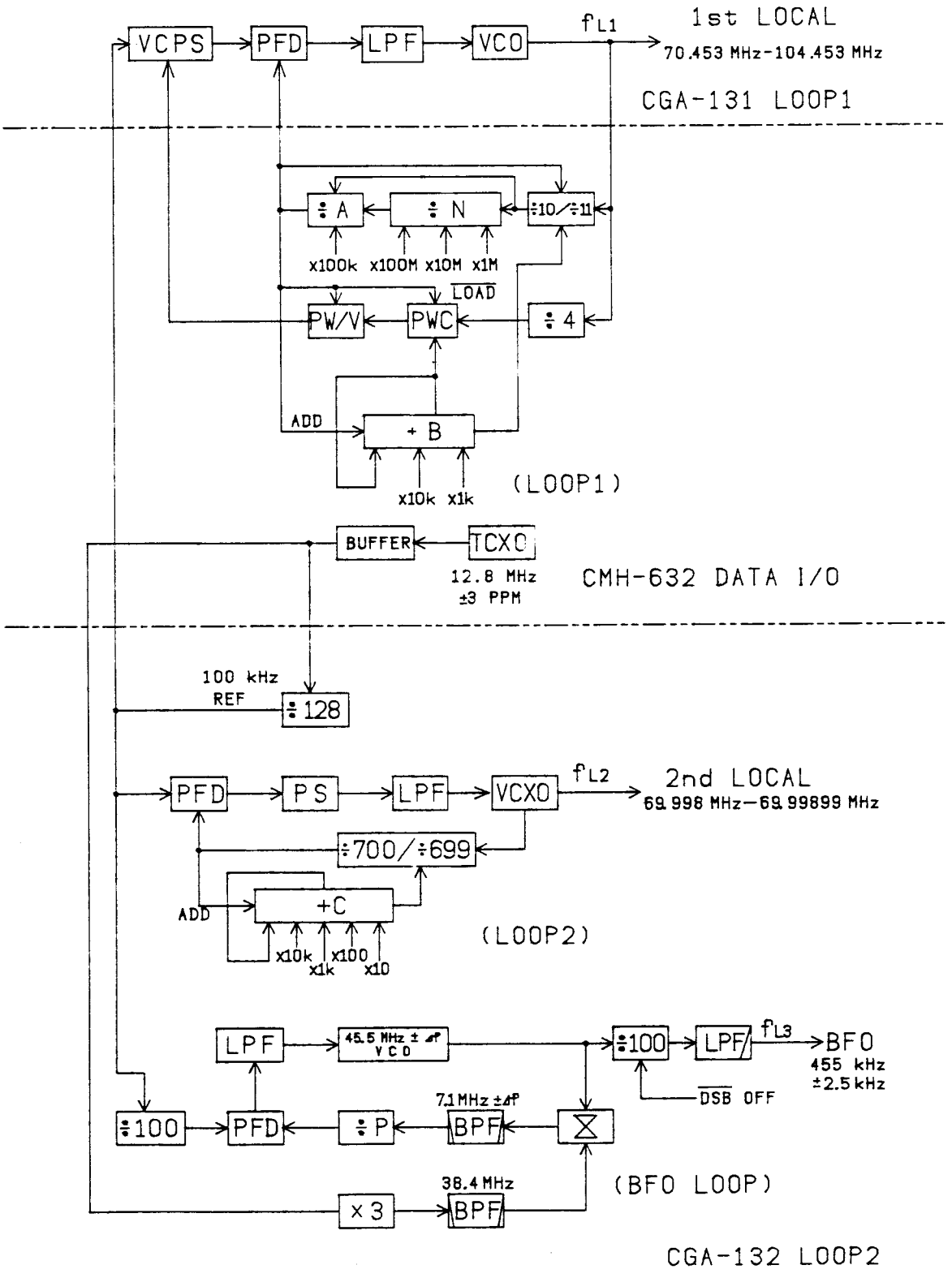
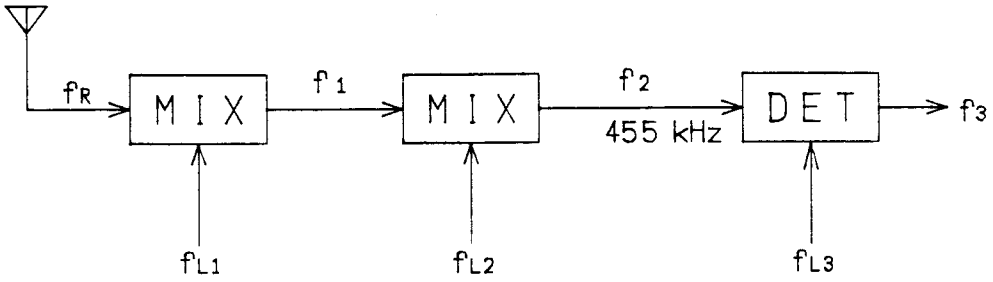


FIG. 1-1 SYNTHESIZER SECTION BLOCK DIAGRAM



BAND	f_R (kHz)	f_{L1} (MHz)	f_1 (MHz)	f_{L2} (MHz)
A	0.09 - 34	70.543 - 104.453	70.45399 - 70.453	69.99899 - 69.998
B	34 - 60	104.453 - 130.453	70.45399 - 70.453	69.99899 - 69.998
C	114 - 141	184.453 - 211.453	70.45399 - 70.453	69.99899 - 69.998
D	141 - 174	211.453 - 244.453	70.45399 - 70.453	69.99899 - 69.998
E	422.5 - 456.4	439.953 - 526.853	70.45399 - 70.453	69.99899 - 69.998

TABLE 1-1 NRD-525 FREQUENCY TABLE

MODE	f_{L3} (kHz)	f_3 (Hz)	REMARKS
RTTY	457.21	2210 ± 85	PBS:Center,FS:± 85 Hz
RTTY	457.10	2100 ± 200	PBS:Center,FS:± 200 Hz
RTTY	456.87	1870 ± 425	PBS:Center,FS:± 425 Hz
CW	455.00	0	PBS:Center,BFO:Center
USB	456.50	0	PBS:Center,No-Modulation
LSB	453.50	0	PBS:Center,No-Modulation
AM	—	—	
FM	—	—	
FAX	456.90	1900 ± 400	PBS:Center,FS:± 400 Hz

TABLE 1-2 FREQUENCY TABLE OF THE BEAT FREQUENCY OSCILATER

1-2-4 Control Block

The control block generates signals necessary for control of the receiver block and synthesizer block according to operation from the panel, exchanges information with the panel, and controls the optional units (VHF/UHF converter, RTTY demodulator, RS-232C interface, etc.). The control block mainly consists of the microcomputer and its peripheral circuits.

When the microcomputer receives frequency data from the panel (entry with numerical keys, tune control, up/down, etc.), it gives frequency data to the loop 1, loop 2, and BFO loop in the synthesizer block, based on the data on the receiving frequency and receiving mode, and controls the PLL. At the same time, the microcomputer generates the band change data (RF BAND) meeting the receiving frequency, and generates the tuning voltage with the aid of the D/A converter to control the tuning circuit in the receiver block.

The microcomputer prepares data necessary for indication and sends it to the panel block. It receives data (RTTY demodulation sign, receiving signal for RS-232C, etc.) and performs control accordingly. The control block has IC for the clock. This IC is operated by the 32.768kHz clock signal and it provides the clock data necessary for the microcomputer. This IC works independently of the on-off of the power switch if AC or DC power is connected to NRD-525.

However, the clock IC is not backed up by a battery. The memory IC is backed up by a battery so as to protect the data on the preset channel and recovery of previous conditions in case of power interruption.

1-2-5 Panel Block

The panel block consists of the key switches used to set various receiving data; vaccume fluorescent display and their drive circuit; controls associated with setting of the receiving frequency including tuning control, BFO control, and PBS control; micro-computer; and controls directly affecting the receiver block including RF gain control, AF gain control, tone control, squelch control, and notch filter control. The microcomputer in the panel block sends data to the microcomputer in the control block whenever switches and controls under its control are manipulated. The microcomputer in the control block prepares data and sends back data necessary for indication. The vacuum fluorescent display is dynamically lit and their cycle is synchronous with the clock signal (CLK) sent by the microcomputer in the control block. Dimmer is operated by changing the time of illumination in each clock signal. As the power source for vacuum fluorescent display, 9V is converted into about 35V by the DC/DC converter.

The BFO, PBS and AGC (S-A/D) signals are converted

into digital values by the A/D converter and processed by the microcomputer.

1-3 Operation of Optional Units

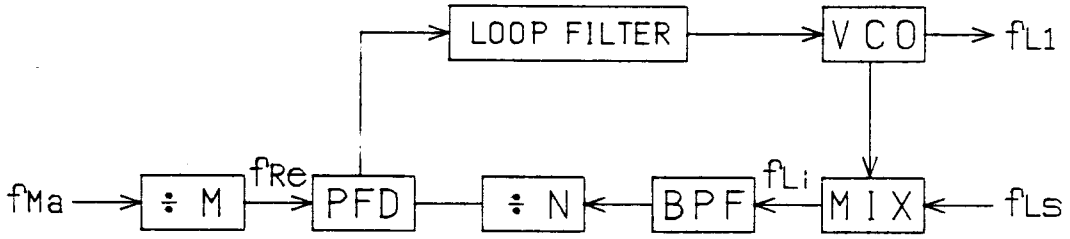
1-3-1 CMK-165 VHF/UHF Converter

The CMK-165 VHF/UHF converter consists of the two PCBs: the RF unit CHE-85 and LOCAL OSC unit CGA-118.

The RF unit consists of the VHF and UHF sections. The 34MHz-60MHz and 114MHz-174MHz received signals are sent to the radio frequency input tuning circuit in the VHF section. This tuning circuit utilizes the variable capacitor diode similar to that used in the HF band, and covers five bands. Selection of the band and bias voltage given to the variable capacitor diode are controlled by the microcomputer according to the receiving frequency. The signal which has passed through the tuning circuit is amplified by the radio frequency amplifier. It is mixed with the local signal supplied by the LOCAL OSC unit (CGA-118), converted into 70.45399-70.45300MHz 1st IF signal, and sent to the IF filter unit (CFH-36).

In the UHF section, the 423MHz-456MHz received signal passes through the band pass filter and amplified by the radio frequency amplifier. It is mixed with the local signal supplied by the LOCAL OSC unit (CGA-118), converted into 1st IF signal, and sent to the IF filter unit.

The LOCAL OSC unit (CGA-118) generates the local signal given to the mixer circuit in the RF unit (CHE-85), using the 70.543MHz-104.453MHz 1st local signal generated by the LOOP1 unit. The LOCAL OSC unit also generates desired local signal with the aid of the PLL. The VCO is so controlled that the division of the mixture of 1st local signal and VHF/UHF local signal may be identical with the standard signal obtained by dividing 12.8MHz. (See Table 1-3.)



BAND	fMa (MHz)	M	fRe (MHz)	N	fLi (MHz)	fLs (MHz)
A	12.8	—	—	—	—	70.543 - 104.453
B	12.8	8	1.6	20	32	72.453 - 104.453
C	12.8	8	1.6	70	112	72.453 - 98.453
D	12.8	2	6.4	22	140.8	70.653 - 103.453
E	12.8	4	3.2	132	422.4	70.553 - 104.453

TABLE 1-3 FREQUENCY TABLE OF THE V/UHF LOCAL SYNTHESIZER

1-3-2 CMH-530 RTTY Demodulator Unit

The RTTY demodulator unit consists of the AGC circuit, mark filter circuit, space filter circuit, slide-back detector circuit, code demodulator circuit, mark/space indicator drive circuit, printer drive circuit and control circuit. The audio signal sent by the IF AF AMP circuit unit (CAE-182) is supplied to the mark filter and space filter circuits through the AGC circuit. The mark filter is an active band pass filter with the center frequency of 2295Hz and pass bandwidth of about 30Hz. The space filters are active band pass filters with the center frequencies of 2125Hz, 1895Hz, and 1145Hz. Their pass bandwidth is about 30Hz. One of the three space filters are selected according to the shift width. The filter output is sent to the slide-back detector circuit and the drive circuit which illuminates the mark/space LEDs on the attached indicator (CKJ-61). The slide-back detector circuit synthesizes and detects the mark signal and space signal. The detected signal passes through the code normal/reverse inversion gate. It undergoes serial/parallel conversion (IC2) and is supplied to the microcomputer. The 5-digit code (CCITT No.2 code) entered by the microcomputer is converted into 8-digit ASCII code, and it drives the printer through the parallel interface (IC3). As the clock signal for the baud rate, 800Hz and 727Hz are generated by dividing

12.8MHz by 10, and further dividing it by 1600 for 50 bauds, and by 1760 for 45.45 bauds. The parallel interface outputs data to the printer, selects the clock for baud rate, and selects the space filter with the suitable center frequency (selects the shift width).

1-3-3 CMH-532 RS-232C Interface Unit

The interface unit consists of the serial/parallel converter circuit, baud rate clock generator circuit, signal level converter circuit and ±12V DC/DC converter circuit.

The serial/parallel converter utilizes a special IC to convert the parallel data identified by the micro-computer in the control block and the serial data on the RS-232C transmission line. The baud rate clock generator circuit utilizes a 3.6864MHz crystal oscillator. It generates 19.2kHz for 1200 bauds and 14.8kHz for 300 bauds by dividing the frequency by 192 and 768, respectively. The signal level converter circuit converts the interface unit signal levels of +5V and 0V, and the RS-232C standard signal levels of ±12V. For connection, photo-couplers are used. The ±12V DC/DC converter circuit generates the power necessary for generation of the RS-232C signal level, using 10.8V. ±12V and common are supplied to an external device through the RS-232C connector.

2. INSPECTION AND ADJUSTMENT

This chapter describes procedures of inspection and adjustment to be practiced when NRD-525 fails to operate normally due to some cause.

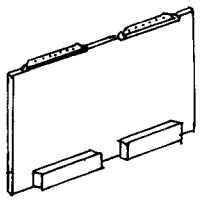
Inspection and adjustment of NRD-525 require advanced measuring techniques. If you are certain, necessary measuring instruments are unavailable or NRD-525 is operating normally, never touch the transformers, variable capacitors, and variable controls in each unit.

2-1 Preparations

2-1-1 Measuring Instruments

Get the following measuring instruments and tools:

(1) Extension board CMH-365: 1



(2) PCB pulling tool MTD000776: 2

(3) Measuring instrument

Get a necessary measuring instrument described in the applicable item of inspection or adjustment.

2-1-2 Removing cover

As shown in Fig. 2-1, remove the upper cover or lower cover by loosening four screws.
The speaker is mounted on the upper cover. Remove the upper cover slowly, taking care not to break the speaker cables. Remove the connector at the end of the cable from the internal unit if necessary.

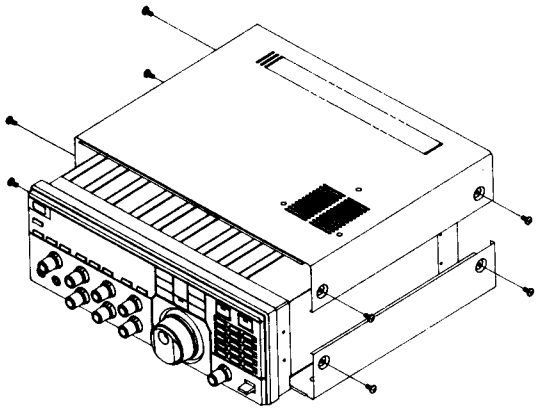


Fig.2-1 Removal of Cover

2-1-3 Removing internal units

(1) Each unit is located as shown in Fig. 2-3.

(1) From the parts mounted side, insert the removal levers supplied with each option into the holes at both corners of the PCB.

(2) Lower the removal lever carefully so as to lift up the PCB.

(3) When the PCB has been removed from the connector, lift it slowly to remove it.

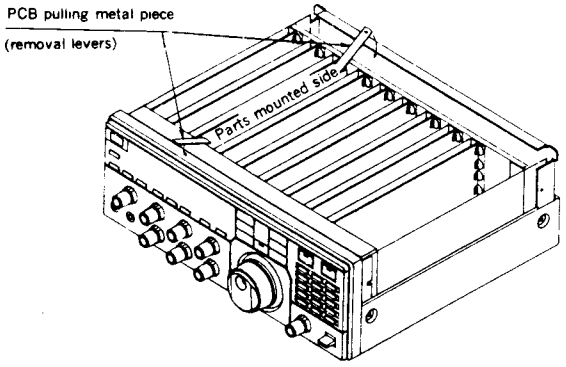


Fig. 2-2 Removal of Units

2-1-4 Use of Extension Board CMH-365

(1) According to 2-1-3, take out the unit to be inspected or adjusted.

(2) Insert the extension board CMH-365 in the place of the removed unit by pushing it along the rail.

(3) Insert the removed unit into the connector on top of the extension board.

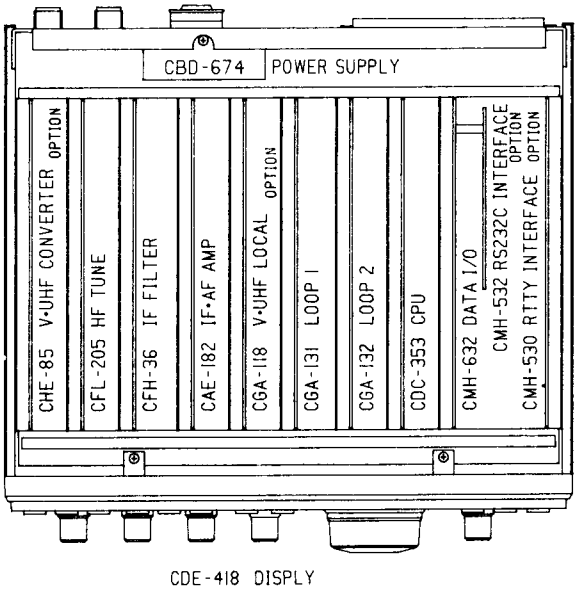


Fig. 2-3 Location of Units

2-1-5 Removing Front and Rear Panels

Remove the front or rear panel as shown in Fig. 2-4.

LOCATION	DESCRIPTION	PART NUMBER	Q'TY	REMARKS
1	Dial	MPHD01145	1	
2	Screw	BSHT03004S	(1)	3T3X4
3	Knob	MPHD01135	8	
4	Panel	MPBC06320	1	
5	Filter	MPOL00718	1	
6	JRC badge	MPNL09514	1	
7	Jack unit	CQB-40	1	(MDBW01356A)
8	Display unit	CDE-418	1	(MDLW02763)
9	Screw	BRTG02970	9	M3X8FE,ZMC
10	Motherboard	CFQ-1726	1	(MDYW01977)
11	Screw	BRTG01225	17	M3X6FE,ZMC
12	Leg	BRKU00159	4	NO.1052
13	Screw	BRTG03311	8	M3X8BS,BNM2
14	Cover,bottom	MTD003163A	1	
15	V/UHF Converter unit	CHE-85	1	(MDMW01176) CMK-165
16	HF Tune unit	CFL-205	1	(MDNW05193)
17	IF Filter unit	CFH-36	1	(MDNW05194)
18	IF-AF Amp unit	CAE-182	1	(MDHW00684)
19	V/UHF Local osc,unit	CGA-118	1	(MDEW00640) CMK-165
20	Loop 1 unit	CGA-131	1	(MDEW00621)
21	Loop 2 unit	CGA-132	1	(MDEW00620)
22	CPU unit	CDC-353	1	(MDLW02762)
23	Data I/O unit	CMH-632	1	(MDYW01983)
24	RS-232C Interface unit	CMH-532	1	(MDYW01976)
25	RTTY Interface unit	CMH-530	1	(MDYW01979)
26	Chassis assy	MPBC05480	1	
27	Screw	BRTG00970	20	M2.6X6FE,ZMC
28	Back board	MTD003164	1	
29	Cover	MTD004430	1	
30	Power unit	CBD-674	1	(MDBW01356A)
31	Hole plug	BRNG00179	3	DP-625
32	Screw	BRTG02145	3	M3X8BS,BLK
33	Cover,top	MTD003162A	1	
34	Rubber	MTT021775	1	
35	Speaker grill cloth	MTZ002537	1	
36	Mounting plate	MTB099587	3	
37	Label	MPNN16017B	1	

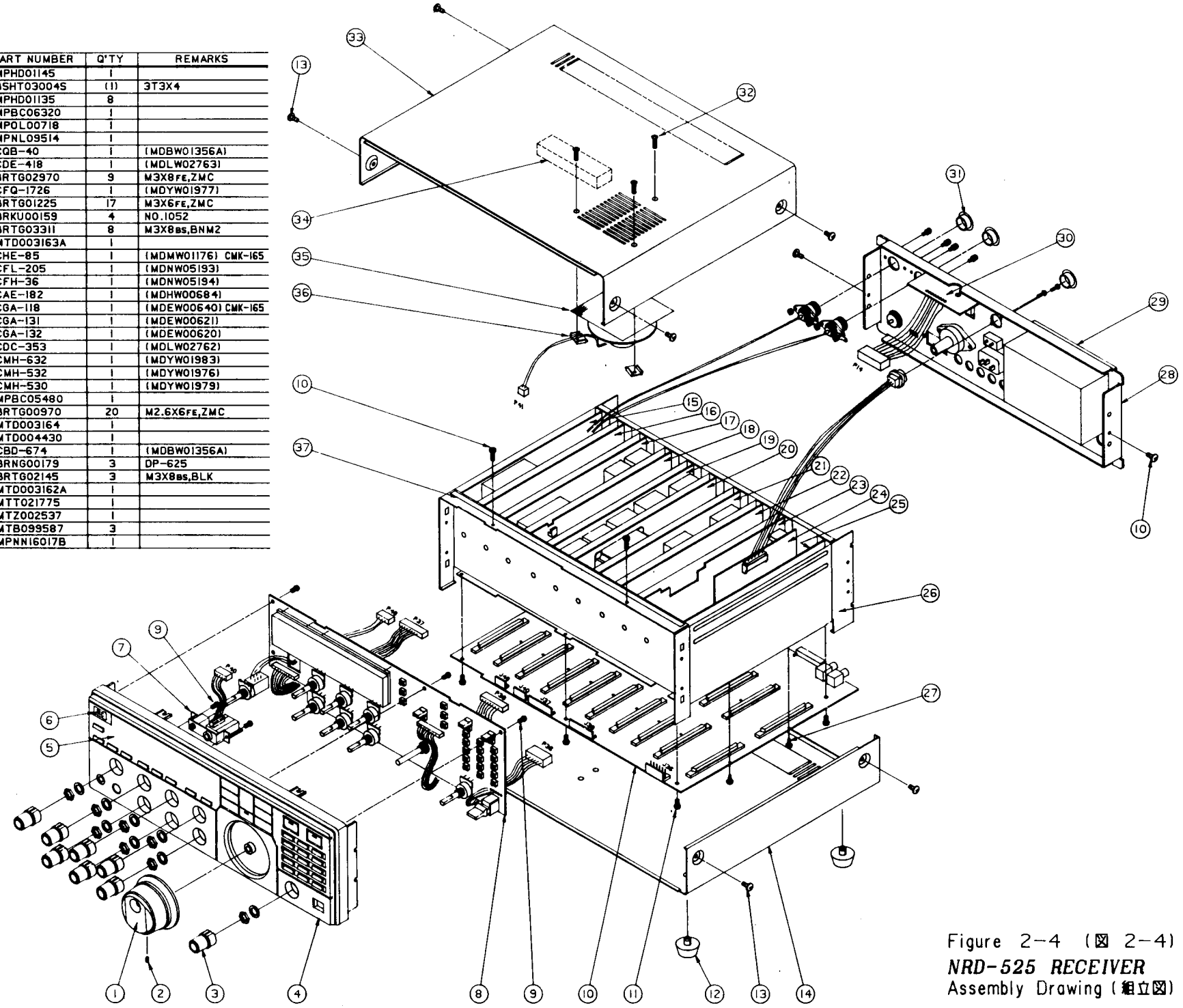
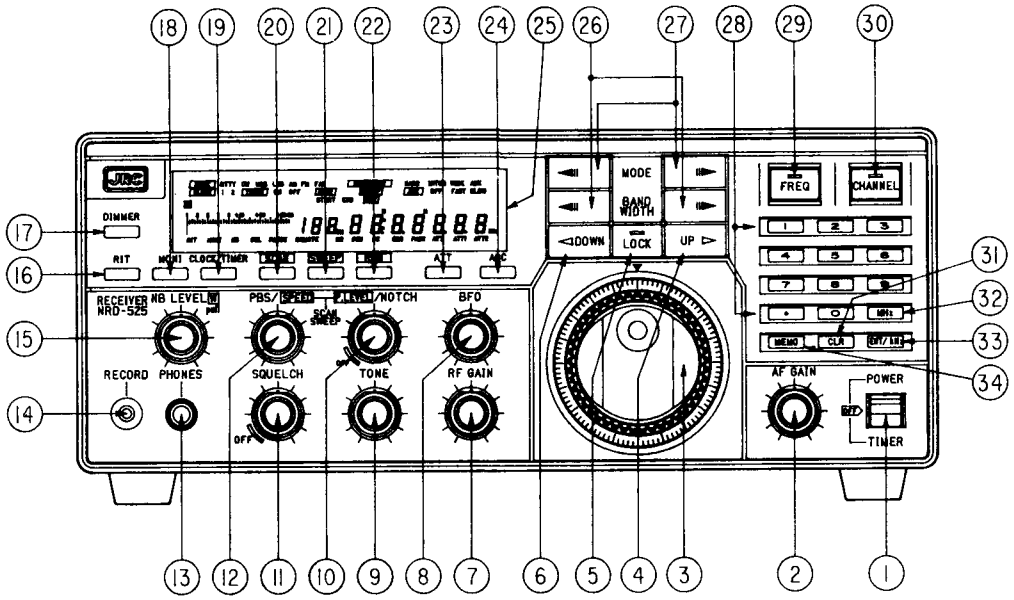


Figure 2-4 (図 2-4)
NRD-525 RECEIVER
Assembly Drawing (組立図)

2-1-6 Preliminary Setting

Switch on the power, and set the controls and switches as follows:



AF GAIN control (2) : Turn it fully counterclockwise.

RF GAIN control (7) : Turn it fully clockwise.

TONE control (9) : Center position

NOTCH control (10) : Turn it fully counterclockwise.

SQUELCH control (11) : Turn it fully counterclockwise.

PBS (pass band shift) control: Center position

NB LEVEL (noise blanker) control (15) :
Turn it fully counterclockwise.

RIT switch (16) : OFF

ATT (attenuator) switch (23) : OFF

LOCK switch (5) : OFF

2-2 Procedures of Inspection and Adjustment

(1) CBD-674 Power Supply Unit

a. Checking of supply voltages

Between T1 BLU and BLK on chassis : 13~15V AC

Between CBD-674 P14-1 and chassis(GND): 4.8~5.2V DC

Between CBD-674 P14-3 and chassis(GND): 8.7~9.4V DC

Between CBD-674 P14-5 and chassis(GND):

15-17V DC (when AC power is used)

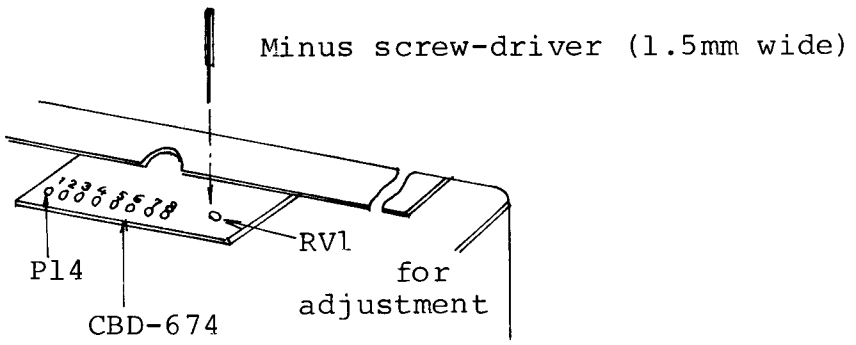
13-13.8V DC (when 13.8V DC is used)

Between CBD-674 P14-6 and chassis(GND): 10.7~10.9V DC

Measure voltages with a DC or AC voltmeter. If voltage is found to be abnormal, remove the power cable immediately, and check the power supply unit and adjacent parts.

b. Adjustment of 10.8V DC

If the voltage between P14-6 on CBD-674 and chassis is not within 10.7 and 10.9V DC, adjust RV1 on CBD-674.

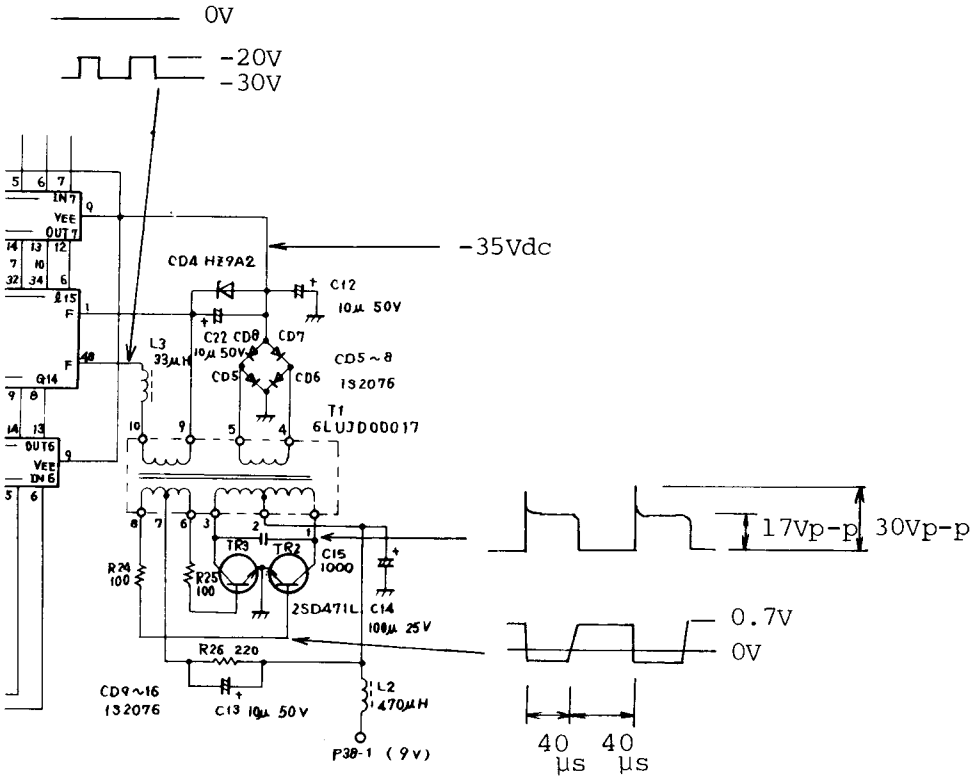


(2) CDE-418 Display Unit

a. Checking of vaccum fluorescent display drive DC-DC converter.

(1) Observe the waveform and level at each test point with a oscilloscope.

(2) Connect the grounding wire for the oscilloscope to the chassis (GND) of NRD-525.



(3) CMH-632 Data I/O Unit

a. Checking of 1st local section

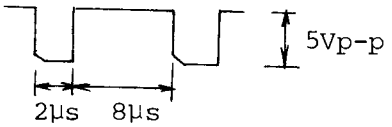
(1) Use the extension board CMH-365.

(2) Set the receiving frequency at 10MHz. Select the CW mode, and put the PBS control to the center position.

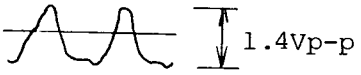
(3) Using the oscilloscope, check the waveform and level at each point:

Between (1) and chassis (GND):

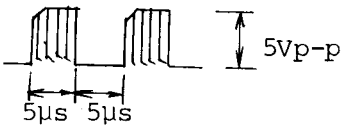
Between (2) and chassis (GND):



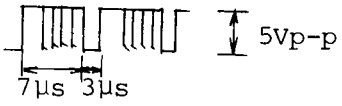
Between (6) and chassis (GND): (12.8MHz)



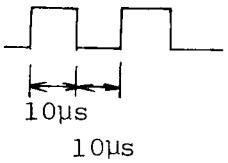
Between (7) and chassis (GND):



Between (8) and chassis (GND):



Between (9) and chassis (GND):



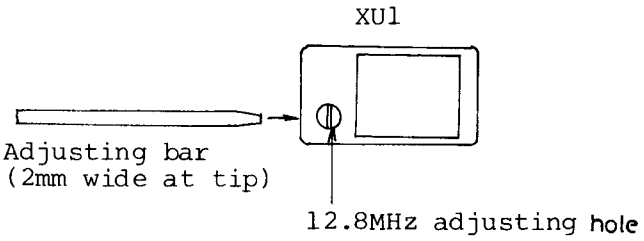
b. Calibration of standard Signal 12.8MHz

(1) Use the extension board CMH-365.

(2) Set the receiving frequency at 10MHz. Select the CW mode. Put the PBS control to the center position.

③ Connect the frequency counter between ② on the CFL-205 HF TUNE unit and chassis (GND).

④ Adjust XU1 on CMH-632 so that the frequency counter indicates 80.453MHz ± 20Hz.



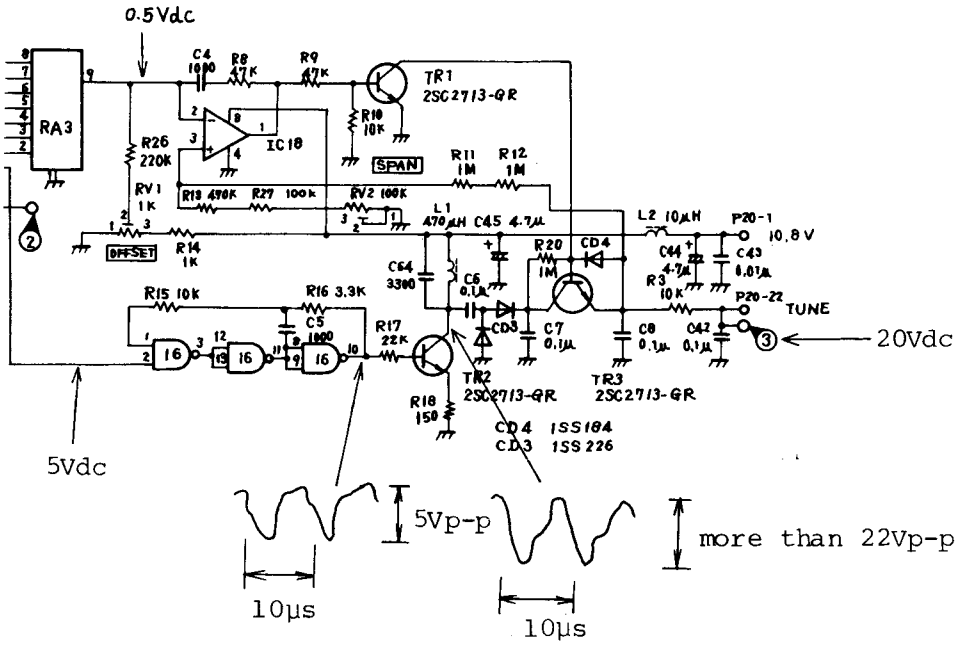
(4) CDC-353 CPU Unit

a. Checking of D/A converter for RF TUNE unit

① Use the extension board CMH-365.

② Set the receiving frequency at 799kHz, and put the PBS control to the center position.

③ Check the waveform and level at each part with oscilloscope. Connect the grounding wire of the oscilloscope to the chassis (GND) of NRD-525.



b. Adjustment of RF TUNE voltage

(1) Connect a DC voltmeter (with input of more than 1MΩ) between (3)▶ on CDC-353 and chassis (GND).

(2) Set the receiving frequency at 0.4MHz.

(3) Adjust RV1 on CDC-353 so that the voltage at (3)▶ on CDC-353 is 5.74 ± 0.1V DC.

(4) Set the receiving frequency at 0.799MHz.

(5) Adjust RV2 on CDC-353 so that voltage at (3)▶ on CDC-353 is 20 ± 0.1V DC.

(6) Repeat the steps (2) through (5) above so that these voltages are satisfactory.

c. Calibration of 32.768kHz for clock

(1) Connect the frequency counter between (1)▶ on CDC-353 and chassis (GND).

(2) Adjust CV1 on CDC-353 so that the frequency counter indicates 32.768kHz ± 0.01Hz.

d. Checking of center position of PBS and BFO controls

(1) Put the PBS control to the center position and see that [PBS] CD6 on CDC-353 is lit. Also, see that [PBS] CD6 goes out when the PBS control is put to other position.

(2) See that [BFO] CD7 on CDC-353 is lit when the BFO control is put to the center position and that it goes out when the BFO control is put to other position.

NOTE 1: When [PBS] CD6 on CDC-353 is lit, the shift width of PBS is neutral (0). When [BFO] CD7 is lit, the oscillation frequency of the BFO is the neutral value (455kHz) (In CW mode).

