How to create an RS-232 message for controlling Athena.

Introduction

The Athena audio matrix mixer is designed to be controlled by a 3rd party hardware or software control system. There are 2 COM Ports, 1 USB Port and 1 Ethernet Port for sending/receiving messages to/from control systems. The basic structure for all Intelix RS-232 messages is the same.

Instructions

Difficulty: Moderate

Communication Details

-The Baud rate for COM 1 and COM 2 is adjustable by the DIP switches on the back of the unit from 9,600bps to 115,200bps (the USB Port is in parallel with COM 2).
-8 data bits
-1 stop bit
-No parity
-Straight-through, 9-pin, RS-232 Serial cable
-Hexadecimal
-Values range from 0-FF (0-255 decimal)

All Intelix RS-232 messages are grouped by **Classes**. Within each Class, there are actions; each action has a **Message ID**. Many messages then have variables (**Data**) of that action that can be adjusted.

All messages begin with a **Start Byte**, this is always FA. The Start byte is followed by **Length**; Length is always a 2 byte message. The Length is the total bytes for Class, Message ID and Data.

The basic structure is:

Start Byte (FA)	Length	Class	Message ID	Data

Example: Invoke Preset

Description: This message copies the values of a predetermined preset into the Live Crosspoints. Athena is capable of storing up to 128 presets.

Class: 3
Message ID: 9

Parameters:

Name	Size (bytes)	Range	Description
Preset Number	1	1h-80h	Preset being invoked

Reply: none

Invoke Preset Example: This example loads preset #10 into the live crosspoints.

Start Byte	Length	Class	Message ID	Data (Preset Number)
FAh	00h 03h	03h	09h	0Ah

Troubleshooting

How do I know that the correct messages are going out?

Having multiple COM Ports is very useful when programming Athena. In the Athena software, open the Live Crosspoints screen when you are sending commands from the control system. This screen will update and new messages are received. Also, in the Communications Diagnostics screen you can send RS-232 commands directly and confirm by the reply that it is the correct message or observe the changes taking place in the Live Crosspoints screen.

**When sending RS-232 commands in the Communication Diagnostics screen they must be send in decimal. The Athena software converts each message to hexadecimal when transmitted.*

My control system will not communicate with the Athena, how do I wire up the RS-232 communication cable?

Refer to the "How to…" library for information on RS-232 communication with Athena.

Why can't I connect to COM 2 and the USB Port on Athena at the same?

COM 2 (the COM Port on the right) and the USB Port are in parallel. These two ports cannot be used at the same. If multiple devices need to communicate with Athena at the same time use COM 1, the IP Port, and either COM 2 or the USB Port.

If further issues arise please refer to the Intelix Athena User Manual or contact Intelix at 866-462-8649.