ADJUSTMENT

Measuring Equipment for Alignment

1. Digital voltmeter (D.V.M)
Input impedance: High

2. RF valve voltmeter (RF V.M)
Input impedance: 1MΩ or more, 2pF or less
Voltage range: Full scale=10mV to 300V
Measureable frequency range: Up to 450MHz

3. Frequency counter (f.counter)
Input sensitivity: About 50mV
Measureable frequency: 450MHz or more

4. DC power supply
Voltage: Variable in the range 10 to 17V
Current: 13A or more

5. Power meter
Measurement power: 60W, 30W, 10W
Impedance: 50Ω
Measurable frequency: 450MHz

6. AF valve voltmeter (AF V.M)
Input impedance: 1MΩ or more
Voltage rane: Full scale=1mV to 30V
Measurable frequency range: 50H to 10kHz

7. AF generator (AG)
Output frequency: 100Hz to 10kHz
Output voltage: 0.5mV to 1V

8. Line detector
Measurable frequency: 450MHz

9. Spectrum analyzer
Measurable frequency: 450MHz

10. Directional coupler

11. Oscilloscope
High sensitivity with horizontal input terminal

12. Standard signal generator (SSG)
The standard signal generator must be able to generate the 1GHz band frequencies and bary the amplitude and frequency.
Output: –133dBm to greater than –13dBm

13. Dummy load (for AF)
8Ω, about 5W

14. Noise generator
The noise generator must be able to generate noise similar to ignition noise containing high-frequency components of 450MHz or more.

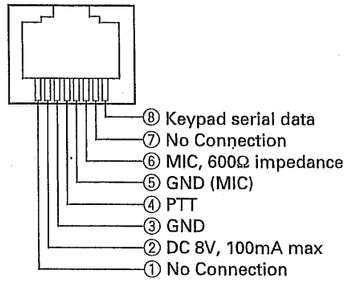
15. Sweep generator
The sweep generator must be able to sweep the 144 and 430MHz bands.

16. Tracking generator

Preparation

- Set the controls and switches to the positions listed below unless otherwise specified.

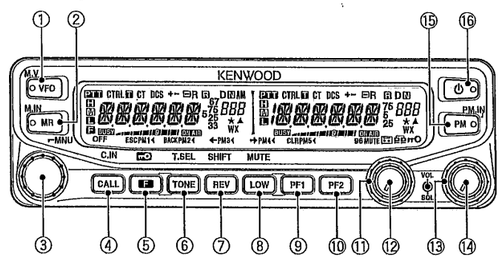
BAND SEL/ VOL (Band A) control	Fully counterclockwise
BAND SEL/ VOL (Band B) control	Fully counterclockwise
SQL (Band A) control	Fully counterclockwise
SQL (Band B) control	Fully counterclockwise
Power switch	OFF



Microphone socket
(as viewed from the front of the transceiver)

- To protect the signal generator, never connect the microphone to the microphone socket when the receiver section is adjusted.
- Before the power cordd is connected, make sure the power switch is off.
- Without specification of SSG, standard modulation is applied (MOD: 1kHz, DEV: ±3kHz, AF output: 0.63V/8Ω)

■ Front panel



① VFO
② MR
③ Tuning control
④ CALL
⑤ F
⑥ TONE
⑦ REV
⑧ LOW
⑨ PF1
⑩ PF2
⑪ SQL (Band A)
⑫ BAND SEL/ VOL (Band A)
⑬ SQL (Band B)
⑭ BAND SEL/ VOL (Band B)
⑮ PM
⑯ Power switch

TM-V71A/V71E

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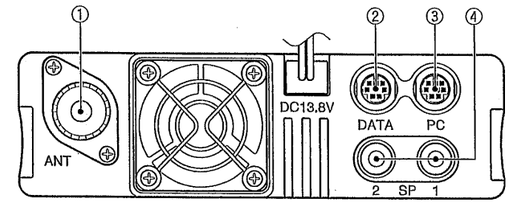
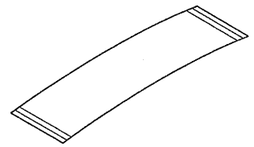
■ Rear panel



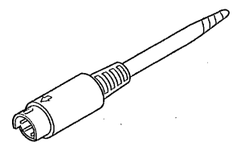
① ANT
② DATA
③ PC
④ SP (SP1/SP2)

Service Jig

A. Flat cable (50-pin) (E37-1407-08), about 10cm



B. Data terminal short plug (W05-0611-00)

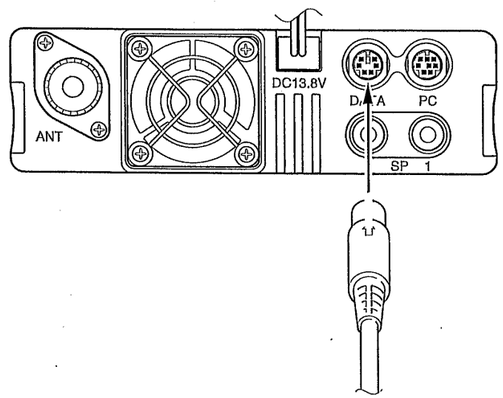


■ About the flat cable (50-pin) of about 10cm

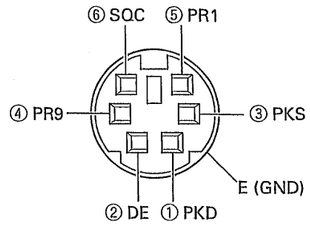
To connect the TX-RX unit (X57-731 A/6) connector (CN677) to the TX-RX (Control section) unit (X57-731 D/6) connector (CN960) while in servicing, you can use the 50-pin flat cable (E37-1407-08).

■ How to use the data terminal short plug

Insert the adjustment jig (W05-0611-00) into the DATA connector located on the rear panel of the transceiver.



■ DATA connector pin assignment



Terminals ③ and ⑥ are short circuited.
③ PKS (SEND switch for DATA terminal)
Connect PTT output. If PKS is set to "GND", data are sent and the microphone will be mute.
⑥ SQC (Squelch control output)
Thiis outputs squelch control output.

