Yamaha DME7 OSC
Application Guide

Audioversity

by Yamaha Pro Audio

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Version history

Version 1.0 – January 22, 2026

Introduction

This guide is designed as a Quick-Start to implementation of OSC commands on the DME7 DSP device – covering some common scenarios within Theatre and Immersive applications.

The DME7 is a high-capacity DSP device from Yamaha, which allows up to 256x256 channels of Dante audio to be routed and processed for many different purposes.
The DME7 also has GPI trigger ports that can be used for control, and has the ability to send and receive TCP/UDP commands in certain formats.

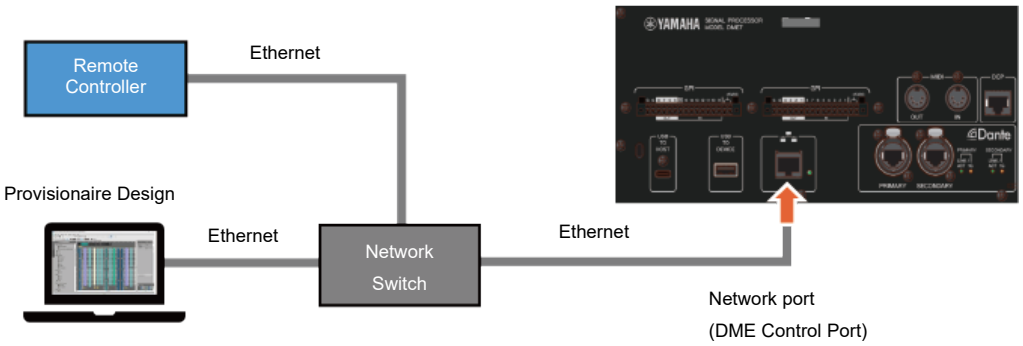
One common control method for the DME7 is to use OSC commands. OSC (Open Sound Control) is a protocol for transmitting control information to and from electronic musical instruments and audio equipment, via a network.

OSC
/open/sound/control

Connecting your DME7 and OSC Controller Device:

The connections required for the DME7 would be as shown below – so from your network switch, you would ensure that the Network Port (DME Control Port) is connected.

You also need to ensure that your OSC Remote Controller device is connected and that you have a PC running ProVisionaire Design – all connected to the same network segment.

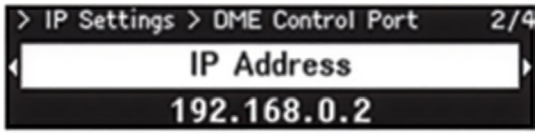


On the DME7 device, we need to configure the DME Control Port to be in the correct subnet, so that it can communicate with the other devices.

It is recommended to set this to a static address, so that OSC can be more easily configured later.

This configuration can be done via two different methods:

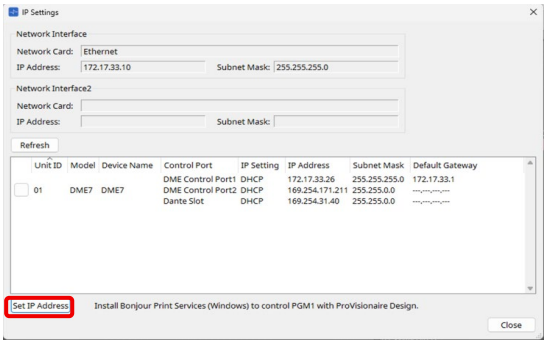
Method 1: On the DME7 Device

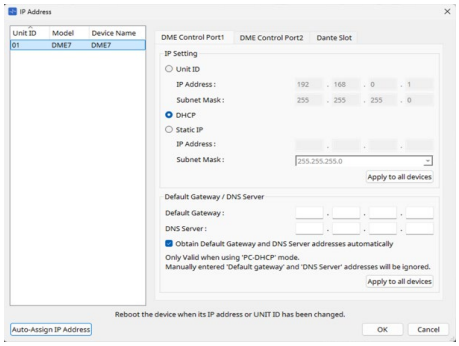


- Press the MENU/HOME Key on the front panel,
- Select Settings > IP Settings > DME Control Port,
- Then specify the Network mode (Static/DHCP), IP Address and Subnet Mask.

