Using the JNIOR with the Dolby Digital Cinema Server

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The following is an explanation of how to utilize the JNIOR with the Dolby Digital Cinema Server.

Please contact INTEG via e-mail at support@integpg.com or via phone at 724-933-9350 with any questions. Please visit our website at www.integpg.com for software updates, manuals and to download the JNIOR Support Tool.

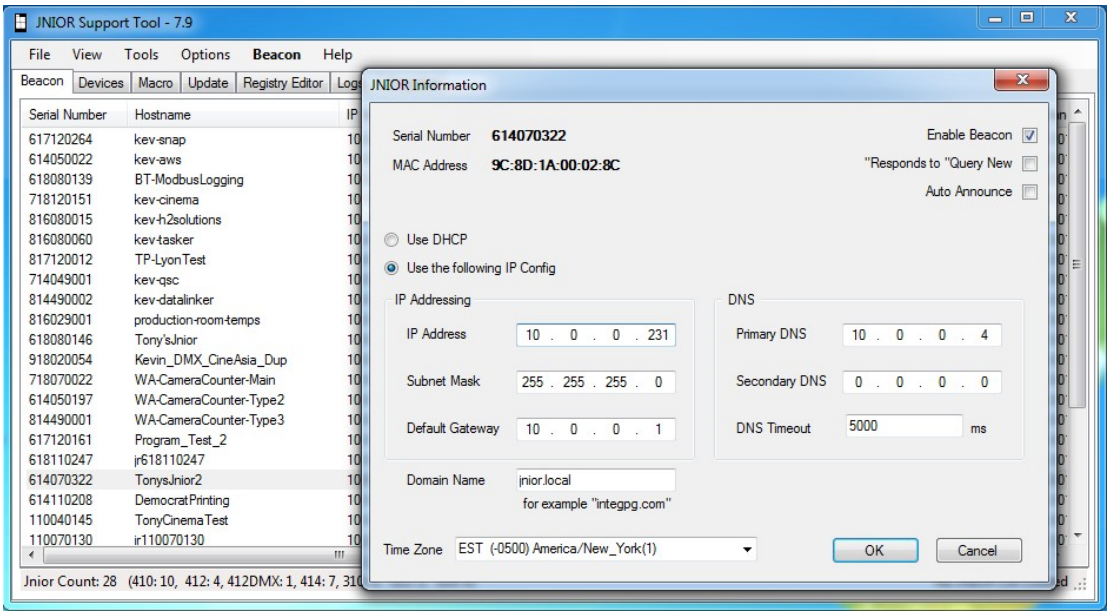
NOTE: This document also can be used to connect the Series 3 JNIOR using Cinema.JNIOR.

Overview

The Dolby cinema server works with both the JNIOR Model 410 and Model 412. The Model 410 has 8 digital inputs and 8 relay outputs. The Model 412 has 4 digital inputs and 12 relay outputs. The Dolby can also work with a 4 Relay Output Expansion Module attached to either the JNIOR Model 410 or 412.

The Dolby makes a SERIAL connection to the JNIOR. You connect the Dolby to the JNIOR using a straight through serial cable. Please connect the cable to the AUX SERIAL port along the top edge of the JNIOR.

Even though the Dolby communicates to the JNIOR via a serial connection, you can still connect the JNIOR to the Ethernet network to utilize all the other features of the JNIOR. To do this, you must configure an IP address in the JNIOR. This can be done using the JNIOR Support Tool. Please connect your JNIOR to the Ethernet network and go to the Beacon tab. Your JNIOR should be displayed on the Beacon tab. Right click on your JNIOR and select Configuration and enter the IP configuration for your JNIOR.



In order for the Dolby to interact with the JNIOR, one of two programs must be running on the JNIOR. Please note, only one of these programs should be running. You do not need both programs running and having both programs running may cause a problem because they will both try to control the AUX Serial port. If you really need both programs running for some reason, then you will have to configure one program to use the other serial port on the JNIOR (the RS232 port). Please contact INTEG for the details on how to do this.

One of the following programs must be running on the JNIOR to work with the Dolby:

1. **Serial Control** (or Serial Control PLUS on newer JNIORs)

2. **Cinema.Jar**

If you just want to control the outputs on the JNIOR and use the JNIOR inputs to control the Dolby server, then you only need the **Serial Control** program.

If you want to control individual outputs on the JNIOR and run macros on the JNIOR, then you will need the **Cinema.Jar** program.