EchoLink Operation Check Method

You can confirm whether EchoLink operates normally by performing the following three operation checks.

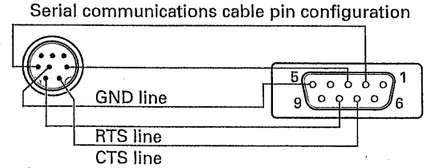
1. Squelch signal operation check
2. PTT signal operation check
3. Voice operation check

■ Operation procedure

1) Connect the serial communications cable (8-pin mini DIN terminal and D-SUB terminal) of the PG-5H (PC interface cable kit) to the PC terminal on the rear of the transceiver.
2) Turn the transceiver power ON while pressing the [PF2] key, to enter the EchoLink Sysop mode.
3) Check the squelch signal operation.
① The squelch signal is output from pin 1 of the transceiver PC terminal or pin 8 of the PG-5H D-SUB terminal (RTS). Check the voltage of the RTS line with a digital voltmeter.

Terminal name	PC terminal of the transceiver	D-SUB terminal of PG-5H
RTS	pin 1	pin 8
CTS	pin 2	pin 7

PG-5H
Serial communications cable pin configuration



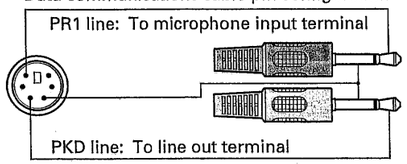
② When you open and close the transceiver squelch, check that the voltage of the RTS line increases and decreases.

(Reference voltage value of RTS line)
Voltage when squelch is closed: 10 V
Voltage when squelch is opened : -10 V

ADJUSTMENT

4) Check the PTT signal operation.
   ① Input 5 to 10 V to pin 2 of the transceiver PC terminal or pin 7 of the PG-5H D-SUB terminal (CTS).
   ② Ensure that the transceiver becomes the transmission state.
5) Check the voice operation.
   ① Connect the data communications cable (6-pin mini DIN terminal and pink/ green pin) of the PG-5H (Interface cable kit) to the DATA terminal on the rear of the transceiver.
   ② Input a 1kHz/ 150 mV AF signal from AG to the green pin of the data communication cable (PKD line). Confirm the modulation of 2 to 4 kHz deviation hangs when transmitting by PTT operation as stated in step 4), above.
   ③ Input a standard modulation signal of -47dBm (MOD: 1kHz, DEV: 3kHz, and AF output: 0.63V/8Ω) from SSG to the transceiver. Check that a 1kHz tone of 3 to 15 mV is output from the pink pin (PR1 line) of the data communication cable.

PG-5H
Data communications cable pin configuration



Adjustment Mode

This mode is used to replace or readjust IC916 (EEPROM). In Adjustment Mode, the transceiver can be adjusted using its panel keys.

■ Adjustment Items

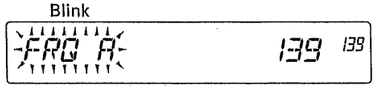
1. Frequency (Band A)
2. Frequency (Band B)
3. High power (144MHz band, 430MHz band)
4. Mid power (144MHz band, 430MHz band)
5. Low power (144MHz band, 430MHz band)
6. SWR protection (144MHz band, 430MHz band)
7. DCS balance (Band A) (144MHz band, 430MHz band)
8. DCS balance (Band B) (144MHz band, 430MHz band)
9. MAX deviation (Band A) (144MHz band, 430MHz band)
10. MAX deviation (Band B) (144MHz band, 430MHz band)
11. CTCSS deviation (Band A) (144MHz band, 430MHz band)
12. CTCSS deviation (Band B) (144MHz band, 430MHz band)
13. DCS deviation (Band A) (144MHz band, 430MHz band)
14. DCS deviation (Band B) (144MHz band, 430MHz band)
15. BPF RSSI (Band A) (144MHz band, 200MHz band, 430MHz band)*1
16. BPF RSSI (Band B) (144MHz band, 200MHz band, 430MHz band)*1
17. Squelch threshold (Band A) (144MHz band, 200MHz band, 300MHz band, 430MHz band)
18. Squelch threshold (Band B) (144MHz band, 200MHz band, 300MHz band, 430MHz band, 1.2GHz band)
19. Squelch tight (Band A) (144MHz band, 200MHz band, 300MHz band, 430MHz band)
20. Squelch tight (Band B) (144MHz band, 200MHz band, 300MHz band, 430MHz band, 1.2GHz band)
21. S-meter S1 (Band A) (144MHz band, 200MHz band, 300MHz band, 430MHz band)
22. S-meter S1 (Band B) (144MHz band, 200MHz band, 300MHz band, 430MHz band, 1.2GHz band)
23. S-meter full scale (Band A) (144MHz band, 200MHz band, 300MHz band, 430MHz band)
24. S-meter full scale (Band B) (144MHz band, 200MHz band, 300MHz band, 430MHz band, 1.2GHz band)

*1: Adjust 3 points (Low, Center, High) for the 144MHz band and the 200MHz band.
Adjust 5 points (Low, Low', Center, High', High) for the 430MHz band.

■ How to enter the adjustment mode

1. Turn the transceiver power OFF and insert the adjustment jig (W05-0611-00) into the DATA terminal located on the rear panel of the transceiver.
2. Turn the transceiver power ON while pressing the [CALL] and [F] keys to enter adjustment mode.
3. The adjustment item "FRQ A" of the Band A frequency is displayed when entering the adjustment mode.

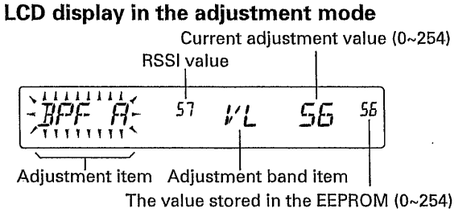
Blink



Note:

- To exit the Adjustment Mode, turn the transceiver power OFF.
- When the adjustment mode is activated, the transceiver automatically sets the frequency as shown in "The frequency that is set to the transceiver" table, on pages 44 to 46.