2: The neutral values of PBS and BFO are provided when the controls are within ±1/3 from the center position.

(5) CGA-132 LOOP2 Unit

a. Adjustment of 2nd local section

(1) Use the extension board CMH-365.

(2) Set the receiving frequency at 10.00005MHz and put the PBS control at the center position.

(3) Connect a radio frequency voltmeter between (1) on CGA-132 and chassis (GND).

(4) Connect (5) on CGA-132 to the chassis (GND) with a copper wire.

(5) Adjust T3 on CGA-132 so that the radio frequency voltmeter indicates a minimum value.

(6) Remove the copper wire from (5) on CGA-132. At this time, the lock indicator [LP2] CD2 goes out.

(7) Adjust T1 and T2 on CGA-132 so that the radio frequency voltmeter indicates a maximum value.

(8) Measure the following voltages with the radio frequency voltmeter:

Between (1) and chassis (GND): 0.15Vrms or more (Use R3 for adjustment.)

Between (3) and chassis (GND): 0.5~0.8Vrms

NOTE: For adjustment of T1, T2 and T3, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

b. Checking of control voltage

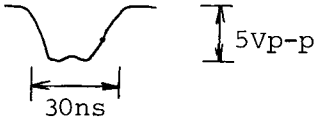
Check the control voltage with a DC voltmeter (with input of 1MΩ or more).

Between ⑤ and chassis (GND): 2 ~ 6V DC

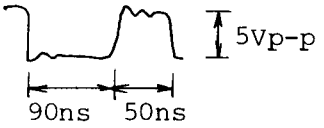
c. Checking of counter

① Check the waveform and level at each part with a oscilloscope.

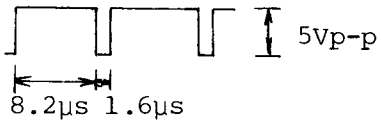
Between ④ and chassis (GND):



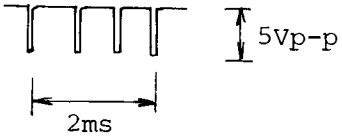
Between ⑥ and chassis (GND):



Between ⑦ and chassis (GND):



Between ⑧ and chassis (GND):



d. Adjustment of BFO

① Use the extension board CMH-365.

② Select the CW mode. Put the PBS and BFO controls to the center position.

③ Connect the radio frequency voltmeter between ⑩ on CGA-132 and chassis (GND).

④ Adjust T5 on CGA-132 so that the radio frequency voltmeter indicates a maximum value.
Between ⑩ and chassis (GND): 0.1 ~ 0.3Vrms

⑤ Connect the DC voltmeter (with input of 1MΩ or more) between ⑫ on CGA-132 and chassis (GND).

⑥ Adjust L5 on CGA-132 so that the DC voltmeter indicates 3 ± 0.2V DC.

⑦ Connect the radio frequency voltmeter between ⑪ on CGA-132 and chassis (GND).

⑧ Adjust T6 on CGA-132 so that the radio frequency voltmeter indicates a maximum value.
Between ⑪ and chassis (GND): 0.5 ~ 0.7Vrms

⑨ Check the level between ⑬ on CGA-132 and chassis (GND) with the radio frequency voltmeter.
Between ⑬ and chassis (GND): 0.2Vrms or more

⑩ Connect the radio frequency voltmeter between ⑭ on CGA-132 and chassis (GND).

⑪ Adjust T7 on CGA-132 so that the radio frequency voltmeter indicates a maximum value.
Between ⑭ and chassis (GND): 0.3 ~ 0.6Vrms

⑫ See that the lock indicator [BFO] CD5 goes out.

NOTE: For adjustment of L5, T5, and T6, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip).
If a metal rod is used, the core may be damaged.

e. Checking of BFO frequency

(1) Use the extension board CMH-365.

(2) Put the PBS control to the center position.

(3) Connect the frequency counter between (14) on CGA-132 and chassis (GND).

(4) Select the mode in the following manner, and check the BFO frequency in each mode.

Mode	BFO frequency	Remarks
CW	455kHz ± 10Hz	Put BFO control to center position
	more than 457kHz	Turn BFO control fully clockwise.
	below 453kHz	Turn BFO control fully counterclockwise.
USB	456.5 kHz ± 10Hz	
LSB	453.5 kHz ± 10Hz	
FAX	456.9 kHz ± 10Hz	
RTTY	457.21kHz ± 10Hz	CMH-530 is not mounted, or the shift width of ±85Hz is selected with CMH-530 mounted.
	457.1 kHz ± 10Hz	CMH-530 is mounted and shift width of ±200Hz is selected.
	456.87kHz ± 10Hz	CMH-530 is mounted and shift width of ±425Hz is selected.

(6) CGA-131 LOOP 1 Unit

a. Adjustment of 8V

(1) Connect the DC voltmeter between (4) on CGA-131 and chassis (GND).

(2) Adjust RV2 on CGA-131 so that the voltage between (4) and chassis (GND) is 8 ± 0.1V DC.

b. Adjustment of VCO at 1st local section

(1) Use the extension board CMH-365.

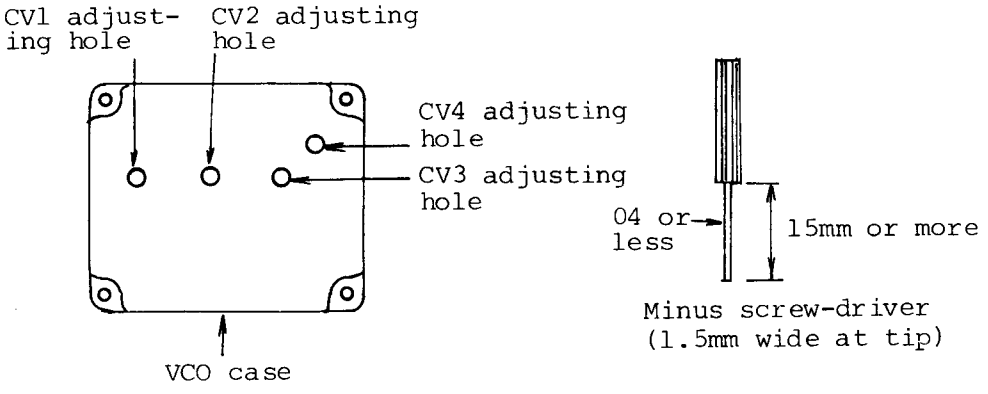
(2) Select the AM mode and put the PBS control to the center position.

(3) Connect the radio frequency voltmeter between (2) on CGA-131 and chassis (GND) and between (3) on CGA-131 and chassis (GND).

(4) Connect the DC voltmeter (with input of 1MΩ or more) between (9) on CGA-131 and chassis (GND).

(5) Adjust the following trimmer so that the voltage between (9) on CGA-131 and chassis (GND) is set within 7 ± 0.1V DC at the following receiving frequency. Also, check the output voltage at (2) and (3) on CGA-131, and lock indicator [UNLOCK] CD16 on CGA-131.

Receiving frequency	Trimmer for adjustment	Voltage at (2)	Voltage at (3)	On/Off of [UNLOCK] CD16
7.28699MHz	CV1	0.2∿0.4Vrms	0.08∿0.2Vrms	Off
15.33299MHz	CV2	"	"	"
24.20699MHz	CV3	"	"	"
33.999 MHz	CV4	"	"	"



c. Adjustment of fluctuation

(1) Set the receiving frequency at 10MHz, and put the PBS control to the center position.

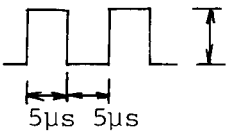
(2) Connect the oscilloscope between (8) on CCA-131 and chassis (GND).

(3) While observing the waveform, adjust RV1 on CGA-131 so that fluctuation is minimized.

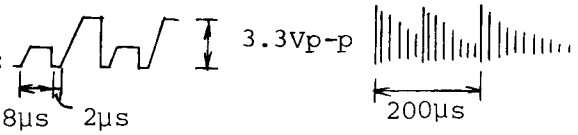
d. Checking of phase comparator

(1) Check the following waveforms and levels with the oscilloscope:

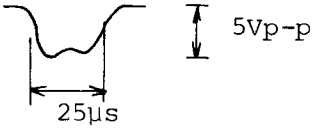
Between (6) and chassis (GND):



Between (7) and chassis (GND):



Between (8) and chassis (GND):



(7) CAE-182 IF AF AMP Unit

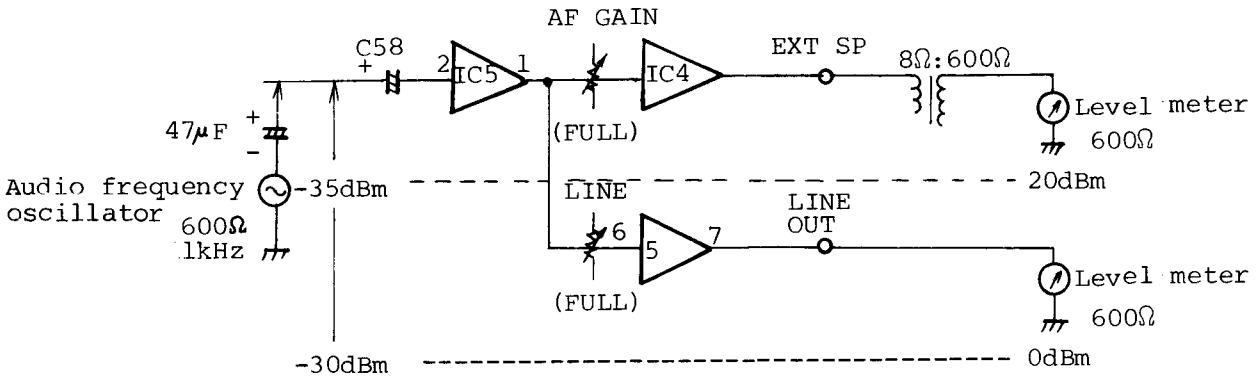
a. Checking of AF AMP

(1) Use the extension board CMH-365.

(2) Turn the RF GAIN control fully counterclockwise, and turn the AF GAIN control fully clockwise. Put the TONE control to the center position, and turn the LINE VR (chassis block RV3) fully clockwise.

(3) Connect the audio frequency oscillator, audio frequency transformer (8:600Ω), and level meter in the following manner.

(4) Check the output level of the audio frequency oscillator so that the EXT SP output is 20dBm and that the LINE output is 0dBm.

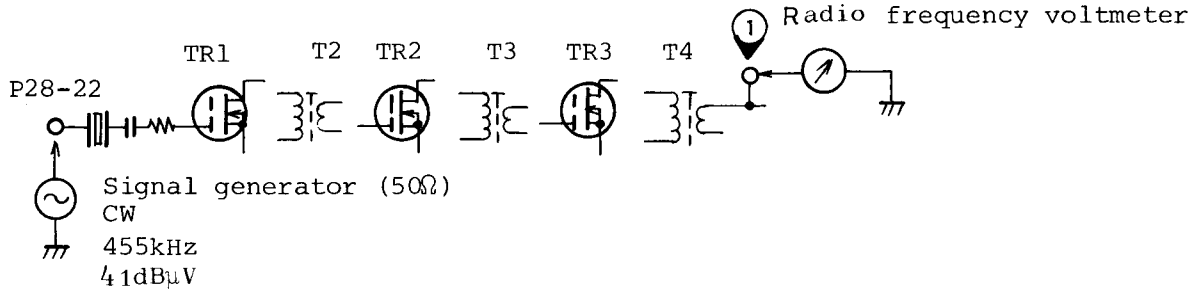


b. Adjustment of IF AMP

(1) Use the extension board CMH-365.

(2) Turn the RF GAIN control fully clockwise, put the AGC and NOTCH control to the OFF position.

(3) Connect the signal generator (50Ω) and radio frequency voltmeter as shown below:



(4) Adjust T2, T3 and T4 on CAE-182 so that the radio frequency voltmeter indicates a maximum value.

(5) At this time the output voltage at (1) on CAE-182 should be 0.1~0.2Vrms.

c. Adjustment of IF AMP for FM

(1) Use the extension board CMH-365.

(2) Turn the RF GAIN control fully clockwise. Put the AGC and NOTCH controls to the OFF position. Select the FM mode.

(3) Connect the internal or external loud speaker.

(4) Connect the signal generator between P28-22 on CAE-182 and chassis (GND).

⑤ Set the signal generator as follows:

Frequency: 455kHz, Output level: 41dBμV,

FM modulation: 1000Hz 30%

⑥ Adjust T1 on CAE-182 so that the speaker output indicates maximum.

d. Checking of Detector Circuit

① Use the extension board CMH-365.

② Set the receiving frequency at 7.104MHz. Turn the RF GAIN control fully clockwise. Put the AGC control to the FAST position, and put the NOTCH control to the OFF position. Put the PBS control to the center position.

③ Connect the signal generator (50Ω) to MF/HF ANT on the rear panel of NRD-525.

④ Set the signal generator (50Ω) as follows:

Frequency: 7,104MHz, Output level: 40dBμV, CW

⑤ Connect the radio frequency voltmeter between ② on CAE-182 and chassis (GND).

⑥ Check the output level at ② on CAE-182 when the DSB or USB mode is selected.

MODE: DSB - 0.2 ∿ 0.3 Vrms

MODE: USB - 0.04 ∿ 0.06 Vrms

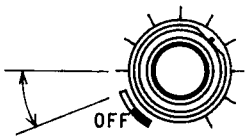
e. Checking of All Mode Squelch

① Use the extension board CMH-365.

② Disconnect the antenna terminal cable.

③ Select the USB mode. Put the AGC control to the FAST position, and turn the SQUELCH control fully counterclockwise.

④ Adjust the SQUELCH control to see the position where squelch is turned on and off.



Position where squelch is turned on and off.

Resistor for adjustment : R9

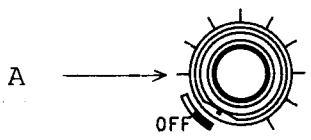
f. Adjustment of FM Squelch

① Use the extension board CMH-365.

② Disconnect the antenna terminal.

③ Select the FM mode. Turn the SQUELCH control fully counterclockwise. Also, turn the RF GAIN control fully counterclockwise.

④ Gradually turn the SQUELCH control clockwise, and adjust [FM SQ] RV1 on CAE-182 so that the squelch is turned on when the point A is reached. (SQL indicator is lit and AF output is turned off.)



g. Adjustment of AGC

(1) Set the receiving frequency at 7.104MHz. Turn the RF GAIN control fully clockwise. Put the AGC control to the FAST position. Put the NOTCH control to the OFF position. Put the PBS control at the center position. Select the DSB mode.

(2) Connect the signal generator (50Ω) to MF/HF ANT on the rear of NRD-525.

(3) Set the signal generator as follows:
Frequency: 7,104MHz, Output level: 100dBμV, CW

(4) Connect the radio frequency voltmeter between (1)▶ on CAE-182 and chassis (GND).

(5) Adjust [AGC] RV5 on CAE-182 so that the radio frequency voltmeter indicates 0.085 ± 0.005Vrms.

(6) Select the USB mode, and check the output voltage at (1)▶ on CAE-182.
Between (1)▶ and chassis (GND): 0.08 ∿ 0.09Vrms
(For adjustment, use resistor R93 on CAE-182.)

(7) Change the output level of the signal generator in the range of 10 ∿ 100dBμV.
At this time check the change of the output voltage level at (1)▶ on CAE-182.
Change of level at (1)▶ : 0.07 ∿ 0.1Vrms

h. Adjustment of S Meter

(1) Set the receiving frequency at 7.104MHz. Turn the RF GAIN control fully clockwise. Put the AGC control to the FAST position. Put the NOTCH control

to the OFF position. Put the PBS control to the center position. Select the DSB mode.

(2) Connect the signal generator (50Ω) to MF/HF ANT on the rear of NRD-525.

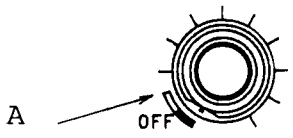
(3) Set the signal generator as follows:
Frequency: 7.104MHz, Output level: 40dBμV, CW

(4) Adjust [S] RV6 on CAE-182 so that the S-meter indicates S9 ± 1 divisions.

i. Adjustment of on-off of notch filter

(1) Use the extension board CMH-365.

(2) Slowly turn the NOTCH control clockwise, and adjust [NOTCH] RV4 on CAE-182 so that the notch filter is turned on when the point A is just reached. When the notch filter is turned on the LED for CD15 on CAE-182 is illuminated.



j. Adjustment of Notch Filter

(1) Use the extension board CMH-365.

(2) Set the receiving frequency at 455kHz. Select the DSB mode. Put the PBS control to the center position. Put the BANDWIDTH to the WIDE position. Set the RF GAIN control so that the output waveform is not saturated.

③ Connect the output (50Ω, center frequency of 455kHz) of the tracking scope to MF/HF ANT on the rear panel of NRD-525.

④ Connect the input of the tracking scope between ① on CAE-182 and chassis (GND).

⑤ Adjust the input and output attenuator for the tracking scope so that the waveform of ① on CAE-182 is not distorted.

⑥ Put the NOTCH control to the center position. While observing the waveform on the tracking scope, adjust RV2 on CAE-182 so that the dip point is set at 455kHz.

⑦ While observing the waveform on the tracking scope, turn the NOTCH control clockwise so that the dip point is set to 456kHz. Adjust [DIPL] RV3 on CAE-182 so that the dip point indicates maximum at this time.

⑧ While observing the waveform on the tracking scope, turn the NOTCH control counterclockwise so that the dip is set at 454kHz. Adjust [DIPH] RV7 on CAE-182 so that the dip indicates maximum at this time.

⑨ Repeat the steps ⑥, ⑦ and ⑧ so that attenuation at 454kHz and 456kHz dip point is more than 30dB.

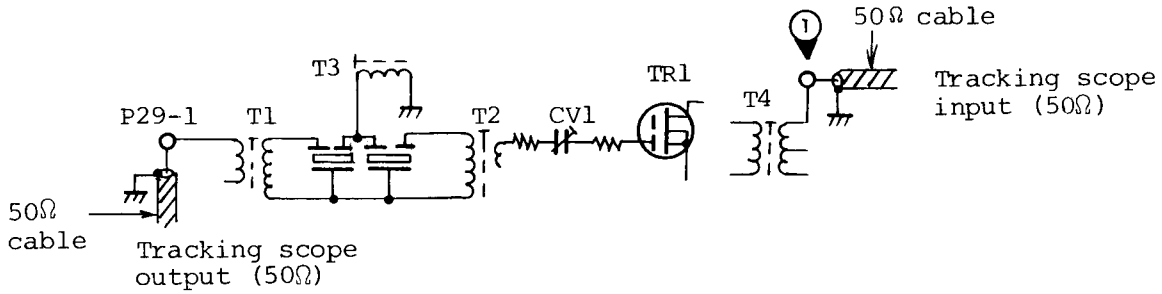
(8) CFH-36 IF Filter Unit

a. Adjustment of lst IF filter (70.455MHz BPF)

(1) Use the extension board CMH-365.

(2) Remove the CFL-205 RF unit. Turn the RF GAIN control fully counterclockwise.

(3) Connect the tracking scope in the following manner:

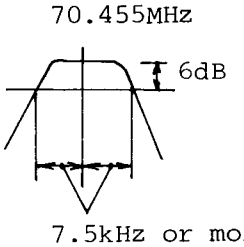


(4) Adjust ATT for the tracking scope so that the output waveform at (1) on CFH-36 is not saturated.

(5) Adjust CV1 and T4 on CFH-36 so that the 70.455MHz point indicates maximum.

(6) Adjust T1, T2 and T3 on CFH-36 so that the 6dB bandwidth is set ±7.5kHz or more.
Using T1 and T2, make the band flat (less than 2dB).
Using T3, adjust the bandwidth (70.455MHz ± 7.5kHz or more).

(7) Repeat the steps (5) and (6) until the required performance is obtained.



NOTE: For adjustment of T1, T2 and T3, use Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

b. Checking of 2nd IF Filter (455kHz)

(1) Use the extension board CMH-365.

(2) Put the AGC control to the OFF position. Select the AM mode. Put the BANDWIDTH to the WIDE position. Turn the RF GAIN control fully clockwise. Put the NOTCH control to the OFF position.

(3) Connect the output of the tracking scope between RV2 (1)▶ on CFH-36 and chassis (GND). Connect the input of the tracking scope between (1)▶ on CAE-182 and chassis (GND).

(4) Adjust the RF GAIN control and ATT for the tracking sope so that the output waveform at (1)▶ on CAE-182 is not saturated.

(5) Adjust T7 on CFH-36 so that the in-band ripple of the filter is minimized.

(6) Change the position of the BANDWIDTH, and check the performance of each filter.

BANDWIDTH	Option	6dB bandwidth	60dB bandwidth
AUX	-	12kHz or more	-
WIDE	-	4kHz or more	10kHz or less
INTER	-	2kHz or more	6kHz or less
NARR	CFL-231 mounted	240Hz or more	560Hz or less
	CFL-232 mounted	0.5 ~ 0.8kHz	1.6kHz or less
	CFL-233 mounted	1 ~ 1.5kHz	3kHz or less
	CFL-218A mounted	1.7 ~ 1.9kHz	4.2kHz or less

NOTE: When the optional filter is not mounted in the NARR position, NARR cannot be selected with the BANDWIDTH switch.

c. Injection Level of 2nd Mixer

(1) Use the extension board CMH-365.

(2) Connect the radio frequency voltmeter between (2) on CFH-36 and chassis (GND).

(3) Adjust T8 on CFH-36 and T1 on CGA-132 so that the radio frequency voltmeter indicates a maximum value.

Injection level : 0.7Vrms or more

Resistor for adjustment : R3 on CGA-132.

d. Adjustment of IF Transformer

(1) Use the extension board CMH-365.

(2) Put the AGC control to the OFF position. Select the AM level. Put the BANDWIDTH to the WIDE position. Turn the RF GAIN control fully clockwise. Put the NOTCH control to the OFF position.

③ Connect the signal generator (with frequency of 70.453MHz and output level of 25dBμV, CW, 50Ω) P29-1 on CFH-36 and chassis (GND).

④ Connect the radio frequency voltmeter between ① on CAE-182 and chassis (GND).

⑤ Adjust T4, T5, and T6 on CFH-36 so that the radio frequency voltmeter indicates a maximum value.

⑥ At this time, the output voltage at ① on CAE-182 should be 0.1 ∿ 0.2Vrms.

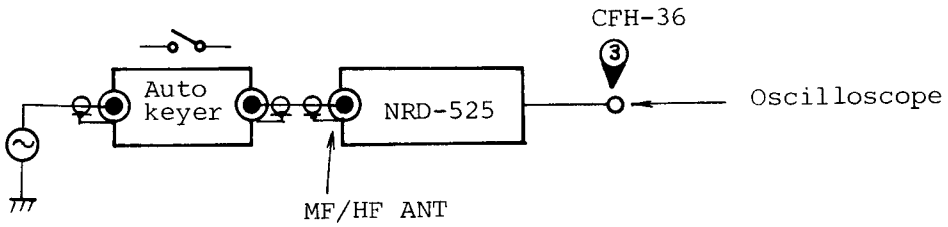
NOTE: For adjustment with T4, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

e. Adjustment of Noise Blanker

① Use the extension board CMH-365.

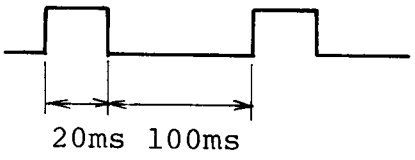
② Set the receiving frequency at 7.104MHz. Select the DSB mode. Put the AGC control to the FAST position. Put the BANDWIDTH switch to the WIDE position. Turn the NB LEVEL control fully clockwise.

③ Connect the signal generator, auto keyer and oscilloscope as follows:



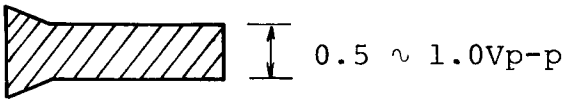
Signal generator(50Ω)
Frequency : 7.104MHz, CW
Output level: 10dBμV

Auto keyer: Capable of turning on radio frequency signal frequency for 20ms and turning it off for 100ms



(4) Adjust T9, T10 and T11 on CFH-36 so that the level of the output waveform at (3) on CFH-36 indicates maximum. If the output at (3) is saturated and it is difficult to get the maximum value, turn the NB LEVEL control counterclockwise.

(5) Change the level of the signal generator in the range of 10 ∿ 100dBμV, check the output waveform at (3) on CFH-36.



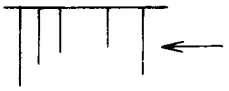
(6) Set the signal generator at the output level of 105dBμV and AM modulation (400Hz, 80%).

(7) Connect the output from the signal generator to MF/HF ANT on NRD-525 without use of the auto keyer.

(8) Connect the oscilloscope to (4) on CFH-36 and chassis (GND).

(9) Turn [NB] (RV1) on CFH-36 fully clockwise, and turn the NB LEVEL control fully clockwise.

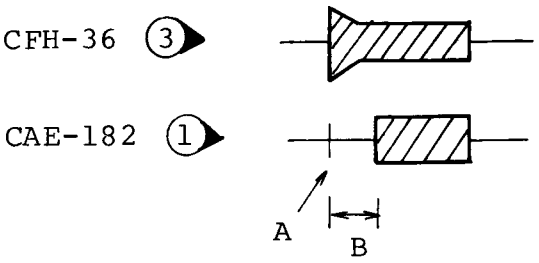
⑩ While observing the waveform on the oscilloscope, turn [NB] (RV1) on CFH-36 counterclockwise until the fall pulse disappears. If no fall pulse appears from the beginning, leave [NB] (RV1) on CFH-36 turned fully clockwise.

Waveform of ④ on CFH-36  on CFH-36 Fall pulse

⑪ Connect the signal generator and auto keyer as described in the step ③ above.

⑫ Connect Channel No.1 of the oscilloscope (two-channel Type) between ③ on CFH-36 and chassis (GND). Connect Channel No.2 between ① on CAE-182 and chassis (GND).

⑬ While observing the waveform at ① on CAE-182. Adjust RV2 on CFH-36 so that the level at A is set to minimum.



⑭ Put the NB LEVEL control to the Pull [W] position, and see that the distance B for ① on CAE-182 becomes larger.

(9) CFL-205 HF TUNE Unit

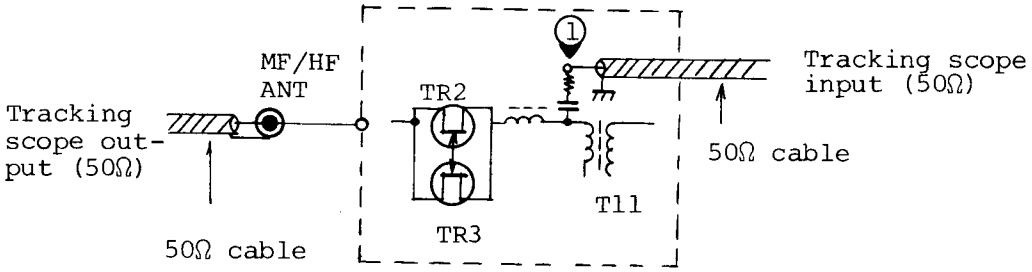
a. Adjustment of HF TUNE

(1) Use the extension board CMH-365.

(2) Put ATT to OFF and put PASS to OFF.

(3) Check RF TUNE voltage as described in (4)-b.

(4) Connect the tracking scope as shown below:



(5) Change the receiving frequency as shown in the table below, and adjust transformers or trimmer capacitors so that deviation in tuning is less than 3dB in each receiving frequency.

BAND		Receiving frequency	Tuning frequency	Transformer, trimmer capacitor
BAND2	SUB	0.8MHz	0.8MHz	T9, 10
		1.599MHz	1.599MHz	Checking only
	MAIN	0.799MHz	0.799MHz	CV5, 6
		0.4MHz	0.4MHz	Checking only
BAND3	SUB	2.65MHz	2.65MHz	T7, 8
		4.399MHz	4.399MHz	Checking only
	MAIN	2.649MHz	2.649MHz	CV3, 4
		1.6MHz	1.6MHz	Checking only

BAND		Receiving frequency	Tuning frequency	Transformer, trimmer capacitor
BAND4	SUB	7.4MHz 12.299MHz	7.4MHz 12.299MHz	T5, 6 Checking only
	MAIN	7.399MHz 4.4MHz	7.399MHz 4.4MHz	CV1, 2 Checking only
BAND5		20.499MHz 12.3MHz	20.499MHz 12.3MHz	T3, 4 Checking only
BAND6		33.999MHz 20.5MHz	33.999MHz 20.5MHz	T1, 2 Checking only

NOTE: For adjustment with T1, T2, T3 and T4, use a Bakelite or Teflon ⊖ adjusting rod (1 mm wide at tip). If a metal rod is used, the core may be damaged.

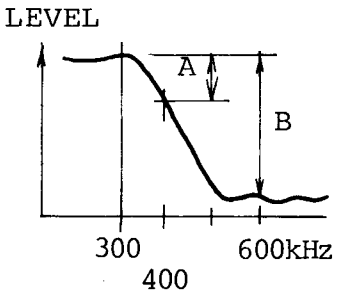
b. Checking of Band 1 400kHz LPF

(1) Use the extension board CMH-365.

(2) Put ATT to OFF, and put PASS to OFF.

(3) Connect the tracking scope as described in (9)-a.

(4) Check the characteristic of the 400kHz LPF.



A = 3dB or less

B = 30dB or more

c. Checking of PASS (by-pass for input tuning circuit)

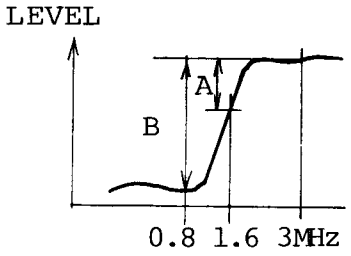
(1) Use the extension board CMH-365

(2) Put ATT to OFF.

③ While depressing the [MEMO] key, press the numerical key [4] to select PASS.

When PASS is selected, only 1600kHz HPF works, and the HF band input tuning circuit is by-passed.

④ Check the characteristic of the 1600kHz HPF.



A = 10dB or less

B = 30dB or more

d. Injection level of 1st mixer

① Use the extension board CMH-365.

② Connect the radio frequency voltmeter between ② on CFL-205 and chassis (GND).

③ Change the receiving frequency as shown in the table below, and check the output level at ② on CFL-205.

Receiving frequency	Output level at ② on CFL-205
7.28MHz	0.5Vrms or more
15.33MHz	"
24.2MHz	"
33.99MHz	"

Resistor for adjustment: R49

e. Adjustment of 1st IF transformer

① Use the extension board CMH-365.

(2) Put the AGC control to the OFF position. Select the AM mode. Put the BANDWIDTH switch to the WIDE position. Turn the RF GAIN control fully clockwise. Put the NOTCH control to OFF. Set the receiving frequency at 7.104MHz.

(3) Connect the signal generator (with the frequency of 7.104MHz and output level of 10dBμV, CW, 50Ω) to MF/HF ANT on the rear panel of NRD-525.

(4) Connect the radio frequency voltmeter between (1)▶ on CAE-182 and chassis (GND).

(5) Adjust T12 on CFL-205 so that the radio frequency voltmeter indicates a maximum value.

(6) At this time, the output voltage at (1)▶ on CAE-182 should be 0.1 ∿ 0.2Vrms.

f. Adjustment of 1st mixer balance

(1) Set the receiving frequency at 100kHz and select the CW mode.

(2) Connect the internal or external speaker.

(3) Then, the internal spurious beat is appeared to output. Adjust [BAL] (RV1) on CFL-205 so that the beat output should be minimized.

2-3 Procedures of Inspection and Adjustment of Optional Units

(1) CGA-118 VHF/UHF LOCAL unit

If this unit is to be adjusted, insert the CHE-85 VHF/UHF RF unit into NRD-525. If both CGA-118 and CHE-85 units are not mounted on NRD-525, the receiving frequency cannot be set at a frequency higher than 34MHz.

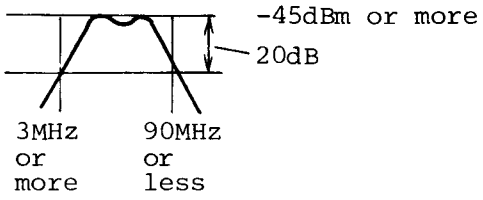
a. Adjustment of BPF

① Use the extension board CMH-365.

② Connect ① on CGA-118 to the chassis (GND) with a copper wire.

③ Connect the output (50Ω, -40dBm) from the tracking scope between ⑧ on CGA-118 and chassis (GND), and connect input (50Ω) to the tracking scope between ④ on CGA-118 and chassis (GND).

Set the receiving frequency at 34MHz, and check the characteristic of BPF.



④ Change the receiving frequency as shown in the table below, and adjust each BPF.

Receivin frequency	Adjusting coils	at	fo	fL	fu
114MHz	L22, 23, 24	-40dB or more	115MHz	80MHz or more	160MHz or less
141MHz	L19, 20, 21	-40dB or more	150MHz	100MHz or more	225MHz or less
424MHz	L16, 17, 18	-35dB or more	425MHz	325MHz or more	550MHz or less

When fo=425MHz, connect the input to the tracking scope between ⑨ on CGA-118 and chassis (GND).

NOTE: For adjustment with L16 through L24, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

b. Checking of mixer input level

① Use the extension board CMH-365.

② Connect the radio frequency voltmeter between ⑦ on CGA-118 and chassis (GND).

③ Change the receiving frequency as shown below, and check the output level at ⑦ on CGA-118.

Receiving frequency	Output level at ⑦ on CGA-118
141MHz	0.15Vrms or more
173.99MHz	"

c. Adjustment of VCO

① Use the extension board CMH-365.

② Connect the DC voltmeter (input of 1MΩ or more) between ① on CGA-118 and chassis (GND).

③ Connect the radio frequency voltmeter between ②▶ on CGA-118 and chassis (GND).

④ Adjust coils on VCO or trimmer capacitors so that the voltage at ①▶ on CGA-118 indicates 9V or 8V at each receiving frequency. Also, adjust the output level at ②▶ on CGA-118.

Receiving frequency	Adjusting coil, trimmer capacitor	Voltage at ①▶ on CGA-118	Output level at ②▶ on CGA-118
59.9999MHz	L1	9 ± 0.1Vdc	0.05Vrms or more
140.9999MHz	L4	"	"
173.9999MHz	L7	8 ± 0.1Vdc	"
456.3999MHz	CV1	"	0.03Vrms or more

NOTE: For adjustment with L1, L4 and L7, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

(2) CHE-85 VHF/UHF RF unit

Insert CGA-118 into NRD-525 beforehand.

a. Adjustment of VHF TUNE

① Use the extension board CMH-365.

② Connect the output (50Ω) from the tracking scope to VHF ANT on the rear of NRD-525. Connect the input (50Ω) to the tracking scope between ③▶ on CHE-85 and chassis (GND).

③ Change the receiving frequency as shown below, and

adjust transformers or trimmer capacitors so that deviation of tuning at each frequency is less than 3dB.

BAND	Receiving frequency	Tuning frequency	Transformer, trimmer capacitor
BAND 1	34.0000MHz	34.0000MHz	T9, 10
	40.9999MHz	40.9999MHz	CV5, 10
BAND 2	41.0000MHz	41.0000MHz	T7, 8
	48.9999MHz	48.9999MHz	CV4, 9
BAND 3	49.0000MHz	49.0000MHz	T5, 6
	59.9999MHz	59.9999MHz	CV3, 8
BAND 4	114.0000MHz	114.0000MHz	T3, 4
	140.9999MHz	140.9999MHz	CV2, 7
BAND 5	141.0000MHz	141.0000MHz	T1, 2
	173.9999MHz	173.9999MHz	CV1, 6

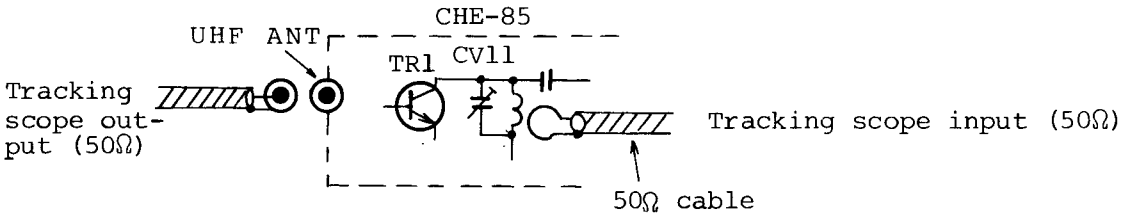
NOTE 1: Do tracking at the highest and lowest frequencies in each band. If clear double hump response cannot be maintained at 173.9999MHz, make adjustment with the receiving frequency and tuning frequency set at 160MHz.

NOTE 2: For adjusting with T1 through T10, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used, the core may be damaged.

b. Adjustment of UHF TUNE

① Use the extension board CHM-365.

