

- [REDACTED] -  
FCC ID: CKEJHP-520  
2.1033(c)9 ALIGNMENT



## ALIGNMENTS

## 1 General

The JHP-520/500 VHF Air Band Transceiver is aligned at the factory. Do not change the settings rashly because it can cause problems. Make alignments carefully according to the following procedures.

## 2 Alignments Procedures

### 2.1 Equipment Necessary for Alignments

Table 1-1

No.	Equipment	Performance	Number of Units
1	Communication analyzer	HP8920A	1
2	Audio-frequency oscillator (AF OSC)	HP8904A (Function generator)	1
3	Signal generator (SG)	2019A (Marconi)	1
4	DC power supply	12V 3A	1
5	Digital voltmeter		1
6	Printer		1

### 2.2 Order of Alignments

Make alignments of the following three units separately:

RF unit CMN-571

AF unit CAB-781

CPU unit CMC-1086

Then, assemble the units and make overall alignments.

The output voltages of the signal generator designated in the alignment procedures are open voltages (emf). (However, they are voltages across a  $50\Omega$  terminating load in measurement of the sensitivity.)

### 2.2.1 RF Unit CMN-571 Alignments

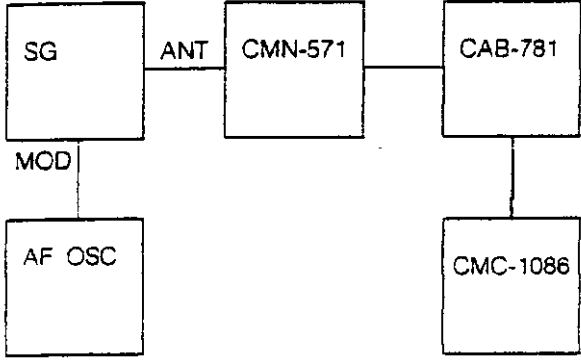
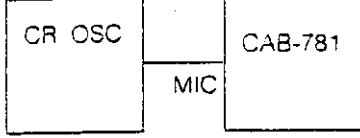
Item to Align	Procedure	Set Value
1. VCO voltage alignment	1) Connect the digital voltmeter to TP 303 (TP312). 2) Set the frequency to 136.975 MHz. Adjust CV303 so that the VCO voltage is 3.5 V in the receiving state. 3) Set the frequency to 118 MHz. Check that the VCO voltage is $1.7 \pm 0.7$ V in the receiving state. 4) Set the frequency at 117.975 MHz. Adjust CV302 so that the VCO voltage is 3.5 V in the receiving state.	$3.5 \pm 0.1V$  $3.5 \pm 0.1V$
2. VCO voltage check	1) Remove jumper pin JP301 from J304. 2) Connect the digital voltmeter to TP 303 (TP312). 3) Set the frequency to 118 MHz. Check that the VCO voltage is $1.2 \pm 0.7$ V in the transmit mode.	
3. Transmit bias alignment	1) Connect the ammeter to J304. 2) Hold pin 21 of J302 to Low to switch off the power to the VCO. Disconnect UNLOCK (J1 28) of the CPU unit from the RF unit and hold it to Low. 3) Set the frequency to 127.5 MHz. Adjust RV303 so that the ammeter reads $10 \text{ mA} \pm 5 \text{ mA}$ during the no-modulation transmission. Adjust RV304 so that the ammeter $\overset{\wedge}{30 \text{ mA} \pm 5 \text{ mA}}$ during the no-modulation transmission. $\underset{\text{reads}}$	$10 \text{ mA} \pm 5 \text{ mA}$
4. Transmit carrier output alignment	1) Attach jumper pin JP301 to J304. 2) Hold pin 21 of J302 to High. 3) Set the frequency to 127.5 MHz. Adjust RV302 so that the voltage is $1250 \text{ mW} \pm 50 \text{ mW}$ during the no-modulation transmission.	$30 \text{ mA} \pm 5 \text{ mA}$ $1250 \text{ mW} \pm 50 \text{ mW}$
5. Frequency alignment	1) Set the frequency to 127.5 MHz. Transmit without modulation. 2) Adjust CV301 so that the transmit frequency is 127.5 MHz.	$127.5 \text{ MHz} \pm 100 \text{ Hz}$

Item to Align	Procedure	Set Value
<p>6. RF tuning circuit alignment</p>	<div data-bbox="571 348 1198 625" data-label="Diagram"> </div> <ol style="list-style-type: none"> <li>1) Connect the spectrum analyzer as shown in the above.</li> <li>2) Set the spectrum analyzer as below:  CF : 118 MHz  SPAN : 100 MHz  TG level : -30 dBm  Input ATT : 10 dB</li> <li>3) Adjust RV301 so that TP311 is 3.3 V ± 0.5 V. Then, adjust LV301 to LV304 so that the ripple is 5 dB or smaller throughout the RF tuned band (5 MHz). Make this alignment at 108 MHz, and check that the ripple is 5 dB or smaller at 125 MHz and 136.975 MHz.</li> </ol>	
<p>7. Sensitivity check</p>	<div data-bbox="342 1129 1373 1612" data-label="Figure"> </div> <ol style="list-style-type: none"> <li>1) Set the output of the signal generator to 3 dB<math>\mu</math> (with termination), 30% modulation with 1kHz modulating frequency, and 118 MHz. Input the signal to the ANT terminal. (Set the unit to 118 MHz, too.)</li> <li>2) Switch on and off the modulation, and check that S/N is 6 dB or greater.</li> </ol>	

Item to Align	Procedure	Set Value
8. A G C voltage check	1) Connect the digital voltmeter to TP302 (TP311). 2) Set the frequency to 136.975 MHz. Input the following signal from the antenna: Frequency : 136.975 MHz Level : 30 dB $\mu$ Modulating frequency : 1 kHz Percentage modulation : 30% 3) Adjust RV301 so that the voltage at TP311 is 3.0 V $\pm$ 0.1 V. 4) Set the AF level to 20 dBm. Change the level of the signal generator from 20 dB $\mu$ to 100 dB $\mu$ and check that the AF level is within 20 dBm $\pm$ 3 dB.	

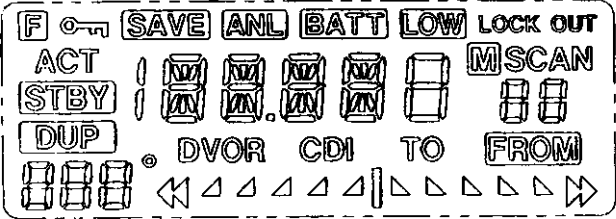
## 2.2.2 AF Unit CAB-781 Alignments

(CPU unit and RF unit are necessary for the alignment of the AF unit)

