

LJ SCS Content Expander v001.010.html documentation

Overview

This JavaScript / HTML file enables you to create a TAB delimited file from Excel that contains information to manage x32 Channel Strip content, DCA Membership, and Mute/Unmute status in a fairly easy to use manner using Software Cue System (SCS).

Why This software?

Software Cue System (SCS) is a powerful tool for managing audio cues, light cues, etc. and it has a built in OSC interface to Behringer x32s. However, the management of large numbers of channels, DCAs, Matrixes, etc. using the interface in SCS is tedious and difficult to visualize. This is especially problematic when there are many dynamic audio requirements, such as when running theater production via DCA groups or muting and unmuting many channels, Matrixes, AUXs, etc.

This simple script lets you create your complex sound cue content in Excel. Then, in SCS, you create a cue into which the complex content in Excel is to be placed. This expander software reads the SCS file, expands it with information from the Excel file (via a tab delimited save of the excel file).

DETAILS

In SCS, create your general Cues as normal, but also build in placeholders for the sound cues that you want to manage through this software.

Build the bulk of the cue content in Excel, save as Tab Delimited, run this software, specify the SCS and substitution Rules files, and you get a new SCS file with the Excel-defined content merged in after the associated SCS Cue.

Here's an example:

Open SCS and create a new or open an old Production. Be sure your network connects to your x32 so you can send commands.

With SCS 11.8.2.1 you can use the Editor to get to Production->Properties. Then under Devices go to Control Send and set up a connection to your x32.

Then in the Cue positions where you will want to get commands from this tool, create a control send cue. In the Description show what you would like...maybe something like "Page 27 Cue 01" to show this cue is to be run on page 27 of the script as the first cue on that page....or however you like to designate these things.

In the Control Send Cue for the OSC Command Type select Free Format. Then for the OSC Message place a unique string so that this tool can find that string and insert the desired commands after it in the SCS XML file. For example, use: /|Cue027-01| (the leading slash makes SCS accept the syntax of this content).

That's it. Do this for as many cues you want expanded by this software, giving each a unique name in the SCS cue list – DO NOT reuse names as it causes errors.

SCS will save this within the content of its XML file you just saved, as in this example where a free format cue is specified as `/|CUE027-01|`.

```
<Cue>
  <CueId>Q1</CueId>
  <Description>X32 OSC</Description>
  <DefDes>1</DefDes>
  <Sub>
    <SubType>M</SubType>
    <SubDescription>X32 OSC</SubDescription>
    <DefSubDes>1</DefSubDes>
    <ControlMessage>
      <CMLogicalDev>X32</CMLogicalDev>
      <OSCCmdType>free</OSCCmdType>
      <OSCItemString>/|Cue027-01|</OSCItemString>
      <OSCData>/|Cue027-01|</OSCData>
    </ControlMessage>
  </Sub>
</Cue>
```

See the reference to this cue you just created? This expander tool will be used to read the XML file from SCS and rewrite it while inserting audio cues you define in Excel leveraging the same specified tag in the Excel generated tab delimited file (in this case `/|Cue027-01|`).

Specific details on the available Excel content will be provided later, but for now, let's consider an example to provide the concept. Suppose we want to color several channel strips White to indicate that they are important and we want to place several channels into one or more DCAs and unmute the DCAs and the Channels and name the DCAs something. For this example, the Channels already have great names on their scribble strips and we are not changing them.

We would create an Excel file like this:

~comment	v01 Sample Show v01					
~comment	The HEADER line defines the subsequent column content					
~TAGSTART	Cue027-01					
~HEADER	ch-01	ch-02	ch-03	dca-1	dca-2	dca-3
~NAME	^	^	^	Joe	Sam	All
~COLOR	wh	wh	wh	wh	wh	wh
~ON	1	1	1	1	1	1
~DCA	1 3	1 3	^	^	^	^
~TAGEND						
~DONE						

Here is what this is saying.

Any row beginning with ~comment is a comment and the tool will ignore it.

The row starting with ~TAGSTART indicates the tag name to look for in the SCS file (note the leading slash in the name is omitted here).