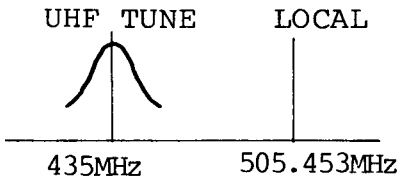
② Connect the tracking scope as shown below:



Fix a one-turn coil (with a diameter of about 5mm) to the end of the 50Ω cable, and bring it near L4 on CHE-85.

③ Set the receiving frequency at 435MHz.

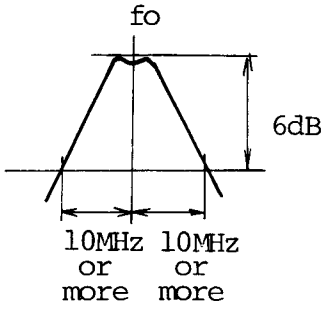
④ Adjust CV2 so that the local level (505.453MHz) on the tracking scope indicates a maximum value.



⑤ Adjust CV1 so that the level on the 435MHz point indicates a maximum value.

⑥ Adjust FL1 so that fO is set at 453MHz and 6dB bandwidth is ±10MHz or more.

⑦ Repeat the steps ⑤ and ⑥ to get the required characteristic.



c. Adjustment of 1st IF transformer and S meter

(1) Use the extension board CMH-365.

(2) Set the signal generator (50Ω) at the frequency of 144.1MHz and output level of 20dBμV, CW.

(3) Set the receiving frequency at 144.1MHz. Select the USB mode. Put the BANDWIDTH switch to the WIDE position.

(4) Connect the signal generator to VHF ANT on the rear panel of NRD-525.

(5) Adjust T15 on CHE-85 so that the AF output level indicates a maximum value.

(6) Adjust RV2 on CHE-85 so that the S meter indicates S9. If the S meter does not reach S9, adjust RV2 on CHE-85 so that the S meter indicates a maximum value.

(7) Set the frequency of the signal generator at 435.1MHz, and connect it to UHF ANT on the rear of NRD-525.

(8) Set the receiving frequency at 435.1MHz.

(9) Adjust T11 on CHE-85 so that the AF output level indicates a maximum value.

(10) Adjust RV1 on CHE-85 so that the S meter indicates S9. If the S meter does not reach S9, adjust RV1 on CHE-85 so that the S meter indicates a maximum value.

NOTE 1: For adjustment with T11 and T15, use a Bakelite or Teflon ⊖ adjusting rod (1mm wide at tip). If a metal rod is used,

the core may be damaged.

NOTE 2: In the steps ⑤ and ⑨, the output level of the signal generator should be set at -10dBμV.

(3) CMH-530 RTTY Unit

a. Operating Procedures

① Selection of speed

Each time the numerical key "5" is pressed with the MEMO key depressed, the speed of 45.45 or 50 Bauds is alternately selected. At this time, the selected speed is indicated in the position (B) on the vacuum fluorescent display of the NRD-525.

② Selection of shift width

Each time the numerical key "6" is pressed with the MEMO key depressed, the shift width of 170Hz (±85Hz), 400Hz (±200Hz) or 850Hz (±425Hz) is alternately selected. At this time, the selected shift width is indicated in the position (C) on the vacuum fluorescent display of the NRD-525.

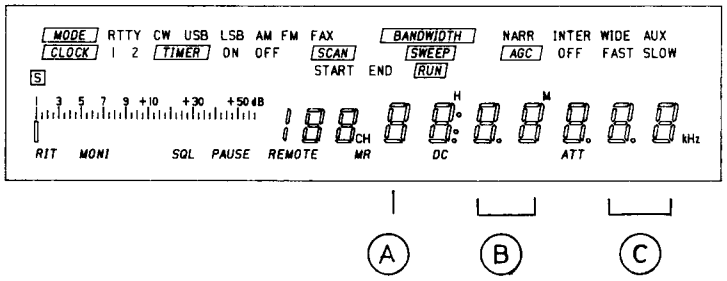
③ Selection of polarity

Each time the numerical key "7" is pressed with the MEMO key depressed, the normal or reverse polarity is selected alternately. At this time, the selected polarity is indicated in the position (A) on the vacuum fluorescent display of the NRD-525.

4 Fine tuning

In the RTTY mode, the BFO control works as the fine tuning control. Turning this control changes the center frequency of the space filter on the RTTY demodulator unit.

Ordinarily, set the control at the central position.



(A) Indication of polarity

0: Reverse

1: Normal

(B) Indication of baud rate

45: 45.45 bauds

50: 50 bauds

(C) Indication of shift width

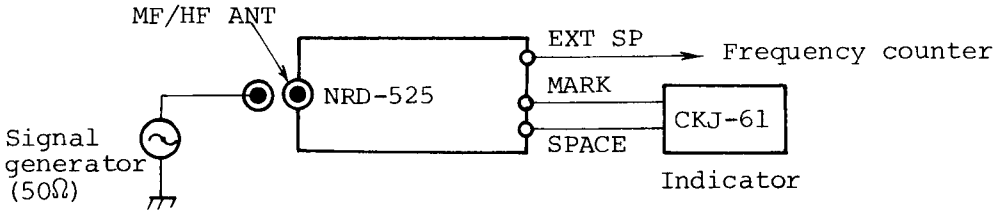
17: 170Hz (± 85Hz)

40: 400Hz (± 200Hz)

85: 850Hz (± 425Hz)

b. Adjustment of filter

(1) Connect the signal generator, frequency counter, and CKJ-61 indicator as shown below:



Receiving frequency: 7.104MHz
MODE: RTTY
BANDWIDTH: WIDE
AGC : FAST

(2) Use the extension board CMH-365.
Turn RV2 and RV3 on CMH-530 fully clockwise.

(3) Connect CH-1 of the oscilloscope (2-channel Type) between (4) on CMH-530 and chassis (GND). Connect CH-2 between (5) on CMH-530 and chassis (GND).

(4) Perform fine adjustment of the frequency of the signal generator or the receiving frequency so that the EXT SP output frequency is set at 2295Hz.

(5) Adjust RV4 so that the output level at (4) on CMH-530 indicates a maximum value. At this time, the output level is saturated. Turn RV1 on CMH-530 clockwise until the output level ceases to be saturated. Then, the MARK LED is illuminated.

(6) Set the shift width at 170Hz (±85Hz).

(7) Perform fine adjustment of the frequency of the signal generator or the receiving frequency so that EXT SP output is set at 2125Hz.

⑧ Adjust RV5 on CMH-530 so that the output level at ⑤ on CMH-530 indicates maximum. The SPACE LED is illuminated.

⑨ In the same manner as the steps ⑥, ⑦ and ⑧ above, adjust the 1895Hz and 1445Hz space filters.

Space filter	Shift width	VR for adjustment
1895Hz	400Hz	RV6
1445Hz	850Hz	RV7

c. Adjustment of Mark and Space Filter Output levels

① Set the shift width at 400Hz.

② Perform fine adjustment of the frequency of the signal generator or the receiving frequency so that the EXT SP output frequency is set at 2295Hz or 1895Hz.

③ Adjust RV2 or RV3 on CMH-530 so that the output levels at ④ and ⑤ on CMH-530 becomes equivalent. At this time, RV2 and RV3 on CMH-530 should be preferably turned fully clockwise.

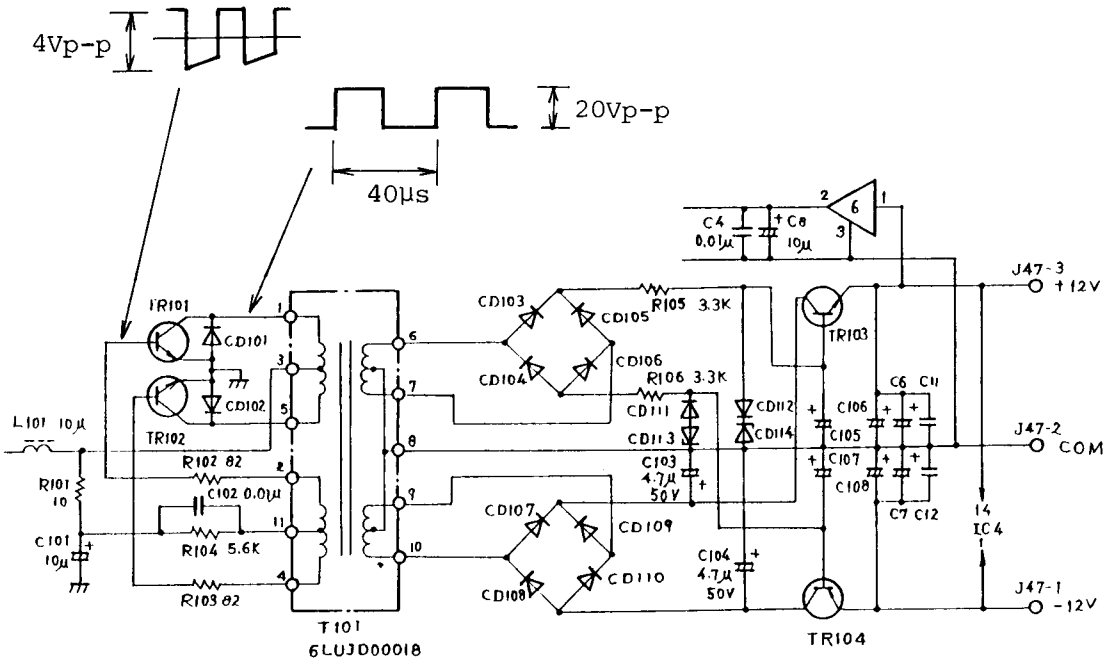
④ Adjust RV1 on CMH-530 so that the output levels at ④ and ⑤ on CMH-530 becomes 8Vp-p.

(4) CMH-532 RS-232C Unit

a. Checking of DC-DC converter

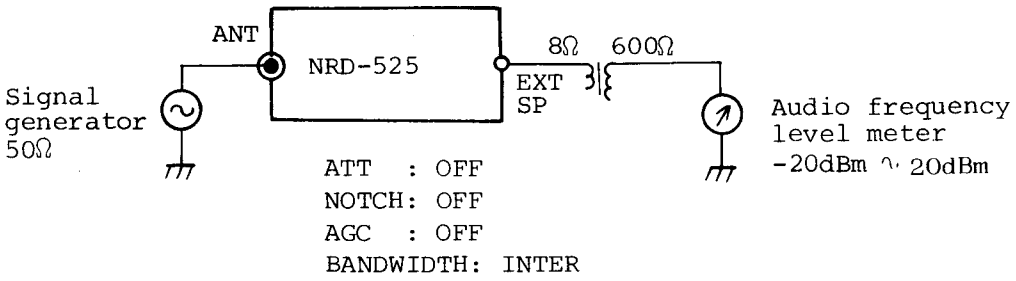
1 Check the waveform and level at each point with the oscilloscope.

2 Connect the GND terminal on the oscilloscope to the chassis (GND).



2-4 Measurement of AM Sensitivity

Connect the measuring instruments as shown below:



a. Measurement of AM sensitivity

(1) Select the AM mode for NRD-525.

(2) Set the signal generator at AM modulation (400Hz, 30%) and set the output level at 10dBμV.

(3) Set the frequency of the signal generator and receiving frequency at the measurement frequency.

(4) Turn on the modulation of the signal generator.

(5) Adjust the AF GAIN control so that the level meter indicates 10dBm.

(6) Turn off the modulation of the signal generator. Adjust the output level of the signal generator so that the level meter indicates 0dBm.

(7) Repeat the steps (4) through (6) above.

(8) The AF OUTPUT level meter indicates 10dBm when modulation of the signal generator is turned on and the level meter indicates 0dBm when modulation is turned off. The AM sensitivity level is the output level of the signal generator.

b. Measurement of SSB, CW sensitivity

(1) Put the NRD-525 in the USB,LSB or CW mode.

(2) Turn off modulation of the signal generator.

(3) Set the receiving frequency at the measurement frequency. The frequency of the signal generator should be deviated from the measurement frequency.

(4) Adjust the AF GAIN control so that the level meter indicates 0dBm.

(5) Set the frequency of the signal generator at the measurement frequency.

(6) Perform fine adjustment of the TUNE control so that the level meter indicates a maximum value.

(7) Adjust the output level of the signal generator so that the level meter indicates 10dBm.
The output available at this time is the SSB, CW sensitivity.

c. Measurement of FM sensitivity

(1) Put the NRD-525 in the FM mode.

(2) Turn off modulation of the signal generator.

(3) Set the receiving frequency at the measurement frequency.

(4) The frequency of the signal generator should be deviated from the measurement frequency.

(5) Adjust the AF GAIN control so that the level meter indicates 10dBm.

(6) Measure the frequency of the signal generator at the measurement frequency.

(7) Adjust the output level of the signal generator so that the level meter indicates -10dBm.
The output level available at this time FM sensitivity.

3. TROUBLE SHOOTING

3-1

Besides the failure of the receiver itself, trouble of the receiver is also caused by erroneous operation, and by some cause ascribable to other devices. For trouble due to erroneous operation and other devices, refer to "8. Trouble Shooting" in Instruction Manual for NRD-525.

Here, the procedures of detecting the failure of the receiver itself are described. If the trouble is localized, replace the unit containing the affected part, or replace the affected part, referring to "4. Parts List".

3-2 Checking of Power Circuit

To detect the trouble of the receiver, the supply voltage must be checked first.

Check DC 10.8V, 9V, and 5V on the power supply unit (CBD-674)on the rear panel of NRD-525. If voltage is found to be abnormal, extract all the plug-in units. Also, remove all the connector pins excepting the connector P36 on the panel block. If the voltage remains to be abnormal, the trouble lies in the power supply unit. If 10.8V is likely to be adjusted, check operation after adjusting 10.8V. If 5V is abnormal, check the panel block because 5V is supplied to the panel block through P36 connector. If each voltage is normal when

the units are removed, mount the units one by one to find a defective unit. If spare unit is available, replace the defective unit with it, and see that the receiver works normally. Also, check abnormal hot C-MOS ICs. If a defective part has been found, replace it with a new one and confirm operation.

3-3 Too Low Sensitivity

If the sensitivity has become too low, replace the HF TUNE unit CFL-205 with a new one, if available. Then, replace the IF FILTER unit CFH-36, IF AF AMP unit CAE-182, and CPU unit CDC-353 in this order to find the defective unit. If the trouble cannot be eliminated even when the units are replaced, check the antenna and motherboard CFQ-1726. If spare units are unavailable, you should find which unit is affected in the following manner:

See if sensitivity is low in all the bands or in a particular band. (For bands, see the description of operation of the receiver block.) If SG is available, measure the sensitivity in each band compare it with the rating. If SG is unavailable, receive broadcasting in each band, and estimate the cause of the trouble from the difference of sensitivity in receiving through the tuning circuit and in receiving through the 1.6MHz high pass filter (PASS).

3-3-1 Too Low Sensitivity in Particular Band

If sensitivity is too low in a particular band, the cause of the trouble may be one of the following:

a) Improper selection of band by tuning circuit

A part may be defective. Check IC1, and CD5 through CD10 on the CFL-205 unit and IC5 on the CDC-353 unit.

b) Defective tuning circuit

The cause may be a defective part or improper adjustment. Perform re-adjustment first. If adjustment is impossible, the trouble lies in a part. Check the tuning transformer, trimmer capacitor and SUB band selector relay on the CFL-205 unit.

c) Defective tuning voltage generator circuit

The cause may be a defective part or improper adjustment. Perform re-adjustment first. If adjustment is impossible, the trouble lies in a part. Check the tuning voltage generator circuit in the CDC-353 unit.

3-3-2 Too Low Sensitivity in All Bands

If sensitivity is too low in all the bands, find the affected circuit by checking the levels in the passage of the receiving signal. For this purpose, measure levels at each test point, referring to the attached level diagram. Find a point where the measured value greatly differs from the standard value specified in the level diagram. Standard values in the level diagram may somewhat differ from the measured values.

If the defective circuit has an adjuster or control, make adjustment according to the specified procedures of adjustment. If adjustment is impossible, the cause lies in a part. So, check parts constituting that circuit.

3-4 No Sound from Speaker

If the loud speaker will not give off any sound, find the affected circuit in the following manner:
First, see that the line connected to the speaker is not disconnected and that the MUTE terminal on the rear of NRD-525 is used.
Check to see that the PLL loop in the synthesizer block is not locked out. Lock-out can be confirmed by checking LED (CD2) for LP2 and LED (CD5) for BFO on the CGA-132 unit. From the combination of illuminated LEDs, the defective circuit may be localized as shown below:

UNLOCK CD16	LP2 CD2	BFO CD5	Defective circuit
OFF	OFF	OFF	None (normal)
OFF	OFF	ON	BFO loop
OFF	ON	OFF	Loop 2
ON	OFF	OFF	Loop 1
ON	ON	ON	Standard signal or control block

From the above table, the defective circuit can be found. Then, find improper adjustment or a defective part,

comparing measured values with standard values.
If the synthesizer block is operating normally, check the squelch circuit. If the SQL segment on the vacuum fluorescent display remains illuminated even when the SQUELCH control on the panel is turned, the trouble lies in the squelch circuit. As described earlier, the squelch circuit utilizes different circuits in the FM mode and in other modes. If the squelch circuit is abnormal in all the modes, check IC2 and IC3 on the CAE-182 unit and the SQUELCH control on the panel.
If the squelch circuit is abnormal only in the FM mode, check the FM detector circuit in the CAE-182 unit with emphasis put on IC10. If abnormality is found in other modes than the FM mode, check the AGC circuit on the CAE-182 unit.

3-5 Operation Impossible

If abnormality lies in the control system (control block and panel block), operation of NRD-525 may become impossible. NRD-525 has microcomputers in the control and panel blocks. If one of these microcomputers or IC around them fails, NRD-525 may become inoperable. To find a defective microcomputer or IC, they must be checked one by one by a person well versed with the fundamental performance of ISs and usage of them in each circuit. Here, apparent troubles and probable causes are described.

a. No indication is given when the power is switched on.

   o Is power supply circuit for vacuum fluorescent display working normally? Check the choke coil (L2), transformer (T1) and transistors (TR2 and TR3) for damage.

   o Is not the heater for the vacuum fluorescent display damaged? Visually check the heater.

b. NRD-525 does not operate every when a switch is pressed (although indication is normal).

   o A certain switch will not work, check that switch. If several switches have become defective at a time, check IC7 on the CDE-418 unit.

c. Receiving frequency indication does not change even if the tuning control is turned (although the key switch works normally).

   o Check PG1 and IC6 on the CDE-418 unit.

d. PBS and BFO do not work normally.

   o If PBS and BFO do not work at all even when PBS and BFO controls are turned, check resistors and capacitors mounted between the PBS control (RV8) and BFO control (RV9) on the CDE-418 and IC5.

e. The internal clock is not correct.

   If the time given by the internal clock greatly deviates, connect the frequency counter to TP1 on the CDC-353 CPU unit, and adjust the trimmer capacitor CV1 so that the oscillation frequency becomes 32.768000kHz.

4. PARTS LIST

CONTENTS

PARTS LIST

TITLE		SHEET NO.
CHASSIS	NRD-525	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C2	CAP,FXD CER	DE7150FZ103PVA1		5CBAB01618
C3	CAP,FXD ELCTLT	ECES1VU472G	35WV 4700UF	5CEAA01681
C4	CAP,FXD ELCTLT	ECE-A1ES101	25V100UF	5CEAA01349
C5	CAP,FXD PLSTC	ECQ-V1H473JZ	0.047UF	5CRAA00389
C6	CAP,FXD PLSTC	ECQ-V1H473JZ	0.047UF	5CRAA00389
C7	CAP,FXD CER	DD104SL680J50	50V 68PF	5CAAA01099
C8	CAP,FXD CER	DD104CH100D50	50V 10PF	5CAAA00846
C9	CAP,FXD CER	DD105SL121J50	50V 120PF	5CAAA01102
C10	CAP,FXD CER	DD104CH220J50	50V 22PF	5CAAA00850
C11	CAP,FXD CER	DD104SL560J50	50V 56PF	5CAAA01098
CD1	DIODE	M4C-52-12		5TXAE00374
CD3	DIODE	EM1Z	200V 1A	5TXAN00061
CD4	DIODE	RK44		5TXAN00114
CD5	DIODE	1S2076S7		5TXAE00355
F2	FUSE	MF60NR-1A	1A	5ZFAD00014
FS2	CHANGER	S-I7221#9 100,120,220,240		5ZZEG00002
IC1	IC	TA78L005AP		5DAAD00048
J1	JACK	S-I0814#01		5ZZEG00003
J2	JACK	PA-125	250V 6A	5JWAJ00007
J3	TERMINAL	M-110C-3		5JTBF00369
J5	JACK	S-Q3097#03		5JJAL00055
J6	JACK	S-Q3097#03		5JJAL00055
J7	JACK	S-Q3096#03		5JJAL00056
J8	JACK	S-Q3096#03		5JJAL00056
J9	JACK	S-Q3097#03		5JJAL00055
J10	TERMINAL	PT-C02P01		5JJAK00003
J11	CONNECTOR	FM-MR-M(FM-205)		5JWBK00004
J14	CONNECTOR	5273-08A		5JWBU00135
J15	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J16	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J17	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J18	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J19	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J20	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082

PARTS LIST

TITLE		SHEET NO.
CHASSIS	NRD-525	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
J21	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J22	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J23	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J24	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J25	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J26	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J27	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J28	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J29	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J30	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J31	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J32	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J33	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J34	CONNECTOR	PCN6-22S-2.5DS		5JDAA00082
J36	CONNECTOR	5273-05A		5JWBU00123
J37	CONNECTOR	IL-G-12P-S3T2-E		5JWAD00082
J38	CONNECTOR	IL-G-12P-S3T2-E		5JWAD00082
J40	CONNECTOR	IL-G-6P-S3T2-E		5JWAD00099
J42	JACK	S-Q3097#03		5JJAL00055
J43	JACK	S-Q3097#03		5JJAL00055
J44	CONNECTOR	67095-12		5JWBE00147
J48	CNNECTOR	IL-G-5P-S3T2-E		5JWAD00069
K1	RELAY	LZ12H		5KLAC00033
L1	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L2	COIL	LAL03VBR22M	0.22UH	5LCAA00280
P41	CONNECTOR	H-6ZCJD00100		6ZCJD00100
P48	CABLE	H-6ZCJD00129		6ZCJD00129
PC1	PCB	H-6PCJD00157B		6PCJD00157
R1	RESISTOR FXD	ERD-50TJ103	1/2W 10K OHM	5RDAA00859
R3	RESISTOR FXD	ERD-25UJ333	1/4W 33K OHM	5RDAA01381
R4	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R5	RESISTOR FXD	ERD-25UJ332	1/4W 3.3K OHM	5RDAA01357
R6	RESISTOR FXD	ERD-25UJ330	1/4W 33 OHM	5RDAA01309
R10	RESISTOR FXD	CRH20G5 OHM J		5RHAA01300
R10-1		0 20W		5ZJAP00003

PARTS LIST

TITLE		SHEET NO.
CHASSIS	NRD-525	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RV1	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV2	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV3	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV4	RESISTOR VAR	EVN-D4AA00B-23	2K OHM	5RVAB00275
RV5	RESISTOR VAR	EVH9Y3F25A14		5RVAB00327
S1	SWITCH	SSP322		5SBAB00206
SP1	SPEAKER	77F51-1		5USAC00028
T1	TRANSFORMER	H-6LTJD00015		6LTJD00015
T2	RF XFMR	H-6LHJD00380		6LHJD00380
TR1	TRANSISTOR	2SC1815-Y		5TCAF00219

PARTS LIST

TITLE			SHEET NO.
AVR	CBD-674		1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C2	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C3	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C4	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C5	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C6	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C7	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C8	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
CD1	DIODE	1S2076RE		5TXAE00588
CD2	DIODE	HZ3B-2RE		5TXAE00566
IC1	IC	M5236L		5DDAB00170
IC2	IC	TA78005AP		5DAAD00082
IC3	IC	TA78009AP		5DAAD00124
P14	CONNECTOR	H-6ZCJD00123		6ZCJD00123
PC1	PCB	H-6PCJD00171A		6PCJD00171
R1	RESISTOR FXD	ERD-25UJ221T	220 OHM 1/4	5RDAA01543
R2	RESISTOR FXD	ERD-25UJ333T	1/4W 33K OHM	5RDAA01591
R3	RESISTOR FXD	ERD-25UJ392T	1/4W 3.9K OHM	5RDAA01608
R4	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R5	RESISTOR FXD	ERD-25UJ222T	2.2K OHM 1/4W	5RDAA01548
R6	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
RV1	RESISTOR VAR	EVN-D4AA00B13	1K OHM B	5RVAB00293
TR1	TRANSISTOR	2SB553-Y		5TBAE00036
TR1-2	ACCESSORY	AC229		5ZKAH00020
TR1-3	BUSHING	YC-40B		5ZZDY00005

PARTS LIST

TITLE			SHEET NO.
JACK	CQB-40		1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
J1	JACK	HSJ0786-01-010		5JJAM00022
J2	JACK	HLJ4305-01-090		5JJAM00027
P40	CONNECTOR	H-6ZCJD00104		6ZCJD00104
R7	RESISTOR FXD	ERD-S1VJ101T	0.5W	5RDAA01711

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C6	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C7	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C8	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C9	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C10	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C11	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C12	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C13	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C14	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C15	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C16	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C17	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C18	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C19	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C20	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C21	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C22	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C23	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C24	CAP,FXD CER	C3216CH1H010C-E-TP	1PF	5CAAD00795
C25	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C26	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C27	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C28	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C29	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C30	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792
C31	CAP,FXD CER	C3216CH1H050C-E-TP	5P	5CAAD00800
C32	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C33	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C36	CAP,FXD CER	C3216CH1H050C-E-TP	5P	5CAAD00800
C37	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C38	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C39	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C40	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C41	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C42	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C43	CAP,FXD CER	C3216B1H472K-E-TP	4700PF	5CAAD00783
C44	CAP,FXD CER	C3216SL1H152J-E-TP	1500P	5CAAD00791
C45	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C46	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C47	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C48	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C49	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C50	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C51	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C52	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C53	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C54	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C55	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931
C56	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C57	CAP,FXD CER	C3216CH1H560J-E-TP		5CAAD00863
C58	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C59	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C60	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C61	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C62	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C63	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C64	CAP,FXD CER	C3216CH1H150J-E-TP	15P	5CAAD00787
C65	CAP,FXD CER	C3216CH1H150J-E-TP	15P	5CAAD00787
C66	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C67	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C68	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C69	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C70	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C71	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C72	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C73	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C74	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C75	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C76	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C77	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C78	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C79	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C80	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C81	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C82	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C83	CAP,FXD CER	C3216CH1H050C-E-TP	5P	5CAAD00800
C84	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792
C85	CAP,FXD CER	C3216B1H103K-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	1000P	5CAAD00782
C90	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C91	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C92	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C93	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C94	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C95	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
C96	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
CD1	DIODE	MI301		5TXAR00004
CD2	DIODE	MI301		5TXAR00004
CD3	DIODE	MI301		5TXAR00004
CD4	DIODE	MI301		5TXAR00004
CD5	DIODE	1SS149HRE		5TXAE00589
CD6	DIODE	1SS149HRE		5TXAE00589
CD7	DIODE	1SS149HRE		5TXAE00589
CD8	DIODE	1SS149HRE		5TXAE00589
CD9	DIODE	1SS149HRE		5TXAE00589
CD10	DIODE	1SS149HRE		5TXAE00589
CD11	DIODE	1SS85RE		5TXAE00590
CD12	DIODE	1SS85RE		5TXAE00590
CD13	DIODE	1SS85RE		5TXAE00590
CD14	DIODE	1SS85RE		5TXAE00590
CD15	DIODE	1SS85RE		5TXAE00590
CD16	DIODE	1SS85RE		5TXAE00590

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD17	DIODE	FC66M-010		5TXAB00035
CD18	DIODE	FC66M-010		5TXAB00035
CD19	DIODE	FC66M-010		5TXAB00035
CD20	DIODE	FC66M-010		5TXAB00035
CD21	DIODE	FC66M-010		5TXAB00035
CD22	DIODE	FC66M-010		5TXAB00035
CD23	DIODE	FC66M-010		5TXAB00035
CD24	DIODE	FC66M-010		5TXAB00035
CD25	DIODE	FC66M-010		5TXAB00035
CD26	DIODE	FC66M-010		5TXAB00035
CD27	DIODE	FC66M-010		5TXAB00035
CD28	DIODE	FC66M-010		5TXAB00035
CD29	DIODE	FC66M-010		5TXAB00035
CD30	DIODE	FC66M-010		5TXAB00035
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	FC66M-010		5TXAB00035
CD40	DIODE	FC66M-010		5TXAB00035
CD41	DIODE	FC66M-010		5TXAB00035
CD42	DIODE	FC66M-010		5TXAB00035
CD43	DIODE	FC66M-010		5TXAB00035
CD44	DIODE	FC66M-010		5TXAB00035
CD45	DIODE	1SS181 TE85L		5TXAD00356
CD46	DIODE	1SS181 TE85L		5TXAD00356
CD47	DIODE	1SS181 TE85L		5TXAD00356
CD48	DIODE	1SS181 TE85L		5TXAD00356
CD50	DIODE	1SS85RE		5TXAE00590
CD51	DIODE	1SS181 TE85L		5TXAD00356
CD52	DIODE	1SS149HRE		5TXAE00589

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD53	DIODE	1SS149HRE		5TXAE00589
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	HD74LS145P		5DDAF00704
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
K1	RELAY	DF2-DC9V		5KLAD00578
K2	RELAY	DF2-DC9V		5KLAD00578
K3	RELAY	DF2-DC9V		5KLAD00578
K4	RELAY	DF2-DC9V		5KLAD00578
K5	RELAY	DF2-DC9V		5KLAD00578
K6	RELAY	DF2-DC9V		5KLAD00578
K7	RELAY	DF2-DC9V		5KLAD00578
L3	COIL	LAL03VB471K	470UH	5LCAA00270
L4	COIL	LAL03VB471K	470UH	5LCAA00270
L5	COIL	LAL03VB471K	470UH	5LCAA00270
L6	COIL	LAL03VB220K	22UH	5LCAA00277
L7	COIL	LAL03VB2R2M	2.2UH	5LCAA00278
L8	COIL	LAL03VB330K	33UH	5LCAA00279
L9	COIL	LAL03VB100K	10UH	5LCAA00273
L10	COIL	LAL03VB330K	33UH	5LCAA00279
L11	COIL	LAL03VB100K	10UH	5LCAA00273
L12	COIL	LAL03VB220K	22UH	5LCAA00277
L13	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L14	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L15	COIL	LAL03VB471K	470UH	5LCAA00270

PARTS LIST

TITLE		SHEET NO.
HF TUNE	CFL-205	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
L16	COIL	LAL03VB3R3K	3.3UH	5LCAA00281
L17	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L18	COIL	LAL03VB100K	10UH	5LCAA00273
L19	COIL	LAL03VB471K	470UH	5LCAA00270
L20	COIL	LAL03VBR33M	0.33UH	5LCAA00274
L21	COIL	LAL03VB5R6K	5.6UH	5LCAA00275
L22	COIL	LAL03VB6R8K	6.8UH	5LCAA00276
L23	COIL	LAL03VB471K	470UH	5LCAA00270
P31	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P32	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00158B		6PCJD00158
R1	RESISTOR FXD	ERD-S1VJ390T		5RDAA00590
R2	RESISTOR FXD	ERD-S1VJ390T		5RDAA00590
R3	RESISTOR FXD	ERD-S1VJ100T		5RDAA01712
R4	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R5	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R6	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R7	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R8	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R9	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R10	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R11	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R12	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R13	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R14	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R15	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R16	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R17	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R18	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R19	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R20	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R21	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R22	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R23	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R24	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587

PARTS LIST

	TITLE		SHEET NO.
	HF TUNE	CFL-205	7

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R25	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R26	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R27	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R28	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R29	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R30	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R31	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R32	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R33	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R34	RESISTOR FXD	ERJ-8GCSJ821T	1/8W 820 OHM	5REAG00636
R35	RESISTOR FXD	ERJ-8GCRK5R6T	1/8W 5/6 OHM	5REAG00595
R36	RESISTOR FXD	ERJ-8GCRK5R6T	1/8W 5/6 OHM	5REAG00595
R37	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R38	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R39	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R40	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R41	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R42	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R43	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R44	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R45	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R46	RESISTOR FXD	ERJ-8GCRK5R6T	1/8W 5/6 OHM	5REAG00595
R47	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R48	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R49	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R50	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R51	RESISTOR FXD	ERJ-8GCSJ682T	1/8W 6.8K OHM	5REAG00577
R52	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R53	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R54	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R55	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R56	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R57	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R58	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R59	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586

PARTS LIST

	TITLE		SHEET NO.
	HF TUNE	CFL-205	8

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R60	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R61	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R62	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
RA1	RESISTOR	IHR-7-473JA		5RZAB00955
RJ1	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ2	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ3	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ4	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ5	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ6	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ7	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ8	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ9	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ10	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ11	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ12	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ13	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ14	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ15	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RV1	RESISTOR VAR	EVN-D1AA00B23		5RVAB00323
T1	RF XFMR	H-6LHJD00441		6LHJD00441
T2	RF XFMR	H-6LHJD00441		6LHJD00441
T3	RF XFMR	H-6LHJD00442		6LHJD00442
T4	RF XFMR	H-6LHJD00442		6LHJD00442
T5	RF XFMR	H-6LHJD00385		6LHJD00385
T6	RF XFMR	H-6LHJD00385		6LHJD00385
T7	RF XFMR	H-6LHJD00384		6LHJD00384
T8	RF XFMR	H-6LHJD00384		6LHJD00384
T9	RF XFMR	H-6LHJD00383		6LHJD00383
T10	RF XFMR	H-6LHJD00383		6LHJD00383
T11	RF XFMR	H-6LHJD00410		6LHJD00410
T12	RF XFMR	H-6LHJD00440		6LHJD00440
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182

PARTS LIST

TITLE			SHEET NO.
HF TUNE	CFL-205		9

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
TR2	TRANSISTOR	2SK125		5TKAH00002
TR3	TRANSISTOR	2SK125		5TKAH00002
TR4	TRANSISTOR	2SK125		5TKAH00002
TR5	TRANSISTOR	2SK125		5TKAH00002
TR6	TRANSISTOR	2SC1254		5TCAB00024
TR7	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR8	TRANSISTOR	2SC2712Y TE85L		5TAAG00186

PARTS LIST

TITLE		SHEET NO.
IF FILTER	CFH-36	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C2	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C4	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C6	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C7	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C8	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C9	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C12	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C13	CAP,FXD CER	C3216CH1H470J-E-TP	47P	5CAAD00864
C14	CAP,FXD CER	C3216CH1H470J-E-TP	47P	5CAAD00864
C15	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C16	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C17	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C18	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C19	CAP,FXD CER	C3216CH1H151J-E-TP	150P	5CAAD00870
C20	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C21	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C22	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C23	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C24	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C25	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C26	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C27	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C28	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C29	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C30	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C31	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C32	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C33	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C34	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C35	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056

PARTS LIST

TITLE		SHEET NO.
IF FILTER	CFH-36	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C36	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C37	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C38	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C39	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C40	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C41	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C42	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C43	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C44	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C45	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C46	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C47	CAP,FXD CER	C3216CH1H271J-E-TP		5CAAD00883
C48	CAP,FXD CER	C3216CH1H271J-E-TP		5CAAD00883
C49	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C50	CAP,FXD CER	C3216CH1H271J-E-TP		5CAAD00883
C51	CAP,FXD CER	C3216CH1H271J-E-TP		5CAAD00883
C52	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C53	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C54	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C55	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C56	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C57	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C58	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C59	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C60	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C61	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C62	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C63	CAP,FXD CER	C3216CH1H050C-E-TP	5P	5CAAD00800
C64	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C65	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C66	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C67	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C68	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C69	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C70	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789

PARTS LIST

TITLE: IF FILTER CFH-36	SHEET NO. 3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C71	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C72	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C73	CAP,FXD CER	C3216CH1H050C-E-TP	5P	5CAAD00800
C74	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C75	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C76	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C77	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C78	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C79	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C80	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C81	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
CD1	DIODE	1SS226 TE85L		5TXAD00320
CD2	DIODE	1SS226 TE85L		5TXAD00320
CD3	DIODE	RD5.1MB1-T1		5TXAA00515
CD4	DIODE	1SS226 TE85L		5TXAD00320
CD5	DIODE	1SS181 TE85L		5TXAD00356
CD6	DIODE	1SS181 TE85L		5TXAD00356
CD7	DIODE	1SS181 TE85L		5TXAD00356
CD8	DIODE	1SS181 TE85L		5TXAD00356
CD9	DIODE	1SS226 TE85L		5TXAD00320
CD10	DIODE	1SS181 TE85L		5TXAD00356
CD11	DIODE	1SS181 TE85L		5TXAD00356
CD12	DIODE	1SS226 TE85L		5TXAD00320
CD13	DIODE	1SS181 TE85L		5TXAD00356
CD15	DIODE	1SS184 TE85L		5TXAD00290
CV1	CAPACITOR VAR	TZ03T200FR		5CVAA00166
FL1	CRYSTAL CKT	H-6XMJD00114	70.455MHZ	6XMJD00114
FL2	COIL	LF-B12		5LFAE00009
FL3	FILTER	CLF-D6S	BW=6KHZ	5NRAD00001
FL4	FILTER	MF-31C		5NMAA00019
IC1	IC	HD74LS145P		5DDAF00704
L1	COIL	LALO3VBR33M	0.33UH	5LCAA00274
L2	COIL	LALO3VB471K	470UH	5LCAA00270
L3	COIL	LALO3VB471K	470UH	5LCAA00270
L4	COIL	LALO3VB331K	330UH	5LCAA00271