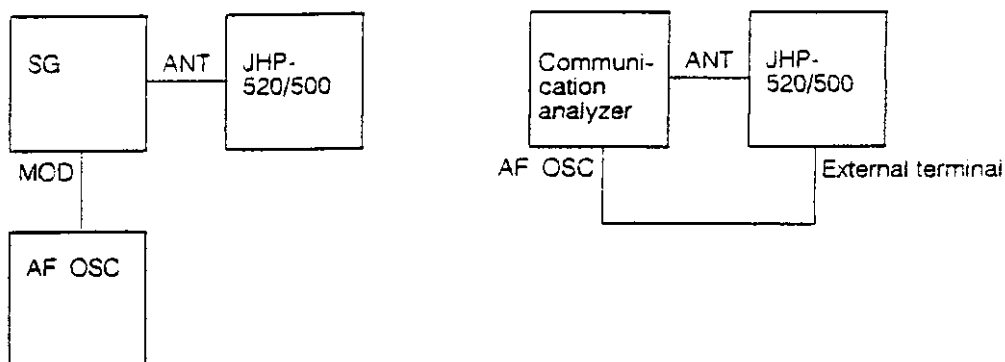
Item to Align	Procedure	Set Value
1. VOR alignment	<p>1) Set the frequency to 108 MHz. Input the following VOR signal from the antenna:            Signal generator level : +30 dB<math>\mu</math>, AM            60% (1 KHz)            Phase : 0°            VOR signal : 30Hz modulation                              9960Hz modulation                              30Hz FM 480Hz modulation</p> <p>2) Input the demodulated signal from the RF unit to pin 8 of J301.</p> <p>3) Connect the oscilloscope to pins 1 and 2 of P101.</p> <p>4) Adjust RV101 so that the wave at pin 2 of P101 has about 1 to 1 duty. (Rough alignment)</p> <p>5) Adjust RV101 so that the display angle is 180° <math>\pm</math> 1° in the TOdisplay in the VOR mode.</p>  <pre>           graph LR             SG[SG] --- ANT[ANT] --- CMN571[CMN-571] --- CAB781[CAB-781] --- CMC1086[CMC-1086]             MOD[MOD] --- AFOSC[AF OSC]           </pre>	180° $\pm$ 1
2. Microphone gain alignment	<p>1) Input the following signal of the audio-frequency oscillator between pins 33 and 34 of P101:            Frequency : 1 kHz            Level : -47 dBm            Termination : 600<math>\Omega</math></p> <p>2) Connect the level meter to pin 11 of J103. Turn RV104 and RV105 to check that the level changes as you turn them. Then, set the variable resistors to their middle position.</p> <p>3) Check that the level is within the range of 0.5 V to 1.0 V (rms).</p>  <pre>           graph LR             CROSC[CR OSC] --- MIC[MIC] --- CAB781[CAB-781]           </pre>	

### 2.2.3 CPU Unit CMC-1086 Alignment

Error 3 is displayed when the power is supplied to the CPU unit for the first time after it is made. This is because of initialization of EEPROM, not a defect in the CPU unit.

Item to Align	Procedure	Set Value
1. LCD	<p>1) All elements of the LCD are turned on just after the power supply to the CPU unit is turned on. Check the LCD for a defect during this time.</p> 	
2. Backlight	<p>1) Ground pin 6 of J1 for at least 200 ms. Check that the backlights of the LCD and keypad illuminate.</p> <p>2) Ground pin 6 of J1 for at least 200 ms again. Check that the backlights of the LCD and keypad go off.</p>	
3. Keypad keys	<p>1) Press keys on the keypad, and check that the display on the LCD changes as you press them.</p>	

## 2.3 JHP-520/500 Overall Alignments



Item to Align	Procedure	Set Value
1. VOR alignment	1) Set the frequency to 108 MHz. Input the following VOR signal from the antenna: Signal generator level : +30 dB $\mu$ , AM 60% (1 kHz) Phase : 0° VOR signal : 30Hz modulation 9960Hz modulation 30Hz FM 480Hz modulation  2) Adjust RV101 so that the display angle is 180° $\pm$ 1° in TO in the VOR mode.	180 $\pm$ 1°
2. Microphone gain alignment	1) Input the following signal of the audio-frequency oscillator to pin 12 of external terminal J601. Frequency : 1 kHz Level : -47 dBm Termination : 600 $\Omega$  2) Adjust RV104 so that the percentage modulation is maximum. 3) Adjust RV105 so that the percentage modulation is 75%. 4) Adjust RV104 so that the percentage modulation is 60%. 5) Set the audio-frequency oscillator signal level to -27 dBm. Adjust RV105 so that the percentage modulation is 90%. 6) Set the audio-frequency oscillator signal level to -47 dBm. Adjust RV104 so that the percentage modulation is 60%. 7) Check that the distortion ratio is 10% or less.  8) Set the audio-frequency oscillator signal level to -27 dBm. Check that the percentage modulation is 85% to 95%, and the distortion ratio is 15% or less.	75% $\pm$ 2% 60% $\pm$ 2% 90% $\pm$ 2% 60% $\pm$ 2%



CPU UNIT (CMC-1086)