The ~HEADER row identifies the x32 components to work on for what will be present in the rows below in the same column (every ~HEADER row replaces any prior ~HEADER row.)

The ~NAME row indicates what to place in the scribble strip on the x32 for the item in the associated ~HEADER column. A caret symbol (^) indicates that this entry should be ignored. Some names are already set so no need to modify them. In this example, we will provide names for DCA 1, DCA 2 and DCA 3.

The ~COLOR row says what color to set the scribble strip. We are making all of them white.

The ~ON row indicates unmuted (1) or muted (0) and we are turning them all on (unmuted).

The ~DCA row indicates which DCA(s) an entry should be in. Of course a DCA cannot be in a DCA so we use the ^ to ignore that as well. We are placing Channels 1 and 2 into DCAs 1 and 3.

The ~TAGEND indicates that this is everything we want done for this tag's position in the SCS file.

The ~DONE row indicates that we have completed the entire rules content definition for all tags we want to have processed.

We then save this as a Tab Delimited file in Excel. It is saved as a .txt file with tab delimiters.

Next we run the tool and tell it to open the SCS file that the SCS software created.

Then tell it to open the SCS RULES file (which is the tab delimited file you just saved from Excel).

Then a text area of the expanded SCS content is displayed for you to copy and paste into your new and expanded SCS file.

It looks something like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<Production>
  <Head>
    <Title>TEST2</Title>
    <ProdId>1C80A71E</ProdId>
    <Version>11.8.2.1</Version>
    <Build>20200107</Build>
    <PRLogicalDev0>Front</PRLogicalDev0>
    <PRNumChans0>2</PRNumChans0>
    <PRAutoIncludeDev0>1</PRAutoIncludeDev0>
    <DfltDBLevel0>-3.0</DfltDBLevel0>
    <PreviewDevice>Front</PreviewDevice>
  </Head>
</Production>
```



```

<PRVidAudLogicalDev0>Default</PRVidAudLogicalDev0>
<PRAutoIncludeVidAud0>1</PRAutoIncludeVidAud0>
<DfltVidAudDBLevel0>-3.0</DfltVidAudDBLevel0>
<PRCtrlSendLogicalDev0>X32</PRCtrlSendLogicalDev0>
<PRCtrlSendDevType0>TelnetOut</PRCtrlSendDevType0>
<PRCSDevice>
  <PRCSLogicalDev>X32</PRCSLogicalDev>
  <PRCSDevType>NetworkOut</PRCSDevType>
  <PRCSNetworkRemoteDev>OSC-X32</PRCSNetworkRemoteDev>
  <PRCSNetworkProtocol>UDP</PRCSNetworkProtocol>
  <PRCSNetworkRole>Client</PRCSNetworkRole>
  <PRCSNetworkReplyMsgAddCR>1</PRCSNetworkReplyMsgAddCR>
  <PRCSNetworkReplyMsgAddLF>0</PRCSNetworkReplyMsgAddLF>
  <PRCSDelayBeforeReloadNames>100</PRCSDelayBeforeReloadNames>
</PRCSDevice>
<FocusPoint>NextManual</FocusPoint>
</Head>
<Cue>
  <CueID>Q1</CueID>
  <Description>X32 OSC</Description>
  <DefDes>1</DefDes>
  <Sub>
    <SubType>M</SubType>
    <SubDescription>X32 OSC</SubDescription>
    <DefSubDes>1</DefSubDes>
    <ControlMessage>
      <CMLogicalDev>X32</CMLogicalDev>
      <OSCCmdType>free</OSCCmdType>
      <OSCItemString>/|Cue027-01|</OSCItemString>
      <OSCDData>/|Cue027-01|</OSCDData>
    </ControlMessage>
  </Sub>
</Cue>
  <Cue>
    <CueID>|Cue027-01|-1</CueID>
    <Description>|Cue027-01|-1</Description>
    <DefDes>1</DefDes>
    <ActivationMethod>auto</ActivationMethod>
    <AutoActivateCueType>prev</AutoActivateCueType>
    <AutoActivatePosn>end</AutoActivatePosn>
    <AutoActivateTime>0</AutoActivateTime>
    <HideCueOpt>EC</HideCueOpt>
    <Sub>
      <SubType>M</SubType>
      <SubDescription>|Cue027-01|-1</SubDescription>
      <ControlMessage>
        <CMLogicalDev>X32</CMLogicalDev>
        <OSCCmdType>free</OSCCmdType>
        <OSCItemString>/dca/1/config/name ,s "Joe"</OSCItemString>
        <OSCDData>/dca/1/config/name ,s "Joe"</OSCDData>
      </ControlMessage>
      <ControlMessage>
        <CMLogicalDev>X32</CMLogicalDev>
        <OSCCmdType>free</OSCCmdType>
        <OSCItemString>/dca/2/config/name ,s "Sam"</OSCItemString>
        <OSCDData>/dca/2/config/name ,s "Sam"</OSCDData>
      </ControlMessage>
    </Sub>
  </Cue>
  <Cue>
    <CueID>|Cue027-01|-2</CueID>

```

