



AFC Image on DME OSC Specifications

Version 1.0.0

This specification document applies to DME Firmware V2.00 and later.

OSC (Open Sound Control) is a protocol for transmitting control information of electronic musical instruments / audio equipment, etc. via a network. This protocol can be used to remotely control the DME. This document describes the connection and setup procedure for remote control using this protocol and lists the necessary parameter information.

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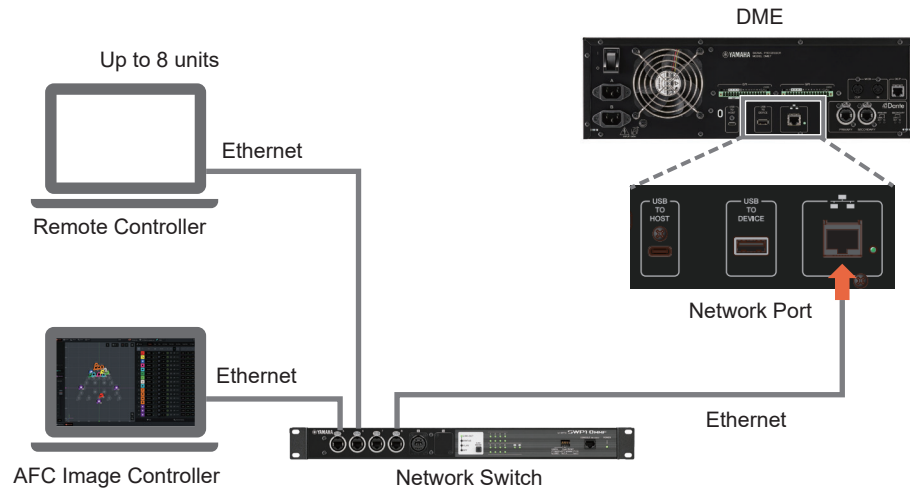
0. Revision History

Version	Date	Section	Description
V1.0.0	Nov. 21, 2025	-	Initial version

1. Setup

1.1. Connection Procedure

Connect to the network ports of each device as follows. The control target devices are specified by their IP addresses. Up to eight remote controllers can be connected to the DME.



1.2. DME Configuration

IP address setting:

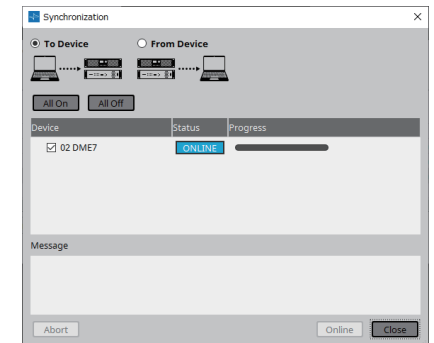
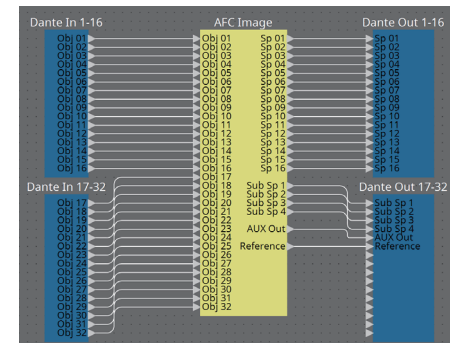
Press the MENU/HOME key on the front panel, select Settings > IP Settings > DME Control Port, then specify the Network Mode, IP address, and subnet mask.

* They can also be set on ProVisionaire Design.



AFC Image Component Settings:

AFC Image Parameters in DME can be controlled after creating an audio configuration that includes an AFC Image Component within DME, then synchronize and save that configuration to them. See the ProVisionaire Design user manual for details.



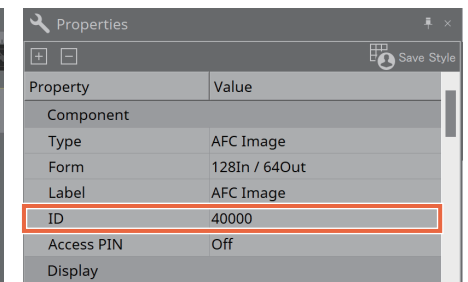
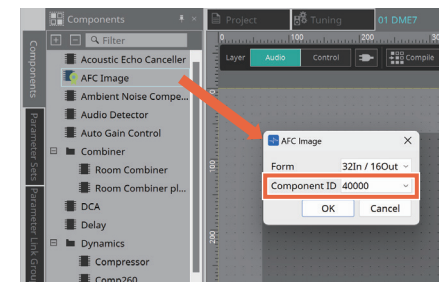
1.3. Configuring the Remote Controller

