



VERSION 8.0.1.XXX - DEVELOPED BY: AVOLITES MEDIA LTD. POWERED BY: SALVATION (TM)
HARRISON DIGITAL MEDIA INC. DRIVEN BY: DAVE GREEN, TREY HARRISON, STEVE WARREN, J.B.
CIARAN ABRAMS, SELVIN COOPER, ARRAN ROTHWELL-EYRE, SIMON GRAHAM, MARY, PRADS,
GREG, ADAM, OLIE, ALL AT AVOLITES AND YOU. SPECIAL THANKS MARK CALVERT. LETS ROCK!

MSC1 Controller

VERSION 8.X

By Arran Rothwell-Eyre December 2014

with Additions by Dave Green & Ciaran Abrams

MSC1

The MSC-1 Ai Media Server Controller provides hands on live control in a compact, user-friendly interface. Connecting directly to any Ai system, the MSC-1 gives access to effects, layers and clips.



- 3 Axis control using smooth optical encoders
- 10 assignable faders
- 16 fader pages
- 4 easy access Layer Select buttons
- 8 Blend Mode select buttons
- 7 Transport Control buttons
- 8 assignable custom buttons
- 16 interface function buttons
- 8 FX buttons
- 4 quick access Scene View buttons
- Numeric keypad
- 4 DMX in/out ports
- MIDI in port
- USB interface (Unit is bus-powered)

Setting up MSC-1 with Ai server

After connecting the MSC-1 to the server using the provided USB cable, you can monitor the communications between the MSC-1 Console and the Ai Server by running the USB Expert program.

This can be found in *Program Files (x86)/Avolites/UsbExpert/UsbExpertConsole*.

Click on the Tools menu and choose *Acw Service* and *Start*. After a moment, the connection should be made. This can be verified by moving a fader or pressing a button – values should then appear in the middle pane. You can now close the *UsbExpert* software.

The ACW service will be automatically run by the Ai server program so this step is not a requirement for general operation.

With the connection made, you can now load Ai and your MSC-1 should be connected. A number of the MSC-1's functions should already be pre-mapped to the software, meaning you can use it straight out of the box. However, some functions (such as the faders) will need mapping manually. This will require accessing *Salvation* and creating a few basic connections. *Salvation* is the powerful node-based programming system that allows full customisation of the Ai software.

Pre-mapped Interface Instructions

Out of the box, the MSC-1 will communicate with the Ai software, giving you a large amount of control over various parameters. In the next section, we will describe the function and application of the controller.

Optical Encoders

(Stage Construction Page)

The ultra-smooth optical encoders allow us to move our fixtures around in the 3d space without having to use the mouse or trackpad of your computer/laptop. The three encoders relate to the X, Y and Z planes of our 3d space, and can allow us to move position or rotate our fixture smoothly and accurately. Simply select the fixture you wish to move in Ai, and turn the optical encoder to see the changes in realtime. To rotate the fixture, simply click the Pos/Rotate button once next to the encoder – now the encoder will rotate the fixture in 3d space. Press the Pos/Rotate button twice and this will allow you to change the position of the fixture. If you hold the Pos/Rotate button, this will change the size of the fixture.

Sensitivity of the movements can be adjusted using the *Sensitivity* buttons. This can allow for a finer degree of control. Pressing the Sensitivity Up once will allow increments of 0.1; pressing Sensitivity Up twice will move in 0.01 increments.

Blend Mode Buttons

(Performance Page)

These can be used to change the blend mode on the current layer, allowing for different visual styles with other media playing. There is a choice of *Alpha*, *N.A.M.*, *Luma*, *Lighten*, *Add*, *Difference*, *Wipe*, *Multiply*, *Darken*, *Screen*, *Subtract* & *Custom*.

Layer Select Buttons

(Performance Page)

These allow us to choose which layer we want to work on. Simply hit the layer you require and you can then use other modes on your chosen layer, such as the Blend Mode Buttons or FX Buttons.

Scene View Buttons

(All Pages)

The view buttons jump to 3 stored viewpoints in the 3d space. You can choose the custom viewpoints by moving the 3d space, then holding the Ai button (on the numeric keypad) and pressing either View 1, 2 or 3. Once stored, you can use the buttons to flick between the viewpoints. The PAN VIEW button interpolates between the 3 stored viewpoints in a fluid motion.

16 Interface Function Buttons

The function buttons allow us quick-access to some commonly used functions within Ai.

Rotate Scene – Using this button in conjunction with the mouse will allow you to rotate the 3d world.

Move Scene – Holding this button while using the mouse allows you to move (pan) the 3d world.

Move Hex – This feature is specific to version 6 and allows you to move the hexagons within a cluster bank.

Tap Widget – Brings up the Tap Tempo widget. To set the tempo, either use the tap button (transport controls) or use the mouse to click in the area marked “Tap”.

Layer Info – this is a feature from version 6 that allowed you to bring up information about the layer. This is not required in version 7 as the layer information is now in the front end of the GUI.

Cluster Zoom – (Motion Page & Performance Page) This button changes the Roller Cue to a Hex Ball and back again.

EQ Trigger – (Performance Page) This button brings up an orange EQ display that reacts to an audio input, such as your computer's microphone. This feature is not currently implemented, but will be coming soon.

Stage Patch – Brings up the Stage Patch if not already visible.

F1-F8 - The remaining 8 buttons require patching in to be used as custom buttons. This can be done by using the *Ai Controller Module/Alternate Skin/F1-F8*.

Transport Control Buttons

STOP button – stops media on currently selected layer.

PLAY button – plays media on currently selected layer.

FF button – sets the play mode to forwards.

REW button – sets the play mode to reverse.

PAUSE button – pauses media on currently selected layer.

REC button – this should be called the “Go” button and it will scroll through and play the media on the currently selected layer.

Numeric Keypad

(All number boxes) Enter numerical values using the keypad.

(Stage Construction Page) CLEAR button deletes a fixture group.

(Performance Page)

ENTER button will pause all playing media on all layers.

CLEAR button will delete currently selected media on Roller Cue.

SET button will pause all playing media on all layers.

(Timeline Page)

ENTER & SET button – both will start/stop playback of timeline.

(Patch Windows)

CLEAR button deletes currently selected patch.

The Ai button works like the Shift key on your computer's keyboard.

The A1 to A8 buttons require patching in to be used as custom buttons. This can be done using the *Ai Controller Module/Alternate Skin/A1-A8*. (See *Connecting The Custom Buttons/Faders* section)

Fader Pages

(Performance Page)

The Page +/- buttons allow you to move up and down through the media banks.

FX Buttons 1 to 8

These buttons are assignable and designed to be used to trigger effects.

Connecting the custom buttons/faders

To connect the assignable faders to the software, you need to first determine what it is you want to control. For example, you may wish to use faders 1 and 2 to control opacity on your first two layers, with faders 3 and 4 controlling the speed of the playback media. This can be achieved with a few simple connections, which we shall describe below.

(Note: with Salvation, there can sometimes be a number of different ways of accessing required modules. We will show you the simplest route to achieve what you need.)

Access the Performance Page in Ai. Select layer 1 on the left-hand side and right-click to enlarge the area. Then double-left-click in the large area. This will open up a patch from Salvation called **Layer 1**. This patch window shows us the Artnet personality for layer 1 and is where we can make our connections.

Layer 1 Personality Screen

We can extend this screen by grabbing the right-hand side of the window and dragging. This will show a number of new modules and connections.