

Setup Guidelines for LDS Systems Using 1026 Mixers

HE/LE/SG 98 Checkout Procedure Guidelines

ver: Red v 1.5a - 1 Feb 2008

Ivie Technical Support

The LDS system setups (Heritage, Legacy, Sage, and retrofits) are very specific. A unique ROM is provided in the 1026 to conform to the logic table specified by LDS church A&E. As you will see from this setup guide, Ivie is committed to providing the support necessary to assure that these systems go in smoothly and operate as the LDS Church Engineering Department intended.

Each major contractor has designated one individual within their own company to be the "point person" for technical support and other LDS system setup questions from all other installers within that company.

If you have questions from a jobsite or in the shop, **you should contact your own company's designated LDS system support person before contacting Ivie.** If your support person can't help, then go to step two and contact Ivie directly. Upon receipt of your call, Ivie will make an attempt to add your company's support person on a conference call and then attempt to provide the support you need.

Step one - contact your company's support person

Name _____

Office Phone _____ Ext _____

Pager _____

Cell Phone _____

Home Phone _____

Step two - if you can't reach your company support person then contact Ivie Technologies. We are available from 8:00 AM to 5:00 PM, Monday through Friday.

Ivie Technologies Tech Support: 801-766-7600

Note: The information contained herein is the latest and most correct available to Ivie Technologies. If any information you have on architectural/engineering drawings conflicts with this, we suggest a prudent approach would be to contact the Consultant involved and resolve those inconsistencies before installation.

Getting Started - Software - Connecting the Box

The Physical Connection

On the rear panel of the 1026 mixer is found a standard RJ45 connector. As the 1026 is a standard Ether Net device connection from your computer to the RJ45 Ether Net port on the back of the 1026 is accomplished in the same ways one would connect any Ether Net device to a computer. 1) A direct connection from the Ether Net port of your computer to the RJ45 Ether Net connector on the back of the 1026 is possible, but in this case a “crossover” cable is require. Connection can also be made using a hub or switch between the computer and the 1026.

Software Installation

1026ANET software is shipped with all Ivie EtherNet products. An install shield is provided with the software to help install it properly. Additionally, the latest version of the software is always available for downloading from Ivie’s web site at www.ivie.com.

In addition to the Ivie EtherNet control software, the CD coming with this product contains another program called 485MON32. This is a monitoring program that will work with the Ether Net connection for the 1026 OR with an RS485 AudioNet connection. 485MON32 can be a tremendous help is programming external control devices such as touch screens. An EtherNet Programming Manual is available from Ivie - either by request to the factory, or by downloading from Ivie’s web site at www.ivie.com. This manual is intended for those programming external controls (such as AMX or Crestron touch panels)and provides both the HEX and ASCII code for controlling all functions of the EtherNet products. Use of the 485MON32 program when programming is very beneficial and highly recommended.

The 1026ANET software is for Windows 98/2000/XP operating systems. To install the software, insert the 1026ANET CD into the CD drive of your computer. If your computer is set up to automatically open a CD placed into your CD drive, the software menu screen will automatically open. Otherwise, you can:

1. Click the Start button in the task bar.
2. Select **Run**.
3. Type **x:\SETUP**, then click **OK** (where “x”=the drive letter of your CD drive)
4. Follow the on-screen prompts to fully install 1026ANSW software.

Standard installation of the 1026ANET software will install an icon on your Windows Desktop screen, by which you can start the software.

Connecting to the 1026 via EtherNet

The 1026 uses Ethernet TCP-IP for its communications with the setup computer or control system. As with any TCP-IP component, each 1026 requires its own unique IP address. (All come from the factory with the same IP address of: 192.168.0.10).

As with any Ethernet network, the usual connection model is to connect each piece of equipment to a hub or switch with a “straight through” cable. The hub or switch then relays the Ethernet traffic on the correct cable pairs so that each piece of equipment sees traffic sent to it. This Network Topology is best in terms of ultimate reliability and ease of troubleshooting.

However, because the typical LDS Network is so small and consists only of a 1026 and a Control Computer, it is unnecessary to install a hub or a switch. **You can connect directly from the 1026 to your control computer, as follows:**

In order to connect directly from your computer to the 1026 you will need an Ethernet crossover cable (where pins 1 & 2 on one end of the cable are connected to pins 3 & 6 on the other end of the cable).

Once you have the cable connected to both your computer's EtherNet port and the 1026 you should see a green "link light" on the front panel of the 1026. This (and a similar indication on the computer end of the cable) will indicate that you have a properly wired cable and that the electrical connection of the equipment through the EtherNet cable is correct.

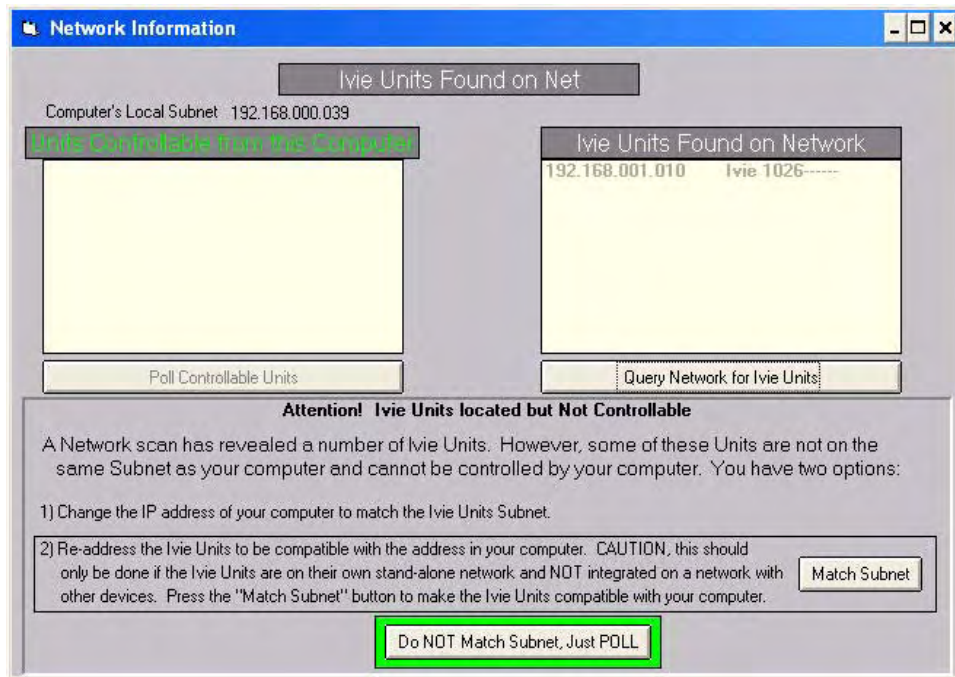
In addition to having a proper electrical connection your computer must be configured properly. The Internet Protocol Properties (TCP-IP) should ideally be set to some appropriate IP address (the actual address is not important, but it should be a "valid" IP address . . . perhaps the one used in your company shop). If your TCP-IP properties are set to obtain an IP address via DHCP (dynamic host controller protocol), your TCP-IP stack will be expecting to be assigned an IP address by a DHCP server. Since there is no DHCP server involved in typical LDS job-site network connection to the 1026, your computer will not receive a valid IP address via DHCP. Windows XP allows for this condition and provides an "Alternate Configuration" that assigns a valid IP address after the DHCP request times out.

If your TCP-IP properties are set to DHCP, a connection to the 1026 will not happen until your DHCP request times out and reverts to the "Automatic Private IP Address" that Windows XP provides. That time out may take several minutes, during which no network communications is possible.

Starting the Software

(For purposes of instruction, we will assume that a 1026 is connected to your network as we start the software. A successful connection will light the green "link light" on the front panel of the 1026.)

See next page



The first screen that appears when you start the 1026ANET software is a Network Information Screen. The window on the right will show any 1026 mixers that are found on the network. The window on the left will show any 1026 mixers on the network that are “IP compatible” with your computer’s network setup. If a mixer is identified in the right-hand window but not in the left-hand window, it is not currently compatible –and therefore cannot be controlled– with your computer’s network settings. Because the 1026 is an IP addressable device, it comes with a default IP address and subnet mask programmed into it. The default IP address in the mixer may not (probably will not) be compatible with the IP setup in your computer.

At this point, to make a compatible connection between your computer’s network port and the 1026, something will have to change. You COULD change the networking setup of your computer to that of the 1026, but that is inconvenient at best. The Ivie 1026ANET software provides a means of changing the IP setup of the 1026 to that of your computer. With a single software button push, you can change the 1026 networking setup to match your computer.

Simply click on the “Match Subnet” button in the Network Information screen. The previously incompatible 1026 has been adjusted to operate on your computer’s networking settings, and is now identified in the left-hand “Units Controllable From This Computer” window. If, in the future, you bring a different computer to the job site, this IP adjustment procedure can be done as the software is started up to once again adjust the 1026 to your present computer’s settings.

LDS Sound System Checkout Procedure

1) While monitoring the 1026 with a computer check all switches, LEDs, Pots and IR sensors for proper function. *Confirming proper function of these external devices will accomplish 90% of your trouble shooting up front.*

2) Confirm proper programming of Matrix mixer and Parametric EQ sections of the 1026.

The 1026 setup files contain the setup information for both the mixer and DSP EQ portions of the product. The file extension for a 1026 setup file is “.126”. The file we use at the factory is named “LDSSET.126.” All of the information related to the settings of the 1026 are contained in one file. There is another file available for the three-door Sage setup (called “LDSSAGE.126”). While we have made every effort to provide the appropriate routing, phantom power, gating, remote settings, DSP templates, as well as approximate Trim settings for inputs and outputs in these files, we recommend that you create your own generic LDS Config file to start out with; one that will configure the templates and presets to something near what you will need for an LDS job. This will save a great deal of time on the job site.

The current setup files “LDSSET.126” and “LDSSAGE.126” are available on Ivie’s web page at: www.ivie.com/insider.

A. MIXER (in the 1026 these settings are all done with software):

- Switch types - (When the software detects an LDS mixer, the switch types are set automatically) Edit, Switch types. All set to “A” except Combine 3+4, 4+5, 5+6, and 8+1, which should be set to “M”.
- Preset Zero (Base Config)**
- Preset 1**
- *Preset 2** (for plans where the organ is reenforced)
- Preset 13 - Satellite**
- Preset 14 - Auto/Manual**
- Software enable ALC on mic inputs 1, 2, 3, 4 (Automixer > Setup/Options)
- Software enable “last on” for auto-mix circuit “W” (Automixer > Setup/Options)
- Assure that the appropriate jumper for the desired meetinghouse configuration is in place (see the “1026 Connection” page for jumper placement. Note that the Legacy plan does not use a jumper).

**See the following pages for preset programming instructions and external sensor/pot/switch wiring diagrams.

B. Remote Control Configuration: The LDS version of the 1026 is automatically configured for the standard LDS setups. Input remote control configuration is different (simpler) in the 1026. You only need to color-match the buttons to the labels to be configured correctly. To see the remote control configuration screen, right click in the remote control window.

C. Preset Port Configure: The Preset Port Configure screen on the 1026 has already done most of the work for you! For standard LDS applications, the preset port configuration is in the setup file and is already done. To see the Preset Port Configure screen, go to Edit > Preset Port Configure. Simply confirm that the buttons are color matched with the labels beneath them.

D. EQ: If you are starting out from scratch, the first thing you’ll need to do is configure the DSP Templates. This is done from the Edit pull-down menu: choose “DSP Configure.” The DSP Template page is identical to the ones you are used to seeing in the 626 for LDS systems. Once you have configured a template, you can copy that template to one or all presets with a single command. Copy the template to all presets.

3) Verify that the proper presets are activated when the system is turned on, dividing doors are opened and closed, etc.. See the graphics on following pages. Do not bother to adjust any EQ at this time.

4) Do an audio “rough check” by “talking the system out.”

5) Equalize the chapel and the cultural center systems. Place the settings in the 1026 DSP section base preset (Preset 15).

6) Load the DSP EQ settings from preset # 15 into each of the 1026 DSP presets. This is easily done by right-clicking anywhere in the gray area of the 1026 DSP area of the main software control screen and selecting “Copy Entire Preset.” Right-click again, and you can choose to “Paste Entire Preset (All 16 Presets)”.

7) With the power amps off, set ALC in Chapel. ALC in LDS chapels is an “attenuate only” type of Automatic Level Control. To set ALC, follow this procedure. Use the pulpit microphone.

First, turn off the power amplifier that feeds the chapel. You do not need to listen to the sound system at this point. Listening while you make these adjustments may well affect your ALC setting adversely.

Activate ALC in inputs 1, 2, 3, 4: With the Ivie EtherNet® software running and connected to the 1026, access the “ALC and Vox Sens” item in the Automix pulldown menu. Make sure that ALC is activated for channels 1, 2, 3, 4. Click on “Close.”

Adjust and set ALC: From the Automixer pulldown menu, select “ALC Levels.” You will see a “virtual chart recorder” pop up on the screen. Make sure that the input number for the mic you are interested in is selected for the red “pen”. To do this for the pulpit mic, make sure that channel 1 is selected under the red “Chnl” column. Attack and Release Time settings should be the “Default” settings.

In the ALC “chart recorder” window (Automixer > ALC Levels), access the “Set ALC Target Level” pull down menu, and select -10dBu. This will temporarily set ALC so that gain reduction will begin to occur when a -10dBu level is present at the input to the matrix bus.

Assure that the software input level control is set to 0. Now have someone speak into the pulpit microphone in a “normal” speaking voice. Adjust the input “trim” control for the pulpit microphone until normal speech causes the red chart recorder pen to just begin to slightly “bobble” at the upper levels of normal speech. Note: You will have to click on “Resume ALC Scrolling” after making an input level adjustment; this is normal.

Having set the pulpit microphone input trim to achieve some very slight “pen bobbling” with normal speech and a target level of -10 dBu, now access the “Set ALC Target Level” pull down menu again, and change the setting to -6 dBu. Doing so will allow 4 dB more ALC “dynamic headroom,” which gives speech a very natural sound and masks the operation of the ALC.

Note: ***Do not set ALC target levels with the other microphones or inputs.***

8) Set Chapel system levels for appropriate Gain-Before-Feedback in the room at the amplifiers. In order to do this you should temporarily turn off the ALC function on the microphones in the chapel. To do this, access the Automixer pull down menu, select “Setup / Options” and un-click the ALC selections on mics 1, 2, 3, and 4. Make your gain adjustments in the 1026 outputs, and then be sure to enable ALC for mics 1, 2, 3, and 4 again.

9) For each of the other microphone inputs in the chapel, use the software “trim” control and adjust for appropriate level in the room by ear.

10) Set “Sticky Level” for Inputs 1, 2, 3, and 4 on the mixer. See the Sticky Level instructions on the 1026 Sticky Level page in this booklet.

11) Set Cultural Center level for good balance with the Chapel.

12) Set Auto/Man Levels in Cultural Center. For setup of the three Cultural Center mics, we recommend the following (after you have finished the EQ, of course):

a) Set level controls for these three mics to “-6”, “-10”, or whatever the Consultant prefers.

b) Now use the “Trim” function with a microphone plugged in and the system active to set the levels for appropriate (just below feedback) “automatic” operation. When the proper level is attained with Trim, save the settings to the Base preset (press “Volume Save”).

c) When the user presses the “manual” button in the CC884 to go into manual operation, the system will revert control of levels to the manual controls in the CC884, and will allow level to go up to “0”. This will allow the system to go marginally higher in level, as is required.

Setting Up Remote Level Controls with the CP-884B / 1026, & “Sticky Level” Instructions

The CP-884B is a button control. There are no rotary controls on it. This means that the 1026 software must set the 1026 up to accept button-type “stepping” controls. All 1026LDS mixers have a pre-loaded setup file which sets up the mixer for LDS applications and includes the appropriate input remote control selection. However, the remote control system of the 1026 is quite different from the older 884+. A review of setup procedures, including software setup, can be helpful. Here is the full instruction set necessary to set up the software and hardware to operate properly for level control in the chapel with a 1026. (** denotes that this should be programmed into the unit at the factory before shipment).

