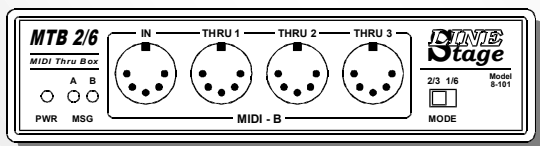


MTB 2/6

MIDI

Thru Box

Model 8-101
ver. 2.0



INSTALLATION MANUAL USER'S GUIDE





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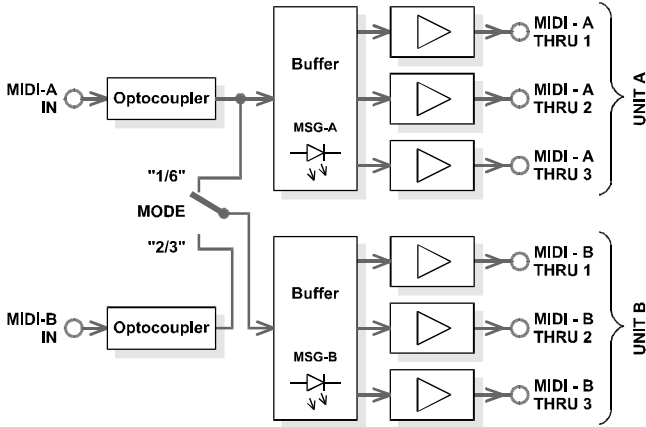
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1. DEVICE DESCRIPTION

Thru Box allows to connect more MIDI receivers to one MIDI transmitter (sequencer, master keyboard, synthesizer) in parallel manner. MTB 2/6 can process MIDI data in two independent ways – it includes two independent MIDI inputs and two triads of MIDI outputs (“Thru”). Method of interconnection between inputs and outputs is given by working mode selection.

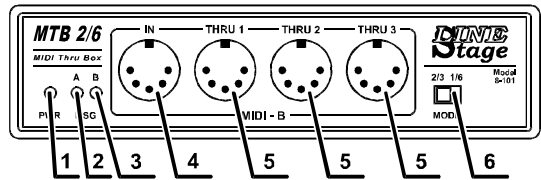
Pic. 1 – Device function



Block diagram of MTB 2/6 function shows picture 1. The device is designed so that delay of transiting data is minimal. High transfer speed optocouplers are on input and all outputs are equipped with powerful buffers. This ensures minimal distortion and transit delay of data, even if lower-quality or very long interconnecting MIDI cables are used.

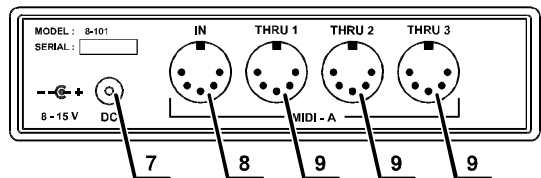
Pic. 2 – Controllers and indicators

Front panel



1. Power-on indicator
2. Indication of data on MIDI-THRU-A outputs
3. Indication of data on MIDI-THRU-B outputs
4. Data input MIDI-IN-A
5. Data outputs MIDI-THRU-A
6. Operation mode selector
7. Supply voltage input
8. Data input MIDI-IN-B
9. Data outputs MIDI-THRU-B

Rear panel





1.1. CONTROLLERS, INDICATORS AND CONNECTORS

Input and output connectors are placed on both panels of the device. Operation mode selector and three LED indicators. Placement and names of connectors and controllers shows picture 2.

1.2. USAGE

Typical usage of MTB 2/6 shows pic. 4. Master keyboard is shown as MIDI transmitter but any other source of MIDI data can be connected – guitar converter, sequencer, PC etc. Similarly, sound expanders are shown as MIDI receivers but any other MIDI devices can be used (sequencers, light controllers etc.).

2. INSTALLATION OF DEVICE

2.1. CONNECTION TO MIDI SYSTEM

MTB 2/6 is connected to MIDI buses with standard MIDI cables with DIN 41524 (5 pins, 180°) connectors. MTB 2/6 includes eight that connectors. Input MIDI-IN [8] and three outputs MIDI-THRU [9] of signal way "A" are on rear panel, input MIDI-IN [4] and three outputs MIDI-THRU [5] of signal way "B" are on front panel of MTB 2/6.

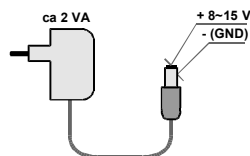
2.2. CONNECTION TO POWER SUPPLY ADAPTER

Device is powered from external DC power supply (e.g. power network adapter) connected to the DC [7] connector. Connector is of standard design (diameter of central pin is 2.1 mm). External DC adapter must be able to continuously supply current at least 100 mA, allowed range of power supply voltage is 8 to 15 volts.

The connector of adapter must have + polarity on middle pin and – polarity on jacket (see pic. 3). The polarity of power supply connector is graphically illustrated on rear panel of the device. MTB 2/6 has built-in protection against supply voltage polarity reversal. The device does not work in such case, but it will not be damaged.

We recommend using of MW-0903SG power supply adapter.

