

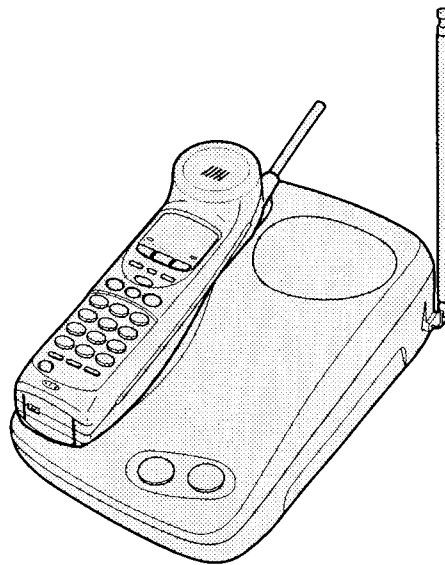


FILE NO. *T-174X*

# SERVICE MANUAL

# CORDLESS TELEPHONE

**CLT-9650/AU**  
**CLT-9650/AU (W)**  
(AUSTRALIA)



PRODUCT CODE No.  
178 422 77

## Specifications

Control	BASE UNIT	HAND UNIT
1. DIAL .....		Push
2. TEL .....		Push
3. END .....		Push
4. INT .....		Push
5. RECEIVER		
HIGH/NORMAL .....		Slide
6. POWER		
ON/OFF .....		Slide
7. FLASH .....		Push
8. MEMORY .....		Push
9. HOLD .....		Push
10. SCAN .....		Push
11. TONE .....		Push
12. PAUSE/REDIAL .....		Push
13. MUTE .....		Push
14. AUTO DIAL 1/2/3 .....		Push
15. CALL WAITING .....		Push

Control	BASE UNIT	HAND UNIT
16. PAGE/INT .....	Push	
17. SPEAKER .....	Push	Push
18. SP PHONE/ INT VOLUME .....	Slide	
19. TONE/PULSE .....	Slide	
20. FLASH TIME .....	Slide	

Indicator Lamps	BASE UNIT	HAND UNIT
1. TEL .....	Green	
2. CHARGE .....	Red	
3. INTERCOM .....	Yellow	
4. SPEAKER .....	Red	
5. BATT. LOW .....		Red
6. IN USE/H.F .....		Green/Amber

Power Supply.....AC 240V 50Hz (AC adaptor)  
Ni-Cd 3N-270AA 3.6V

# ALIGNMENT PROCEDURES

## 1. HAND UNIT

### 1-1 Transmitting Part

- ANT should be disconnected.
- Feed 3.8V DC power supply to CP1.
- Operate the unit by switching the POWER SW on.
- The connection of unit is shown in Fig.1-1.
- Make TP201 momentary short for TEST MODE.  
(TEST MODE channel is CH 4)

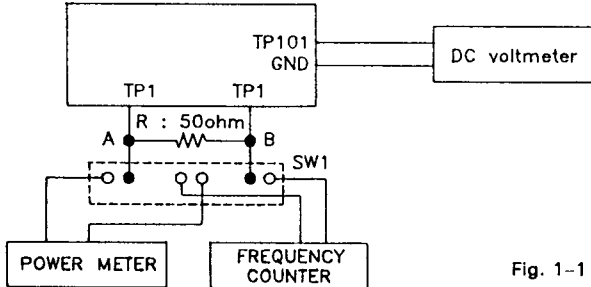


Fig. 1-1

Step	Condition	Adjust	Confirm	Adjusted Value
(a)	—	T103	Indication of DC voltmeter	2.0V ± 0.1
(b)	SW1 to A side	T101,102	Indication of Power meter	Maximum amplitude
(c)	SW1 to B side	CT31	Indication of Frequency Counter	39.925 ± 0.0002 MHz

### 1-2 Transmitting Part

- ANT should be disconnected.
- Feed 3.8V DC power supply to CP1.
- Operate the unit by switching the POWER SW on.
- The connection of unit is shown in Fig.1-2.
- Make TP201 momentary short for TEST MODE.
- Microphone should be disconnected.  
(TEST MODE channel is CH 4)

