

ADJUSTMENT PROCEDURES

PLL ADJUSTMENT for IC-F4TR

ADJUSTMENT	ADJUSTMENT CONDITIONS		MEASUREMENT		VALUE	ADJUSTMENT	
			UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1	Operating freq: 480.000 MHz Receiving	MAIN	Connect a multimeter to check point CP1.	1.3 V	MAIN	L11
	2	Operating freq: 480.000 MHz Transmitting					L405
	3	Operating freq: 512.000 MHz Receiving			3.5V- 4.5V		Verify
	4	Operating freq: 512.000 MHz Transmitting					

TRIMMER ADJUSTMENT for IC-F4TR

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT
		UNIT	LOCATION		
REFERENCE REFERENCE	1 Operating freq: 512.000 MHz Transmitting	Top panel	Loosely couple a frequency counter to the antenna connector	430.000000 MHz	push up or down keys on the com- puter key-board.
OUTPUT POWER	1 Operating freq: 480.000 MHz High Lossitch:High	Top panel	Connecte comput- er screen Power High.	80	push up or down keys on the com- puter key-board.
	2 Transmitting		Connect an R power meter to the ante- enna connector.	Maximum output	Adjust C4 on the MAIN unit. see detaile illustration at right
	3 Operating freq: 500.000 MHz High Lossitch:High Transmitting			4.2	push up or down keys on the com- puter key-board.
	4 High Lossitch:Lo Transmitting			0.5 -2.0	Verify
P1-P4	1 Operating freq: 480.000 MHz Set the G as: Level : 20 uV Modulation :1kHz Deviation :3.0kHz :1.5kHz N Receiving	Top panel	Connect an G to the antenna conne- ctor and a INA meter with 8 ohm load to the P ack.	Minimum distor- tion level	push up or down keys on the com- puter key-board.

TRANSMITTER ADJUSTMENT for IC-F4TR

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
M BALANCE	1 Operating freq: 500.000 MHz	Top panel	Connect an M deviation meter to the antenna connector through an attenuator.	Set to flat wave	MAIN	R11
M DEVIATION	1 Operating freq: 500.000 MHz Wide Narrow switch: Wide Connect an audio generator to the MIC jack and set as: 1kHz 100mV Set an M deviation meter as: HP :0 LP :20kHz De-emphasis :0 Detector : P-P 2 Transmitting	Top panel	Connect an M deviation meter to the antenna connector through an attenuator	3.5kHz	MAIN	R5 4

RECEIVER ADJUSTMENT for IC-F4TR

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
ELCH LEVEL	1 Operating freq: 500.000 MHz i.e. Narrow sitch: i.e. set the G as: Modulation :1kHz Deviation :3.0kHz Receiving	Top panel	Connect an G to the antenna connector an INA meter with an 8ohm load to the antenna connector	12 INA	G	Output level
	2 Turn R 2 clockwise to close squelch Receiving					