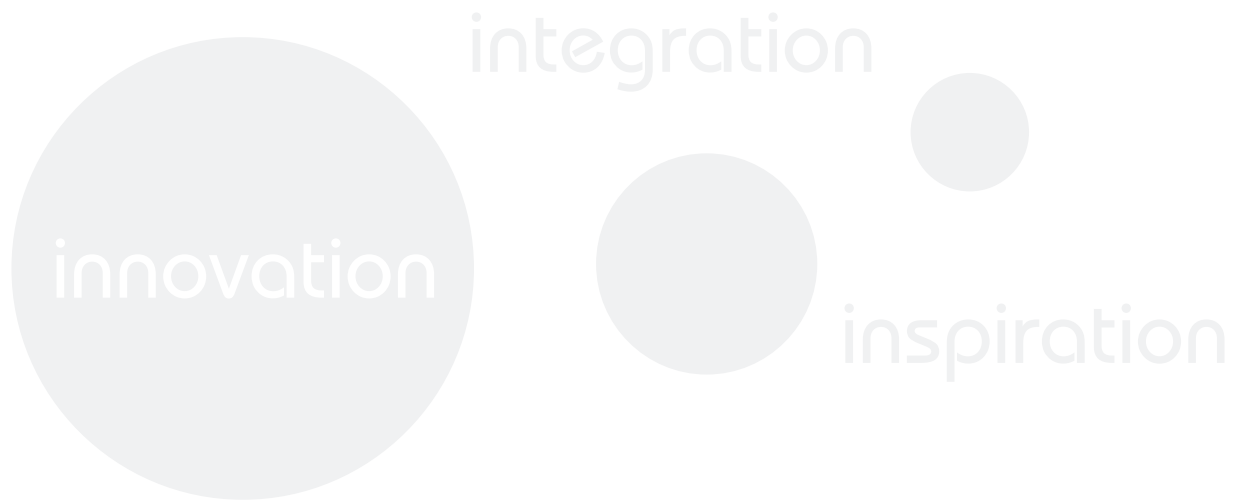


M Series Matrix Mixers Quick Reference Guide



User/Programmer Manual

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M-series Matrix RS-232 Quick Guide

This document is intended to provide a beginning programmer with the most commonly used messages in the Intelix M-series matrix RS-232 protocol. It contains five messages:

Are You There

This message is a general purpose communications check. Your controller should send it to the matrix at the start of any communication session. This message should be answered by:

I Am Here

The I Am Here message indicates that the matrix has successfully received the **Are You There** message. This verifies your communication settings and the communication operations of the matrix.

Set Input Level

This message allows you to set the audio level of an input VCA. An input affects all columns of cross-points connected to that input.

Set Output Level

This message allows you to set the audio level of an output VCA. An output affects all rows of cross-points connected to that output.

Set Current Value

The Set Current Value message sets the audio level of the specific crosspoint you wish. Using values of 00h and FFh as the current level essentially acts as an on/off switch; 00h-> off, FFh -> full on.

Go To Preset

Presets are existing collections of control values. This message allows you to invoke all those values with a single message.

Are You There

Description: This message is used as a simple way to verify communication with a Matrix Mixer.

Class: 0

Message ID: 0

Source: external

Parameters: none

Reply: **I Am Here**

Notes: In the following example, the calculated checksum is 255. Since 255 is greater than the RS232_ESCAPE value of 240, the checksum is escaped and transmitted in two bytes (240 and 15).

Example

RS232_START	length	data fields		Checksum
		class	message ID	
FAh	00h 02h	00h	00h	F0h 0Fh

I Am Here

Description: This message is sent by the Matrix Mixer as a reply to an Are You There message. It is also sent when the Matrix Mixer is powered up or reset.

Class: 0

Message ID: 1

Source: Matrix Mixer

Parameters: none

Reply: none

Example

RS232_START	length	data fields		Checksum
		class	message ID	
FAh	00h 02h	00h	01h	00h

Set Input Level

Description: This message immediately sets the level of an audio input.

Message ID: 10

Source: external

Parameters:

Name	Size	Range	Description
input	1	1-128	audio input number
level	1	0-255	audio input level

Reply: none

Notes: none

Example:

RS232_START	length	data fields	
		class	message ID
FAh	00h 04h	01h	10h

data fields		checksum
input	level	D7h
03h	C8h	

Set Output Level

Description: This message immediately sets the level of an audio output.
Message ID: 13
Source: external
Parameters:

Name	Size	Range	Description
output	1	1-128	audio output number
level	1	0-255	audio output level

Reply: none
Notes: none

Example:

RS232_START	length	data fields	
		class	message ID
FAh	00h 04h	01h	0Dh

data fields		checksum
output	level	11h
03h	F0h 0Fh	

Set Current Value

Description:

This message sets the current value of an audio crosspoint. The coordinates of the audio crosspoint are of the form (audio input #, audio output #). The coordinate's values are one-based (1-128 inclusive) and are transmitted in the object ID. *Using this message to change the current value of an audio crosspoint will cause an immediate change to the audio volume, since it bypasses the audio crosspoint's ramp time and slew rate.*

Class: 2
Message ID: 14
Source: external
Parameters:

Name	Size	Range	Description
current value	1	0-255	crosspoint current value

Reply: none

Notes: This message is useful for “show control” applications.

Example:

RS232_START	length	data fields	
		class	message ID
FAh	00h 03h	02h	0Eh

data fields		checksum
current value (escaped)		07h
F0h 00h		

Go To Preset

Description: This message copies the values of one preset into the “live” crosspoints. All 8 X 8 section of the preset are affected by the **Go ToPreset** message. If a preset’s ramp time is zero, the live values change immediately. Otherwise, the live values are ramped to the preset’s crosspoint values. The preset’s ramp time is set using the **Set Preset Ramp Time** message. The default preset ramp time is zero.
 This message is also known as the “Take” message.

Message ID: 7
Source: external
Parameters:

Name	Size	Range	Description
preset number	1	1-128	preset to go to

Reply: none
Notes: Preset number zero is not allowed for this message.

Example:

RS232_START	length	data fields	
		class	message ID
FAh	00h 03h	03h	07h

data fields		checksum
preset number		0Eh
05h		