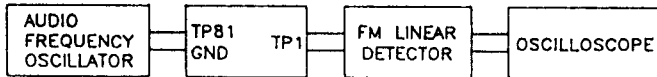
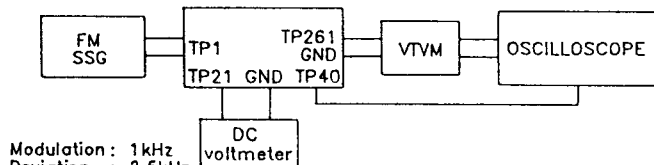


Fig. 1-2

Step	Condition	Adjust	Confirm	Adjusted Value
(a)	Oscillator output: 20mV open (1kHz) at TP81	SVR61	Indication of FM linear detector	2.5 ± 0.1kHz dev.
(b)	Oscillator output: 20mV open (1kHz) + 20dB	Confirm	Indication of FM linear detector	3.0 ~ 4.5kHz dev.
(c)	Hold down "1" key (TX DATA MODE)	Confirm	Indication of FM linear detector	3.0 ~ 4.5kHz dev.

### 1-3 Receiving Part

- ANT should be disconnected.
- Feed 3.8V DC power supply to CP1.
- Operate the unit by switching the POWER SW on.
- Set SW71 to NORMAL position.
- The connection of unit is shown in Fig.1-3.
- Make TP201 momentary short for TEST MODE.  
(TEST MODE channel is CH 4)
- Speaker should be disconnected.



Modulation : 1kHz  
Deviation : 2.5kHz  
Carrier : 30.225MHz

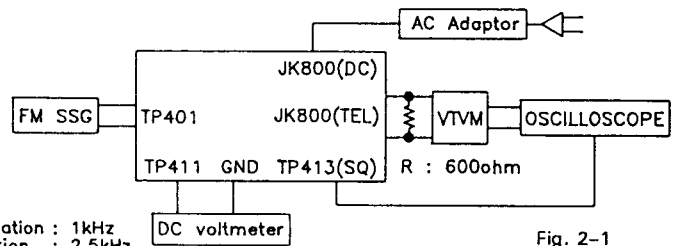
Fig. 1-3

Step	Condition	Adjust	Confirm	Adjusted Value
(a)	—	T41	Indication of DC voltmeter	1.5V ± 0.1
(b)	SSG output:40EMF dBμV	T42	Deflection of waveform on the Oscilloscope	Maximum amplitude
(c)	SSG output:40EMF dBμV	SVR41	Indication of VTVM	-20 dBm
(d)	SSG output:0EMF dBμV	T1,2,3	Deflection of waveform on the Oscilloscope	Maximum S/N Ratio
(e)	SSG output:20EMF dBμV	SVR11	Monitor at TP40	Change from Low → Hi

## 2. BASE UNIT

### 2-1 Receiving Part

- ANT should be disconnected.
- Connect the AC adaptor to base unit.
- The connection of unit is shown in Fig. 2-1.
- Momentary short TP710 & GND for TEST MODE.  
(TEST MODE channel is CH 8)



Modulation : 1kHz  
Deviation : 2.5kHz  
Carrier : 39.800MHz

Fig. 2-1

Step	Condition	Adjust	Confirm	Adjusted Value
(a)	—	T405	Indication of DC voltmeter	1.5V ± 0.1
(b)	SSG output:40EMF dBμV	T410	Deflection of waveform on the Oscilloscope	Maximum amplitude
(c)	SSG output:40EMF dBμV	SVR461	Indication of VTVM	-3 dBm
(d)	SSG output:0EMF dBμV	T401,402,404,406	Deflection of waveform on the Oscilloscope	Maximum S/N Ratio
(e)	SSG output:-3EMF dBμV	SVR401	Monitor at TP413 (SQ)	Change from Hi → Low

### 2-2 Transmitting Part

- ANT should be disconnected.
- Connect the AC adaptor to base unit.
- The connection of unit is shown in Fig.2-2.
- Momentary short TP710 & GND for TEST MODE.  
(TEST MODE channel is CH 8)

