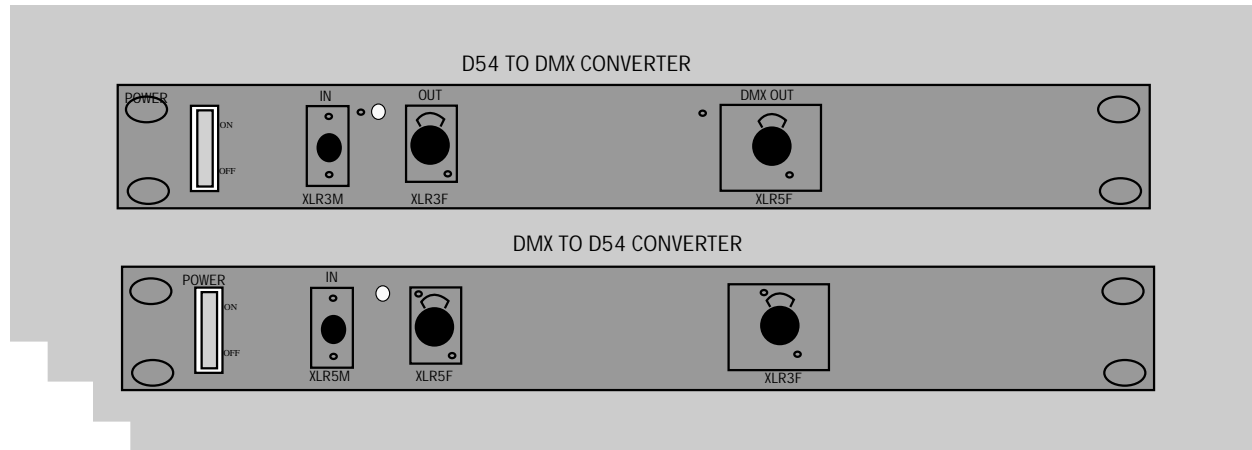


D54 to DMX/DMX to D54 Converters

Housed in a 1U high, 19" rack mounting case these units are available in two basic versions, either D54/DMX which will convert 384 channels of Strand D54 protocol to DMX-512 (1990) data or DMX/D54 which will convert the first 384 channels of a DMX-512 signal to D54 output.

Connectors are 3-pin XLR for D54 and 5-pin XLR for DMX, inputs are provided with a Loop through socket to enable other receiving devices to be fed with data, an LED is provided to indicate that data is present on the input. A fused IEC socket is fitted on the rear panel for mains inlet and the unit is supplied complete with an IEC cable with moulded 13A plug top.

Applications include running DMX colour scrollers or moving lights from a desk with D54 output, driving D54 input dimmers from a DMX output lighting console and driving DMX input dimmers from a D54 output lighting console. Any combination of both DMX and D54 receiving units may be utilised with a single output source control system.



TECHNICAL DATA

The Byte length of DMX is 44uS whereas the byte length of D54 is 70uS it is therefore inevitable that there is going to be a delay in the data transfer as the processor has to wait until it has received all the data before translating it. This delay is dependant on the number of channels being converted, but when converting all 384 channels would not be more than 0.05 second. The DMX/D54 unit utilises an 80C31-16MHz processor and the D54/DMX an 80C196-12MHz processor.

There is no need for error correction when converting DMX to D54 as the signal is digital. As D54 is an analogue signal, when converting from D54 to DMX a Hyst process is used on the input data sample to prevent noise from corrupting the signal. The Hyst length is normally 5 bits but if pins 4 and 5 of the DMX output connector are shorted together this length is increased to 10 bits.

The DMX/D54 converter always outputs the full 384 channels of data, regardless of how many channels are being received. As the length of each byte is 70uS the refresh rate is 384 times this i.e. 27mS. The D54/DMX converter only outputs as many channels as are input and although the byte length of the DMX output is 44uS the byte length of the D54 input will be 70uS and this will therefore govern the refresh rate of the output. Thus if 120 channels are being received on the input the refresh rate of the output will be $120 \times 70\mu\text{S} = 9\text{mS}$.

The built-in power supply unit provides +5 volts and +/-15 volts and power consumption from the mains supply is 0.5 amps

DIMENSIONS - 1U high (44mm) 19" wide (483mm) 224mm deep

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