

DMX512 DISTRIBUTION FOR THE NEXT GENERATION GODDARD DESIGN'S DMX HUB5

Goddard Design's Hub5 is the splitter for today's DMX512. It is designed to provide flexible, reliable signal distribution for systems using E1.11 (DMX512-A) and E1.27 (RDM). While it is a truism that RDM systems that use splitters must use splitters designed for that standard, many RDM splitters will have very little to offer for a system that only runs plain DMX512. The Hub5 provides a feature set unmatched by any other DMX or DMX/RDM splitter.

RDM was designed to be compatible with standard compliant legacy DMX512 equipment, however there is a lot of legacy equipment whose standard compliance is less complete. The Hub5 is designed to allow mixed systems even when some of the equipment may not be fully DMX512 compliant.

A Hub5 can also solve thorny problems found in pure DMX512 systems. Hopefully you won't need all the Hub5's features every day but it's a great insurance policy at a very reasonable price.

Physical / Electrical:

- The **Hub5** comes with 5 RDM-ready outputs, and 1 input with a passive loop-thru. It is packaged in a 19" 1U rackmount chassis. It supports the new preferred topology of isolated inputs and grounded DMX512-A outputs. One output port may optionally be configured as fully isolated to drive problem legacy equipment. All ports are fully bi-directional and fully protected to 60 volts.
- The five output ports support the RDM termination requirements. This termination may be selectively removed by on board programming jumpers.
- It is powered by a universal switching power supply for 100-250 VAC 50-60Hz.
- High speed programmable logic handles all RDM switching for minimal, predictable delays

RDM features:

- It meets the requirements as a 'transparent in-line device' (section 4 of E1.20) The factory defaults will handle most standard systems, whether plain DMX or RDM. Just plug and play.
- The Hub echos all RDM response messages on all ports. Under the standard sending the responses to all branches is optional. GDC feels that including this optional feature is important for systems that wish to achieve the full power of RDM.
- The Hub5 includes sophisticated jabber detection. If an RDM device on one port attempts to hijack the system the Hub will quickly quarantine that port, limiting how many responders are affected. Even when a port is quarantined the Hub attempts to send standard DMX data to that port. Quarantined ports are retested, and will have RDM reenabled when the problem is cleared. User may manually quarantine any port.



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- The Hub5 is fully discoverable. It can be monitored via RDM. Configuration is done directly from the back panel. Configuration data can be read out via E1.11(DMX512-A) text packets.
- If your system contains older legacy equipment that does not tolerate the use of alternate start codes, any port on the Hub5 can be configured to send only Null START Code packets. We call this type of port a 'Clean Port'.
- Supports a unique 'Full Hub' mode in which any port may serve as the controller port (input port)

Features useful in both DMX and RDM systems:

- ◆ In the event of DMX failure the Hub5 can automatically continue sending the last packet received to all ports set as 'Clean Ports' .
- ◆ If your system contains equipment that is a bit fussy about the flavor of DMX that it will respond to, the HUB5 can re-time the DMX to either of two relaxed flavors. To be re-timed the port must be set to be a 'Clean Port'.

Feature for DMX only systems:

- ◆ Splitters are often used in large DMX systems with long cable runs. Splitters are often placed at the end of these runs. Here they not only allow star topologies but they eliminate ground loops and restore the signal level. Further they correct some of the wave form issues caused by long cable runs. However, they cannot restore the signal timing. Cascading conventional splitters will provide less and less benefit.

A Hub5 is no conventional splitter. Any port can be set to re-time DMX512 signals restoring all timing back to correct DMX values. As long as the runs between Hub5 units are kept to some reasonable length (say 1200') Hub5s will allow DMX systems of any length to be constructed. Unfortunately RDM signals are not re-timed and RDM systems should be limited to a total of about 1200 -1500 feet from the controller to the furthest receiver.

The RDM standard - Status as January 26, 2006

The draft standard BSR E1.20, Entertainment Technology has been accepted by the ESTA Control Protocols Working Group. It has been approved by the Technical Standards Committee and the ESTA board. It will soon be sent to ANSI, at which point it is hopefully just a matter of time until it issues as an American National Standard.

Hub5 hardware is complete - units are shipping now. The software supports the draft as it is at this moment. Goddard Design will update all Hub5s free for one year.

FD HUB5 Professional Net Price \$925.00

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