1026 Remote Level Controls

The remote control system of the 1026 consists of 8 remote control ports to which any combination of inputs and outputs of the same type can be assigned. There are eight hardware remote control ports found on the Phoenix-type rear connectors. Each remote control port can be programmed to accept either a potentiometer (10 V ramp) type control or a button (stepping) type control (right click on the remote control software window to access remote control settings). The remote control port may also be turned on or off via software, presets, etc. See the 1026 manual for complete remote control programming information.

In standard LDS setups, inputs 1, 2, 3 and 4 are assigned to remote control port 1 (since they are button-type controls the assignment is “B-1”). In previous 884+ systems the chapel remote control is assigned to Output A of the mixer. However, in 1026 systems chapel remote control is assigned to the four inputs that control levels in the chapel.

In standard LDS setups, the three cultural center inputs are assigned to remote control ports P-6, P-7, and P-8. The satellite level control, if there is one, would be assigned to P-5. This means that the remote control line from the CS-884 would connect to the “Remote Level” contact number 5 on the rear Phoenix connector, and the Cultural Center remote controls would connect to contact numbers 6, 7, and 8.

1. **“RB” Button setting:** As inputs 1, 2, 3, and 4 are to be controlled by a “button-type” remote control (CP-884B), remote control port # 1 needs to be set for “Remote Button”. 1026 LDS mixers are normally shipped with this configuration.
2. **“RP” Button Setting:** Inputs 6, 7, and 8 (Cultural Center) are to be controlled by potentiometer-type controls and so remote control port #'s 6, 7, and 8 need to be set for “Remote Pot”. The satellite control would be on remote control port 5, and so needs to be set for “Remote Pot” as well. LDS mixers are normally shipped with this configuration..
3. **Set the “Sticky Level”:** LDS Church Engineering has requested that the “sticky level”

feature available in the 1026 be associated with inputs 1, 2, 3 and 4. *Note: This is different than in the 884/626 system. Sticky levels are set on the inputs of the 1026!* “Sticky level” allows the mixer to “wake up” at a pre-programmed level on Output A each time the mixer is turned on. The church recommends that sticky level for Inputs 1, 2, 3, and 4 should be set at -4 dB. To do this, the installer/consultant needs to edit Preset # 1 (in building plans where the organ is reinforced, this pertains to preset #'s 1 and 2) as follows. **Be sure to start with no presets called. You should be in the Base Preset, Preset 0.**

a) In the 1026 EtherNet software main screen, press the mixer section “Edit Preset” button to enter the editing mode for presets. Select the button for Preset 1. *Note: There are two sets of preset buttons on the main screen. The set on the left is for the mixer, and the mixer is what we are programming.*

b) Set the output level for Inputs 1, 2, 3, and 4 at -4 dB. (It is important that you move each slider in this process. If any of the sliders is already on -4, move it away from 44 and then back again). When you are done with this process, you should be on -4 with the level control colored red.

c) Now cycle the “RMT: button above the slider for each of the inputs through a complete cycle (so that the button changes colors and ends up with a red background and white lettering).

d) Press the “Save Preset” button to the right of the mixer preset buttons, and then press the “Edit Preset” button to exit the Edit Mode.

This will cause the “sticky level” to be set on each of the four inputs so that each time the mixer is turned on (going to Preset 1), it will turn on with Inputs 1, 2, 3, and 4 set at -4 dB.

A setup file with all of the steps described above pre-programmed is available on Ivie’s web site. The files, found on the Insider Page (www.ivie.com/insider) are named: “LDSSET.zip” or “LDSSAGE.zip”.

Gain Settings in the 1026

In setting up the 1026 there are a few guidelines in setting gain through the unit that will maximize signal and minimize noise. These guidelines follow general good practice in system gain. There are several points in the 1026 where can be adjusted (input trim/input level, buss trim, output trim/level). These general guidelines will help to maximize the performance of the system.

#1 - Push as much gain as possible toward the front of the unit. This prevents you from amplifying noise picked up along the way.

#2 - Minimize overall gain. The mixer / amplifier combination has much more gain than is needed. Modern amplifiers are at least 20dB more sensitive than older designs. All too often the installer is reluctant to set the amplifier's gain down to match the mixer's output. This results in way too much gain way too late in the signal chain and your signal-to-noise ratio is not optimal. In LDS systems, the standard procedure is to leave amplifier gain settings full up so as to give the "well meaning local technician" fewer settings to adjust. This unfortunately can mean that more careful gain adjustments are needed in the 1026. As a general rule, however:

- Remove output trim to compensate.
- Eliminate excess gain. Avoid gain stages followed by attenuation stages.

#3 - Turn down the ADC Bus Trim. The ADC (analog to digital converter) input to the DSP section is an "unseen" source of excess gain. A hot line input will overdrive the ADC which can only stand about 0dBV. The Bus Trim has two "level VU bars" with a level adjust slider in between. The left bar indicates the analog signal. The right bar indicates the output of the ADC into the DSP section. Hence Bus Trim values of even -10 to -20dB into the ADC are ok. The right hand bar should be peaking on loud speech at perhaps -15 to -18. The slider control will generally be below "0".

The idea is to fully drive the ADC to maximize its Dynamic Range. Consider the case where an ADC has a dynamic range of say 100dB. If the input to the ADC is always -20dBFS (dBFS = dB Full Scale) or below then the dynamic range is reduced to 80dB before you even start considering other noise sources.

The same is true for the Mix Bus. Operating the Mix Bus 20 to 30dB below its max level only chops 20 to 30dB off the Mix Bus's Dynamic Range.

Remember:

- Push Gain towards the front end (inputs) to maximize the Mix Bus Level. This will raise signals farther above the Mix Bus Noise Floor. (This is done by raising the input Trim and Input Slider levels. The typical pulpit mic will have a Trim level of about +35 or more, and a Slider level of -4 (sticky wake up level). Hand mics will have a typical Trim of +40 - +55 (Slider levels in the -4 range). Line inputs will have a typical Trim of "0", with a slightly lower Slider level.

- Turn down the ADC Bus Trim to match the "high level" Mix Bus to the ADC input. Actually the "high level" Mix Bus is really a "noise optimized" Mix Bus.

Adjusting the System for the “Two Door Rule”

One of the adjustments the Consultant makes in an LDS system is the “two door rule,” where system level in the Cultural Center is reduced when there are not two doors (sliding partitions) separating the sound systems.

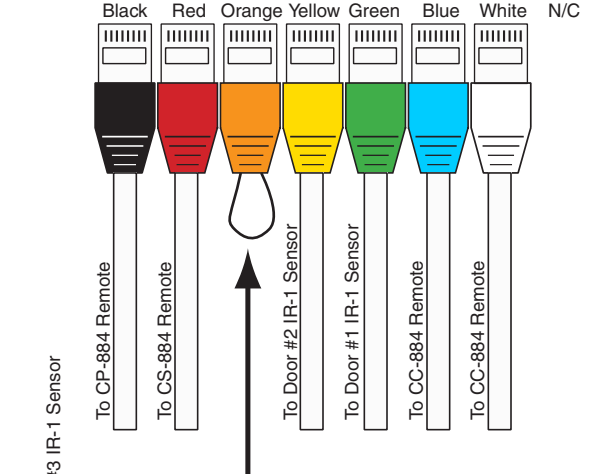
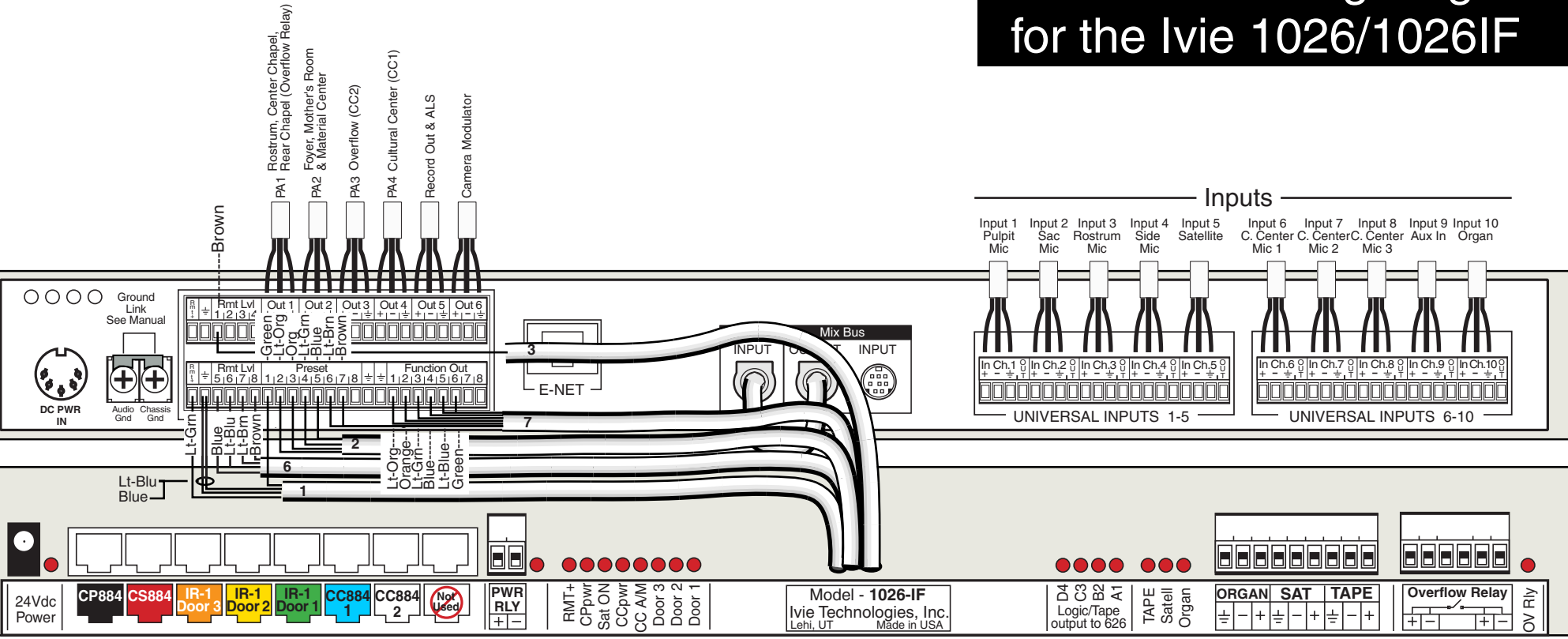
This adjustment is made in the 1026 using the Bus Trim control for Input B (the Green Bus). In those presets where there is only one door separating the active sound systems, the Cultural Center the Input B Bus Trim is programmed six to ten dB lower. (Bus Trim is programmed in the DSP section presets, not the mixer presets.)

Set levels into the various output zones in the normal fashion. Make sure that there is sufficient level in the Input B Bus Trim that its level can be reduced by six to ten dB to accommodate the two door rule.

In the presets where there is only one door between the two active sound systems, program the Input B Bus Trim level to be six to ten dB (set level to the preference of the Consultant) lower. (In a Heritage system, this would be DSP presets 3 and 5). This is done by accessing the Input B Bus Trim and lower the Slider level about six dB, then clicking on the DSP preset “Save” button for those presets. That’s all there is to it.

HERITAGE wiring diagram for the Ivie 1026/1026IF

↑ Outputs to Amplifiers ↑

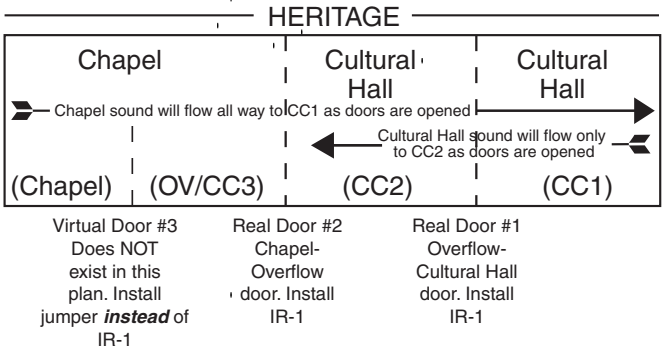
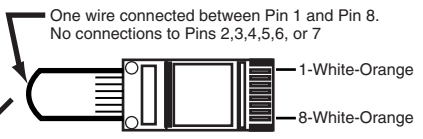


Supplies a switched +24 Vdc to Master Rack Power Relay
 Lights when POWER RELAY is activated
 Lights when RMT+ is not shorted by remotes. (See Note 1)
 Lights when CHAPEL Power is turned ON
 Lights when SATELLITE is turned ON
 Lights when CULTURAL CENTER Power is turned ON
 Lights when CULTURAL CENTER is in MANUAL MODE
 Lights when Door #3 is OPEN
 Lights when Door #2 is OPEN
 Lights when Door #1 is OPEN

Note 1
 This LED is a SPECIAL MONITOR. It Should ALWAYS be lit. If it is not lit, there is a problem with the RMT+ power supplied by the 1026. Most likely the problem is due to a short somewhere in the wiring of the CP-884, CS-884 or CC-884 remote controls. If the RMT+ LED is off, first check the connection to the 1026. Then disconnect ALL RJ45 connectors going to the CP-884, CS-884 and the two going to the CC-884. If the LED lights while the remotes are disconnected the RMT+ is being shorted to ground somewhere in the wiring associated with the remotes.

These seven LEDs are not used on the 1026-IF and should be ignored.
 These connectors are not used on the 1026-IF and should be ignored.

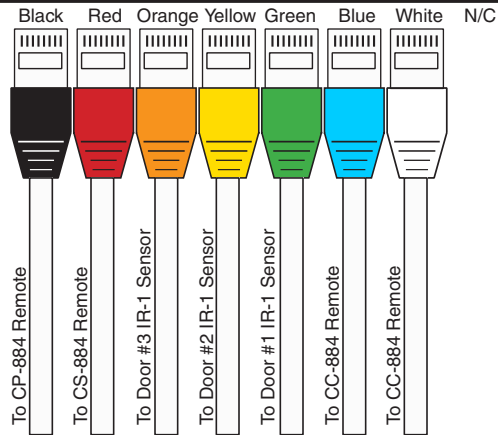
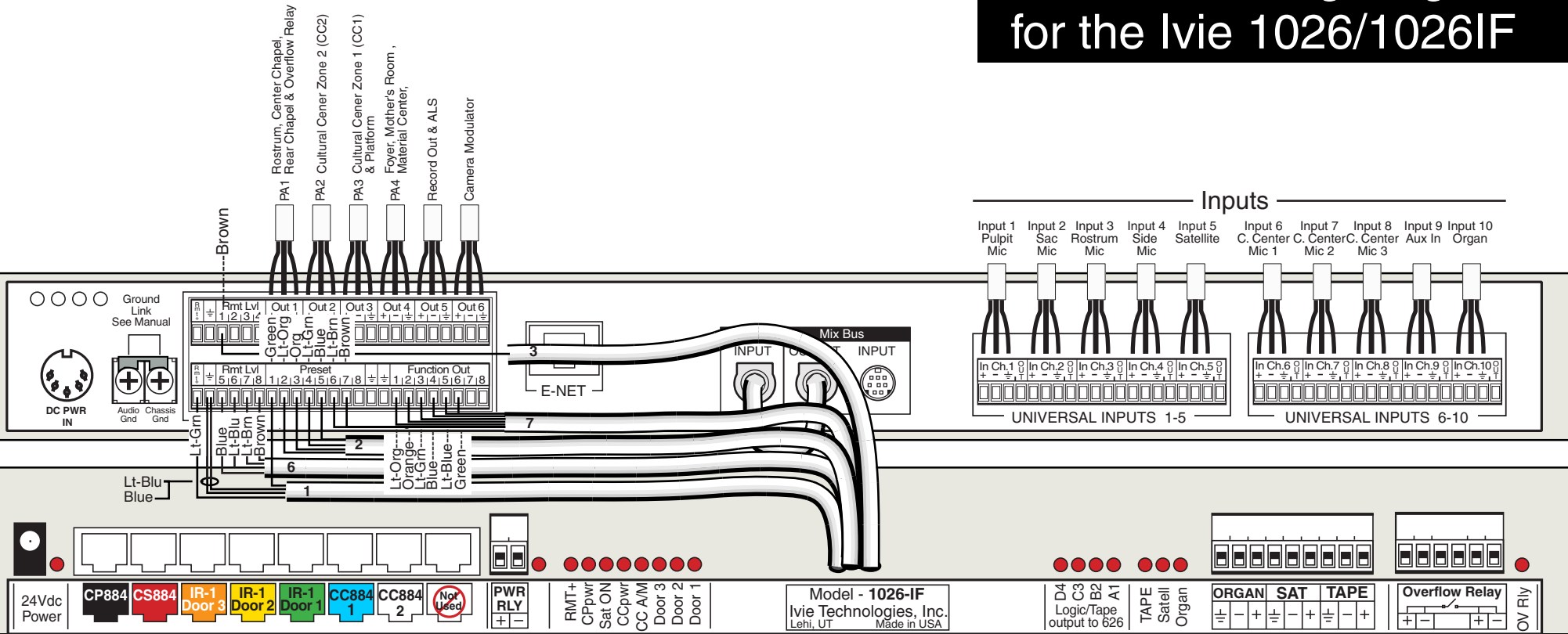
To Door #3 IR-1 Sensor
 Since Door #3 does not physically exist in the Heritage plan, we need to make the 1026 think that the door is there but that it is always open. We accomplish this with a RJ45 connector that has a jumper wire between pins 1 and 8. These are the two outside pins of the connector.