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C1	CAP, FXD TAN (CASE B2)	33UF/6.3V	110-0354-00
C2	CAP, FXD CER (0603)	0.1U 25V Y5V	110-0045-00
C3	CAP, FXD CER (0603)	1000PF 50V X7R	110-0016-00
C4	CAP, FXD CER (0603)	4P 50V NPO	110-0096-00
C5	CAP, FXD CER (0603)	18P 50V NPO	110-0065-00
C8	CAP, FXD TAN(CASE A)	1UF/25V	110-0367-00
C9	CAP, FXD CER (0603)	0.01UF X7R 50V K	110-0027-00
C10	CAP, FXD CER (0603)	0.01UF X7R 50V K	110-0027-00
C11	CAP, FXD CER (0603)	0.01UF X7R 50V K	110-0027-00
C13	CAP, FXD CER (0603)	1000PF X7R 50V K	110-0016-00
C14	CAP, FXD CER (0603)	1000PF X7R 50V K	110-0016-00
C15	CAP, FXD TAN(CASE A)	1UF/25V	110-0367-00
C16	CAP, FXD CER (0603)	100P NPO 50V J	110-0051-00
C17	TAN, CAP TAN (CASE A)	10UF/16V	110-0372-00
CD1	LED	CL220YG-C-T	130-0140-00
CD2	LED	CL220YG-C-T	130-0140-00
CD3	LED	SML310MT	130-0107-00
CD4	LED	SML310MT	130-0107-00
CD10	DIODE	1SS352-TPH3	130-0158-00
CD11	DIODE	1SS352-TPH3	130-0158-00
CD12	DIODE	1SS352-TPH3	130-0158-00
CD13	DIODE	1SS352-TPH3	130-0158-00
CD14	DIODE	1SS352-TPH3	130-0158-00
CD5	LED	SML310MT	130-0107-00
CD6	LED	SML310MT	130-0107-00
CD7	LED	SML310MT	130-0107-00
CD15	DIODE	DUMMY	130-0159-00
CD19	ZENER DIODE	DTZ7.5B	130-0160-00
IC1	IC	MB89657A	140-0260-00
IC2	IC	24LC08BI/SN	140-0017-00
IC3	IC	NJM062V-T1	140-0261-00
IC4	IC	PST575D	140-0262-00
J1	CONNECTOR	FH12-40S-0.5SV	200-0069-00
LCD1	INDICATOR	WK-TZA043-FH-A	161-0012-00
P1	RUBBER CONNECTOR	40*2.3*2.7 for LCD using	204-0003-00
PC1	PCB	JRC CPU PL-266AA	260-0203-00
PC2	PCB	JRC KEY PAD PL-267AA	260-0204-00
R1	RESISTOR FXD (0603)	3.3K 1/16W J	100-0058-00
R2	RESISTOR FXD (0603)	33K 1/16W J	100-0065-00
R3	RESISTOR FXD (0603)	1.0K 1/16W J	100-0042-00
R4	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R5	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R6	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R7	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R8	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R9	RESISTOR FXD (0603)	20K 1/16W J	100-0048-00
R10	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R11	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R12	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R13	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R14	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R15	RESISTOR FXD (0603)	470K 1/16W J	100-0073-00
R16	RESISTOR FXD (0603)	470K 1/16W J	100-0073-00
R17	RESISTOR FXD(0603)	470K 1/16W J	100-0073-00
R18	RESISTOR FXD (0603)	470 OHM 1/16W J	100-0074-00
R19	RESISTOR FXD (0603)	100 OHM 1/16W J	100-0026-00
R20	RESISTOR FXD (0603)	100 OHM 1/16W J	100-0026-00
R21	RESISTOR FXD (0603)	100 OHM 1/16W J	100-0026-00
R22	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R23	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
R24	RESISTOR FXD (0603)	10K 1/16W J	100-0027-00
R31	NC		
R32	NC		
R34	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R35	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R36	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R37	RESISTOR FXD (0603)	4.7K 1/16W J	100-0070-00
R38	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R39	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R40	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R41	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R42	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R43	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R44	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R45	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R46	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
R47	RESISTOR FXD (0603)	1K 1/16W J	100-0042-00
R48	RESISTOR FXD (0603)	47K 1/16W J	100-0075-00
TR1	TRANSISTOR	UN9211-(TX)	131-0159-00
TR2	TRANSISTOR	2SB1115	131-0160-00
X1	CRYSTAL	SX-1 4.9152MHZ	150-0036-00
R49	RESISTOR FXD (0603)	1K 1/16W J	100-0042-00
R50	RESISTOR FXD (0603)	0 OHM 1/16W J	100-0021-00
R51	RESISTOR FXD (0603)	DUMMY	
R52	RESISTOR FXD (0603)	0 OHM 1/16W J	100-0021-00
MIC1	MICPHONE C-MOS	MK-001 ECM-10f6	232-0002-00
SP1	SPEAKER	36f, 8 ohm, 0.5W	230-0009-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C101	CAP, FXD CER(0603)	Y5V, 0.1U, 25V	110-0045-00
C102	CAP, FXD CER(0603)	Y5V, 0.1U, 25V	110-0045-00
C103	CAP, FXD CER(1206)	CH472J50PT	110-0501-00
C104	CAP, FXD CER(0603)	Y5V 0.1U 25V Z	110-0045-00
C105	CAP, FXD CER(0603)	X7R 1000PF 50V K	110-0016-00
C106	CAP, FXD CER(0603)	X7R 2200PF 25V K	110-0029-00
C108	CAP, FXD CER(0603)	X7R 50V 0.01UF K	110-0027-00
C109	CAP, FXD TAN(CASE A)	1UF 25V	110-0367-00
C110	CAP, FXD CER(0603)	0.01UF 50V X7R K	110-0027-00
C111	CAP, FXD CER(0603)	0.01UF 50V X7R K	110-0027-00
C112	CAP, FXD CER(0603)	0.01UF 50V X7R K	110-0027-00
C113	CAP, FXD CER(0603)	Y5V 0.1U 25V Z	110-0045-00
C114	CAP, FXD CER(0603)	Y5V 0.1U 25V Z	110-0045-00
C115	CAP, FXD CER(0603)	Y5V 0.1U 25V Z	110-0045-00
C117	CAP, FXD CER(0603)	NPO 390PF 50V J	110-0187-00
C118	CAP, FXD CER(0603)	NPO 680PF 25V J	110-0002-00
C119	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C120	CAP, FXD TAN(CASE A)	10U 25V	110-0372-00
C121	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C122	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C123	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C124	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C126	CAP, FXD TAN(CASE A)	10U 25V	110-0372-00
C127	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C128	CAP, FXD TAN(CASE A)	1UF 25V	110-0367-00
C129	CAP, FXD TAN(CASE A)	1UF 25V	110-0367-00
C134	CAP, FXD TAN(CASE A)	4.7UF/16V	110-0497-00
C135	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C136	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C137	CAP, FXD CER(0603)	0.1UF 25V Y5V Z	110-0045-00
C138	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C139	CAP, FXD CER(0603)	10PF 50V NPO D	110-0054-00
C140	CAP, FXD CER(0603)	47PF 50V NPO J	110-0094-00
C141	CAP, FXD TAN(CASE B)	47UF 6.3V	110-0404-00
C142	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C145	CAP, FXD ELEC(SMD)	100UF/16V	110-0397-00
C146	CAP, FXD CER(0603)	100PF 50V NPO J	110-0051-00
C150	CAP, FXD TAN(CASE A)	1U 25V	110-0367-00
C151	CAP, FXD TAN(CASE A)	1U 25V	110-0367-00
C152	CAP, FXD TAN(CASE A)	1U 25V	110-0367-00