AFC Image Component in DME can be controlled from an external device via Ethernet (Network terminal). The settings on the remote controller side for each connection are as follows:

IP Address: Specify the IP address of the DME Control Port

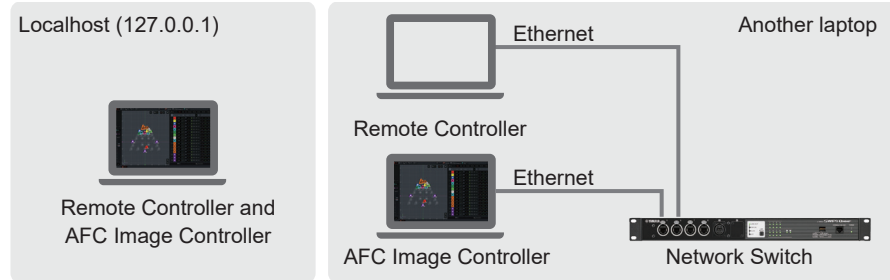
IP Port No.: UDP 50528

The component ID of AFC Image component to be controlled also needs to be specified within the OSC address. In ProVisionaire Design, component ID can be confirmed or changed either when the AFC Image component is dragged and dropped or from the Properties area.



The operation checks are also performed without a DME unit by using the AFC Image Controller. The settings on the remote controller side for each connection are as follows -

IP Address: Localhost (127.0.0.1) or the IP address of another laptop running AFC Image Controller
 IP Port No.: UDP 50528
 Component ID: 0



1.4. Configuration Examples

Below are several example commands set using an OSC Controller, in this case with the QLab application. QLab does not require type tags to be added to the command. A type tag may be required depending on the OSC Controller application, please check this for the OSC controller to be used.

1.4.1. OSC Address Format Pattern

OSC Address Format Pattern

/yosc:req/<Action>/PROC:Component/<Component ID>/<Parameter ID>/<X>/<Y> <value>

Format	Command	Notes
/yosc:req	/yosc:req	"yosc:req" is a Yamaha identifier
Action	/set	
Address	/PROC:Component	AFC Image - dedicated address for DME
Component ID	/ComponentID	Component ID of AFC Image Component in DME (i.e 40000)
Parameter ID	/parameter1/parameter2/parameter3	
X index	/X	X index
argument value	value (integer, float or string)	value must always be separated from address or other value by a space

OSC address format pattern for scene store, recall, etc.:

/yosc:req/<Action> PROC:Component/<Component ID>/<Parameter ID> <X> <Y> <value>

Format	Command	Notes
/yosc:req	/yosc:req	"yosc:req" is a Yamaha identifier
Action	/event	
Address	PROC:Component	AFC Image - dedicated address for DME
Component ID	/ComponentID	Component ID of AFC Image Component in DME (i.e 40000)
X index	/X	X index
Y index	/Y	Y index
Parameter ID	/parameter1/parameter2/parameter3	
argument value	value (string)	value must always be separated from address or other value by a space

1.4.2. Snapshot setting example

Assume the AFC Image component ID is 40000 in a DME.

Object Fader On

Set the object 1 Fader to "On"

OSC command: /yosc:req/set/PROC:Component/40000/OBA/Object/Fader/On/1 1

Object Type

Set the object type of object 2 to "Static"

OSC command: /yosc:req/set/PROC:Component/40000/OBA/Label/Type/2 "Static"

Object Physical Position

Set the physical position of object 3 to (x, y, z) = (-3.5, 4.0, 1.2) in meter scale

OSC command: /yosc:req/set/PROC:Component/40000/OBA/Object/PhysicalPosition/3 -3.5
4.0 1.2

Object Logical Position

Set the logical position of object 4 to (x, y, z) = (0.5, 1.0, 0.5) in normalized scale

OSC command: /yosc:req/set/PROC:Component/40000/OBA/Object/LogicalPosition/4 0.5 1.0
0.5

Main Fader Level

Set the Main Fader Level to -10 dB

OSC command: /yosc:req/set/PROC:Component/40000/OBA/MainFader/Level -1000

3D Reverb Main Fader Level

Set the 3D Reverb Main Fader Level to +2.3 dB

OSC command: /yosc:req/set/PROC:Component/40000/3DRev/MainFader/Level 230

Store New Scene or Update Existing Scene

Store a new scene with scene number "1.00", named "New Scene 1.00", and add the comment "Default Settings".

