TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
No Power	1. Unit not turned on	1. Turn unit on
	2. Unit not plugged in	2. Plug unit in
	3. No power from wall adaptor	3. Check supply for 16 VAC
Bar graph won't flicker	1. Audio input connection incorrect	1. Re-connect wires
	2. Transceiver not turned on	2. Turn transceiver "ON"
	3. Volume too low from transceiver	3. Turn up volume
	4. Incorrect tuning of transceiver	4. Tune transceiver to signal
No copy on computer	1. Computer not turned on	1. Turn computer on
	2. Program did not load	2. Re-load program
	3. Computer not connected	3. Connect computer
Computer generating RFI	1. Improper shielding of computer	1. Install .01 uf caps to ground on all lines to computer from CP-1 and/ or use shielded cable
		2. Relocate computer
Won't copy CW	1. CP-1 filter not in CW position	1. Select CW filter on CP-1
	2. Incorrect tuning of transceiver	2. Tune for full closure of LED bar graph
	3. Computer program set to incorrect mode	3. Set program to Morse
	4. TTL plug upside down	4. Reverse plug
	5. Excessive band noise	5. Decrease RF gain or AF gain
Won't copy RTTY or ASCII	1. CP-1 filter not in correct position	1. Select proper filter on CP-1 (170 or VAR)
	2. Transceiver in USB mode	2. Switch to LSB
	3. Incorrect tuning of transceiver	3. Tune to full closure on bar graph with little or no flicker
	4. Signal is reversed	4. Change position of normal-reverse switch
	5. Program not set for correct mode or speed	5. Select correct mode or speed in program
	6. TTL plug upside down	6. Reverse plug
Transceiver stuck in key down state while using CW mode on transceiver	1. TTL plug reversed	1. Reverse plug
	2. Improper key line selected	2. Use + key line for transistor-keyed transceiver; use - key line for grid block
Transceiver stuck in TX state while using RTTY	1. Transceiver in VOX mode	1. Turn VOX off
	2. Incorrectly wired mic plug	2. Rewire mic plug
Copy seems to run away while receiving RTTY	1. Noise or interference on channel	1. If possible change antenna
	2. Speed or mode (Baudot, ASCII) incorrect	2. Change mode
	3. Sending station using reversed tones	3. Use normal-reverse switch
No tone out from CP-1	1. AFSK level set too low	1. Adjust AFSK level on rear panel of CP-1
No tone shift	1. RS-232/TTL switch set to incorrect input	1. Select correct I/O mode

ALIGNMENT PROCEDURE

Each CP-1 has been carefully aligned after an elevated temperature oven burn-in and has passed many tests before it leaves the factory. However, many amateurs like to keep their equipment aligned to specifications. The following describes how to tune your CP-1:

Test equipment needed: 1. Oscilloscope;
2. Audio Frequency Generator;
3. Frequency counter;

Filter Adjustment:

1. Connect power to the CP-1 and turn the unit 'on';
2. Set filter switch to '170' position;
3. Set your signal generator to 2125 Hz as indicated on your frequency counter. Connect your signal generator to the 'audio in' jack;
4. Adjust R18 and R39 for maximum signal out of the 'mark out' jack on the back of the CP-1 as measured with your scope;
5. Set the frequency generator to 2295 (as indicated on the frequency counter). Adjust R12 and R34 for maximum signal out of the 'space out' jack;
6. Set filter switch to VAR and turn the 'VAR shift' control full clockwise;
7. Set frequency generator to 3125 Hz, adjust R10 and R18 for maximum signal out of 'space out';
8. Adjust 'VAR Shift' full counter-clockwise;
9. Set frequency generator to 2225 Hz, adjust R8, R31 for maximum signal out of 'space out';

AFSK Adjustment:

1. Set filter switch to '170';
2. On Pin 2 of U14, measure the signal with your frequency counter. It should measure 2125. Adjust R87 to correct frequency output;
3. Ground Pin 2 of the TTL plug on the rear of the CP-1 (make sure the TTL/RS-232 Switch is 'in'). Again on Pin 2 of U14, measure signal with your frequency counter. It should measure 2295. Adjust R89 to correct frequency output.