

Adjustment

1) Required Test Equipment

1. Regulated Power Supply

Supply voltage: 2V to 15V
Current: 2A or more.
Standard voltage: 13.8V

2. Frequency Counter

Measurable frequency: Up to 1GHz
Measurements stability: 0.2ppm or so

3. Power Meter

Measurable frequency: Up to 500MHz.
Impedance: 50Ω, unbalanced.
Measuring range: Full scale of 100W or so.

4. Linear Detector

Measurable frequency: Up to 500MHz.
Characteristics: Flat
CN: 60dB or more.

5. Digital Multimeter

Voltage range: FS = 18V or so.
Input resistance: 1MΩ or more.

6. Oscilloscope

Measurable frequency: DC to 30MHz.

7. AF Voltmeter

Measurable frequency: 50Hz to 1MHz.
Maximum sensitivity: 1mV or more.

8. Spectrum Analyzer

Measuring range: DC to 2GHz or more.

9. SSG

Maximum frequency: 1GHz or more.
Output: -20dB/0.1μV to 120dB/1V.
Output Impedance: 50Ω, unbalanced.

10. Dummy Load

Impedance: 8Ω
Dissipation: 100W or more.

11. Distortion Meter

Measurable frequency: 30Hz to 100KHz.
Input level: 50mV to 10V rms.

2)Adjustment for DJ-582T/TA/TC

TX-RX Common Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Backup Voltage	Power off	Digital multimeter	D116 TP3			Check	2.8V or more

PLL Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Reference Frequency	Frequency: 445.00MHz PTT: ON	Frequency Counter	ANT	RF	TC406		445.00000MHz
UHF TX VCO	Frequency: 445.00MHz PTT: ON Power: Middle	Digital multimeter	TP1	U-VCO	L433		1.5 ~ 1.7V
UHF RX VCO	Frequency: 445.00MHz	Digital multimeter	TP1	U-VCO	L432		1.8 ~ 2.2V
VHF VCO	Frequency: 145.00MHz	Digital multimeter	TP2	V-VCO	L441		2.0 ~ 2.1V

RX Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Receive Sensitivity	Freq: 445.05MHz SSG mod: 1KHz Power Supply Voltage: 6V	SSG Oscilloscope AF Voltmeter Distortion meter	SP	RF	TC401 ~ TC405	12dB SINAD: MAX	12dB SINAD -7.5db μ V (EMF)
	RF			L422, L424 ~ L428	12dB SINAD: MAX	12dB SINAD -7.5db μ V (EMF)	
S Meter	Freq: 445.05MHz SSG output: 15dB μ V (EMF)			IF	VR103	Full	+10 ~ +25dB μ V (EMF)
	Freq: 145.05MHz SSG output: 15dB μ V (EMF)			IF	VR104	Full	+10 ~ +25dB μ V (EMF)

TX Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Power	1) Before adjustment	Power meter Spectrum Analyzer	ANT	IF	VR109	MAX	
	2) Freq: 445.00MHz PTT: ON Power: High			RF	L402		spurious below -65dBc
	3) Freq: 445.00MHz PTT: ON Power: High			IF	VR109		5.0 ~ 5.3W
	4) Freq: 445.00MHz PTT: ON Power: Middle			IF	VR108		0.9~1.1W
	5) Freq: 445.00MHz PTT: ON Power: Low			IF	VR110		0.15~0.25W
	6) Freq: 145.00MHz PTT: ON Power: High			RF	VR401		5.0 ~ 5.3W
	7) Freq: 145.00MHz PTT: ON Power: Middle					Check	0.8 ~ 1.5W
	8) Freq: 145.00MHz PTT: ON Power: Low					Check	0.1 ~ 0.6W
DEV	1) Freq: 445.00MHz AG output: 1KHz, -30dBm PTT: ON Power: Low	Power meter AG Liner detector	ANT	IF	VR105		4.7KHz/DEV
	2) Freq: 145.00MHz AG output: 1KHz, -30dBm PTT: ON Power: Low			IF	VR106		4.7KHz/DEV
DTMF	Freq: 445.00MHz PTT: ON Power: Low Push "1" key on keypad			IF	VR107		3KHz/DEV
CTCSS (88.5Hz)	Freq: 445.00MHz PTT: ON Power: Low with Tone SQL Unit			Tone SQL	VR701		800Hz/DEV

3)Adjustment for DJ-582E

TX-RX Common Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Backup Voltage	Power off	Digital multimeter	D116 TP3			Check	2.8V or more

PLL Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Reference Frequency	Frequency: 435.00MHz PTT: ON	Frequency Counter	ANT	RF	TC406		435.00000MHz ±100Hz
UHF TX VCO	Frequency: 435.00MHz PTT: ON Power: Middle	Digital multimeter	TP1	U-VCO	L433		1.3 ~ 1.8V
UHF RX VCO	Frequency: 435.00MHz		TP1	U-VCO	L432		1.8 ~ 2.2V
VHF VCO	Frequency: 145.00MHz		TP2	V-VCO	L441		2.0 ~ 2.1V

