

## TK-3102/TK-3107 Tuning Procedure

Before attempting to tune the transceiver, connect the unit to a suitable power supply. Whenever the transmitter tuned, must be connected to a suitable dummy load, unless the instruction specify otherwise. The speaker output connector must be terminated with a 8 8ohms dummy load at any time during the tuning and connected to an AC voltmeter and an audio distortion meter or a SINAD measurement meter at all the time during the tuning.

### 1-1 Adjusting Mode

Connect with the Radio and Personal Computer to COMPUTER PROGRAMMING INTERFACE(KPG-8 or KPG-22)

### 1-2 Tuning Items

- Frequency Adjust
- RF Power
- Standard Battery Voltage
- Squelch Threshold Level(Tight)
- Squelch Threshold Level(Open)
- QT Deviation(Wide)
- DQT Deviation(Wide)
- QT Deviation(Narrow)
- DQT Deviation(Narrow)

### 1-3 Test Mode

Starting Test Mode, select the Tuning Frequency and Signaling.

1-3-1 Open the Program Menu of Window.

1-3-2 Press[T] or use [↓][↑]keys to Test Mode, then Press the [Enter].

1-3-3 Starting the Test Mode channel and Signaling after Tuning Data Read.

1-3-4 Use[←][→]keys to select channel then use [↓][↑]keys to select channel number then Press the [Enter].

1-3-5 Use[←][→]keys to select Signaling then use [↓][↑]keys to select Signaling number 38 waves.

1-3-6 Press the [Space/ S+ Space],[F2/S+F2] then Transmitter on.

1-3-7 Back to Reception during transmitter use[Space/S + Space],[F2/ S+ F2] keys.

## 2-1 Tuning Mode

Starting Tuning Mode from Test Mode.

2-1-1 Press the [F10] during the TEST MODE CHANNEL & SIGNALING MODE then starting Tuning Mode and message Window open.

Tuning Mode
Frequency Tune
RF Power
Battery
Squelch(Tight)
Squelch(Open)
QT Deviation(Wide)
DQT Deviation(Wide)
QT Deviation(Narrow)
DQT Deviation(Narrow)

2-1-2 Use[↓][↑]keys select tuning item[Frequency Tune]then press [Enter].

2-1-3 Use[←][→]keys to adjust the level then press [Enter].

2-1-4 Select tuning item [RF Power]then press [Enter].

2-1-5 Use [←][→]keys to adjust the level then press[Enter].

2-1-6 Select tuning item[BATTERY] then press [Enter].

2-1-7 Use [←][→]keys to adjust the level then press [Enter].

2-1-8 Select tuning item [Squelch(Tight)]then press [Enter].

2-1-9 Use [←][→]keys to adjust the level then press [Enter].

2-1-10 Select tuning item [Squelch(Open)] then press [Enter].

2-1-11 Use [←][→]keys to adjust the level then press [Enter].

2-1-12 Select tuning item [QT Deviation(Wide)] then press [Enter].

2-1-13 Use [←][→]keys to adjust the level then press [Enter].

2-1-14 Select tuning item [DQT Deviation(Wide)] then press [Enter].

2-1-15 Use [←][→]keys to adjust the level then press [Enter].

2-1-16 Select tuning item [QT Deviation(Narrow)] then press [Enter].

2-1-17 Use [←][→]keys to adjust the level then press [Enter].

2-1-18 Select tuning item [DQT Deviation(Narrow)]then press [Enter].

2-1-19 Use [←][→]keys to adjust the level then press [Enter].

\*\*\*\*\* SEMICONDUCTOR PARTS LIST \*\*\*\*\*

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FOR MODEL : EX-3092

(TK-3107 ,X57-6030-10)

