ALIGNMENT PROCEDURE FOR 21-1936(UT022ZH)

TRANSMITTER

STEP	MODE	CHANNEL	FREQUENCY	CONDITION	ADJUST	METHOD
1	POWER OFF	-	-	CONNECT DC POWER SUPPLY TO THE BATT POWER SUPPLY PATTERN ON THE PCB.	-	INPUT VOLTAGE DC6.0V/2A
2	TX	8	467.5625MHz	CONNECT RF WATTMETER TO THE ANTENNA PATTERN ON THE PCB.	RT201	KEY THE TRANSMITTER WITH PTT, AND ADJUST THE OUTPUT POWER AT 0.50W±0.0
3	TX	1	462.5625MHz	CONNECT FREQUENCY COUNTER TO THE ANTENNA PATTERN ON THE PCB WITH AN APPROPRIATE ATTENUATOR.	CT401	KEY THE TRANSMITTER WITHOUT ANY MODULATION. ADJUST TRANSMISSION FREQUENCY TO 462.562500MHz±100Hz
4	TX	1	462.5625MHz	CONNECT MODULATION ANALYZER TO THE ANTENNA PATTERN ON THE PCB. HPF:OFF LPF:3KHz DE-EMP.OFF CONNECT OSCILLOSCOPE TO MODULATION OUTPUT OF THE MODULATION ANALYZER. CONNECT AUDIO GENERATOR TO TP3(BAL) WAVEFORM:20Hz SQUARE WAVE MAGNITUDE:1.5Vp-p(DC COUPLING)	RT402	KEY THE TRANSMITTER, AND ADJUST RT402 AS THE WAVEFORM ON THE OSCILLOSCOPE COMES TO BE A CERTAIN SQUARE WAVE
5	TX	1 +CTCSS No.27	462.5625MHz	CONNECT MODULATION ANALYZER TO THE ANTENNA PATTERN ON THE PCB. HPF:OFF LPF:15KHz DE-EMP.OFF INJECT 1KHz 60mVp-p SINE WAVE TO MICROPHONE JACK FROM AUDIO GENERATOR.	RT403	KEY THE TRANSMITTER, AND ADJUST RT201 AS THE MODULATION ANALYZER INDICATES ±2.2KHz ±0.1KHz DEVIATION.

RECEIVER

STEP	MODE	CHANNEL	FREQUENCY	CONDITION	ADJUST	METHOD
1	RX	1	462.5625MHz	CONNECT DC VOLTMETER TO TP2 INJECT -47dBm RF SIGNAL WITHOUT MODULATION FROM SSG TO THE ANTENNA PATTERN ON THE PCB.	L403	ADJUST L403 AS THE VOLTMETER INDICATES 1.3V±0.05V
2	RX	1	462.5625MHz	CONNECT SINAD METER TO SPEAKER JACK WITH 16 DUMMY LOAD. INJECT RF SIGNAL FROM SSG AS FOLLOWING CONDITION. MAGNITUDE:AS LARGE AS THE RECEIVER OBTAINS 10dB SINAD SENSITIVITY. DEVIATION:±1.5KHz AF FREQUENCY:1KHz	RT404	TURN TO C.W.MAX, SET TO 10dB SINAD FIRST. TURN TO C.C.W.MAX. ADJUST SLOWLY TO THE POINT WHERE WAVEFORM APPEARS AT THE SPEAKER OUT. (C.W)

1. MAIN PCB B101 (TOP VIEW)

2. MAIN PCB B101 (BOTTOM VIEW)

GND
RF IN/OUT
UP
TP7
TP6
DN
TP4
GND
TP8
+6V
LOCAL OUT
GND
TP2
GND
TP5
TP1
GND
CHG
GND
TP3

VR101
AT201
L182
RT402
RT403
L401
RT404
CT401

CHG JACK

TP1 : VCONT   +6V:DC 6V   L182 : VCONT ADJ.
TP2 : DISC OUT(De_Em) LOCAL OUT   L401 : DISC.ADJ.
TP3 : BALANCE   RF IN/OUT   RT201 : TX POWER ADJ.
TP4 : AF OUT   UP   CT401 : FREQ. ADJ.
TP5 : MIC IN   DN   RT402 : MOD. BALANCE ADJ
TP6 : BOOST   CHG:DC 11V   RT403 : MAX DEV. ADJ.
TP7 : PTT   with CHARGE JIG   RT404 : SQ ADJ.
TP8 : BATT SEL

ENGLISH VERSION   02.09 JQD818ZF011 R0

E54- 3751

ALIGNMENT PROCEDURE	FORM - 3		PAGE	
MODEL	UNIT	BLOCK	ISSUE DATE	ISSUED
UT022ZH			2006/5/24	SAKAIHI

TITLE	TEST MODE	SUB TITLE	CONFIRMATION	REF DIAGRAM

TEST MODE

1. TEST MODE IN

    PRESS AND HOLD **[WX]** , **[MON]** AND TURN POWER ON

    WILL BE STARTED LCD TEST AND LED WILL TURN ON FOR 2sec.

2. TEST MODE OUT   TURN POWER OFF

3. NOTE

1) VIBRATION TEST **(NOT USE)**

To enter the vibration test: Press [TONE] SW in All TEST MODE

                (except LCD TEST, WX ALERT MODE and GROUP DECODE TEST MODE).

To exit the vibration test: Press [TONE] SW once more.

2) SCRAMBLE TEST **(NOT USE)**

To enter the scramble test: Press [WX] SW in All TEST MODE

                (except LCD TEST, WX ALERT MODE).

To exit the vibration test: Press [WX] SW once more.

4. TEST MODE ITEM

    *MODE CHANGE : PRESS [MENU] .

    1) LCD TEST MODE   5) VOX TEST MODE **(NOT USE)**   9) WX ALERT TEST MODE

    2) TX TEST MODE   6) RX TEST MODE **(NOT USE)**   **(NOT USE)**

    3) SUBCODE ENCODE TEST MODE   7) SUBCODE DECODE TEST MODE **(NOT USE)**

                    (NOT USE)   8) STANDBY TEST MODE   10) GROUP DECODE TEST MODE

    4) TX CALL TEST MODE **(NOT USE)**   **(NOT USE)**   **(NOT USE)**

    *USE ONLY TX TEST MODE.

5. TEST MODE PROPER

    1) LCD TEST MODE

        AFTER LOGGING IN TEST MODE,

        EACH LCD SEGMENT IS GRADUALLY DISPLAYED(LCD TEST MODE)

    2) TX TEST MODE

        WHEN THE UNIT ENTERS THIS TEST MODE , CH1 AUTOMATICALLY DISPLAY.

        PRESS [ ] OR [ ] :

            → CH1 ←→ CH8 ←→ CH22 ←

        PRESS [ ] OR [ ] FOR 500ms.   AUTO REPEAT FUNCTION ON

        PRESS [PTT] , "TX" INDICATOR WILL BE DISPLAYED ON LCD.

        RX MUTE ON

        BATTERY SAVE FUNCTION IS ALWAYS OFF.

        [TONE] & [MON] & [D-CALL] FUNCTIONS ARE INVALIDATION

<USE CH>

CH1: 462.5625MHz(GMRS)

CH8: 467.5625MHz(FRS)

REVISIONS:	REV. CODE													
	DATE													
	LOT # / RN #													
	REVISED BY													
	CHECKED BY													