

ALIGNMENT PROCEDURE FOR GMR2875-2CK (UT042ZH)

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 $0.50W \pm 0.05W$
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 $462.562500MHz \pm 100Hz$
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 $\pm 2.2KHz \pm 0.1KHz$ DEVIATION.

RECEIVER

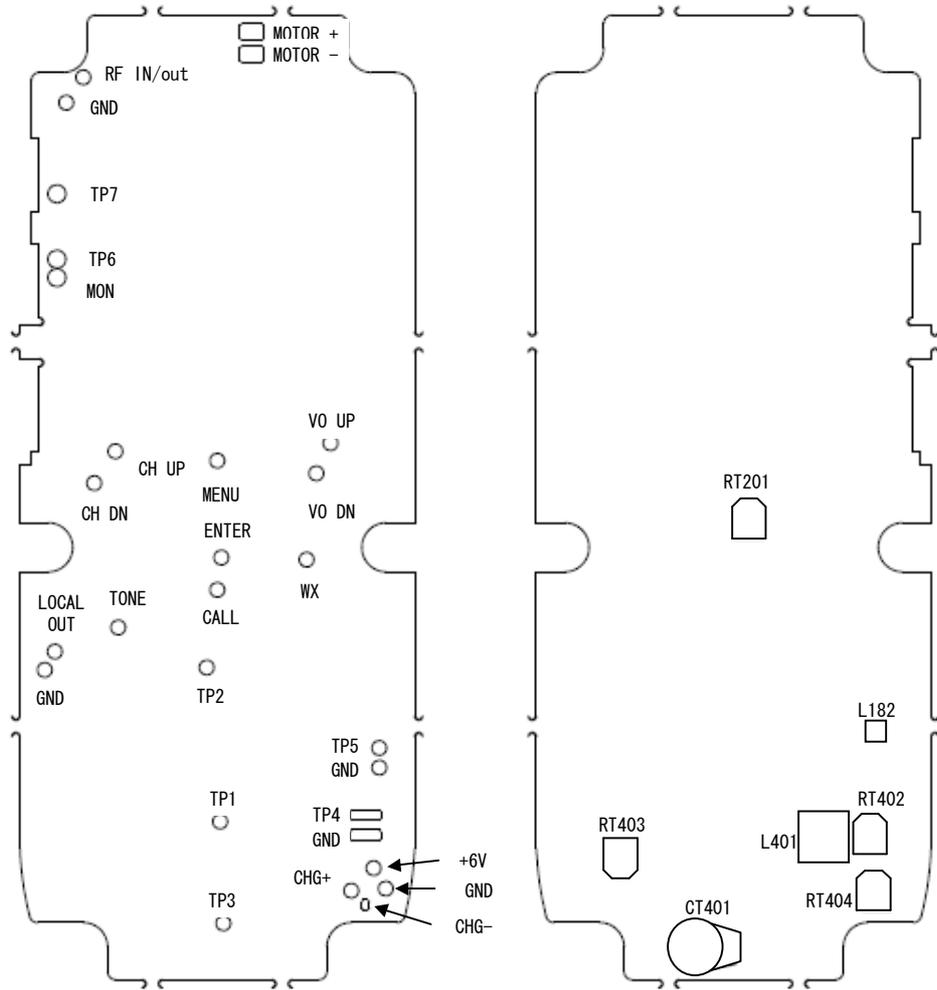
STEP	MODE	CHANNEL	FREQUENCY	CONDITION	ADJUST	METHOD
1	RX	1	462.5625MHz	CONNECT DC VOLTMETER TO TP2 INJECT -47dBm RF SIGNAL WITHOUT MODULATION FROM SSG TO THE ANTENNA PATTERN ON THE PCB.	L403	ADJUST L403 AS THE VOLTMETER INDICATES $1.3V \pm 0.05V$
2	RX	1	462.5625MHz	CONNECT SINAD METER TO SPEAKER JACK WITH 16Ω DUMMY LOAD. INJECT RF SIGNAL FROM SSG AS FOLLOWING CONDITION. MAGNITUDE:AS LARGE AS THE RECEIVER OBTAINS 10dB SINAD SENSITIVITY. DEVIATION: $\pm 1.5KHz$ 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.)