■ LCD display in the adjustment mode



ADJUSTMENT

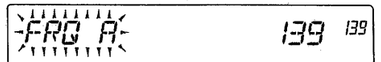
■ Panel key operation in the adjustment mode

Key name		Function
Tuning control	(Turn)	Changes the adjustment item or adjustment band item. Increase or decrease the adjustment values (00~254).
	(Press)	Movement from the adjustment item display to the adjustment band item display or movement from the adjustment band item display to the adjustment value dispaly. (Forward) Write adjustment values.
[CALL]		Movement from the adjustment value display to the adjustment band item display or movement from the adjustment band item display to the adjustment item display. (Back)
[VFO],[MR],[F], [TONE],[REV], [LOW],[PF1],[PF2], [PM]		Unused
Microphone key		
[PTT]		Transmit. (Only the adjustment item of the transmitter section can be used.)

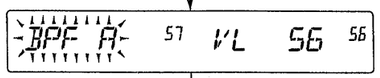
■ Example of the adjustment mode operation procedure

The operating procedure when the BPF RSSI of band A (430MHz band, low frequency) is adjusted is described as follows.

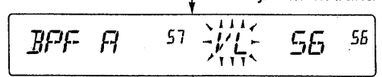
The adjustment item "FRQ A" of the band A frequency is displayed when entering the adjustment mode according to the operating procedure of "How to enter the adjustment mode" described on page 42.



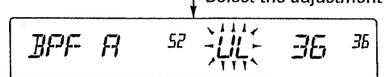
Turn the Tuning control while "FRQ A" is blinking.
Select the BPF RSSI adjustment item "BPF A" of band A.



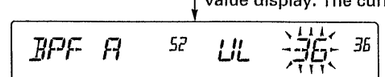
Press the Tuning control while "BPF A" is blinking.
"BPF A" stops blinking and it moves to the adjustment band items display.
The adjustment band item "VL" of 144MHz band and the low frequency blinks.



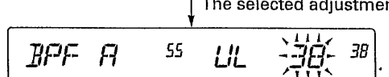
Turn the Tuning control while "VL" is blinking.
Select the adjustment band item "UL" of the 430MHz band and the low frequency.



Press the Tuning control while "UL" is blinking. "UL" stops blinking and it moves to the adjustment value display. The current adjustment value "36" blinks.



Change the adjustment value by turning the Tuning control so that the RSSI value may become the maximum while the current adjustment value "36" is blinking.
(For example, assume an adjustment value of 38 after adjustment.)
The selected adjustment value is stored in the EEPROM when the Tuning control is pressed.



ADJUSTMENT

■ **Adjustment item, adjustment band item, display and the frequency that is set to the transceiver**

No.	Adjustment item	Adjustment band item	Display		The frequency that is set to the transceiver		Signaling
			Adjustment item	Adjustment band item	K type	E, M4 types	
1	Frequency (Band A)	-	FRQ A	-	444.100MHz	435.100MHz	
2	Frequency (Band B)	-	FRQ B	-	444.100MHz	435.100MHz	
3	High power	144MHz band	HPWR	V	146.100MHz	145.100MHz	
		430MHz band	HPWR	U	444.100MHz	435.100MHz	
4	Mid power	144MHz band	MPWR	V	146.100MHz	145.100MHz	
		430MHz band	MPWR	U	444.100MHz	435.100MHz	
5	Low power	144MHz band	LPWR	V	146.100MHz	145.100MHz	
		430MHz band	LPWR	U	444.100MHz	435.100MHz	
6	SWR protection	144MHz band	SWR	V	146.100MHz	145.100MHz	
		430MHz band	SWR	U	444.100MHz	435.100MHz	
7	DCS balance *1 (Band A)	144MHz band, Low frequency	BAL A	VL	136.100MHz	136.100MHz	50Hz
		144MHz band, Center frequency	BAL A	VC	146.100MHz	145.100MHz	
		144MHz band, High frequency	BAL A	VH	173.900MHz	173.900MHz	
		430MHz band, Low frequency	BAL A	UL	400.100MHz	400.100MHz	
		430MHz band, Center frequency	BAL A	UC	444.100MHz	435.100MHz	
		430MHz band, High frequency	BAL A	UH	469.900MHz	469.900MHz	
8	DCS balance *1 (Band B)	144MHz band, Low frequency	BAL B	VL	136.100MHz	136.100MHz	50Hz
		144MHz band, Center frequency	BAL B	VC	146.100MHz	145.100MHz	
		144MHz band, High frequency	BAL B	VH	173.900MHz	173.900MHz	
		430MHz band, Low frequency	BAL B	UL	400.100MHz	400.100MHz	
		430MHz band, Center frequency	BAL B	UC	444.100MHz	435.100MHz	
		430MHz band, High frequency	BAL B	UH	469.900MHz	469.900MHz	
9	MAX deviation (Band A)	144MHz band	DEV A	V	146.100MHz	145.100MHz	
		430MHz band	DEV A	U	444.100MHz	435.100MHz	
10	MAX deviation (Band B)	144MHz band	DEV B	V	146.100MHz	145.100MHz	
		430MHz band	DEV B	U	444.100MHz	435.100MHz	
11	CTCSS deviation (Band A)	144MHz band	CT A	V	146.100MHz	145.100MHz	CTCSS: 91.5Hz
		430MHz band	CT A	U	444.100MHz	435.100MHz	
12	CTCSS deviation (Band B)	144MHz band	CT B	V	146.100MHz	145.100MHz	CTCSS: 91.5Hz
		430MHz band	CT B	U	444.100MHz	435.100MHz	
13	DCS deviation (Band A)	144MHz band	DCS A	V	146.100MHz	145.100MHz	DCS: 023N
		430MHz band	DCS A	U	444.100MHz	435.100MHz	
14	DCS deviation (Band B)	144MHz band	DCS B	V	146.100MHz	145.100MHz	DCS: 023N
		430MHz band	DCS B	U	444.100MHz	435.100MHz	

*1: The DCS balance adjustment can adjust only the center frequency.