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LEGACY wiring diagram for the Ivie 1026/1026IF

↑ Outputs to Amplifiers ↑



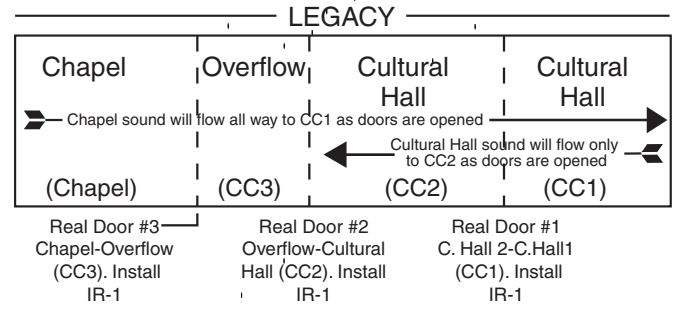
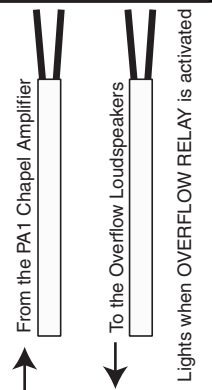
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Heritage Preset Configurations for the Ivie 1026

The Standard Heritage/Legacy plan presets are shown on the following pages. There are five mixer section presets and nine DSP section presets including the base, or off condition, presets.

All levels, phantom power, and some other settings are contained in the base presets (preset "0" for the mixer section and preset "15" for the DSP section).

The Heritage/Legacy configuration is pre-loaded into all LDS 1026 units leaving the Ivie factory.

On the pages that follow, the sequence of graphics shows the conditions of the various mixer section and DSP presets. From each graphic you can observe settings for trim, routing, phantom power, automatic mixer gating, remote control assignments, levels, etc.

Refer to the table on the opposite side of this page for all of the mixer / DSP preset combinations that are found in the Heritage Presets.

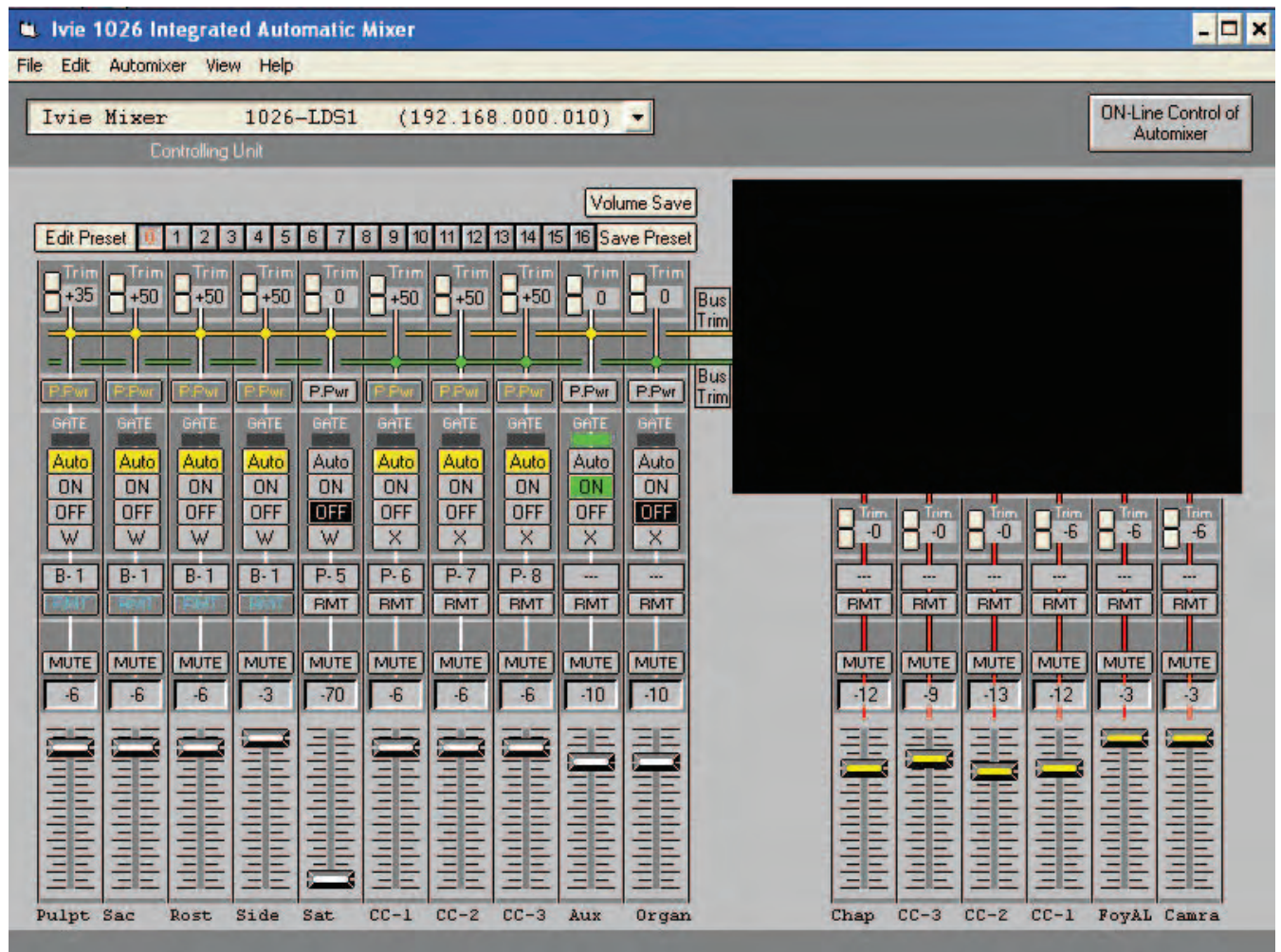
The base preset: In the base preset (preset 0 in the mixer section and preset 15 in the DSP section), the sound system is off.

The mixer section presets: On the left page you will see all the settings in the mixer section for that preset. On the right page you will see what the software screen should look like in the Preset Edit Mode.

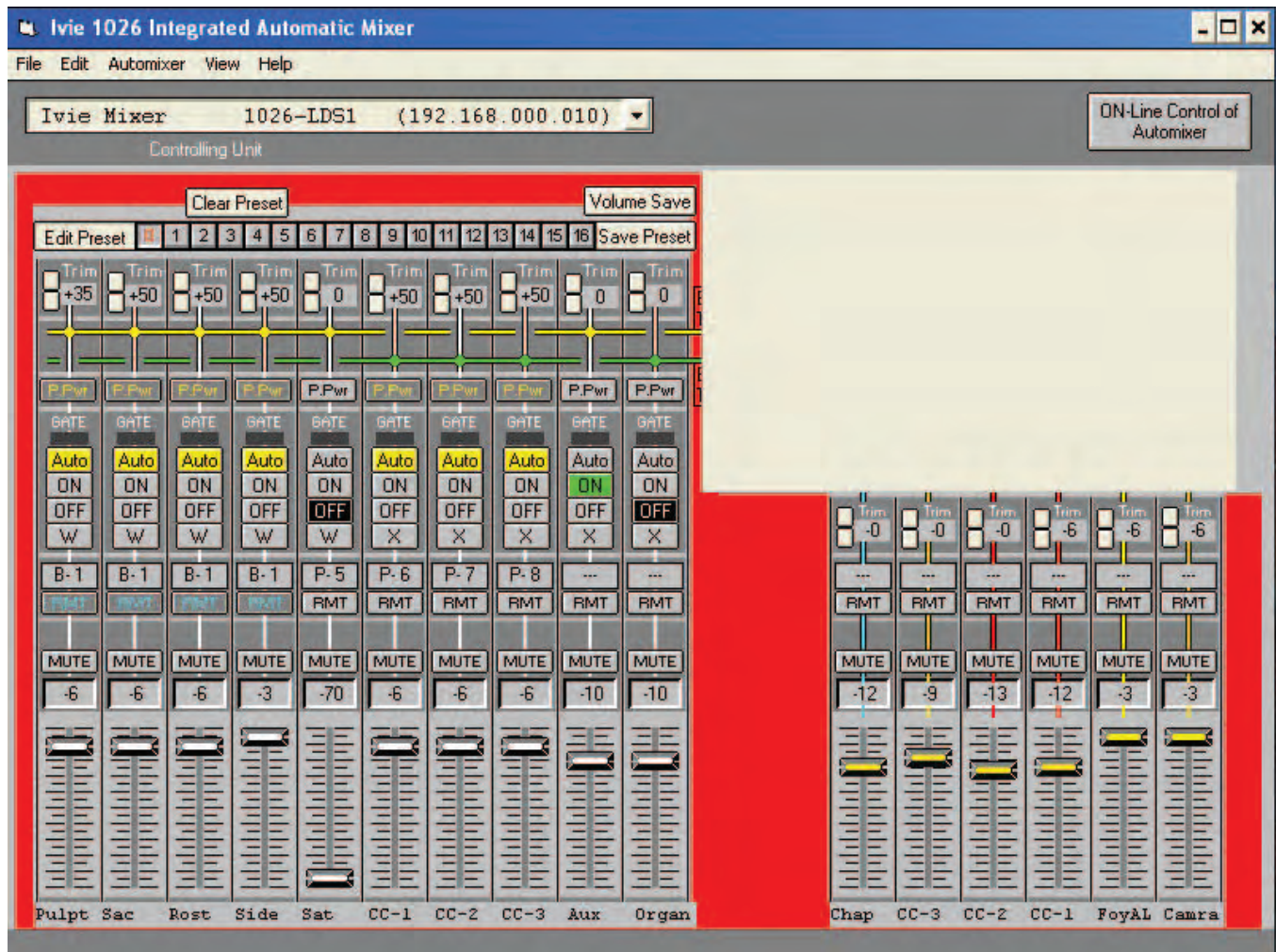
There are more DSP presets than mixer presets (refer to the Heritage Presets table at the beginning of this section). What follows is a graphic for each of the DSP presets which shows the routing for the DSP section for each preset. You can observe which DSP preset is being called in the software by noting the PEQ preset number in "PEQ Preset = x" at the bottom of the special LDS window (labeled "HA98/LE98/SG98") in the software main screen .

**1026 Presets and Room Conditions
LDS Heritage Building**

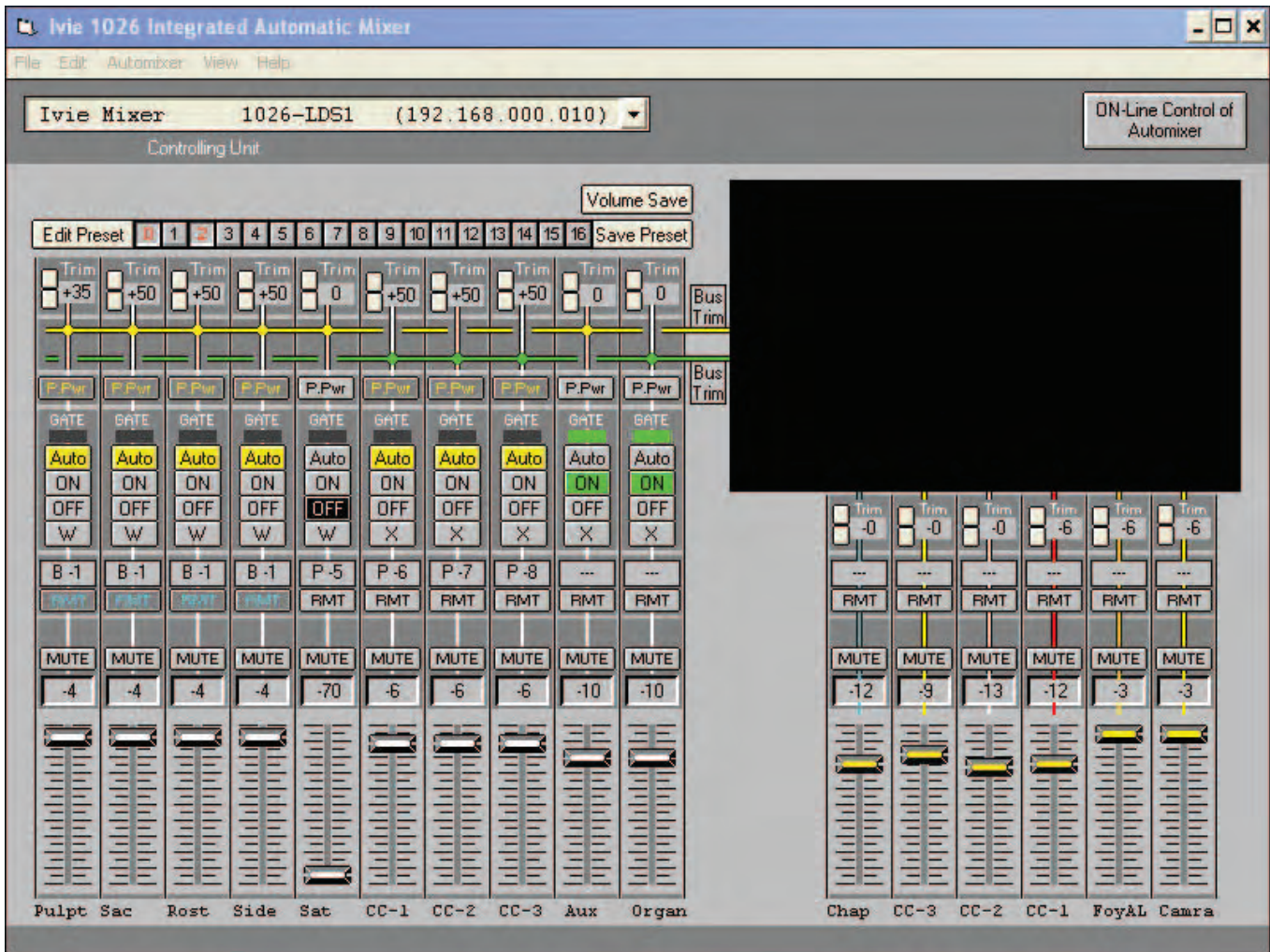
	Description of Functions / Room Conditions	Mixer Preset #	DSP Preset #	
1	Base Preset (system off)	0	15	
2	Chapel Only	1	1	
3	Chapel/ OV + CC2	2	4	
4	Stake Conference (Chap/OV + CC2 + CC1)	2	6	
5	Stake Conference w/ Satellite	1, 2, 13	6	
6	Chapel/ OV + CC2 CC1	1	5	
7	CC1 Only	1	7	
8	CC1 + CC2	1	8	
9	Chapel/OV CC1	1	2	
10	Chapel/OV CC1 & CC2	1	3	
11	Chapel/OV CC1 & CC2, manual mode	1 & 14	3	
12	Chapel/OV CC1 & CC2, w/ Sat. & manual	1 & 13 & 14	3	



PRESET 0 Base Configuration The sound system is off. (When the system is off, the 1026 remains on. It is the "control center" for all of the other components in the system.)