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MODEL	UNIT	BLOCK	ISSUE DATE	ISSUED		
UT042ZH			2009/7/6			

TITLE	ADJUST POINT	SUB TITLE	REF DIAGRAM		
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1. MAIN PCB B101 (TOP VIEW)

2. MAIN PCB B101 (BOTTOM VIEW)



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|------------------------|---------------------|--------------------------|
| TP1 : VCONT | CH UP : CH UP KEY | L182 : VCONT ADJ. |
| TP2 : DISC OUT (De_Em) | CH DN : CH DWN KEY | L401 : DISC. ADJ. |
| TP3 : BALANCE | VO UP : VOL UP KEY | RT201 : TX POWER ADJ. |
| TP4 : AF OUT | VO DN : VOL DWN KEY | CT401 : FREQ. ADJ. |
| TP5 : MIC IN | +6V : DC 6V | RT402 : MOD. BALANCE ADJ |
| TP6 : BOOST KEY | CHG+ | RT403 : MAX DEV. ADJ. |
| TP7 : PTT KEY | CHG- | RT404 : SQ ADJ. |
| MON : MIN KEY | MOTOR+ | |
| MENU : PWR/MENU KEY | MOTOR- | |
| ENTER : ENTER KEY | LOCAL OUT | |
| TONE : TONE KEY | RF IN/OUT | |
| CALL : D CALL KEY | | |
| WX : WX KEY | | |

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MODEL	UNIT	BLOCK	ISSUE DATE	ISSUED
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TITLE	TEST MODE	SUB TITLE	CONFIRMATION	REF DIAGRAM
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TEST MODE

1. TEST MODE IN

PRESS AND HOLD [WX] , [MON] AND [PWR/MENU].
WILL BE STARTED LCD TEST AND LED WILL TURN ON FOR 3sec.

2. TEST MODE OUT TURN POWER OFF

3. TEST MODE ITEM

*MODE CHANGE : PRESS [PWR/MENU]

- | | | |
|---------------------------------------|--|--|
| 1) LCD TEST MODE | 5) RX TEST MODE (NOT USE) | 9) GROUP DECODE TEST MODE (NOT USE) |
| 2) TX TEST MODE | 6) SUBCODE DECODE TEST MODE (NOT USE) | |
| 3) SUBCODE ENCODE TEST MODE | 7) STANDBY TEST MODE (NOT USE) | |
| 4) TX CALL TEST MODE (NOT USE) | 8) WX ALERT TEST MODE (NOT USE) | |

Note

- * Press [PWR/MENU] to change the TEST MODE.
- * Press [CH UP] or [CH DWN] to change the number of CH or Sub-code/Group-code.
- * Press [VOL UP] or [VOL DWN] to adjust the volume level.
(Except LCD TEST MODE and WX ALERT TEST MODE) The selected volume level will be displayed on the screen for 1 second. In Test Mode, it can select all numbers continuously. And the volume level is reset when CH/Sub-code/Group-code or TEST MODE is changed.
- * VIBRATOR moves or stops by pressing [TONE].
(Except LCD TEST MODE, WX ALERT TEST MODE and GROUP DECODE TEST MODE)
And VIBRATOR stops when TEST MODE is changed.

***USE ONLY TX TEST MODE & SUBCODE ENCODE TEST MODE**

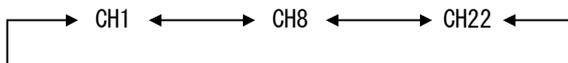
4. TEST MODE PROPER

- 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 IS AUTOMATICALLY DISPLAYED ON LCD.