PARTS LIST

TITLE: IF FILTER CFH-36	SHEET NO. 4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
L5	COIL	LALO4NA331K		5LCAA00136
L6	COIL	LALO3VB221K	220UH	5LCAA00272
L7	COIL	LALO4NA221K		5LCAA00206
L8	COIL	LALO3VB100K	10UH	5LCAA00273
P29	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P30	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00159B		6PCJD00159
R1	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R2	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R3	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R4	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R5	THERMISTOR	23D25		5RXAB00026
R6	RESISTOR FXD	ERJ-8GCSJ821T	1/8W 820 OHM	5REAG00636
R7	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R8	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R9	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R10	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R11	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R12	RESISTOR FXD	ERJ-8GCSJ123T	1/8W 12K OHM	5REAG00681
R13	RESISTOR FXD	ERJ-8GCSJ123T	1/8W 12K OHM	5REAG00681
R14	RESISTOR FXD	ERJ-8GCSJ681T	1/8W 680 OHM	5REAG00591
R15	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R16	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R17	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R18	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R19	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R20	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R21	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R22	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R23	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R24	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R25	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R26	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R27	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R28	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585

PARTS LIST

TITLE		SHEET NO.
IF FILTER	CFH-36	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R29	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R30	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R31	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R32	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R33	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R34	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R35	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R36	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R37	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R38	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R39	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R40	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R41	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R42	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R43	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R44	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R45	RESISTOR FXD	ERJ-8GCSJ153T	1/8W 15K OHM	5REAG00596
R46	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R47	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R48	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R49	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R51	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R52	RESISTOR FXD	ERJ-8GCSJ334T	1/8W 330K OHM	5REAG00632
R53	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R54	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R55	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R56	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R57	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R58	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R59	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R60	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R61	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R62	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R63	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R64	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585

PARTS LIST

TITLE		SHEET NO.
IF FILTER	CFH-36	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R65	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R66	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R67	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R68	RESISTOR FXD	ERJ-8GCSJ122T	1/8W 1.2K OHM	5REAG00585
R69	RESISTOR FXD	ERJ-8GCSJ821T	1/8W 820 OHM	5REAG00636
R70	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R71	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R72	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R73	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R74	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R75	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
RA1	RESISTOR	IHR-5-473JA	47K OHM X5	5RZAB00419
RJ1	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ2	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ3	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ5	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ6	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ7	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ8	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ9	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ10	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ11	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ12	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ13	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ14	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ15	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ16	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ17	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ18	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ19	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ20	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ21	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ22	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ23	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ24	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590

PARTS LIST

TITLE			SHEET NO.
IF FILTER	CFH-36		7

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RJ25	RESISTOR FXD	ERJ-8GCSOR00T	0 OHM	5REAG00590
RV1	RESISTOR VAR	EVN-D4AA00B54		5RVAB00317
RV2	RESISTOR VAR	EVN-D1AA00B22		5RVAB00320
T1	RF XFMR	H-6LHJD00415	70.455MHZ	6LHJD00415
T2	RF XFMR	H-6LHJD00415	70.455MHZ	6LHJD00415
T3	RF XFMR	H-6LHJD00416	0.95UH	6LHJD00416
T4	RF XFMR	H-6LHJD00456		6LHJD00456
T5	RF XFMR	H-6LHJD00389		6LHJD00389
T6	RF XFMR	H-6LHJD00390A		6LHJD00390
T7	RF XFMR	H-6LHJD00390A		6LHJD00390
T8	RF XFMR	H-6LHJD00297		6LHJD00297
T9	RF XFMR	S-061-006		5LJAA00006
T10	RF XFMR	S-061-006		5LJAA00006
T11	RF XFMR	H-6LJJD00037A	455KHZ	6LJJD00037
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	3SK77-GR		5TKAA00108
TR2	TRANSISTOR	2SK125		5TKAH00002
TR3	TRANSISTOR	2SK125		5TKAH00002
TR4	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
TR5	TRANSISTOR	3SK77-GR		5TKAA00108
TR6	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR7	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR8	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR9	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR10	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR11	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR12	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR13	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
W1	TIN COATED WIRE	TA-0.8P		2717100002
W2	TIN COATED WIRE	TA-0.8P		2717100002

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	C3216CH1H680J-E-TP	68PF	5CAAD00929
C2	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C3	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C4	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C5	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C6	CAP,FXD TANTAL	202L2502 225MB	2.2UF 25V	5CSAC01129
C7	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C8	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C9	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C10	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C11	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C12	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C13	CAP,FXD TANTAL	202L3502 224MB	0.22UF 35V	5CSAC00988
C14	CAP,FXD TANTAL	202L3502 224MB	0.22UF 35V	5CSAC00988
C15	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C16	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C17	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C18	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C19	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792
C20	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C21	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C22	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C23	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C24	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C25	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C26	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C27	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C28	CAP,FXD ELCTLT	ECE-A1EU221B	25V 220UF	5CEAA01786
C29	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C30	CAP,FXD TANTAL	202L3502 224MB	0.22UF 35V	5CSAC00988
C31	CAP,FXD ELCTLT	ECE-A1EU221B	25V 220UF	5CEAA01786
C32	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C33	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C34	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C35	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C36	CAP,FXD CER	C3216CH1H151J-E-TP	150P	5CAAD00870
C37	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C38	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C39	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C40	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C41	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C42	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C43	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C44	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C45	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C46	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C47	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C48	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C49	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C50	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C51	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C52	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C53	CAP,FXD ELCTLT	ECE-A1EU330B		5CEAA01822
C54	CAP,FXD CER	C3216SL1H222J-E-TP	2200P	5CAAD00792
C55	CAP,FXD CER	C3216B1E333J-E-TP		5CAAD01055
C56	CAP,FXD TANTAL	202L3502 474MB		5CSAC01065
C57	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C58	CAP,FXD TANTAL	202L3502 474MB		5CSAC01065
C59	CAP,FXD TANTAL	202L3502 474MB		5CSAC01065
C60	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C61	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C62	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C63	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C64	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C65	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C66	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C67	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C68	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C69	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C70	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C71	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C72	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C73	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C74	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C75	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C76	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C77	CAP,FXD TANTAL	202L3502 224MB	0.22UF 35V	5CSAC00988
C78	CAP,FXD TANTAL	202L3502 224MB	0.22UF 35V	5CSAC00988
C79	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C80	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C81	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C82	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C83	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C84	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C85	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C86	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C87	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C88	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C89	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C90	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C91	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C92	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C93	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C94	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C95	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C96	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C97	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C98	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C99	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C100	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C101	CAP,FXD CER	C3216B1E333J-E-TP		5CAAD01055
C102	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
CD1	DIODE	1SS226 TE85L		5TXAD00320
CD2	DIODE	1SS226 TE85L		5TXAD00320
CD3	DIODE	1SS226 TE85L		5TXAD00320

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD4	DIODE	1SS226 TE85L		5TXAD00320
CD5	DIODE	1SS184 TE85L		5TXAD00290
CD6	DIODE	1SS184 TE85L		5TXAD00290
CD7	DIODE	1SS184 TE85L		5TXAD00290
CD8	DIODE	1SS184 TE85L		5TXAD00290
CD9	DIODE	1SS181 TE85L		5TXAD00356
CD10	DIODE	1SS184 TE85L		5TXAD00290
CD11	DIODE	1SS181 TE85L		5TXAD00356
CD12	DIODE	1SS226 TE85L		5TXAD00320
CD13	DIODE	1SV149B		5TXAD00332
CD14	DIODE	1SV149B		5TXAD00332
CD15	LED	TLR102A		5TZAD00020
CD16	DIODE	1SS184 TE85L		5TXAD00290
IC1	IC	SN16913P		5DDAL00301
IC2	IC	TC4052BP		5DDAE00208
IC3	IC	M5223P		5DDAB00171
IC4	IC	TA7222AP		5DAAD00070
IC4-1	HEAT SINK	MPTH00638A		MPTH00638A
IC5	IC	M5218P		5DDAB00152
IC6	IC	M5223P		5DDAB00171
IC7	IC	TC4066BP		5DDAE00078
IC8	IC	TC4066BP		5DDAE00078
IC9	IC	M5223P		5DDAB00171
IC10	IC	MC3361P		5DDAS00080
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
JP4	TIN COATED WIRE	TA-0.6P		2717100001
JP5	TIN COATED WIRE	TA-0.6P		2717100001
L1	COIL	LAL03VB221K	220UH	5LCAA00272
L2	COIL	FL-7H472J	4.7MH	5LCAA00023
L3	COIL	LAL03VB100K	10UH	5LCAA00273
P27	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P28	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070

PARTS LIST

	TITLE		SHEET NO.
	IF AF AMP	CAE-182	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
PC1	PCB	H-6PCJD00160B		6PCJD00160
R1	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R2	RESISTOR FXD	ERJ-8GCSJ474T	1/8W 470K OHM	5REAG00593
R3	RESISTOR FXD	ERJ-8GCSJ682T	1/8W 6.8K OHM	5REAG00577
R4	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R5	RESISTOR FXD	ERJ-8GCSJ822T	1/8W 8.2K OHM	5REAG00584
R6	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R7	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R8	RESISTOR FXD	ERJ-8GCSJ563T	1/8W 56K OHM	5REAG00627
R9	RESISTOR FXD	ERJ-8GCSJ562T	1/8W 5.6K OHM	5REAG00625
R10	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R11	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R12	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R13	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R14	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R15	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R16	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R17	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R18	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R19	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R20	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R21	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R22	RESISTOR FXD	ERJ-8GCSJ562T	1/8W 5.6K OHM	5REAG00625
R23	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R24	RESISTOR FXD	ERJ-8GCSJ220T	1/8W 22 OHM	5REAG00619
R25	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R26	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R27	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R28	RESISTOR FXD	ERJ-8GCSJ563T	1/8W 56K OHM	5REAG00627
R29	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R31	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R32	RESISTOR FXD	ERJ-8GCSJ474T	1/8W 470K OHM	5REAG00593
R33	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R35	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R36	RESISTOR FXD	ERD-50TJ101	1/2W 100 OHM	5RDAA00811

PARTS LIST

	TITLE		SHEET NO.
	IF AF AMP	CAE-182	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R37	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R38	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R39	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R40	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R41	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R42	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R43	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R44	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R45	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R46	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R47	RESISTOR FXD	ERJ-8GCSJ560T	1/8W 56 OHM	5REAG00900
R48	THERMISTOR	13D49 (D-1A)		5RXAB00027
R49	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R50	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R51	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R52	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R53	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R54	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R55	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R56	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R57	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R58	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R59	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R60	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R61	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R62	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R63	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R64	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R65	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R66	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R67	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R68	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R69	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R70	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R71	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	7

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R72	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R73	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R74	RESISTOR FXD	ERJ-8GCSJ183T	1/8W 18K OHM	5REAG00682
R75	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R76	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R77	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R78	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R79	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R80	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R81	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R82	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R83	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R84	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R85	RESISTOR FXD	ERJ-8GCSJ682T	1/8W 6.8K OHM	5REAG00577
R86	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R87	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R88	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R89	RESISTOR FXD	ERJ-8GCSJ682T	1/8W 6.8K OHM	5REAG00577
R90	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R91	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R92	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R93	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R94	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R95	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R96	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R97	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R98	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R99	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R100	RESISTOR FXD	ERJ-8GCSJ333T	1/8W 33K OHM	5REAG00592
R101	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R102	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R103	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R104	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R105	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R106	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	8

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R107	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R108	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R109	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R110	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R111	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R112	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R113	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R114	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R115	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R116	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R117	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R118	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R119	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R120	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R121	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R122	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R123	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R124	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R125	RESISTOR FXD	ERJ-8GCSJ153T	1/8W 15K OHM	5REAG00596
R126	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R127	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R128	RESISTOR FXD	ERJ-8GCSJ563T	1/8W 56K OHM	5REAG00627
R131	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
RJ1	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ2	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ3	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ4	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ5	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ6	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ7	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ8	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ9	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ10	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ11	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ12	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	9

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RJ13	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ14	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ15	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ16	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ17	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ18	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ19	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ20	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ21	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ22	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ23	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ24	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ25	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ26	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ27	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ28	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ29	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ30	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ31	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ32	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ34	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ35	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ36	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ37	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ38	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ39	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ40	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ41	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ42	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ43	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ44	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ45	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ46	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ47	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ48	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590

PARTS LIST

TITLE		SHEET NO.
IF AF AMP	CAE-182	10

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RJ49	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RJ50	RESISTOR FXD	ERJ-8GCS0R00T	0 OHM	5REAG00590
RV1	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV2	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV3	RESISTOR VAR	EVN-D4AA00B-24	20K OHM	5RVAB00278
RV4	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
RV5	RESISTOR VAR	EVN-D1AA00B23		5RVAB00323
RV6	RESISTOR VAR	EVN-D1AA00B14		5RVAB00324
RV7	RESISTOR VAR	EVN-D4AA00B-14	10K OHM	5RVAB00279
T1	COIL	5D-ELD19A-41		6LAFD00018
T2	RF XFMR	S-061-006		5LJAA00006
T3	RF XFMR	S-061-006		5LJAA00006
T4	RF XFMR	S-061-006		5LJAA00006
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	3SK77-GR		5TKAA00108
TR2	TRANSISTOR	3SK77-GR		5TKAA00108
TR3	TRANSISTOR	3SK77-GR		5TKAA00108
TR4	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR5	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR6	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR7	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR8	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
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	2SC2712Y TE85L		5TAAG00186
TR15	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR16	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR17	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR18	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
X1	RESONATOR	R460C FO+-0.1%		5NNAF00003

PARTS LIST

	TITLE		SHEET NO.
	LOOP 1	CGA-131	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C2	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C3	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C4	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C6	CAP,FXD CER	C3216CH1H060D-E-TP	6P	5CAAD00799
C7	CAP,FXD CER	C3216CH1H270J-E-TP	27P	5CAAD00793
C8	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C9	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C11	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C12	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C13	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C14	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C15	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C16	CAP,FXD CER	C3216CH1H040C-E-TP	4P	5CAAD00801
C17	CAP,FXD CER	C3216CH1H270J-E-TP	27P	5CAAD00793
C18	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C19	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C20	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C21	CAP,FXD CER		*	6ZZAB02065
C22	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C23	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C24	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C25	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C26	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C27	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C28	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C29	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C30	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C31	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C32	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C33	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C34	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C48	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864

PARTS LIST

	TITLE		SHEET NO.
	LOOP 1	CGA-131	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C49	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C50	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C51	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C52	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C53	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C54	CAP,FXD MICA	DM05C150J1	100WV 15PF	5CMAB00051
C55	CAP,FXD PLSTC	ECQ-B1H102JZ3	1000PF 50V	5CRAA00585
C56	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C57	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C58	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C59	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C60	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C61	CAP,FXD TANTAL	202L3502 225MB		5CSAC01069
C62	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C63	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C64	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C65	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C66	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C67	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
CD1	DIODE	1SV68RE		5TXAE00591
CD2	DIODE	1SV68RE		5TXAE00591
CD3	DIODE	1SV68RE		5TXAE00591
CD4	DIODE	1SV68RE		5TXAE00591
CD5	DIODE	1SV68RE		5TXAE00591
CD6	DIODE	1SV68RE		5TXAE00591
CD7	DIODE	1SV68RE		5TXAE00591
CD8	DIODE	1SV68RE		5TXAE00591
CD9	DIODE	1SS85RE		5TXAE00590
CD10	DIODE	1SS85RE		5TXAE00590
CD11	DIODE	1SS85RE		5TXAE00590
CD12	DIODE	1SS85RE		5TXAE00590
CD14	DIODE	1SS181 TE85L		5TXAD00356
CD15	DIODE	1SS184 TE85L		5TXAD00290
CD16	LED	TLR102A		5TZAD00020
CV1	CAPACITOR VAR	TZ03Z070FR		5CVAA00165

PARTS LIST

TITLE		SHEET NO.
LOOP 1	CGA-131	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CV2	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV3	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV4	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
FL1	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
FL2	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
FL3	FILTER	BPEB1		5NBAG00011
FL4	FILTER	BPEB1		5NBAG00011
IC1	IC	TA7521P		5DAAD00045
IC2	IC	MC14016BCP		5DAAJ00351
IC3	IC	UPC141C		5DAAA00042
IC5	IC	HD74LS26P		5DDAF00297
IC6	IC	MC4044P		5DDAS00002
IC7	IC	HD74LS26P		5DDAF00297
IC8	IC	UPC1651G		5DAAA00171
IC9	IC	UPC1651G		5DAAA00171
L1	COIL	S18(3.5T)ｺｱﾅｼ		5LAAA00031
L2	COIL	S18(3.5T)ｺｱﾅｼ		5LAAA00031
L3	COIL	S18(2.5T)ｺｱﾅｼ		5LAAA00032
L4	COIL	S18(2.5T)ｺｱﾅｼ		5LAAA00032
L5	COIL	LAL04NA2R2M		5LCAA00184
L6	COIL	LAL04NA2R2M		5LCAA00184
L7	COIL	LAL04NA2R2M		5LCAA00184
L8	COIL	LAL04NA2R2M		5LCAA00184
L9	COIL	LAL04NA2R2M		5LCAA00184
L10	COIL	LAL04NA2R2M		5LCAA00184
L11	COIL	LAL04NA2R2M		5LCAA00184
L12	COIL	LAL04NA2R2M		5LCAA00184
L14	COIL	LAL03VB471K	470UH	5LCAA00270
L15	COIL	LAL03VB471K	470UH	5LCAA00270
L19	COIL	LAL03VB471K	470UH	5LCAA00270
L20	COIL	LAL03VB471K	470UH	5LCAA00270
P23	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P24	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00161C		6PCJD00161
R1	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576

PARTS LIST

TITLE		SHEET NO.
LOOP 1	CGA-131	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R2	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R3	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R4	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R5	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R6	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R7	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R8	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R9	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R10	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R11	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R12	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R13	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R14	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R15	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R16	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R17	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R18	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R19	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R20	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R21	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R23	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R24	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R25	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R26	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R27	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R28	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R29	RESISTOR FXD	ERJ-8GCSJ680T	1/8W 68 OHM	5REAG00621
R30	RESISTOR FXD	ERJ-8GCSJ680T	1/8W 68 OHM	5REAG00621
R31	RESISTOR FXD	ERJ-8GCSJ680T	1/8W 68 OHM	5REAG00621
R45	RESISTOR FXD	ERD-25UJ2R2T	1/4W 2.2 OHM	5RDAA01633
R46	RESISTOR FXD	ERJ-8GCSJ822T	1/8W 8.2K OHM	5REAG00584
R47	RESISTOR FXD	ERJ-8GCSJ182T	1/8W 1.8K OHM	5REAG00582
R48	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R49	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R50	RESISTOR FXD	ERJ-8GCSJ152T	1/8W 1.5K OHM	5REAG00574

PARTS LIST

TITLE		SHEET NO.
LOOP 2	CGA-132	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C2	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C4	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C6	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C7	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C8	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C9	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C10	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C12	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C13	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C14	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C15	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C16	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
C17	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C18	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C19	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C20	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C21	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C22	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C23	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C24	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C25	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C27	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C28	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C29	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C30	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930
C31	CAP,FXD CER	C3216CH1H150J-E-TP	15P	5CAAD00787
C32	CAP,FXD TANTAL	202L3502 474MB		5CSAC01065
C33	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C34	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C35	CAP,FXD CER	C3216CH1H220J-E-TP	22P	5CAAD00869
C36	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930

PARTS LIST

TITLE		SHEET NO.
LOOP 2	CGA-132	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C37	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C38	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C39	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C40	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C41	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C42	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C43	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C44	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C45	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C46	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C47	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C48	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C49	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C50	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C51	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C52	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C53	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C54	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C55	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
CD1	DIODE	FC53M-4	11.2-14.8PF(4V)	5TXAB00034
CD2	LED	TLR102A		5TZAD00020
CD3	DIODE	1SV68RE		5TXAE00591
CD4	DIODE	1SS184 TE85L		5TXAD00290
CD5	LED	TLR102A		5TZAD00020
FL1	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
FL2	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
IC1	IC	TA7310P		5DAAD00091
IC2	IC	TA7310P		5DAAD00091
IC3	IC	NJM78L08A	8V 100MA	5DAAN00079
IC4	IC	MC14016BCP		5DAAJ00351
IC5	IC	MC4044P		5DDAS00002
IC6	IC	HD74LS123P		5DDAF00354
IC7	IC	HD74LS26P		5DDAF00297
IC8	IC	TC74HC4520P		5DDAE00675
IC9	IC	MC74HC00N		5DAAJ00142

PARTS LIST

TITLE		SHEET NO.
LOOP 1	CGA-131	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R51	RESISTOR FXD	ERJ-8GCSJ152T	1/8W 1.5K OHM	5REAG00574
R52	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R53	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R54	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R55	RESISTOR FXD	ERJ-8GCSJ394T	1/8W 390K OHM	5REAG01000
R56	RESISTOR FXD	ERJ-8GCSJ124T	1/8W 120K OHM	5REAG00629
R57	RESISTOR FXD	ERJ-8GCSJ124T	1/8W 120K OHM	5REAG00629
R58	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R59	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R60	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R61	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R62	RESISTOR FXD	ERJ-8GCSJ561T	1/8W 560 OHM	5REAG00571
R63	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R64	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R65	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R66	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R67	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R68	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R69	RESISTOR FXD	HVN1/8-10M OHM K	1/8W 10M OHM	5RDAC02203
RV1	RESISTOR VAR	EVN-D1AA00B13	1K	5RVAB00313
RV2	RESISTOR VAR	EVN-D1AA00B13	1K	5RVAB00313
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP8	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP9	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR2	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR3	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR4	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR5	TRANSISTOR	2SK192A-BL		5TKAA00080
TR6	TRANSISTOR	2SK192A-BL		5TKAA00080
TR7	TRANSISTOR	2SK192A-BL		5TKAA00080
TR8	TRANSISTOR	2SK192A-BL		5TKAA00080
TR9	TRANSISTOR	2SK192A-BL		5TKAA00080
TR14	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182

PARTS LIST

TITLE		SHEET NO.
LOOP 1	CGA-131	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
TR15	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR16	TRANSISTOR	2SC2712Y TE85L		5TAAG00186

PARTS LIST

TITLE		SHEET NO.
LOOP 2	CGA-132	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
IC10	IC	HD10551P		5DDAF00953
IC11	IC	MC74HC160N		5DAAJ00182
IC12	IC	MC74HC160N		5DAAJ00182
IC13	IC	MC74HC74N		5DAAJ00133
IC14	IC	MC74HC161N		5DAAJ00136
IC15	IC	M54459L	1/100 1/20	5DDAB00083
IC16	IC	MC145145P		5DDAS00058
IC17	IC	MC74HC574N		5DAAJ00230
IC18	IC	MC14560BCP		5DAAJ00350
IC19	IC	MC14560BCP		5DAAJ00350
IC20	IC	MC74HC574N		5DAAJ00230
IC21	IC	MC14560BCP		5DAAJ00350
IC22	IC	MC14560BCP		5DAAJ00350
IC23	IC	MC74HC574N		5DAAJ00230
L1	COIL	LALO3VB2R2M	2.2UH	5LCAA00278
L2	COIL	LALO3VBR47M	0.47UH	5LCAA00283
L3	COIL	LALO3VB1R0M	1UH	5LCAA00282
L4	COIL	LALO3VB471K	470UH	5LCAA00270
L5	COIL	H-6LAJD00234A		6LAJD00234
L6	COIL	LALO3VB221K	220UH	5LCAA00272
L7	COIL	LALO3VB471K	470UH	5LCAA00270
P21	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P22	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00162B		6PCJD00162
R1	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R2	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R3	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R4	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R5	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R6	RESISTOR FXD	ERJ-8GCSJ153T	1/8W 15K OHM	5REAG00596
R7	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R8	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R9	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R11	RESISTOR FXD	ERJ-8GCSJ561T	1/8W 560 OHM	5REAG00571
R12	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573

PARTS LIST

TITLE		SHEET NO.
LOOP 2	CGA-132	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R13	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R14	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R15	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R16	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R17	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R18	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R19	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R20	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R21	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R22	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R23	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R25	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R26	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R27	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R28	RESISTOR FXD	ERJ-8GCSJ153T	1/8W 15K OHM	5REAG00596
R29	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R30	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R31	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R32	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R33	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R34	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R35	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R36	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R37	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R38	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R39	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R40	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R41	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R42	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R43	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R44	RESISTOR FXD	ERJ-8GCSJ561T	1/8W 560 OHM	5REAG00571
R45	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
T1	RF XFMR	H-6LHJD00297		6LHJD00297
T2	RF XFMR	H-6LHJD00297		6LHJD00297
T3	RF XFMR	H-6LHJD00297		6LHJD00297

PARTS LIST

TITLE			SHEET NO.
LOOP 2	CGA-132		5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
T5	RF XFMR	H-6LHJD00297		6LHJD00297
T6	RF XFMR	H-6LHJD00288A	7MHZ	6LHJD00288
T7	RF XFMR	S-061-006		5LJAA00006
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP5	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP10	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP11	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP12	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP14	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP15	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SC2714Y TE85L		5TCAF00436
TR2	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR3	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR4	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR5	TRANSISTOR	2SA1162-Y		5TAAG00179
X1	CRYSTAL	H-6XHJD00189		6XHJD00189

PARTS LIST

TITLE		SHEET NO.
CPU	CDC-353	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
BT1	BATTRY	CR-2032FT6		5ZBAD00067
C1	CAP,FXD CER	C3216CH1H330J-E-TP	33P	5CAAD00794
C2	CAP,FXD CER	C3216CH1H150J-E-TP	15P	5CAAD00787
C3	CAP,FXD CER	C3216CH1H150J-E-TP	15P	5CAAD00787
C4	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C6	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C7	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C8	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C9	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C12	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C13	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C14	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C15	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C16	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C18	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C19	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C20	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C21	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C22	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C23	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C25	CAP,FXD CER	C3216CH1H330J-E-TP	33P	5CAAD00794
C26	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C27	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C28	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C29	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C30	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C31	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C32	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C33	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C35	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C36	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C37	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789

PARTS LIST

TITLE		SHEET NO.
CPU	CDC-353	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C38	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C39	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C40	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C42	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C43	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C44	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C45	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C46	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C47	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C48	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C49	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C50	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C51	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C52	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C53	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C54	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C55	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C56	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C57	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C58	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C59	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C60	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C61	CAP,FXD TANTAL	202L6301 476MB		5CSAC00963
C62	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C63	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C64	CAP,FXD CER	C3216B1H332K-E-TP		5CAAD01020
CD1	DIODE	1SS184 TE85L		5TXAD00290
CD2	DIODE	1SS184 TE85L		5TXAD00290
CD3	DIODE	1SS226 TE85L		5TXAD00320
CD4	DIODE	1SS184 TE85L		5TXAD00290
CD5	DIODE	1SS181 TE85L		5TXAD00356
CD6	LED	TLR102A		5TZAD00020
CD7	LED	TLR102A		5TZAD00020
CV1	CAPACITOR VAR	TZ03R300YR		5CVAA00171
FL1	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002

PARTS LIST

TITLE		SHEET NO.
CPU	CDC-353	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
IC1	IC	MC74HC245N		5DAAJ00203
IC2	IC	M5L2764K		5DAAB00038
IC3	IC	MSM5126-20RS		5DDAG00139
IC4	IC	MC146818P		5DAAJ00112
IC5	IC	MSM82C55A-5RS		5DDAG00102
IC6	IC	TD62083AP		5DDAE00507
IC7	IC	S-8054ALR		5DZBX00003
IC8	IC	MC74HC573N		5DAAJ00229
IC9	IC	TC40H138P		5DDAE00310
IC10	IC	MC74HC573N		5DAAJ00229
IC11	IC	HD63A03RP		5DDAF00934
IC12	IC	MC74HC00N		5DAAJ00142
IC13	IC	MC74HC11N		5DAAJ00156
IC14	IC	MC74HC00N		5DAAJ00142
IC15	IC	MC74HC14N		5DAAJ00157
IC16	IC	MC14011UBCP		5DAAJ00349
IC17	IC	MC74HC74N		5DAAJ00133
IC18	IC	M5223P		5DDAB00171
ICS2	IC SOCKET	ICC05-028-360T		5ZJCK00042
L1	COIL	LAL03VB471K	470UH	5LCAA00270
L2	COIL	LAL03VB100K	10UH	5LCAA00273
L3	COIL	LAL03VB221K	220UH	5LCAA00272
L4	COIL	LAL03VB221K	220UH	5LCAA00272
L5	COIL	LAL03VB221K	220UH	5LCAA00272
L6	COIL	LAL03VB221K	220UH	5LCAA00272
L7	COIL	LAL03VB221K	220UH	5LCAA00272
L8	COIL	LAL03VB221K	220UH	5LCAA00272
L9	COIL	LAL03VB221K	220UH	5LCAA00272
L10	COIL	LAL03VB221K	220UH	5LCAA00272
L12	COIL	LAL03VB221K	220UH	5LCAA00272
L13	COIL	LAL03VB221K	220UH	5LCAA00272
L14	COIL	LAL03VB221K	220UH	5LCAA00272
L15	COIL	LAL03VB221K	220UH	5LCAA00272
L16	COIL	LAL03VB221K	220UH	5LCAA00272
L17	COIL	LAL03VB221K	220UH	5LCAA00272

PARTS LIST

TITLE		SHEET NO.
CPU	CDC-353	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
P19	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P20	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00163B	22P	6PCJD00163
R1	RESISTOR FXD	ERJ-8GCSJ154T	1/8W 150K OHM	5REAG00630
R2	RESISTOR FXD	RC1/4GF5.1M OHM J	1/4W5.1M OHM	5RCAA00742
R3	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R6	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R7	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R8	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R9	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R10	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R11	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R12	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R13	RESISTOR FXD	ERJ-8GCSJ474T	1/8W 470K OHM	5REAG00593
R14	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R15	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R16	RESISTOR FXD	ERJ-8GCSJ302T		5RDAA01573
R17	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581
R18	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R20	RESISTOR FXD	ERJ-8GCSJ105T	1/8W 1M OHM	5REAG00772
R21	RESISTOR FXD	ERJ-8GCSJ332T	1/8W 3.3K OHM	5REAG00589
R22	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R23	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R24	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R25	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R26	RESISTOR FXD	ERJ-8GCSJ224T	1/8W 220K OHM	5REAG00631
R27	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
R28	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R29	RESISTOR FXD	ERJ-8GCSJ104T	1/8W 100K OHM	5REAG00587
RA1	RESISTOR	IHR-1/8-8-103JA		5RZAB00388
RA2	RESISTOR	IHR-1/8-8-103JA		5RZAB00388
RA3	RESISTOR	EXB-LD7104G		5RZAS00180
RA4	RESISTOR	IHR-1/8-4-103JA		5RZAB00936
RA5	RESISTOR	IHR-1/8-8-103JA		5RZAB00388
RA6	RESISTOR	IHR-1/8-8-103JA		5RZAB00388

PARTS LIST

TITLE			SHEET NO.
CPU	CDC-353		5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RV1	RESISTOR VAR	EVN-D1AA00B13	1K	5RVAB00313
RV2	RESISTOR VAR	EVN-D1AA00B15	100K	5RVAB00314
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SC2713-GR TE85L		5TCAF00433
TR2	TRANSISTOR	2SC2713-GR TE85L		5TCAF00433
TR3	TRANSISTOR	2SC2713-GR TE85L		5TCAF00433
X1	CRYSTAL	MX-38T 32.768KHZ		5XHAA00509
X2	CRYSTAL	LN-X-0008 F=4.9152MHZ		5XHAA00422

PARTS LIST

TITLE		SHEET NO.
DATA I/O	CMH-632	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C2	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C3	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C4	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C5	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C6	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C7	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C8	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C9	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C12	CAP,FXD CER	C3216SL1H1D2J-E-TP	1000P	5CAAD00782
C13	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C14	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C17	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C18	CAP,FXD CER	C3216CH1H471J-E-TP	470PF	5CAAD00797
C20	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C21	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C22	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C23	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C24	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C25	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C26	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C27	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C28	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C29	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C30	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C31	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C32	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C33	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C34	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C35	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C36	CAP,FXD CER	C3216CH1H331J-E-TP		5CAAD01066
C37	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C38	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056

PARTS LIST

TITLE		SHEET NO.
DATA I/O	CMH-632	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C39	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C40	CAP,FXD CER	C3216CH1H221J-E-TP	220P	5CAAD00790
C41	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
FL1	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
FL2	FILTER	DSS310-55B222M	100V 0.0022UF	5NXAA00005
IC1	IC	HD10551P		5DDAF00953
IC2	IC	MC74HC00N		5DAAJ00142
IC3	IC	MC74HC161N		5DAAJ00136
IC4	IC	MC74HC74N		5DAAJ00133
IC5	IC	MC74HC161N		5DAAJ00136
IC6	IC	MC74HC161N		5DAAJ00136
IC7	IC	MC74HC74N		5DAAJ00133
IC8	IC	MSM82C55A-5RS		5DDAG00102
IC9	IC	MC74HC27N		5DAAJ00158
IC10	IC	MC74HC139N		5DAAJ00175
IC11	IC	MC74HC174N		5DAAJ00187
IC13	IC	M54455L		5DDAB00172
IC14	IC	MC74HC74N		5DAAJ00133
IC15	IC	HD74LS160P		5DDAF00429
IC16	IC	HD74LS160P		5DDAF00429
IC17	IC	MC74HC574N		5DAAJ00230
IC18	IC	MC14560BCP		5DAAJ00350
IC19	IC	MC14560BCP		5DAAJ00350
IC20	IC	MC74HC574N		5DAAJ00230
J45	CONNECTOR	HKP-10FD2		5JJAA00076
J46	CONNECTOR	HKP-12FD2		5JJAA00088
L2	COIL	LAL03VB100K	10UH	5LCAA00273
L3	COIL	LAL03VB100K	10UH	5LCAA00273
L4	COIL	LAL03VB100K	10UH	5LCAA00273
L5	COIL	LAL03VB1R0M	1UH	5LCAA00282
P17	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P18	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00165B		6PCJD00165
R1	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R2	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594

PARTS LIST

TITLE		SHEET NO.
DATA I/O	CMH-632	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R3	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R5	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R6	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R7	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R8	RESISTOR FXD	ERJ-8GCSJ682T	1/8W 6.8K OHM	5REAG00577
R9	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R10	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R11	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R12	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R13	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R14	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R15	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R16	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R17	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R18	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R19	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R20	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R21	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R22	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
RA1	RESISTOR	IHR-1/8-8-473JA		5RZAB00442
TR1	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR2	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR3	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
TR4	TRANSISTOR	2SC2712Y TE85L		5TAAG00186
XU1	CRYSTAL OSC	NTO-771A	12.8MHZ	5XNAG00002

PARTS LIST

TITLE		SHEET NO.
DISPLAY	CDE-418	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD PLSTC	ECQ-V1H473JZ3	50V 0.047	5CRAA00628
C2	CAP,FXD CER	DD104-979CH220J50		5CAAA02543
C3	CAP,FXD CER	DD104-979CH220J50		5CAAA02543
C4	CAP,FXD PLSTC	ECQ-B1H152JZ3		5CRAA00727
C5	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C6	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C7	CAP,FXD PLSTC	ECQ-V1H104JZ3		5CRAA00617
C8	CAP,FXD CER	DD106-979F103Z50		5CAAA02544
C9	CAP,FXD TANTAL	202L2502 475MB		5CSAC00934
C10	CAP,FXD CER	DD106-979F103Z50		5CAAA02544
C11	CAP,FXD CER	DD106-979F103Z50		5CAAA02544
C12	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184
C13	CAP,FXD ELCTLT	ECE-A1HU100B	50V 10UF	5CEAA02184
C14	CAP,FXD ELCTLT	ECE-A1EU101B		5CEAA01813
C15	CAP,FXD PLSTC	ECQ-M1102KZ3	50V 1000PF	5CRAA00728
C16	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
C17	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C18	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C19	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C20	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C21	CAP,FXD TANTAL	202L3502 105MB	35V 1UF	5CSAC00982
C22	CAP,FXD ELCTLT	ECE-A1EU100B		5CEAA01864
CD1	LED	PR5551K		5TZAW00035
CD2	LED	PG5551KY		5TZAW00055
CD3	LED	PG5551KY		5TZAW00055
CD4	DIODE	HZ9A2RE		5TXAE00592
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	1S2076RE		5TXAE00588
CD13	DIODE	1S2076RE		5TXAE00588