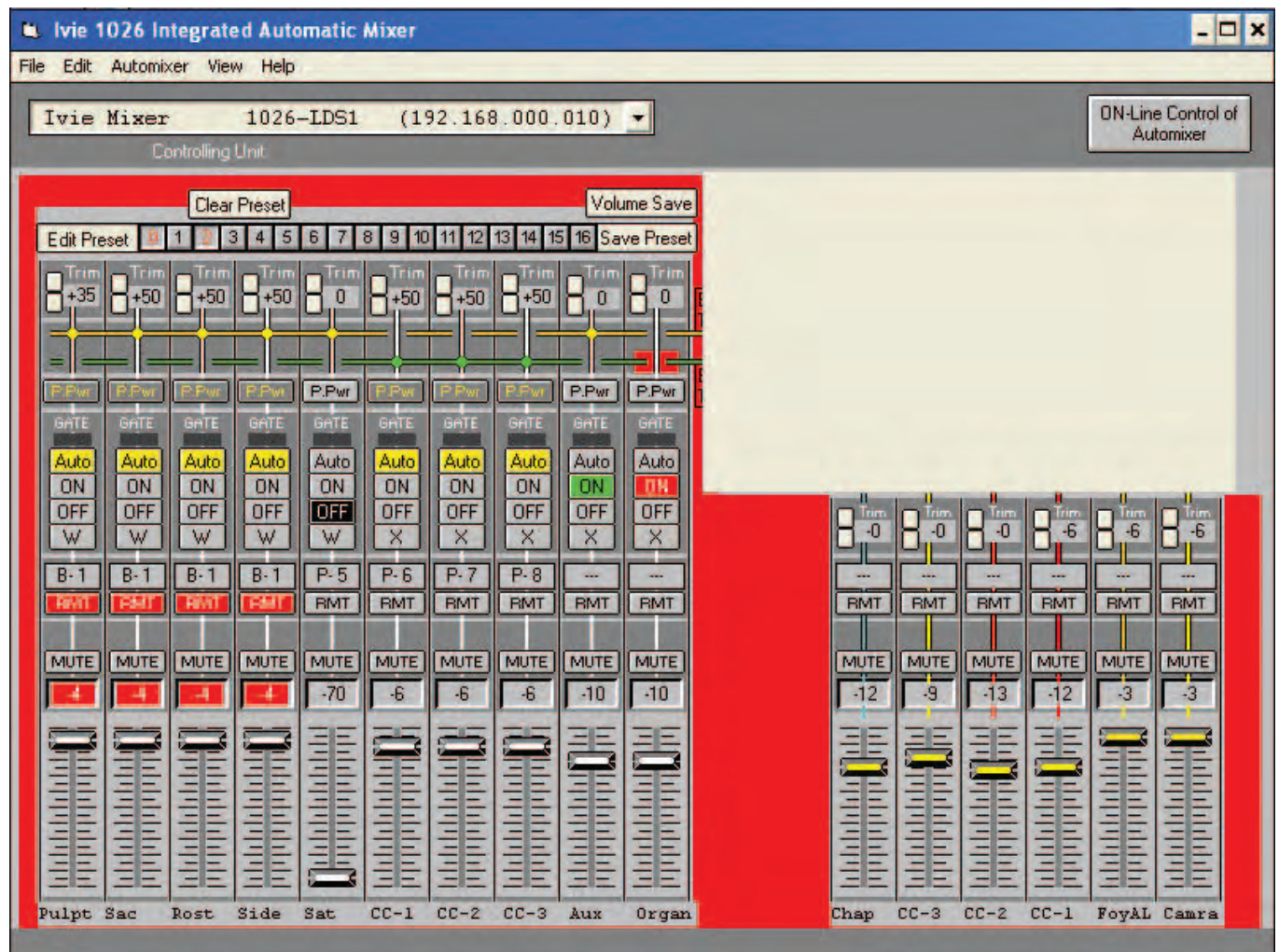


EDIT PRESET 1 (Chapel and/or Cultural Center Power) Turning the power on in either or both rooms (C), CC) will activate Preset 1. Preset 1(or preset 2) will be active ANYTIME the sound system is powered up. There are only three other presets that are activated in the mixer section of the 1026. Preset 2 also activates at power up when the Chapel is on and the CC2 door is open. Preset 13 is an overlay for Satellite operation. Preset 14 is an overlay for Automatic/Manual operation of the Cultural Center.



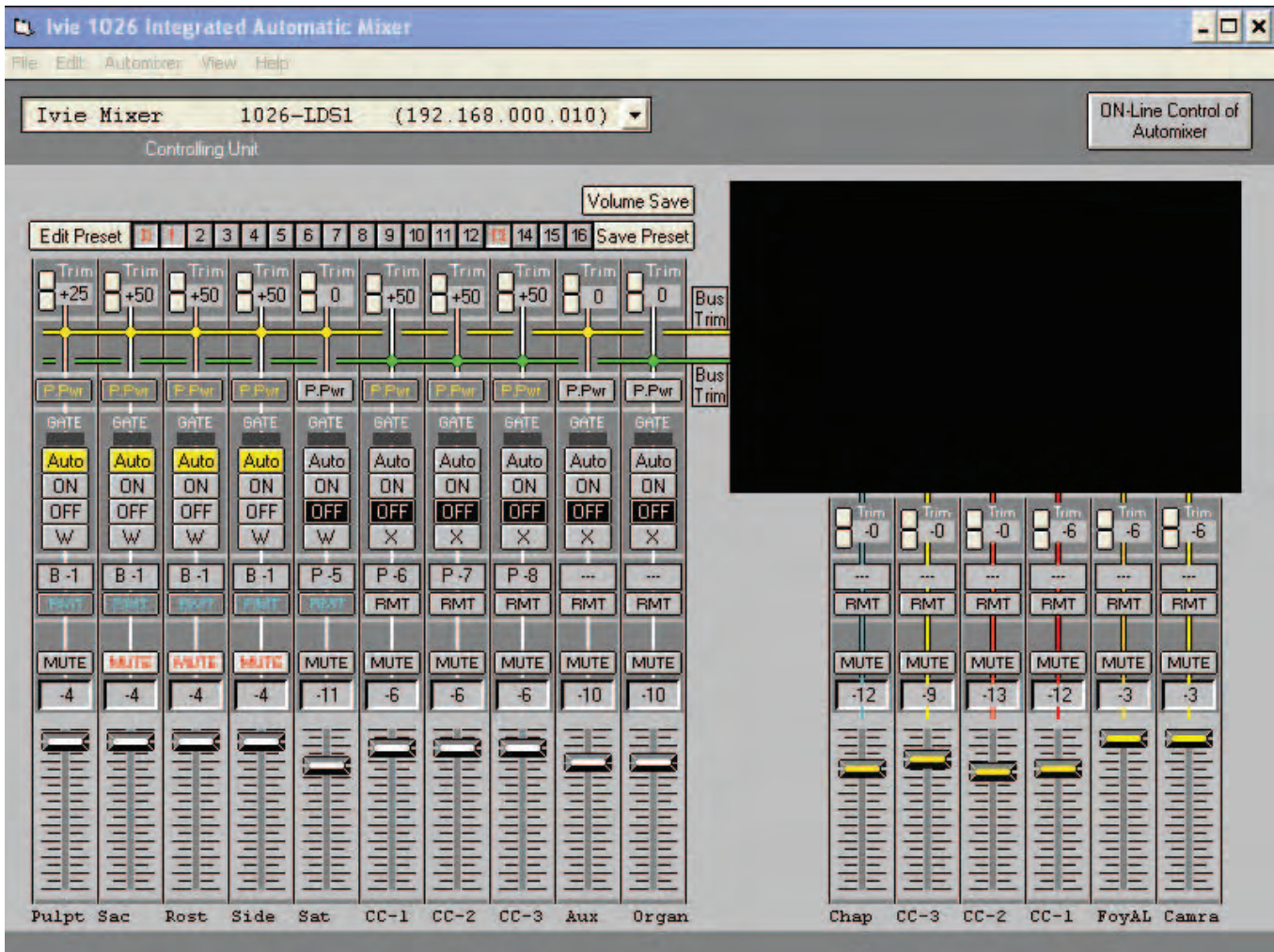
Used to add Organ to Overflow areas

PRESET 2 (Chapel Power with CC2 door open) Turning the power on in the Chapel with the CC2 door open (combined with the chapel) will activate Preset 2. Preset 2(or preset 1) will be active ANYTIME the sound system is powered up. There are only three other presets that are activated in the mixer section of the 1026. Preset 1 also activates at power up when the Chapel is on and NOT combined with CC2. Preset 13 is an overlay for Satellite operation. Preset 14 is an overlay for Automatic/Manual operation of the Cultural Center.

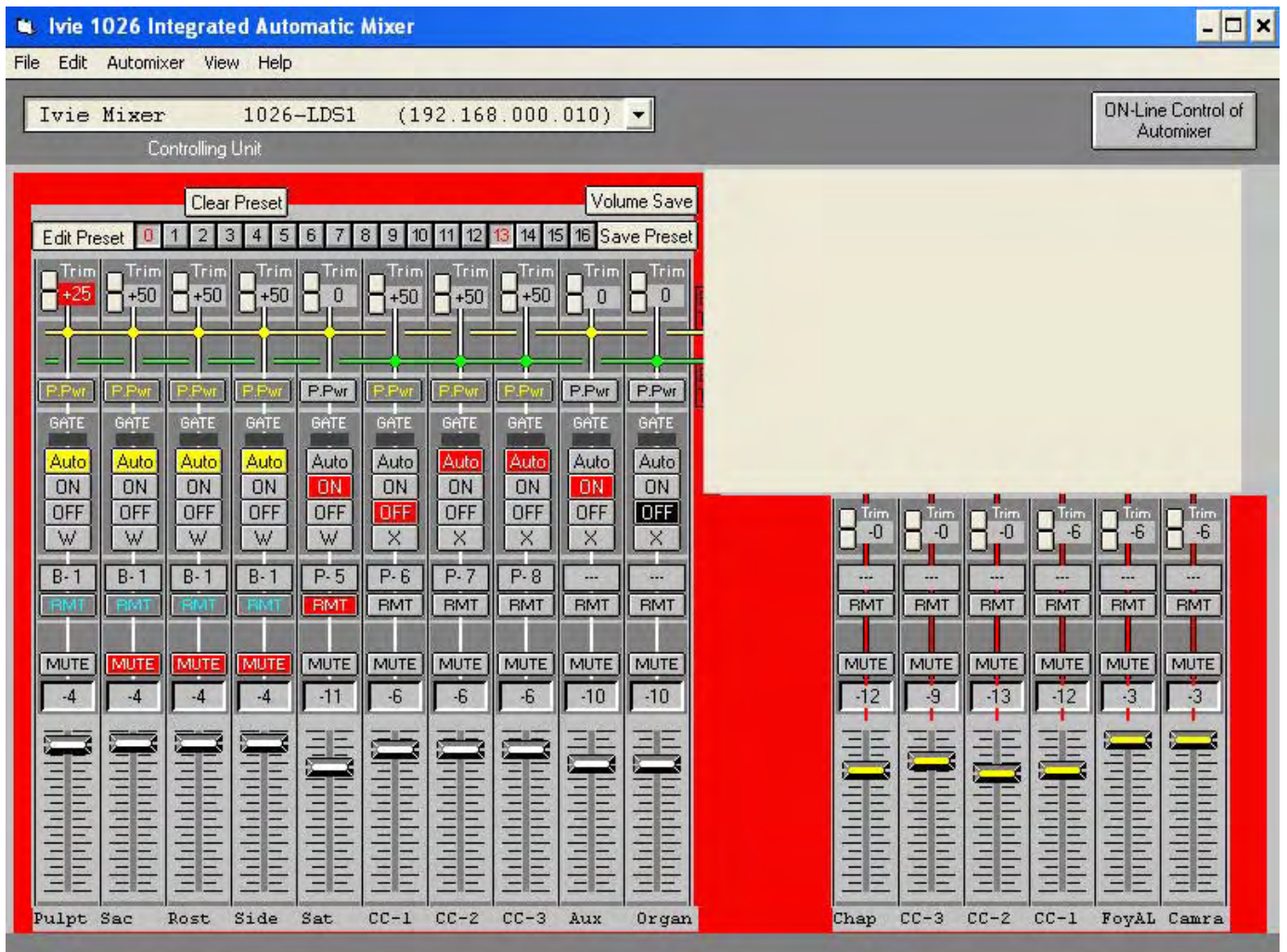


Adjust Organ input from this preset edit screen

EDIT PRESET 2 (Chapel Power with CC2 door open) Turning the power on in the Chapel with the CC2 door open (combined with the chapel) will activate Preset 2. Preset 2(or preset 1) will be active ANYTIME the sound system is powered up. There are only three other presets that are activated in the mixer section of the 1026. Preset 1 also activates at power up when the Chapel is on and NOT combined with CC2. Preset 13 is an overlay for Satellite operation. Preset 14 is an overlay for Automatic/Manual operation of the Cultural Center.

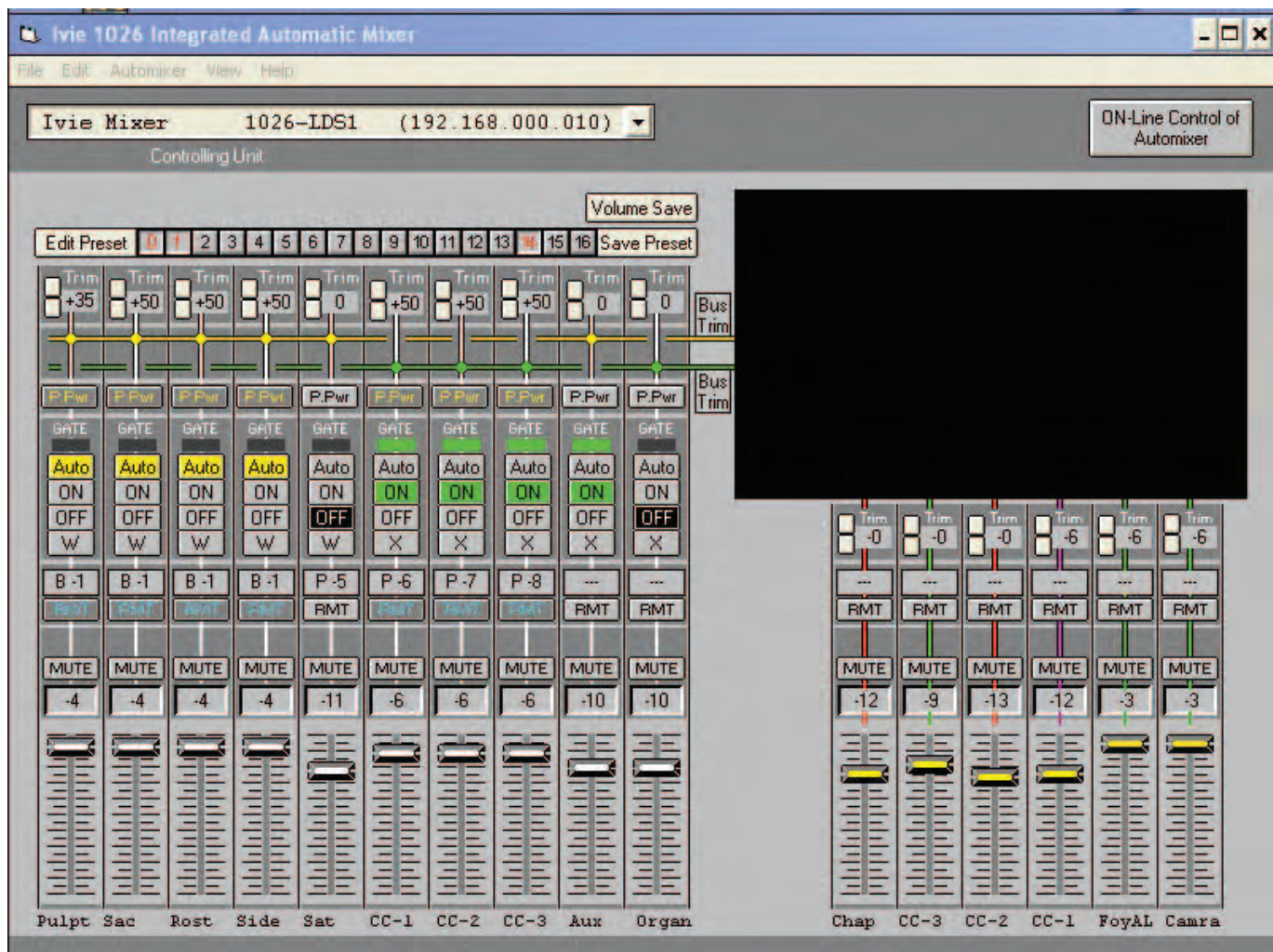


PRESET 13 (Satellite) Preset 13 is an overlay for Satellite operation. Preset 13 can be active only if Preset 1 or Preset 2 is already active.

