(3) Capacitance values are indicated in micro farads unless otherwise noted. (uf = Microfarad)

ABOUT THE HR2510

The 2510 has two main circuit boards. One is the PB121AB. This board contains a 5 volt regulator, an 8 volt regulator, and the microprocessor. The microporcessor is the UC1170 DIP (Dual In-line Package) chip and it controls the bandwidths, channels, frequency, redouts, etc. In effect, it controls the whole radio. The PB121BA also contains the PLL0305A, a serial PLL, which is fed directly by the microprocessor thus avoiding the pin jumping needed in older radios. Modification is performed by programming the pins on the microprocessor, allowing you to obtain the extra bandwidths you want. Two S042P mixer chips are also on this board. These are the same chips used on the 148GTL. They do the mixing in the VCO (Voltage Control Oscillator) and they make the VCO very stable.

The other main board, which is controlled by the microprocessor, is the PB111AB. The MR477 final, the 2166 driver and the AN612 balance modulator are located on this board. It also contains the complete audio, receive and transmit circuitry. The audio IC chip is a TDA1905, a full 7 watt IC DIP chip that is being used on all new Uniden radios, including scanners. It is somewhat unusual in that it is a 14-in chip rather than a flat pack, but it must work very well because Uniden has been using it for some time. The receive uses a 455KHzIF (Intermediate Frequency) which gives you a crystal filter for reception. The resulting narrower bandwidth causes better rejection and helps prevent bleedover. The AMC (Automatic Modulation Control) is handled by VR114. VR104 handles ALC (Automatic Level Control). When increased to max, it can develope 25 to 30 watts at peak. The AM powerr control is VR103.

The radio also contains several other smaller circuit boards that perform specific functions. The PB119A is the FM detector board and enables the radio to receive Frequency Modulation (FM).

The PB117M is the noise blanker and AM detector board and it allows operation on the AM band. There are different boards because this is a basic Uniden chassis. It can be configured easily to suit any customers needs, such as the Realistic HTX100. (It has no LSB or AM.) To get the configuration desired, the appropriate board is plugged in and soldered into place.

The PB100AB is the collector current adjustment board. This board allows for the easy measurement and adjustment of the final transistors bias current.You can pull the board and put a current meter between each of the pins to set up the bias on the finals.

The PB118AA SWR board has the SWR meter circuitry on it. Information is sampled by this board and sent to the microprocessor. This board determines what you see on the front of the radio.

The PB112 is the digital readout board. It has a IR2429 IC chip on it which is the driver for the LCD display. It takes information from the microprocessor and feeds it to the display.

Those are the most important boards in the radio. There are several other subboards in the front of radio for volume control, modulation selector switches and the like.

HR2510 POWER MIKE MOD'S

HR2510 MIKE WIRING

PIN 1 White Audio

PIN 2 Red and Shield

PIN 3 Blue

PIN 4 Not used

PIN 5 Not used

Take off the speaker side of the case and expose the back of the speaker, you will see the speaker wires going from the speaker to the PC board of the radio. They are marked on the speaker as plus (+) and minus (-) FROM THE PC BOARD.