OSC command: /yosc:req/event PROC:Component/40000/Command/Scene/Store "1.00"
"New Scene 1.00" "Default Settings"

Recall Scene

Recall the scene with scene number "2.00".

OSC command: /yosc:req/event PROC:Component/40000/Command/Scene/Recall "2.00"

AUX Out Fader Level

Set the AUX Out Main Fader Level to 3.5 dB

OSC command: /yosc:req/set/PROC:Component/40000/AuxOut/Fader/Level 350

Oscillator Level

Set the Oscillator Level to -30.0 dB

OSC command: /yosc:req/set/PROC:Component/40000/Oscillator/Level -3000

Oscillator Assignment to Speakers

Set the Oscillator Send On to Speaker 5

OSC command: /yosc:req/set/PROC:Component/40000/Oscillator/SendAssign/ToSpeaker/5 1

2. Parameter

2.1. Parameter List

Control Object-Based Audio (OBA) Renderer

OSC address: /yosc:req/<Action>/PROC:Component/<Component ID>/<Parameter ID>/<X> <value>

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
Control	Object Icon	set	OBA/Label/Icon/	1-128	Object ID	-	-		string			-	-	See "Icon".
Control	Object Icon Color	set	OBA/Label/Color/	1-128	Object ID	-	-		string			-	-	See "Color".
Control	Object Name	set	OBA/Label/Name/	1-128	Object ID	-	-		string			-	-	
Control	Fader Level	set	OBA/Label/Object/Fader/Level/	1-128	Object ID	-	-		int	-13801	1000	100	dB	
Control	Fader On	set	OBA/Label/Object/Fader/On/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	Solo On	set	OBA/Solo/On/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	Object Visible	set	OBA/Object/Visible/	1-128	Object ID	-	-		int	0	1	-	-	0: Invisible, 1: Visible
Control	Zone	set	OBA/Object/Zone/	1-128	Object ID	-	-		int	1	32	-	-	
Control	Object Physical Position	set	OBA/Object/PhysicalPosition/	1-128	Object ID	-	-		float x3	-500.0	500.0	-	m	
Control	Object Logical Position	set	OBA/Object/LogicalPosition/	1-128	Object ID	-	-		float x3	0.0	1.0	-	-	
Control	Type	set	OBA/Label/Type/	1-128	Object ID	-	-		string	-	8	-	-	See "Type".
Control	Object Width	set	OBA/Object/SizeH/	1-128	Object ID	-	-		int	0	10000	1	cm	
Control	Object Height	set	OBA/Object/SizeV/	1-128	Object ID	-	-		int	0	10000	1	cm	
Control	AUX Send On	set	OBA/Object/AuxSend/On/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	AUX Send Level	set	OBA/Object/AuxSend/Level/	1-128	Object ID	-	-		int	-13801	1000	100	dB	
Control	Reverb Send On	set	OBA/Object/RevSend/On/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	Reverb Send Level	set	OBA/Object/RevSend/Level/	1-128	Object ID	-	-		int	-13801	1000	100	dB	
Control	Sub Send On	set	OBA/Object/SubSend/On/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	Sub Send Level	set	OBA/Object/SubSend/Level/	1-128	Object ID	-	-		int	-13801	1000	100	dB	
Control	X-Y Mode On	set	OBA/Object/XYmode/	1-128	Object ID	-	-		int	0	1	-	-	0: Off, 1: On
Control	Precision	set	OBA/Object/Precision	-	-	-	-		String		16	-	-	See "Precision"
Control	Distance Attenuation	set	OBA/Object/DistanceAttenuation	-	-	-	-		int	-6	0	1	dB	
Control	OBA Mute	set	OBA/MainFader/On	-	-	-	-		int	0	1	-	-	0: Mute On, 1: Mute Off
Control	Main Fader Level	set	OBA/MainFader/Level	-	-	-	-		int	-13801	1000	100	dB	

Scene

OSC address: /yosc:req/<Action> PROC:Component/<Component ID>/<Parameter ID> <X> <Y> <value>