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ADJUSTMENT

No.	Adjustment item	Adjustment band item	Display		The frequency that is set to the transceiver		Signaling
			Adjustment item	Adjustment band item	K type	E, M4 types	
15	BPF RSSI (Band A)	144MHz band, Low frequency	BPF A	VL	118.050MHz	118.050MHz	
		144MHz band, Center frequency	BPF A	VC	145.050MHz	145.050MHz	
		144MHz band, High frequency	BPF A	VH	199.950MHz	199.950MHz	
		200MHz band, Low frequency	BPF A	2L	220.050MHz	220.050MHz	
		200MHz band, Center frequency	BPF A	2C	250.050MHz	250.050MHz	
		200MHz band, High frequency	BPF A	2H	279.950MHz	279.950MHz	
		430MHz band, Low frequency	BPF A	UL	300.050MHz	300.050MHz	
		430MHz band, Low' frequency	BPF A	ULD	350.050MHz	350.050MHz	
		430MHz band, Center frequency	BPF A	UC	400.050MHz	400.050MHz	
		430MHz band, High' frequency	BPF A	UHD	440.050MHz	440.050MHz	
		430MHz band, High frequency	BPF A	UH	500.050MHz	500.050MHz	
16	BPF RSSI (Band B)	144MHz band, Low frequency	BPF B	VL	118.050MHz	118.050MHz	
		144MHz band, Center frequency	BPF B	VC	145.050MHz	145.050MHz	
		144MHz band, High frequency	BPF B	VH	199.950MHz	199.950MHz	
		200MHz band, Low frequency	BPF B	2L	220.050MHz	220.050MHz	
		200MHz band, Center frequency	BPF B	2C	250.050MHz	250.050MHz	
		200MHz band, High frequency	BPF B	2H	279.950MHz	279.950MHz	
		430MHz band, Low frequency	BPF B	UL	300.050MHz	300.050MHz	
		430MHz band, Low' frequency	BPF B	ULD	350.050MHz	350.050MHz	
		430MHz band, Center frequency	BPF B	UC	400.050MHz	400.050MHz	
		430MHz band, High' frequency	BPF B	UHD	440.050MHz	440.050MHz	
		430MHz band, High frequency	BPF B	UH	500.050MHz	500.050MHz	
17	Squelch threshold (Band A)	144MHz band	SQ1 A	V	145.050MHz	145.050MHz	
		200MHz band	SQ1 A	2	220.050MHz	220.050MHz	
		300MHz band	SQ1 A	3	350.050MHz	350.050MHz	
		430MHz band	SQ1 A	U	440.050MHz	440.050MHz	
18	Squelch threshold (Band B)	144MHz band	SQ1 B	V	145.050MHz	145.050MHz	
		200MHz band	SQ1 B	2	220.050MHz	220.050MHz	
		300MHz band	SQ1 B	3	350.050MHz	350.050MHz	
		430MHz band	SQ1 B	U	440.050MHz	440.050MHz	
		1.2GHz band	SQ1 B	8	1270.050MHz	1270.050MHz	
19	Squelch tight (Band A)	144MHz band	SQT A	V	145.050MHz	145.050MHz	
		200MHz band	SQT A	2	220.050MHz	220.050MHz	
		300MHz band	SQT A	3	350.050MHz	350.050MHz	
		430MHz band	SQT A	U	440.050MHz	440.050MHz	

ADJUSTMENT

No.	Adjustment item	Adjustment band item	Display		The frequency that is set to the transceiver		Signaling
			Adjustment item	Adjustment band item	K type	E, M4 types	
20	Squelch tight (Band B)	144MHz band	SQT B	V	145.050MHz	145.050MHz	
		200MHz band	SQT B	2	220.050MHz	220.050MHz	
		300MHz band	SQT B	3	350.050MHz	350.050MHz	
		430MHz band	SQT B	U	440.050MHz	440.050MHz	
		1.2GHz band	SQT B	8	1270.050MHz	1270.050MHz	
21	S-meter S1 (Band A)	144MHz band	SM1 A	V	145.050MHz	145.050MHz	
		200MHz band	SM1 A	2	220.050MHz	220.050MHz	
		300MHz band	SM1 A	3	350.050MHz	350.050MHz	
		430MHz band	SM1 A	U	440.050MHz	440.050MHz	
22	S-meter S1 (Band B)	144MHz band	SM1 B	V	145.050MHz	145.050MHz	
		200MHz band	SM1 B	2	220.050MHz	220.050MHz	
		300MHz band	SM1 B	3	350.050MHz	350.050MHz	
		430MHz band	SM1 B	U	440.050MHz	440.050MHz	
		1.2GHz band	SM1 B	8	1270.050MHz	1270.050MHz	
23	S-meter full scale (Band A)	144MHz band	SM7 A	V	145.050MHz	145.050MHz	
		200MHz band	SM7 A	2	220.050MHz	220.050MHz	
		300MHz band	SM7 A	3	350.050MHz	350.050MHz	
		430MHz band	SM7 A	U	440.050MHz	440.050MHz	
24	S-meter full scale (Band B)	144MHz band	SM7 B	V	145.050MHz	145.050MHz	
		200MHz band	SM7 B	2	220.050MHz	220.050MHz	
		300MHz band	SM7 B	3	350.050MHz	350.050MHz	
		430MHz band	SM7 B	U	440.050MHz	440.050MHz	
		1.2GHz band	SM7 B	8	1270.050MHz	1270.050MHz	

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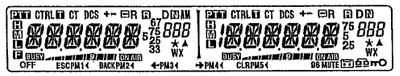
ADJUSTMENT

Common Section

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1.Setting	1) Power supply voltage DC power supply terminal : 13.8V							
2. All LCD segments light check and full reset	1) All LCD segments light check Turn the transceiver power ON by pressing the power switch while [F] key is pressed. While the [F] key is pressed, all LCD segments light. 2) Full reset After confirming that all LCD segments have lighted described in the step 1 above, release the [F] key. Select reset type "FULL" by tunring the Tuning control when the reset confirmation message appears. Press the Tuning control to set the reset type. Press the Tuning control again to perform the full reset. **Note** When you do not want to remove data such as memory channel data, save the data using the MCP-2A (Memory control program) before performing the full reset, then write the data to the transceiver after performing the adjustment.							Confirm that all LCD segments light. 

