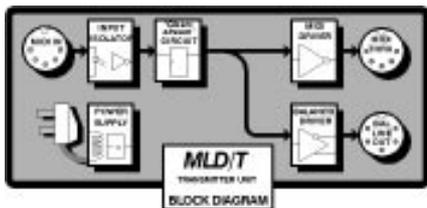


PHILIP REES MLD MIDI LINE DRIVER

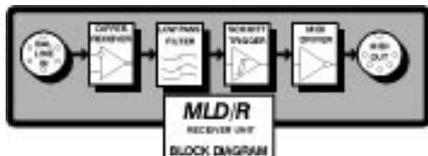
Phil Rees Music Tech +44 (0) 1903 691160
<http://www.philrees.co.uk>



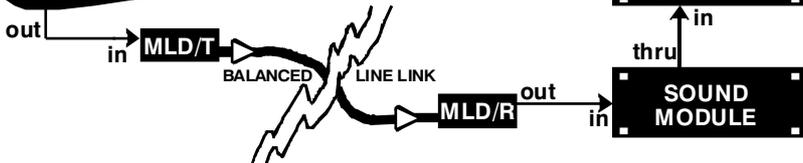
The **MLD** system overcomes the distance restriction (officially 15 metres maximum) of the standard MIDI hardware. It converts the MIDI signal to a differential (balanced) format and back again. This allows the signal to traverse up to a kilometre with quality screened twisted pair (STP) cable. Unscreened cable can also be used.



The **MLD** system consists of a pair of units. **MLD/T** is a transmitter unit with a built-in mains power supply and integral mains lead fitted with a plug. A POWER lamp indicates that the **MLD/T** is powered-up. A DATA lamp flashes clearly to indicate that that MIDI data is passing through.



The **MLD/R** receiver unit is phantom-powered over the line. The case of each unit are 109mm x 55mm x 40mm. The connection to the line cable is via 240 degree 5 pin DIN plugs, which are supplied.



Technical refinements

MIDI-thru chains can distort the MIDI waveforms. So that the line driver might receive a clean signal, the **MLD/T** unit includes our fast, high-precision "Cleanstream" waveform restitution. This processing is applied to the MIDI-thru output and the line output. Because this processing ensures that the duty cycle of the waveform is perfect, it also helps to make sure that the **MLD** system can convey a signal over the full specified distance. The "Cleanstream" has a 250ns sample period, so it is many times more discriminating than ordinary serial interfaces.

In the receiver unit, a low pass filter followed by hysteresis provide amazingly reliable performance, even in electrically noisy environments. Hysteresis is the method where the threshold level of a signal detector changes depending on the previous state of the signal; it is employed to enhance noise immunity.

Many applications

In live performance situations, the **MLD** can allow on-stage MIDI gear to be controlled from the desk. Alternatively, the **MLD** can transmit performance data back to modules located at the desk end.

MIDI-based systems installed in theatres may require the ability to get MIDI data down long cable runs reliably. The **MLD** system can do this.

In recording studios, particularly with remote control rooms, an **MLD** system can be permanently installed. They can also be used on an ad hoc basis, with the **MLD/T** employed rather like a DI box.

MTR BIDIRECTIONAL MIDI LINE DRIVER

Two-way communication

The **MTR** MIDI Line Transmitter/Receiver offers full duplex solution for MIDI communication over cable runs of up to 150m. It does not feature waveform restitution.

MTR consists of a pair of units, each of which is a dinky 109mm x 55mm x 40mm. The cable link between the two units is made via four or five conductors, two screened twisted pairs would be ideal. The connections to the line cable are via 240 degree 5 pin DIN plugs, which are supplied.

Mains-powered master

One unit is the mains-powered master transceiver. It has MIDI In, MIDI Out and Line connectors plus a captive mains lead supplied with a plug. There is an indicator to let you know that the unit is powered-up.



Phantom powered slave

The second unit is the remote slave transceiver. This derives its power from the line. It has MIDI In, MIDI Out and Line connectors.

Applications

Remember, the **MTR** is particularly useful where no mains power is conveniently available at the remote end of the line.

In live music applications, the **MTR** can allow interaction between MIDI equipment on the stage and at the desk. The **MTR** can work down multicore and has many uses in live sequencing and automation.

MIDI-based show control systems may be installed in theatres. For example, MIDI may be used to control lighting or to transfer triggers from the stage to automatically cue sound effects. These situations require the ability to get MIDI data down long cable runs.

In recording studios, particularly with remotely located control rooms, an **MTR** system can be part of the permanent installation. They can also be used on an ad hoc basis, with the remote unit employed rather like a DI box.