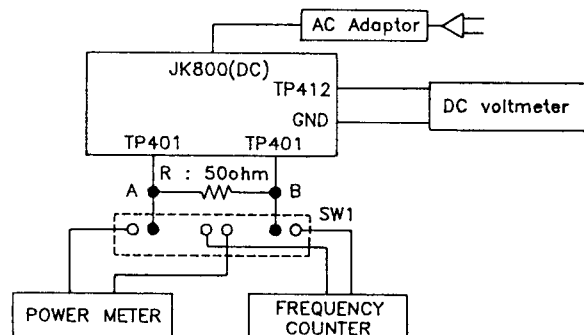


Fig. 2-2

# ALIGNMENT PROCEDURES

Step	Condition	Adjust	Confirm	Adjusted Value
(a)	—	T601	Indication of DC voltmeter	1.5V ± 0.1
(b)	SW1 to A side	T602,603	Indication of Power meter	Maximum amplitude
(c)	SW1 to A side	SVR601	Indication of Power meter	0dBm ± 1dB
(d)	SW1 to B side	CT601	Indication of Frequency Counter	30.100 ± 0.0002 MHz
(e)	—	T601	Indication of DC voltmeter	1.5V ± 0.1

- 2-3 Transmitting Part
- ANT should be disconnected.
  - Connect the AC adaptor to base unit.
  - The connection of unit is shown in Fig.2-3.
  - Momentary short TP710 & GND for TEST MODE.
  - Microphone should be disconnected.  
(TEST MODE channel is CH 6)

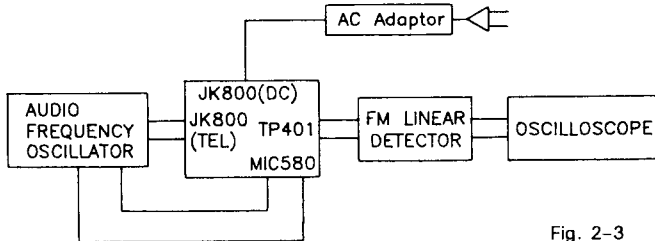


Fig. 2-3

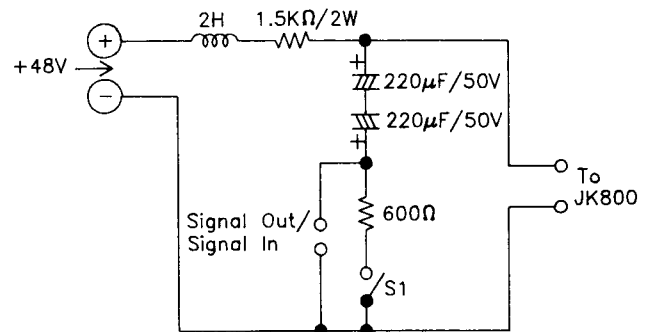
Step	Condition	Adjust	Confirm	Adjusted Value
(a)	Oscillator output 250mV open (1kHz) to JK800	SVR610	Indication of FM linear detector	2.5 ± 0.1kHz dev.
(b)	Oscillator output 250mV open (1kHz) + 20dB	Confirm	Indication of FM linear detector	3.0 ~ 4.5kHz dev.
(c)	Depress SW710 2 times (TX DATA MODE)	Confirm	Indication of FM linear detector	3.0 ~ 4.5kHz dev.
(d)	Depress SW710 one more time (INT MODE) Oscillator output 10mV open (1kHz) to MIC580	Confirm	Indication of FM linear detector	2.5 ± 0.5kHz dev.

Frequency Table 1 – unit MHz

CHANNEL	FREQUENCY (MHz)	
	BASE TO HANDSET	HANDSET TO BASE
1	30.075	39.775
2	30.125	39.825
3	30.175	39.875
4	30.225	39.925
5	30.275	39.975
6	30.100	39.800
7	30.150	39.850
8	30.200	39.900
9	30.250	39.950
10	30.300	40.000