Transmitter Section (Refer to the table on pages 44 to 46 for the frequencies which will apply in the adjustment mode.)

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency (Band A) Adjust	1) Adj item: [FRQ A] Adjust: [***] 2) PTT: ON	f. counter	Rear panel	ANT	Front panel	Tuning control	Write	435.100MHz±100Hz **E,M4** 444.100MHz±100Hz **K**
2. Frequency (Band B) Adjust	1) Adj item: [FRQ B] Adjust: [***] 2) PTT: ON							
3. High power Adjust • 144MHz band	1) Adj item: [HPWR V] Adjust: [***] 2) PTT: ON	Power meter					Write	50W±1W
• 430MHz band	3) Adj item: [HPWR U] Adjust: [***] 4) PTT: ON							48W±1W
4. Mid power Adjust • 144MHz band	1) Adj item: [MPWR V] Adjust: [***] 2) PTT: ON						Write	12W±1W **K,E** 22.5W±1W **M4**
• 430MHz band	3) Adj item: [MPWR U] Adjust: [***] 4) PTT: ON							
5. Low power Adjust • 144MHz band	1) Adj item: [LPWR V] Adjust: [***] 2) PTT: ON						Write	5W±1W
• 430MHz band	3) Adj item: [LPWR U] Adjust: [***] 4) PTT: ON							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
6. SWR protection Adjust • 144MHz band	1) Adj item: [SWR V] Adjust: [***] 2) PTT: ON	Power meter	Rear panel	ANT	Front panel	Tuning control	Set the following adjustment values to the transceiver by turning the Tuning control. Adjustment value: 66	
• 430MHz band	3) Adj item: [SWR U] Adjust: [***] 4) PTT: ON						Adjustment value: 120	
7. DCS balance (Band A) Adjust • 144MHz band	1) Adj item: [BAL A VC] Adjust: [***] Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF 2) PTT: ON	Linear detector Oscilloscope					By turning the Tuning control, adjust the modulation wave until it becomes the square wave.	
• 430MHz band	3) Adj item: [BAL A UC] Adjust: [***] 4) PTT: ON							
8. DCS balance (Band B) Adjust • 144MHz band	1) Adj item: [BAL B VC] Adjust: [***] Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF 2) PTT: ON							
• 430MHz band	3) Adj item: [BAL B UC] Adjust: [***] 4) PTT: ON							
9. MAX deviation (Band A) Adjust • 144MHz band	1) Adj item: [DEV A V] Adjust: [***] AG: 1kHz/50mV **K,M4** AG: 1kHz/20mV **E** Detector: +P, –P LPF: 15kHz HPF: OFF De-emphasis: OFF 2) PTT: ON	Linear detector Oscilloscope AG AF V.M		ANT MIC			Write	4.2kHz±0.1kHz (According to the larger +P, –P)
• 430MHz band	3) Adj item: [DEV A U] Adjust: [***] 4) PTT: ON							
10. MAX deviation (Band B) Adjust • 144MHz band	1) Adj item: [DEV B V] Adjust: [***] AG: 1kHz/50mV **K,M4** AG: 1kHz/20mV **E** Detector: +P, –P LPF: 15kHz HPF: OFF De-emphasis: OFF 2) PTT: ON							
• 430MHz band	3) Adj item: [DEV B U] Adjust: [***] 4) PTT: ON							

Note:
Do not repeatedly adjust the SWR protection adjustment; adjust it only once when you replace the EEPROM.

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ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
11. CTCSS deviation (Band A) Adjust • 144MHz band	1) Adj item: [CT A V] Adjust: [***] Detector: P-P/2 LPF: 3kHz HPF: OFF De-emphasis: OFF PTT:ON	Linear detector Oscilloscope	Rear panel	ANT	Front panel	Tuning control	Write	0.75kHz±0.05kHz
• 430MHz band	2) Adj item: [CT A U] Adjust: [***] PTT: ON							
12. CTCSS deviation (Band B) Adjust • 144MHz band	1) Adj item: [CT B V] Adjust: [***] Detector: P-P/2 LPF: 3kHz HPF: OFF De-emphasis: OFF PTT: ON							
• 430MHz band	2) Adj item: [CT B U] Adjust: [***] PTT: ON							
13. DCS deviation (Band A) Adjust • 144MHz band	1) Adj item: [DCS A V] Adjust: [***] Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF PTT: ON						Write	0.75kHz±0.05kHz
• 430MHz band	2) Adj item: [DCS A V] Adjust: [***] PTT: ON							
14. DCS deviation (Band B) Adjust • 144MHz band	1) Adj item: [DCS B V] Adjust: [***] Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF PTT: ON							
• 430MHz band	2) Adj item: [DCS B U] Adjust: [***] PTT: ON							
15. High power Check • Band A	1) Frequency: 144.000MHz 2) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 3) PTT: ON	Power meter Ammeter					Check	47~53W 12A or less
	4) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 5) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 6) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 7) PTT: ON							45~51W 12A or less

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
• Band B	8) Frequency: 144.000MHz 9) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** 10) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 11) PTT: ON	Power meter Ammeter	Rear panel	ANT			Check	47~53W 12A or less
	12) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 13) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 14) PTT: ON							45~51W 12A or less
16. Mid power Check • Band A	1) Frequency: 144.000MHz 2) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 3) PTT: ON						Check	**K,E:** 11~13W, 5A or less **M4:** 20.5~24.5W, 8A or less
	4) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 5) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 6) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 7) PTT: ON							**K,E:** 11~13W, 6A or less **M4:** 20.5~24.5W, 8A or less
• Band B	8) Frequency: 144.000MHz 9) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** 10) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 11) PTT: ON						Check	**K,E:** 11~13W, 5A or less **M4:** 20.5~24.5W, 8A or less
	12) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 13) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 14) PTT: ON							**K,E:** 11~13W, 6A or less **M4:** 20.5~24.5W, 8A or less
17. Low power Check • Band A	1) Frequency: 144.000MHz 2) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 3) PTT: ON						Check	4~6W 3.5A or less
	4) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 5) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 6) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 7) PTT: ON							4~6W 4.5A or less
• Band B	8) Frequency: 144.000MHz 9) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** 10) Frequency: 145.990MHz **E,M4** Frequency: 147.990MHz **K** 11) PTT: ON						Check	4~6W 3.5A or less
	12) Frequency: 430.000MHz **E,M4** Frequency: 438.000MHz **K** 13) Frequency: 439.990MHz **E,M4** Frequency: 449.990MHz **K** 14) PTT: ON							4~6W 4.5A or less

