MIMOMAX TORNADO TRANSMITTER TUNE-UP PROCEDURE

1.1 OVERVIEW

All power calibration is done at maximum average output power of +24dBm. This is calibrated at manufacture to within +/-0.2dB.

Power is not required to be calibrated for changing to a lower power level as this algorithmically derived from the maximum power calibration.

The settable power range is 0 to +24dBm in 0.5dB steps. The tolerance of power across the settable range is defined by the tolerance of the power calibration at maximum. As such a +/-0.2dB tolerance at maximum power calibration will dictate a +/-0.2dB tolerance at any set power within 0 to +24dBm.

1.2 EQUIPMENT REQUIRED: POWER METER

For accurate measurement of average power from MiMOMax transmitters a thermistor bolometer type of power meter (e.g. HP435A or similar) is required. Other types of power meter may give inaccurate average power readings when used with MiMOMax transmitters, and may be suitable only for relative power measurement.

1.3 POWER CALIBRATION

Figure 1 shows the Tx Power Calibration page in the "Configuration and Control Monitoring System" (CCMS). The calibration method is easy to follow using the instruction panel on the right of the screen. In summary:-

- Read the power value and enter it into the Tx1 Measured Power text box
- Press Calibrate
- Once Tx1 is calibrated buttons will appear that allow you to re-calibrate Tx1. This is a good method of checking that the original calibration is accurate as the Tx will key up and allow you to measure the power. In addition a next button will appear that will allow you to calibrate channel 2 power. **Ensure** that your power meter is connected to channel 2 before selecting 'Next'.
- On calibrating Tx2 and selecting 'Done' this will cause CCMS to exit the calibration menu and remove associated warnings.

Figure 1: Tx Power Calibration

1.4 POWER SETTING

The output power level can be set on the RF Tx and Rx page. Its range is between +0 to +24 dBm in 0.5dB steps. The power can be specified in either dBm or mW, by selecting either dBm or mW as the transmitter power unit.

The power cannot be set beyond a maximum of +24dBm (250mW) or below 0dBm (1mW).

Figure 2 Transmitter Power Setting