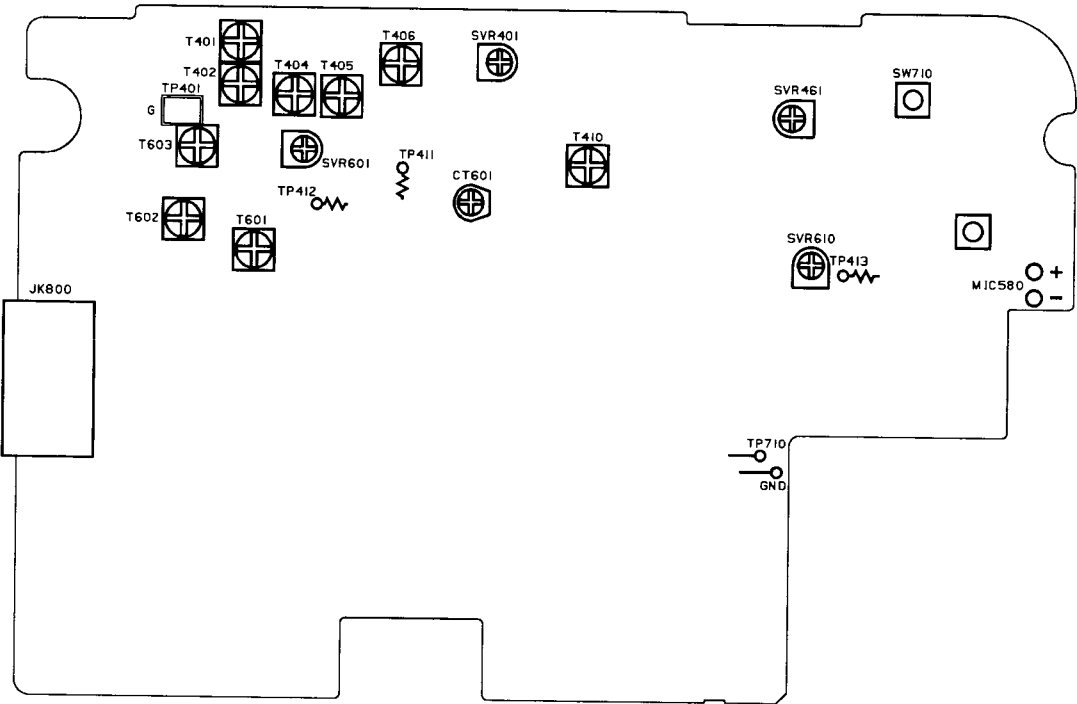
### DC Feed Circuit

- Must be connected to JK800 (Base unit) during alignment for Base unit.
- Switch on S1 during alignment for Base unit receiving part.

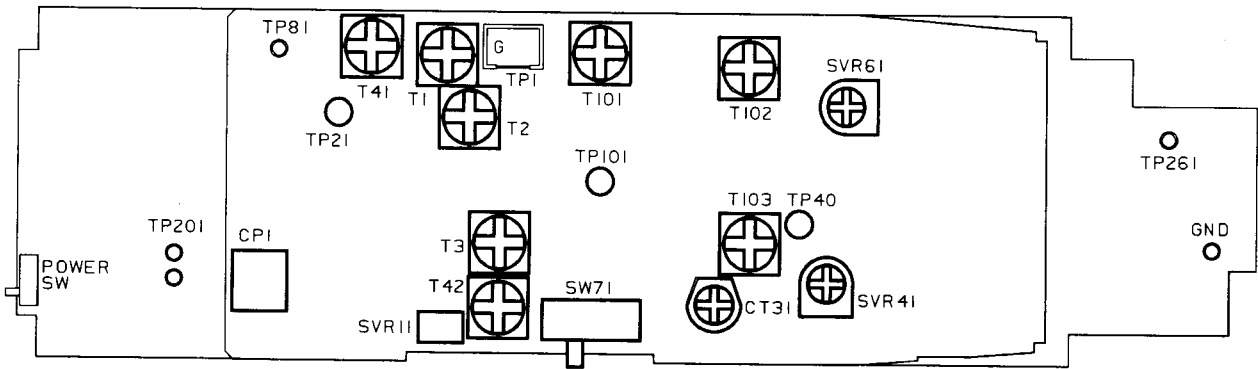


# MAIN PARTS IDENTIFICATION ILLUSTRATION

## BASE MAIN P.C.B. TOP



## HANDY P.C.B. TOP



# WIRING DIAGRAM (HAND UNIT)

HANDY RF P.C.B. TOP

HANDY RF P.C.B. BOTTOM