Method 2: Within ProVisionaire Design

If your device is already contactable on the network, within the ProVisionaire Design software you can alter the IP address if required.
You do this by entering the System menu, and then choosing IP Settings:





Configuring the Remote Controller

You may be planning to send your OSC commands from a piece of software, or you might have some compatible hardware, such as a Yamaha Rivage console, which can send these trigger commands to other devices.
On your controller, you'll need to specify the IP address that you've just set for your DME Control Port – you'll also have to set the IP Port number to: **UDP 49900**

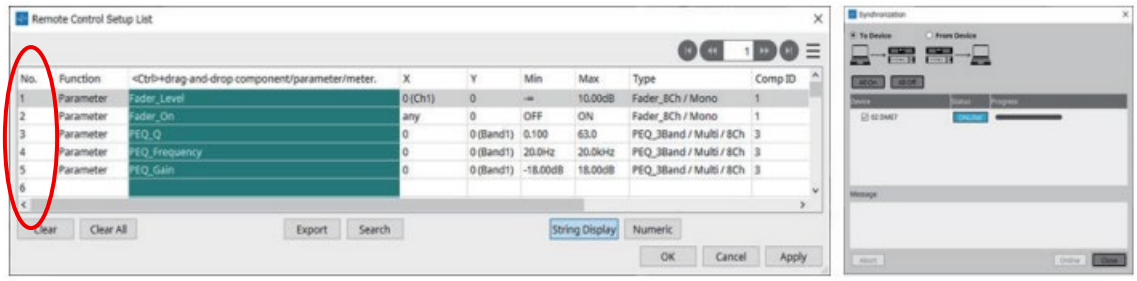
Assigning Commands

Once the DME7 is contactable, you can assign commands that you wish to trigger via OSC.

Within ProVisionaire Design, once you've created your DSP design, using the available components, you can then Ctrl + Drag and Drop to add parameters into the "Remote Control Setup List."

This is a list which can include many types of command, from different types of modules within your DSP layout. It creates triggers for external control systems to send commands to the DSP.

The parameters may take the form of a Toggle/One-shot or might involve variable values. So, for instance, a Channel On button within a fader might be a toggle command. But a fader movement would be a variable value.



In the Remote-Control Setup List, the parameters all have a Number assigned to them in the “No.” column. This number is what we will refer to within the OSC commands later, to reference the commands in this list.

Command and usage examples:

Here are some examples relating to use with QLab. ***Some other applications might require a slightly different command format, including a “type tag” – so check the documentation for your specific application.*** Here we show the full format of the commands, taken from the OSC Reference Guide. We then give an example of those commands:

Set the Ch2 Level of the Fader component (4Ch) registered to No.1 in the Remote Control Setup List to ∞

Category	Parameter Description	<Action>	<Address>	<X>	X name	<Y>	Y name	<type tag>	Type tag	<value>		value		comment
										Min	max	scaling	unit	
Fader	Level	set	PROC:Remote/ <IndexNo>	1	-	1	-	i:	int	-13801	1000	100	dB	-Infinity - +10dB

Format: /yosc:req/<Action>/<Address>/<X>/<Y> <value>

Command: /yosc:req/set/PROC:Remote/1/1/1 -13801

* Specify "1" to X and Y for parameters with specified X and Y registered on the Remote Control Setup List.
* Specify a value to X and Y for parameters registered by specifying X and Y as "any" on the Remote Control Setup List.

* Specify the index number of the Remote Control Setup List for <IndexNo> in the <Address> argument of the command.