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ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
18. MIC sensitivity Check • Band A	1) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** AG: 1kHz/5mV **K,M4** AG: 1kHz/2mV **E** Detector: P-P/2 LPF: 15kHz HPF: OFF De-emphasis: OFF 2) PTT: ON	Linear detector Oscilloscope AG AF V.M	Rear panel	ANT MIC			Check	±2.34~4.17kHz **K,M4** ±2.38~4.05kHz **E**
	3) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 4) PTT: ON							
• Band B	5) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** AG: 1kHz/5mV **K,M4** AG: 1kHz/2mV **E** Detector: P-P/2 LPF: 15kHz HPF: OFF De-emphasis: OFF 6) PTT: ON						Check	±2.34~4.17kHz **K,M4** ±2.38~4.05kHz **E**
	7) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 8) PTT: ON							
19. CTCSS deviation Check • Band A	1) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** Detector: P-P/2 LPF: 3kHz HPF: OFF De-emphasis: OFF 2) PTT: ON	Linear detector Oscilloscope		ANT			Check	0.65~0.85kHz
	3) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 4) PTT: ON							
• Band B	5) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** Detector: P-P/2 LPF: 3kHz HPF: OFF De-emphasis: OFF 6) PTT: ON							
	7) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 8) PTT: ON							
20. DCS deviation Check • Band A	1) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF 2) PTT: ON						Check	0.65~0.85kHz
	3) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 4) PTT: ON							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
• Band B	5) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** Detector: +P HOLD LPF: 3kHz HPF: OFF De-emphasis: OFF 6) PTT: ON	Linear detector Oscilloscope	Rear panel	ANT			Check	0.65~0.85kHz
	7) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 8) PTT: ON							
21 .Protection Check • Band A	TX Power: High ANT: Short circuit and Open 1) Frequency: 145.000MHz **E,M4** Frequency: 146.000MHz **K** 2) PTT: ON	Ammeter					Check	12A or less
• Band B	3) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** 4) PTT: ON							

Reciever Section (Refer to the table on pages 44 to 46 for the frequencies which will apply in the adjustment mode.)

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. BPF RSSI (Band A) Adjust • 144MHz band	1) Adj item: [BPF A VL] → [BPF A VC] → [BPF A VH] Adjust: [***] SSG output: –100dBm (2.24µV) SSG MOD: 1kHz SSG DEV: 3kHz	SSG Oscilloscope Distortion meter AF V.M Dummy load	Rear panel	ANT EXT.SP	Front panel	Tuning control	Turn the Tuning control until the maximum RSSI value will appear on the LCD. When the same RSSI value remains while it is being adjusted, set the adjustment value to the center value. For example, set the adjustment value to 38 for the values listed below. RSSI value / Adjustment value 54 / 35 55 / 36 55 / 37 55 / 38 55 / 39 55 / 40 54 / 41	
• 200MHz band	2) Adj item: [BPF A 2L] Adjust: [***] SSG output: –100dBm (2.24µV) 3) Adj item: [BPF A 2C] Adjust: [***] SSG output: –90dBm (7.08µV) 4) Adj item: [BPF A 2H] Adjust: [***] SSG output: –80dBm (22.4µV)							
• 430MHz band	5) Adj item: [BPF A UL] Adjust: [***] SSG output: –90dBm (7.08µV) 6) Adj item: [BPF A ULD] → [BPF A UC] → [BPF A UHD] → [BPF A UH] Adjust: [***] SSG output: –100dBm (2.24µV)							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
2. BPF RSSI (Band B) Adjust • 144MHz band	1) Adj item: [BPF B VL] → [BPF B VC] → [BPF B VH] Adjust: [***] SSG output: –100dBm (2.24µV) SSG MOD: 1kHz SSG DEV: 3kHz	SSG Oscilloscope Distortion meter AF V.M Dummy load	Rear panel	ANT EXT.SP	Front panel	Tuning control	Turn the Tuning control until the maximum RSSI value will appear on the LCD. When the same RSSI value remains while it is being adjusted, set the adjustment value to the center value. For example, set the adjustment value to 38 for the values listed below. RSSI value / Adjustment value 54 / 35 55 / 36 55 / 37 55 / 38 55 / 39 55 / 40 54 / 41	
• 200MHz band	2) Adj item: [BPF B 2L] Adjust: [***] SSG output: –100dBm (2.24µV) 3) Adj item: [BPF B 2C] Adjust: [***] SSG output: –90dBm (7.08µV) 4) Adj item: [BPF B 2H] Adjust: [***] SSG output: –80dBm (22.4µV)							
• 430MHz band	5) Adj item: [BPF B UL] Adjust: [***] SSG output: –90dBm (7.08µV) 6) Adj item: [BPF B ULD] → [BPF A UC] → [BPF A UHD] → [BPF A UH] Adjust: [***] SSG output: –100dBm (2.24µV)							
3. Squelch threshold (Band A) Writing • 144MHz band	1) Adj item: [SQ1 A V] Adjust: [***] SSG output: –128dBm (0.089µV) SSG MOD: 1kHz SSG DEV: 3kHz	SSG		ANT			Write	
• 200MHz band	2) Adj item: [SQ1 A 2] Adjust: [***] SSG output: –117dBm (0.32µV)							
• 300MHz band	3) Adj item: [SQ1 A 3] Adjust: [***] SSG output: –117dBm (0.32µV)							
• 430MHz band	4) Adj item: [SQ1 A U] Adjust: [***] SSG output: –128dBm (0.089µV)							
4. Squelch threshold (Band B) Writing • 144MHz band	1) Adj item: [SQ1 B V] Adjust: [***] SSG output: –128dBm (0.089µV) SSG MOD: 1kHz SSG DEV: 3kHz							
• 200MHz band	2) Adj item: [SQ1 B 2] Adjust: [***] SSG output: –117dBm (0.32µV)							
• 300MHz band	3) Adj item: [SQ1 B 3] Adjust: [***] SSG output: –117dBm (0.32µV)							
• 430MHz band	4) Adj item: [SQ1 B U] Adjust: [***] SSG output: –128dBm (0.089µV)							
• 1.2GHz band	5) Adj item: [SQ1 B 8] Adjust: [***] SSG output: –108dBm (0.89µV)							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
5. Squelch tight (Band A) Writing • 144MHz band	1) Adj item: [SQT A V] Adjust: [***] SSG output: –119dBm (0.25µV) SSG MOD: 1kHz SSG DEV: 3kHz	SSG	Rear panel	ANT	Front panel	Tuning control	Write	
• 200MHz band	2) Adj item: [SQT A 2] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 300MHz band	3) Adj item: [SQT A 3] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 430MHz band	4) Adj item: [SQT A U] Adjust: [***] SSG output: –119dBm (0.25µV)							
6. Squelch tight (Band B) Writing • 144MHz band	1) Adj item: [SQT B V] Adjust: [***] SSG output: –119dBm (0.25µV) SSG MOD: 1kHz SSG DEV: 3kHz							
• 200MHz band	2) Adj item: [SQT B 2] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 300MHz band	3) Adj item: [SQT B 3] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 430MHz band	4) Adj item: [SQT B U] Adjust: [***] SSG output: –119dBm (0.25µV)							
• 1.2GHz band	5) Adj item: [SQT B 8] Adjust: [***] SSG output: –98dBm (2.82µV)							
7. S-meter S1 (Band A) Writing • 144MHz band	1) Adj item: [SM1 A V] Adjust: [***] SSG output: –118dBm (0.28µV) SSG MOD: 1kHz SSG DEV: 3kHz							
• 200MHz band	2) Adj item: [SM1 A 2] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 300MHz band	3) Adj item: [SM1 A 3] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 430MHz band	4) Adj item: [SM1 A U] Adjust: [***] SSG output: –118dBm (0.28µV)							

