



## **MTA-64**

MADI-TP Adapter for  
DiGiCo/Soundcraft/Studer/Harman

User's Manual

**(en)**

## Table of Contents

1. GENERAL.....	3
1.1. Purpose.....	3
1.2. Box Contents.....	3
1.3. Conventions used in this manual.....	3
2. DEVICE DESCRIPTION.....	4
2.1. LED indications.....	4
3. PREREQUISITES.....	5
3.1. Multiverter Firmware Check.....	5
4. OPERATION.....	6
4.1. Connection.....	6
4.2. Connecting two MTA-64s.....	6
4.3. Software setup.....	7
▶ Web.....	7
▶ Front panel.....	8
▶ Command line.....	8
5. CONFIGURING A SECOND MTA-64.....	10
5.1. Changing the MTA-64's address via jumper.....	10
5.2. Pinswap cable.....	10
6. SPECIFICATIONS.....	11
7. APPENDIX.....	12
7.1. Warranty.....	12
7.2. Manufacturer contact.....	12
7.3. FCC Compliance.....	12
7.4. Recycling.....	13
7.5. Document Revision History.....	13
7.6. About this document.....	13

## 1. GENERAL

### 1.1. Purpose




With the MTA-64, the multiverter becomes capable of connecting to the MADI-TP variants used in DiGiCo and Soundcraft/Studer/Harman desks, which - although not officially standardized - have gained widespread acceptance because they are built into many desks and stageboxes. The MTA-64s relay logic eliminates the need for crossover cables and allows to use standard straight (1:1) cabling in all situations.

The MTA-64 connects to the multiverter's MADI-TP port (for the audio transmission) and to the EXTENSION port (for power supply and mode control). The EXTENSION port is fed through on the MTA-64 to allow other extension boxes (e.g. for AVB) to connect to the multiverter simultaneously. Optionally, a second MTA-64 may be connected to the MVR-64 to add another MADI-TP port (instead of the AES50 port).

### 1.2. Box Contents

- 1 MTA-64 Adapter Box
- 1 Cat5 cable 0.5m / 1.7 ft
- 1 HDMI cable 0.5m / 1.7 ft with locking screws
- This manual

### 1.3. Conventions used in this manual

- A button on the front of the multiverter is shown like this: 
- A particular LED on the front of the device is shown like this: 
- Text indicated on the seven-segment display is shown as 
- Operations in a particular control method are indicated by a triangle:
  - ▶ **Front panel**, ▶ **Web** or ▶ **Command line**