```
<Description>|Cue027-01|-2</Description>
<DefDes>1</DefDes>
<ActivationMethod>auto</ActivationMethod>
<AutoActivateCueType>prev</AutoActivateCueType>
<AutoActivatePosn>end</AutoActivatePosn>
<AutoActivateTime>0</AutoActivateTime>
<HideCueOpt>EC</HideCueOpt>
<Sub>
<SubType>M</SubType>
<SubDescription>|Cue027-01|-2</SubDescription>
<ControlMessage>
<CMLogicalDev>X32</CMLogicalDev>
<OSCCmdType>free</OSCCmdType>
<OSCItemString>/ch/01/config/color ,i 7</OSCItemString>
<OSCData>/ch/01/config/color ,i 7</OSCData>
</ControlMessage>
<ControlMessage>
<CMLogicalDev>X32</CMLogicalDev>
<OSCCmdType>free</OSCCmdType>
<OSCItemString>/ch/02/config/color ,i 7</OSCItemString>
<OSCData>/ch/02/config/color ,i 7</OSCData>
</ControlMessage>
<ControlMessage>
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<OSCCmdType>free</OSCCmdType>
<OSCItemString>/ch/03/config/color ,i 7</OSCItemString>
<OSCData>/ch/03/config/color ,i 7</OSCData>
</ControlMessage>
<ControlMessage>
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</ControlMessage>
<ControlMessage>
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<OSCCmdType>free</OSCCmdType>
<OSCItemString>/dca/2/config/color ,i 7</OSCItemString>
<OSCData>/dca/2/config/color ,i 7</OSCData>
</ControlMessage>
</Sub>
</Cue>
<Cue>
<CueID>|Cue027-01|-3</CueID>
<Description>|Cue027-01|-3</Description>
<DefDes>1</DefDes>
<ActivationMethod>auto</ActivationMethod>
<AutoActivateCueType>prev</AutoActivateCueType>
<AutoActivatePosn>end</AutoActivatePosn>
<AutoActivateTime>0</AutoActivateTime>
<HideCueOpt>EC</HideCueOpt>
<Sub>
<SubType>M</SubType>
<SubDescription>|Cue027-01|-3</SubDescription>
<ControlMessage>
<CMLogicalDev>X32</CMLogicalDev>
<OSCCmdType>free</OSCCmdType>
<OSCItemString>/ch/01/mix/on ,i 1</OSCItemString>
<OSCData>/ch/01/mix/on ,i 1</OSCData>
</ControlMessage>
<ControlMessage>
```

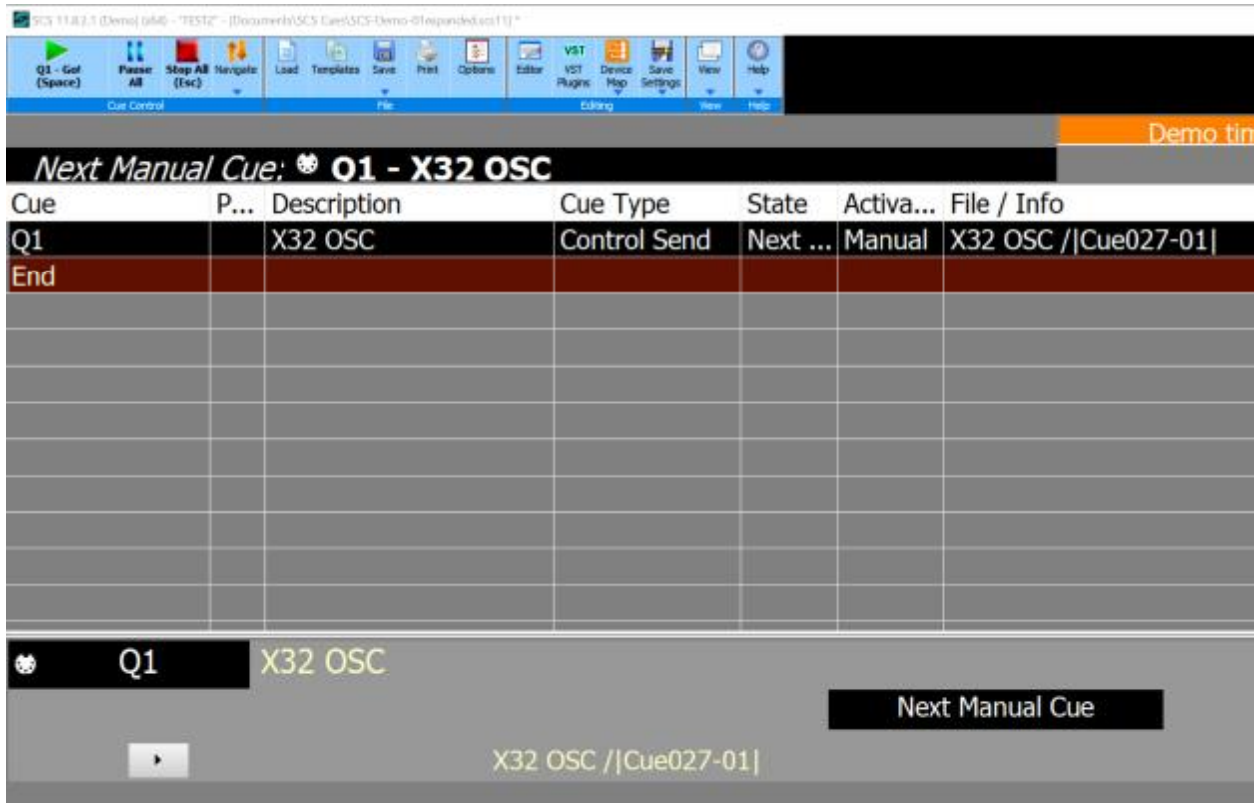
```