Recall a Snapshot No.10, relating to the Parameter Set in ProVisionaire Design – with an ID of 5000

Category	Parameter Description	<Action>	<type tag>	Type tag	<value 1>		<value 2>		comment
					min	max	min	max	
Snapshot	Recall snapshot	ssrecall_ex	si:	string, int	“1”	“65535”	1	100	-

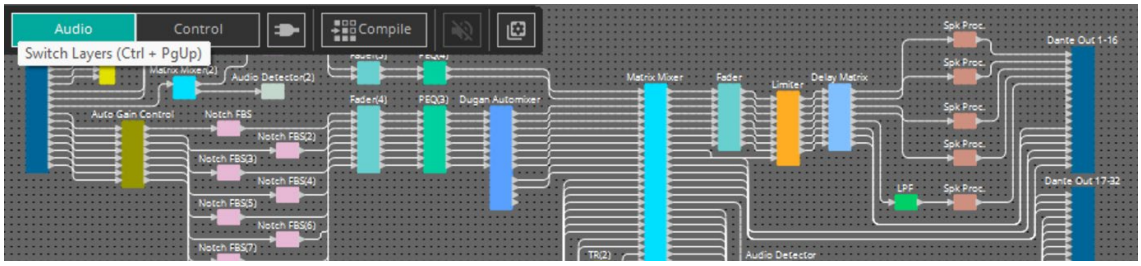
Format: /yosc:req/<Action> <value1> <value2>

Command: /yosc:req/ssrecall_ex "5000" 10

Application Examples

Theatre

Requirement: During a show changeover – you need to change your audio routing, change FX levels, or recall a system Snapshot after running some pre-show tests.

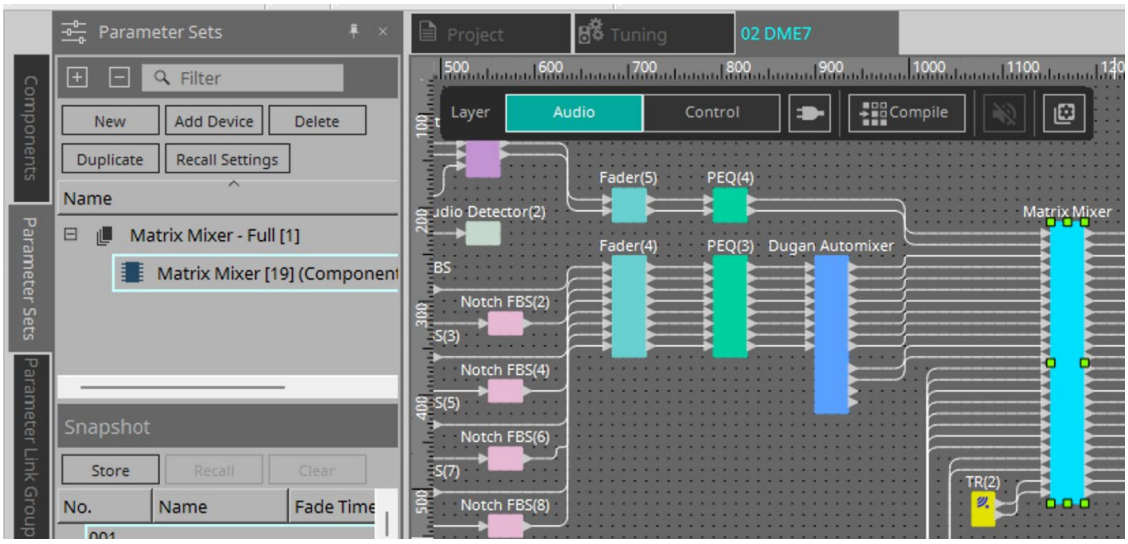


Within Yamaha Provisionaire Design software, you would set up your Snapshots, using Parameter Sets. We’ll show one example of this process below.

What are Parameter Sets?

Parameter Sets are a method to group and control specific DSP parameters – so for instance, you might decide that one Parameter Set includes an entire Matrix Mixer block – that allows you to recall every value on that block – this could be treated like a reset just for that component.