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
Scene	Store New or Update Scene	event	Command/Scene/Store <X> <Y>		Scene #		Name	Comment	String x3			-	-	
Scene	Update Scene Undo	event	Command/Scene/UpdateUndo	-	-	-	-	-	-	-	-	-	-	
Scene	Recall Scene	event	Command/Scene/Recall	-	-	-	-	Scene #	String	-	-	-	-	
Scene	Recall Scene Undo	event	Command/Scene/RecallUndo	-	-	-	-	-	-	-	-	-	-	

3D Reverb

OSC address: /yosc:req/<Action>/PROC:Component/<Component ID>/<Parameter ID>/<X>/<Y> <value>

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
3D Reverb	Reverb Pattern	set	3DRev/Pattern	-	-	-	-		String		64	-	-	See "Reverb Pattern".
3D Reverb	Reverb Center	set	3DRev/Center	-	-	-	-		int x3	-50000	50000	1	cm	
3D Reverb	Room Size	set	3DRev/RoomSize	-	-	-	-		int	2	20	10	-	
3D Reverb	PreDelay	set	3DRev/PreDelay	-	-	-	-		int	0	1000000	1000	ms	
3D Reverb	Fade-In Time	set	3DRev/FadeInTime	-	-	-	-		int	0	500000	1000	ms	
3D Reverb	Fade-In Time Auto On/Off	set	3DRev/FadeInTimeAuto	-	-	-	-		int	0	1	-	-	0: Off, 1: On
3D Reverb	Decay	set	3DRev/Decay	-	-	-	-		int	10	100	-	-	
3D Reverb	ER Level	set	3DRev/ERGain	-	-	-	-		int	-13801	1000	100	dB	
3D Reverb	REV Level	set	3DRev/RevGain	-	-	-	-		int	-13801	1000	100	dB	
3D Reverb	Gain Weighting	set	3DRev/GainWeight/<X>	1-3	X/Y/Z	-	-		int	-100	100	100	-	
3D Reverb	Delay Weighting	set	3DRev/DelayWeight/<X>	1-3	X/Y/Z	-	-		int	-100	100	100	-	
3D Reverb	Gain Shaping	set	3DRev/GainShape	-	-	-	-		int	0	100	100	-	
3D Reverb	Delay Shaping	set	3DRev/DelayShape	-	-	-	-		int	0	100	100	-	
3D Reverb	PEQ A/B Select	set	3DRev/PEQ/Select/<X>	1	-	-	-		int	0	1	-	-	0: A, 1: B
3D Reverb	PEQ A On/Off	set	3DRev/PEQ1/On/<X>	1	-	-	-		int	0	1	-	-	0: Off, 1: On
3D Reverb	PEQ B On/Off	set	3DRev/PEQ2/On/<X>	1	-	-	-		int	0	1	-	-	0: Off, 1: On
3D Reverb	PEQ A Attenuation	set	3DRev/PEQ1/ATT/<X>	1	-	-	-		int	-9600	1000	100	dB	
3D Reverb	PEQ B Attenuation	set	3DRev/PEQ2/ATT/<X>	1	-	-	-		int	-9600	1000	100	dB	
3D Reverb	PEQ A Type	set	3DRev/PEQ1/Type/<X>/<Y>	1	-	1-8	Band #		string		16	-	-	See "PEQ Type".
3D Reverb	PEQ B Type	set	3DRev/PEQ2/Type/<X>/<Y>	1	-	1-8	Band #		string		16	-	-	See "PEQ Type".
3D Reverb	PEQ A Q	set	3DRev/PEQ1/Q/<X>/<Y>	1	-	1-8	Band #		int	10	6300	100	-	
3D Reverb	PEQ B Q	set	3DRev/PEQ2/Q/<X>/<Y>	1	-	1-8	Band #		int	10	6300	100	-	
3D Reverb	PEQ A Frequency	set	3DRev/PEQ1/Freq/<X>/<Y>	1	-	1-8	Band #		int	200	200000	10	Hz	
3D Reverb	PEQ B Frequency	set	3DRev/PEQ2/Freq/<X>/<Y>	1	-	1-8	Band #		int	200	200000	10	Hz	
3D Reverb	PEQ A Gain	set	3DRev/PEQ1/Gain/<X>/<Y>	1	-	1-8	Band #		int	-1800	1800	100	dB	
3D Reverb	PEQ B Gain	set	3DRev/PEQ2/Gain/<X>/<Y>	1	-	1-8	Band #		int	-1800	1800	100	dB	