    <CMLogicalDev>X32</CMLogicalDev>
    <OSCCmdType>free</OSCCmdType>
    <OSCItemString>/ch/02/mix/on ,i 1</OSCItemString>
    <OSCData>/ch/02/mix/on ,i 1</OSCData>
  </ControlMessage>
  <ControlMessage>
    <CMLogicalDev>X32</CMLogicalDev>
    <OSCCmdType>free</OSCCmdType>
    <OSCItemString>/ch/03/mix/on ,i 1</OSCItemString>
    <OSCData>/ch/03/mix/on ,i 1</OSCData>
  </ControlMessage>
  <ControlMessage>
    <CMLogicalDev>X32</CMLogicalDev>
    <OSCCmdType>free</OSCCmdType>
    <OSCItemString>/dca/1/on ,i 1</OSCItemString>
    <OSCData>/dca/1/on ,i 1</OSCData>
  </ControlMessage>
  <ControlMessage>
    <CMLogicalDev>X32</CMLogicalDev>
    <OSCCmdType>free</OSCCmdType>
    <OSCItemString>/dca/2/on ,i 1</OSCItemString>
    <OSCData>/dca/2/on ,i 1</OSCData>
  </ControlMessage>
</Sub>
</Cue>
  <Cue>
    <CueID>|Cue027-01|-4</CueID>
    <Description>|Cue027-01|-4</Description>
    <DefDes>1</DefDes>
    <ActivationMethod>auto</ActivationMethod>
    <AutoActivateCueType>prev</AutoActivateCueType>
    <AutoActivatePosn>end</AutoActivatePosn>
    <AutoActivateTime>0</AutoActivateTime>
    <HideCueOpt>EC</HideCueOpt>
  <Sub>
    <SubType>M</SubType>
    <SubDescription>|Cue027-01|-4</SubDescription>
    <ControlMessage>
      <CMLogicalDev>X32</CMLogicalDev>
      <OSCCmdType>free</OSCCmdType>
      <OSCItemString>/ch/01/grp/dca ,i 5</OSCItemString>
      <OSCData>/ch/01/grp/dca ,i 5</OSCData>
    </ControlMessage>
    <ControlMessage>
      <CMLogicalDev>X32</CMLogicalDev>
      <OSCCmdType>free</OSCCmdType>
      <OSCItemString>/ch/02/grp/dca ,i 5</OSCItemString>
      <OSCData>/ch/02/grp/dca ,i 5</OSCData>
    </ControlMessage>
  </Sub>
</Cue>
</Files>
</Files>
<FileSaveInfo>
  <_CueFile_>C:\Users\Larry\Documents\SCS Cues\SCS-Demo-01.scs11</_CueFile_>
  <_Saved_>2020/02/26 15:43:26</_Saved_>
  <_SCS_Version_>11.8.2.1 (Demo)</_SCS_Version_>
  <_SCS_Build_>2020/01/07 09:25</_SCS_Build_>
</FileSaveInfo>
</Production>