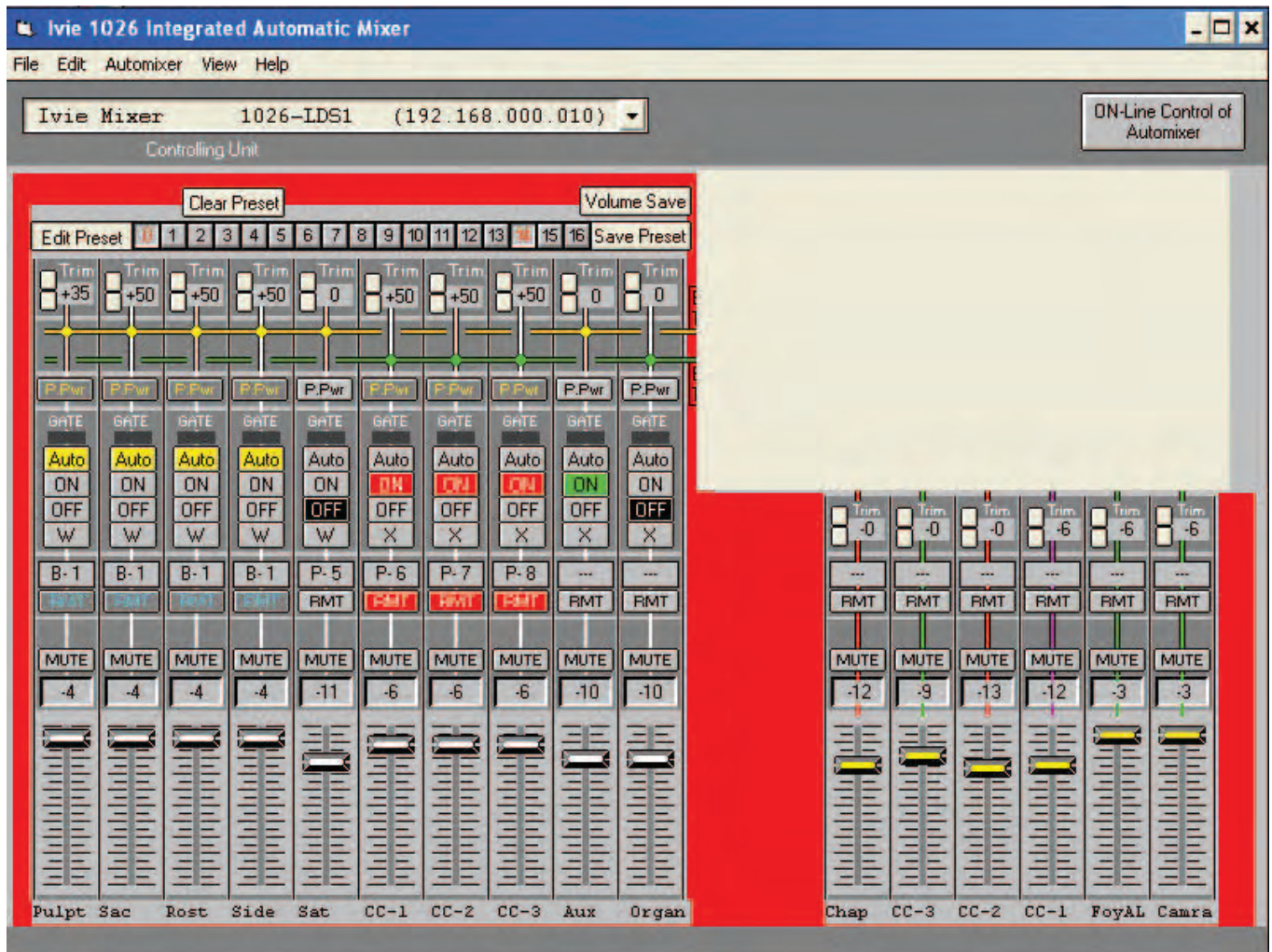


Adjust Satellite TRIM (not level) from this screen

EDIT PRESET 13 (Satellite) Preset 13 is an overlay for Satellite operation.

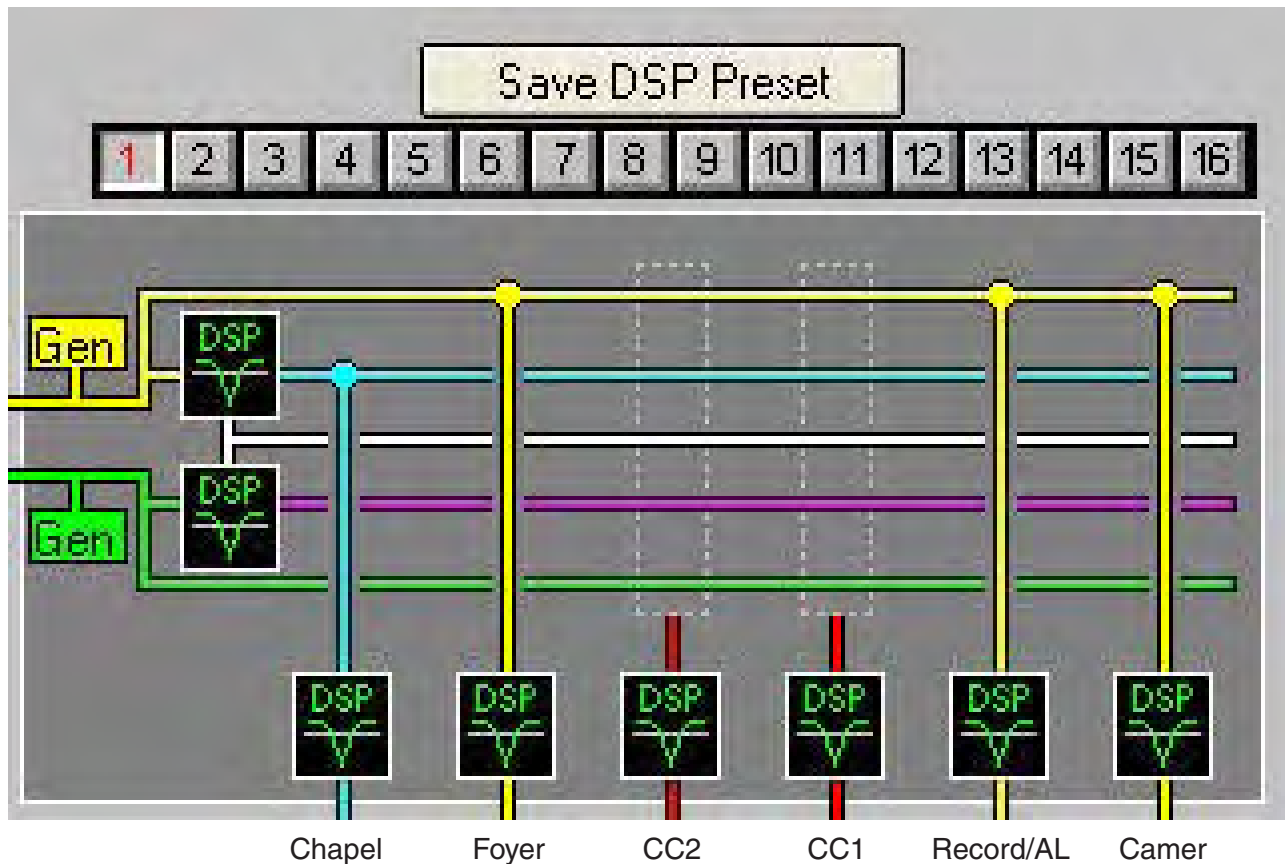


PRESET 14 (AUTO/MANUAL) Preset 14 is unique. IT is an "overlay" or modifier preset. IT is used in conjunction with Preset 1. Preset 1 turns on power to the Cultural Center. Once the Cultural Center is "powered up" preset 14 is then used to switch inputs 6, 7, and 8 from Automatic gating mode to Manual control with remote volume controls activated. Note: There are no buss assignments in this preset, as it overlays assignments made in Preset 1.

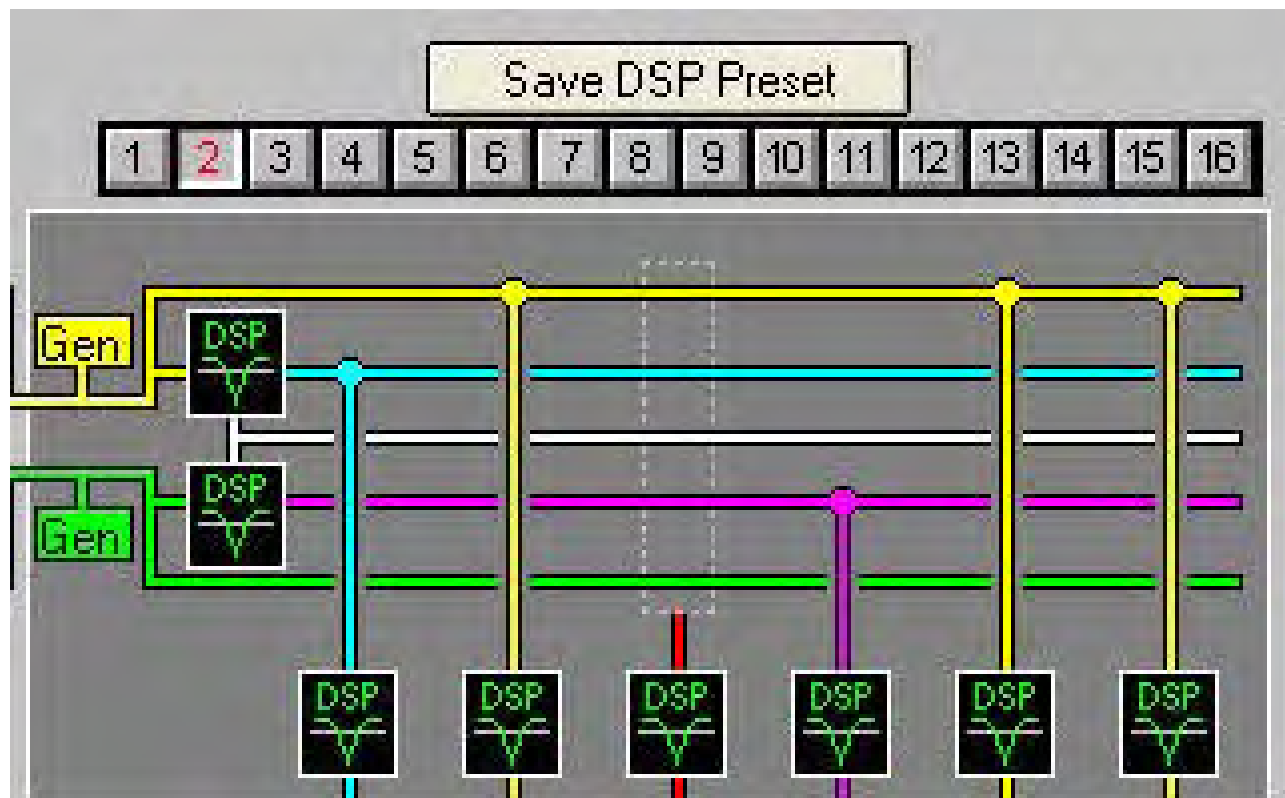


EDIT PRESET 14 (AUTO/MANUAL) Preset 14 is unique. IT is an "overlay" or modifier preset. IT is used in conjunction with Preset 1. Preset 1 turns on power to the Cultural Center. Once the Cultural Center is "powered up" preset 14 is then used to switch inputs 6, 7, and 8 from Automatic gating mode to Manual control with remote volume controls activated. Note: There are no buss assignments in this preset, as it overlays assignments made in Preset 1.

