

- 8) Connect the output from the receiver's squelch noise detector to pin 17. The input to this point should be a D. C. level which shifts low in the presence of a received signal. Most modern solid state receivers operate in this fashion, and the output can typically be taken from one of the D. C. amplifiers immediately following the noise detector. In the event that the particular receiver in use has a large D. C. offset in the unsquelched mode, a zener diode can be substituted for CR4 & CR5 to cancel the offset. For example, if the receiver squelch D.C. voltage is 8 volts squelched and 4 volts unsquelched, a 4 volt zener in place of CR4 & CR5 will level shift the signal down to the 0-4 volt range. In addition, if the sense of the squelch voltage is wrong, (i.e. it goes high with incoming signals), a polarity reversal can be accomplished in the CTC100 by removing Q7 and R14, and jumping the free end of R16 to the base of Q6. R19, on board, is the "COR SENSITIVITY ADJUST" pot.
- 9) Connect pin 14 to the transmitter P.T.T. input. On most modern solid state transmitters, the P.T.T. circuitry is activated by switching the P.T.T. input to ground. If this is the case, and if the required sinking current is no more than 50 MA, pin 14 may be used directly. If high voltage (>25 volts) or high current (>50 MA) switching is required, or if the switching polarity is the opposite of that provided, then a small external relay with an appropriate diode transient suppressor across the coil should be used to indirectly switch the load.
- 10) If an automatic ID'er is employed, connect pin 8 to the ID'er trigger input, and pin 13 to the transmitter hold output of the ID'er. Note that pin 8 is the equivalent of an open collector which switches to ground in the presence of a COR activation, and that pin 13, if held low by the ID'er will hold the transmitter on for the duration of the ID.
- 11) Connect the remote control decoding and/or activating device to pins 19 & 20. Note that a positive going pulse with an amplitude between 60% and 100% of the CTC100 supply voltage is required to trigger these inputs. A positive going pulse on pin 20 will put the repeater transmitter in the "INHIBIT" mode, while a similar pulse on pin 19 will reset the unit to normal operation. (For TTL compatibility on these inputs, the CTC100 should be operated from a 5VDC power supply.)