One DMX link of 512 channels is defined as a universe; typical theatrical control consoles have multiple universe outputs. Each Level has 256 steps divided over a range of 0(zero) to 100 percent.

The DMX 512 follows the RS-485 standard (similar to QS digital link).

Since 1998 the Entertainment Services and Technology Association (ESTA) started a permanent revision process to develop the standard as an ANSI standard. The resulting revised standard, known officially as 'Entertainment Technology—USITT DMX512-A; 'Asynchronous Serial Digital Data Transmission Standard' for Controlling Lighting Equipment and Accessories, was approved by the American National Standards Institute (ANSI). It was revised recently and now is the current standard known as 'E1.11 - 2008, USITT DMX512-A', or just 'DMX512-A'.

Connectors
DMX512 1990 specifies that where connectors are used, the data link shall use fivepin XLR style electrical connectors (XLR-5), with female connectors used on transmitting (OUT) ports and male connectors on receiving ports.

The use of a 3-pin XLR connector is specifically prohibited.

DMX512-A (ANSI E1.11-2008) allows the use of eight-pin modular (8P8C, or 'RJ-45') connectors for fixed installations where regular plugging and unplugging of equipment is not required.

XLR-5 pinout
1. Signal Common
2. Data 1- (Primary Data Link)
3. Data 1+ (Primary Data Link)
4. Data 2- (Optional Secondary Data Link)
5. Data 2+ (Optional Secondary Data Link)

XLR-3 pinout
1. Ground
2. Data 1- (Primary Data Link)
3. Data 1+ (Primary Data Link)

NOTE 1 This connector is prohibited by ANSI - E1.11 standard; DMX+ and DMX- are often swapped.

RJ-45 pinout
1. Data 1+
2. Data 1-
3. Data 2+
4. Not Assigned
5. Not Assigned
6. Data 2-
7. Signal Common (0 V) for Data 1
8. Signal Common (0 V) for Data 2

NOTE 2 The 8P8C modular connector pinout matches the conductor pairing scheme used by Category 5 (Cat5) twisted pair patch cables. The avoidance of pins 4 and 5 helps to prevent equipment damage, if the cabling is accidentally plugged into a single-line public switched telephone network phone **2.3.3 DMX 512 or now DMX**