1 - Using the Serial Control Program

The Serial Control program will allow you to control the outputs on the JNIOR and use the inputs on the JNIOR to control the Dolby. Serial Control is preloaded on every JNIOR shipped. A new version called Serial Control PLUS is loaded with newer JNIOR Operating Systems and is available for installation via an update project on the INTEG website. The difference between the 2 programs is Serial Control PLUS allows you to make a serial connection and Ethernet connection to the JNIOR. You can send the same

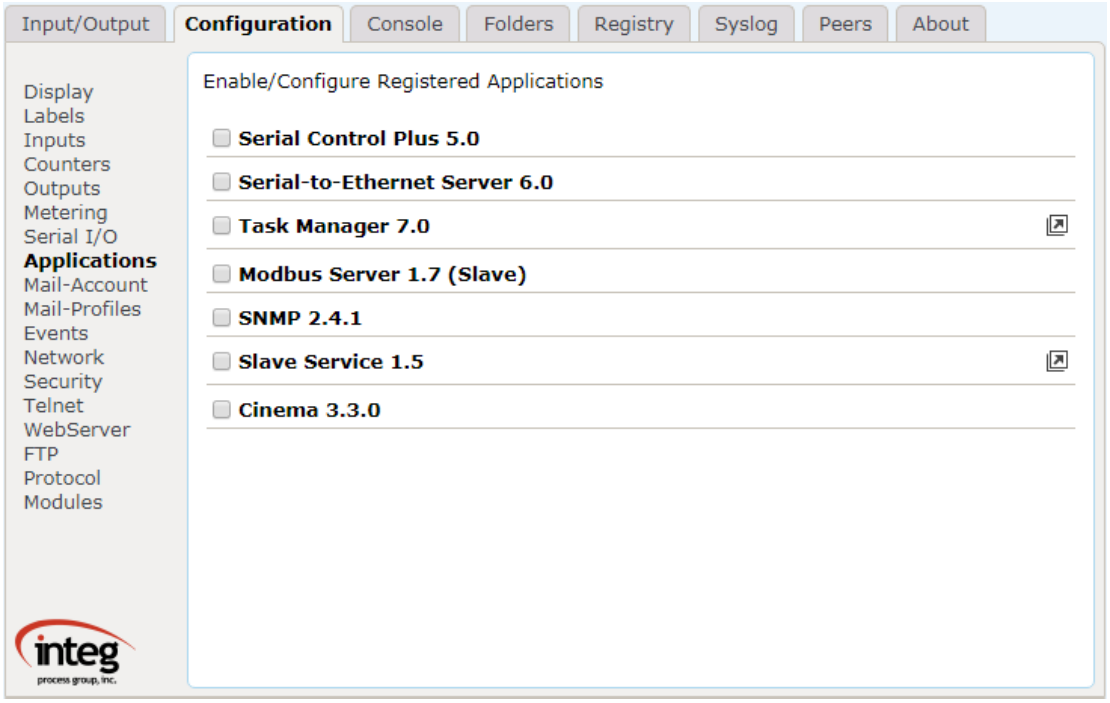
ASCII commands via either the serial connection or the Ethernet connection to control the JNIOR.

JNIOR Configuration – Starting the Serial Control application

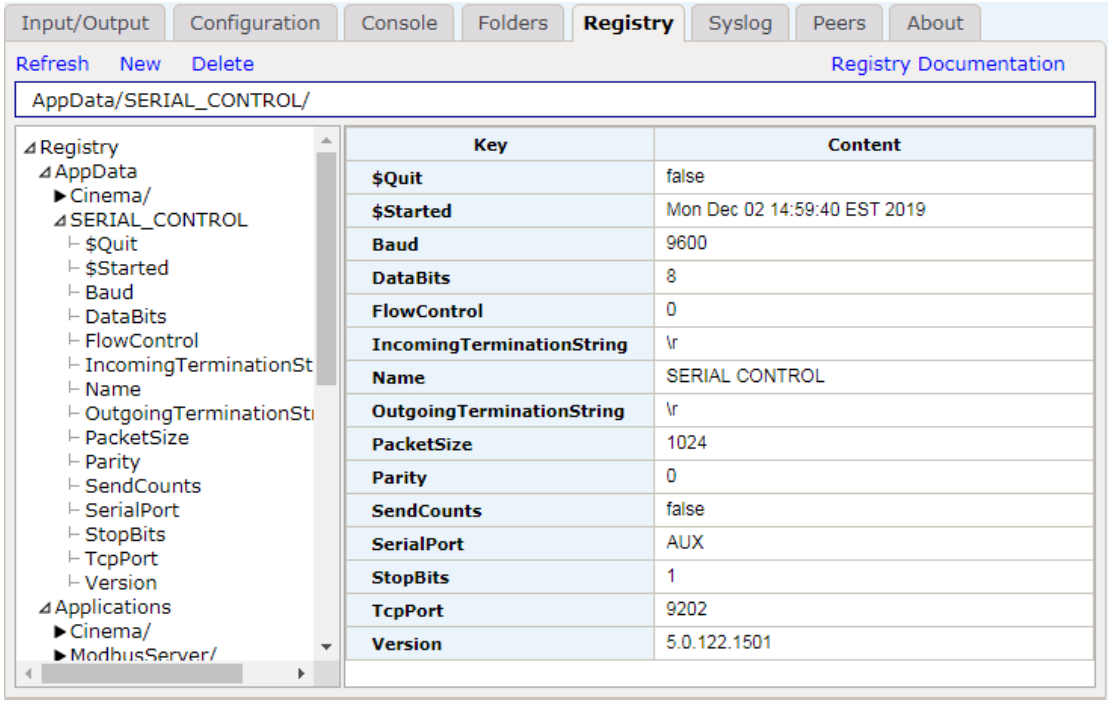
You will have to enable the Serial Control program on your JNIOR. It is not running by default. Once you enable the program, it will always run on boot up.