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
3D Reverb	PEQ A Bypass On/Off	set	3DRev/PEQ1/Bypass/<X>/<Y>	1	-	1-8	Band #		int	0	1	-	-	0: Bypass Off, 1: On
3D Reverb	PEQ B Bypass On/Off	set	3DRev/PEQ2/Bypass/<X>/<Y>	1	-	1-8	Band #		int	0	1	-	-	0: Bypass Off, 1: On
3D Reverb	Zone	set	3DRev/Zone	-	-	-	-	Zone #	int	1	32	-	-	
3D Reverb	SubSend On/Off	set	3DRev/SubSend/On	-	-	-	-		int	0	1	-	-	Off, 1: On
3D Reverb	SubSend Level	set	3DRev/SubSend/Level	-	-	-	-		int	-13801	1000	100	dB	
3D Reverb	3D Reverb On/Off	set	3DRev/MainFader/On	-	-	-	-		int	0	1	-	-	Off, 1: On
3D Reverb	3D Reverb Main Fader Level	set	3DRev/MainFader/Level	-	-	-	-		int	-13801	1000	100	dB	

AUX Out

OSC address: /yosc:req/<Action>/PROC:Component/<Component ID>/<Parameter ID>/<X>/<Y> <value>

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
AUX Out	Source Select	set	AuxOut/Source/	-	-	-	-		int	0	1	-	-	0: Pre, 1: Post
AUX Out	HPF On/Off	set	AuxOut/HPF/On	-	-	-	-		int	0	1	-	-	0: Off, 1: On
AUX Out	HPF Frequency	set	AuxOut/HPF/Freq	-	-	-	-		int	200	200000	10	Hz	
AUX Out	HPF Type	set	AuxOut/HPF/Type	-	-	-	-		int	0	14	-	-	See "LPF/HPF Type".
AUX Out	LPF On/Off	set	AuxOut/LPF/On	-	-	-	-		int	0	1	-	-	
AUX Out	LPF Frequency	set	AuxOut/LPF/Freq	-	-	-	-		int	200	200000	10	Hz	
AUX Out	LPF Type	set	AuxOut/LPF/Type	-	-	-	-		int	0	14	-	-	See "LPF/HPF Type".
AUX Out	AUX Out On/Off	set	AuxOut/Fader/On	-	-	-	-		int	0	1	-	-	0: Off, 1: On
AUX Out	AUX Out Level	set	AuxOut/Fader/Level	-	-	-	-		int	-13801	1000	100	dB	

Oscillator

OSC address: /yosc:req/<Action>/PROC:Component/<Component ID>/<Parameter ID>/<X>/<Y> <value>

Category	Parameter Description	<Action>	<Parameter ID>	<X>	X name	<Y>	Y name	value name	value type	<value>		value		Comment
										min	max	scaling	unit	
Oscillator	Oscillator Level	set	Oscillator/Level	-	-	-	-		int	-9600	0	100	dB	
Oscillator	Oscillator On	set	Oscillator/On	-	-	-	-		int	0	1	-	-	0: Off, 1: On
Oscillator	Send Assign to Speakers	set	Oscillator/SendAssign/ToSpeaker/<X>	1- 64	Speaker #	-	-		int	0	1	-	-	0: Off, 1: On
Oscillator	Send Assign to SubSpeakers	set	Oscillator/SendAssign/ToSubSpeaker/<X>	1-16	Sub SP #	-	-		int	0	1	-	-	0: Off, 1: On
Oscillator	Send Assignment to AUX Out	set	Oscillator/SendAssign/ToAuxOut/	-	-	-	-		int	0	1	-	-	0: Off, 1: On

2.2. Parameter Value Detail

Icon

Icon	Value
	"Kick"
	"Snare"
	"Hi-Hat"
	"TomTom"
	"FloorTom"
	"Cymbal"
	"Drumkit"
	"Perc."
	"Mallets"
	"A. Bass"
	"E. Bass"

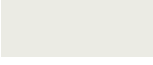
Icon	Value
	"BassAmp"
	"A. Guitar"
	"E. Guitar"
	"GuitarAmp"
	"Trumpet"
	"Trombone"
	"Saxophone"
	"Flute"
	"Strings"
	"Piano"
	"Organ"
	"Keyboard"

Icon	Value
	"Male"
	"Female"
	"Choir"
	"DynamicMic"
	"CondenserMic"
	"InstMic"
	"WirelessMic"
	"Headset"
	"SpeechMic"
	"DirectBox"
	"Foh"
	"Speaker"