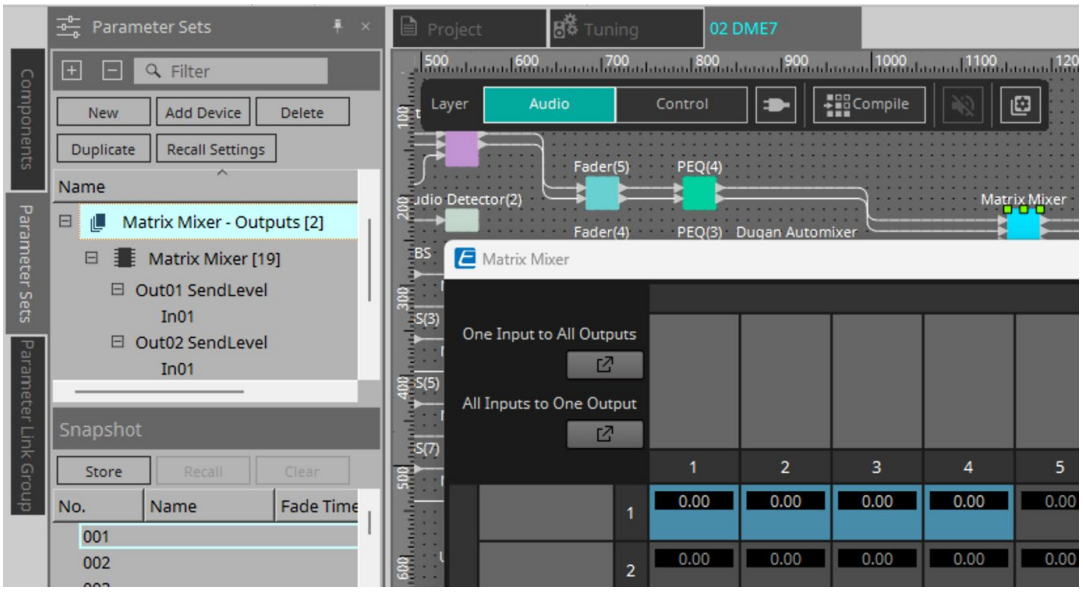
To configure a new Parameter Set, you'd click the "New" button to create a new Parameter Set, then Ctrl+Drag the Matrix mixer block onto that Parameter Set:



As an alternative, you might create another Parameter Set that **only** includes gain levels on 4 crosspoints on the matrix mixer, reflecting 4 zones within your space.

In this Parameter Set, all the other values on that Matrix Mixer module would be ignored or not affected.

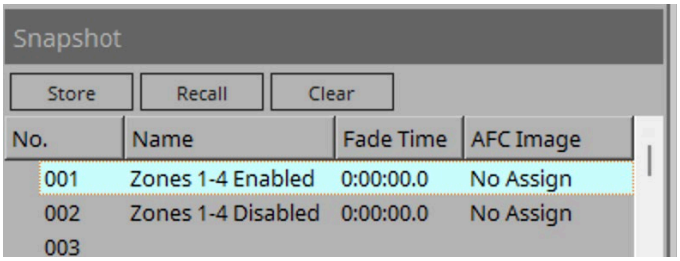
You would then create a second Parameter Set, open the Matrix Mixer, hold Ctrl, and Click/Drag each value/crosspoint onto that Parameter Set:



Under each Parameter Set, there is a list of Snapshots.
Snapshots are how you recall the status of these parameters that you have selected in the Parameter Sets. So you would change the values on the component, and then store a Snapshot for each version of the settings that you need.

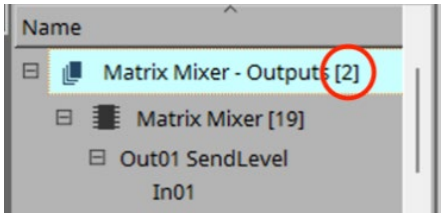
So in the example above, you might have one snapshot with all four crosspoints enabled, and another with all 4 disabled.

It makes sense to name your snapshots, and then it is easier to refer back to them later. You'll also notice that you can set a Fade Time, if you don't wish for the changes to be sudden.

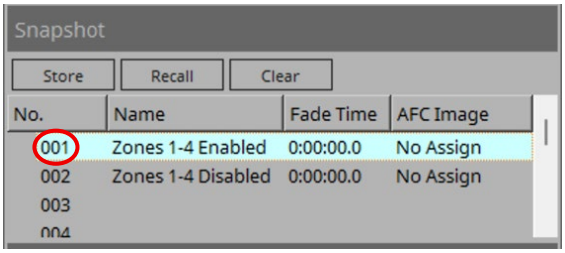


To then allow these Presets to be triggered from an external system (such as using OSC) You would trigger using the ID of the Parameter Set, and the number of the Snapshot.

