

## Reader Calibration

Figure 2.0 shows the Reader Test Utility which is used to calibrate the power and squelch levels of the Reader. For each antenna port, there are 30 configurable squelch levels. Each squelch level can have a value of 0 to 1023. Each of these values will result in a squelch level that will have a 30 dB range and can be set for a minimum level of -65 dB. Each value is determined during calibration, and the set squelch table command is used to store the squelch levels into non volatile memory in the Reader.

Each power level can have a value of 0 to 15. Each of these values will result in a power level that will have a 10 dB range and can be set between 100mW to 1 Watt. Each value is determined during calibration, and the set power table command is used to store the power levels into non volatile memory in the Reader.

The screenshot displays the 'Reader Test Utility' window. It is divided into three main sections: 'Squelch Table Settings', 'Power Table Settings', and 'Configuration Settings'.

**Squelch Table Settings:** This section contains a table with 17 columns (numbered 1 to 17) and 4 rows (Antenna 1 to Antenna 4). Each cell in the table contains the value '0'. To the left of the table are five buttons: 'Increment', 'Decrement', 'Set Value', 'Set Table', and 'Get Table'.

**Power Table Settings:** This section contains a table with 10 columns (numbered 1 to 10) and 4 rows (Antenna 1 to Antenna 4). Each cell in the table contains the value '0'. To the left of the table are five buttons: 'Increment', 'Decrement', 'Set Value', 'Set Table', and 'Get Table'.

**Configuration Settings:** This section contains three sub-sections: 'Antenna Pattern', 'Squelch Table Indexes', and 'Power Table Indexes'. Each sub-section has a list of antenna ports (Antenna 1 to Antenna 7 for Antenna Pattern, and Antenna 1 to Antenna 3 for the others) with a value of '0' next to each. Below these sub-sections is a 'Set Configuration' button.

At the bottom right of the window, the following text is displayed: 'Base = Base 10, Comm Port = COM2, Baud Rate = 115200 baud'.

**Figure 1-Reader Calibration using Reader Test Utility**

## Reader Maximum Transmit Output Power Adjustment

Potentiometer R14 is to be used only by a qualified technician to adjust the transmit output power output level of the Reader. Clockwise rotation of the potentiometer adjustment screw decreases the transmit power level output; counterclockwise rotation increases the transmit power level output. The power level is set for a maximum output of 1 watt out of the Reader Antenna Port with zero power attenuation selected.

