



INDUSTRIAL CONTROL COMMUNICATIONS, INC.

DMX-512 Slave Driver Manual



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1 DMX-512 Slave

1.1 Overview

This driver supports the DMX-512 slave protocol, which allows any connected non-DMX equipment to receive data from a universal DMX controller device. Some notes of interest are:

- Fully configurable to occupy any number of sequential DMX channels.
- Capable of using all 512 DMX channels.
- Simple configuration consisting of channel-to-database address assignments.
- Supports timeout feature to automatically set channel values to a known failsafe state.

1.2 Connections

This section describes the typical connections used for a Millennium Series gateway.

While there are a variety of different DMX-512 connector types in existence, most standard DMX-512 connectors use either XLR 5-pin or 3-pin connectors (refer to Figure 1 and Figure 2). A female connector is fitted to a transmitter device (e.g. a console,) while a male connector is fitted to a receiver device (e.g. a dimmer or servo).



Figure 1: 5-Pin XLR Connector



Figure 2: 3-Pin XLR Connectors

An appropriate wiring harness must be used when connecting the DMX-512 network to the gateway's RS-485 port. This can be accomplished by using off-the-shelf DMX-512 cabling with bare-wire terminations on one end, or by simply cutting a standard DMX-512 cable in half and stripping back the wires. Refer to Table 1 for an overview of DMX-512 pin assignments and connections.

Table 1: DMX-512 Pin Assignments

Pin	Usage	Gateway Connection
1	Network GND reference	GND
2	Primary data-	B & Z
3	Primary data+	A & Y
4	Optional secondary data- (not available on 3-pin connectors)	N/A
5	Optional secondary data+ (not available on 3-pin connectors)	N/A

1.3 Slave Settings

Baud Rate

Fixed at 250kbaud.

Parity

Fixed at No Parity (2 Stop Bit).

Timeout Time

Defines the maximum number of milliseconds for a break in network communications before a timeout event will be triggered. To disable timeout processing, set this field to 0.

1.4 Node Settings

Address

Defines the DMX channel number start address (1...512) for this node.

1.5 Data Settings

Database Start Address

Defines the location in the database where the channels will be mapped, starting with the channel defined by the node's "Address" field setting. The DMX-512 Slave configuration consists of assigning database bytes to channel numbers that the device will occupy in the DMX universe. Each byte in the database corresponds to one channel in the DMX packet.

Number of Channels

Defines the number of consecutive channels (1...512) to map into the database.



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