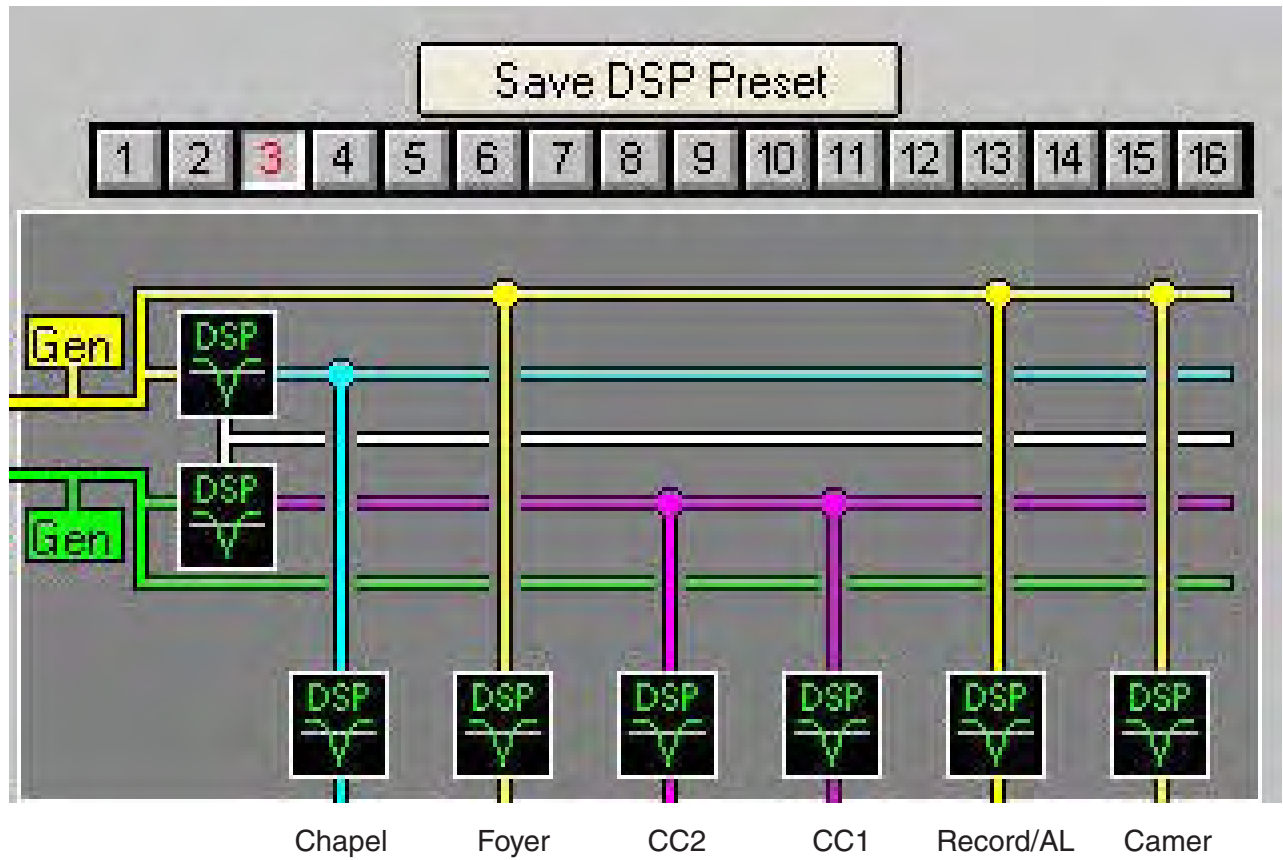
DSP Preset 1



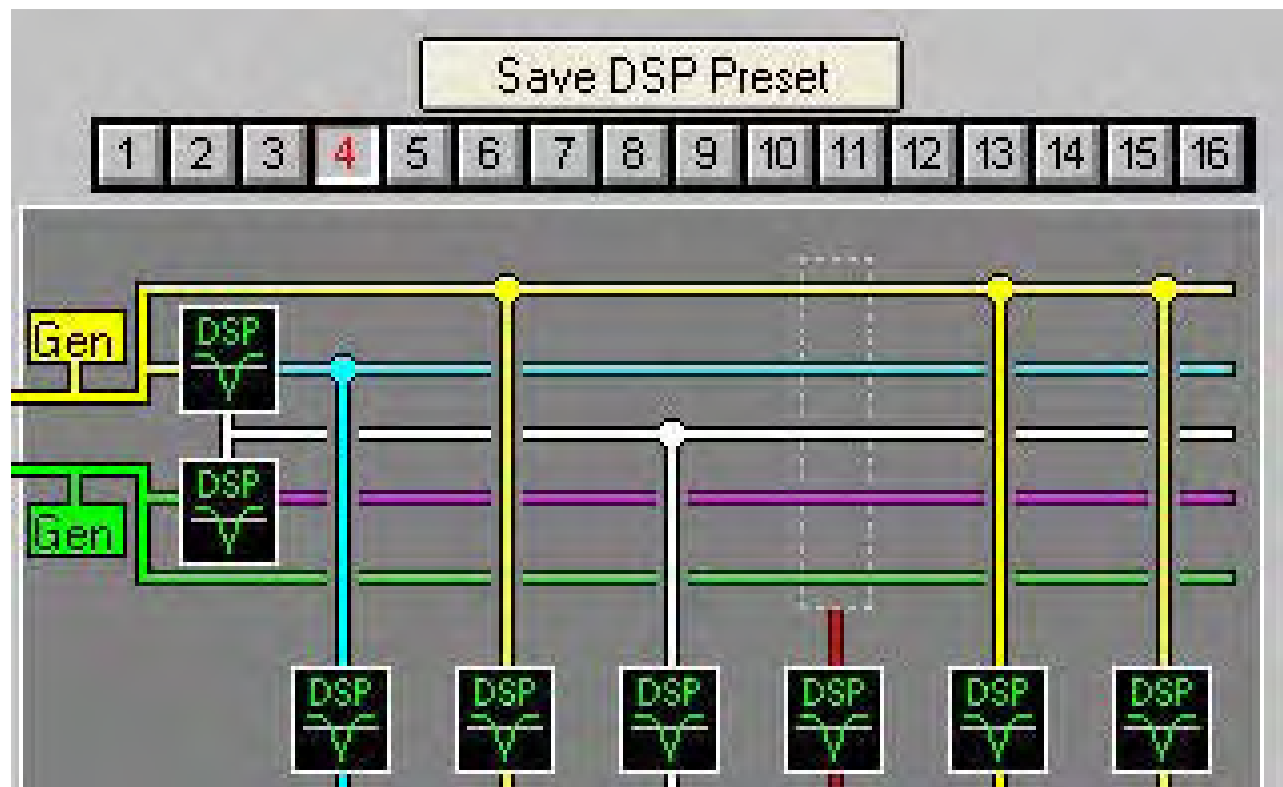
DSP Preset 2



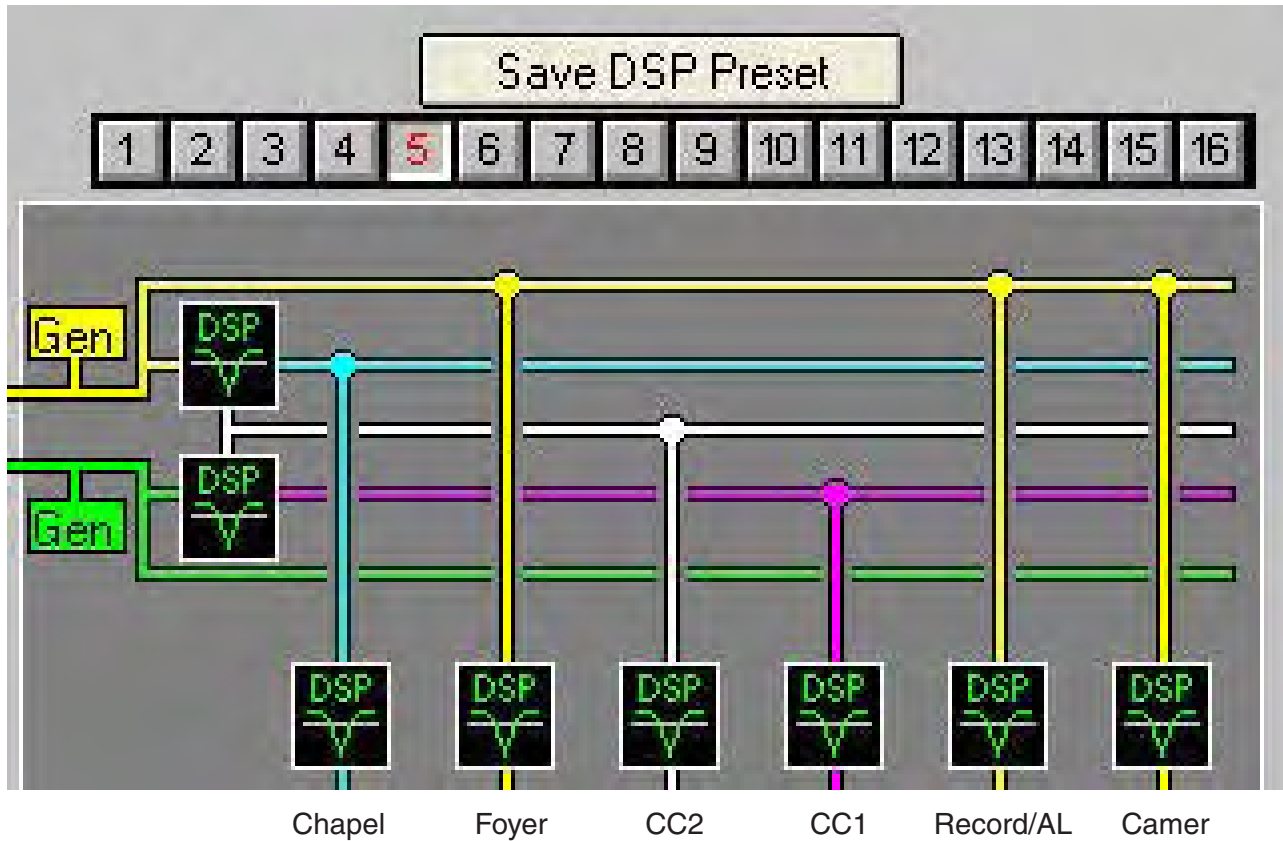
DSP Preset 3



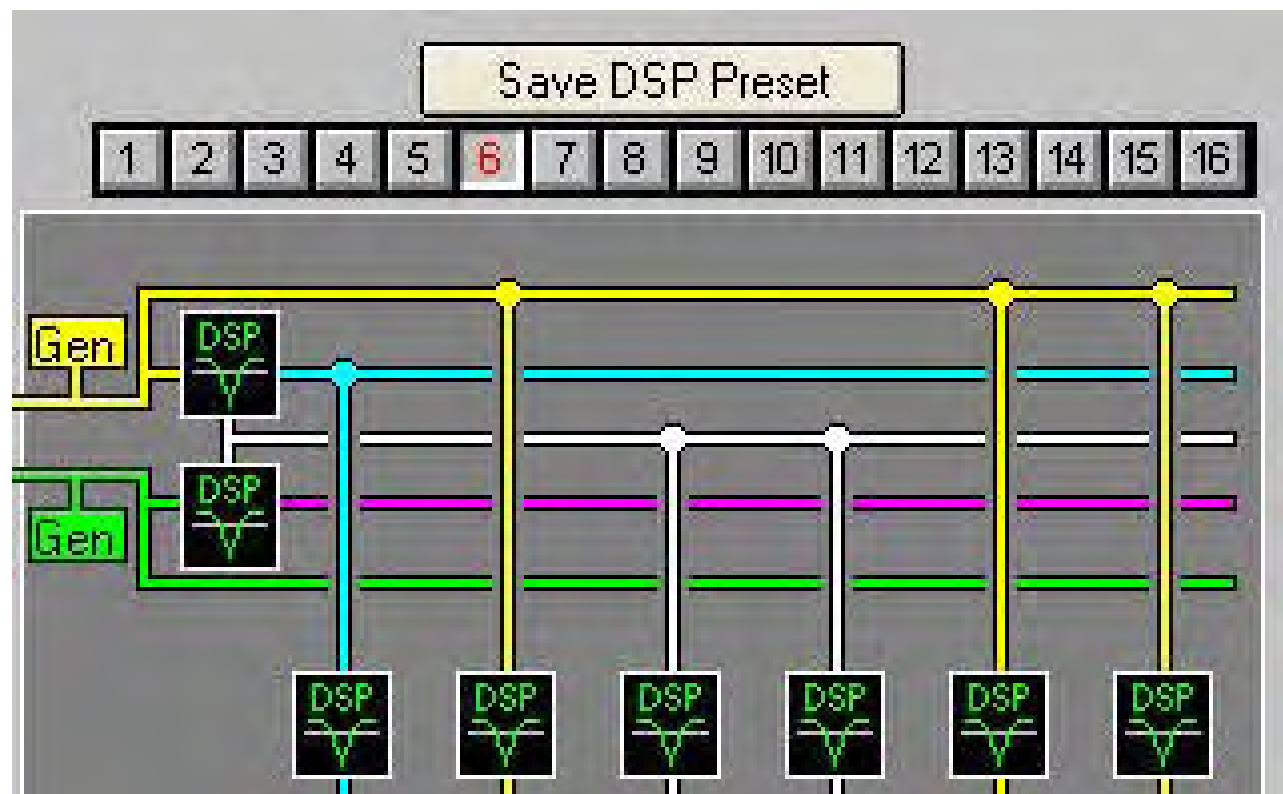
DSP Preset 4



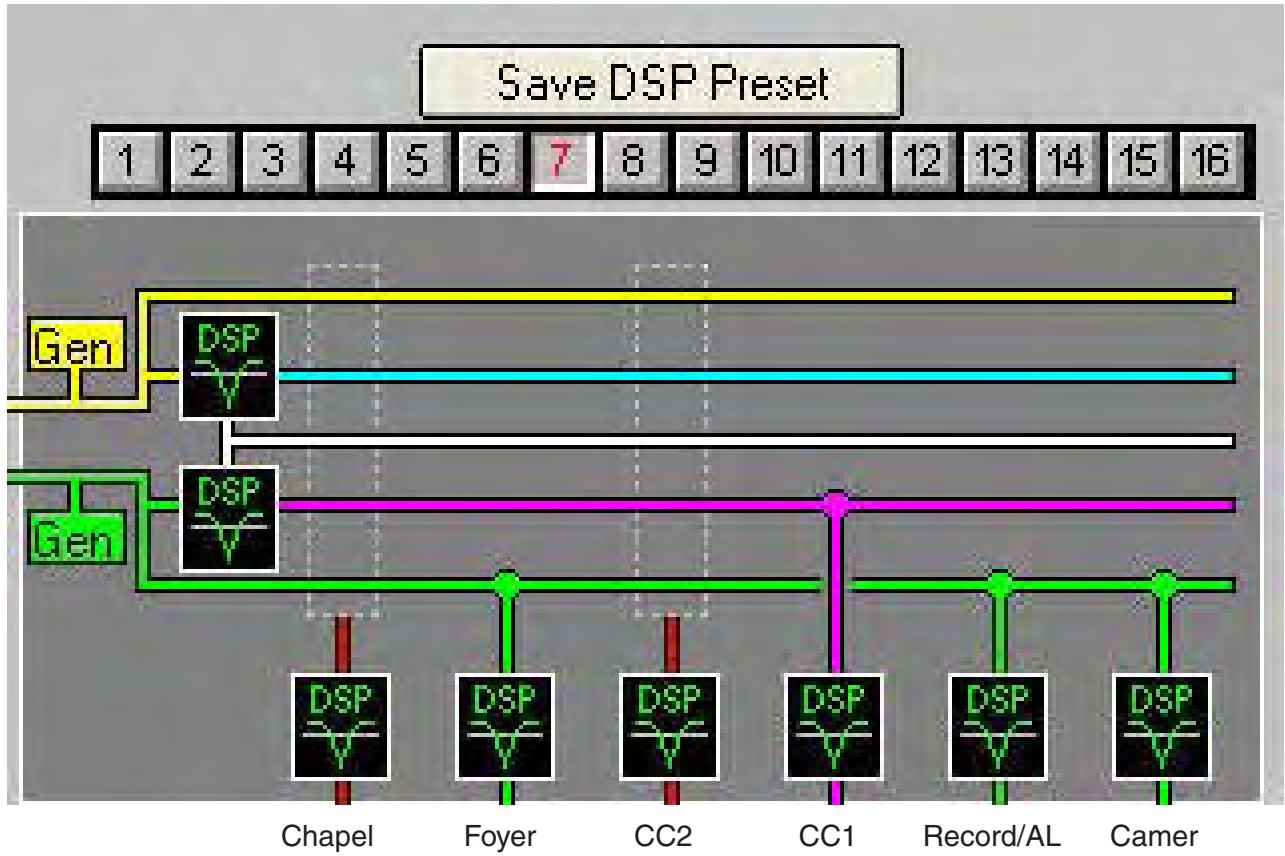
DSP Preset 5



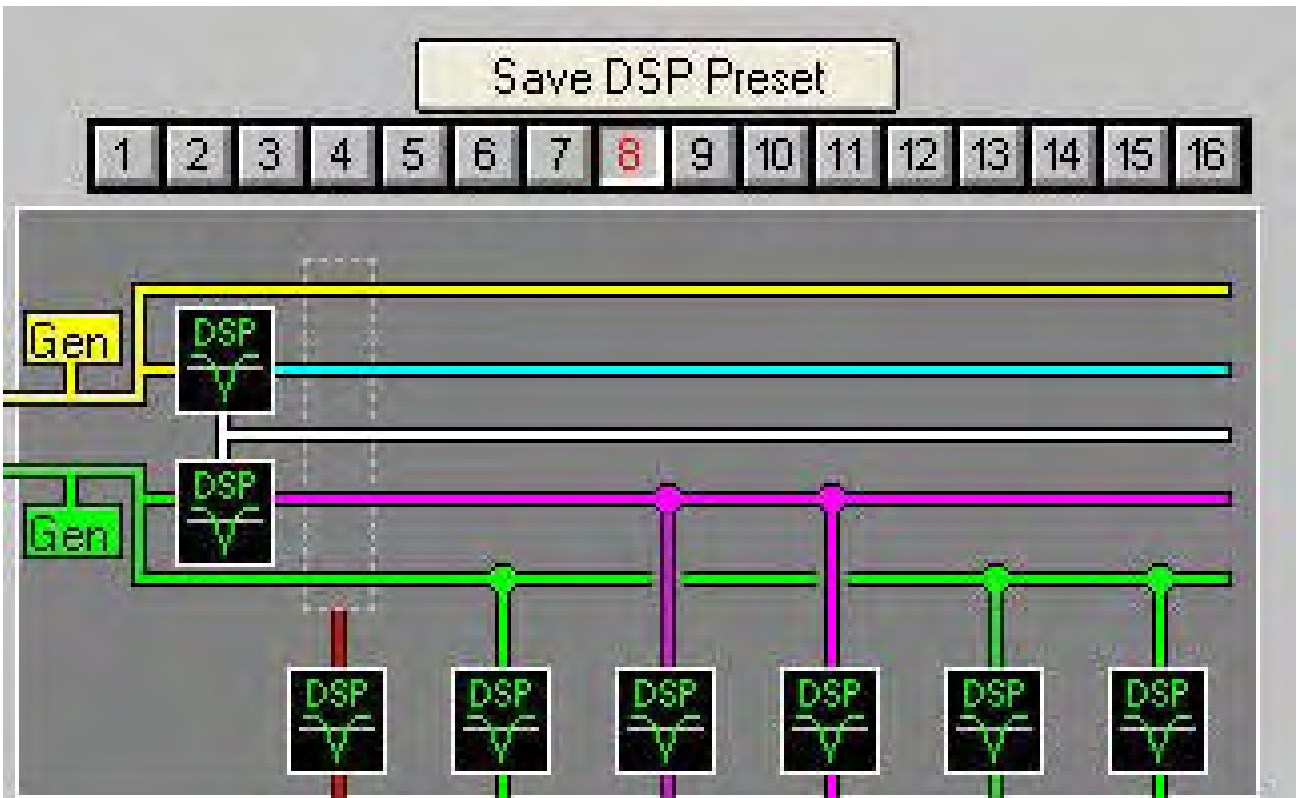
DSP Preset 6



DSP Preset 7



DSP Preset 8

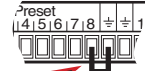


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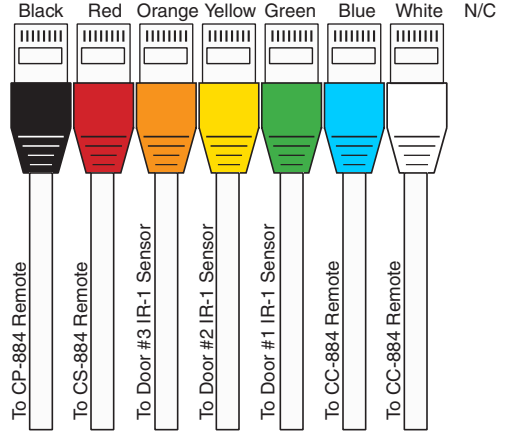
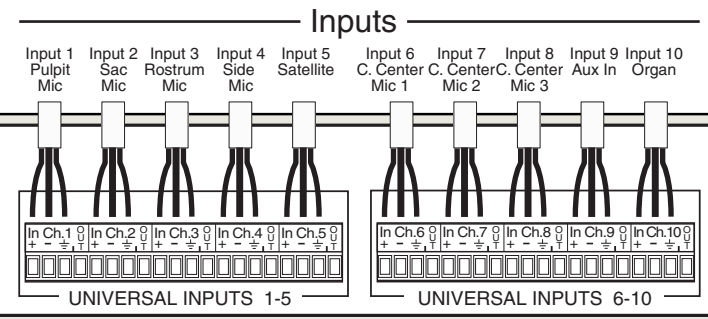
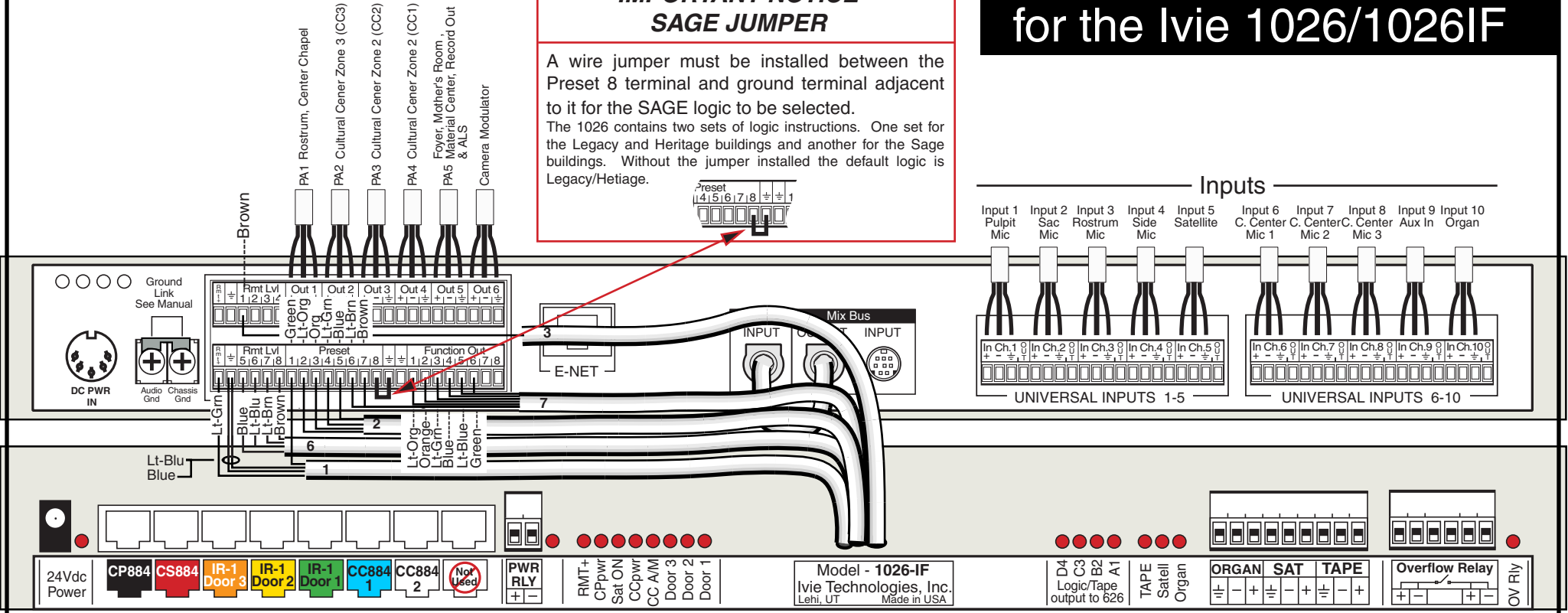
SAGE wiring diagram for the Ivie 1026/1026IF

IMPORTANT NOTICE SAGE JUMPER

A wire jumper must be installed between the Preset 8 terminal and ground terminal adjacent to it for the SAGE logic to be selected. The 1026 contains two sets of logic instructions. One set for the Legacy and Heritage buildings and another for the Sage buildings. Without the jumper installed the default logic is Legacy/Hetiage.



↑ Outputs to Amplifiers ↑



Supplies a switched +24 Vdc to Master Rack Power Relay

Lights when POWER RELAY is activated

Lights when RMT+ is not shorted by remotes. (See Note 1)

Lights when CHAPEL Power is turned ON

Lights when SATELLITE is turned ON

Lights when CULTURAL CENTER Power is turned ON

Lights when CULTURAL CENTER is in MANUAL MODE

Lights when Door #3 is OPEN

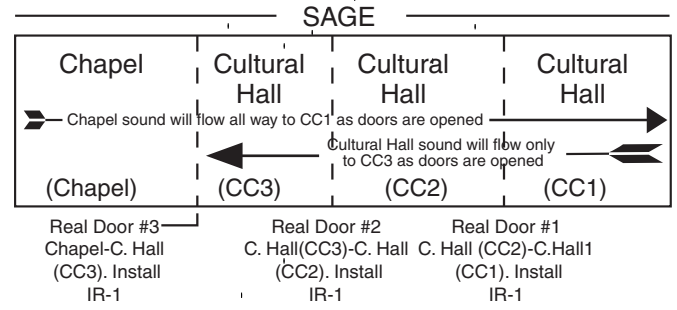
Lights when Door #2 is OPEN

Lights when Door #1 is OPEN

Note 1
This LED is a SPECIAL MONITOR. It Should ALWAYS be lit. If it is not lit, there is a problem with the RMT+ power supplied by the 1026. Most likely the problem is due to a short somewhere in the wiring of the CP-884, CS-884 or CC-884 remote controls. If the RMT+ LED is off, first check the connection to the 1026. Then disconnect ALL RJ45 connectors going to the CP-884, CS-884 and the two going to the CC-884. If the LED lights while the remotes are disconnected the RMT+ is being shorted to ground somewhere in the wiring associated with the remotes.

These seven LEDs are not used on the 1026-IF and should be ignored.

These connectors are not used on the 1026-IF and should be ignored.