The easiest way to enable the Serial Control program is via the JNIOR Web page. To use the main JNIOR web page, the JNIOR must have its IP address configured so that it can be connected to via the Ethernet network. Please see the JNIOR Getting Started Manual for more details on configuring the JNIOR IP address using the JNIOR Support Tool.

Once the JNIOR is connected to the Ethernet network, launch the main JNIOR web page by typing the JNIOR IP address in your browser address line or right clicking on your JNIOR in the Beacon tab. After the JNIOR web page is loaded, go to the Applications tab and check the box for Serial Control. Reboot the JNIOR and the program will be running.



From the Registry Editor tab in the JNIOR Web page, you can click on AppData – Serial Control folder to see the default Serial Control settings. The following shows the registry keys for the Serial Control PLUS program.



Dolby Configuration – with Serial Control

Please use the following instructions in conjunction with the Dolby documentation and the JNIOR Serial Control manual when using the Serial Control program on the JNIOR.

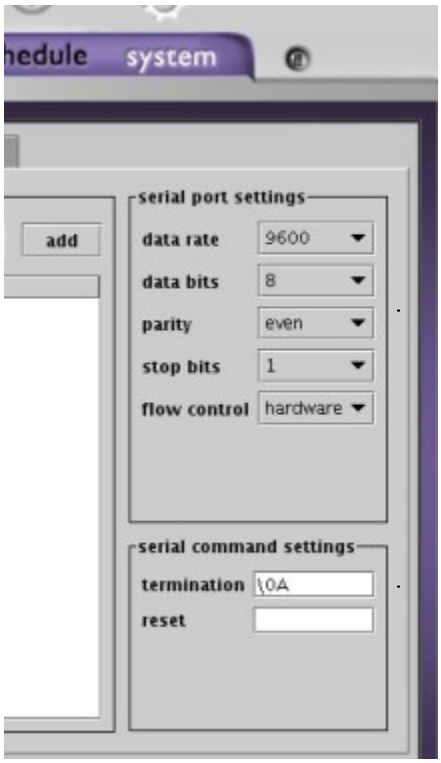
A) On the Dolby, you must first set the Dolby serial port to communicate with the JNIOR using the default serial port settings for the JNIOR **AUX SERIAL** port. The default settings for the AUX port when using the Serial Control program are:

9600 Baud
8 bits
no parity
no flow control
1 stop bit

Please set the Dolby to match these settings. You may have to disconnect the serial cable between the JNIOR and the Dolby to reset this port on the Dolby and JNIOR.

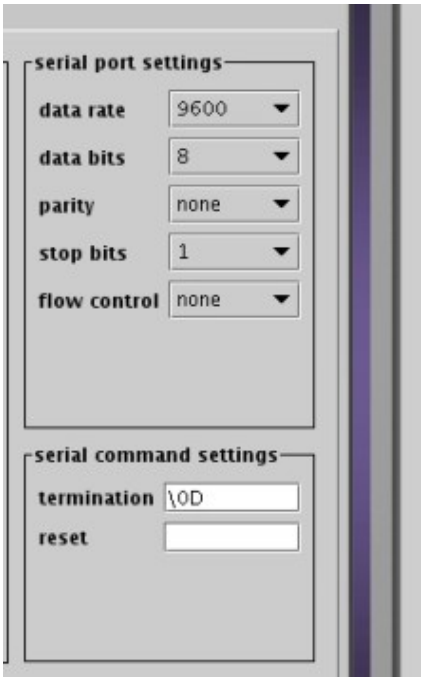
B) In the Dolby, there is a termination character. The Dolby default is \0A. You must change this to \0D to match the JNIOR. (The JNIOR displays \r in its Registry Key which is the ASCII representation of the HEX characters \0D.)

Configuration to match default JNIOR Serial Control settings



Change to 'no parity' and 'no flow control'

Change to \ 0D



Dolby Serial Automation – Outputs

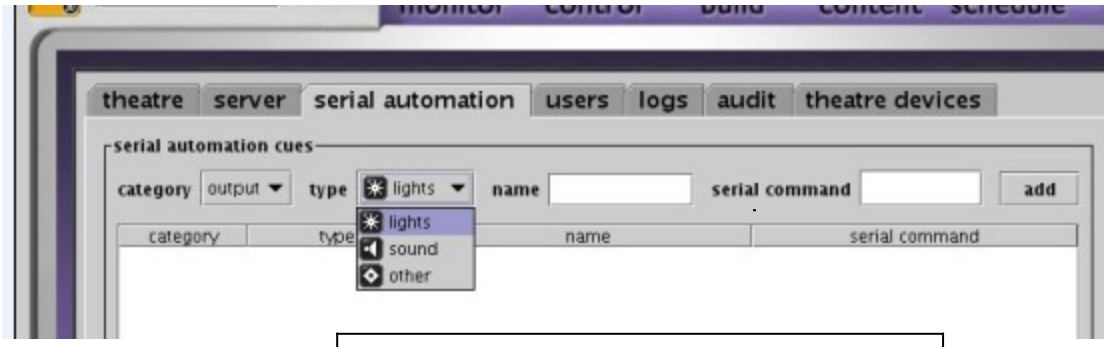
After you have configured the Dolby serial port settings, you will then enter the commands listed in the Serial Control Manual to meet your needs.