C153	CAP, FXD TAN(CASE A)	1000PF 16V	110-0366-00
C154	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C156	CAP, FXD CER(0603)	47PF 50V NPO J	110-0094-00
C157	CAP, FXD TAN(CASE A)	4.7UF 16V	110-0497-00
C159	CAP, FXD TAN(CASE A)	10U 16V	110-0366-00
C164	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C165	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C168	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C170	CAP, FXD TAN(CASE A)	10U 16V	110-0366-00
C171	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C173	CAP, FXD ELEC DIP	100U 16V M6.5*5RV2	110-0420-00
C174	CAP, FXD CER(0603)	0.01UF 50V X7R K	110-0027-00
C175	CAP, FXD TAN(CASE A)	47U 6.3V	110-0404-00
C176	CAP, FXD CER(0603)	0.01U 50V Y5V Z	110-0027-00
C177	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C178	CAP, FXD CER(0603)	0.01UF 50V X7R K	110-0027-00
C179	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C180	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C181	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C182	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C183	CAP, FXD CER(0603)	1500P 50V X7R K	110-0014-00
C184	CAP, FXD CER(0603)	3900P 50V X7R K	110-0507-00
C185	CAP, FXD CER(0603)	220PF 50V NPO J	110-0072-00
C186	CAP, FXD TAN(CASE A)	1000PF 16V	110-0366-00
C187	CAP, FXD TAN(CASE A)	1U 25V	110-0367-00
C188	CAP, FXD TAN(CASE A)	1U 25V	110-0367-00
C189	CAP, FXD TAN(CASE A)	0.22UF 25V	110-0359-00
C190	CAP, FXD CER	47UF 16V	131-0108-00
C193	CAP, FXD CER(0603)	0.1U 25V Y5V Z	110-0045-00
C194	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C195	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C196	CAP, FXD CER(0603)	0.1UF 25V Y5V Z	110-0045-00
C197	CAP, FXD CER(0603)	0.1UF 25V Y5V Z	110-0045-00
C198	CAP, FXD CER(0603)	0.1UF 25V Y5V Z	110-0045-00
C199	CAP, FXD CER(0603)	1000PF 50V X7R K	110-0016-00
C201	CAP, FXD TAN(CASE A)	4.7U 16V	110-0497-00
CD101	DIODE	HSM198S-TR	130-0161-00
CD102	DIODE	SMB/D0-214AA/SD2	130-0108-00
CD103	DIODE	HSM198S-TR	130-0161-00
CD104	DIODE	1SS301	130-0162-00
CD109	DIODE	DA023 SLM-1251MW	130-0077-00
IC101	IC	NJM2211M-T1	140-0263-00
IC102	IC	NJM064V-T1	140-0264-00
IC103	IC	TK15210M-TL	140-0265-00
IC104	IC	NJM064V-T1	140-0264-00
IC105	IC	TA7368F	140-0143-00
IC107	IC	TA7330F-SO-EL	140-0266-00
IC109	IC	NJM062V-T1	140-0261-00
IC110	IC	S-81250SGUP	140-0133-00
IC111	IC	M5237 SOT-89	140-0062-00
IC112	IC	TK15210M-TL	140-0265-00
IC113	IC	TC4S66F	140-0152-00
J101	CONNECTOR	FH12-40S-0.55V	200-0069-00
PC101	PCB	JRC AF PL-268AA	260-0202-00
R101	RESISTOR FXD(0603)	47K	100-0075-00
R102	RESISTOR FXD(0603)	DUMMY	100-0073-00
R103	RESISTOR FXD(0603)	470K	100-0025-00
R104	RESISTOR FXD(0603)	100K	100-0025-00
R105	RESISTOR FXD(0603)	220K	100-0050-00
R106	RESISTOR FXD(0603)	18K	100-0040-00
R107	RESISTOR FXD(0603)	12K	100-0032-00
R108	RESISTOR FXD(0603)	100K	100-0025-00
R109	RESISTOR FXD(0603)	220 OHM	100-0051-00
R110	RESISTOR FXD(0603)	5.6K	100-0078-00
R111	RESISTOR FXD(0603)	47K	100-0075-00
R112	RESISTOR FXD(0603)	47K	100-0075-00
R113	RESISTOR FXD(0603)	47K	100-0075-00
R114	RESISTOR FXD(0603)	47K	100-0075-00
R115	RESISTOR FXD(0603)	DUMMY	100-0025-00
R116	RESISTOR FXD(0603)	100K	100-0025-00
R117	RESISTOR FXD(0603)	4.7K	100-0070-00
R118	RESISTOR FXD(0603)	150K	100-0035-00
R119	RESISTOR FXD(0603)	100K	100-0025-00
R121	RESISTOR FXD(0603)	DUMMY	100-0025-00
R122	RESISTOR FXD(0603)	10K	100-0027-00
R123	RESISTOR FXD(0603)	100K	100-0025-00
R124	RESISTOR FXD(0603)	10K	100-0027-00
R125	RESISTOR FXD(0603)	3.3K	100-0058-00
R126	RESISTOR FXD(0603)	100K	100-0025-00
R127	RESISTOR FXD(0603)	100K	100-0025-00
R128	RESISTOR FXD(0603)	100K	100-0025-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
R129	RESISTOR FXD(0603)	470K	100-0073-00
R130	RESISTOR FXD(0603)	27K	100-0055-00
R131	RESISTOR FXD(0603)	33K	100-0065-00
R132	RESISTOR FXD(0603)	47K	100-0075-00
R133	RESISTOR FXD(0603)	100K	100-0025-00
R134	RESISTOR FXD(0603)	DUMMY	
R135	RESISTOR FXD(0603)	100K	100-0025-00
R137	RESISTOR FXD(0603)	4.7K	100-0070-00
R138	RESISTOR FXD(0603)	330K	100-0063-00
R143	RESISTOR FXD(0603)	1K	100-0042-00
R144	RESISTOR FXD(0603)	33K	100-0065-00
R145	RESISTOR FXD(0603)	47K	100-0075-00
R146	RESISTOR FXD(0603)	2.2K	100-0044-00
R147	RESISTOR FXD(0603)	100 OHM	100-0026-00
R148	RESISTOR FXD(0603)	1K	100-0042-00
R153	RESISTOR FXD(0603)	0 OHM	100-0021-00
R154	RESISTOR FXD(0603)	10K	100-0027-00
R156	RESISTOR FXD(0603)	4.7K	100-0070-00
R161	RESISTOR FXD(0603)	1.0K	100-0042-00
R162	RESISTOR FXD(0603)	47K	100-0075-00
R163	RESISTOR FXD(0603)	47K	100-0075-00
R164	RESISTOR FXD(0603)	47K	100-0075-00
R165	RESISTOR FXD(0603)	47K	100-0075-00
R170	RESISTOR FXD(0603)	47K	100-0075-00
R171	RESISTOR FXD(0603)	470K	100-0073-00
R172	RESISTOR FXD(0603)	47K	100-0075-00
R175	RESISTOR FXD(0603)	10K	100-0027-00
R176	RESISTOR FXD(0603)	1.8K	100-0024-00
R179	RESISTOR FXD(0603)	18K	100-0040-00
R180	RESISTOR FXD(0603)	1.0K	100-0042-00
R181	RESISTOR FXD(0603)	100K	100-0025-00
R182	RESISTOR FXD(0603)	470 OHM	100-0074-00
R183	RESISTOR FXD(0603)	1.0K	100-0042-00
R184	RESISTOR FXD(0603)	100K	100-0025-00
R185	RESISTOR FXD(0603)	100K	100-0025-00
R186	RESISTOR FXD(0603)	100K	100-0025-00
R187	RESISTOR FXD(0603)	47K	100-0075-00
R188	RESISTOR FXD(0603)	47K	100-0075-00
R189	RESISTOR FXD(0603)	47K	100-0075-00
R190	RESISTOR FXD(0603)	100K	100-0025-00
R194	RESISTOR FXD(0603)	0 OHM	100-0021-00
R195	RESISTOR FXD(0603)	0 OHM	100-0021-00
R200	RESISTOR FXD(0603)	0 OHM	100-0021-00
R201	RESISTOR FXD(0603)	0 OHM	100-0021-00
R202	RESISTOR FXD(0603)	DUMMY	
R203	RESISTOR FXD(0603)	5.6K	100-0078-00
R205	RESISTOR FXD(0603)	100K	100-0025-00
R206	RESISTOR FXD(0603)	47K	100-0075-00
R207	RESISTOR FXD(0603)	180K	100-0038-00
R208	RESISTOR FXD(0603)	180K	100-0038-00
R209	RESISTOR FXD(0603)	22K	100-0052-00
R211	RESISTOR FXD(0603)	10K	100-0027-00
R212	RESISTOR FXD(0603)	330 OHM	100-0064-00
R214	RESISTOR FXD(0603)	2.2K	100-0044-00
R215	RESISTOR FXD(0603)	10K	100-0027-00
R216	RESISTOR FXD(0603)	330 OHM	100-0064-00
R217	RESISTOR FXD(0603)	220 OHM	100-0051-00
R218	RESISTOR FXD(0603)	3.3K	100-0058-00
R219	RESISTOR FXD(0603)	1K	100-0042-00
R220	RESISTOR FXD(0603)	470 OHM	100-0074-00
RV101	RESISTOR VAR	5K	102-0020-00
RV102	DUMMY		