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Sage Preset Configurations for the Ivie 1026

The Standard Sage plan varies from the Heritage plan in that there are more presets required in the DSP. There are five mixer section presets and fourteen DSP section presets including the base, or off condition, presets.

All levels, phantom power, and some other settings are contained in the base presets (preset "0" for the mixer section and preset "15" for the DSP section).

Note: The Heritage configuration is pre-loaded into all LDS 1026 units leaving the Ivie factory. If you are installing a Sage style building, you will need to load the Sage configuration file supplied on the Ivie CD –also accessible from the Ivie web site, www.ivie.com– into the 1026.

All mixer presets in the Sage configuration are the same as the presets in the Heritage configuration. Refer to the mixer presets on the previous pages in the Heritage section.

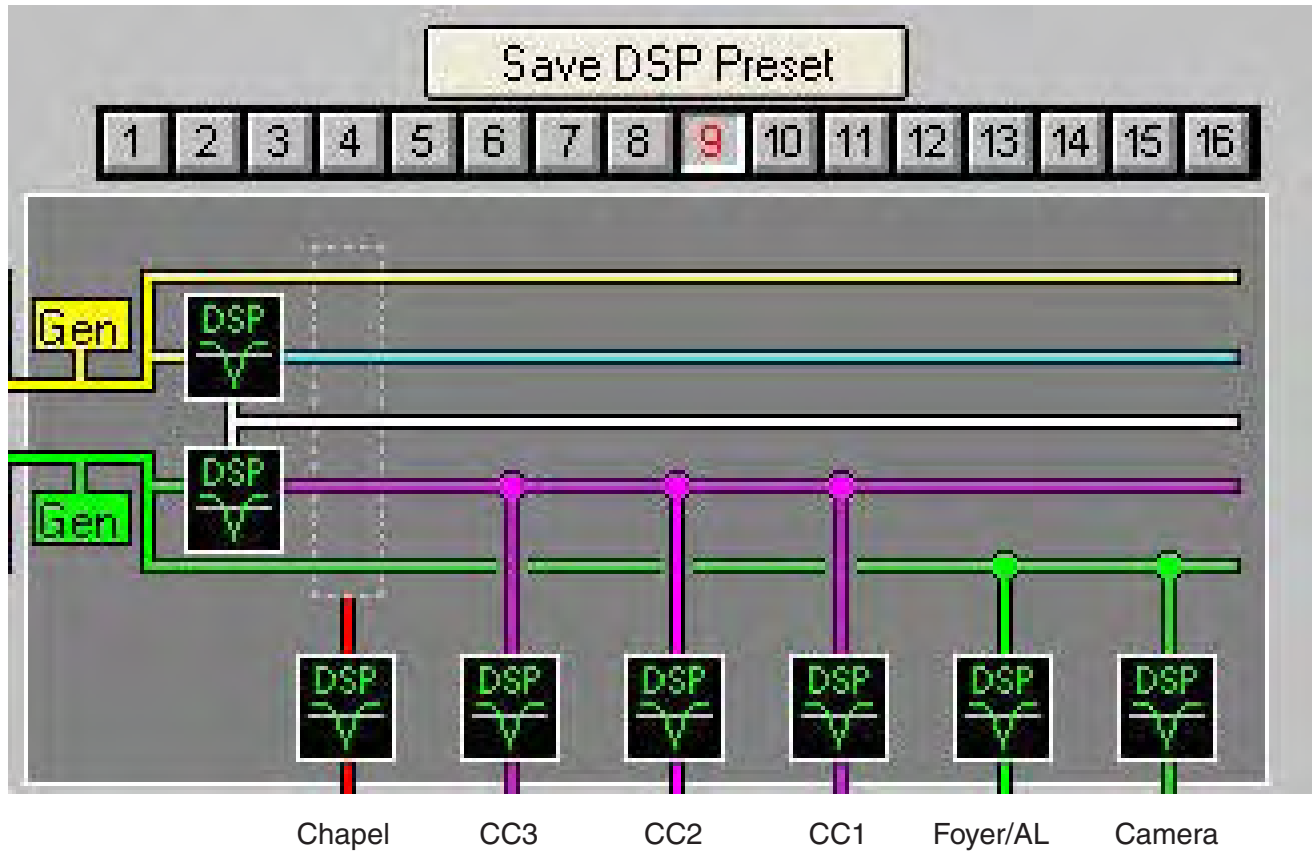
DSP presets one through eight (1 - 8) are the same as in the Heritage configuration. Refer to the DSP presets on the previous pages in the Heritage section.

There are more DSP presets than mixer presets (refer to the Sage Presets table at the beginning of this section). What follows is a graphic for each of the DSP presets unique to the Sage configuration. You can observe which DSP preset is being called in the software by noting the PEQ preset number in "PEQ Preset = x" at the bottom of the special LDS window (labeled "HA98/LE98/SG98") in the software main screen.

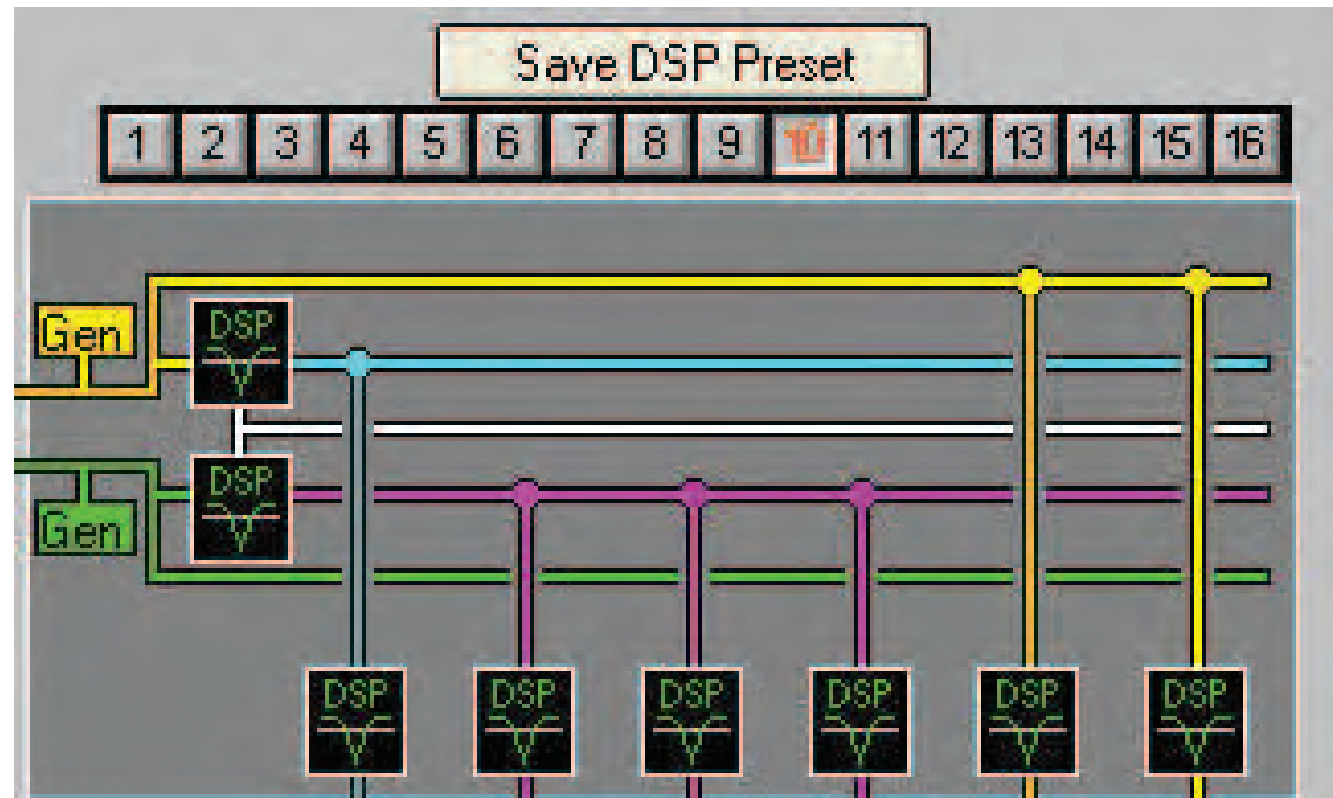
**1026 Presets and Room Conditions
LDS Sage Building**

	Description of Functions / Room Conditions	Mixer Preset #	DSP Preset #	
1	Base Preset (system off)	0	15	
2	Chapel Only	1	1	
3	Chapel + CC3	1	11	
4	Chapel +CC3 + CC2	1	4	
5	Stake Conference (Chapel +CC3 + CC2 + CC1)	1	6	
6	Stake Conference, w/ satellite	1, 13	6	
7	Chapel + CC3 + CC2 CC1	1	5	
8	CC1 Only	1	7	
9	CC1 + CC2	1	8	
10	CC1 + CC2 + CC3	1	9	
11	Chapel + CC3 CC1	1	12	
12	Chapel + CC3 CC1 & CC2	1	13	
13	Chapel CC1 + CC2 + CC3	1	10	
14	Chapel CC1 + CC + CC3, Manal Mode	1, 14	10	