So in this case the Parameter set ID is 2:



And the Snapshot ID is 1:



The command we would send here would be:

/yosc:req/ssrecall_ex "2" 1

By using software such as QLab, or Touch OSC, this command will trigger these system changes easily on the Yamaha DSP device.

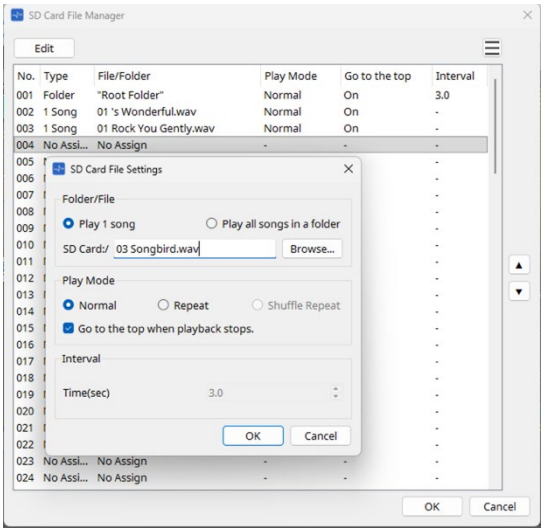
Immersive Experiences/Escape Rooms

A key usage that we would expect in this type of environment may be triggering audio playback from an SD Card. Or varying volume levels on sound FX – for example to trigger a sound effect when a door opens, or to vary the output level on a racing game as a throttle is increased/decreased within the game.

This might be triggered by physical controls in the space, or by motion sensors.

Either way, these inputs can either be passed straight into the Yamaha DSP as GPI triggers, or an external device can receive these physical inputs, and turn them into OSC commands that trigger actions on the Yamaha DSP.

To trigger tracks on an SD Card, begin by adding your track names into the list on the SD Card File Manager, which will assign each track an index number in the playlist.



Then you can use a direct OSC command to trigger specific tracks and playback commands within the DSP device.

In the example here – to play back audio track 03 on the SD Card – you would use the following command: **/yosc:req/ss: "PROC:AudioPlayerSetCurrentSong" "3"**

Some more examples are shown in the table below – but a full list of these commands is covered in greater detail in the full OSC Reference Guide which is available alongside this document on the Yamaha website.

Event

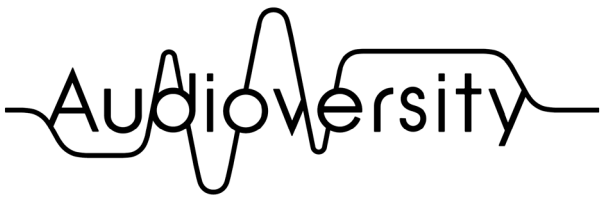
Format: /yosc:req/<Action> <type tag> <value1> <value2>

Category	Parameter Description	<Action>	<type tag>	type tag	<value1>	<value2>	comment
Audio Player	Specify a playback song	event	ss:	string,string	"PROC:AudioPlayerSetCurrentSong"	"index=<number>"	<number>: SD Card File Manager No
Audio Player	Transport operation	event	ss:	string,string	"PROC:AudioPlayerTransport"	"operation=stop"	Stop the song.
Audio Player	Transport operation	event	ss:	string,string	"PROC:AudioPlayerTransport"	"operation=play"	Play the song.
Audio Player	Transport operation	event	ss:	string,string	"PROC:AudioPlayerTransport"	"operation=prev"	Play the previous song.
Audio Player	Transport operation	event	ss:	string,string	"PROC:AudioPlayerTransport"	"operation=next"	Play the next song.

We hope that this reference guide was useful for you – for access to additional resources, if you search for “OSC” on the Yamaha Global YouTube channel, you’ll find videos that give other examples of how to implement within different types of system.

You’ll also find other videos on the Provisionaire Design software, which might help if designing a DSP layout to match your requirements.

The Yamana Pro Audio website and Audioversity Online also offer a wide range of information.



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