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
RV103	RESISTOR VAR	EVM1YSX50B14 10K	101-0002-01
RV104	RESISTOR VAR	EVM1YSX50B14 10K	101-0002-01
RV105	RESISTOR VAR	EVM1YSX50B14 10K	101-0002-01
RV106	RESISTOR VAR	EVM1XSX50B13 1K	101-0002-00
TR101	TRANSISTOR	UN9119-(TX)	131-0161-00
TR102	TRANSISTOR	UN9211-(TX)	131-0159-00
TR103	TRANSISTOR	UN9211-(TX)	131-0159-00
TR105	TRANSISTOR	2SB1115	131-0160-00
TR109	TRANSISTOR	UN9211-(TX)	131-0159-00
TR111	TRANSISTOR	UN9119-(TX)	131-0161-00
TR112	TRANSISTOR	UN9211-(TX)	131-0159-00
TR113	TRANSISTOR	2SB1182F(Q)	131-0155-00
TR118	TRANSISTOR	UN9119-(TX)	131-0161-00
TR119	TRANSISTOR	UN9211-(TX)	131-0159-00
TR123	TRANSISTOR	UMZIN	131-0162-00
TR124	TRANSISTOR	UN9211-(TX)	131-0159-00
TR125	TRANSISTOR	UN9119-(TX)	131-0161-00
SW104	ROTARY SWITCH	EC09P20-64B	220-0016-00
VR101+S101	RESISTOR VAR	10K(A) RK09711111020	102-0008-00
W201	CONNECTOR	PC BOARS F.P.C PL-128AA	212-0019-00
W204	CONNECTOR	8PIN	200-0071-00
W202	VR	10K(A)	102-0019-00
PC102	FUNCTION KEY PCB		260-0210-00
PC103	PTT KEY PCB		260-0211-00
S102	F(P67) FUNCTION TACT SWITCH		220-0023-00
S103	PTT TACT SWITCH		220-0024-00
PC104	VOLUME/PWR PCB		260-0212-00
PC105	SQUELCH VR PCB		260-0213-00
PC106	CH SWITCH PCB		260-0214-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C301	CAP, FXD CER	22PF 50V	110-0074-00
C302	CAP, FXD CER	10PF 50V	110-0054-00
C303	CAP, FXD CER	47PF 50V	110-0094-00
C304	CAP, FXD CER	5PF 50V	110-0104-00
C305	CAP, FXD CER	39PF 50V	110-0087-00
C306	CAP, FXD CER	5PF 50V	110-0104-00
C307	CAP, FXD CER	18PF 50V	110-0065-00
C308	CAP, FXD CER	1000PF 50V	110-0016-00
C309	CAP, FXD CER	18PF 50V	110-0065-00
C310	CAP, FXD CER	18PF 50V	110-0065-00
C311	CAP, FXD CER	1000PF 50V	110-0016-00
C312	CAP, FXD CER	1000PF 50V	110-0016-00
C313	CAP, FXD CER	1000PF 50V	110-0016-00
C314	CAP, FXD CER	DUMMY	110-0016-00
C316	CAP, FXD CER	1000PF 50V	110-0016-00
C317	CAP, FXD CER	8P	110-0111-00
C318	CAP, FXD CER	0.01UF 50V	110-0027-00
C319	CAP, FXD CER	4PF 50V	110-0096-00
C320	CAP, FXD CER	3PF 50V	110-0088-00
C321	CAP, FXD CER	4PF 50V	110-0096-00
C322	CAP, FXD CER	DUMMY	110-0083-00
C323	CAP, FXD CER	33PF 50V	110-0083-00
C324	CAP, FXD CER	1000PF 50V	110-0016-00
C325	CAP, FXD CER	8P	110-0111-00
C326	CAP, FXD CER	0.01UF 50V	110-0027-00
C327	CAP, FXD CER	1000PF 50V	110-0016-00
C328	CAP, FXD CER	1000PF 50V	110-0016-00
C329	CAP, FXD CER	1000PF 50V	110-0016-00
C330	CAP, FXD CER	1000PF 50V	110-0016-00
C331	CAP, FXD CER	1000PF 50V	110-0016-00
C332	CAP, FXD CER	DUMMY	110-0094-00
C333	CAP, FXD CER	47PF 50V	110-0094-00
C334	CAP, FXD CER	1000PF 50V	110-0016-00
C335	CAP, FXD CER	8P	110-0111-00
C336	CAP, FXD CER	0.01UF 50V	110-0027-00
C337	CAP, FXD CER	4PF 50V	110-0096-00
C338	CAP, FXD CER	3PF 50V	110-0088-00
C339	CAP, FXD CER	4PF 50V	110-0096-00
C340	CAP, FXD CER	DUMMY	110-0083-00
C341	CAP, FXD CER	33PF 50V	110-0083-00
C342	CAP, FXD CER	1000PF 50V	110-0016-00
C343	CAP, FXD CER	8P	110-0111-00
C344	CAP, FXD CER	0.01UF 50V	110-0027-00
C345	CAP, FXD CER	1000PF 50V	110-0016-00
C346	CAP, FXD CER	1000PF 50V	110-0016-00
C347	CAP, FXD CER	10PF 50V	110-0054-00
C348	CAP, FXD CER	0.01UF 50V	110-0027-00
C349	CAP, FXD CER	22PF 50V	110-0074-00
C350	CAP, FXD CER	0.01UF 50V	110-0027-00
C351	CAP, FXD CER	DUMMY	110-0088-00
C352	CAP, FXD CER	3PF 50V	110-0088-00
C353	CAP, FXD CER	DUMMY	110-0027-00
C354	CAP, FXD CER	0.01UF 50V	110-0027-00
C355	CAP, FXD CER	0.01UF 50V	110-0027-00
C356	CAP, FXD CER	0.01UF 50V	110-0027-00
C357	CAP, FXD CER	27PF 50V	110-0074-00
C358	CAP, FXD CER	0.01UF 50V	110-0027-00
C359	CAP, FXD CER	0.01UF 50V	110-0027-00
C360	CAP, FXD CER	0.1UF 25V	110-0045-00
C361	CAP, TAN(CASE A)	10U 16V	110-0366-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C362	CAP, FXD CER	0.1UF 25V	110-0045-00
C363	CAP, FXD CER	0.1UF 25V	110-0045-00
C364	CAP, FXD CER	0.1UF 25V	110-0045-00
C365	CAP, FXD CER	0.1UF 25V	110-0045-00
C366	CAP, FXD CER	0.1UF 25V	110-0045-00
C367	CAP, FXD CER	120PF 50V	110-0506-00
C368	CAP, FXD CER	0.1UF 25V	110-0045-00
C369	CAP, FXD CER	0.1UF 25V	110-0045-00
C370	CAP, TAN(CASE A)	10UF 16V	110-0366-00
C371	CAP, TAN(CASE A)	10UF 16V	110-0366-00
C372	CAP, FXD CER	0.1UF 25V	110-0045-00
C373	CAP, FXD CER	22000PF 50V	110-0029-00
C374	CAP, FXD CER	0.01UF 50V	110-0027-00
C375	CAP, FXD CER	1800PF 50V	110-0118-00
C376	CAP, FXD CER	1800PF 50V	110-0118-00
C377	CAP, FXD CER	0.1UF 25V	110-0045-00
C378	CAP, CER (0805)	2.2UF	110-0393-00
C379	CAP, FXD CER	0.1UF 25V	110-0045-00
C380	CAP, CER (0805)	1UF 16V Y5V Z	110-0169-00
C381	CAP, FXD CER	0.1UF 25V	110-0045-00
C382	CAP, FXD CER	0.1UF 25V	110-0045-00
C383	CAP, FXD CER	0.1UF 25V	110-0045-00
C384	CAP, FXD CER	1000PF 50V	110-0016-00
C385	CAP, TAN(CASE A)	10UF 16V	110-0366-00
C386	CAP, TAN(CASE A)	10UF 16V	110-0366-00
C387	CAP, TAN(CASE A)	1UF 25V	110-0367-00
C388	CAP, FXD CER	1000PF 50V	110-0016-00
C389	CAP, FXD CER	7PF 50V	110-0108-00
C390	CAP, FXD CER	5PF 50V	110-0104-00
C391	CAP, FXD CER	0.5PF 50V	110-0046-00
C392	CAP, FXD CER	0.01UF 50V	110-0027-00
C393	CAP, FXD CER	15PF 50V	110-0062-00
C394	CAP, TAN(CASE A)	10U 16V	110-0366-00
C395	CAP, FXD CER	1000PF 50V	110-0016-00
C396	CAP, FXD CER	2PF 50V	110-0079-00
C397	CAP, FXD CER	5PF 50V	110-0104-00
C398	CAP, FXD CER	1000PF 50V	110-0016-00
C399	CAP, FXD CER	1000PF 50V	110-0016-00
C400	CAP, FXD CER	6PF 50V	110-0106-00
C401	CAP, FXD CER	6PF 50V	110-0106-00
C403	CAP, FXD CER	1000PF 50V	110-0016-00
C404	CAP, FXD CER	1000PF 50V	110-0016-00
C405	CAP, FXD CER	DUMMY	110-0096-00
C406	CAP, FXD CER	4PF 50V	110-0096-00
C407	CAP, FXD CER	1000PF 50V	110-0016-00
C408	CAP, FXD CER	1000PF 50V	110-0016-00
C409	CAP, FXD CER	4PF 50V	110-0096-00
C410	CAP, FXD CER	4PF 50V	110-0096-00
C412	CAP, FXD CER	1000PF 50V	110-0016-00
C413	CAP, FXD CER	1000PF 50V	110-0016-00
C414	CAP, FXD CER	2PF 50V	110-0079-00
C415	CAP, FXD CER	1000PF 50V	110-0016-00
C416	CAP, FXD CER	100PF 50V	110-0051-00
C417	CAP, FXD CER	2PF 50V	110-0079-00
C418	CAP, FXD CER	1000PF 50V	110-0016-00
C419	CAP, FXD CER	5PF 50V	110-0104-00
C420	CAP, FXD CER	1000PF 50V	110-0016-00
C421	CAP, FXD CER	1000PF 50V	110-0016-00
C422	CAP, FXD CER	0.1UF 25V	110-0045-00
C423	CAP, FXD CER	1000PF 50V	110-0016-00
C424	CAP, FXD CER	1000PF 50V	110-0016-00
C425	CAP, FXD CER	1000PF 50V	110-0016-00



PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C426	CAP, FXD CER	1000PF 50V	110-0016-00
C427	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C428	CAP, FXD CER	1000PF 50V	110-0016-00
C429	CAP, FXD CER	1000PF 50V	110-0016-00
C430	CAP, FXD CER	1000PF 50V	110-0016-00
C431	CAP, FXD CER	1000PF 50V	110-0016-00
C432	CAP, FXD CER	1000PF 50V	110-0016-00
C433	CAP, TAN (CASE A)	1UF 25V M	110-0367-00
C434	CAP, FXD CER	1000PF 50V	110-0016-00
C435	CAP, FXD CER	1000PF 50V	110-0016-00
C436	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C437	CAP, FXD CER	1000PF 50V	110-0016-00
C438	CAP, FXD CER	1000PF 50V	110-0016-00
C439	CAP, FXD CER	1000PF 50V	110-0016-00
C440	CAP, FXD CER	1000PF 50V	110-0016-00
C441	CAP, FXD CER	0.01UF 50V	110-0027-00
C442	CAP, FXD CER	15PF 50V	110-0062-00
C444	CAP, FXD CER	1000PF 50V	110-0016-00
C445	CAP, FXD CER	22PF 50V	110-0074-00
C446	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C447	CAP, FXD CER	1000PF 50V	110-0016-00
C448	CAP, FXD CER	1000PF 50V	110-0016-00
C449	CAP, FXD CER	15PF 50V	110-0062-00
C450	CAP, FXD CER	10PF 50V	110-0054-00
C451	CAP, FXD CER	1000PF 50V	110-0016-00
C452	CAP, FXD CER	0.01UF 50V	110-0027-00
C453	CAP, FXD CER	1000PF 50V	110-0016-00
C454	CAP, FXD CER	4PF 50V	110-0096-00
C455	CAP, FXD CER	1000PF 50V	110-0016-00
C456	CAP, FXD CER	1000PF 50V	110-0016-00
C457	CAP, ELEC DIP	10UF 16V 4**5mm	110-0269-00
C458	CAP, ELEC DIP	10UF 16V 4**5mm	110-0269-00
C459	CAP, FXD CER	1000PF 50V	110-0016-00
C460	CAP, ELEC DIP	10UF 16V	110-0269-00
C461	CAP, FXD CER	1000PF 50V	110-0016-00
C462	CAP, FXD CER	4PF 50V	110-0096-00
C463	CAP, FXD CER	0.1UF 25V	110-0045-00
C464	CAP, CER (CASE A)	1UF	110-0367-00
C465	CAP, FXD CER	470PF 50V	110-0001-00
C466	CAP, FXD CER	0.1UF 25V	110-0045-00
C467	CAP, CER (CASE A)	1UF	110-0367-00
C469	CAP, FXD CER	0.1UF 25V	110-0045-00
C470	CAP, CER (CASE A)	1UF	110-0367-00
C471	CAP, FXD CER	0.1UF 25V	110-0045-00
C472	CAP, FXD TAN	1UF	110-0367-00
C473	CAP, FXD CER	12PF 50V	110-0059-00
C474	CAP, FXD CER	12PF 50V	110-0059-00
C475	CAP, FXD CER	15PF 50V	110-0062-00
C476	CAP, FXD CER	0.1UF 25V	110-0045-00
C477	CAP, FXD CER	150P	110-0061-00
C482	CAP, FXD CER	0.01UF 50V	110-0027-00
C483	CAP, FXD CER	0.01UF 50V	110-0027-00
C484	CAP, FXD CER	1000PF 50V	110-0016-00
C485	CAP, FXD CER	1000PF 50V	110-0016-00
C488	CAP, FXD CER	1000PF 50V	110-0016-00
C489	CAP, FXD CER	1000PF 50V	110-0016-00
C490	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C491	CAP, TAN (CASE B)	47UF 6.3V	110-0404-00
C492	CAP, FXD CER	27PF 50V	110-0074-00
C494	CAP, FXD CER	10PF 50V	110-0054-00
C495	CAP, FXD CER	12PF 50V	110-0059-00
C497	CAP, FXD CER	7PF 50V	110-0108-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
C498	CAP, FXD CER	DUMMY	
C499	CAP, FXD CER	DUMMY	
C500	CAP, FXD CER	0.01UF 50V	110-0027-00
C501	CAP, FXD CER	0.01UF 50V	110-0027-00
C502	CAP, FXD CER	7PF 50V	110-0108-00
C503	CAP, FXD CER	18PF 50V	110-0065-00
C600	CAP, FXD CER	1000PF 50V	110-0016-00
C601	CAP, FXD CER	1000PF 50V	110-0016-00
C602	CAP, FXD CER	22PF 50V	110-0074-00
C603	CAP, FXD CER	1000PF 50V	110-0016-00
C604	CAP, FXD CER	27PF 50V	110-0077-00
C605	CAP, FXD CER	27PF 50V	110-0077-00
C606	CAP, FXD CER	1000PF 50V	110-0016-00
C607	CAP, FXD CER	1000PF 50V	110-0016-00
C608	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C609	CAP, FXD CER	1000PF 50V	110-0016-00
C610	CAP, FXD CER	1000PF 50V	110-0016-00
C611	CAP, FXD CER	1000PF 50V	110-0016-00
C612	CAP, FXD CER	33PF 50V	110-0083-00
C613	CAP, TAN (CASE A)	10UF 16V	110-0366-00
C614	CAP, FXD CER	1000PF 50V	110-0016-00
CD301	DIODE	RLS-135/TE11	130-0101-00
CD302	DIODE	RLS-135/TE11	130-0101-00
CD303	DIODE	MA304-TX	130-0163-00
CD304	DIODE	MA304-TX	130-0163-00
CD305	DIODE	MA304-TX	130-0163-00
CD306	DIODE	MA304-TX	130-0163-00
CD307	DIODE	DAN235U/T-106	130-0050-00
CD308	DIODE	DAN235U/T-106	130-0050-00
CD309	DIODE	1SS352-TPH3	130-0158-00
CD310	DIODE	1SS352-TPH3	130-0158-00
CD311	DIODE	1SS352-TPH3	130-0158-00
CD312	DIODE	MA362-TX	130-0088-00
CD313	DIODE	MA362-TX	130-0088-00
CD314	DIODE	DAP236U/T-106	130-0170-00
CD315	DIODE	DAN235U/T-106	130-0050-00
CD316	DIODE	1SS352-TPH3	130-0158-00
CD317	DIODE	1SS352-TPH3	130-0158-00
CD318	DIODE	1SS352-TPH3	130-0158-00
CD319	DIODE	1SS315-TE85L	130-0025-00
CD320	DIODE	1SS300	130-0167-00
CD322	DIODE	1SS315-TE85L	130-0025-00
CD321	DIODE	1SS301-TE85L	130-0166-00
CV301	CAPACITOR VAR	CTC038-20RSM 20PF	111-0003-03
CV302	CAPACITOR VAR	CTC038-06RSM 6PF	111-0003-01
CV303	CAPACITOR VAR	3PFCTC038-03RSM	111-0003-00
FL301	CRYSTAL CKT	(FL-A,FL-B) 21.7MHZ	152-0039-00
FL302	CERAMIC FILTER	SFGCG450BX-TX	152-0040-00
FL303	FILTER	SFFC450D-TC01	152-0041-00
IC301	IC	MB1504PF	140-0083-00
IC302	IC	TK10930V-TL	140-0267-00
IC303	IC	NJM064V-T1	140-0264-00
IC307	IC	MB511PF-G	140-0268-00
J301	ANT JACK		
J303	JACK	EXT MIC 2.5φ EXT SP 3.5φ	200-0024-00
J304	JACK	1*2P F=2.0mm 180D	200-0073-00
J305	JACK	1*2P F=2.0mm 180D	200-0073-00
J304-1	SHORT PIN		200-0039-00
J305-1	SHORT PIN		200-0039-00
L301	SPRING COIL	AR 050335B	124-0026-00
L302	SPRING COIL	AR 050335B	124-0026-00
L303	SPRING COIL	AR 050335B	124-0026-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
L304	INDUCTOR (0805)	47NH	126-0027-00
L305	INDUCTOR (1008)	2.2UH	126-0026-00
L306	INDUCTOR (1008)	2.2UH	126-0026-00
L307	INDUCTOR (1008)	2.2UH	126-0026-00
L308	INDUCTOR (0805)	15NH	126-0027-10
L310	INDUCTOR (0805)	15NH	126-0027-10
L312	INDUCTOR	0.22UH	126-0027-11
L313	INDUCTOR	0.22UH	126-0027-11
L314	INDUCTOR	0.1UH	126-0027-09
L315	INDUCTOR	LQH1N1R0K04	126-0037-00
L321	INDUCTOR	27NH	126-0027-19
L323	COIL	120NH	126-0032-00
L324	INDUCTOR (0805)	47NH	126-0027-12
L325	COIL	120NH	126-0032-00
L326	SPRING COIL	AR 050335B	124-0026-00
L331	INDUCTOR	LQH1N2R2K04	126-0038-00
LD301	FERRITE BEAD	BLM21B050S	123-0031-00
LD302	BEAD CORE	$\phi 2.5 \times 1.0 \times 3.0\text{mm}$	123-0030-00
LD303	FERRITE BEAD	BLM21B050S	123-0031-00
LD304	BEAD CORE	$\phi 2.5 \times 1.0 \times 3.0\text{mm}$	123-0030-00
LV301	INDUCTOR	56NH (0805)	126-0027-13
LV302	INDUCTOR	56NH (0805)	126-0027-13