Pic. 3 – Supply adapter



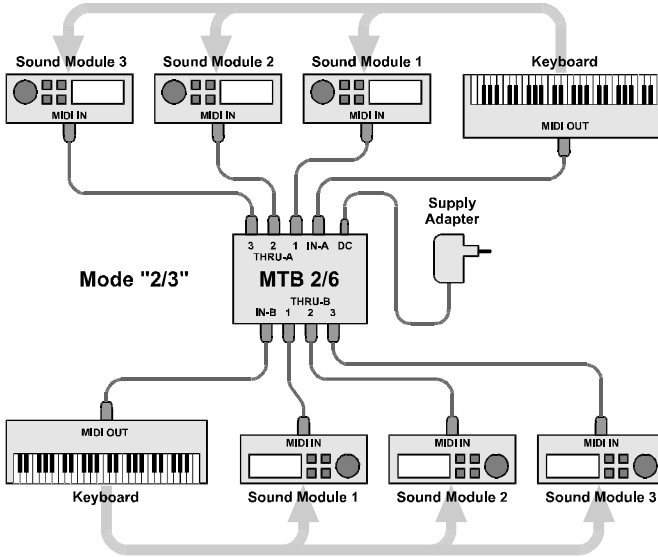
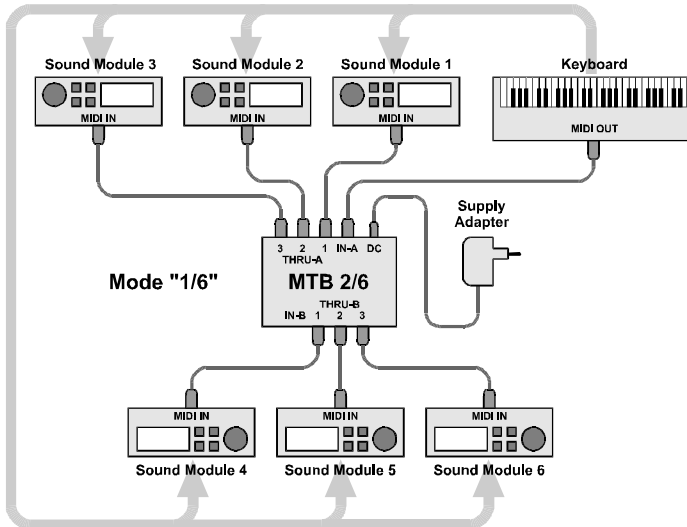
3. ATTENDANCE OF DEVICE

3.1. WORKING MODE SELECTION

Two-position switch MODE [6] on front panel of device selects operating mode of MTB 2/6.

In left position (mode "2/3") of MODE [6] switch, MTB 2/6 works as two independent thru boxes (see pic. 4a). In this case, MIDI data are processed in two independent ways "A" and "B". Thru Box "A" uses connector IN-A [8] as MIDI input and connectors THRU-A [9] as MIDI outputs. Thru Box "B" uses connector IN-B [4] as MIDI input and connectors THRU-B [5] as MIDI outputs.

In right position (mode "1/6") of MODE [6] switch, both signal way are joined and MTB 2/6 works as one thru box with one input and six outputs (see pic. 4b). In this case, connector IN-A [8] is used as MIDI input and six connectors THRU-A [9] and THRU-B [5] are used as MIDI outputs. Connector IN-B [4] is internally disconnected in "1/6" mode.

Pic. 4a – Two independent Thru Boxes**Pic. 4b – One Thru Box with six outputs**



3.2. OPERATING STATUS INDICATION

Three LED indicators are on front panel of MTB 2/6. Attendants are continuously informed about current state of the device during operation by these LEDs.

3.2.1. POWER ON INDICATOR

Red LED PWR [1] lights constantly while power supply adapter is connected to the device. It indicates power-on state and serviceability of the device. If this LED is not on after connecting power supply adapter, the adapter is probably malfunctioning or some fatal error occurred in MTB 2/6.

3.2.2. INDICATION OF MIDI OUTPUTS ACTIVITY

Green LED MSG-A [2] indicates activity of outputs MIDI-OUT-A [9] (i.e. fact that there are currently data being transferred through outputs of signal way "A"). Green LED MSG-A [2] blinks shortly always during transition of MIDI byte. Individual blinks can blend in case of dense flow of data (more often than approx. every 100 ms), so LED can be continuously on.

Green LED MSG-B [3] works in the same manner for signal way "B".

In operating mode "1/6" (if both signal ways are linked to one), both LEDs MSG-A [2] and MSG-B [3] blink or light identically.



4. TECHNICAL SPECIFICATION

Supply voltage :	DC 8 V to 15 V
Consumption :	100 mA max
Protection :	against reversal supply voltage
Ext power supply connector :	standard, 6 / 2,1 mm
MIDI connectors :	8x DIN 41524 (5 pins / 180°)
Transit data delay :	0,005 ms max
Dimensions :	140 mm (width) x 35 mm (height) x 105 mm (depth)
Weight :	approx. 200 g
Electrical design :	under the regulations of the ČSN EN 60335-1+A55, ČSN EN 60335-2-45
EMC :	under the regulations of the ČSN EN 55014
Operating environment :	standard
Range of operating temperature :	+10 to +35 °C
Relative environmental humidity :	up to 85 % r.h.
Accessories :	operation manual
Recommended accessories :	power supply adapter MW-0903GS (not included)

5. WARRANTY CONDITIONS

The equipment is provided with **thirty-month warranty** starting from the date of the equipment take-over by the customer. This date must be specified on warranty list together with dealer's confirmation.

During this period of time, all defects of equipment or its accessories, caused by defective material or faulty manufacturing, will be removed free of charge.

Warranty repair is asserted by the customer against the dealer.

Warranty period is to be extended for the time period, during which the product was under the warranty repair.

The relevant legal regulations take effect in case of cancellation of purchase contract.

The customer will lose the right for free warranty repair, if he will not be able to submit properly filled out warranty list or if the defects of the product had been caused by:

- unavoidable event (natural disaster),
- connecting the device to the incorrect supply voltage,
- inputs or outputs overloading by connecting the signals source or load source with not-corresponding characteristics etc.,
- faulty equipment operation, which is at variance with the instructions referred-to in the operating manual,
- mechanical damage caused by consumer during transportation or usage of equipment,
- unprofessional interference with the equipment or by equipment modification without manufacturer's approval.