PARTS LIST

TITLE		SHEET NO.
DISPLAY	CDE-418	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD14	DIODE	1S2076RE		5TXAE00588
CD15	DIODE	1S2076RE		5TXAE00588
CD16	DIODE	1S2076RE		5TXAE00588
F1	VFD	CP5243AGLR		5NZBE00002
FL1	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
IC1	IC	UPD8749HD		5DDAC00317
IC2	IC	MSM82C43RS		5DDAG00096
IC3	IC	MSM82C43RS		5DDAG00096
IC4	IC	TC5090AP		5DDAE00396
IC5	IC	MC14051BCP		5DAAJ00348
IC6	IC	LR3671D		5DDBN00037
IC7	IC	MC74HC244N		5DAAJ00138
IC8	IC	MSL915RS		5DDAG00052
IC9	IC	MSL915RS		5DDAG00052
IC10	IC	MSL915RS		5DDAG00052
IC11	IC	MSL915RS		5DDAG00052
IC12	IC	HD74LS14P		5DDAF00294
J1	JACK UNIT	CQB-40		CQB-40
J45	CONNECTOR	B4P-SHF-1AA		5JWAP00089
L2	COIL	FL-9H471J		5LCAA00089
L3	COIL	LAL04NA330K		5LCAA00196
P36	CONNECTOR	H-6ZCJD00126A		6ZCJD00126
P37	CONNECTOR	H-6ZCJD00124		6ZCJD00124
P38	CONNECTOR	H-6ZCJD00125		6ZCJD00125
PC1	PCB	H-6PCJD00164B		6PCJD00164
PG1	PULSEMOTOR	RES20-50-200-B		5BPAF00004
R1	RESISTOR FXD	ERD-25UJ223T	22K OHM 1/4W	5RDAA01545
R2	RESISTOR FXD	ERD-25UJ562T	1/4W 5.6K OHM	5RDAA01597
R3	RESISTOR FXD	ERD-25UJ123T	1/4W 12K OHM	5RDAA01592
R5	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R6	RESISTOR FXD	ERD-25UJ105T	1/4W 1M OHM	5RDAA01616
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-25UJ103T	10K OHM 1/4W	5RDAA01547

PARTS LIST

TITLE: DISPLAY	CDE-418	SHEET NO. 3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R11	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R12	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R13	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R14	RESISTOR FXD	ERD-25UJ472T	4.7K OHM 1/4W	5RDAA01549
R15	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R16	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R17	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R18	RESISTOR FXD	ERD-25UJ221T	220 OHM 1/4	5RDAA01543
R19	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R20	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R21	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R22	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
R24	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R25	RESISTOR FXD	ERD-25UJ101T	1/4W 100 OHM	5RDAA01599
R26	RESISTOR FXD	ERD-25UJ221T	220 OHM 1/4	5RDAA01543
R29	RESISTOR FXD	ERD-25UJ682T		5RDAA01713
R30	RESISTOR FXD	ERD-25UJ102T	1K OHM 1/4	5RDAA01542
R31	RESISTOR FXD	ERD-25UJ103T	10K OHM 1/4W	5RDAA01547
RA1	RESISTOR	IHR-1/8-4-103JA		5RZAB00936
RV1	RESISTOR VAR	EVH-0XA009A14		5RVAB00261
RV2	RESISTOR VAR	EVH-0XA009A14		5RVAB00261
RV3	RESISTOR VAR	EVH-0XA009B14		5RVAB00262
RV5	RESISTOR VAR	EVH-0XA009B14		5RVAB00262
RV6	RESISTOR VAR	EVH-0XA009B14		5RVAB00262
RV8	RESISTOR VAR	EVH-0XA009B14		5RVAB00262
RV9	RESISTOR VAR	EVH-0XA009B14		5RVAB00262
S1	SWITCH	B3F-1022S		5SCAP00036
S2	SWITCH	B3F-1022S		5SCAP00036
S3	SWITCH	B3F-1022S		5SCAP00036
S4	SWITCH	B3F-1022S		5SCAP00036
S5	SWITCH	B3F-1022S		5SCAP00036
S6	SWITCH	B3F-1022S		5SCAP00036
S7	SWITCH	B3F-1022S		5SCAP00036
S8	SWITCH	B3F-1022S		5SCAP00036
S9	SWITCH	B3F-1022S		5SCAP00036

PARTS LIST

TITLE: DISPLAY	CDE-418	SHEET NO. 4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
S10	SWITCH	B3F-1022S		5SCAP00036
S11	SWITCH	B3F-1022S		5SCAP00036
S12	SWITCH	B3F-1022S		5SCAP00036
S13	SWITCH	B3F-1022S		5SCAP00036
S14	SWITCH	B3F-1022S		5SCAP00036
S15	SWITCH	B3F-1022S		5SCAP00036
S16	SWITCH	B3F-1022S		5SCAP00036
S17	SWITCH	B3F-1022S		5SCAP00036
S18	SWITCH	B3F-1022S		5SCAP00036
S19	SWITCH	B3F-1022S		5SCAP00036
S20	SWITCH	B3F-1022S		5SCAP00036
S21	SWITCH	B3F-1022S		5SCAP00036
S22	SWITCH	B3F-1022S		5SCAP00036
S23	SWITCH	B3F-1022S		5SCAP00036
S24	SWITCH	B3F-1022S		5SCAP00036
S25	SWITCH	B3F-1022S		5SCAP00036
S26	SWITCH	B3F-1022S		5SCAP00036
S27	SWITCH	B3F-1022S		5SCAP00036
S28	SWITCH	B3F-1022S		5SCAP00036
S29	SWITCH	B3F-1022S		5SCAP00036
S30	SWITCH	B3F-1022S		5SCAP00036
S31	SWITCH	B3F-1022S		5SCAP00036
S32	SWITCH	B3F-1022S		5SCAP00036
S33	SWITCH	B3F-1022S		5SCAP00036
S35	SWITCH	D-2023KB AT-451		5SAAB00551
T1	TRANSFORMER	H-6LUJD00017		6LUJD00017
TR1	TRANSISTOR	2SA1015-Y		5TAAG00070
TR2	TRANSISTOR	2SD471L	HFE135-270	5TDAB00020
TR3	TRANSISTOR	2SD471L	HFE135-270	5TDAB00020
X1	TRANSDUCER	CSA8.46MT		5UNAB00033

PARTS LIST

TITLE		SHEET NO.
ACCESSORIES	6ZXJD00018	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
AC1	CONNECTOR	M-P-3		5JAAN00010
AC2	PLUG	AR568-BLK		5JWGC00003
AC3	PLUG	AP-320		5JJAW00033
AC4	PLUG	AP310-BLK		5JJAW00036
AC5	FUSE	MF60NR-1A	1A	5ZFAD00014
AC6	DC CABLE	H-6ZCJD00127		6ZCJD00127

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C2	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C3	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C4	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C5	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C6	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C7	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C8	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C9	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C10	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C11	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C12	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C13	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C14	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C15	CAP,FXD CER	DD104SL0R5C50		5CAAA02174
C16	CAP,FXD CER	DD105CH330J50	50V 33PF	5CAAA00852
C17	CAP,FXD CER	DD104CK010C50	50V 1PF	5CAAA00841
C18	CAP,FXD CER	DD107SL221J50	50V 220PF	5CAAA01105
C19	CAP,FXD CER	DD107CH101J50	50V 100PF	5CAAA00858
C20	CAP,FXD CER	DD104CK010C50	50V 1PF	5CAAA00841
C21	CAP,FXD CER	DD107SL331J50	50V 330PF	5CAAA01106
C22	CAP,FXD CER	DD104SL0R5C50		5CAAA02174
C23	CAP,FXD CER	DD104CK010C50	50V 1PF	5CAAA00841
C24	CAP,FXD CER	DD105CH330J50	50V 33PF	5CAAA00852
C25	CAP,FXD CER	DD105CH330J50	50V 33PF	5CAAA00852
C26	CAP,FXD CER	DD107SL331J50	50V 330PF	5CAAA01106
C27	CAP,FXD CER	DD104SL0R5C50		5CAAA02174
C28	CAP,FXD CER	DD104CK010C50	50V 1PF	5CAAA00841
C29	CAP,FXD CER	DD105CH330J50	50V 33PF	5CAAA00852
C30	CAP,FXD CER	DD105CH330J50	50V 33PF	5CAAA00852
C31	CAP,FXD CER	DD107SL331J50	50V 330PF	5CAAA01106
C32	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C33	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C34	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C35	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C36	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C37	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C38	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C39	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C40	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C41	CAP,FXD CER	DD105SL101J50	50V 100PF	5CAAA01101
C42	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C43	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C44	CAP,FXD CER	DD104CH220J50	50V 22PF	5CAAA00850
C45	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C46	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C47	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C48	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C49	CAP,FXD CER	DD105SL101J50	50V 100PF	5CAAA01101
C50	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C51	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C52	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C53	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C54	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C55	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C56	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C57	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C58	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C59	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C60	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C61	CAP,FXD CER	DD104CH220J50	50V 22PF	5CAAA00850
C62	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C63	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C64	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C65	CAP,FXD CER	DD105SL101J50	50V 100PF	5CAAA01101
C66	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C67	CAP,FXD CER	DD105SL101J50	50V 100PF	5CAAA01101
C68	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C69	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302
C70	CAP,FXD CER	DD104B102K50	50V 1000PF	5CBAB00302

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD1	DIODE	MI301		5TXAR00004
CD2	DIODE	MI301		5TXAR00004
CD3	DIODE	1SS85		5TXAE00085
CD4	DIODE	1SS85		5TXAE00085
CD5	DIODE	1SS85		5TXAE00085
CD6	DIODE	1SS85		5TXAE00085
CD7	DIODE	1SS85		5TXAE00085
CD8	DIODE	1SS85		5TXAE00085
CD9	DIODE	1SS85		5TXAE00085
CD10	DIODE	1SS85		5TXAE00085
CD11	DIODE	1SS85		5TXAE00085
CD12	DIODE	1SS85		5TXAE00085
CD13	DIODE	MI301		5TXAR00004
CD14	DIODE	MI301		5TXAR00004
CD15	DIODE	1SV97		5TXAE00415
CD16	DIODE	1SV97		5TXAE00415
CD17	DIODE	1SV97		5TXAE00415
CD18	DIODE	1SV97		5TXAE00415
CD19	DIODE	1SV97		5TXAE00415
CD20	DIODE	1SV97		5TXAE00415
CD21	DIODE	1SV97		5TXAE00415
CD22	DIODE	1SV97		5TXAE00415
CD23	DIODE	1SV97		5TXAE00415
CD24	DIODE	1SV97		5TXAE00415
CD25	DIODE	1SV97		5TXAE00415
CD26	DIODE	1SV97		5TXAE00415
CD27	DIODE	FC66M-010		5TXAB00035
CD28	DIODE	FC66M-010		5TXAB00035
CD29	DIODE	FC66M-010		5TXAB00035
CD30	DIODE	FC66M-010		5TXAB00035
CD31	DIODE	FC66M-010		5TXAB00035
CD32	DIODE	FC66M-010		5TXAB00035
CD33	DIODE	FC66M-010		5TXAB00035
CD34	DIODE	FC66M-010		5TXAB00035
CD35	DIODE	1S2076S7		5TXAE00355

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD36	DIODE	1S2076S7		5TXAE00355
CD37	DIODE	1S2076S7		5TXAE00355
CD38	DIODE	1S2076S7		5TXAE00355
CD39	DIODE	1SS85		5TXAE00085
CD40	DIODE	1SS85		5TXAE00085
CD41	DIODE	HZ5C1	5V 0.5W	5TXAE00130
CD42	DIODE	ND487C1-3R		5TXAA00334
CD43	DIODE	MI301		5TXAR00004
CV1	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV2	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV3	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV4	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV5	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV6	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV7	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV8	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV9	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV10	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV11	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
CV12	CAPACITOR VAR	TZ03Z070FR		5CVAA00165
FL1	FILTER	7HW TQ252MX-1858A		5LGAE00015
FL2	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
FL3	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
FL4	FILTER	UVS04		5NBAG00006
FL5	FILTER	LP174A1		5NLAT00020
IC1	IC	HD74LS145P		5DDAF00704
J1	CONNECTOR	TMP-J01X-V2		5JWCL00048
J2	CONNECTOR	TMP-J01X-V2		5JWCL00048
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

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
JP8	TIN COATED WIRE	TA-0.6P		2717100001
JP9	TIN COATED WIRE	TA-0.6P		2717100001
JP10	TIN COATED WIRE	TA-0.6P		2717100001
K1	RELAY	G5Y-154P 9V		5KLAF00354
K2	RELAY	G5Y-154P 9V		5KLAF00354
KC1	CABLE	H-6ZCJD00128		6ZCJD00128
KC2	CABLE	H-6ZCJD00128		6ZCJD00128
L3	COIL			6ZZAB00009
L4	COIL			6ZZAB00009
L5	COIL			6ZZAB00009
P33	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P34	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00166B		6PCJD00166
R1	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321
R2	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R3	RESISTOR FXD	ERD-25UJ680	1/4W 68 OHM	5RDAA01317
R4	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R5	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R6	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R7	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R8	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R9	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R10	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R11	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R12	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R13	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R14	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R15	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R16	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R17	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R18	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R19	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R20	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R21	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R22	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R23	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R24	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R25	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R26	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R27	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R28	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R29	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R30	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R31	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R32	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R33	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R34	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R35	RESISTOR FXD	ERD-25UJ561	1/4W 560 OHM	5RDAA01339
R36	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R37	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321
R38	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R39	RESISTOR FXD	ERD-25UJ680	1/4W 68 OHM	5RDAA01317
R40	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R41	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R42	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R43	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R44	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R45	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321
R46	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R47	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R48	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R49	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R50	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R51	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R52	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R53	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R54	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R55	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R56	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R57	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	7

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R58	RESISTOR FXD	ERD-25UJ330	1/4W 33 OHM	5RDAA01309
R59	RESISTOR FXD	ERD-25UJ821	1/4W 820 OHM	5RDAA01343
R60	RESISTOR FXD	ERD-25UJ100	1/4W 10 OHM	5RDAA01297
R61	RESISTOR FXD	ERD-25UJ332	1/4W 3.3K OHM	5RDAA01357
R62	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321
R63	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R64	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R65	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R66	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R67	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321
R68	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R69	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R70	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
RA1	RESISTOR	IHR-5-473JA	47K OHM X5	5RZAB00419
RV1	RESISTOR VAR	EVN-D1AA00B22		5RVAB00320
RV2	RESISTOR VAR	EVN-D1AA00B14		5RVAB00324
T1	RF XFMR	H-6LHJD00443		6LHJD00443
T2	RF XFMR	H-6LHJD00443		6LHJD00443
T3	RF XFMR	H-6LHJD00444		6LHJD00444
T4	RF XFMR	H-6LHJD00444		6LHJD00444
T5	RF XFMR	H-6LHJD00407A		6LHJD00407
T6	RF XFMR	H-6LHJD00407A		6LHJD00407
T7	RF XFMR	H-6LHJD00408A		6LHJD00408
T8	RF XFMR	H-6LHJD00408A		6LHJD00408
T9	RF XFMR	H-6LHJD00409A		6LHJD00409
T10	RF XFMR	H-6LHJD00409A		6LHJD00409
T11	RF XFMR	H-6LHJD00297		6LHJD00297
T12	RF XFMR	H-6LHJD00445		6LHJD00445
T13	RF XFMR	H-6LHJD00445		6LHJD00445
T14	RF XFMR	H-6LHJD00445		6LHJD00445
T15	RF XFMR	H-6LHJD00297		6LHJD00297
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SC1988		5TCAB00135

PARTS LIST

TITLE		SHEET NO.
V-UHF CONV	CHE-85	8

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
TR2	TRANSISTOR	3SK129-P2		5TKAK00005
TR3	TRANSISTOR	2SC1260		5TCAB00025
TR4	TRANSISTOR	2SA1015-Y		5TAAG00070
TR5	TRANSISTOR	2SC1260		5TCAB00025
TR6	TRANSISTOR	2SC1260		5TCAB00025
TR7	TRANSISTOR	3SK77-GR		5TKAA00108
TR8	TRANSISTOR	2SA1015-Y		5TAAG00070

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
A1	MIXER	M8-8P		5EZAT00006
C1	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C2	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C3	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C4	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C5	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C6	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C7	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C8	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C9	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C10	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C11	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C12	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C13	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C14	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C15	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C16	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C17	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C18	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C19	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C20	CAP,FXD CER	C3216CH1H010C-E-TP	1PF	5CAAD00795
C21	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C22	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C23	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C24	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C25	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C26	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C27	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C28	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C29	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C30	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C31	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C32	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C33	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C34	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C35	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C36	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C37	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C38	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C39	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C40	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C41	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C42	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C43	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C44	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C45	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C46	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C47	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C48	CAP,FXD TANTAL	202L2502 475M4	4.7UF 25V	5CSAC00344
C49	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C50	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C51	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C52	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C53	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C54	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C55	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C56	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C57	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C58	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C59	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C60	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C61	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C62	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C63	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C64	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C65	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C66	CAP,FXD CER	C3216CH1H0R5C-E-TP		5CAAD00976
C67	CAP,FXD CER	C3216CH1H010C-E-TP	1PF	5CAAD00795
C68	CAP,FXD CER	C3216CH1H0R5C-E-TP		5CAAD00976
C69	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C70	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C71	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C72	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C73	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C74	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C75	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C76	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C77	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C78	CAP,FXD CER	C3216CH1H020C-E-TP	2P	5CAAD00798
C79	CAP,FXD CER	C3216CH1H070D-E-TP		5CAAD00977
C80	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C81	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C82	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C83	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
C84	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C85	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
C86	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C87	CAP,FXD CER	C3216CH1H120J-E-TP	12P	5CAAD00784
C88	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C89	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C90	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930
C91	CAP,FXD CER	C3216CH1H820J-E-TP	82P	5CAAD00930
C92	CAP,FXD CER	C3216CH1H330J-E-TP	33P	5CAAD00794
C93	CAP,FXD CER	C3216CH1H121J-E-TP	120PF	5CAAD00931
C94	CAP,FXD CER	C3216CH1H100D-E-TP	10PF	5CAAD00785
C95	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C96	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C97	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C98	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C99	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C100	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C101	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C102	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C103	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C104	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C105	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C106	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C107	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C108	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C109	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C110	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C111	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C112	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C113	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C114	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C115	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C116	CAP,FXD CER	C3216B1H103K-E-TP	0.01UF	5CAAD00789
C117	CAP,FXD CER	C3216F1H104Z-E-TP	0.1UF	5CAAD01056
C118	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C119	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C120	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C121	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C122	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C123	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C124	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C125	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C126	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C127	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C128	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C129	CAP,FXD CER	C3216CH1H0R5C-E-TP		5CAAD00976
C131	CAP,FXD CER	C3216CH1H0R5C-E-TP		5CAAD00976
C132	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C133	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C134	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C135	CAP,FXD CER	C3216CH1H030C-E-TP	3PF	5CAAD00796
C136	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
C137	CAP,FXD CER	C3216SL1H102J-E-TP	1000P	5CAAD00782
C138	CAP,FXD ELCTLT	ECE-A1EU101	25V 100UF	5CEAA01839
C139	CAP,FXD CER	C3216CH1H101J-E-TP	100PF	5CAAD00780
CD1	DIODE	1SV68		5TXAE00170

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD2	DIODE	1SV68		5TXAE00170
CD4	DIODE	1SS226 TE85L		5TXAD00320
CD5	DIODE	1S2208(B)		5TXAA00549
CD6	DIODE	1S2208(B)		5TXAA00549
CD8	DIODE	1SS226 TE85L		5TXAD00320
CD9	DIODE	1S2208(B)		5TXAA00549
CD10	DIODE	1S2208(B)		5TXAA00549
CD12	DIODE	1SS226 TE85L		5TXAD00320
CD13	DIODE	1S2208(B)		5TXAA00549
CD15	DIODE	1SS226 TE85L		5TXAD00320
CD16	DIODE	1SS226 TE85L		5TXAD00320
CD17	DIODE	1SS226 TE85L		5TXAD00320
CD18	DIODE	1SS226 TE85L		5TXAD00320
CD19	DIODE	1SS226 TE85L		5TXAD00320
CD20	DIODE	1SS226 TE85L		5TXAD00320
CD21	DIODE	1SS226 TE85L		5TXAD00320
CD22	DIODE	1SS226 TE85L		5TXAD00320
CD23	DIODE	1SS226 TE85L		5TXAD00320
CD24	DIODE	1SS226 TE85L		5TXAD00320
CD25	DIODE	1SS226 TE85L		5TXAD00320
CD26	DIODE	1SS226 TE85L		5TXAD00320
CD27	DIODE	1SS181 TE85L		5TXAD00356
CD28	DIODE	1SS226 TE85L		5TXAD00320
CD29	DIODE	1SS226 TE85L		5TXAD00320
CD30	DIODE	1SS226 TE85L		5TXAD00320
CD31	DIODE	1SS226 TE85L		5TXAD00320
CD32	DIODE	1SS226 TE85L		5TXAD00320
CD33	DIODE	1SS226 TE85L		5TXAD00320
CD34	DIODE	1SS226 TE85L		5TXAD00320
CD35	DIODE	1SS226 TE85L		5TXAD00320
CD36	DIODE	1SS181 TE85L		5TXAD00356
CD37	DIODE	1SS181 TE85L		5TXAD00356
CV1	CAPACITOR VAR	TZ03Z050FR	1.5-5PF	5CVAA00169
FL1	FILTER	HP5803		5NHAD00001
FL2	FILTER	UVS04		5NBAG00006

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	6

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
FL3	FILTER	UVS04		5NBAG00006
FL4	FILTER	BPTB1		5NBAG00015
FL5	FILTER	LP163A1		5NLAT00013
FL6	FILTER	HP5803		5NHAD00001
FL7	FILTER	BPEB1		5NBAG00011
FL8	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
FL9	FILTER	DS310-55B222M	100V 0.0022UF	5NXAA00002
IC1	IC	HD74LS145P		5DDAF00704
IC2	IC	MC4044P		5DDAS00002
IC3	IC	TC74HC161P		5DDAE00430
IC4	IC	TC74HC161P		5DDAE00430
IC5	IC	HD10551P		5DDAF00953
IC6	IC	UPB582C		5DDAC00504
IC7	IC	UPC1651G		5DAAA00171
IC8	IC	UPC1651G		5DAAA00171
IC9	IC	UPC1651G		5DAAA00171
IC10	IC	UPC1651G		5DAAA00171
IC11	IC	UPC1651G		5DAAA00171
L1	COIL	H-6LAJD00253		6LAJD00253
L2	COIL	LAL03VB1R0M	1UH	5LCAA00282
L3	COIL	LAL03VB1R0M	1UH	5LCAA00282
L4	COIL	H-6LAJD00254		6LAJD00254
L5	COIL	LAL03VBR33M	0.33UH	5LCAA00274
L6	COIL	LAL03VBR33M	0.33UH	5LCAA00274
L7	COIL	H-6LAJD00255		6LAJD00255
L8	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L9	COIL	LAL03VBR22M	0.22UH	5LCAA00280
L10	COIL	H-6LAJD00256		6LAJD00256
L11	COIL	H-6LAJD00212		6LAJD00212
L12	COIL	H-6LAJD00212		6LAJD00212
L13	TIN COATED WIRE	TA-0.6P		2717100001
L14	TIN COATED WIRE	TA-0.6P		2717100001
L15	COIL	LAL03VB471K	470UH	5LCAA00270
L16	COIL	H-6LAJD00257		6LAJD00257
L17	COIL	H-6LAJD00257		6LAJD00257

PARTS LIST

	TITLE		SHEET NO.
	V.VHF LOCAL	CGA-118	7

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
L18	COIL	H-6LAJD00257		6LAJD00257
L19	COIL	H-6LAJD00258		6LAJD00258
L20	COIL	H-6LAJD00258		6LAJD00258
L21	COIL	H-6LAJD00258		6LAJD00258
L22	COIL	H-6LAJD00258		6LAJD00258
L23	COIL	H-6LAJD00258		6LAJD00258
L24	COIL	H-6LAJD00258		6LAJD00258
L25	COIL	LAL03VBR33M	0.33UH	5LCAA00274
L26	COIL	H-6LAJD00212		6LAJD00212
L27	COIL	H-6LAJD00212		6LAJD00212
P25	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P26	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00167B		6PCJD00167
R1	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R2	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R3	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R4	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R5	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R6	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R7	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R8	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R9	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R10	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R11	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R12	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R13	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R14	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R15	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R16	RESISTOR FXD	ERJ-8GCSJ473T	1/8W 47K OHM	5REAG00578
R17	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R18	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R19	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R20	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R21	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R22	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586

PARTS LIST

	TITLE		SHEET NO.
	V.VHF LOCAL	CGA-118	8

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R23	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R24	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R25	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R26	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R27	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R28	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R29	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R30	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R31	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R32	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R33	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R34	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R35	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R36	RESISTOR FXD	ERJ-8GCSJ562T	1/8W 5.6K OHM	5REAG00625
R37	RESISTOR FXD	ERJ-8GCSJ474T	1/8W 470K OHM	5REAG00593
R38	RESISTOR FXD	ERJ-8GCSJ222T	1/8W 2.2K OHM	5REAG00575
R39	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R40	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R41	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R42	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R43	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R44	RESISTOR FXD	ERJ-8GCSJ330T	1/8W 33 OHM	5REAG00620
R45	RESISTOR FXD	ERJ-8GCSJ331T	1/8W 330 OHM	5REAG00597
R46	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R47	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R48	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R49	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R50	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R51	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R52	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R53	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R54	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R55	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R56	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R57	RESISTOR FXD	ERJ-8GCSJ223T	1/8W 22K OHM	5REAG00581

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	9

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R58	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R59	RESISTOR FXD	ERJ-8GCSJ221T	1/8W 220 OHM	5REAG00594
R60	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R62	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R63	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R64	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R65	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R66	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R67	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R68	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R69	RESISTOR FXD	ERJ-8GCSJ471T	1/8W 470 OHM	5REAG00579
R70	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R71	RESISTOR FXD	ERJ-8GCSJ220T	1/8W 22 OHM	5REAG00619
R72	RESISTOR FXD	ERJ-8GCSJ470T	1/8W 47 OHM	5REAG00580
R73	RESISTOR FXD	ERJ-8GCSJ220T	1/8W 22 OHM	5REAG00619
R74	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R75	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R76	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R77	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R78	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R79	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R80	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R81	RESISTOR FXD	ERJ-8GCSJ102T	1/8W 1K OHM	5REAG00572
R82	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R83	RESISTOR FXD	ERJ-8GCSJ151T	1/8W 150 OHM	5REAG00583
R84	RESISTOR FXD	ERJ-8GCSJ100T	1/8W 10 OHM	5REAG00617
R85	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R86	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R87	RESISTOR FXD	ERJ-8GCSJ101T	1/8W 100 OHM	5REAG00586
R89	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R90	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R91	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R92	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
R93	RESISTOR FXD	ERJ-8GCSJ472T	1/8W 4.7K OHM	5REAG00573
R94	RESISTOR FXD	ERJ-8GCSJ561T	1/8W 560 OHM	5REAG00571

PARTS LIST

TITLE		SHEET NO.
V.VHF LOCAL	CGA-118	10

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R95	RESISTOR FXD	ERJ-8GCSJ680		5REAG00495
R96	RESISTOR FXD	ERJ-8GCSJ103	1/8W 10K OHM	5REAG00517
R97	RESISTOR FXD	ERJ-8GCSJ103T	1/8W 10K OHM	5REAG00576
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
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
TP8	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP9	TEST TERMINAL	PCN6-PEA		5JDAA00364
TR1	TRANSISTOR	2SK192A-BL		5TKAA00080
TR2	TRANSISTOR	2SK192A-BL		5TKAA00080
TR3	TRANSISTOR	2SK192A-BL		5TKAA00080
TR4	TRANSISTOR	2SK192A-BL		5TKAA00080
TR5	TRANSISTOR	2SK192A-BL		5TKAA00080
TR6	TRANSISTOR	2SC2714-O		5TCAF00407
TR7	TRANSISTOR	2SC2714-O		5TCAF00407
TR8	TRANSISTOR	2SC2714-O		5TCAF00407
TR9	TRANSISTOR	2SA1162-Y TE85L		5TAAG00182
TR10	TRANSISTOR	2SC2714-O		5TCAF00407
TR11	TRANSISTOR	2SA817A-Y		5TAAG00229
TR12	TRANSISTOR	2SA817A-Y		5TAAG00229
TR13	TRANSISTOR	2SC2714-O		5TCAF00407

PARTS LIST

TITLE		SHEET NO.
ACCESSORIES	CMK-165-F	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
AC1	LEVER	MTD000776		MTD000776
AC2	LEVER	MTD000776		MTD000776
AC3	CASE	CMK-165		5ZXAM00003
AC5	MANUAL	CMK-165		6ZXJD00022

PARTS LIST

TITLE		SHEET NO.
RTTY DEMO	CMH-530	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C2	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C3	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C4	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C5	CAP,FXD TANTAL	202L2502 106M4	10UF 25V	5CSAC00324
C6	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C7	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C8	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C9	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C10	CAP,FXD PLSTC	501N5002 103K1	50V 0.01UF	5CRAC00009
C11	CAP,FXD PLSTC	501N5002 103K1	50V 0.01UF	5CRAC00009
C12	CAP,FXD TANTAL	202L3502 474M5 471	35V 0.47UF	5CSAC00825
C13	CAP,FXD TANTAL	202L3502 474M5 471	35V 0.47UF	5CSAC00825
C14	CAP,FXD TANTAL	202L2502 106M4	10UF 25V	5CSAC00324
C15	CAP,FXD TANTAL	202L2502 106M4	10UF 25V	5CSAC00324
C16	CAP,FXD PLSTC	501N5002 224K1	50V 0.22UF	5CRAC00017
C17	CAP,FXD PLSTC	501N5002 473K1	50V 0.047UF	5CRAC00013
C18	CAP,FXD PLSTC	501N5002 103K1	50V 0.01UF	5CRAC00009
C19	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C20	CAP,FXD TANTAL	202L3502 105M5471	35V 1UF	5CSAC00796
C21	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C22	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C23	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C24	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C25	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C26	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C27	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C28	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C29	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C30	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C31	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C32	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C33	CAP,FXD PLSTC	501N5002 103K1	50V 0.01UF	5CRAC00009
C34	CAP,FXD PLSTC	501N5002 103K1	50V 0.01UF	5CRAC00009
CD1	DIODE	1S2076S7		5TXAE00355

PARTS LIST

TITLE		SHEET NO.
RTTY DEMO	CMH-530	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD2	DIODE	1S2076S7		5TXAE00355
CD3	DIODE	1S2076S7		5TXAE00355
CD4	DIODE	1S2076S7		5TXAE00355
CD5	DIODE	1S2076S7		5TXAE00355
CD6	DIODE	1S2076S7		5TXAE00355
CD7	DIODE	1S2076S7		5TXAE00355
CD8	LED	TLR102A		5TZAD00020
CD9	LED	TLR102A		5TZAD00020
CP1	PHOTO COUPLER	P1501		5TZCS00004
CP2	PHOTO COUPLER	P1501		5TZCS00004
IC1	IC	TC74HC138P		5DDAE00440
IC2	IC	MSM82C51ARS		5DDAG00110
IC3	IC	MSM82C55A-5RS		5DDAG00102
IC4	IC	TC9122P		5DDAE00281
IC5	IC	TC74HC160P		5DDAE00446
IC8	IC	HD7406P		5DDAF00113
IC9	IC	HD74LS05P		5DDAF00291
IC10	IC	NJM3403AD		5DAAN00085
IC11	IC	NJM3403AD		5DAAN00085
IC12	IC	NJM3403AD		5DAAN00085
IC13	IC	NJM3403AD		5DAAN00085
IC14	IC	NJM3403AD		5DAAN00085
IC15	IC	NJM3403AD		5DAAN00085
IC16	IC	TC4066BP		5DDAE00078
IC17	IC	TC4030BP		5DDAE00050
L1	COIL	FL-5H101K	100UH	5LCAA00013
L2	COIL	FL-5H101K	100UH	5LCAA00013
P15	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
P16	CONNECTOR	EC1C-22P-2.5DSA	22P	5JWBS00070
PC1	PCB	H-6PCJD00169A		6PCJD00169
R1	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R2	RESISTOR FXD	ERD-25UJ105	1/4W 1M OHM	5RDAA01417
R3	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R4	RESISTOR FXD	ERD-25UJ473	1/4W 47K OHM	5RDAA01385
R5	RESISTOR FXD	ERD-25UJ101	1/4W 100 OHM	5RDAA01321

PARTS LIST

TITLE: RTTY DEMO / CMH-530	SHEET NO. 3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R6	RESISTOR FXD	ERD-25UJ473	1/4W 47K OHM	5RDAA01385
R7	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345
R8	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R9	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R10	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R11	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R12	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R13	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R14	RESISTOR FXD	ERD-25UJ333	1/4W 33K OHM	5RDAA01381
R15	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R16	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R17	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R18	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R19	RESISTOR FXD	ERD-25UJ222	1/4W 2.2K OHM	5RDAA01353
R20	RESISTOR FXD	ERD-25UJ682	1/4W 6.8K OHM	5RDAA01365
R21	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R22	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R23	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R24	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R25	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R26	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R27	RESISTOR FXD	ERD-25UJ224	1/4W 220K OHM	5RDAA01401
R28	RESISTOR FXD	ERD-25UJ222	1/4W 2.2K OHM	5RDAA01353
R29	RESISTOR FXD	ERD-25UJ332	1/4W 3.3K OHM	5RDAA01357
R30	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R31	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R32	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R33	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R34	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R35	RESISTOR FXD	ERD-25UJ682	1/4W 6.8K OHM	5RDAA01365
R36	RESISTOR FXD	ERD-25UJ223	1/4W 22K OHM	5RDAA01377
R37	RESISTOR FXD	ERD-25UJ223	1/4W 22K OHM	5RDAA01377
R38	RESISTOR FXD	ERD-25UJ223	1/4W 22K OHM	5RDAA01377
R42	RESISTOR FXD	ERD-25UJ182	1/4W 1.8K OHM	5RDAA01351
R43	RESISTOR FXD	ERD-25UJ102	1/4W 1K OHM	5RDAA01345

PARTS LIST

TITLE: RTTY DEMO / CMH-530	SHEET NO. 4

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R44	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R45	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R46	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R47	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R48	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R49	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R50	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R51	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R52	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R53	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R54	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R55	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393
R56	RESISTOR FXD	ERD-25UJ474	1/4W 470K OHM	5RDAA01409
R57	RESISTOR FXD	ERD-25UJ183	1/4W 18K OHM	5RDAA01375
R58	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R59	RESISTOR FXD	ERD-25UJ333	1/4W 33K OHM	5RDAA01381
R60	RESISTOR FXD	ERD-25UJ333	1/4W 33K OHM	5RDAA01381
R61	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R62	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R63	RESISTOR FXD	ERD-25UJ105	1/4W 1M OHM	5RDAA01417
R64	RESISTOR FXD	ERD-25UJ153	1/4W 15K OHM	5RDAA01373
R65	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R66	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R67	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R68	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R69	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R70	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R71	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R72	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R73	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R74	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R75	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R76	RESISTOR FXD	ERD-25UJ103	1/4W 10K OHM	5RDAA01369
R77	RESISTOR FXD	ERD-25UJ221	1/4W 220 OHM	5RDAA01329
R78	RESISTOR FXD	ERD-25UJ104	1/4W 100K OHM	5RDAA01393

PARTS LIST

TITLE			SHEET NO.
RTTY DEMO	CMH-530		5

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
RA1	RESISTOR	IHR-8-103JA	10K OHM X8	5RZAB00136
RA2	RESISTOR	IHR-4-103JA	10K OHM X4 1/8W	5RZAB00133
RV1	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV2	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV3	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV4	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV5	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV6	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
RV7	RESISTOR VAR	GF06P-10K OHM	10K OHM	5RMAB00053
TP1	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP2	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP3	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP4	TEST TERMINAL	PCN6-PEA		5JDAA00364
TP5	TEST TERMINAL	PCN6-PEA		5JDAA00364

PARTS LIST

TITLE		SHEET NO.
ACCESSORIES	CMH-530-F	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
AC1	LEVER	MTD000776		MTD000776
AC2	LEVER	MTD000776		MTD000776
AC3	CASE	CMH-530		5ZXAM00001
AC4	MANUAL	CMH-530		6ZXJD00019
AC5	INDI UNIT	CKJ-61 6EZJD00008		6EZJD00008
AC6	CNNECTOR	67096-012		5JWBE00142
AC7	RECEPTACLE	76630-001		5JWBE00143