----- SELECT: 1999-05-18

CURCUIT SYMBOL	PARTS NUMBER	DESCRIPTION
D1	MA2S376	VARIABLE CAPACITANCE DIODE,FREQUENCY CONTROL
D2	MA2S376	VARIABLE CAPACITANCE DIODE,FREQUENCY CONTROL
D3	MA2S376	VARIABLE CAPACITANCE DIODE,FREQUENCY CONTROL
D4	MA2S376	VARIABLE CAPACITANCE DIODE,FREQUENCY CONTROL
D5	MA360	VARIABLE CAPACITANCE DIODE,FREQUENCY CONTROL
D6	MA2S111	DIODE,CURRENT STEERING
D7	MA2S111	DIODE,UNLOCK DETECT
D100	HSC277	DIODE,RF SWITCH
D101	HVU131	DIODE,ANTENNA SWITCH
D102	HSC277	DIODE,ANTENNA SWITCH
D103	HSC277	DIODE,ANTENNA SWITCH
D200	HSC277	DIODE,RF SWITCH
D201	HVC350B	VARIABLE CAPACITANCE DIODE,BPF TUNE
D202	HVC351B	VARIABLE CAPACITANCE DIODE,BPF TUNE
D203	HVC352B	VARIABLE CAPACITANCE DIODE,BPF TUNE
D300	DA221	DIODE,LIMITTER
D400	B30-2156-05	LED,TX
D401	B30-2157-05	LED,BUSY
D500	1SS372	DIODE,AGC DETECT
D501	DAN222	DIODE,REVERCE PROTECTION
D502	1SR154-400	DIODE,REVERCE PROTECTION
IC1	MB15A02	IC,PHASE LOCKED LOOP SYSTEM
IC100	NJM2904V	IC,APC
IC200	TA31136FN	IC,IF SYSTEM
IC300	NJM2902V	IC,AUDIO AMP ACTIVE FILTER
IC301	NJM2904V	IC,ACTIVE FILTER
IC302	TA7368F	IC,AUDIO POWER AMP
IC400	PST9140NR	IC,RESET SWITCH
IC401	AT2408N10SI2.5	IC,EEPROM
IC402	RN5VL45C	IC,VOLTAG DETECT
IC403	M38267M8L241GP	IC,MICRO PROCESSOR
IC404	S-81350HG-KD	IC,VOLTAGE REGURATER
IC500	NJM2100V	IC,AUDIO AMP
Q1	2SC4649(N,P)	TRANSISTOR,TRIPLER
Q2	2SC5108(Y)	TRANSISTOR,RF AMP
Q3	2SK508NV(K52)	FET,VCO RX
Q4	2SC4228(R44)	FET,VCO TX
Q5	2SJ243	FET,DC SWITCH
Q6	2SC5108(Y)	TRANSISTOR,RF BUFFER AMP
Q7	UMC4	TRANSISTOR,DC SWITCH
Q8	2SC4617(S)	TRANSISTOR,RIPPLE FILTER
Q100	2SC5108(Y)	TRANSISTOR,RF AMP
Q101	2SC5108(Y)	TRANSISTOR,RF AMP
Q102	2SC4988	TRABSISTOR,TX PRE-DRIVE

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CURCUIT SYMBOL	PARTS NUMBER	DESCRIPTION
Q103	2SK1824	FET,DC SWITCH
Q104	FMMT718	TRANSISTOR,DC SWITCH
Q105	2SK2596	FET,TX DRIVE AMP
Q106	2SK1824	FET,DC SWITCH
Q107	2SK2595	FET,TX FINAL
Q108	DTC114EE	TRANSISTOR,DC SWITCH
Q109	DTA144EE	TRANSISTOR,DC SWITCH
Q110	DTC114TE	TRANSISTOR,DC SWITCH
Q200	DTA114EE	TRANSISTOR,DC SWITCH
Q201	2SC4649(N,P)	TRANSISTOR,IF AMP
Q202	3SK228	FET,MIXER
Q203	3SK228	FET,RF AMP
Q300	2SC4617(S)	TRANSISTOR,AUDIO MUTE SWITCH
Q302	2SK1824	FET,AUDIO MUTE SWITCH
Q303	DTA144EE	TRANSISTOR,DC SWITCH
Q304	DTC144EE	TRANSISTOR,DC SWITCH
Q305	2SA1362(GR)	TRANSISTOR,DC SWITCH
Q306	DTC144EE	TRANSISTOR,DC SWITCH
Q307	2SK1588	FET,AUDIO MUTE SWITCH
Q400	DTC114EE	TRANSISTOR,DC SWITCH
Q401	DTC114EE	TRANSISTOR,DC SWITCH
Q402	DTA114YE	TRANSISTOR,DC SWITCH
Q403	DTC144EE	TRANSISTOR,BEAT SHIFT SWITCH
Q404	UMG3N	TRANSISTOR,DC SWITCH
Q405	UPA672T	FET,DC SWITCH
Q406	FP210	TRANSISTOR,DC SWITCH
Q407	UMG3N	TRANSISTOR,DC SWITCH
Q408	DTA123JE	TRANSISTOR,DC SWITCH
Q500	2SK1824	FET,DC SWITCH
Q501	2SC4617(S)	TRANSISTOR,ACTIVE FILTER
Q502	2SC4617(S)	TRANSISTOR,ACTIVE FILTER
Q503	2SC4919	TRANSISTOR,MIC MUTE/AGC
Q504	DTA144EE	TRANSISTOR,DC SWITCH
Q505	DTA143ZE	TRANSISTOR,DC SWITCH