MacroBox User Manual

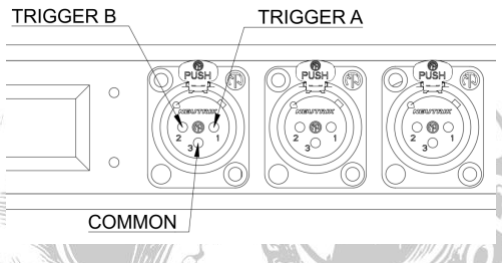
Five Twelve Engineering

1. Overview

MacroBox is a compact network-based OSC trigger device designed for professional lighting, media, and show-control environments.

It provides six configurable trigger inputs arranged as three physical ports with two trigger positions per port:

- Port 1 - Position 1
- Port 1 - Position 2
- Port 2 - Position 1
- Port 2 - Position 2
- Port 3 - Position 1
- Port 3 - Position 2
- Position 3 is connected to Common



Each input can be assigned a custom OSC command from the built-in web configuration page. When an input is activated, MacroBox sends the assigned OSC command to the configured target device.

MacroBox also includes an E-stop input. When the E-stop is active, OSC output is blocked and the display shows an E-STOP ACTIVE warning.

2. Input Ports

MacroBox has three trigger ports. Each port supports two trigger positions.

Port Position	Typical Use
Port 1 - Position 1	Trigger A
Port 1 - Position 2	Trigger B
Port 2 - Position 1	Trigger C
Port 2 - Position 2	Trigger D
Port 3 - Position 1	Trigger E
Port 3 - Position 2	Trigger F

Each trigger position can be assigned its own OSC command.

2.1 Toggle Switch Behavior

MacroBox is designed to work well with three-way toggle-style controls.

```
Switch Up   -> Port 1 - Position 1
Switch Down -> Port 1 - Position 2
```

In this setup:

- Moving the switch up sends the Position 1 OSC command
- Moving the switch down sends the Position 2 OSC command

3. E-stop Operation

MacroBox includes an E-stop input for disabling OSC output.

When the E-stop is active:

- OSC output is blocked
- Physical triggers are ignored
- The display changes to an E-STOP ACTIVE warning

When the E-stop is released:

- OSC output resumes
- Physical triggers resume operation
- The display returns to the normal status screen

The E-stop function is intended as a software output lockout for MacroBox. It should not be used as a substitute for required life-safety, electrical, or machinery safety systems.

4. Network Configuration

MacroBox uses static network settings.

Setting	Default Value
Local IP	10.101.100.151
Subnet	255.255.255.0
OSC Target IP	10.101.100.5
Local Port	8001
OSC Target Port	8000

These values can be changed from the web configuration page.

4.1 Local IP

The Local IP is the address of MacroBox on the network. Use an address that is valid for the show network, does not conflict with another device, and is in the same subnet as the computer or target device when required.

4.2 Subnet

The subnet mask defines the network range MacroBox operates on. A common value for simple show networks is:

```
255.255.255.0
```

4.3 OSC Target IP

The OSC Target IP is the destination device that receives OSC commands. This could be a lighting console, media server, show-control computer, or other OSC-compatible device.

4.4 OSC Target Port

The OSC Target Port is the UDP port on the target device used for receiving OSC commands. Refer to the target device documentation for the correct receive port.

4.5 Local Port

The Local Port is the UDP port used by MacroBox locally. For most users, the default value can remain unchanged.

5. Web Configuration Page

MacroBox includes a built-in web configuration page.

To access it:

1. Connect MacroBox to the network.
2. Connect your computer to the same network.
3. Open a web browser.
4. Enter the MacroBox Local IP address.

Example:

```
http://10.101.100.151
```

5.1 Web Page Settings

The web page allows you to edit:

- Local IP
- Subnet
- OSC Target IP
- Local Port
- OSC Target Port
- OSC command for each trigger position

5.2 Saving Settings

After changing settings, press Save Settings. Settings are saved internally and remain stored after power loss.

5.3 Network Setting Changes

Changing trigger OSC commands should return quickly and should not interrupt the network connection. Changing network settings such as Local IP, Subnet, or Local Port may briefly interrupt the web connection while MacroBox applies the new network configuration.

5.4 Reboot Button

The web page includes a Reboot Device button. Use this when applying certain network changes or during troubleshooting.

6. OSC Command Setup

Each trigger position sends one OSC command to the configured target IP and target port.

MacroBox supports two OSC entry formats:

Format	Use Case
Path-only OSC	For targets that respond to an OSC address with no additional value.
Typed OSC	For targets that require an OSC address, type tag, and value.

6.1 Path-Only OSC Format

Path-only OSC sends the entered OSC address exactly as the command, with no additional arguments.

Format:

```
/address/path
```

Examples:

```
/eos/macro/46000/fire
/eos/macro/46001/fire
/cue/next
/playback/start
/media/layer/1/go
```

6.2 Typed OSC Format

Typed OSC is used when the target expects a value to be sent along with the OSC address. MacroBox uses a comma-separated entry format:

```
/address,type,value
```

Supported type values:

Type	Meaning
s	String/text value
i	Integer number
f	Floating-point number

Examples:

```
/cmd,s,Go Macro 1
/cmd,s,Fixture 1 At 75
/Page1/Fader201,i,100
/Some/Fader,f,75.0
```

If an OSC entry contains commas, MacroBox treats it as a typed OSC message. If an entry does not contain commas, MacroBox treats it as a path-only OSC message.

7. Setup Examples

7.1 Typical grandMA3 Setup

grandMA3 can receive OSC commands over the network. One common method is to use the command-line OSC input, where MacroBox sends an OSC address of /cmd with a string value containing the grandMA3 command.