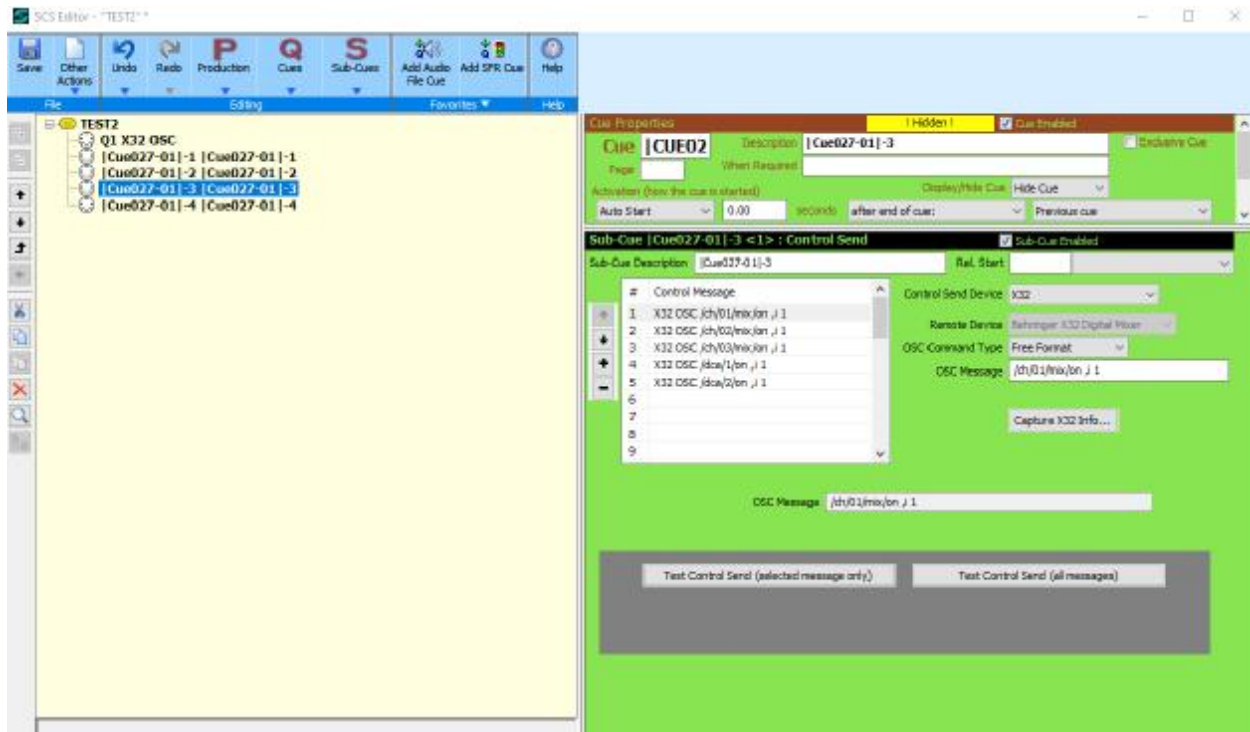
```

Save that into a .scsxx file (xx is the SCS version number as mimicked from the scs source file extension) in the folder where your other SCS files are (default is Documents -> SCS Cues). It is suggested that you keep the same name as the original file but add the word "Expanded" to it so that you know it is the expanded version. In Windows, use Notepad to avoid adding any control characters to the file.

Start SCS and browse to the expanded folder and open it.



Use the SCS Editor to check content or even edit it. The added cues are hidden in the main SCS window and run automatically after the Cue you entered with the tag designation. That cue is also run, but it contains an invalid command for the x32 so is ignored.



DETAILS

Here are the commands that are allowed in the first column of the RULES Tab delimited file along with overall information.

Any double-quote character in the Tab Delimited file will be removed.

Every ~HEADER entry replaces any prior ~HEADER entry so you can change these any time you want. However, it is up to you to be sure that there is always a ~HEADER entry in place prior to any command that requires the header content.

~comment

Any line in the rules file that begins with ~comment is ignored later on.

~TAGSTART *with the next column containing a tag*

The Tag specified is what you name the Cue in SCS for which subsequent rows up to the next ~ENDTAG will be used for added information to place into the SCS cue set. Be sure to make these something that will not occur elsewhere in the scs file. Here, the tag does not include a leading / like it does when you add it to the SCS free format command.

You may place as many ~TAGSTART ... content ... ~TAGEND sets of rows in the file as you want. DO NOT repeat any Tag name in either the original SCS file or in the tab delimited Rules file or there will be errors.

~HEADER with subsequent columns specifying a channel, bus, auxin, fx return, matrix, or bus

The ~HEADER defines which item each following row in that same column applies to. You can identify a channel, aux-in, bus, fx-rtn, DCA, or MTX.