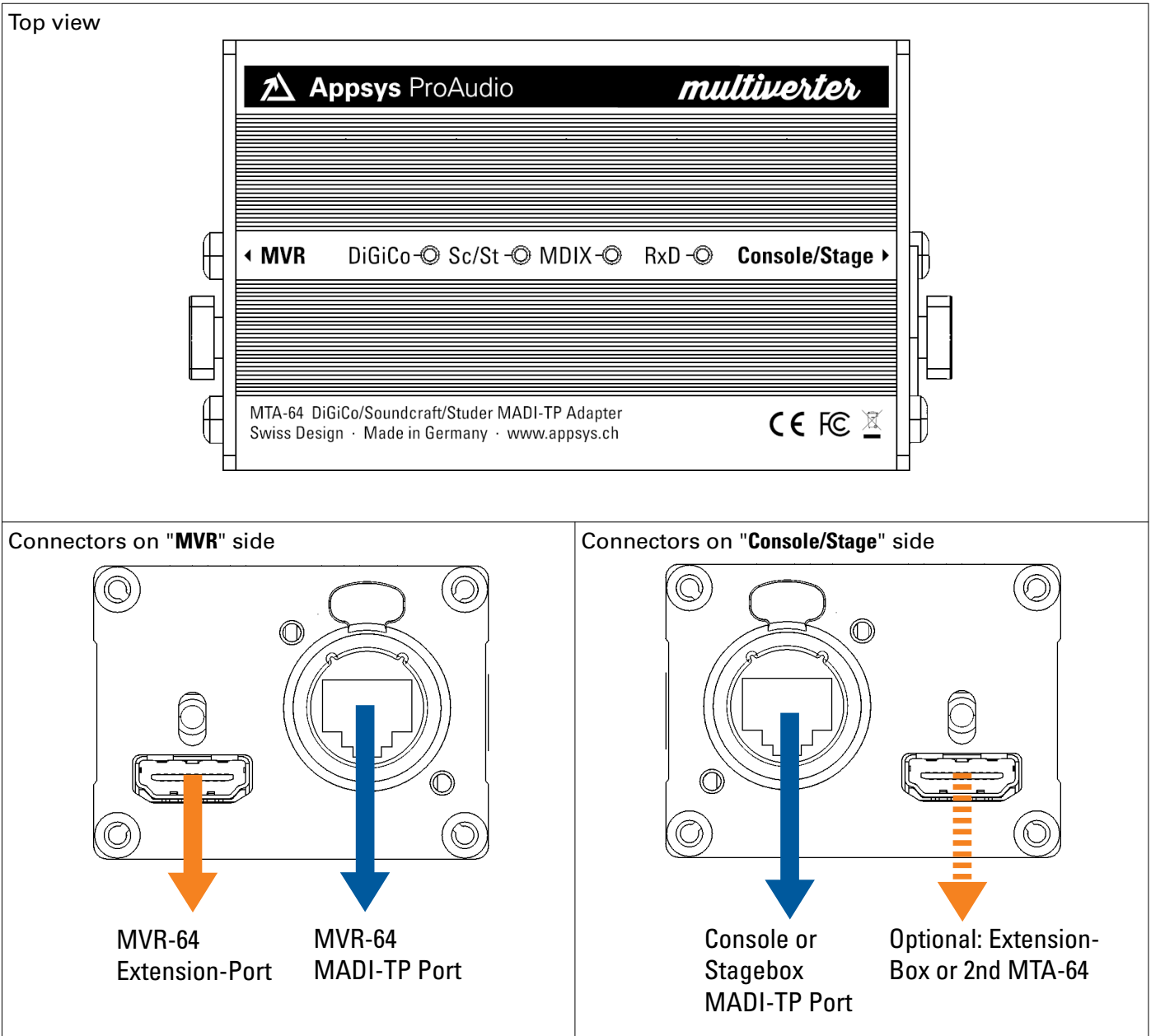


Filled circles with an exclamation mark indicates an action that must be performed ("Required").



A section marked with a "information" icon indicates a useful tip.

## 2. DEVICE DESCRIPTION



### 2.1. LED indications

LED	Meaning
* DiGiCo (blue)	DiGiCo mode selected
* Sc/St (white)	Soundcraft/Studer/Harman mode selected
* MDIX (yellow)	Crossover configuration (Receive/Transmit swapped). When lit, a crossover cable is emulated on the "Console/Stage" port.
* RxD (green)	Receive Data OK (same as MADI-TP "green" indication on MVR front). When lit, the MTA-64 is configured correctly and receives a signal

### 3. PREREQUISITES

#### 3.1. Multiverter Firmware Check



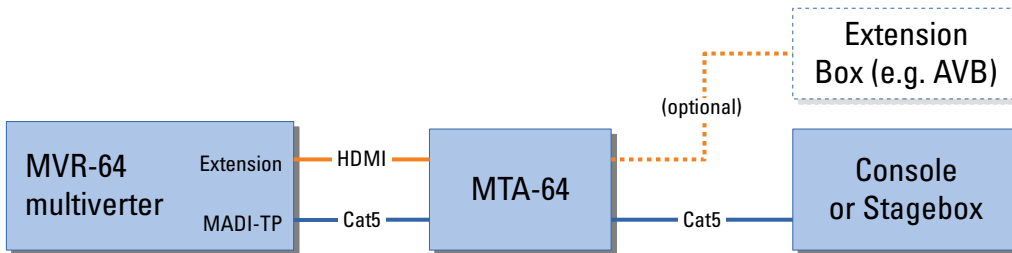
The multiverter requires **at least firmware 4.0** for the MTA-64 to work. Please check and update if required (see below).