On the grandMA3 side, configure OSC input according to the console documentation. In a typical setup, confirm:

- OSC input is enabled.
- The receive port matches the MacroBox OSC Target Port.
- Receive Command is enabled if using /cmd command-line control.
- The grandMA3 station is on the same network as MacroBox.
- The MacroBox OSC Target IP is set to the grandMA3 station IP address.

Typical MacroBox network settings for a grandMA3 target might look like:

Setting	Default Value
Local IP	10.101.100.151
Subnet	255.255.255.0
OSC Target IP	grandMA3 station IP address
Local Port	8001
OSC Target Port	grandMA3 OSC receive port

Example MacroBox trigger assignments for grandMA3 command-line control:

Trigger Position	OSC Command
Port 1 - Position 1	/cmd,s,Go Macro 1
Port 1 - Position 2	/cmd,s,Go Macro 2
Port 2 - Position 1	/cmd,s,Fixture 1 At 75
Port 2 - Position 2	/cmd,s,Fixture 1 At 0

In this example:

- Moving Port 1 to Position 1 sends the command Go Macro 1.
- Moving Port 1 to Position 2 sends the command Go Macro 2.
- Moving Port 2 to Position 1 sends Fixture 1 At 75.
- Moving Port 2 to Position 2 sends Fixture 1 At 0.

The typed OSC format is important for grandMA3 command-line control. For example:

```
/cmd,s,Go Macro 1
```

MacroBox sends this as:

```
OSC Address: /cmd
OSC Type:    s
OSC Value:   Go Macro 1
```

7.2 Typical ETC Eos Setup

ETC Eos commonly uses path-only OSC commands for triggering macros and other actions. In this case, each MacroBox field can contain the complete OSC path with no comma-separated type or value.

On the Eos side, configure OSC input according to the console documentation. In a typical setup, confirm:

- OSC input is enabled.
- UDP string/OSC input is allowed as required for the show setup.
- The receive port matches the MacroBox OSC Target Port.
- The Eos device is on the same network as MacroBox.
- The MacroBox OSC Target IP is set to the Eos device IP address.

Typical MacroBox network settings for an Eos target might look like:

Setting	Default Value
Local IP	10.101.100.151
Subnet	255.255.255.0
OSC Target IP	Eos console or device IP address
Local Port	8001
OSC Target Port	8000

Example MacroBox trigger assignments for Eos macro firing:

Trigger Position	OSC Command
Port 1 - Position 1	/eos/macro/46000/fire
Port 1 - Position 2	/eos/macro/46001/fire
Port 2 - Position 1	/eos/macro/46002/fire
Port 2 - Position 2	/eos/macro/46003/fire

In this example:

- Moving Port 1 to Position 1 fires Eos macro 46000.
- Moving Port 1 to Position 2 fires Eos macro 46001.
- Moving Port 2 to Position 1 fires Eos macro 46002.
- Moving Port 2 to Position 2 fires Eos macro 46003.

Because these entries do not contain commas, MacroBox sends them as path-only OSC messages.

8. Status Display

The display shows the current MacroBox status.

8.1 Normal Status Screen

The normal screen shows:

- Local IP
- Target IP
- Target port
- Connection state

8.2 Connection State

The display shows CONNECTED or DISCONNECTED. This indicates whether the configured target appears reachable on the network.

8.3 E-stop Screen

When the E-stop is active, the display shows E-STOP ACTIVE. While this screen is shown, OSC output is blocked.

9. Connection Status

MacroBox can check whether the configured target IP appears reachable on the network. The display connection state is intended as a network-reachability indicator. A connected status does not always guarantee that the target application is actively listening for OSC commands. A connected status only indicates that MacroBox sees the target device.

A CONNECTED status means the configured target IP appears reachable.

A DISCONNECTED status means the configured target IP did not respond or could not be reached.

10. Power

Use only the supplied or recommended power source for MacroBox.

Using an incorrect power source may cause:

- Unstable operation
- Network dropouts
- Unexpected resets
- Excessive heat
- Permanent damage

Do not modify the power wiring unless instructed by the manufacturer or a qualified technician.

11. Normal Startup Procedure

5. Connect MacroBox to the network.
6. Connect the trigger switches or control accessories.
7. Connect the E-stop accessory, if used.
8. Apply power.
9. Wait for the display to show the normal status screen.
10. Confirm the Local IP and Target IP are correct.
11. Confirm the display shows CONNECTED when the target is available.
12. Test each trigger position.
13. Confirm the target device responds correctly.

12. Basic Operation

14. Configure the target IP and target port.
15. Assign OSC commands to each trigger position.
16. Save settings.
17. Move a switch or activate a trigger input.
18. MacroBox sends the assigned OSC command to the target device.

When the E-stop is active, triggers will not send OSC commands.

13. Quick Reference

Default network settings:

Setting	Default Value
Local IP	10.101.100.151
Subnet	255.255.255.0
OSC Target IP	10.101.100.5
Local Port	8001
OSC Target Port	8000

Web page:

```
http://<MacroBox Local IP>
```

Example:

```
http://10.101.100.151
```

Trigger layout:

```
Port 1 - Position 1
Port 1 - Position 2
Port 2 - Position 1
Port 2 - Position 2
Port 3 - Position 1
Port 3 - Position 2
```

Display states:

```
CONNECTED      Target appears reachable
DISCONNECTED   Target does not appear reachable
E-STOP ACTIVE OSC output is blocked
```

OSC entry formats:

```
Path-only: /eos/macro/46000/fire
Typed:     /cmd,s,Go Macro 1
```

14. Support

For support, configuration help, service, or repair, contact Five Twelve Engineering.