The basic commands are:

c1 - closes output 1
o1 - opens output 1
c1p=1000 - pulses output 1 closed for 1000 milliseconds

Where the number 1 can be replaced with 2 through 8 to represent the first 8 outputs.

For outputs 9 – 12 in the JNIOR Model 412 or when using a 4 Relay Output Expansion Module, the number 1 is replaced with +1 through +8 to represent outputs 9 – 16. For example, c+3p=1000 would pulse output 11 for 1000 milliseconds.



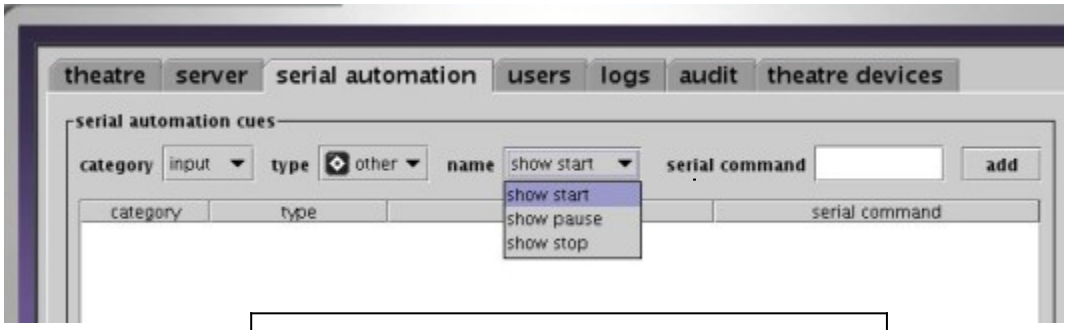
Enter the appropriate ASCII command string in 'serial command' box to control JNIOR outputs

Dolby Serial Automation – Inputs

You can trigger events on the Dolby by monitoring JNIOR digital inputs. When a JNIOR digital input goes from low to high (off to on), the JNIOR will send the following text to the Dolby:

IN1=1 when input 1 goes on
IN1=0 when input 1 goes off

The number 1 above can be replaced with 2 through 8 to represent the 8 JNIOR inputs.



Enter ASCII command string in 'serial command' box coming from the JNIOR to trigger the Dolby inputs show start, show pause or show stop

2 - Using the Cinema.Jar Program

The Cinema.Jar program will allow you to control the outputs on the JNIOR, use the inputs on the JNIOR to control the Dolby and allow you to run macros on the JNIOR. The macros can be configured to control JNIOR outputs, control external devices, such as projectors, and send text to the Dolby to start, stop or pause the Dolby server.

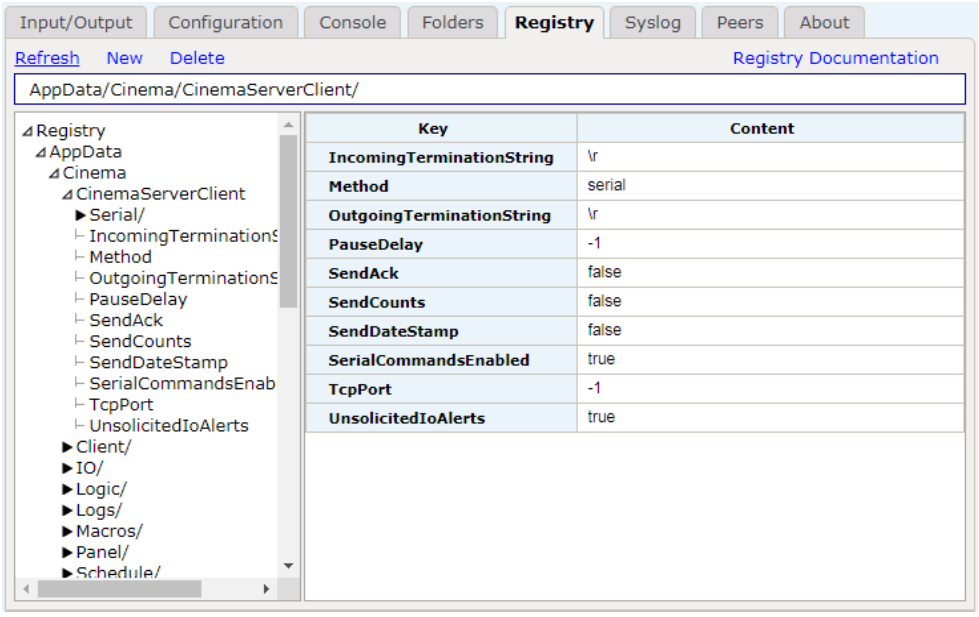
Cinema.Jar is NOT preloaded on the JNIOR before it is shipped. A JNIOR 'update' project that works with the JNIOR Support Tool can be downloaded from the Cinema area of our website. The Cinema.Jar manual is also available on our website where you download the software.

