PARTS LIST AND TUNE-UP PROCEDURE

REFERENCE	DESCRIPTION	VENDOR	VENDOR P/N
D101,D103	PIN DIODE 1SS314	TOSHIBA	1SS314
D102	DIODE VARACTOR 1SV214	TOSHIBA	1SV214
D104	PIN DIODE BAR63-03W	SIEMENS	BAR63-03W
D105	SILICON DUAL DIODE ARRAYS	ROHM	DA204K
D106	SCHOTTKY DIODES	ROHM	RB425D
Q101	TR CHIP NPN 2SC4226R24	NEC	2SC4226R24
Q102	TR.CHIP FET DUAL GATE 3SK320	TOSHIBA	3SK320
Q103	TR CHIP HN3C10FT	TOSHIBA	HN3C10FT
Q104	TR CHIP 2SC5087CO	TOSHIBA	2SC5087CO
Q105	TR. CHIP FET 2SK3078	TOSHIBA	2SK3078
Q106, Q112	TR CHIP NPN 2SC2712		2SC2712
Q107, Q108, Q111	TR DIGITAL CHIP PNP DTA143EKA	ROHM	DTA143EKA
Q109	N-CHANNEL J-FET 2SK303	SANYO	2SK303
Q110	TR DIGITAL CHIP NPN DTC114EKA	ROHM	DTC114EKA
BPF101	SAW FILTER 465.1375MHZ SAMSUNG	SAMSUNG	S465PC
BPF102	CRYSTAL FILTER 26.05MHZ KSS	KSS	MXF 26.05-15A6
BPF103	CERAMIC FILTER 450 kHz MURATA	MURATA	CFW450G
IC101	IC DBL5019V IF SYSTEM	DAEWOO	DBL5019V
IC102	IC M64082AGP PLL IC	MITSUBISHI	M64082AGP
IC103	COMPANDER IC DBL5020V SOP	DAEWOO	DBL5020V
IC104	IC KA358D LOW POWER DUAL OP AMP SOP	SAMSUNG	KA358D
IC105	IC RECEIVER AMP MC34119D-R2	MOTOROLA	MC34119
IC106	CMOS MICROCONTROLLER	TOSHIBA	TMP87C405M
IC107	IC XC62AP3002PR 3V REGULATOR SOT89	TOREX	XC62AP3002PR
IC108	3.3V DETECTOR S-80733AN-DX-X(SOT-89-3)	SEIKO	S-80733AN-DX-X
IC201	RAM MAPPING 32X4 LCD CONTROLLER	HOTEX	HT1621B
X0SC01	12.8MHZ KXN1292A MOTOROLA TCXO	MOTOROLA	KXN1292A
X0SC02	CRYSTAL 4.194304MHZ CSA-309 CITIZEN	CITIZEN	CSA-310

EXHIBIT 10

<u>**TUNE UP PROCEDURE**</u>

The following tune-up procedure is for the factory only. There will be no customer tuning.

Tuning Procedures

ALIGNMENT (PCB level)			
(Test Condition: under CH1)			
NO.	ITEM	ALIGNMENT METHOD	REMARK
1.	Standby current	1. Set A-METER, and RX mode 2. Check the standby current <45mA VDC	
2.	RX Current @ Rated	1. Set SG RF level to –50dBm with 1.5kHz deviation at 1kHz audio frequency. 2. Rotate the volume switch to the position, which give an output 900mV at TP14. 3. Check the RX current <200mA	
3.	Talk on current	1. Set A-METER, and TX mode 2. Check the talk on current <500mA DC	
4.	Tx VCO	1. Set TX mode 2. Adjust L106 to provide 2.4 VDC at TP04 on CH14 3. Check TP04 to provide 0.5 ~ 1.2 VDC on CH1	
5.	Rx VCO	1. Set RX mode on CH1 2. Check TP04 to provide 0.5 ~ 1.2 VDC on CH1 3.Check TP04 to provide 1.5 ~ 2.5 VDC on CH14	
6.	Tx Power	1. Set TX mode 2. Check transmit power to provide 26 ~ 27.5dBm	
7.	Tx Frequency	1. Adjust VR103 to provide 462.5625MHz ± 300Hz	

8.	Tx Modulation & distortion	1. Input 55mV 1000Hz at TP05
		2. Adjust VR102 to provide max TX deviation 2.4kHz.
		3. Check normal deviation @ input 5.5mV 1kHz audio frequency to be >1kHz and <2kHz.
		4. Check the demodulation distortion <= 3.5%
		5. Audio Frequency Response
		   a) Input a 2.0mV 1KHz audio frequency to TP05 and press 'PTT' switch.
		   b) Check the response compare to 1kHz tone
		      i) 300Hz (-9.5 to –13.5)dB.	