PARTS LIST

TITLE		SHEET NO.
INTERFACE	CMH-532	1

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
C1	CAP,FXD CER	DD107SL221J50	50V 220PF	5CAAA01105
C2	CAP,FXD CER	DD107SL221J50	50V 220PF	5CAAA01105
C3	CAP,FXD CER	DD107SL221J50	50V 220PF	5CAAA01105
C4	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C5	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C6	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C7	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C8	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C9	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C10	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C11	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C12	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C13	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C14	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C15	CAP,FXD TANTAL	245M3502 105M	35V 1UF	5CSAC00709
C16	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C17	CAP,FXD CER	DD104SL330J50	50V 33PF	5CAAA01095
C18	CAP,FXD CER	DD104SL330J50	50V 33PF	5CAAA01095
C101	CAP,FXD ELCTLT	ECE-A1ES100	25V10UF	5CEAA01348
C102	CAP,FXD CER	DD106F103Z50	50V 10000PF	5CBAB00400
C103	CAP,FXD ELCTLT	ECE-A1HS4R7	50V4.7UF	5CEAA01372
C104	CAP,FXD ELCTLT	ECE-A1HS4R7	50V4.7UF	5CEAA01372
C105	CAP,FXD TANTAL	202L2502 475M4	4.7UF 25V	5CSAC00344
C106	CAP,FXD TANTAL	202L2502 475M4	4.7UF 25V	5CSAC00344
C107	CAP,FXD TANTAL	202L2502 475M4	4.7UF 25V	5CSAC00344
C108	CAP,FXD TANTAL	202L2502 475M4	4.7UF 25V	5CSAC00344
CD1	DIODE	TLP504A		5DZAD00033
CD2	DIODE	TLP504A		5DZAD00033
CD3	DIODE	TLP504A		5DZAD00033
CD4	DIODE	TLP504A		5DZAD00033
CD101	DIODE	1SS149H		5TXAE00181
CD102	DIODE	1SS149H		5TXAE00181
CD103	DIODE	1S2076S7		5TXAE00355
CD104	DIODE	1S2076S7		5TXAE00355
CD105	DIODE	1S2076S7		5TXAE00355

PARTS LIST

TITLE		SHEET NO.
INTERFACE	CMH-532	2

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
CD106	DIODE	1S2076S7		5TXAE00355
CD107	DIODE	1S2076S7		5TXAE00355
CD108	DIODE	1S2076S7		5TXAE00355
CD109	DIODE	1S2076S7		5TXAE00355
CD110	DIODE	1S2076S7		5TXAE00355
CD111	DIODE	1S2076S7		5TXAE00355
CD112	DIODE	1S2076S7		5TXAE00355
CD113	DIODE	HZ12A2	1/2W 12V	5TXAE00235
CD114	DIODE	HZ12A2	1/2W 12V	5TXAE00235
IC1	IC	TC4050BP	MOS	5DDAE00073
IC3	IC	TC4069UBP	MOS	5DDAE00045
IC4	IC	SN75188N		5DDAL00409
IC5	IC	SN75189AN		5DDAL00460
IC6	IC	TA78L005AP		5DAAD00048
IC7	IC	TC9122P		5DDAE00281
IC8	IC	TC74HC573P		5DDAE00631
IC9	IC	TC74HC32P		5DDAE00427
IC10	IC	MSM82C51ARS		5DDAG00110
J47	CONNECTOR	67095-010	10P	5JWFS00011
J50	SPACER	KGLS-10S		5ZJEB00003
KC1	CABLE	H-6ZCJD00141		6ZCJD00141
L1	COIL	LAL04NA100K		5LCAA00191
L2	COIL	LAL04NA100K		5LCAA00191
L101	COIL	LAL04NA100K		5LCAA00191
P45	CONNECTOR	HKP-10M2		5JJAA00075
P46	CONNECTOR	HKP-12M2		5JJAA00089
PC1	PCB	H-6PCJD00186B		6PCJD00186
R1	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R2	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R3	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R4	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R5	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R6	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R7	RESISTOR FXD	ERD-25UJ681	1/4W 680 OHM	5RDAA01341
R8	RESISTOR FXD	ERD-25UJ105	1/4W 1M OHM	5RDAA01417

PARTS LIST

TITLE		SHEET NO.
INTERFACE	CMH-532	3

PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
R9	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R10	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R11	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R12	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R13	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R14	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R15	RESISTOR FXD	ERD-25UJ472	1/4W 4.7K OHM	5RDAA01361
R101	RESISTOR FXD	ERD-25UJ100	1/4W 10 OHM	5RDAA01297
R102	RESISTOR FXD	ERD-25UJ820	1/4W 82 OHM	5RDAA01319
R103	RESISTOR FXD	ERD-25UJ820	1/4W 82 OHM	5RDAA01319
R104	RESISTOR FXD	ERD-25UJ562	1/4W 5.6K OHM	5RDAA01363
R105	RESISTOR FXD	ERD-25UJ332	1/4W 3.3K OHM	5RDAA01357
R106	RESISTOR FXD	ERD-25UJ332	1/4W 3.3K OHM	5RDAA01357
T101	TRANSFORMER	H-6LUJD00018		6LUJD00018
TR101	TRANSISTOR	2SC1627A-Y		5TCAF00532
TR102	TRANSISTOR	2SC1627A-Y		5TCAF00532
TR103	TRANSISTOR	2SC1627A-Y		5TCAF00532
TR104	TRANSISTOR	2SA817A-Y		5TAAG00229
X1	CRYSTAL	NC-18C F=3.6864MHZ		5XHAA00527

PARTS LIST

TITLE			SHEET NO.
ACCESSORIES	CMH-532-F		1

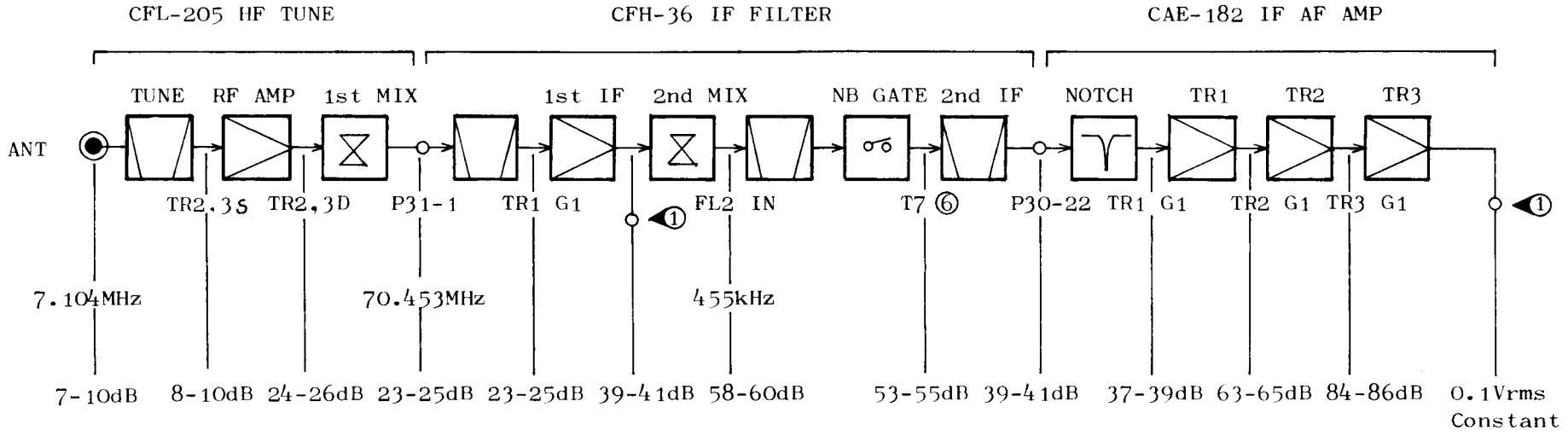
PARTS NO	PARTS NAME	TYPE	DESCRIPTION	CODE
AC1	LEVER	MTD000776		MTD000776
AC2	LEVER	MTD000776		MTD000776
AC3	CASE	CMH-532		5ZXAM00002
AC4	MANUAL	CMH-532		6ZXJD00020
AC5	CONNECTOR	RP17-13P-12PC		5JCAA00518
AC6	CONNECTOR	RP17-PC-112		5JCAA00519