- To check the multiverter's firmware version: Press **Recall**, move to **Function**, press **OK**, move to **12**, press **OK**, move cursor to **AD**.
- If the seven-segment display shows **04** or higher, no update is required.
- If **03** or less is shown, a firmware update is required. Download the firmware update from [our website](#) and follow the instructions in the README.TXT file contained in the package.

## 4. OPERATION

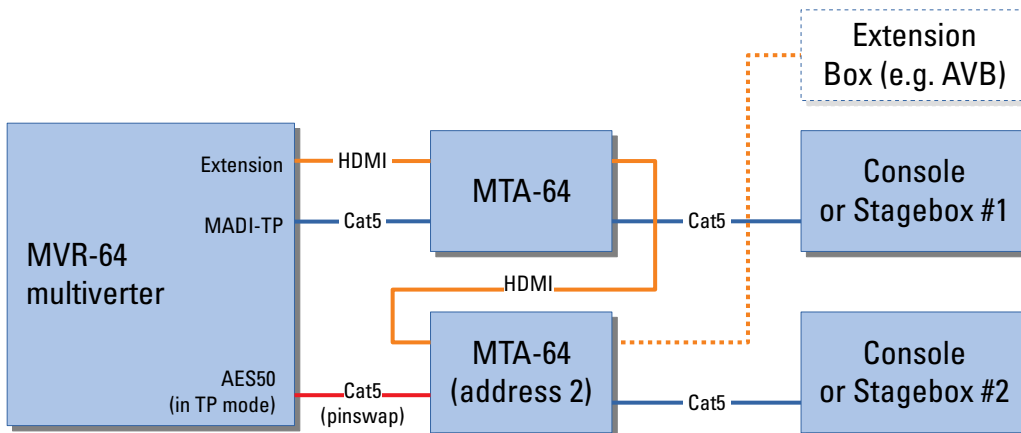
### 4.1. Connection

- Connect the Cat5 port on the ◀ **MVR** side of the MTA-64 to the **MADI-TP** port of the multiverter
- Connect the Extension port on the ◀ **MVR** side of the MTA-64 to the **Extension** port of the multiverter
- Connect the Cat5 port on the **Console / Stage** ▶ side of the MTA-64 to the console or stagebox:



### 4.2. Connecting two MTA-64s

- The second MTA-64 needs to be jumpered to address 2 and connected to the AES50 port (which must be set to MADI-TP mode). A pinswap cable is required between the AES50 port and the MTA-64. See chapter 5."Configuring the second MTA-64" for details.



### 4.3. Software setup



The easiest way of setting up the MTA-64 is by using the multiverter's web configuration. Simply type the IP address of the Dante module in your web browser and open the SETTINGS page.

#### ► Web

The settings [04] and [05] can be altered on the "SETTINGS" page:

The screenshot shows the 'SETTINGS' page of the multiverter web interface. The page title is 'localhost:7800 - Google Chrome'. The navigation menu includes 'PRESET 1\*', 'ROUTING', 'CLOCK', 'MONITOR', 'SETTINGS', 'ABOUT', and 'DEMO'. The 'SETTINGS' page is titled 'Parameter settings (\* indicates default setting)'. The settings are listed as follows:

- [01] Headphones mode: Mono, +0dB
- [02] MADi optical transmit mode: Standard MADi (AES10), \*64ch, \*96k frame
- [03] MADi coaxial transmit mode: Standard MADi (AES10), \*64ch, \*96k frame
- [04] MADi-TP port operation mode: DiGiCo (MTA-64), 57ch, \*96k frame
- [05] AES50 port operation mode: \*AES50, 56ch, 48k frame
- [06] Wordclock output: \*00: BNC output frequency equal to samplerate
- [07] MIDI channel for Preset Recall: \*1
- [08] MIDI forwarding: \*00: Disabled
- [10] Display brightness: Slider control
- [13] ADAT/AES3/SPDIF output: Configures the output format for each port (input is always auto-detected)

The settings [04] and [05] are highlighted with a red box. The output format table for [13] is as follows:

	1	2	3	4	5	6	7	8
ADAT	●	●	●	●	●	●	●	●
AES3	○	○	○	○	○	○	○	○
SPDIF	○	○	○	○	○	○	○	○

► **Front panel**

The mode setting is available through the "Function" menu. To adjust the value:

- Press the blue **Recall** button
- Move the cursor to **☼ Function** by turning the encoder left or right
- Confirm **OK** (push the encoder)
- The **☼ Function** LED should now be lit.
- Move the cursor to index **☼ 4** (MADI-TP operation mode) and push the encoder knob\*. The seven-segment display is now blinking, indicating the current mode number (see Table 1 on page 9)
- Rotate the encoder to alter the value
- Confirm **OK** (push the encoder) or press **↶ Back** to cancel the operation.

► **Command line**

**function 04 <value>**

with <value> according to Table 1 on page 9 \*

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\* Index 05 is used to configure a second MTA-64 connected to the AES50 port



Value	Mode	Num. Ch	96k frame format	Pinout mode	Remarks	
00	AES-X213	56	48k	Auto	connect directly (without MTA-64)	
01			96k			
02		64	48k			
03			96k			
04	AES50	48	-		connect directly (without MTA-64), use pinswap cable	
08	DiGiCo	56	48k		Straight	
09			96k			
10		64	48k			
11			96k			
12	Soundcraft/Studer	56	48k			
13			96k			
14		64	48k			
15			96k			
24	DiGiCo	56	48k	MDIX (Crossover)		
25			96k			
26		64	48k			
27			96k			
28	Soundcraft/Studer	56	48k			
29			96k			
30		64	48k			
31			96k			
32	AES-X213	57	48k	Auto	connect directly (without MTA-64)	
33			96k			
40	DiGiCo	57	48k	Straight		
41			96k			
44	Soundcraft/Studer	57	48k			
45			96k			
56	DiGiCo	57	48k	MDIX (Crossover)		
57			96k			
60	Soundcraft/Studer	57	48k			
61			96k			

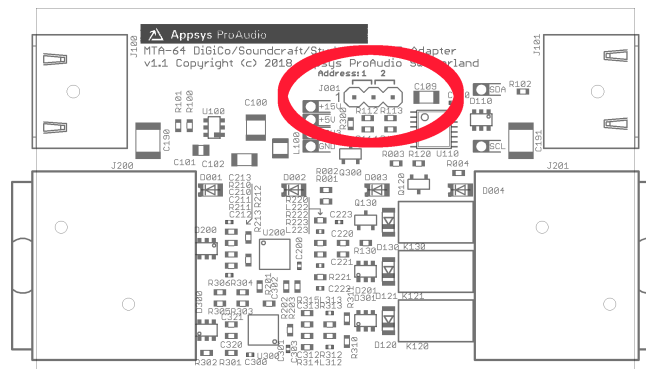
Table 1: Mode numbers (numbers not listed are reserved)

## 5. CONFIGURING THE SECOND MTA-64

### 5.1. Changing the MTA-64's address via jumper

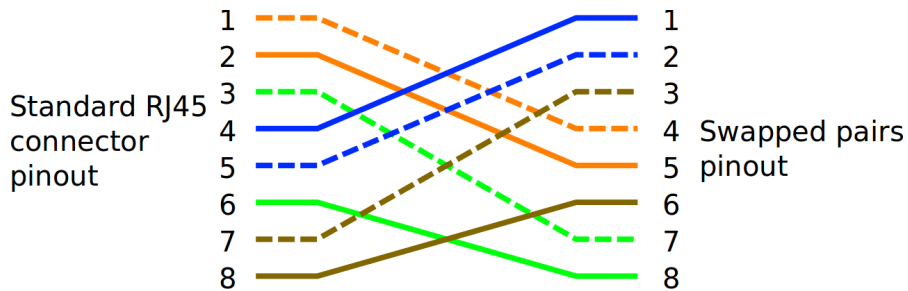
The second MTA-64 needs to be jumpered internally to address "2". The jumper is located on the internal PCB. To access it:

1. Remove the four screws (two upper screws on each side).
2. Remove the top cover.
3. Locate the jumper on the top and change it to position "2":



### 5.2. Pinswap cable

The AES50 port has a different pinout and requires a pin swap Cat5 cable between the MVR-64 and the MTA-64. (Note: this is the same cable which is required to use the MADI-TP port as AES50).



## 6. SPECIFICATIONS

Parameter	Value					
Dimensions	83x39x52mm (WxHxD)					
Weight	128 g					
Operating temperature	0..+70°C, non-condensing					
Storage temperature	-40..+85°C, non-condensing					
Power consumption	+15V DC from multiverter, 2W max.					
Cable lengths	MVR-64 to MTA-64 / Cat5	5m max.				
	MVR-64 to MTA-64 / HDMI	5m max.				
	MTA-64 to Console/Stagebox	70..100m (depends on cable quality and counterpart)				
Channel count	Up to 64x64 in x1 modes (44.1 / 48 kHz) Up to 32x32 in x2 modes (88.2 / 96 kHz) Up to 16x16 in x4 modes (176.4 / 192 kHz)					
Sample rates	Arbitrary sample rates between 32kHz and 192kHz					
Remote Control Data	Transparent forwarding of DiGiCo remoting data (contained in ch57), Soundcraft/Studer remoting data (userbits of ch1-10) and others					
Latency	The latency added by the MTA-64 is negligible (in the nanoseconds range)					
Pinout	Pin number/ color	MVR side	Console/Stage side			
			DiGiCo	DiGiCo MDIX	Soundcraft	Soundcraft MDIX
	1 (orange/wt)		TX+	RX+	TX+	RX+
	2 (orange)		TX-	RX-	TX-	RX-
	3 (green/wt)				RX+	TX+
	4 (blue/wt)	TX+				
	5 (blue)	TX-				
	6 (green)				RX-	TX-
	7 (brown/wt)	RX+	RX+	TX+		
8 (brown)	RX-	RX-	TX-			
Note: The signals on the "MVR" side are electrically different from the "Console/Stage" side.						

## 7. APPENDIX

### 7.1. Warranty

We offer a full two (2) year warranty from the date of purchase. Within this period, we repair or exchange your device free of charge in case of any defect\*. If you experience any problems, please contact us first. We try hard to solve your problem as soon as possible, even after the warranty period.

\* Not covered by the warranty are any damages resulting out of improper use, willful damage, normal wear-out (especially of the connectors) or connection with incompatible devices.

### 7.2. Manufacturer contact

Appsys ProAudio  
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Bullingerstr. 63 / BK241  
CH-8004 Zürich  
Switzerland

www.appsys.ch  
info@appsys.ch  
Phone: +41 43 537 28 51  
Mobile: +41 76 747 07 42

### 7.3. FCC Compliance

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This equipment has been verified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications

made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

#### 7.4. Recycling



According to EU directive 2002/96/EU, electronic devices with a crossed-out dustbin may not be disposed into normal domestic waste.

Please return the products back for environment-friendly recycling, we'll refund you the shipping fees.

#### 7.5. Document Revision History

2: Corrected 96k frame format in Table 1

1: Initial release

#### 7.6. About this document

All trademarks mentioned in this document are property of the respective owners. All information provided here is subject to change without prior notice.

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