Please download the Cinema.Jar update zip file from our website, but do not unzip it. Go to the Update tab in the JNIOR Support Tool and select Open Project and navigate to where you saved the Cinema.Jar zip file and select it. The JNIOR Support Tool will unzip the file. Click Publish Update to JNIOR and select your JNIOR.

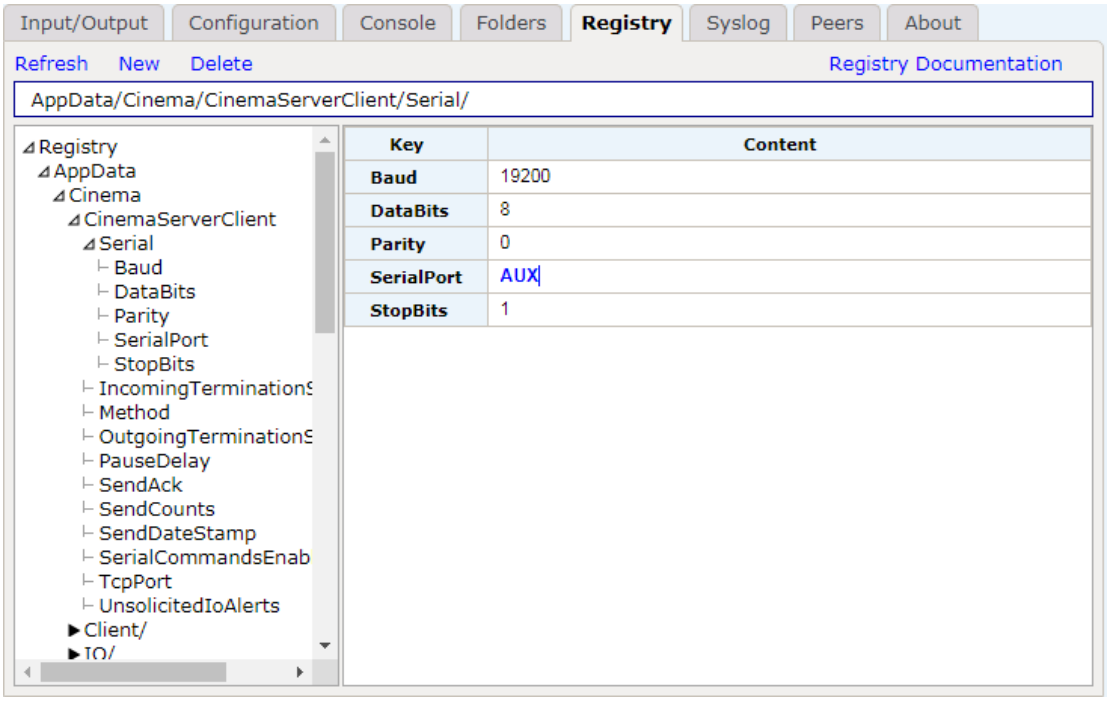
NOTE: Cinema.Jar requires a JNIOR Operating System (OS) greater than 3.4, so you will probably have to update your JNIOR OS. An OS update project is available in the JNIOR Downloads section of our website.

JNIOR Configuration – Configuring a Cinema Server Client

After you have installed Cinema.Jar, you will need to enable a Cinema Server Client. The Dolby will act as a Cinema Server Client within the Cinema.Jar program. Open the main JNIOR Web page and go to the Registry Editor tab, click on the AppData folder, then the Cinema folder and finally CinemaServerClient folder.
Please modify the Cinema Server Client configuration to match the configuration in the picture below.



You will also have to modify the Serial settings for the Cinema Server Client. Please change the Serial Port registry key to AUX (as highlighted in yellow below). Also, the default baud rate for the Cinema Server Client is 19200. You can either change the Dolby to be 19200 or change the JNIOR to be 9600. Either baud setting will work as long as they match on the JNIOR and the Dolby.