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ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
8 .S-meter S1 (Band B) Writing • 144MHz band	1) Adj item: [SM1 B V] Adjust: [***] SSG output: –118dBm (0.28µV) SSG MOD: 1kHz SSG DEV: 3kHz	SSG	Rear panel	ANT	Front panel	Tuning control	Write	
• 200MHz band	2) Adj item: [SM1 B 2] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 300MHz band	3) Adj item: [SM1 B 3] Adjust: [***] SSG output: –108dBm (0.89µV)							
• 430MHz band	4) Adj item: [SM1 B U] Adjust: [***] SSG output: –118dBm (0.28µV)							
• 1.2GHz band	5) Adj item: [SM1 B 8] Adjust: [***] SSG output: –98dBm (2.82µV)							
9. S-meter full scale (Band A) Writing • 144MHz band	1) Adj item: [SM7 A V] Adjust: [***] SSG output: –96dBm (3.54µV) SSG MOD: 1kHz SSG DEV: 3kHz							
• 200MHz band	2) Adj item: [SM7 A 2] Adjust: [***] SSG output: –86dBm (11µV)							
• 300MHz band	3) Adj item: [SM7 A 3] Adjust: [***] SSG output: –86dBm (11µV)							
• 430MHz band	4) Adj item: [SM7 A U] Adjust: [***] SSG output: –96dBm (3.54µV)							
10. S-meter full scale (Band B) Writing • 144MHz band	1) Adj item: [SM7 B V] Adjust: [***] SSG output: –96dBm (3.54µV) SSG MOD: 1kHz SSG DEV: 3kHz							
• 200MHz band	2) Adj item: [SM7 B 2] Adjust: [***] SSG output: –86dBm (11µV)							
• 300MHz band	3) Adj item: [SM7 B 3] Adjust: [***] SSG output: –86dBm (11µV)							
• 430MHz band	4) Adj item: [SM7 B U] Adjust: [***] SSG output: –96dBm (3.54µV)							
• 1.2GHz band	5) Adj item: [SM7 B 8] Adjust: [***] SSG output: –76dBm (35.4µV)							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
11. AF distortion Check • Band A	1) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –53dBm (501µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 1V/8Ω	SSG Oscilloscope Distortion meter AF V.M Dummy load	Rear panel	ANT EXT.SP			Check	4% or less
• Band B	2) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –53dBm (501µV) AF output: 1V/8Ω							
12. Sensitivity Check • Band A (Wide)	1) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –122dBm (0.178µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω 2) Frequency:144.250MHz SSG output: –122dBm (0.178µV) 3) Frequency: 145.750MHz **E,M4** Frequency: 147.750MHz **K** SSG output: –122dBm (0.178µV) 4) Frequency: 430.250MHz **E,M4** Frequency: 438.250MHz **K** SSG output: –122dBm (0.178µV) 5) Frequency: 435.250MHz **E,M4** Frequency: 444.250MHz **K** SSG output: –122dBm (0.178µV) 6) Frequency: 439.750MHz **E,M4** Frequency: 449.750MHz **K** SSG output: –122dBm (0.178µV) 7) Frequency: 136.050MHz **K,E** SSG output: –115dBm (0.4µV) 8) Frequency: 160.050MHz **K,E** SSG output: –115dBm (0.4µV) 9) Frequency: 225.050MHz **K,E** SSG output: –110dBm (0.707µV) 10) Frequency: 382.050MHz **K,E** SSG output: –110dBm (0.707µV) 11) Frequency: 400.050MHz **K,E** SSG output: –118dBm (0.28µV) 12) Frequency: 460.050MHz **K,E** SSG output: –100dBm (2.24µV) 13) Frequency: 520.050MHz **K,E** SSG output: –100dBm (2.24µV)						Check	12dB SINAD or more
• Band A (Narrow)	14) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –120dBm (0.22µV) SSG MOD: 1kHz SSG DEV: 1.5kHz AF output: 0.63V/8Ω 15) Frequency: 435.250MHz **E,M4** Frequency: 444.250MHz **K** SSG output: –120dBm (0.22µV)							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
• Band B (Wide)	16) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –122dBm (0.178µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω 17) Frequency:144.250MHz SSG output: –122dBm (0.178µV) 18) Frequency: 145.750MHz **E,M4** Frequency: 147.750MHz **K** SSG output: –122dBm (0.178µV) 19) Frequency: 430.250MHz **E,M4** Frequency: 438.250MHz **K** SSG output: –122dBm (0.178µV) 20) Frequency: 435.250MHz **E,M4** Frequency: 444.250MHz **K** SSG output: –122dBm (0.178µV) 21) Frequency: 439.750MHz **E,M4** Frequency: 449.750MHz **K** SSG output: –122dBm (0.178µV) 22) Frequency: 136.050MHz **K,E** SSG output: –115dBm (0.4µV) 23) Frequency: 160.050MHz **K,E** SSG output: –115dBm (0.4µV) 24) Frequency: 225.050MHz **K,E** SSG output: –110dBm (0.707µV) 25) Frequency: 382.050MHz **K,E** SSG output: –110dBm (0.707µV) 26) Frequency: 400.050MHz **K,E** SSG output: –118dBm (0.28µV) 27) Frequency: 460.050MHz **K,E** SSG output: –100dBm (2.24µV) 28) Frequency: 520.050MHz **K,E** SSG output: –100dBm (2.24µV) 29) Frequency: 859.900MHz **K,E** SSG output: –90dBm (7.08µV) 30) Frequency: 1270.050MHz **K,E** SSG output: –100dBm (2.24µV)	SSG DVM Oscilloscope AF V.M	Rear panel	ANT EXT.SP			Check	12dB SINAD or more
• Band B (Narrow)	31) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –120dBm (0.22µV) SSG MOD: 1kHz SSG DEV: 1.5kHz AF output: 0.63V/8Ω 32) Frequency: 435.250MHz **E,M4** Frequency:444.250MHz **K** SSG output: –120dBm (0.22µV)							
13. Hum and Noise Check • Band A	1) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –53dBm (501µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 1V/8Ω AF V.M: 0dB	SSG Oscilloscope Distortion meter AF V.M Dummy load						
	2) SSG DEV: OFF						Check	–43dB or less