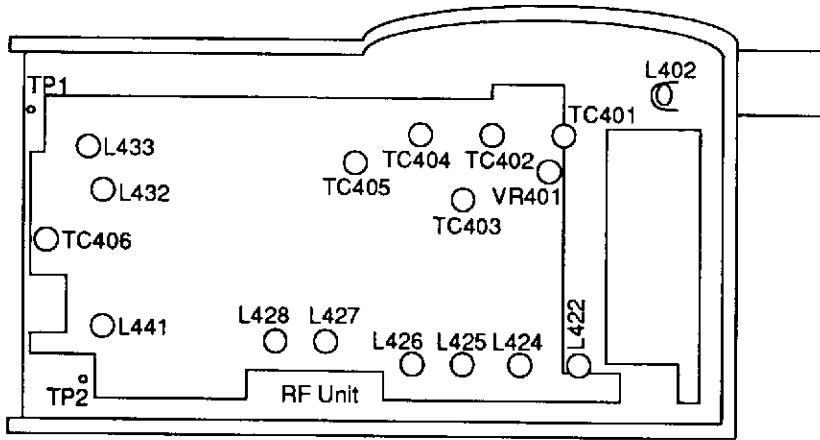
RX Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Receive Sensitivity	Freq: 435.05MHz SSG mod: 1KHz Power Supply Voltage: 6V	SSG Oscilloscope AF Voltmeter Distortion meter	SP	RF	TC401 ~ TC405	12dB SINAD: MAX	12dB SINAD -7.5dB μ V (EMF)
	RF			L422, L424 ~ L428	12dB SINAD: MAX	12dB SINAD -7.5dB μ V (EMF)	
S Meter	Freq: 435.05MHz SSG output: 15dB μ V (EMF)			IF	VR103	Full	+10 ~ +25dB μ V (EMF)
	Freq: 145.05MHz SSG output: 15dB μ V (EMF)			IF	VR104	Full	+10 ~ +25dB μ V (EMF)

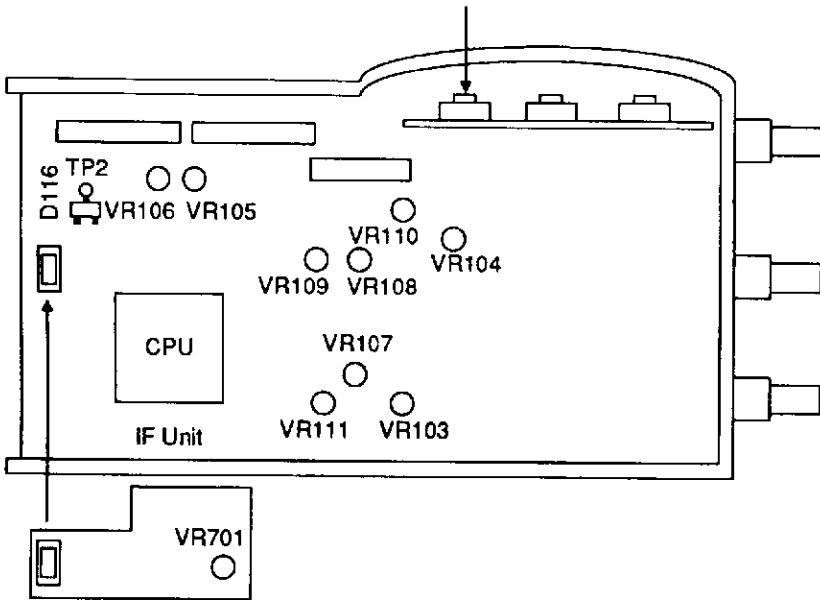
TX Adjustment

Item	Condition	Measurement		Adjustment			Specifications/ Remarks
		Test-equipment	Terminal	Unit	Parts	Method	
Power	1) Before adjustment	Power meter Spectrum Analyzer	ANT	IF	VR109	MAX	
	2) Freq: 435.00MHz PTT: ON Power: High			RF	L402		spurious below -65dBc
	3) Freq: 435.00MHz PTT: ON Power: High			IF	VR109		5.0 ~ 5.3W
	4) Freq: 435.00MHz PTT: ON Power: Middle			IF	VR108		0.9~1.1W
	5) Freq: 435.00MHz PTT: ON Power: Low			IF	VR110		0.15~0.25W
	6) Freq: 145.00MHz PTT: ON Power: High			RF	VR401		5.0 ~ 5.3W
	7) Freq: 145.00MHz PTT: ON Power: Middle					Check	0.8 ~ 1.5W
	8) Freq: 145.00MHz PTT: ON Power: Low					Check	0.1 ~ 0.6W
DEV	1) Freq: 435.00MHz AG output: 1KHz, -30dBm PTT: ON Power: Low	Power meter AG Liner detector	ANT	IF	VR105		4.5KHz/DEV
	2) Freq: 145.00MHz AG output: 1KHz, -30dBm PTT: ON Power: Low			IF	VR106		4.5KHz/DEV
DTMF	Freq: 435.00MHz PTT: ON Power: Low Push "1" Key on keypad			IF	VR107		3KHz/DEV
1750Hz Tone	Freq: 435.00MHz PTT: ON Power: Low			IF	VR111		3KHz/DEV

4) Adjustment Points



LOW PTT Key (T/TA/TC)
Tone Burst Key (E only)



Tone SQL Unit (T/TA/TC)