PRESS [CH UP] OR [CH DWN] :



PRESS [CH UP] OR [CH DWN] FOR 500ms. → AUTO REPEAT FUNCTION ON.

PRESS [PTT] , "TXH1"@CH1, CH22 AND "TXLO"@CH8 WILL BE DISPLAYED ON LCD

RX MUTE ON.

BATTERY SAVE FUNCTION IS ALWAYS OFF.

[ENTER] , [MON] , [WX] & [D CALL] FUNCTIONS ARE INVALIDATION.

CH1 : 462. 5625MHz (GMRS)
CH8 : 467. 5625MHz (FRS)

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ALIGNMENT PROCEDURE

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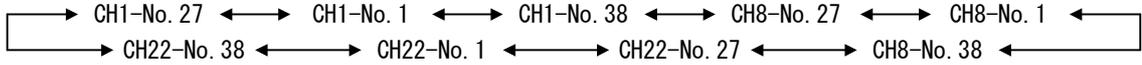
MODEL	UNIT	BLOCK	ISSUE DATE	ISSUED
UT042ZH			2009/7/6	

TITLE	TEST MODE	SUB TITLE	CONFIRMATION	REF DIAGRAM
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3) SUBCODE ENCODE TEST MODE

WHEN THE UNIT ENTERS THIS TEST MODE ,
CH1-SUBCODE No. 27 IS AUTOMATICALLY DISPLAYED ON LCD.

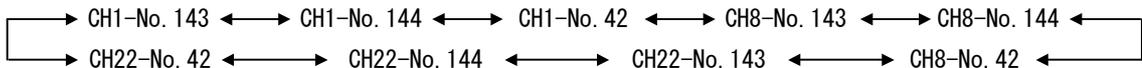
PRESS [CH UP] OR [CH DWN] :



PRESS [CH UP] OR [CH DWN] FOR 500ms. → AUTO REPEAT FUNCTION ON.

PRESS [D-CALL] , CHANGING CTCSS TONE & DCS CODE
CH1-SUBCODE No. 143 IS AUTOMATICALLY DISPLAYED ON LCD.

PRESS [CH UP] OR [CH DWN] :



PRESS [CH UP] OR [CH DWN] FOR 500ms. → AUTO REPEAT FUNCTION ON.

PRESS [PTT], SENDING CTCSS TONE OR DCS CODE, AND "TXH1"@CH1, CH22 AND "TXLO"@CH8 WILL
BE DISPLAYED ON LCD.

RX MUTE ON.

BATTERY SAVE FUNCTION IS ALWAYS OFF.

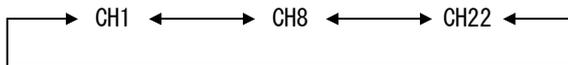
CH1 - No. 27 : Freq. 462.5625MHz (GMRS) , TONE 167.9Hz
CH8 - No. 27 : Freq. 467.5625MHz (FRS) , TONE 167.9Hz

[ENTER] , [MON] & [WX] FUNCTIONS ARE INVALIDATION.

4) TX CALL TEST MODE (NOT USE)

WHEN THE UNIT ENTERS THIS TEST MODE , CH1 IS AUTOMATICALLY DISPLAYED ON LCD.
CALL TONE NUMBER IS DISPLAYED AT SUBCODE INDICATOR AND "call" ICON IS DISPLAYED
ON LCD.

PRESS [CH UP] OR [CH DWN] :



PRESS [CH UP] OR [CH DWN] FOR 500ms. → AUTO REPEAT FUNCTION ON.

PRESS [PTT] , SENDING CALL TONE. & "TXH1"@CH1, CH22 AND "TXLO"@CH8 WILL BE DISPLAYED ON LCD.

PRESS [D CALL] , CHANGE CALL TONE.

RX MUTE ON.

BATTERY SAVE FUNCTION IS ALWAYS OFF.

[ENTER] , [MON] & [WX] FUNCTIONS ARE INVALIDATION.

REVISIONS:	REV. CODE	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
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