



The Guildenstern Mini (DMX interface)

Trinculo's Attic Spec Sheet

The Trinculo's Attic Guildenstern Mini is a small form-factor board designed to allow miniature Arduino controllers and other devices that use the FTDI serial connector to interface with DMX signals.

The Guildenstern Mini is a half-duplex device: you can either receive DMX (RX) or send DMX (TX), but you cannot do both. There is a physical switch on the device that changes between transmitting and receiving.

Characteristics

Size: 1.75" x 0.70" x 0.25"

Connectors:

- (1) 6-pin female FTDI connector
- (1) 3-pin screw terminal OR (1) RJ-45 modular connector

User Interface:

- (1) RX/TX switch
- (3) solder jumpers to select resistors

Power

The Guildenstern Mini DMX is powered by the Arduino it is attached to. It is compatible with 3v-5.5v Arduinos.

In Default mode:

Data Direction and Termination

The onboard switch allows you to switch between transmitting DMX (TX) and receiving DMX (RX). When in TX mode, the on-board 120-ohm resistor is connected across the data lines, providing the head-end termination.

A bias network is also available on the board. This will drive the data lines to VCC and GND when no data is being transmitted. This is not required, and by default is not enabled. To enable, close the solder jumpers adjacent to the 1k resistors with solder.

When in RX mode, the termination resistor is normally disconnected. To connect it, close the solder jumper with a dot of solder.

To open the solder jumpers, use solder wick to remove the dot of solder.

Data Connections

The Guildenstern Mini DMX has two options for wiring:

A 3-position screw terminal allows for the direct connection of wiring or the attachment of various XLR connectors.

An RJ45 connector for modular jacks is also available. ESTA's DMX-512 standards permit the use of Cat5 wiring with modular connectors for the transport of DMX data. This will not work with an Ethernet-based protocol like ACN or ArtNet. The RJ45 jack follows ESTA's recommended pin out, so you can use existing RJ45 DMX adapters.

Accessories

The Guildenstern Mini DMX is itself an accessory, allowing DMX control of the following devices:

- Trinculo's Attic Lady M (phone ringer)
- Trinculo's Attic Caliban (servo controller)
- Arduino Fio
- Arduino Pro Mini (3.3v or 5v)
- Arduino LilyPad