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	3) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** SSG output: –53dBm (501µV) AF V.M: 0dB	SSG Oscilloscope Distortion meter AF V.M Dummy load						
	4) SSG DEV: OFF						Check	–43dB or less
• Band B	5) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: –53dBm (501µV) AF V.M: 0dB							
	6) SSG DEV: OFF						Check	–43dB or less
	7) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** SSG output: –53dBm (501µV) AF V.M: 0dB							
	8) SSG DEV: OFF						Check	–43dB or less
14. Squelch Check Band A • 144MHz band	1) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: OFF Set to the point where noise will be muted by turning the SQL knob (Band A).	SSG Oscilloscope	Rear panel	ANT EXT.SP			Check	SQL knob (Band A) position: 8:00~11:00 BUSY icon disappear.
	2) SSG output: –126dBm (0.11µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω							Squelch open. BUSY icon appears and S-meter display does not appear.
• 430MHz band	3) Frequency: 435.250MHz **E,M4** Frequency: 444.250MHz **K** SSG output: OFF Set to the point where noise will be muted by turning the SQL knob (Band A).							SQL knob (Band A) position: 8:00~11:00 BUSY lights off
	4) SSG output: –126dBm (0.11µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω							Squelch open. BUSY icon appears and S-meter display does not appear
Band B • 144MHz band	5) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG output: OFF Set to the point where noise will be muted by turning the SQL knob (Band B).							SQL knob (Band B) position: 8:00~11:00 BUSY icon disappear.
	6) SSG output: –126dBm (0.11µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω							Squelch open. BUSY icon appears and S-meter display does not appear

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ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
• 430MHz band	7) Frequency: 435.250MHz **E,M4** Frequency: 444.250MHz **K** SSG output: OFF Set to the point where noise will be muted by turning the SQL knob (Band B).	SSG Oscilloscope	Rear panel	ANT EXT.SP			Check	SQL knob (Band B) position: 8:00~11:00 BUSY icon disappear.
	8) SSG output: –126dBm (0.11µV) SSG MOD: 1kHz SSG DEV: 3kHz AF output: 0.63V/8Ω							Squelch open. BUSY icon appears and S-meter display does not appear.
15. S-meter Check Band A • 144MHz band S1	1) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG MOD: 1kHz SSG DEV: 3kHz SSG output : –118dBm (0.28µV)±3dB	SSG	Rear panel	ANT			Check	One segment in S-meter lights.
• 144MHz band Full scale	SSG output : –96dBm (3.54µV)±3dB							All segments in S-meter light.
• 430MHz band S1	2) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** SSG output : –118dBm (0.28µV)±3dB							One segment in S-meter lights.
• 430MHz band Full scale	SSG output : –96dBm (3.54µV)±3dB							All segments in S-meter light.
Band B • 144MHz band S1	3) Frequency: 145.250MHz **E,M4** Frequency: 146.250MHz **K** SSG MOD: 1kHz SSG DEV: 3kHz SSG output : –118dBm (0.28µV)±3dB							One segment in S-meter lights.
• 144MHz band Full scale	SSG output : –96dBm (3.54µV)±3dB							All segments in S-meter light.
• 430MHz band S1	4) Frequency: 435.000MHz **E,M4** Frequency: 444.000MHz **K** SSG output : –118dBm (0.28µV)±3dB							One segment in S-meter lights.
• 430MHz band Full scale	SSG output : –96dBm (3.54µV)±3dB							All segments in S-meter light.