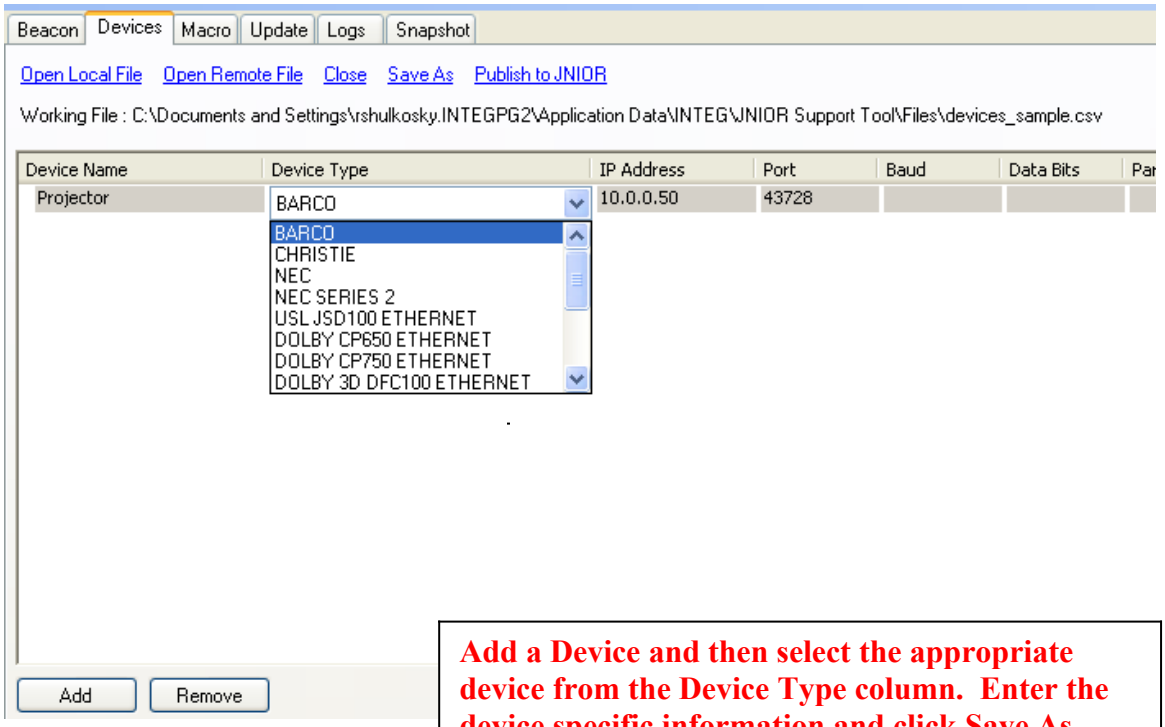
NOTE: In order for the above settings to take effect, you will have to reboot the JNIOR. Please do not disconnect the power to the JNIOR to reboot. After you make your changes, the JNIOR will take up to 1 minute to save the changes to permanent memory. To reboot the JNIOR, please go to the About tab in the JNIOR Web page and click on the Reboot button so all settings will be saved properly.

Cinema.Jar Configuration – Devices and Macro Files

The details on how and why to use a Devices file and Macro file are described in detail in the Cinema.Jar Users Manual. The following provides a brief overview.

Devices File

You do not need a devices file to use Cinema.Jar with the Dolby server. You only need a Devices file if you are going to control an external device such as a digital projector. In order to control one or more projectors or other 'devices', you must configure your devices file. Below is a sample devices file for controlling a projector.



Add a Device and then select the appropriate device from the Device Type column. Enter the device specific information and click Save As

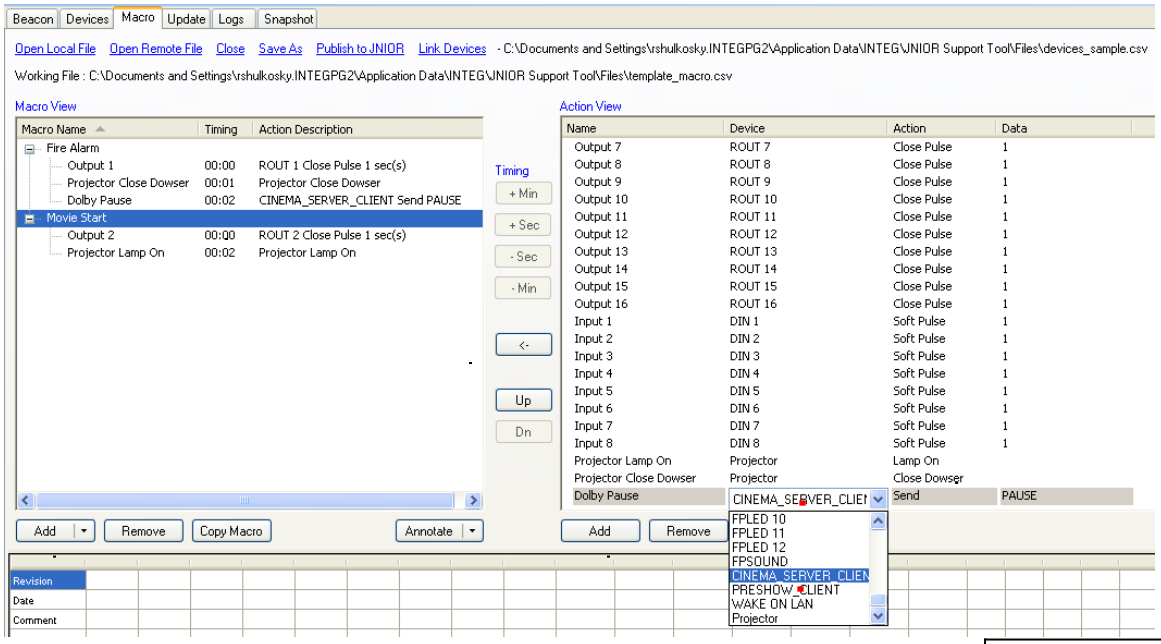
NOTE: After you have created your devices, you must click on the Save As and then click on Publish to JNIOR to load the devices file to your JNIOR.