LV303	INDUCTOR	56NH (0805)	126-0027-13
LV304	INDUCTOR	56NH (0805)	126-0027-13
PC301	PCB	JRC RF PL-265AA	260-0209-00
R301	RESISTOR FXD	47K	100-0075-00
R302	RESISTOR FXD	47K	100-0075-00
R303	RESISTOR FXD	100K	100-0025-00
R304	RESISTOR FXD	47K	100-0075-00
R305	RESISTOR FXD	43K	100-0464-00
R306	RESISTOR FXD	47K	100-0075-00
R307	RESISTOR FXD	100K	100-0025-00
R308	RESISTOR FXD	47K	100-0075-00
R309	RESISTOR FXD	43K	100-0464-00
R310	RESISTOR FXD	100K	100-0025-00
R311	RESISTOR FXD	100K	100-0025-00
R312	RESISTOR FXD	470K	100-0073-00
R313	RESISTOR FXD	DUMMY	100-0051-00
R314	RESISTOR FXD	220 OHM	100-0076-00
R315	RESISTOR FXD	47 OHM	100-0076-00
R316	RESISTOR FXD	47K	100-0075-00
R317	RESISTOR FXD	100K	100-0025-00
R318	RESISTOR FXD	47K	100-0075-00
R319	RESISTOR FXD	43K	100-0464-00
R320	RESISTOR FXD	47K	100-0075-00
R321	RESISTOR FXD	100K	100-0025-00
R322	RESISTOR FXD	47K	100-0075-00
R323	RESISTOR FXD	43K	100-0464-00
R324	RESISTOR FXD	100K	100-0025-00
R325	RESISTOR FXD	100K	100-0025-00
R326	RESISTOR FXD	150K	100-0035-00
R327	RESISTOR FXD	100K	100-0025-00
R328	RESISTOR FXD	390 OHM	100-0068-00
R329	RESISTOR FXD	3.3K	100-0058-00
R330	RESISTOR FXD	47 OHM	100-0076-00
R331	RESISTOR FXD	0 OHM	100-0021-00
R332	RESISTOR FXD	220 OHM	100-0051-00
R333	RESISTOR FXD	220 OHM	100-0051-00
R334	RESISTOR FXD	470K	100-0073-00
R335	RESISTOR FXD	330 OHM	100-0064-00
R336	RESISTOR FXD	220 OHM	100-0051-00
R337	RESISTOR FXD	220 OHM	100-0051-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
R338	RESISTOR FXD	47 OHM	100-0076-00
R339	RESISTOR FXD	47 OHM	100-0076-00
R340	RESISTOR FXD	2.2K	100-0044-00
R341	RESISTOR FXD	1.5K	100-0023-00
R342	RESISTOR FXD	1K	100-0042-00
R343	RESISTOR FXD	10K	100-0027-00
R344	RESISTOR FXD	5.6K	100-0078-00
R345	RESISTOR FXD	4.7K	100-0070-00
R346	RESISTOR FXD	10K	100-0027-00
R347	RESISTOR FXD	1K	100-0042-00
R348	RESISTOR FXD	10K	100-0027-00
R349	RESISTOR FXD	10K	100-0027-00
R350	RESISTOR FXD	68K	100-0089-00
R351	RESISTOR FXD	4.7K	100-0070-00
R352	RESISTOR FXD	8.2K	100-0092-00
R353	RESISTOR FXD	DUMMY	100-0076-00
R354	RESISTOR FXD	47 OHM	100-0076-00
R355	RESISTOR FXD	18K	100-0040-00
R356	RESISTOR FXD	820 OHM	100-0094-00
R357	RESISTOR FXD	390K	100-0067-00
R358	RESISTOR FXD	4.7K	100-0070-00
R359	RESISTOR FXD	1K	100-0042-00
R360	RESISTOR FXD	330K	100-0063-00
R362	RESISTOR FXD	47K	100-0075-00
R363	RESISTOR FXD	470K	100-0073-00
R364	RESISTOR FXD	470K	100-0073-00
R365	RESISTOR FXD	470K	100-0073-00
R366	RESISTOR FXD	470K	100-0073-00
R367	RESISTOR FXD	DUMMY	100-0073-00
R368	RESISTOR FXD	0 OHM	100-0021-00
R369	RESISTOR FXD	0 OHM	100-0021-00
R370	RESISTOR FXD	100K	100-0025-00
R371	RESISTOR FXD	100K	100-0025-00
R372	RESISTOR FXD	1M	100-0043-00
R373	RESISTOR FXD	100K	100-0025-00
R374	RESISTOR FXD	1M	100-0043-00
R375	RESISTOR FXD	47K	100-0075-00
R376	RESISTOR FXD	33K	100-0065-00
R377	RESISTOR FXD	0 OHM	100-0021-00
R378	RESISTOR FXD	0 OHM	100-0021-00
R379	RESISTOR FXD	47K	100-0075-00
R380	RESISTOR FXD	4.7K	100-0070-00
R381	RESISTOR FXD	2.7K	100-0047-00
R382	RESISTOR FXD	2.2K	100-0044-00
R383	RESISTOR FXD	330 OHM	100-0064-00
R384	RESISTOR FXD	47 OHM	100-0076-00
R385	RESISTOR FXD	10 OHM	100-0028-00
R386	RESISTOR FXD	47K	100-0075-00
R387	RESISTOR FXD	1K	100-0042-00
R388	RESISTOR FXD	47 OHM	100-0076-00
R389	RESISTOR FXD	47K	100-0075-00
R390	RESISTOR FXD	47K	100-0075-00
R391	RESISTOR FXD	4.7K	100-0070-00
R392	RESISTOR FXD	47K	100-0075-00
R393	RESISTOR FXD	4.7K	100-0070-00
R394	RESISTOR FXD	220 OHM	100-0051-00
R395	RESISTOR FXD	4.7K	100-0070-00
R396	RESISTOR FXD	47K	100-0075-00
R397	RESISTOR FXD	47K	100-0075-00
R398	RESISTOR FXD	47K	100-0075-00
R399	RESISTOR FXD	4.7K	100-0070-00
R400	RESISTOR FXD	220 OHM	100-0051-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
R401	RESISTOR FXD	47K	100-0075-00
R402	RESISTOR FXD	47K	100-0075-00
R403	RESISTOR FXD	100 OHM	100-0026-00
R404	RESISTOR FXD	47 OHM	100-0076-00
R405	RESISTOR FXD	47K	100-0075-00
R406	RESISTOR FXD	47 OHM	100-0076-00
R407	RESISTOR FXD	1K	100-0042-00
R408	RESISTOR FXD	1K	100-0042-00
R409	RESISTOR FXD	1K	100-0042-00
R410	RESISTOR FXD	180 OHM	100-0039-00
R411	RESISTOR FXD	820 OHM	100-0094-00
R412	RESISTOR FXD	180 OHM	100-0039-00
R413	RESISTOR FXD	1K	100-0042-00
R414	RESISTOR FXD	47K	100-0075-00
R415	RESISTOR FXD	470K	100-0073-00
R416	RESISTOR FXD	10K	100-0027-00
R417	RESISTOR FXD	470K	100-0073-00
R418	RESISTOR FXD	47 OHM	100-0076-00
R419	RESISTOR FXD	470 OHM	100-0074-00
R420	RESISTOR FXD	47 OHM	100-0076-00
R421	RESISTOR FXD	560 OHM	100-0081-00
R422	RESISTOR FXD	220K	100-0050-00
R423	RESISTOR FXD	47K	100-0075-00
R424	RESISTOR FXD	470K	100-0073-00
R425	RESISTOR FXD	47K	100-0075-00
R426	RESISTOR FXD	47K	100-0075-00
R427	RESISTOR FXD	47 OHM	100-0076-00
R428	RESISTOR FXD	47 OHM	100-0076-00
R429	RESISTOR FXD	390 OHM	100-0068-00
R430	RESISTOR FXD	220 OHM	100-0051-00
R431	RESISTOR FXD	1K	100-0042-00
R432	RESISTOR FXD	390 OHM	100-0068-00
R433	RESISTOR FXD	470 OHM	100-0074-00
R434	RESISTOR FXD	270 OHM	100-0378-00
R435	RESISTOR FXD	270 OHM	100-0378-00
R436	RESISTOR FXD	180 OHM	100-0039-00
R437	RESISTOR FXD	2.2K	100-0044-00
R438	RESISTOR FXD	2.2K	100-0044-00
R439	RESISTOR FXD	470 OHM	100-0074-00
R440	RESISTOR FXD	100 OHM	100-0026-00
R442	RESISTOR FXD	150 OHM	100-0036-00
R443	RESISTOR FXD	4.7K	100-0070-00
R444	RESISTOR FXD	22K	100-0052-00
R445	RESISTOR FXD	100 OHM	100-0026-00
R446	RESISTOR FXD	100 OHM	100-0026-00
R447	RESISTOR FXD	1.2K	100-0022-00
R448	RESISTOR FXD	47 OHM	100-0076-00
R449	RESISTOR FXD	10K	100-0027-00
R452	RESISTOR FXD	470 OHM	100-0074-00
R453	RESISTOR FXD	0 OHM	100-0021-00
R454	RESISTOR FXD	0 OHM	100-0021-00
R455	RESISTOR FXD	8.2K	100-0092-00
R456	RESISTOR FXD	4.7K	100-0070-00
R457	RESISTOR FXD	8.2K	100-0092-00
R458	RESISTOR FXD	4.7K	100-0070-00
R500	RESISTOR FXD	1 OHM	100-0028-01
R501	RESISTOR FXD	2.2K	100-0044-00
R502	RESISTOR FXD	47K	100-0075-00
R503	RESISTOR FXD	470 OHM	100-0074-00
RV301	RESISTOR VAR 3 $\phi$	10K	102-0005-00
RV302	RESISTOR VAR 3 $\phi$	10K	102-0005-00
RV303	RESISTOR VAR 3 $\phi$	300 OHM	102-0024-00

