

CONTROLS

FRONT PANEL

Power. On/off switch. With the switch depressed, the CP-1 will be on and the LED power indicator will light.

Filter. VAR/170/CW — Selects CW or RTTY operation. Use the VAR (variable) shift rotary control when in the VAR position for RTTY shifts at other than 170 Hz. The variable shift control covers frequency shifts between 100 Hz and 1000 Hz. It is used for tuning non-amateur RTTY signals. Normally, when using your CP-1 in the amateur bands, use the 170 position. CW selects a 800Hz center frequency filter.

Normal/Reverse. In the normal position 2125 Hz mark and 2295 Hz space are selected. In reverse, 2295 mark and 2125 space Hz tones are selected. This feature only affects receive. If you select reverse, your transmitted tones will still be 2125 Hz mark and 2295 Hz space. The reverse mode is useful for copying stations that are inadvertently transmitting inverted.

Tune. Magic eye style bar graph indicator for CW and RTTY signal tuning.

VAR Shift. Adjusts RTTY shift of upper frequency tone from 100 Hz to 1000 Hz. This control is only effective when the VAR filter is selected.

STBY/PTT, Manual TX. This control will allow you to manually activate the PTT line of your transceiver, (provided you have hooked up a cable between the mic output of the CP-1 and the mic input of your transceiver). When the switch is in the 'in' position, your transceiver will be in a transmit state.

REAR PANEL

Threshold — Squelch Adjustment. Sets minimum signal level for CP-1 operation. This control only affects RTTY reception. It can be used as an anti-space circuit (so you only get print when you are receiving a RTTY signal). To set the level, tune to a dead air spot on the band and turn the control full clockwise viewing the unit from the back. With the RTTY filter selected on the CP-1, slowly start turning the 'threshold' control counter-clockwise. When garbled copy starts appearing on the screen, turn the control a bit clockwise.

Note: Your volume control should be set at an easy listening point. If you have it set too high or have too much line noise, you may not be able to completely eliminate garbage copy under no-signal conditions.

AFSK Level. Sets the AFSK output level. The level is variable between 0 and 200 mv pp. For transceivers with pre-amplified microphones (such as ICOM), set the control at maximum signal out. The level is preset to 30 mv pp. If more output is required, reduce R116 value, but no lower than 560 ohms.

CONNECTIONS

POWER

The CP-1 requires a 12-16 VAC power source (supplied with unit) capable of supplying 400 ma. The power connector is a 2.1 mm center pin coaxial type.

AUDIO

The audio IN/OUT jacks are 3.5 mm phone jacks and are in parallel in the CP-1. The audio IN (input) jack is used to provide the CP-1 with audio (CW, RTTY) signals from the transceiver. Receiver audio should be taken from the external speaker output of your receiver. Do not draw audio from the headphone, tape out, or phone patch out jacks; because frequently, manufacturers will install some resistance in the leads to cut down audio level or impedance match.

KEY IN

Straight key, or positive keyer input. In the CW mode, this input keys the + and - keying transistor switches. In the RTTY mode, it generates narrow shift AFSK (about 50 Hz) for CW identification in RTTY. It is also useful for Morse sending practice by monitoring your fist on the CRT attached to your computer (providing you have Morse receiving software). This input is only active when the CP-1 is turned on.

SCOPE OUT

The mark and space filter outputs are provided at these connections for tuning RTTY signals with the aid of an X-Y scope.

KEY OUT/ +, -

The + and - keyed outputs are for CW keying of the transmitter. The + key output is for use with transistor (direct) keying. The key output is for use with transmitters using grid block keying. Connect a line from one of these jacks to the key/input on your transceiver. If you do not know whether your rig is + keyed or - keyed, then simply insert the cable into either the + or the - key outputs. If you suddenly hear your side tone go on and stay on, then insert the cable into the opposite key out jack. Remember to place your mode switch on your radio in the CW mode when performing this test.

DEMODO OUT

TTL level low on space tone or CW (0v). High mark tone or lack of signal (5v). This output can also be used to drive a current loop circuit. Appendix A shows a loop keying circuit that will perform the task of driving a current loop. If you wish, you could also purchase the AEA model RS-232-1 option that will perform as an isolated current loop keying circuit.