Meter functions are typically accurate to within ± 1KHz at +10 to +35°C.) Also, for best accuracy on these two functions, the incoming signal should be "full quieting". And, the Deviation Meter should read zero on the received signal when there is no modulation - (this is definitely full quieting).

3.0 ADDITIONAL FUNCTIONS

3.1 In addition to the above functions, the receiver board also includes other outputs which may be used in certain applications. These are as follows:

3.1.1 CTCSS OUTPUT - (Terminal E109/1109) - If it is desired to connect a CTCSS ("PL") tone decoder unit to this receiver, its Tone Input point may be connected to this terminal (through shielded wire). Note that the decoder board's input impedance must be greater than 25K ohms.

3.1.2 COR OUTPUT - (Terminal E107/1107)- This output can be used to trigger a repeater or link transmitter, (via a COR or digital control circuit board). Note that this IC output can only switch high impedance loads. It can "source" (supply) up to 10mA of output current; and it can "sink" (to ground) up to 1mA max. (It cannot directly switch relays, lamps, etc. Interface circuitry, such as transistor switches, must be used if the currents to be switched exceed the above limits. See Figure 2.) The output "High" state voltage is appx. 7 VDC; and the "Low" state voltage is appx. 0.1 VDC. When the Squelch is open, the COR output state will be "Low". When the Squelch is closed, the COR output will be "High".

Note that this COR output will directly interface with the Spec Comm CTC100A COR/Timer/Control board, and its use is highly recommended for this application since it has a very high input impedance (CMOS gate). Simply connect the receiver's COR output terminal (E107/1107) to E323 on the CTC100A board.

3.1.3 9 VDC OUTPUT - (Terminal E114/1114) - This output can be connected to a front panel DC voltmeter which would be used to monitor system voltages. It can also be used to supply regulated 9 VDC to other circuitry. Maximum load current = 25mA.

4.0 CIRCUIT DESCRIPTION

4.1 RECEIVER CIRCUIT DESCRIPTION

4.1.1 The receiver front end consists of an RF Preamplifier stage followed by a second RF Amplifier stage. The transistors used for this application are new, state of the art types which are designed to provide an extremely low noise figure, while simultaneously giving high gain, and an extremely wide dynamic range. Eight "Hi Q" resonators are intermixed before, between, and after the two RF transistors. These tuned circuits provide extremely good rejection of strong out of band signals - which could otherwise overload the front end. Shield partitions are used between each tuned circuit in order to obtain optimum skirt selectivity characteristics. The output of