Icon	Value
	"SubWoofer"
	"Wedge"
	"In-Ear"
	"Monitor"
	"Effect"
	"Processor"
	"Media1"
	"Media2"
	"Media3"
	"Video"
	"Mixer"
	"PC"

Icon	Value
	"Audience"
	"ArrowLeft"
	"ArrowRight"
	"Exclamation"
	"Smile"
	"Money"
	"Star1"
	"Star2"
	"Blank"

Color

Icon	Value
	"Blue"
	"Orange"
	"Yellow"
	"Purple"
	"Cyan"
	"Magenta"
	"Red"
	"Green"
	"LtGreen"
	"White"
	"Off"

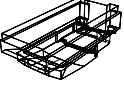
Type

Type	Value
Manual	"Manual"
Static	"Static"
External	"External"

Precision

Parameter	Value
	"High"
	"SlightlyHigh"
	"Moderate"
	"SlightlyLow"
	"Low"

Reverb Pattern

Pattern	Value
	"Recital Hall"
	"Small Concert Hall"
	"Small Symphony Hall"
	"Large Concert Hall"
	"Large Symphony Hall"
	"Cathedral"

PEQ Type

Type	Value
PEQ	"PEQ"
LShelf 6dB	"L.SHELF 6dB/Oct"
LShelf 12dB	"L.SHELF 12dB/Oct"
HShelf 6dB	"H.SHELF 6dB/Oct"
HShelf 12dB	"H.SHELF 12dB/Oct"
Low Pass	"LPF"
High Pass	"HPF"

LPF/HPF Type

Type	Value
0	THRU
1	6dB/Oct
2	12dB/Butwrth
3	18dB/Butwrth
4	24dB/Butwrth
5	36dB/Butwrth
6	48dB/Butwrth
7	12dB/Bessel
8	18dB/Bessel
9	24dB/Bessel
10	36dB/Bessel
11	48dB/Bessel
12	12dB/Linkwitz
13	24dB/Linkwitz
14	48dB/Linkwitz

3. ADM-OSC

3.1. What is ADM-OSC?

The ADM-OSC is an industry initiative for standardization of Object-Based Audio positioning data in live production ecosystems by implementing the Audio Definition Model over Open Sound Control.

3.2. Configuring Remote Controller

By ADM-OSC, AFC Image Component in DME can be controlled from an external device via Ethernet (Network terminal). The settings on the remote controller side for each connection are as follows -

IP Address: Specify the IP address of the DME Control Port

IP Port No.: UDP 4002 for bi-directional communication

ADM-OSC can only be operated while remote controller are in a same network with the DME. If multiple AFC Image component exist within the processor, the one with the lowest component ID is controlled.

3.3. Supported ADM-OSC messages

Object Position Messages

These messages take the form of /adm/obj/n..., where n signifies object number

Address		Description	type	Units	Min	Max	Default
/adm/obj/n	/w	Object width	float	normalized	0.0	1.0	0.0
	/x	left/right object location	float	normalized	-1.0	1.0	0.0
	/y	front/back object location	float	normalized	-1.0	1.0	0.0
	/z	top/bottom object location	float	normalized	-1.0	1.0	0.0
	/xy	2D compact format	float x2	normalized	-1.0	1.0	0.0
	/xyz	3D compact format	float x3	normalized	-1.0	1.0	0.0
	/gain	object gain	float	linear	0.0	1.0	0.0
	/mute	1 means "true" so muted	integer	-	0	1	0
	/name	object nice name	string	-	0	128 char	

Environment Messages

These messages could be expanded to include program changes and other global data. They are currently not supported in AFC Image.

Listener Messages

These messages could be used by a binaural renderer for head tracking data and listener position in a 6DOF setting. They are currently not supported in AFC Image.

Communication type

Address	Description	Communication type
/adm/obj/n/w	Object width	transmit and receive
/adm/obj/n/x	left/right object location	transmit and receive
/adm/obj/n/y	front/back object location	transmit and receive
/adm/obj/n/z	top/bottom object location	transmit and receive
/adm/obj/n/xy	2D compact format	transmit and receive
/adm/obj/n/xyz	3D compact format	transmit and receive
/adm/obj/n/gain	object gain	transmit and receive
/adm/obj/n/mute	1 means "true" so muted	transmit and receive
/adm/obj/n/name	object nice name	transmit and receive