

Introduction

The MT-AIO v4 is a new and upgraded version of the older generation of MT-AIO's. It is smaller, lighter, and more powerful than previous versions, and is designed to take advantage of newer battery technologies, i.e., 18650 LiPo batteries that are a significant improvement over the previously utilized AA batteries.

Battery Selection

The MT-AIO does not include batteries or battery chargers, and batteries must be charged in an external charger. Chargers and batteries should be selected with your applications in mind. For ordinary use, we suggest using "Protected" 18650 LiPo batteries, which are typically the safest types of cell. Ordinarily, these will produce about 10 Watts output, with a five day operational period, with two minute transmission intervals. This of course will vary with various factors, and actual performance characteristics of your batteries.

Batteries for high performance applications

Certain user applications may require higher power and longer operational periods. The MT-AIO will operate with significantly greater output power (Up to 20 Watts depending on the specific batteries) when using Unprotected LiPo 18650 batteries. Note that these batteries do not have internal protection circuitry to protect against short circuits or other battery catastrophes, and you must choose and select these batteries with great care.

Programming

This generation of MT-AIO transmitters are designed to be programmed using a Byonics USB-to-DB-9 Cable (Model TT-USB) and a programming header adapter designed to be plugged into four holes on the MT-AIO, located just under the LED's on the board. This arrangement allows the logic portions of the AIO to be powered from the USB cable. You need not, and should not, turn on the power switch while programming, as the high power RF that this unit generates can interfere with programming and even shut off your computer's USB Ports. The four header holes have a square pad on the pad furthest to the right. This is the Negative pad. The header programming adapter has its polarity marked on the PCB, and the '-' connection should be mated to the square hole. The weight of the adapter and the USB cable will provide for an adequate connection during



infrequent programming. Note that the current generation of configuration software is backwards compatible with older AIO's and current AIO's. However, the firmware loaded on MT-AIO v4.3 is unique to this version, and older AIO versions will not work. The current firmware version is MT-Omega v1.48T. (Instructions for reloading the firmware are in a separate document)