PART NO	PART NAME	DESCRIPTION	MATERIAL NO
RV304	RESISTOR VAR 3 φ	300 OHM	102-0024-00
T301	RF XFMR	H-6LHPCC00016 CBM33	123-0033-00
T302	RF XFMR		123-0034-00
T303	RF XFMR		123-0035-00
T304	RF XFMR		123-0035-00
T305	RF XFMR		123-0036-00
TR301	TRANSISTOR	3SK131-V12	131-0165-00
TR302	TRANSISTOR	3SK131-V12	131-0165-00
TR303	TRANSISTOR	3SK131-V12	131-0165-00
TR304	TRANSISTOR	ZSC4184	131-0164-00
TR305	TRANSISTOR	ZSC4184	131-0164-00
TR306	TRANSISTOR	ZSC4184	131-0164-00
TR307	TRANSISTOR	ZSC4184	131-0164-00
TR308	TRANSISTOR	UN9211-TX	131-0159-00
TR309	TRANSISTOR	UN9211-TX	131-0159-00
TR310	TRANSISTOR	UN9211-TX	131-0159-00
TR311	TRANSISTOR	UN9111-TX	131-0163-00
TR312	TRANSISTOR	ZSC4184	131-0164-00
TR313	TRANSISTOR	ZSC4184	131-0164-00
TR314	TRANSISTOR	ZSC4184	131-0164-00
TR315	TRANSISTOR	ZSC4184	131-0164-00
TR316	TRANSISTOR	ZSC4184	131-0164-00
TR317	TRANSISTOR	ZSC4184	131-0164-00
TR318	TRANSISTOR	ZSC4184	131-0164-00
TR319	TRANSISTOR	UN9211-TX	131-0159-00
TR320	TRANSISTOR	UN9211-TX	131-0159-00
TR321	TRANSISTOR	3SK131-V12	131-0165-00
TR322	TRANSISTOR	3SK131-V12	131-0165-00
TR323	TRANSISTOR	ZSC2407	131-0166-00
TR324	TRANSISTOR	ZSC1947	131-0167-00
TR325	TRANSISTOR	UN9211-TX	131-0159-00
TR326	TRANSISTOR	UN9211-TX	131-0159-00
TR327	TRANSISTOR	UN9211-TX	131-0159-00
TR328	TRANSISTOR	UN9211-TX	131-0159-00
TR329	TRANSISTOR	ZSC1971	131-0029-00
TR331	TRANSISTOR	UN9211-TX	131-0159-00
TR333	TRANSISTOR	UN9211-TX	131-0159-00
TR335	TRANSISTOR	UN9211-TX	131-0159-00
TR330	TRANSISTOR	RT1P434M	131-0108-00
TR332	TRANSISTOR	RT1P434M	131-0108-00
TR334	TRANSISTOR	RT1P434M	131-0108-00
X301	CRYSTAL	21.5MHZ	150-0037-00
XD301	FILTER	CDBC450CX35-TC 450KHZ	152-0042-00

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

15.27(a) SPECIAL ACCESSORIES.

The users manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.21 INFORMATION TO USER.

THE APPLICANT HAS BEEN CAUTIONED AS TO THE FOLLOWING: