MA-3188

8x8 3G/HD/SD-SDI Matrix

User Manual

Full HD 1080

HDCP HIGH-DEFINITION CONTENT PROTECTION

7.1 CH AUDIO

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Safety and Notice

The **MA-3188 8x8 3G/HD/SD-SDI Matrix** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the MA-3188 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

● Follow all instructions and warnings marked on this unit.

● Do not attempt to service this unit yourself, except where explained in this manual.

● Provide proper ventilation and air circulation and do not use near water.

● Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.

● Use only the power adapter and power cords and connection cables designed for this unit.

● Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

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INTRODUCTION

The **MA-3188** **8x8 3G/HD/SD-SDI Matrix** provides the most flexible and cost effective solution in the market to route 3Gbps high definition video sources from any of the eight SDI sources to the any eight SDI receivers at the same time. This solution is well suited for use in home theater, conference room presentation systems, or other similar setting or application.

FEATURES

- Inputs meet SMPTE 259M, 292M, 424M,425M
- Allows any SDI display to view any SDI source at any time
- Auto-Reclocking
- The matrix master can switch every output channels to any SDI inputs by push-in button, IR remote controller or RS-232 control
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively

PACKAGE CONTENTS

- 1x MA-3188
- 1x Rack-mounting ear set
- 1x IR Remote control
- 1x User Manual
- 1x Installation software CD
- 1x UL AC power cord
- 2x BNC Terminator Plug

SPECIFICATIONS

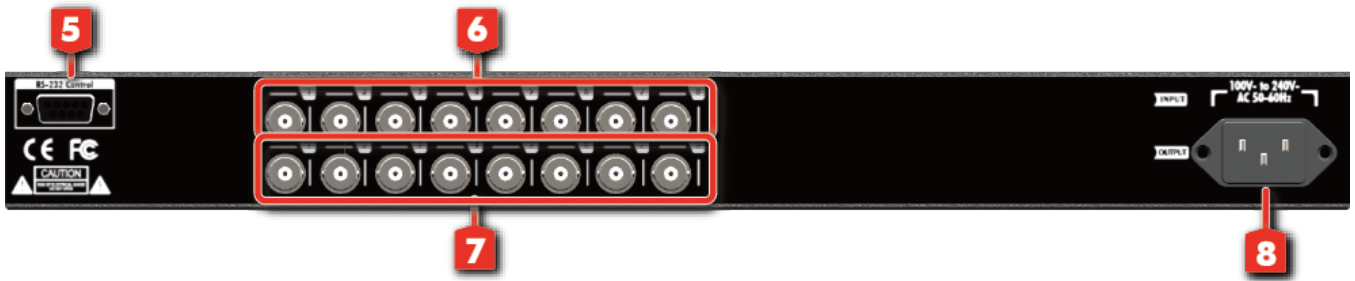| Model Name		MA-3188
Technical		
Role of usage		True 8x8 matrix
Video bandwidth		2.97 & 2.97/1.001Gbps
Video support		[3G] 1080p@50/59.94/60 (4:2:2) [HD] 720p50/59.94/60, 1080p24/30, 1035i50/59.94/60, 1080i50/59.94/60 [SD] NTSC@59.94Hz, PAL@50Hz
Audio support		Yes
Cable equalization		[3G] up to 100m(300ft) / [HD-SDI] up to 150m (500ft) / [SD-SDI] up to 300m (1000ft)
Reclocking function		Yes
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
Input		8x SDI BNC + 1x Synchronized BNC + 1x RS-232
Output		8x SDI BNC + 1x Synchronized BNC loop-out
SDI Input selection		Push button / IR remote / RS-232
IR remote control		Electro-optical characteristics: τ = 25$\circ$ / Carrier frequency: 38kHz
RS-232 connector		DE-9 [9-pin D-sub female]
Mechanical		
Housing		Metal case
Dimensions [L x W x H]	Model	440 x 280 x 42mm [1'5" x 0.9' x 1.6"]
	Package	513 x 456 x 144mm [1'7" x 1'5" x 5.6"]
	Carton	535 x 320 x 495mm [1'8" x 1' x 1'6"]
Weight	Model	4051g [8.9 lbs]
	Package	4900g [10.8 lbs]
Fixedness		1U rack-mount with ears and wall hanging holes
Power supply		AC Power 100-240V
Power consumption		35 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

PANEL DESCRIPTIONS

Front Panel

1. **Power Switch:** Power ON/OFF switch

2. **IR Sensor:** IR sensor for receiving the IR commands from IR remote

3. **Output Push Button & 7-segment LED:** Front panel push buttons used to select the number of display channels & LED display for output ports

4. **Input Push Button & 7-Segment LED:** Front panel push buttons used to select the number of input source & LED display for input channels
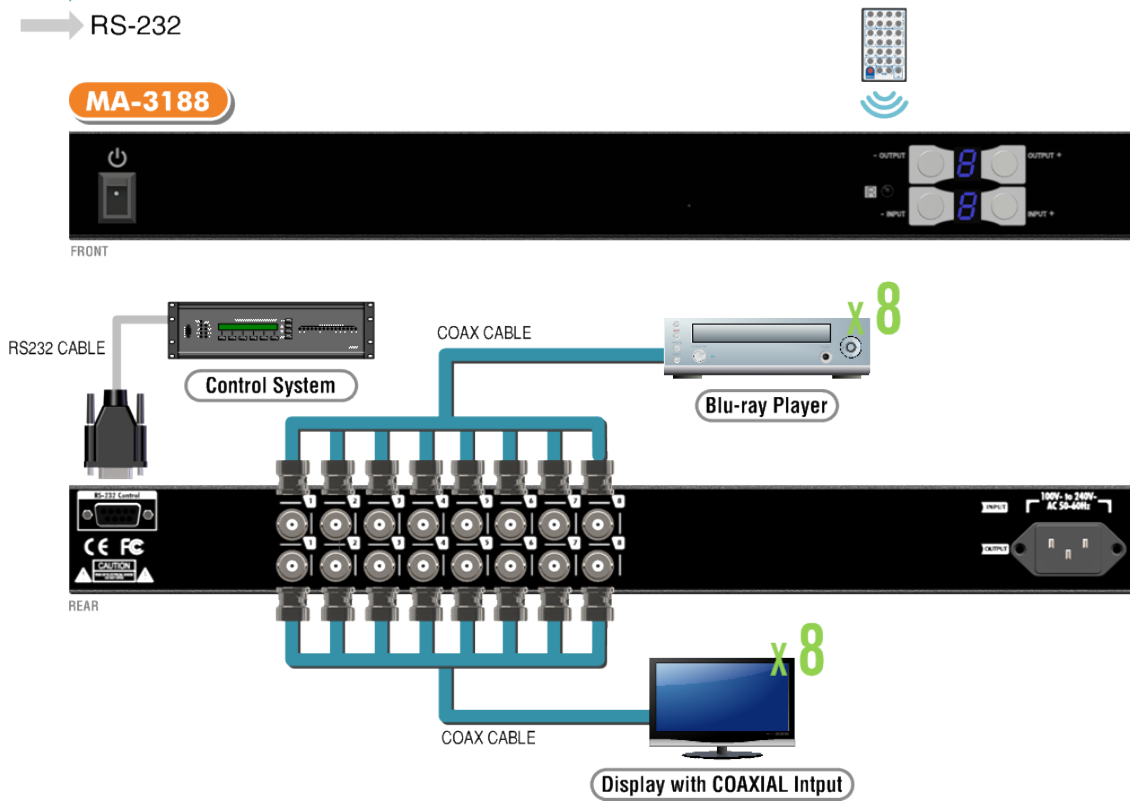
Rear Panel

5. **RS-232:** RS-232 control port

6. **INPUT PORT 1-8:** SDI inputs

7. **OUTPUT PORT 1-8:** SDI outputs

8. **AC Power:** 100-240V
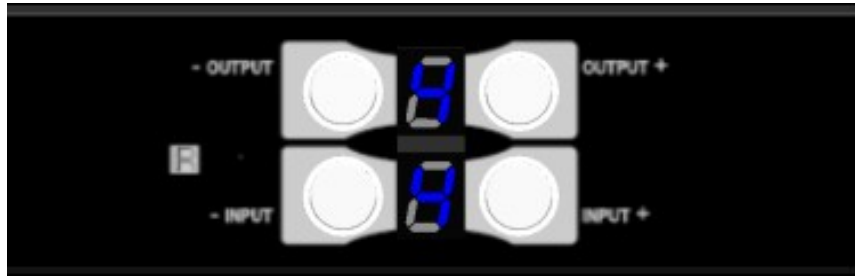
CONNECTION DIAGRAM

HARDWARE INSTALLATION

MA-3188

1. Connect all sources to SDI Inputs on the 8x8 SDI matrix
2. Connect all outputs to SDI Receiver
3. Connect the AC power supply to the 8x8 SDI matrix
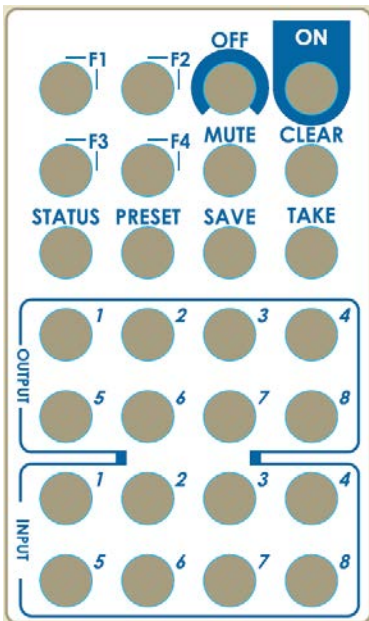4. Power on the 8x8 SDI matrix MA-3188

OPERATION APPROACH

Method A: Push-in Button

IN/OUT MAP

1) Use the "+"or "-" output push button to select the number of display

2) Use the "+"or "-" input push button to select the number of input source

   "+": change selected input/output port in ascending order

   "-" : change selected input/output port in descending order

Method B: IR Remote Control

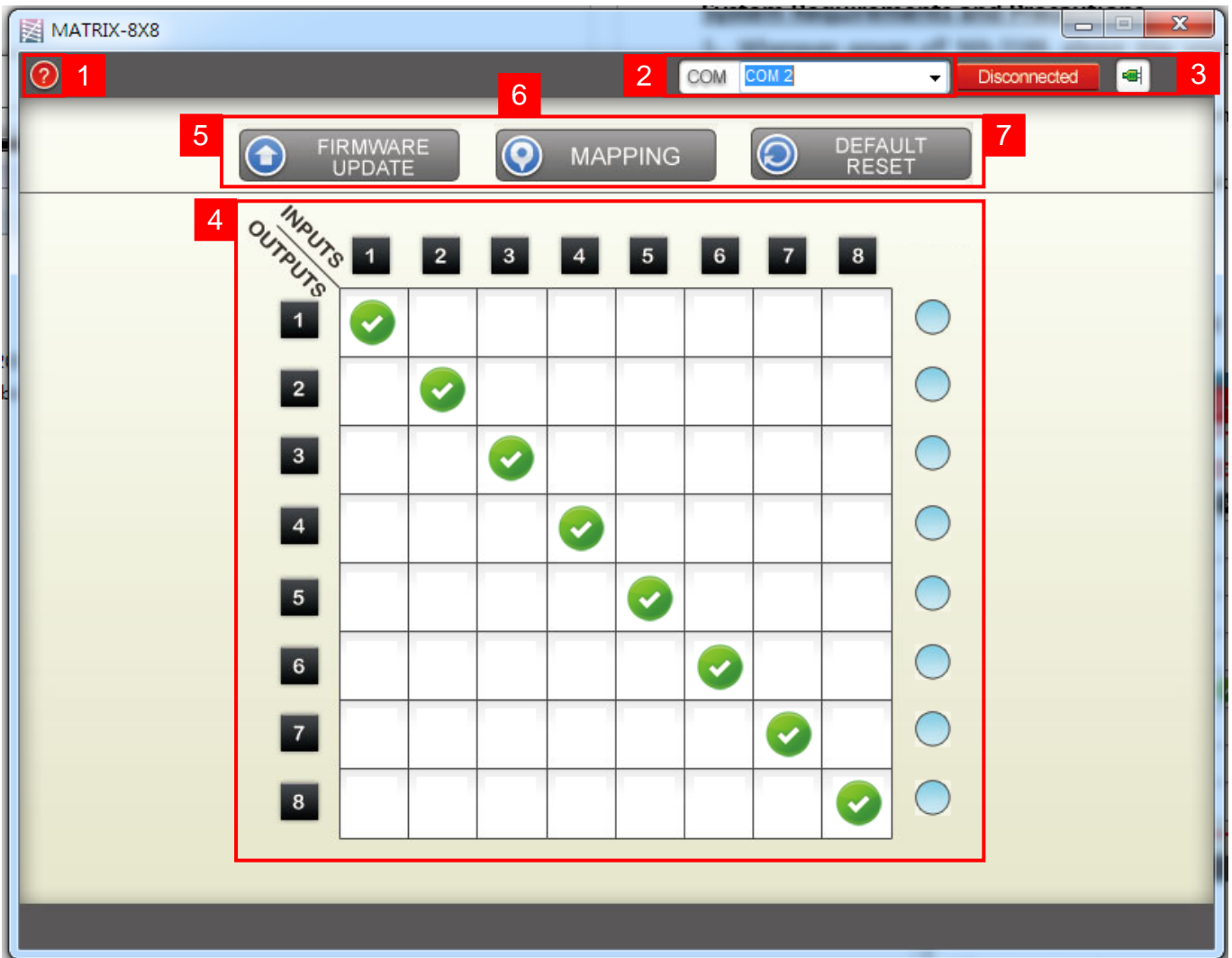| Button	Function
ON	Mute off the video output
OFF	Mute the video output
Mute	Output port number + Mute + Take
CLEAR	Clear the remote setting
STATUS	Output port number + Status + Take
Preset Mapping	Number + Preset + Take [Memory 6 sets of configuration]
Save Mapping	Number + Save + Take [Memory 6 sets of configuration]
F1, F2, F3, F4	Reserved Buttons
Route input to output	**output port number + To + input port number + Take**

Method C: Software Control through RS-232 port
System Requirements and Precautions

1. Whenever power off MA-3188, please stay unpowered at least 5 to 10 seconds to allow power capacitors to discharge.
2. The MA-3188 provides software control program under Microsoft Windows XP, 7, 8 through the interface of RS-232 control port
3. Before you click on the icon of the software, make sure you have secured the connection between your computer RS-232 port and the MA-3188

Start the software control program

When clicking on the executable file, the following dialog will pop-up (under Microsoft Windows 7, please run as administrator).

Control Interface

1. Info
   Read the software and firmware version.

2. COM Port selection
   Use RS-232 cable to connect the port on device and computer. Select correct COM port and click the button.
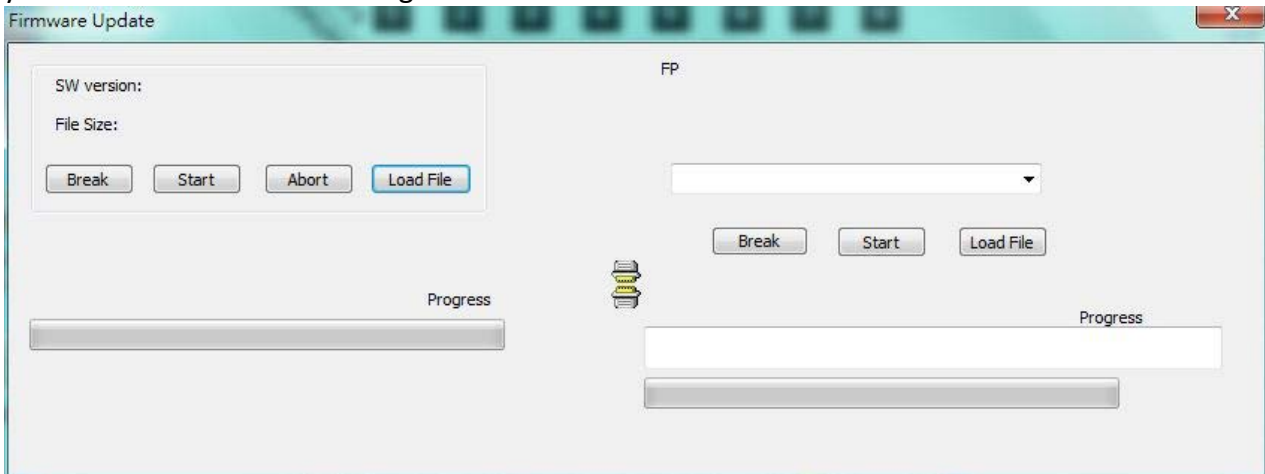
3. Connection Status
   Show the connect status (Connected or Disconnected).

4. In/Out switch panel
   For each output, you can assign arbitrary video source or mute output video here.

5. Firmware Update
   The "Firmware update" window shows up as below. Before firmware update process, please ensure your RS-232 cable is connecting and the status is "CONNECTED".
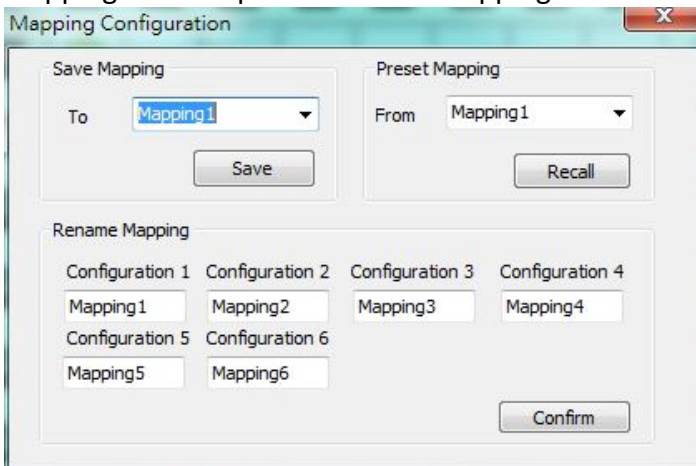

   ➢ Click [Load FILE] button to select the firmware file which you want to update.
   ➢ Click [Break] button.
   ➢ Recycle power.
   ➢ Click [Start] button and the firmware will start to update.

   Front Panel firmware update

   ➢ Click [Load FILE] button to select the firmware file which you want to update.
   ➢ Click [Break] button.
   ➢ Click [Start] button.
   ➢ Recycle power and the front panel firmware will start to update.
   ➢ Press the lower left button of front panel until the firmware update process is finished.
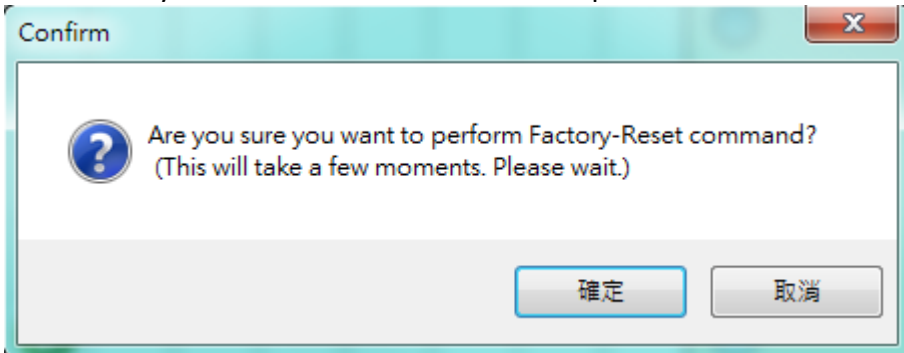
6. Mapping
   Save/Recall the Mapping Configuration. In this part, you can rename the mapping, save the current mapping or recall previous saved mapping.

7. Default Reset
   To do factory default reset. This default reset process will take about 10 seconds.

Method D: Terminal control:

Baud rate: 115200

Data length: 8bit

Parity check: No

Stop bit: 1

COMMAND	ACTION
ST + 0x0d	Show all mapping
PON + 0x0d	Power on the device
POFF + 0x0d	Power off the device
MUTE + number (ASCII) + 0x0d	Mute output video
VR + 0x0d	Show the firmware version
P + number (ASCII) + I + number (ASCII) + 0x0d	Switch I/O mapping
SMAP + number (ASCII) + 0x0d	Save mapping
LMAP + number (ASCII) + 0x0d	Recall mapping
WHO + 0x0d	Show the model no.
FST## + 0x0d	Factory reset
SH + number (ASCII) + 0x0d	Show signal port

LIMITED WARRANTY

The SELLER warrants the **MA-3188 8x8 3G/HD/SD-SDI Matrix** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, the SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the MA-3188 v1.2/v1.3 features and specifications is subject to change without further notice.**