		ii) 3kHz (+6.5 to +10.5)dB iii) 6kHz (-17 to –21)dB	
9.	Rx Sensitivity	1. Reduce SG RF level 2. Check SINAD sens. <= -118dBm @12dBSINAD at TP14	

10.	Rx Audio	1. Set RX mode
		2. Set SG RF level to -50dBm with 1.5 kHz dev.
		    1KHz mod. sig.
		4. Adjust T101 to provide min. distortion
		5. Check audio output >100mV at TP10
		6. Check the 1kHz distortion <= 3.5%
		7. Audio frequency response
		  a) Set SG RF level to –50dBm with 0.5kHz deviation at 1kHz audio frequency.
		  b) Rotate the volume switch to the position, which give an output 200mV (±5mV) at TP14.
		  c) Vary the audio frequency from 300Hz – 3KHz.
		  d) Check the RX response compare to 1KHz tone.
		    i) 300Hz (+15 to +23)dB
		    ii) 3KHz (-17 to –25)dB
		8. Maximum and Minimum Audio Output Power
		  a) Set SG RF level to –40dBm with 1.5kHz deviation at 1KHz audio frequency.
		  b) Rotate the volume switch to the position, which give a maximum output with distortion <5%.
		  c) Check the voltage at TP14 >800mV
		  d) Set maximum audio output to 0dB, rotate the volume switch to the position, which give a minimum output. Check the min. voltage at TP14 (-35dB ±5dB)	

11.	RSSI Detector	1. Set SG to -119dBm with 1.5kHz dev., 1kHz tone on CH7 2. Adjust VR101 for HIGH state : 9dBSINAD 3. Check for LOW state : 4dBSINAD 4. Repeat on CH8	
12.	Battery Detect	1. Low Battery, 3.4V (speaker output beep tone and indicate LED flash). 2. Dead Battery, 3.0V (to be define by customer).	

* Remark:

TX mode :
1. Press and hold PTT button

RX mode :
1. Release PTT button

TESTING (Casing)			
NO.	ITEM	TEST METHOD	REMARK

1.	Current Consumption	1. Set A-METER, plug the dummy speaker and dummy mic into audio jet.
		2. With volume switch OFF, check the OFF current <10mA.
		3. With volume switch ON, check the standby current <45mA.
		4. RX Current @ Rated
		  a) Set SG RF level to –40dBm with 1.5kHz deviation at 1kHz audio frequency.
		  b) Rotate the volume switch to the position, which give an output 900mV ±50mV (voltage difference of dummy speaker).
		  c) Check the RX current <200mA.
		1. TX Current
		  a) Input a 5.5mV 1kHz audio frequency to dummy mic.
		  b) Press 'PTT' switch and check the TX current <500mA.	

2.	Battery Detect	1. Low Battery, 3.3V (speaker output beep tone and indicate LED flash). 2. Dead Battery, 3.0V (to be define by customer).	

3.	Audio RX Path	1. Plug the dummy speaker and dummy mic into audio jet.
		2. Check the radiated sensitivity correlate to the golden sample
		3. Audio frequency response
		  a) Set SG RF level to –40dBm with 0.5kHz deviation at 1KHz audio frequency.
		  b) Rotate the volume switch to the position, which give an output 50mV (±5mV) (voltage difference of dummy speaker).
		  c) Vary the audio frequency from 300Hz – 3kHz.
		  d) Check the RX response compare to 1kHz	

		tone. e) 300Hz (+15 to +23)dB ii) 3KHz (-17 to –25)dB 1. **Maximum and Minimum Audio Output Power** a) Set SG RF level to –40dBm with 1.5kHz deviation at 1KHz audio frequency. b) Rotate the volume switch to the position, which give a maximum output with distortion <5%. c) Check the voltage difference of dummy speaker >775mV. d) Set maximum audio output to 0dB, rotate the volume switch to the position, which give a minimum output. e) Check the voltage difference between of dummy speaker (-35dB ±5dB).	
4.	Audio TX Path	1. **Check the radiated power correlate to golden sample.** 2. **Plug the dummy speaker and dummy mic into audio jet.** 3. **Standard TX Deviation** a) Input a 55mV 1KHz audio frequency to dummy mic and press 'PTT' switch. b) Check max TX deviation <2.5kHz. c) Check normal deviation @5.5mV input audio frequency to be >1kHz and <2kHz. 1. Audio Frequency Response a) Input a 2.0mV 1KHz audio frequency to dummy mic and press 'PTT' switch. b) Check the response. c) 300Hz (-9.5 to –13.5)dB. ii) 3KHz (+6.5 to +10.5)dB ii) 6KHz (-17 to –21)dB	

EXHIBIT 10