You may place new ~HEADER rows whenever you want in the Excel file to establish new designations. They linger until a new one is read in. Be sure to have one of these prior to any command rows that require header content or things will not work right.

There are two formats used for this command.

The first format is:

x-yy

where x is

ch for a channel designation

auxin for an aux-in designation

bus for a bus designation

fxrtn for a function return designation

where yy is a two digit number. For 0 through 9 use 00 through 09

The second format is:

x-y

where x is

dca for a DCA designation

mtx for an mtx designation

where y is a single digit number

~NAME with subsequent columns specifying scribble strip content for the entity identified in the prior header row.

A ^ in a column indicates to not change the value for the entity identified in the prior header.

~COLOR with subsequent columns specifying a color value for the scribble strip of the entity identified in the prior header row.

A ^ in a column indicates to not change the value for the entity identified in the prior header.

The following are valid colors:

of for off

re for red

gr for green

ye for yellow

bl for blue

ma for magenta

cy for cyan

wh for white

ofi for off inverted

rei for red inverted

gri for green inverted

yei for yellow inverted

bli for blue inverted

mai for magenta inverted

cyi for cyan inverted

whi for white inverted

~ON with subsequent columns specifying the off (muted) vs on (unmuted) status of the entity identified in the prior header row.

A ^ in a column indicates to not change the value for the entity identified in the prior header.

A 1 means the entity is to be set to on (unmuted)

A 0 means the entity is to be set to off (muted)

~DCA with subsequent columns specifying the DCA group(s) of the entity identified in the prior header row.

A ^ in a column indicates to not change the value for the entity identified in the prior header.

To place an entity into multiple DCA groups, just enter the DCA numbers desired separated by spaces in the appropriate column.

~TAGEND

This command indicates that the substitution content for the prior ~TAGSTART has ended.

~DONE

This command indicates that the end of the content has been reached.