You may or may not have to restart Cinema.Jar after you upload your devices file. The JNIOR Support Tool may try to restart the program or the Cinema.Jar may try to ingest the new file. It all depends on the version of software you are running. To be safe, you can reboot the JNIOR.

Macro File

The macro file stores the macros to be executed on the JNIOR. You can create a variety of macros to control the digital projector, JNIOR outputs, other devices and to send data to the Cinema Server Client.

Make sure your Link Devices file to your macro file so all your devices are available.



Add Macros

Adjust timing of actions

Add Actions to Macros

Add Actions

Edit Actions for the device you have selected

Send text strings to the Dolby configured as a Cinema Server Client

NOTE: After you have created your macros, you must click on the Save As and then click on Publish to JNIOR to load the macro file to your JNIOR.

You may or may not have to restart Cinema.Jar after you upload your macro file. The JNIOR Support Tool may try to restart the program or the Cinema.Jar may try to ingest the new file. It all depends on the version of software you are running. To be safe, you can reboot the JNIOR.

Dolby Configuration

There are a few differences in the Dolby configuration when using the Cinema.Jar program. As noted above, the default baud rate for the Cinema Server Client is 19200. Please make sure the Dolby and JNIOR match.

Dolby Serial Automation – Outputs

When controlling individual outputs, the commands are the same when using Cinema.Jar except that the command must start with :: (double colon). For example, if your house lights low signal is connected to output 1, then you would enter the command ::c1p=1 000 and this would close output 1 for 1 second (1000 milliseconds).

All the commands are listed in Appendix B of the Cinema.Jar Manual.

NOTE: All ASCII commands used to control outputs directly must start with :: (colon, colon) when using the Cinema.Jar program. The Serial Control program does not need the ::

Instead of controlling outputs individually, you can also 'trigger' a macro on the JNIOR by typing the following command in the 'serial command' box:

run macro_name Where 'macro_name' is the name of the macro on the JNIOR

For example, enter the command run test in the Dolby to have the JNIOR run the macro named test

NOTE: Do NOT use the :: in front of the run command
The run command must be entered in the Dolby in lower case letters.

Dolby Serial Automation – Inputs

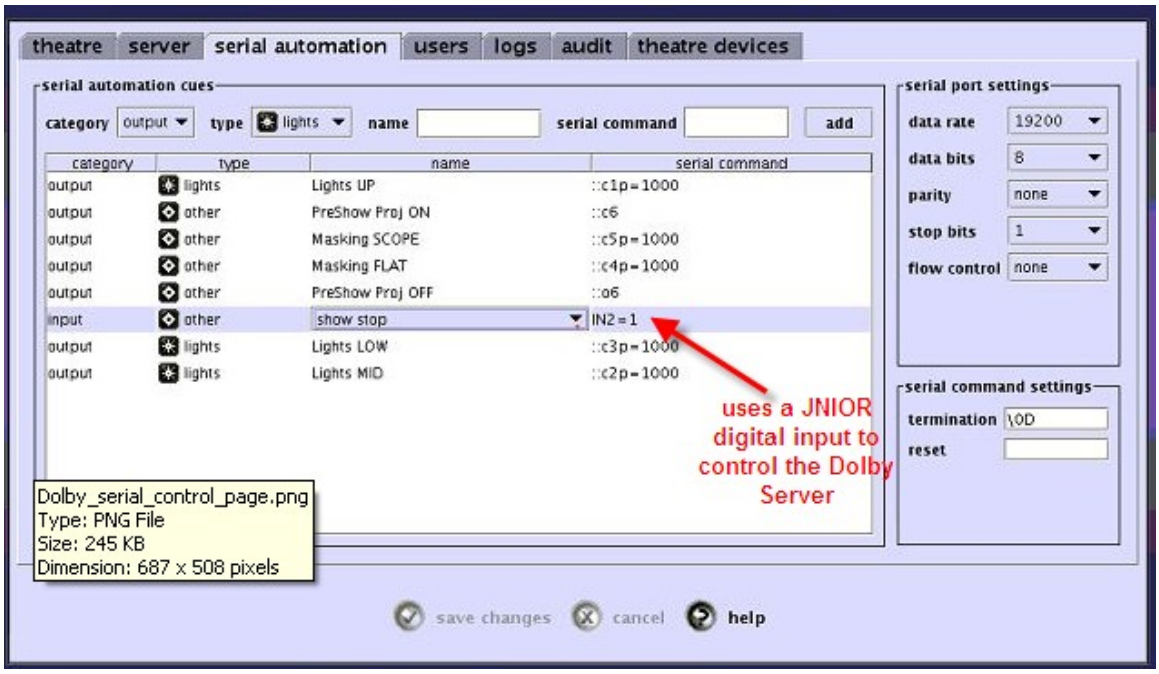
You can trigger events on the Dolby by monitoring JNIOR digital inputs. When a JNIOR digital input goes from low to high (off to on), the JNIOR will send the following text to the Dolby:

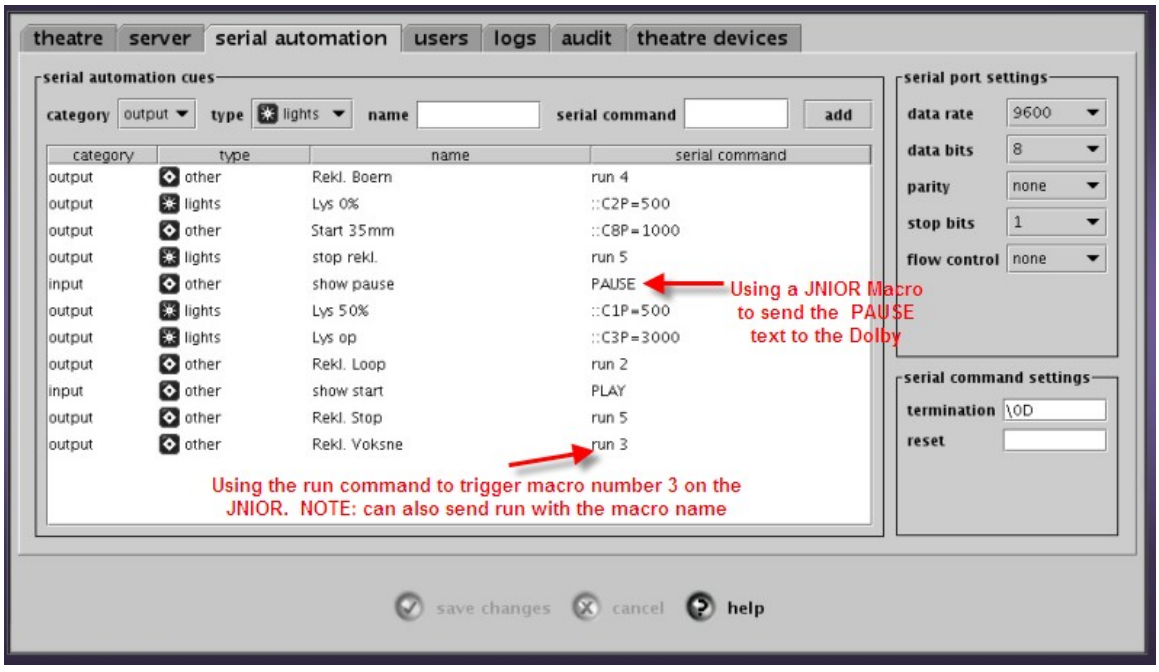
IN1=1 when input 1 goes on
IN1=0 when input 1 goes off

You can also trigger events on the Dolby by receiving ASCII text from a JNIOR macro using the 'digital cinema server client' send action.

NOTE: The JNIOR does not send the :: in front of these commands so do NOT enter the :: in the Dolby set-up.

Sample Pictures of the Dolby Configuration


theatre
server
serial automation
users
logs
audit
theatre devices
serial automation cues
category output
type lights
name
serial command
add
category
type
name
serial command
output lights Lights UP ::c1p=1000
output other PreShow Proj ON ::c6
output other Masking SCOPE ::c5p=1000
output other Masking FLAT ::c4p=1000
output other PreShow Proj OFF ::o6
input other show stop IN2=1
output lights Lights LOW ::c3p=1000
output lights Lights MID ::c2p=1000
serial port settings
data rate 19200
data bits 8
parity none
stop bits 1
flow control none
serial command settings
termination \0D
reset
uses a JNIOR digital input to control the Dolby Server
Dolby_serial_control_page.png
Type: PNG File
Size: 245 KB
Dimension: 687 x 508 pixels
save changes
cancel
help


theatre
server
serial automation
users
logs
audit
theatre devices
serial automation cues
category output
type lights
name
serial command
add
category
type
name
serial command
output other Rekl. Boern run 4
output lights Lys 0% ::C2P=500
output other Start 35mm ::C8P=1000
output lights stop rekl. run 5
input other show pause PAUSE
output lights Lys 50% ::C1P=500
output lights Lys op ::C3P=3000
output other Rekl. Loop run 2
input other show start PLAY
output other Rekl. Stop run 5
output other Rekl. Voksne run 3
Using a JNIOR Macro to send the PAUSE text to the Dolby
Using the run command to trigger macro number 3 on the JNIOR. NOTE: can also send run with the macro name
serial port settings
data rate 9600
data bits 8
parity none
stop bits 1
flow control none
serial command settings
termination \0D
reset
save changes
cancel
help