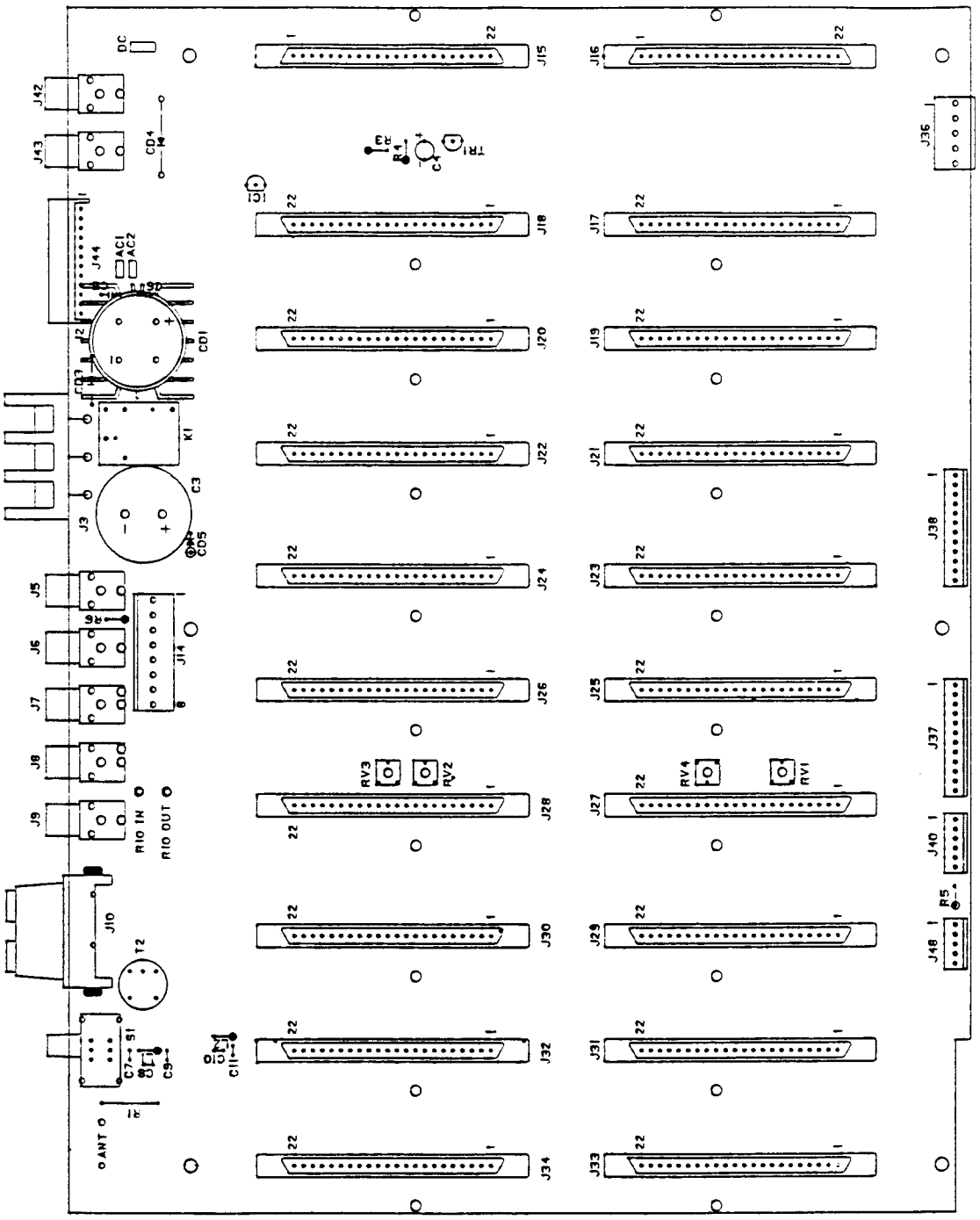
5. APPENDIX DRAWINGS

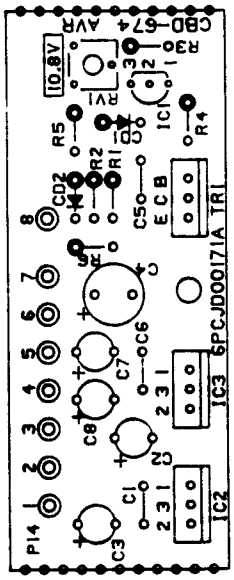
CONTENTS

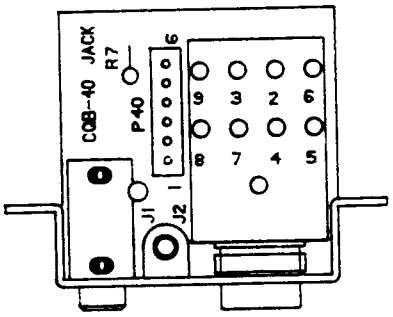
NRD-525 LEVEL DIAGRAM

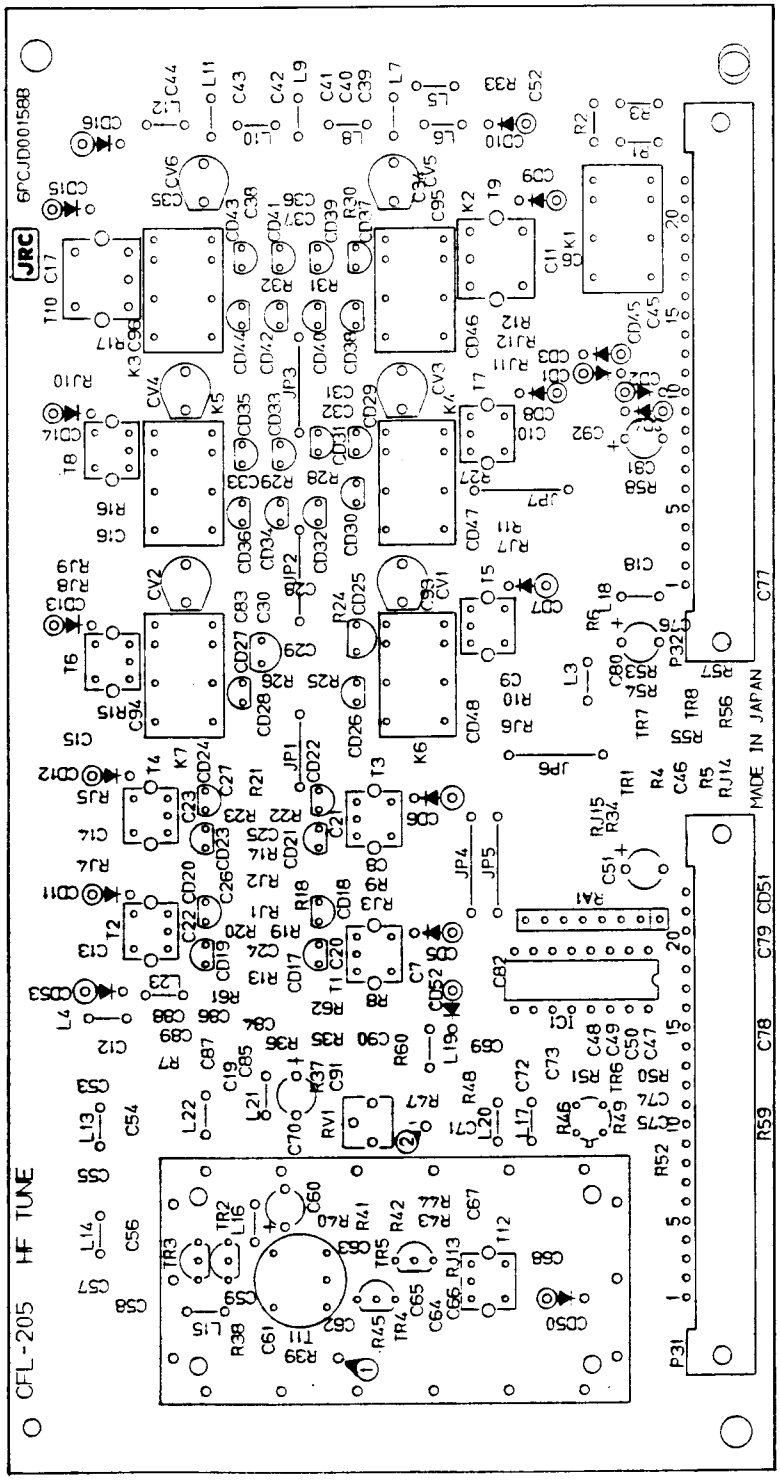
FR :7.104MHz
B.W :WIDE
MODE :DSB
RF GAIN:MAX
AGC :OFF
SSG :50 OHM

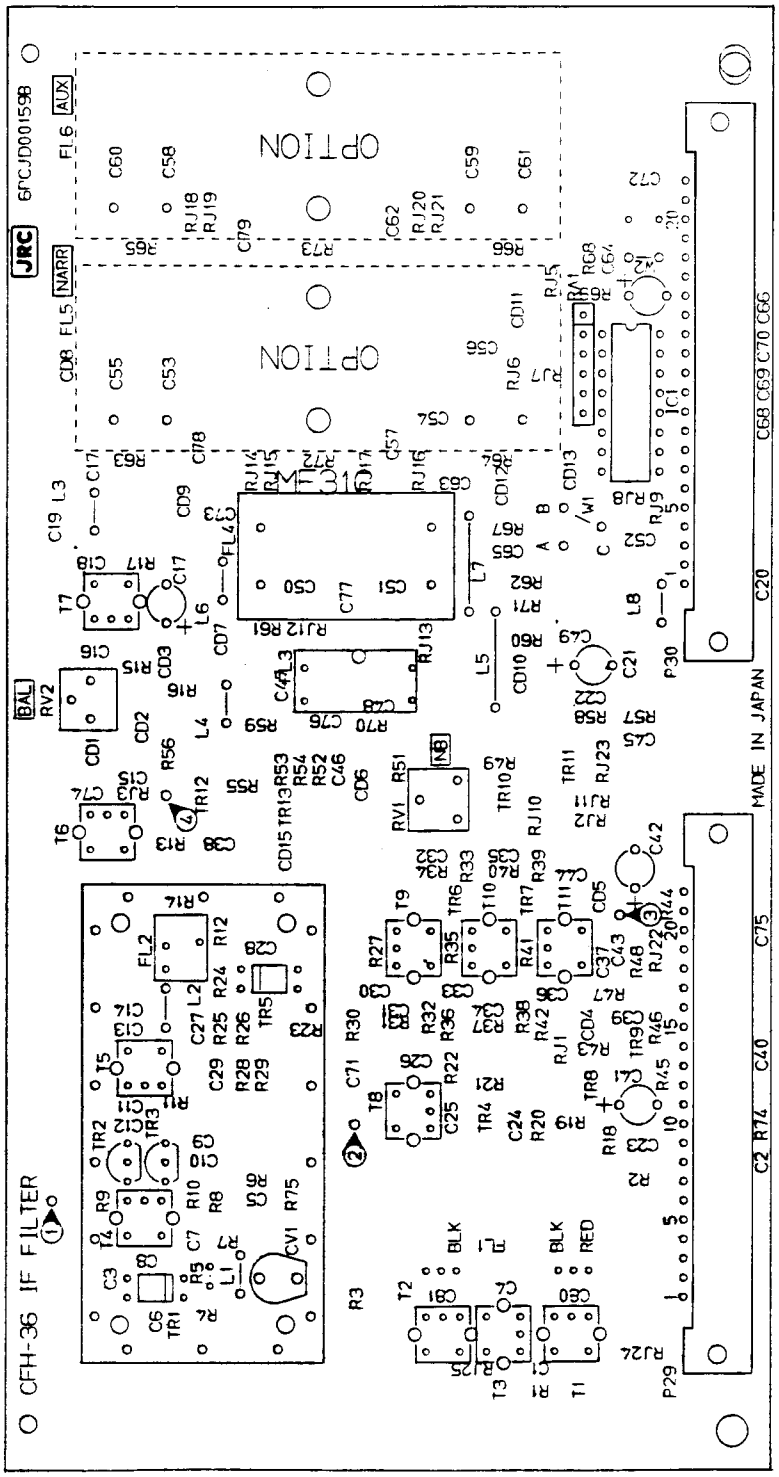


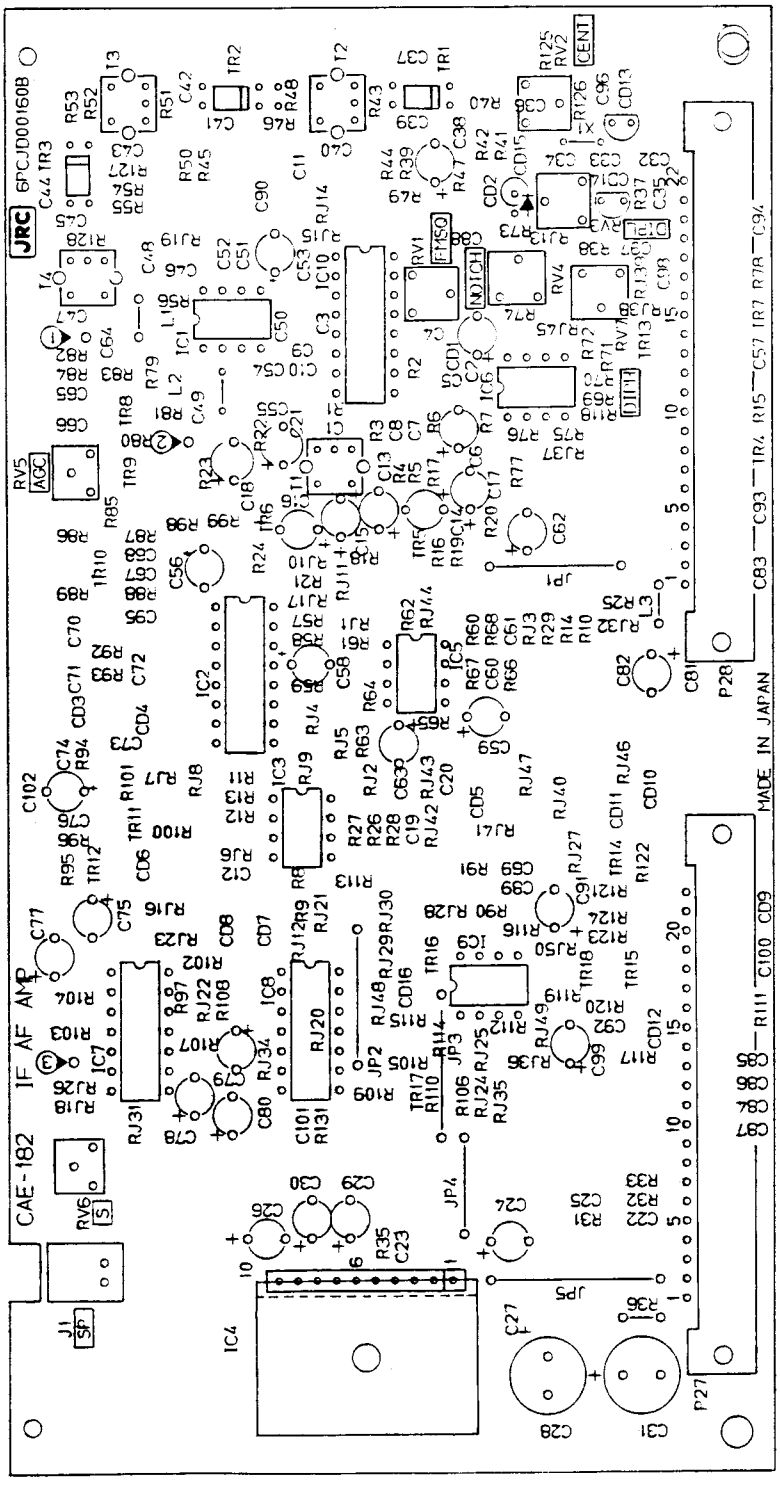


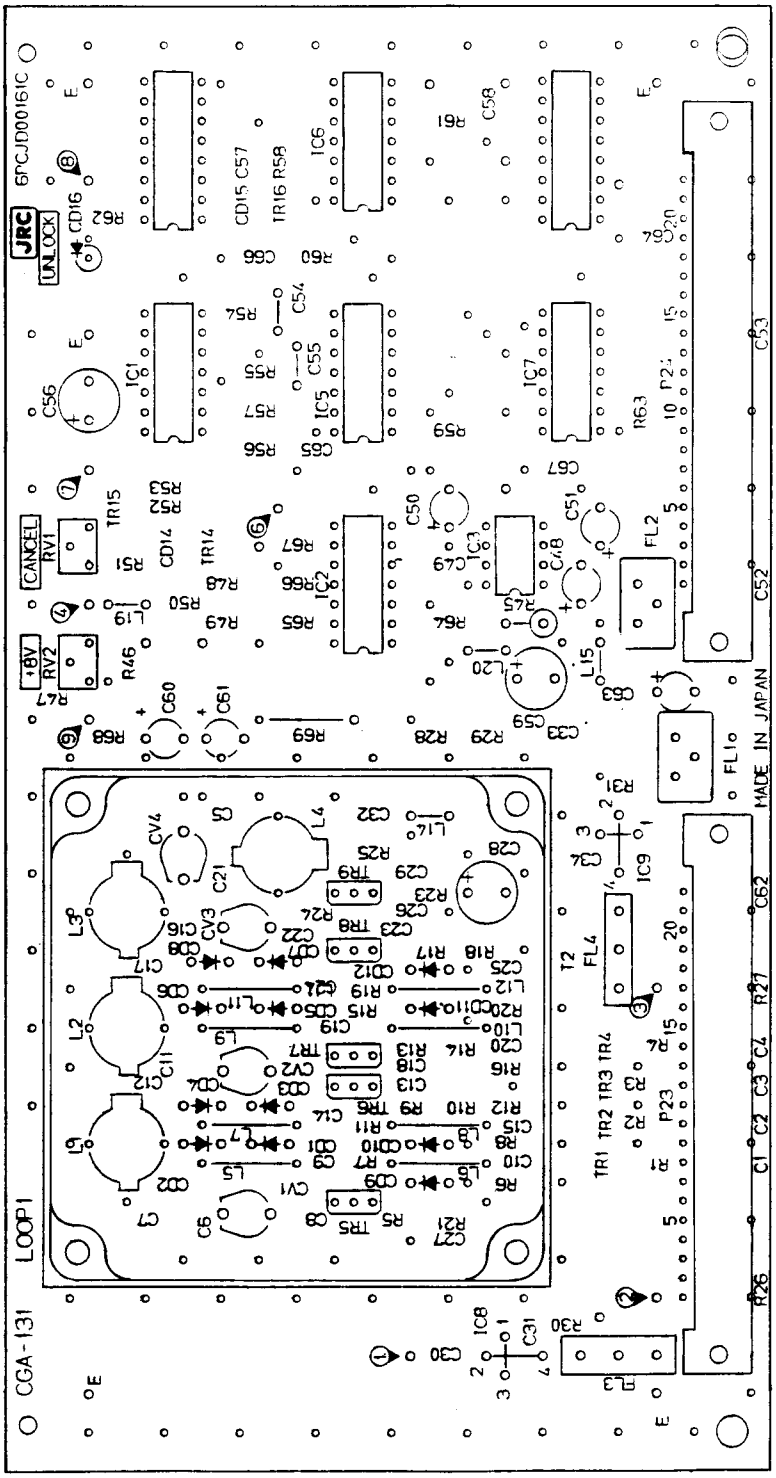


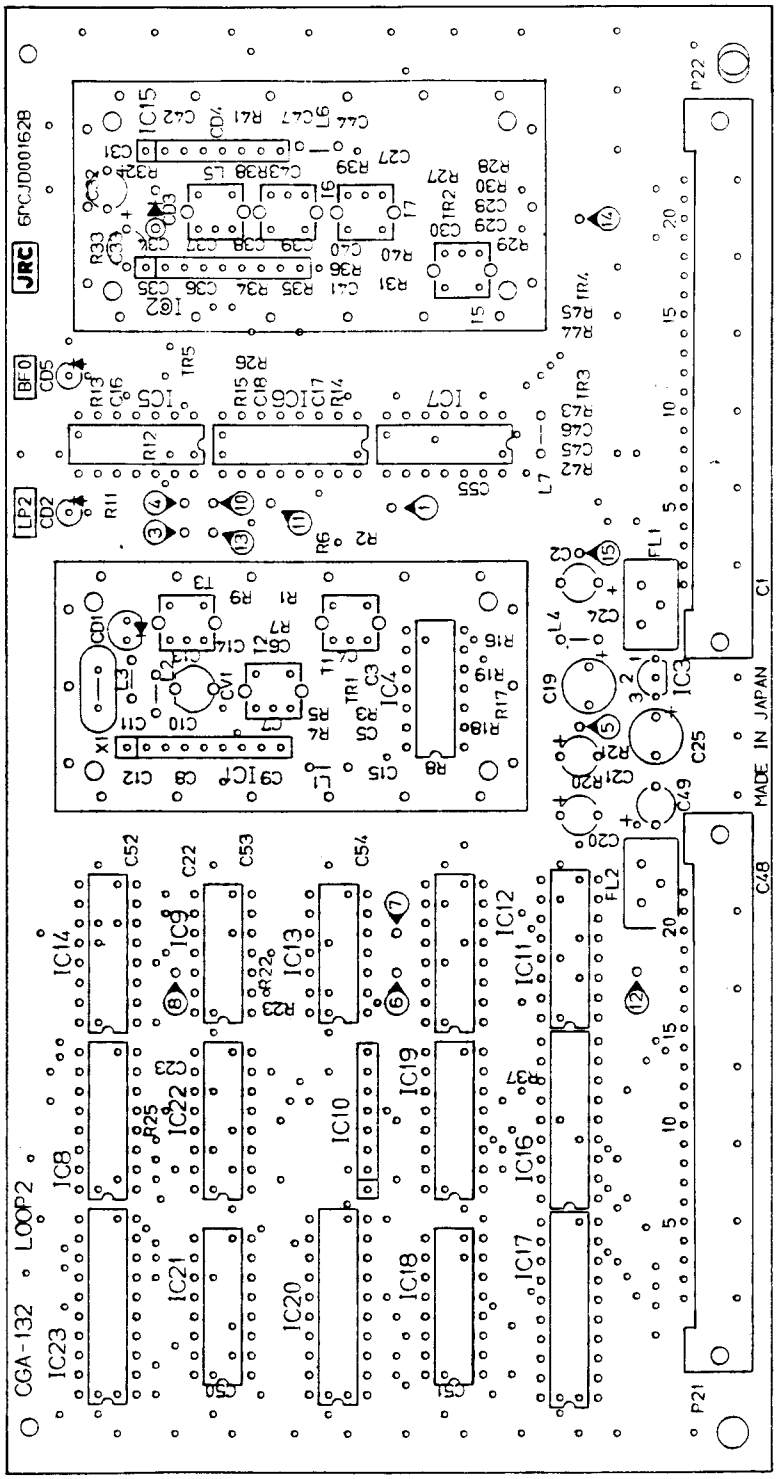


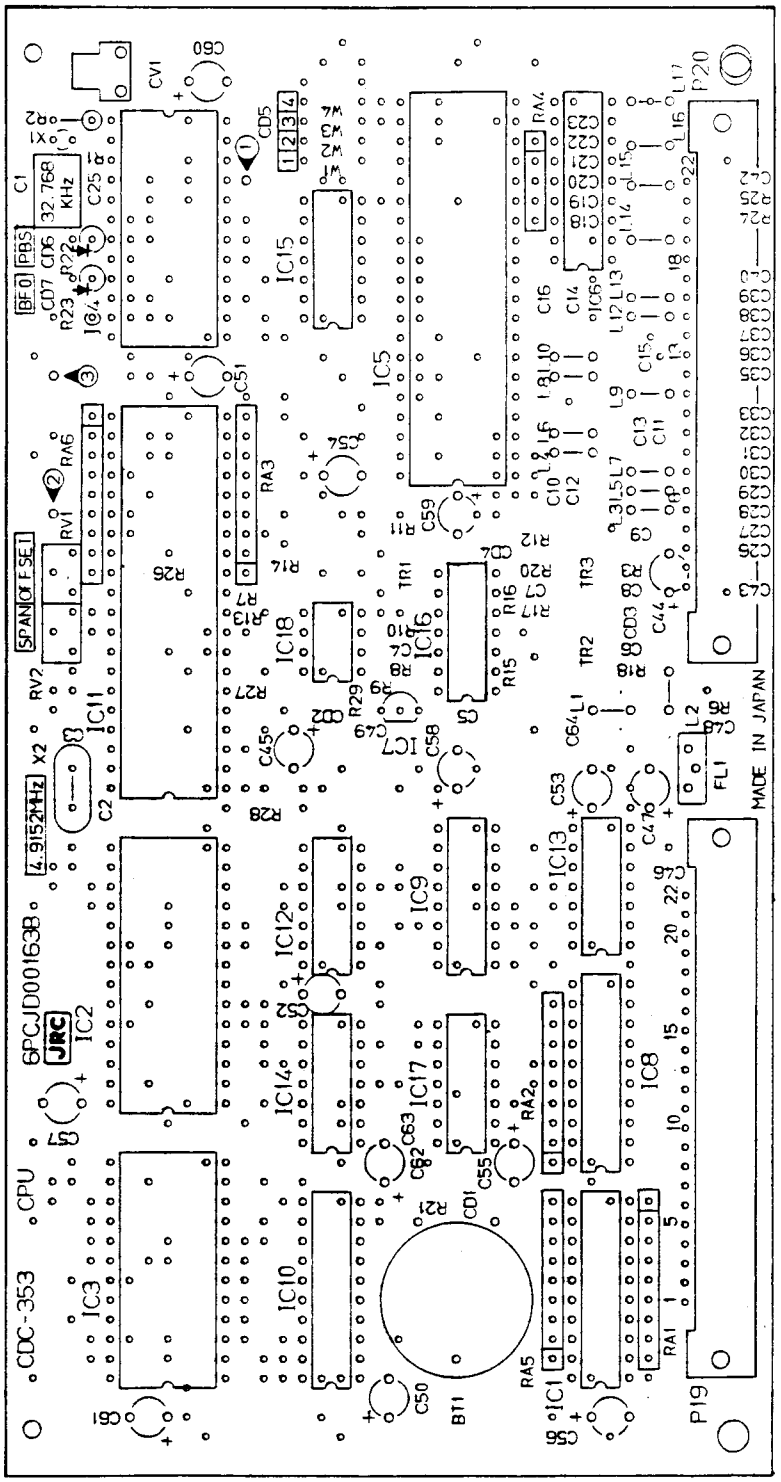


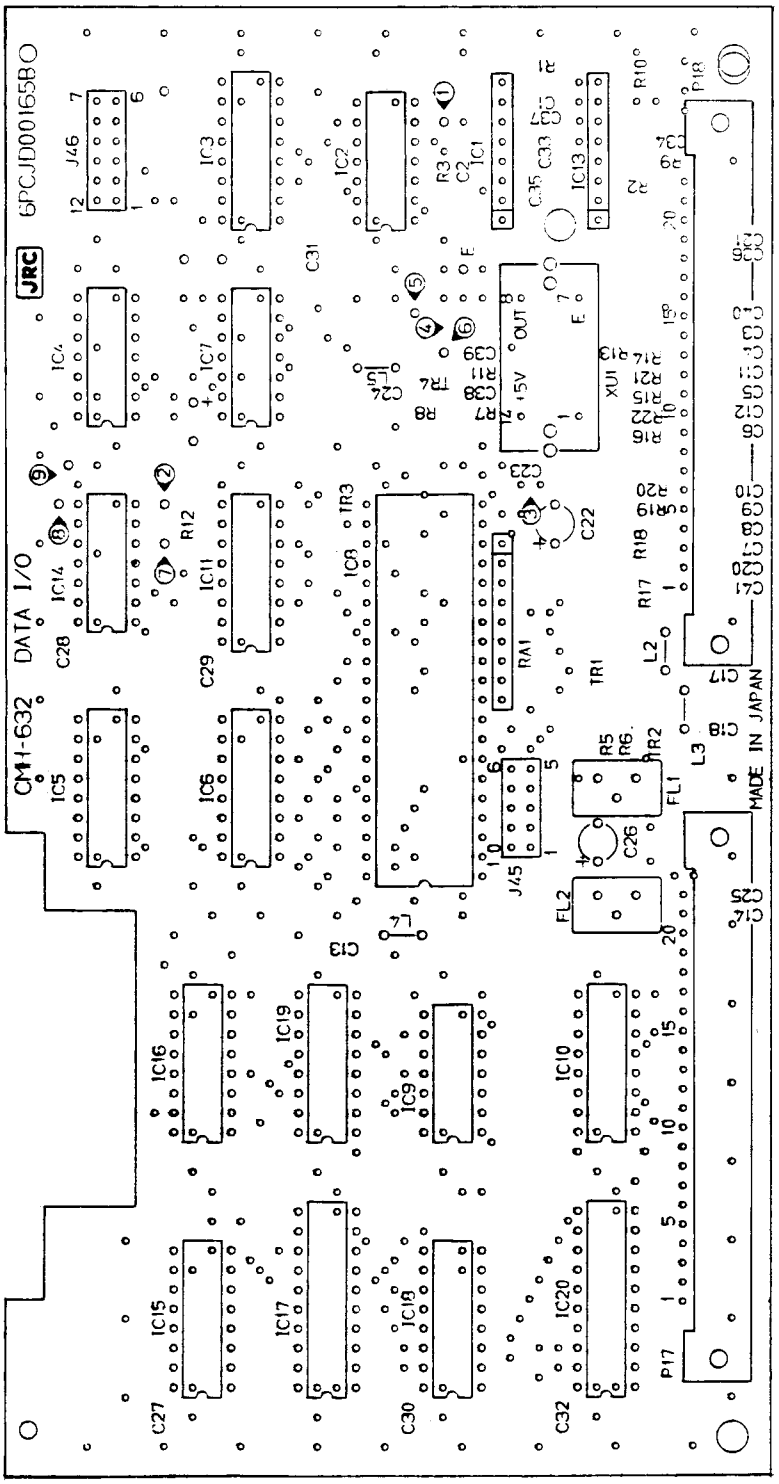


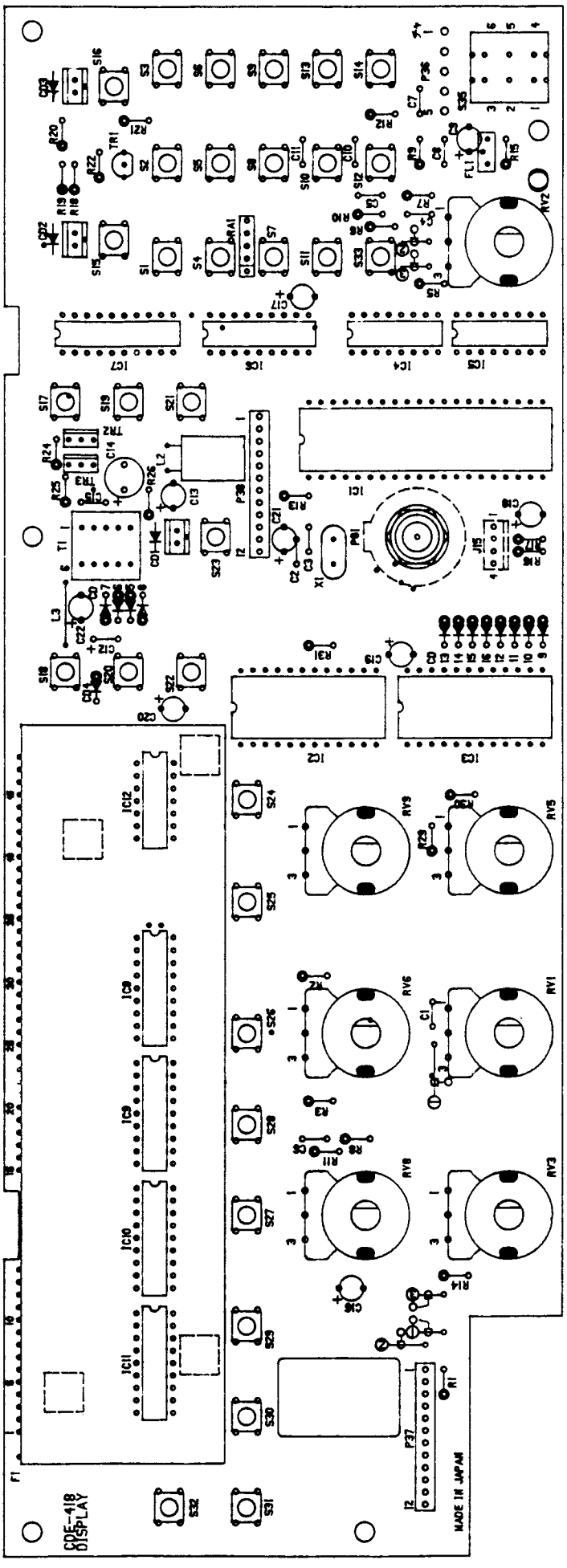


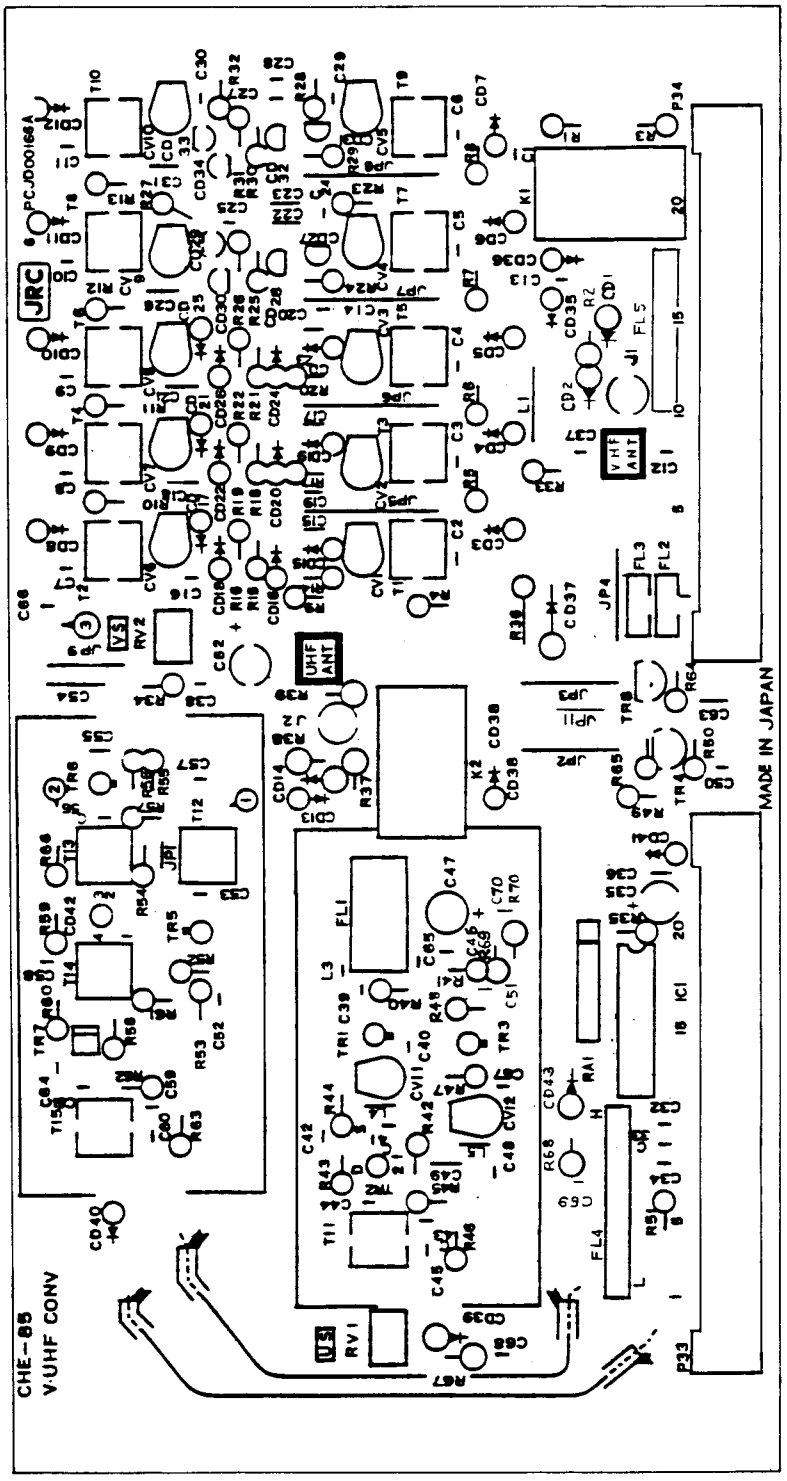


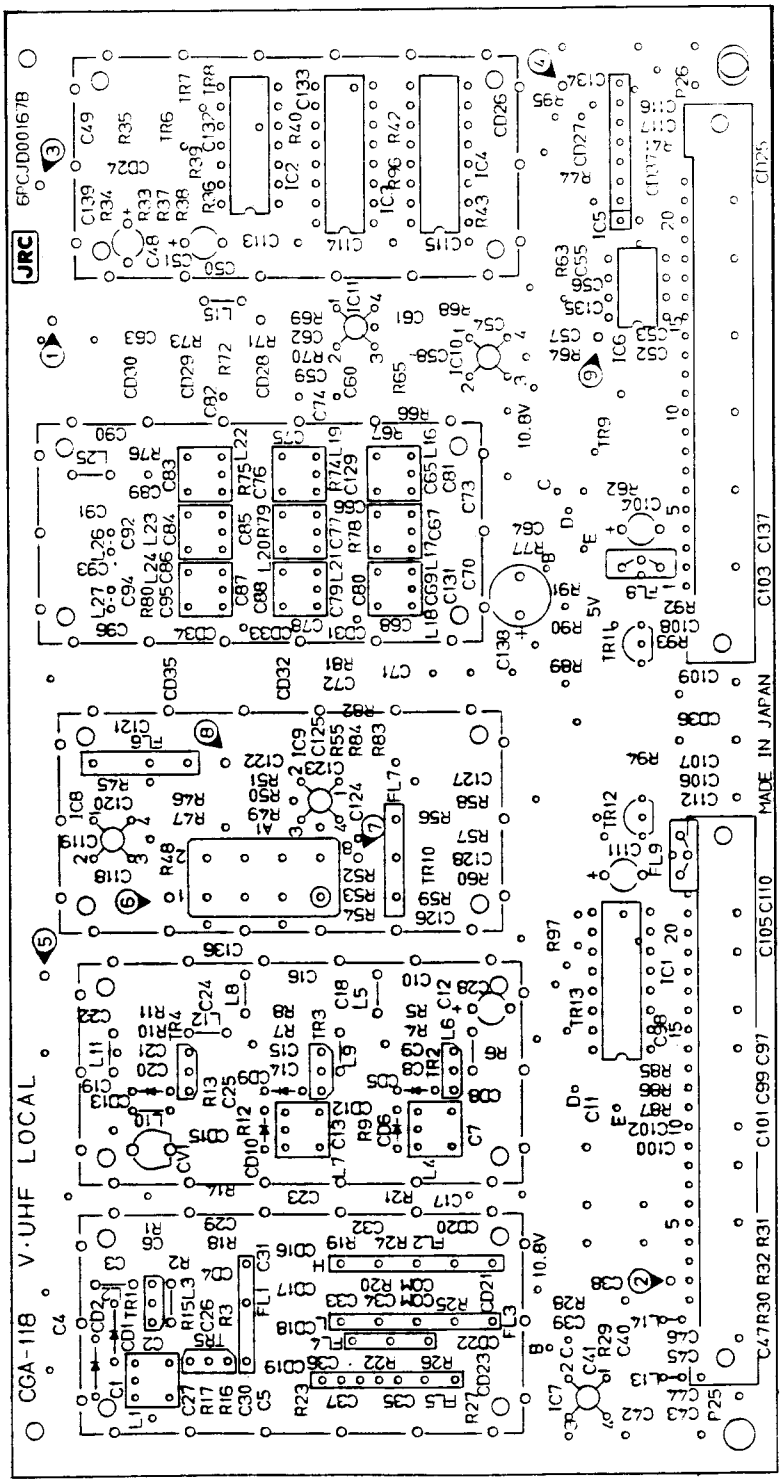


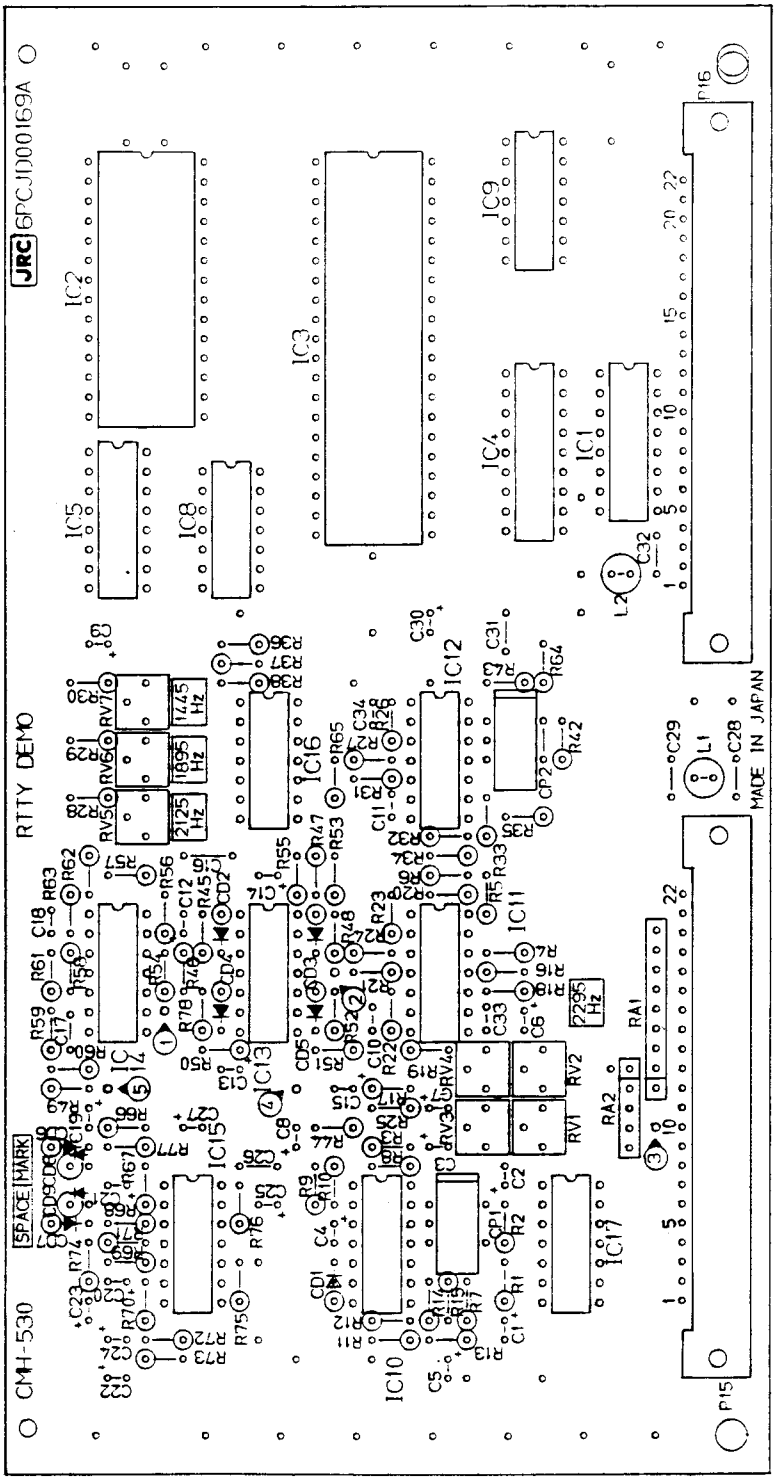


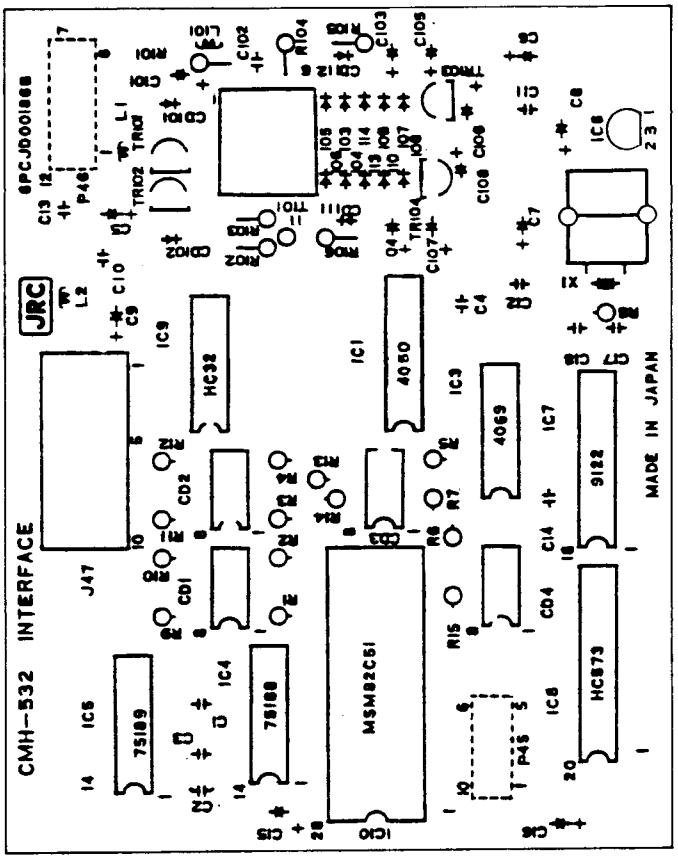


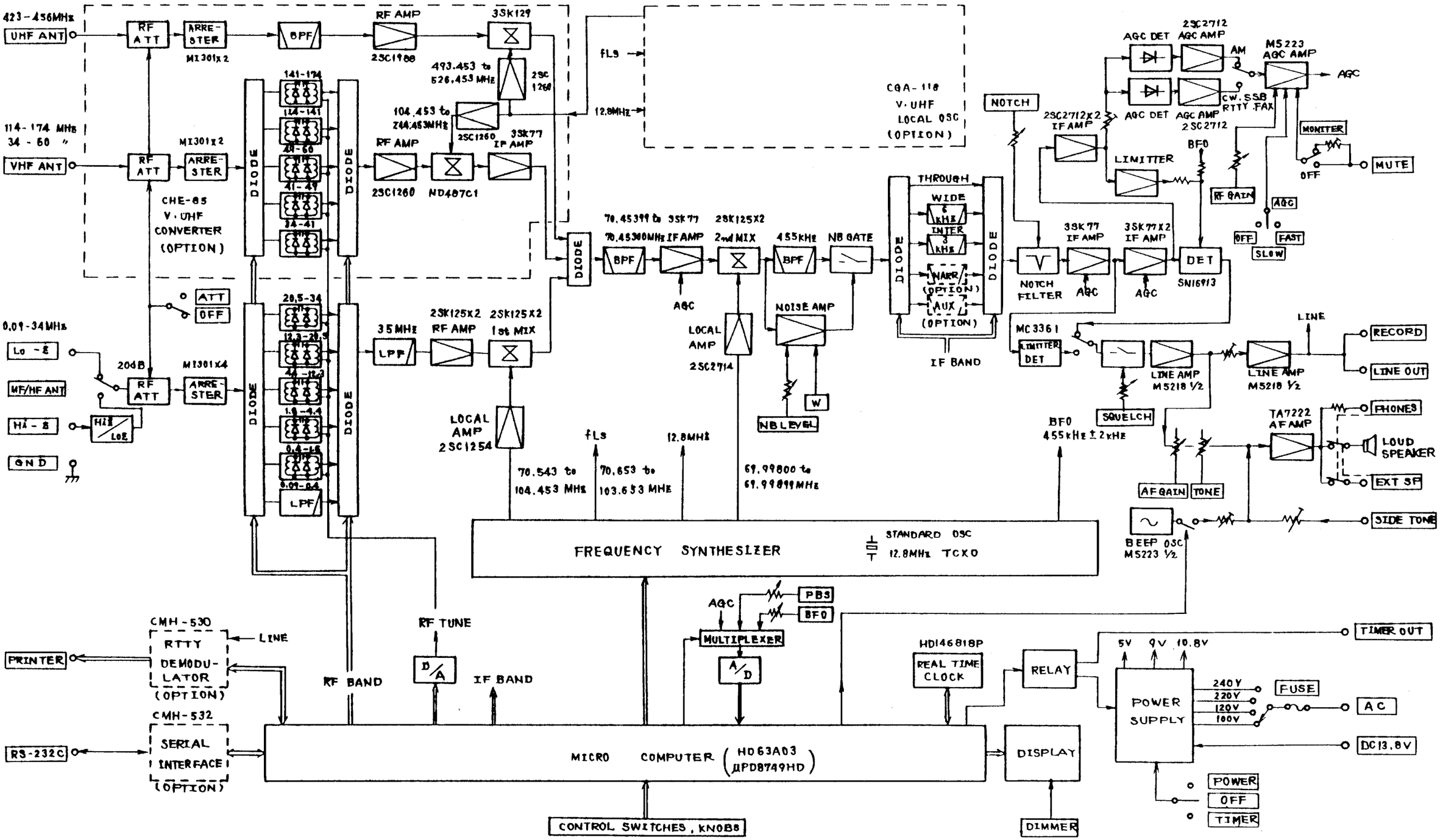


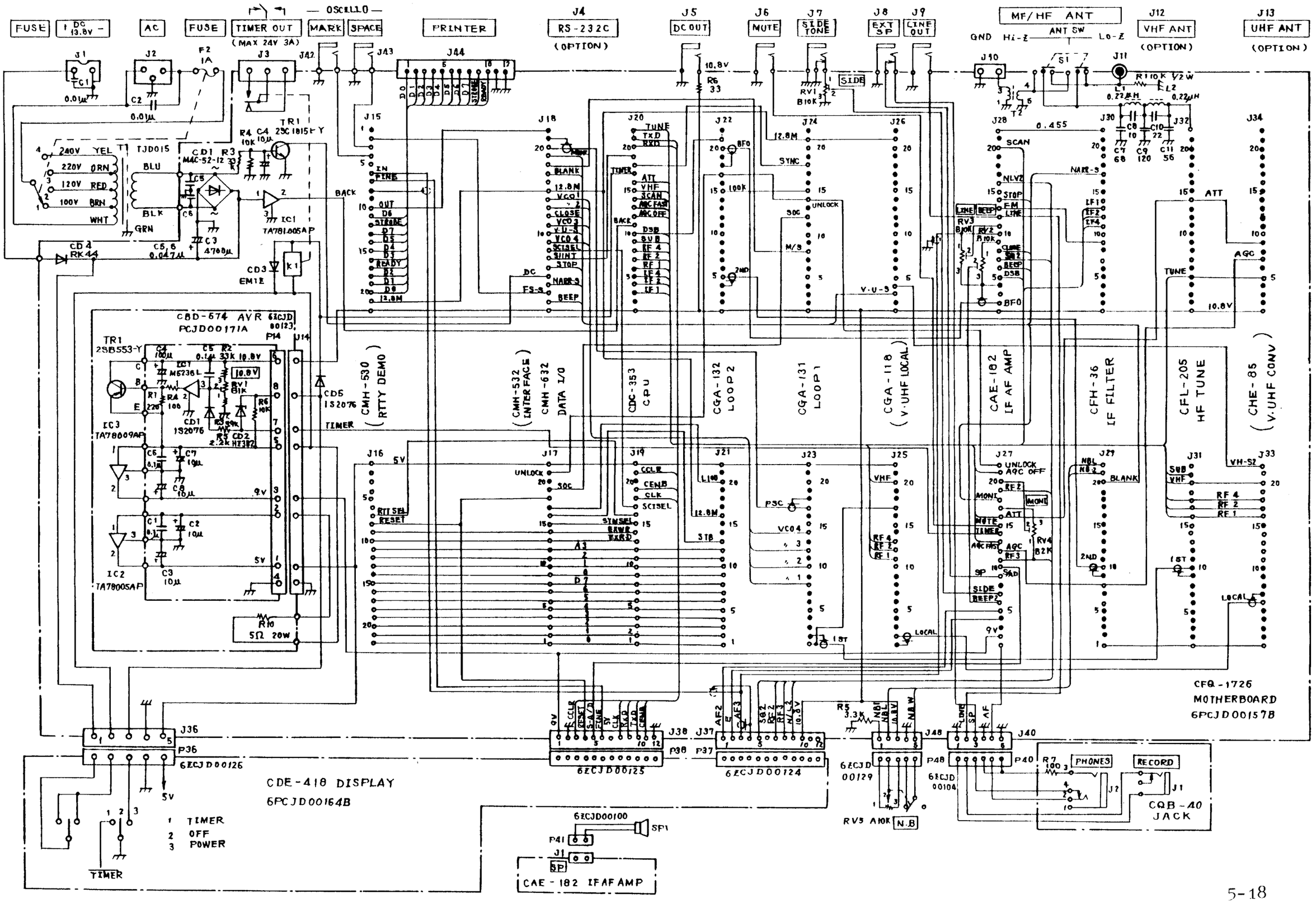


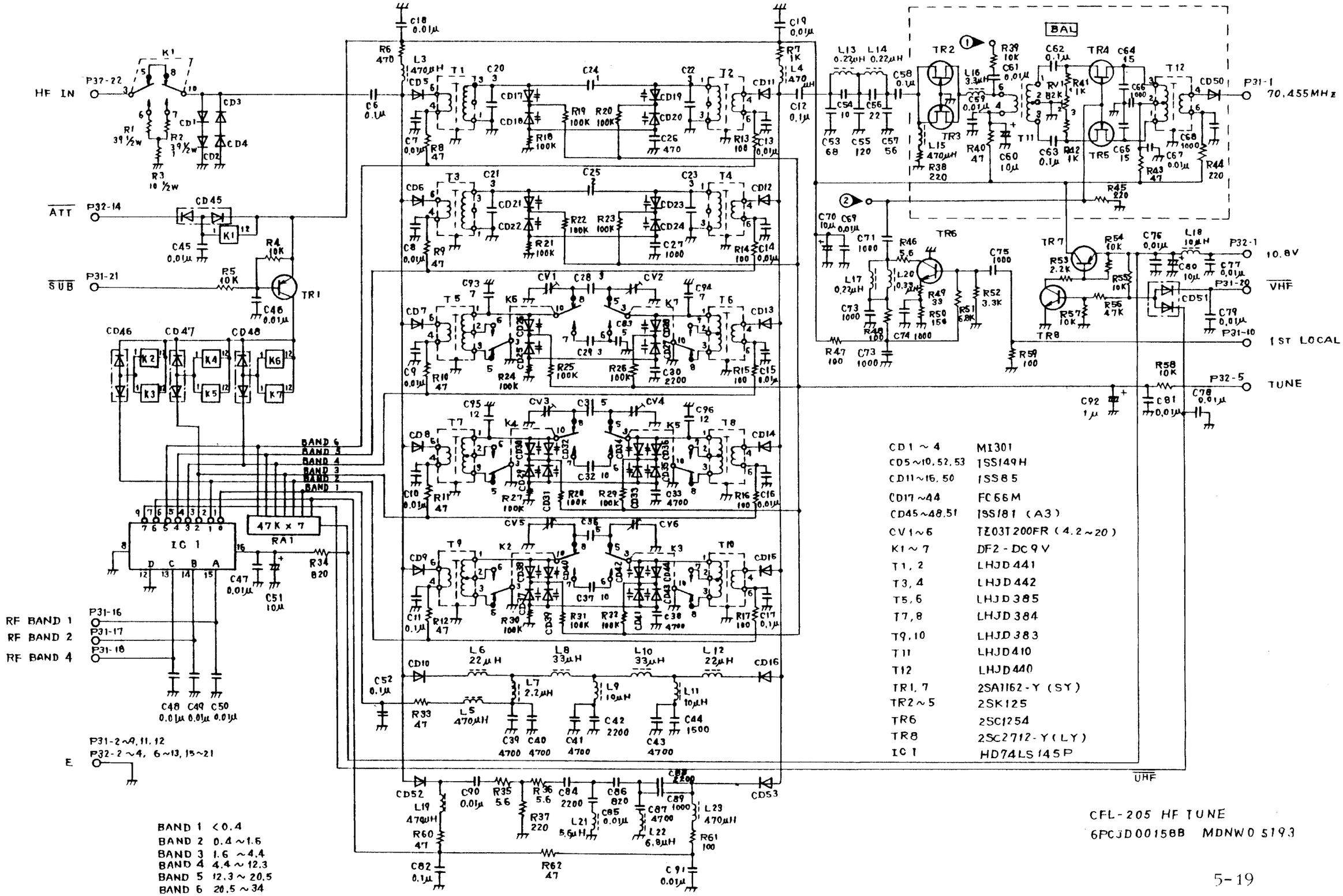








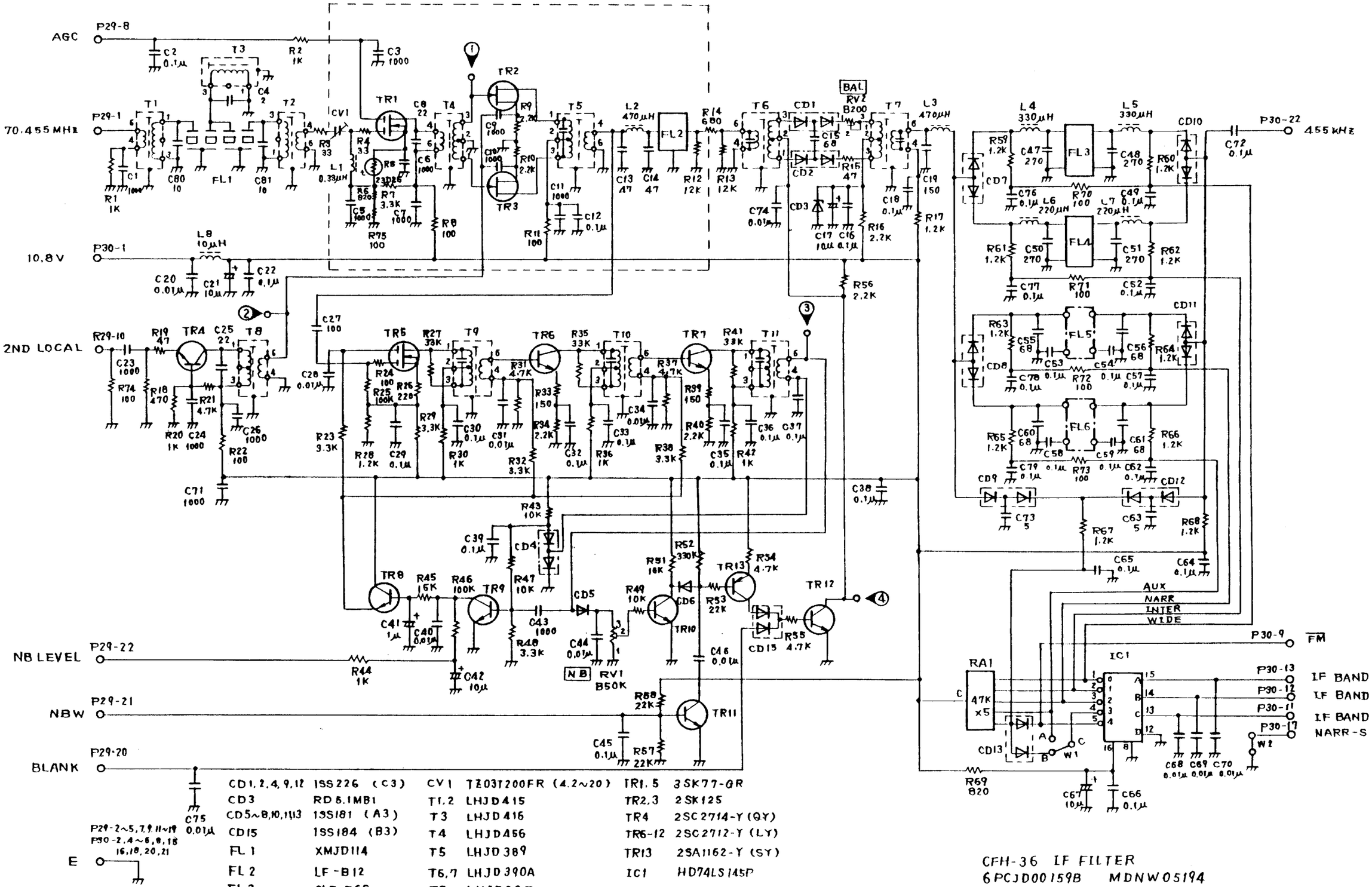




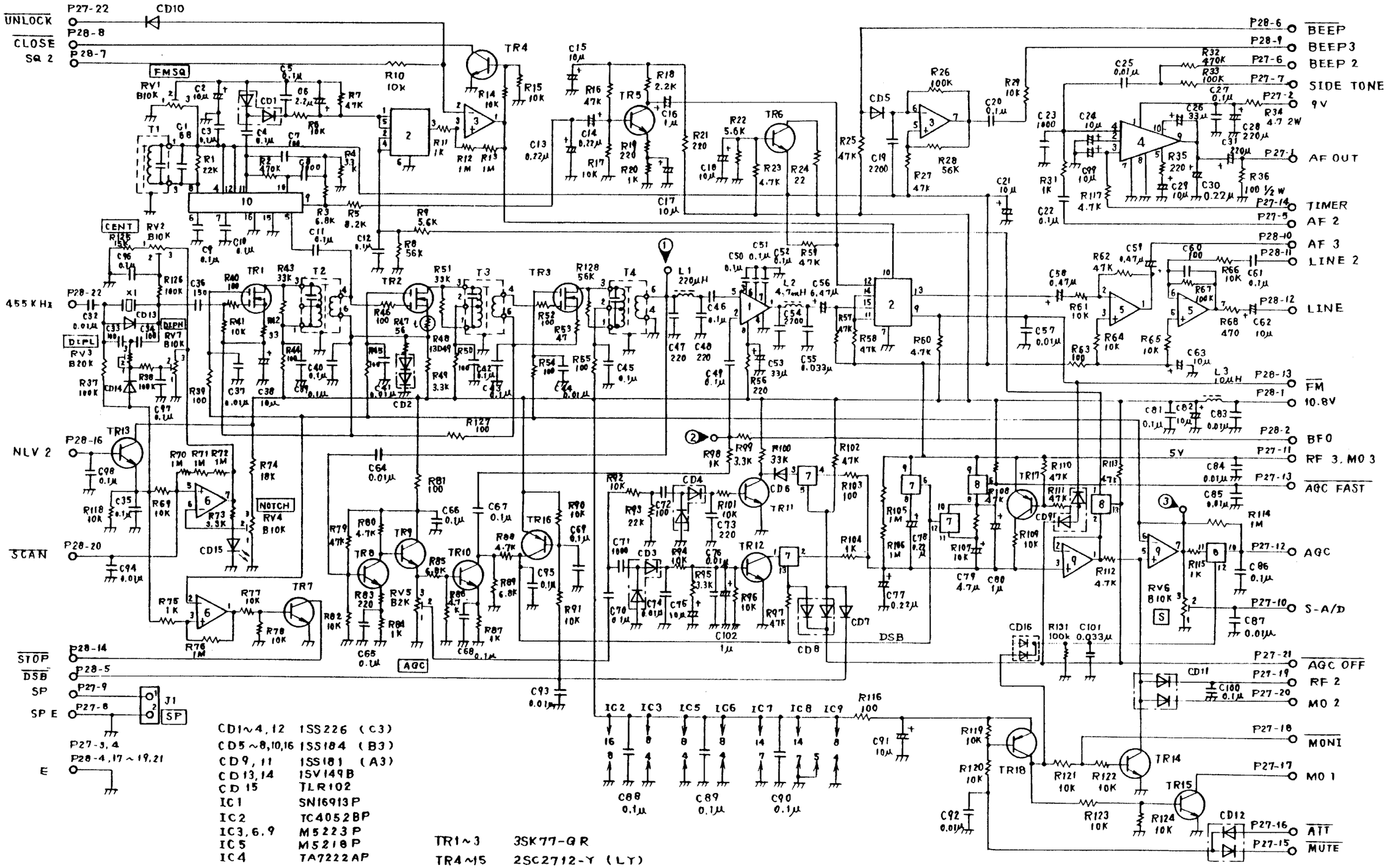
CD1 ~ 4	MI301
CD5 ~ 10, 52, 53	1SS149H
CD11 ~ 16, 50	1SS85
CD17 ~ 44	FC66M
CD45 ~ 48, 51	1SS181 (A3)
CV1 ~ 6	TE03T200FR (4.2 ~ 20)
K1 ~ 7	DF2 - DC9V
T1, 2	LHJD441
T3, 4	LHJD442
T5, 6	LHJD385
T7, 8	LHJD384
T9, 10	LHJD383
T11	LHJD410
T12	LHJD440
TR1, 7	2SA1162-Y (SY)
TR2 ~ 5	2SK125
TR6	2SC1254
TR8	2SC2712-Y (LY)
IC 1	HD74LS145P

