

Standard DMX Cabling

As outlined in the ANSI E1.27-2 Standard:

Standard RS485 Cabling (using Belden, Proplex, etc.)	
5-Pin XLR Pin	Conductor
1	Shield
2	Data - (Pair 1 Complement)
3	Data + (Pair 1 True)
4	Optional Data - (Pair 2 Complement)
5	Optional Data + (Pair 2 True)

Notes:

- Interactive Technologies' products do not use the "Optional Data Pair", therefore, Pins 4 & 5 do not need to be connected.
- Recommended cable types include Belden 9842 or TMB Proplex PC224T.
- Even though the ANSI Standard describes 5-Pin XLRs being used for DMX cables, many manufacturers use 3-Pin XLRs or terminal blocks for discrete wiring.
- Even though the theoretical limit for DMX cable length is slightly longer than 3000 feet, we recommend limiting cable runs to 1500 feet for a reasonable safety margin.

Category (RJ45) DMX Cabling

Also outlined in the ANSI E1.27-2 Standard, but for use only in permanent installations where these connections would only be accessible to qualified, authorized users and if the connections are available on a patch panel, they would be installed in controlled access areas.

CAT5, CAT5e, CAT6 Cabling (using RJ45 connectors)		
Conductor	Function	Corresponding XLR Pin
1 - White/Orange	Data + (Pair 1 True)	3
2 - Orange	Data - (Pair 1 Complement)	2
3 - White/Green	Optional Data + (Pair 2 True)	5
4 - Blue	Unused (Do not connect)	-
5 - White/Blue	Unused (Do not connect)	-
6 - Green	Optional Data - (Pair 2 Complement)	4
7 - White/Brown	Data Common	1
8 - Brown	Data Common	1

Notes:

- Interactive Technologies' products do not use the "Optional Data Pair", therefore, conductors 3 & 6 (Green Pair) do not need to be connected.
- This chart describes the "standard" cabling practice as defined by the ANSI standard. Some equipment uses different pinouts, such as equipment by Color Kinetics.
- The Category wiring chart is for DMX512 signals only and **NOT DMX-over-Ethernet cabling**. **Please use care not to accidentally connect or mix Ethernet or Telephone devices and DMX devices that may be using RJ45 Jacks and/or Category cabling.** Equipment damage or personal injury could result in mixing DMX and Ethernet/Telephone devices due to potentially high voltages present on these lines.