BAND 1	< 0.4
BAND 2	0.4 ~ 1.6
BAND 3	1.6 ~ 4.4
BAND 4	4.4 ~ 12.3
BAND 5	12.3 ~ 20.5
BAND 6	20.5 ~ 34

CFL-205 HF TUNE
6PCJD00158B MDNW0 5193



CFH-36 IF FILTER
6PCJD00159B MDNW05194

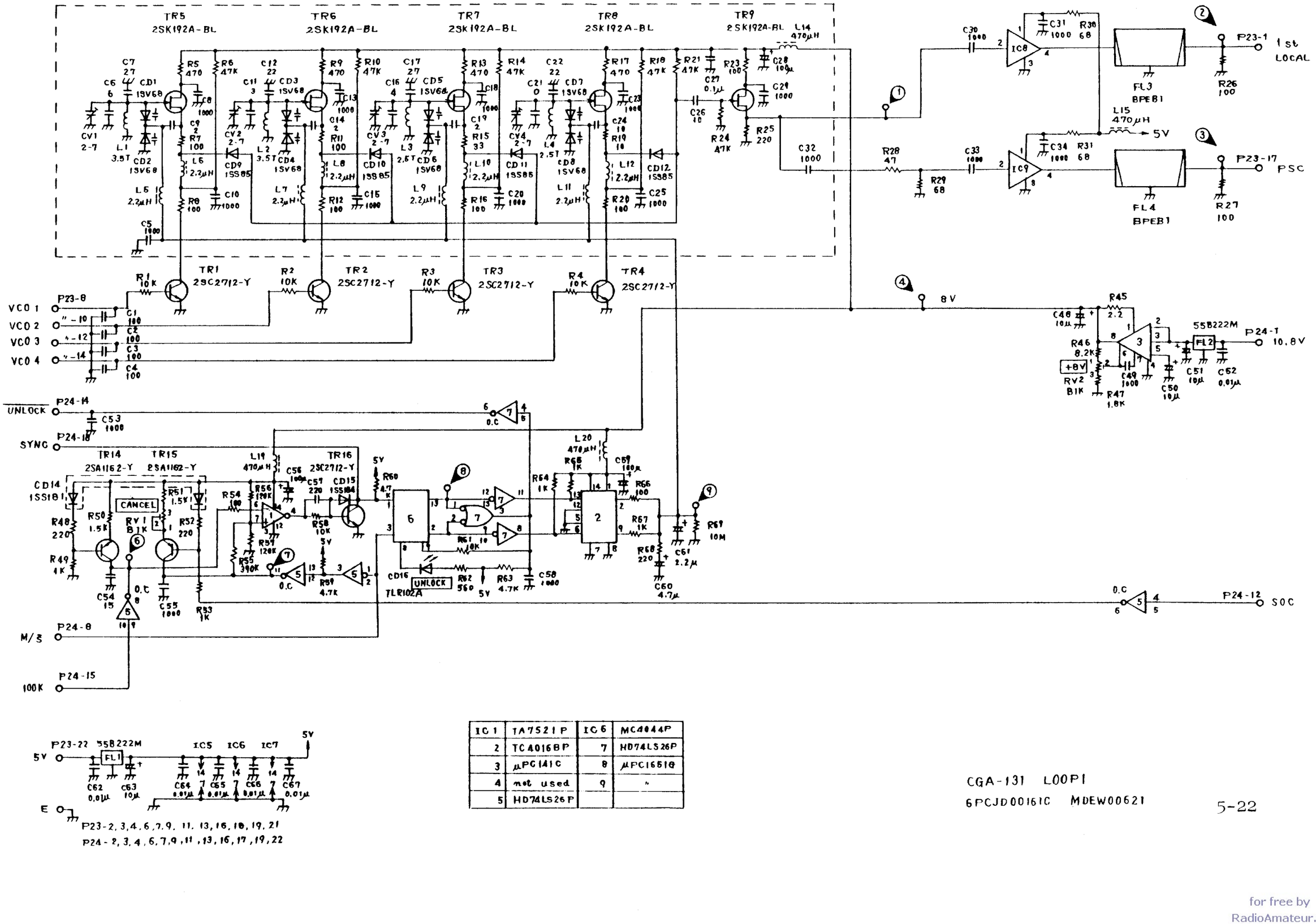


CD1~4, 12	1SS226 (C3)
CD5~8, 10, 16	1SS184 (B3)
CD9, 11	1SS181 (A3)
CD13, 14	1SV149B
CD 15	TLR102
IC1	SN16913P
IC2	TC4052BP
IC3, 6, 9	M5223P
IC5	M5218P
IC4	TA7222AP
IC7, 8	TC4066BP
IC10	MC3361P

TR1~3	3SK77-GR
TR4~15	2SC2712-Y (LY)
TR16~18	2SA1162-Y (SY)
T1	LAFD18 (5D-ELD19A-41)
T2~4	S-061-006
X1	R460C10.1 ※

CAE-182 IF AF AMP

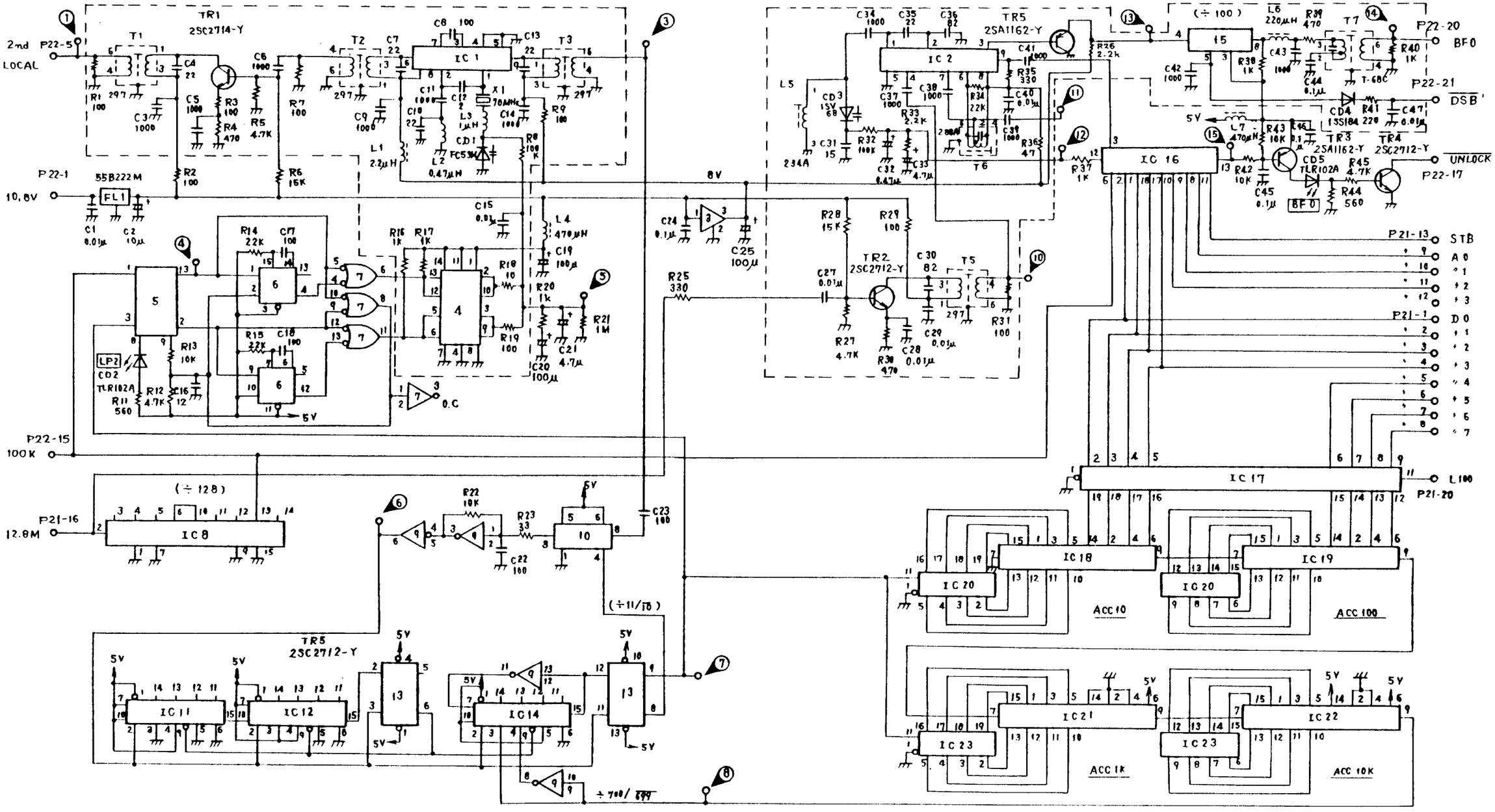
6PCJD00160B MDHW00684

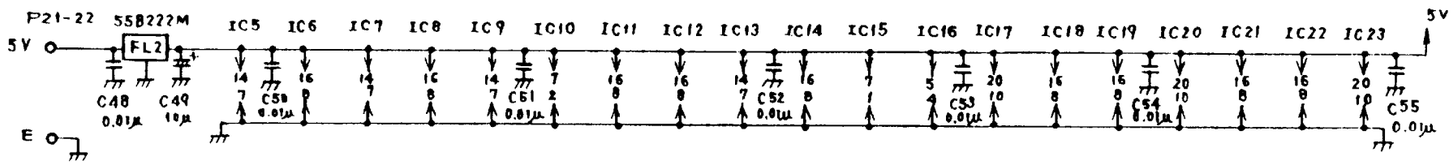


IC 1	TA7521P	IC 6	MC4044P
2	TC4016BP	7	HD74LS26P
3	μPC141C	8	μPC1651B
4	not used	9	〃
5	HD74LS26P		

CGA-131 LOOP I

6PCJD00161C MDEW00621

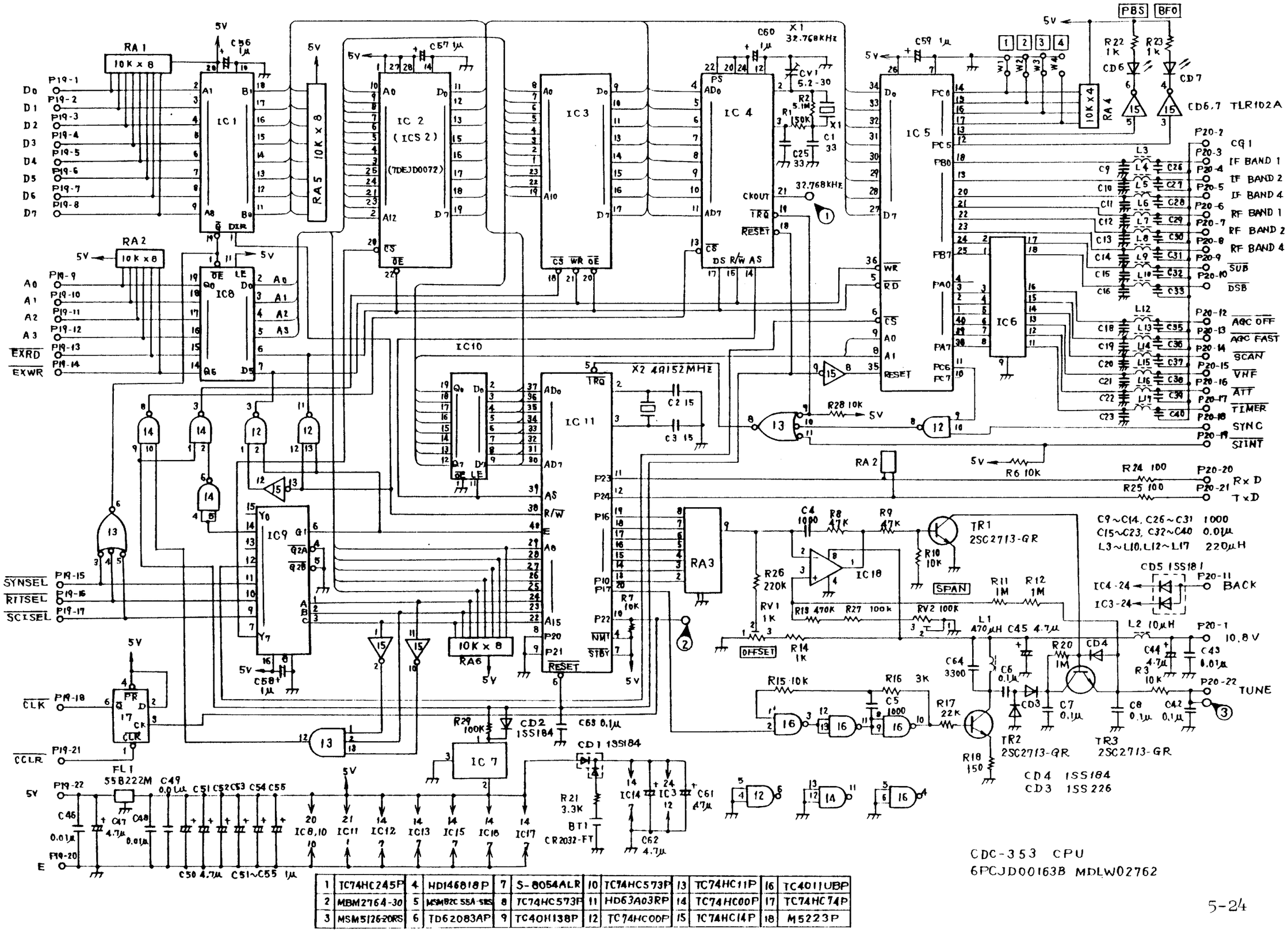




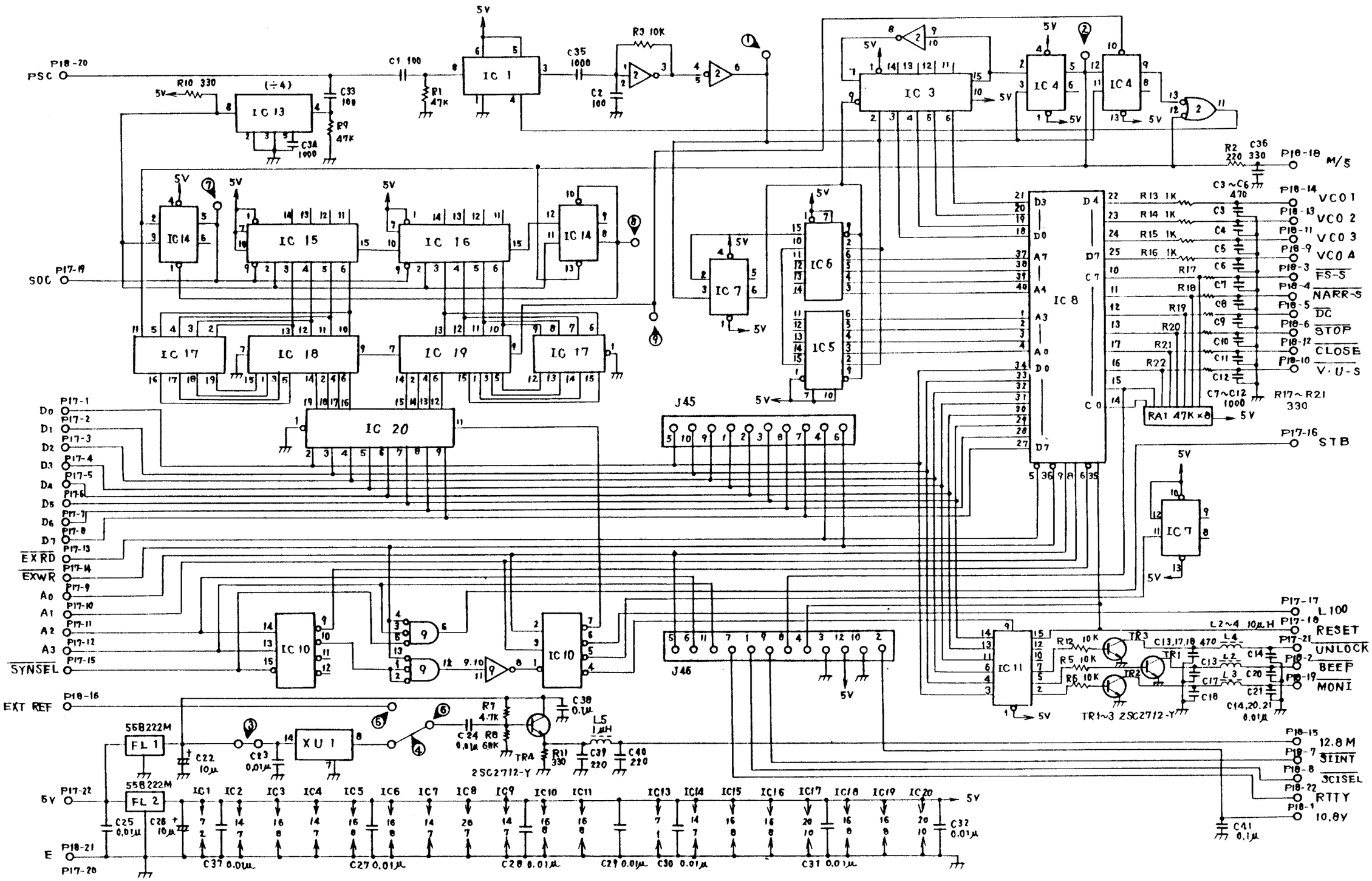
P21- 14, 15, 17~19, 21
P22- 2, 3, 4, 6~9,
11~14, 16, 18, 19, 22

IC 1	TA7310P	IC 7	HD74LS26P	IC 13	TC74HC74P	IC 19	TC4560BP
2	〃	8	TC74HC4520P	14	TC74HC161P	20	TC74HC574P
3	NJM78L08A	9	TC74HC00P	15	M54459L	21	TC4560BP
4	IC40168P	10	HD10551P	16	MC145145P	22	〃
5	MC4044P	11	TC74HC160P	17	TC74HC574P	23	TC74HC574P
6	HD74LS123P	12	〃	18	TC4560BP		

CGA-132 LOOP 2
6PCJD00162B MDEW00620



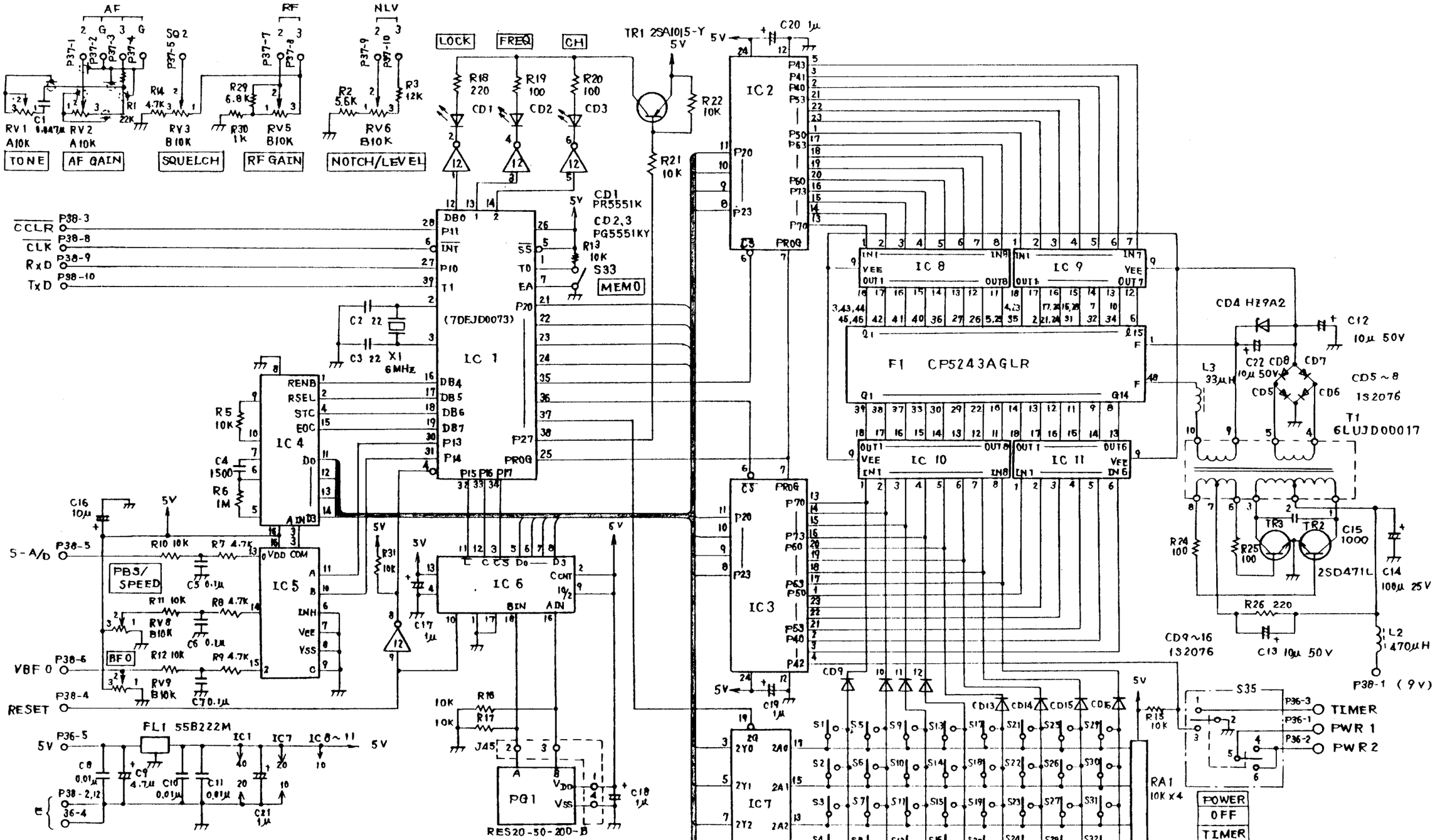
1	TC74HC245P	4	HD146818P	7	S-8054ALR	10	TC74HC573P	13	TC74HC11P	16	TC4011UBP						
2	MBM2764-30	5	MSM82C55A-5RS	8	TC74HC573P	11	HD63A03RP	14	TC74HC00P	17	TC74HC74P						
3	MSM5126-20RS	6	TD62083AP	9	TC40H138P	12	TC74HC00P	15	TC74HC14P	18	M5223P						



IC 1	HD10551P	IC 6	TC74HC161P	IC 11	TC74HC174P	IC 16	HD74LS160P
IC 2	TC74HC00P	IC 7	TC74HC74P	IC 12	not used	IC 17	TC74HC574P
IC 3	TC74HC161P	IC 8	M5M82C56A-6RS	IC 13	M54855L	IC 18	TC4560BP
IC 4	TC74HC74P	IC 9	TC74HC27P	IC 14	TC74HC74P	IC 19	TC4560BP
IC 5	TC74HC161P	IC 10	TC74HC139P	IC 15	HD74LS160P	IC 20	TC74HC574P

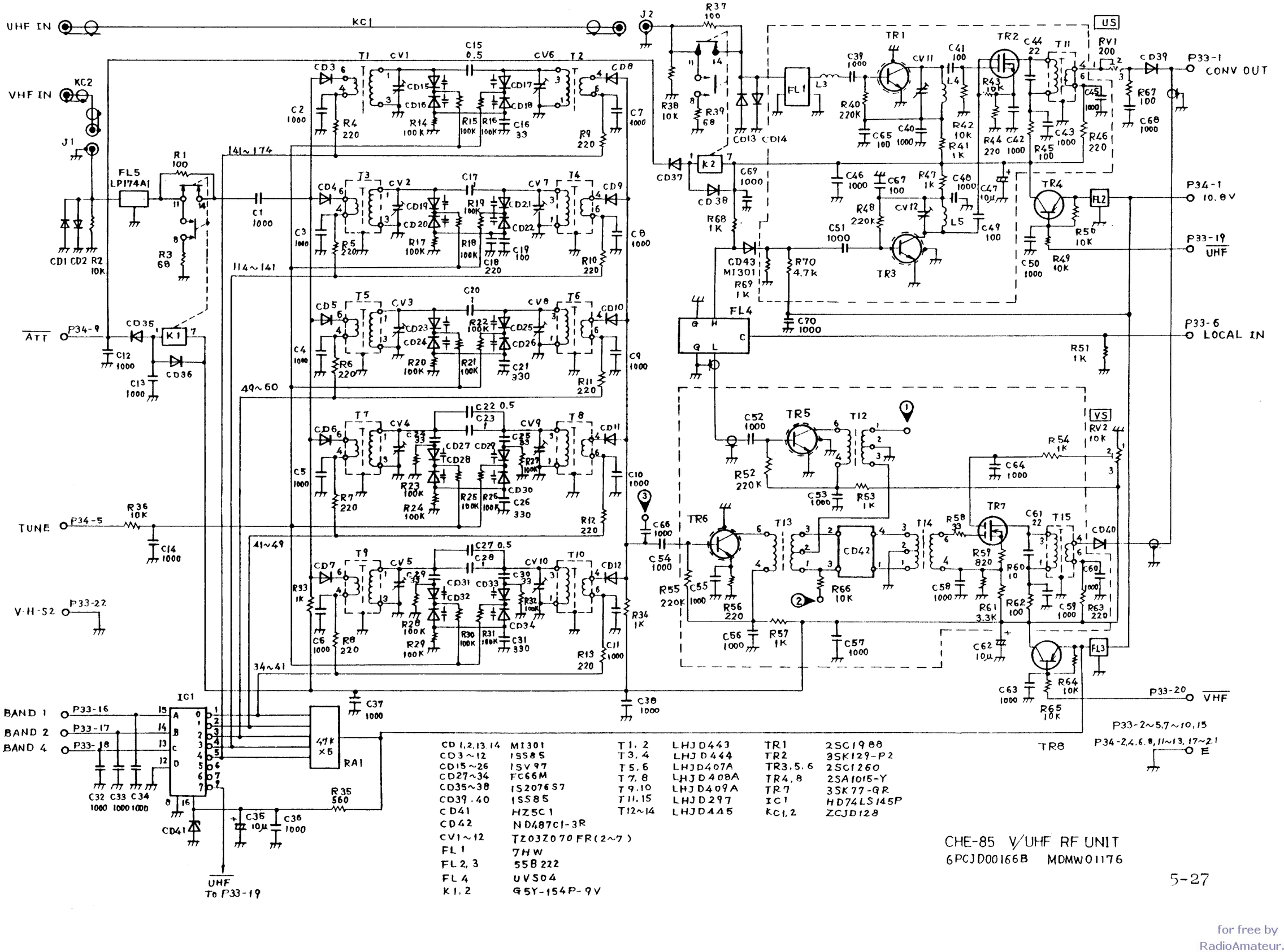
CMH-632 DATA I/O

6PCJD00165B MDYW01983



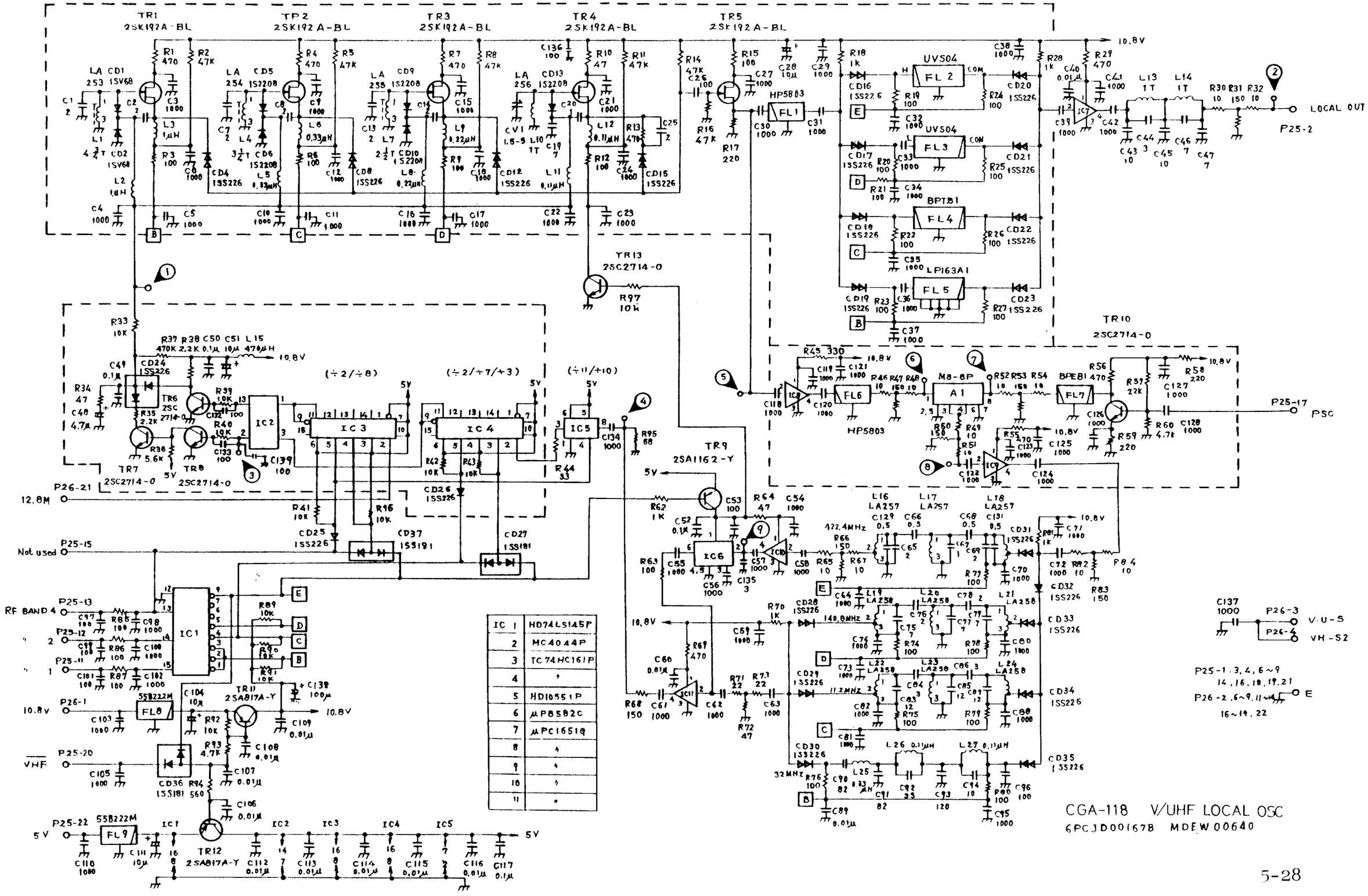
1	μPD8749HD	8	MSL915RS
2	MSM80C43RS	9	MSL915RS
3	MSM80C43RS	10	MSL915RS
4	TC5090AP	11	MSL915RS
5	TC4051BP	12	HD74LS14P
6	LR3671D		
7	TC74HC244P		

S	NAME	S	NAME	S	NAME	S	NAME
1	TEN KEY 1	9	TEN KEY 9	17	MODE ▷	25	ATT
2	" 2	10	" 0	18	MODE ◁	26	RUN
3	" 3	11	PERIOD .	19	BAND ▷	27	SCAN
4	" 4	12	CLR	20	BAND ◁	28	SWEEP
5	" 5	13	MHz	21	UP	29	CLOCK/TIMER
6	" 6	14	kHz/ENT	22	DOWN	30	MONI
7	" 7	15	FREQ	23	LOCK	31	RIT
8	" 8	16	CH	24	AGC	32	DIMM



CD 1,2,13,14	MI301	T1, 2	LHJD443	TR1	2SC1988
CD3~12	1SS85	T3, 4	LHJD444	TR2	3SK129-P2
CD15~26	1SV97	T5, 6	LHJD407A	TR3,5,6	2SC1260
CD27~34	FC66M	T7, 8	LHJD408A	TR4, 8	2SA1015-Y
CD35~38	1S2076S7	T9,10	LHJD409A	TR7	3SK77-GR
CD39,40	1SS85	T11,15	LHJD297	IC1	HD74LS145P
CD41	HZ5C1	T12~14	LHJD445	KC1,2	ZCJD128
CD42	ND487C1-3R				
CV1~12	TZ03Z070FR(2~7)				
FL1	7HW				
FL2,3	55B222				
FL4	UVS04				
K1,2	G5Y-154P-9V				

CHE-85 V/UHF RF UNIT
6PCJD00166B MDMW01176



IC	
1	HD74LS145P
2	MC4044P
3	TC74HC161P
4	〃
5	HD10551P
6	μPB582C
7	μPC1651G
8	〃
9	〃
10	〃
11	〃

CGA-118 V/UHF LOCAL OSC
6PCJD00167B MDEW00640

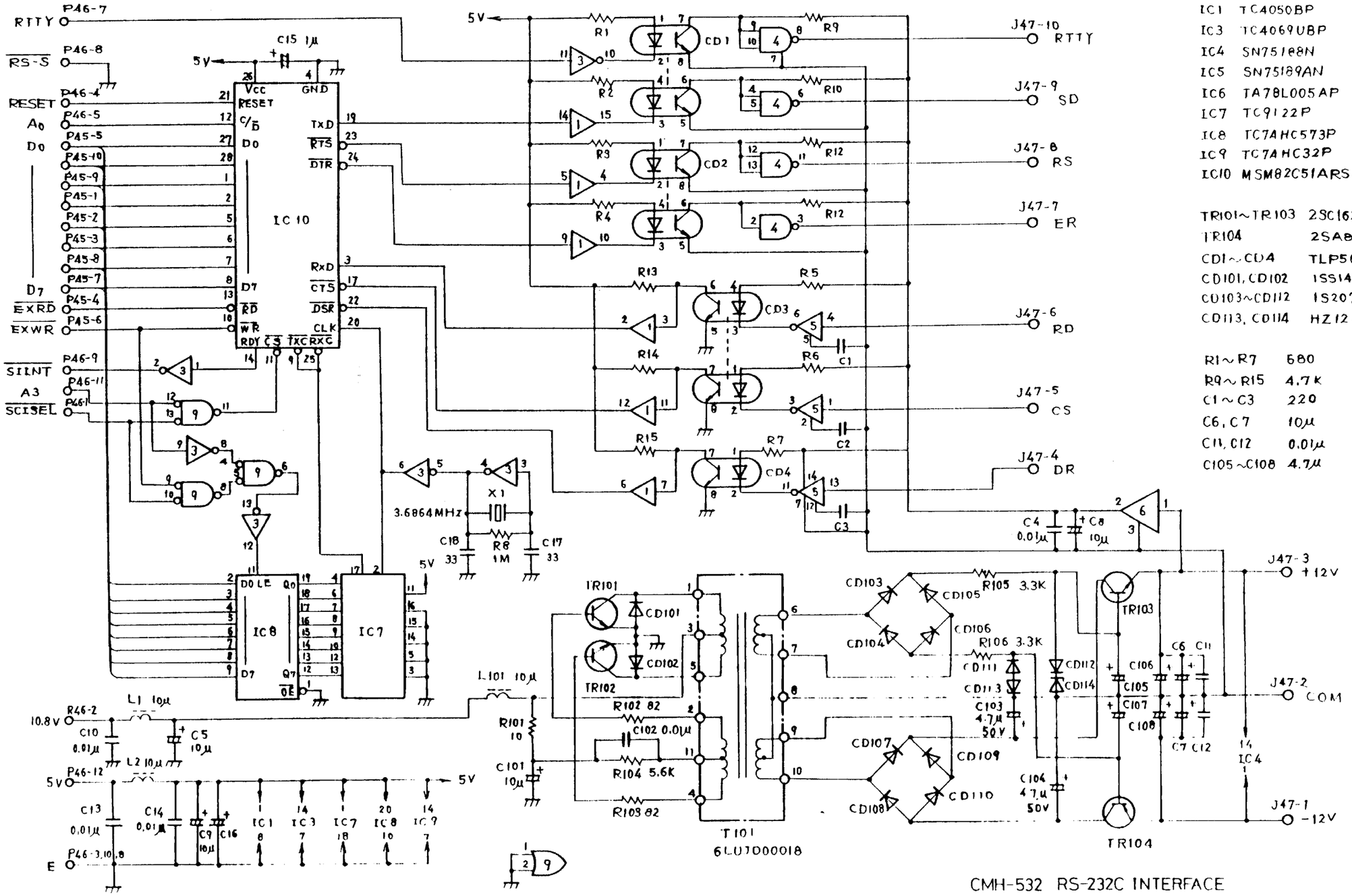
RV 4	2295 Hz
RV 5	2125 Hz
RV 6	1895 Hz
RV 7	1445 Hz

IC 1	TC74HC138P	IC 8	HD7406P
IC 2	MSM82C51ARS	IC10~15	NJM-3403AD
IC 3	MSM82C55A-5RS	IC 16	TC4066BP
IC 4	TC9122P	IC 17	TC4030BP
IC 5	TC74HC160P	IC 9	HD74LS05P

CD1~7 1S2076S7
CD8,9 TLR102A

CMH-530 RTTY DEMODULATOR

6PCJD00169A MDYW01979



IC1 TC4050BP
IC3 TC4069UBP
IC4 SN75188N
IC5 SN75189AN
IC6 TA78L005AP
IC7 TC9122P
IC8 TC74HC573P
IC9 TC74HC32P
IC10 MSM82C51ARS

TR101~TR103	2SC1627A-Y
TR104	2SA817A-YC
CD1~CD4	TLP504A
CD101, CD102	1SS149H
CD103~CD112	1S2076S7
CD113, CD114	HZ12A2

R1~R7	680
R9~R15	4.7K
C1~C3	220
C6, C7	10μ
C11, C12	0.01μ
C105~C108	4.7μ

CMH-532 RS-232C INTERFACE
6PCJD00186B MDYW01976