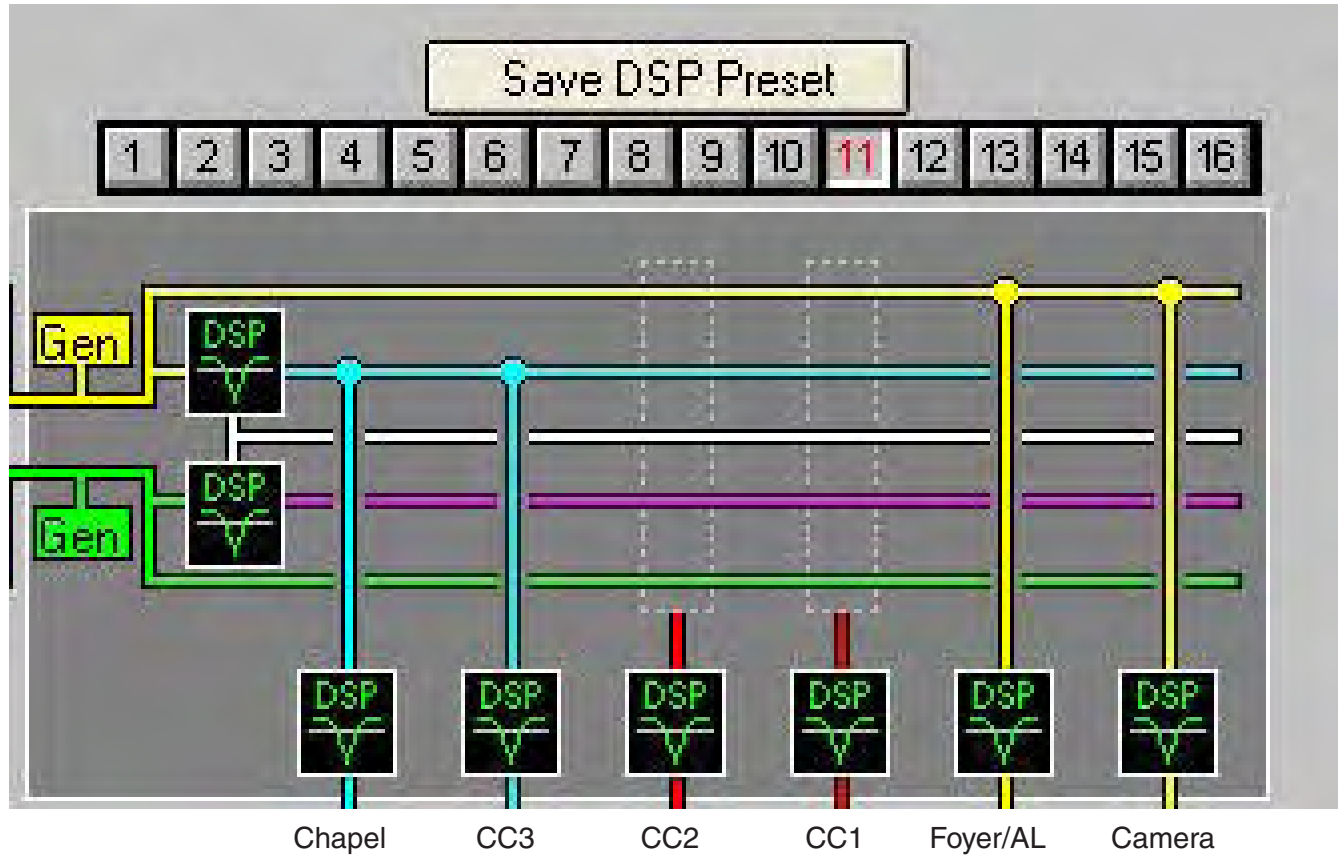
DSP Preset 9



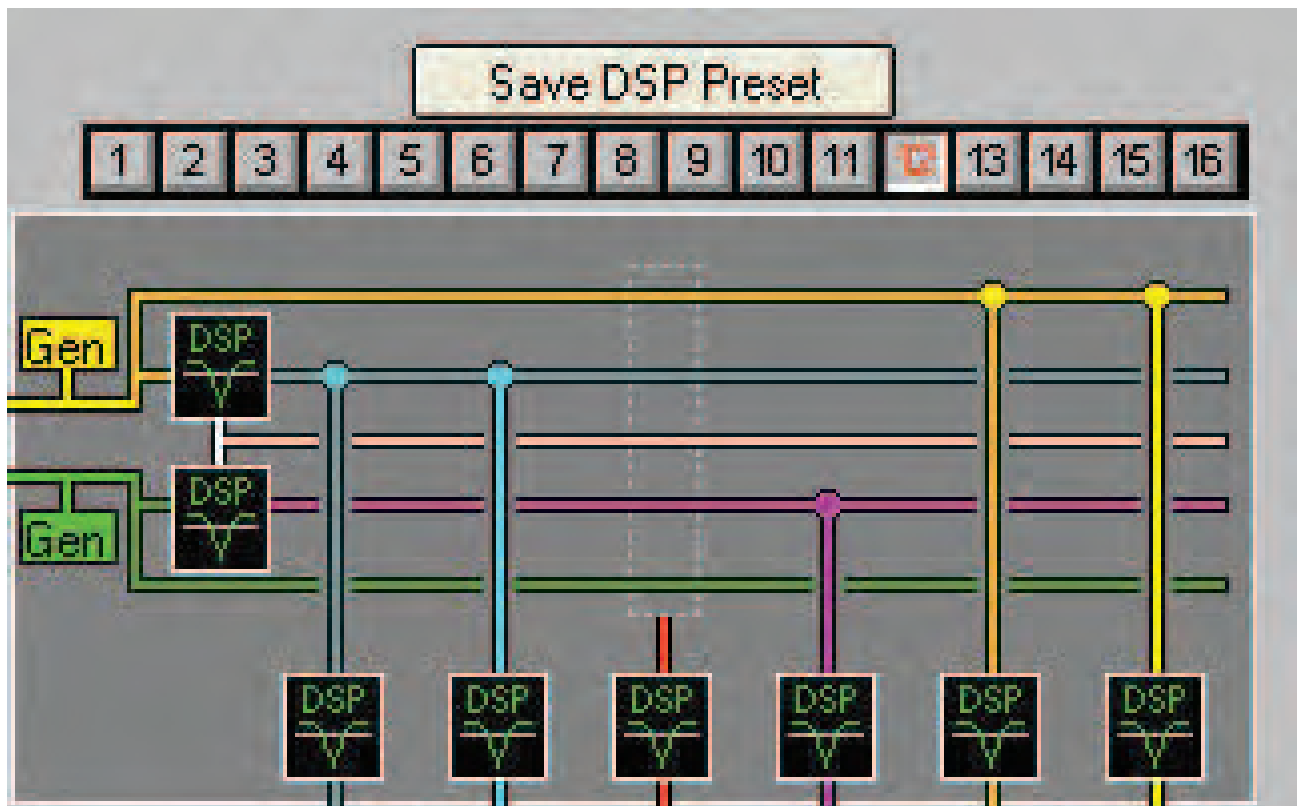
DSP Preset 10



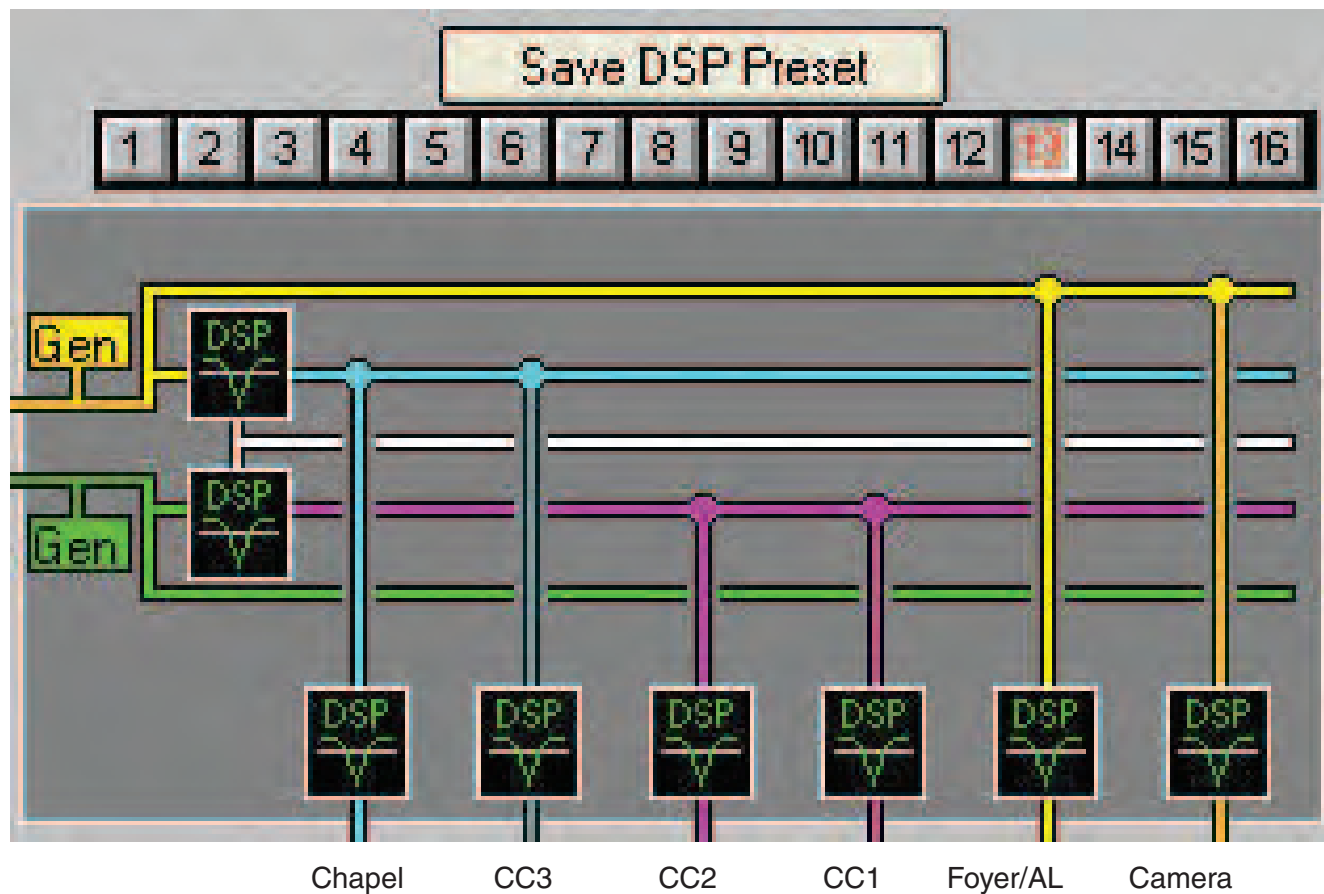
DSP Preset 11



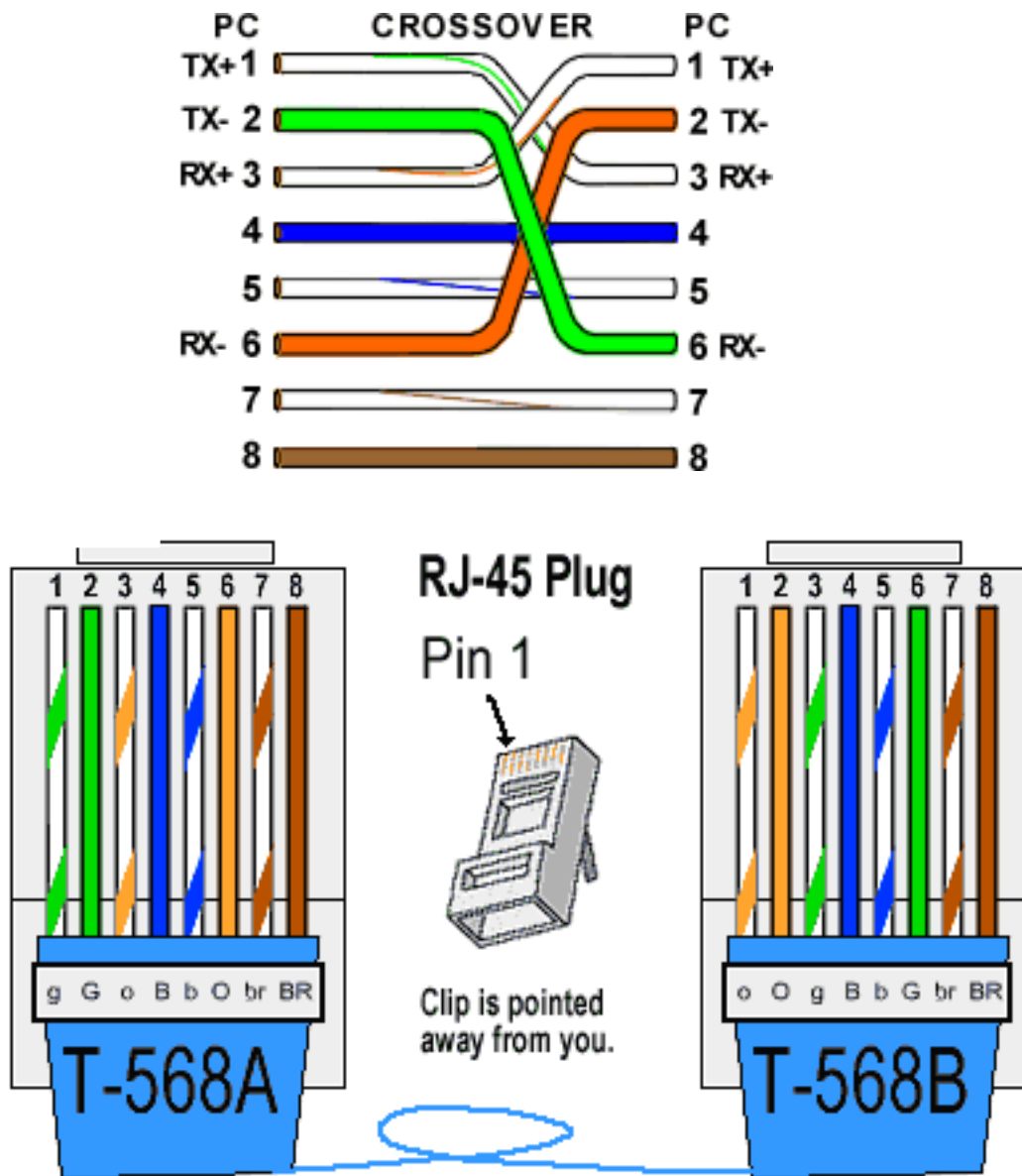
DSP Preset 12



DSP Preset 13

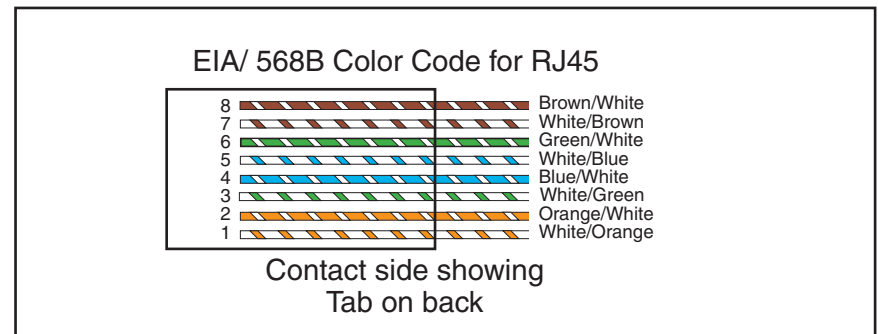
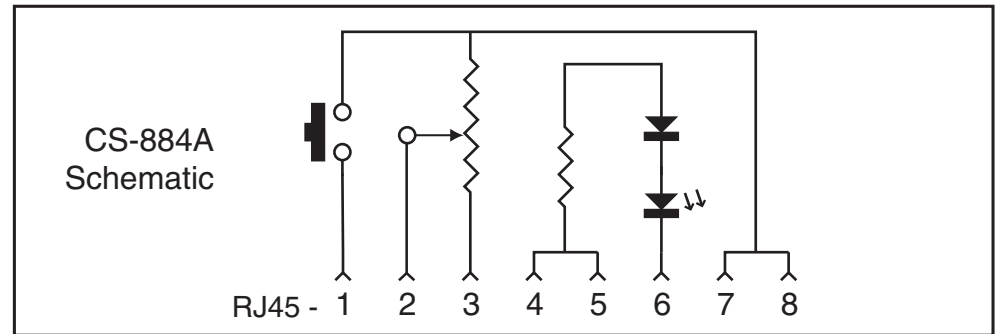
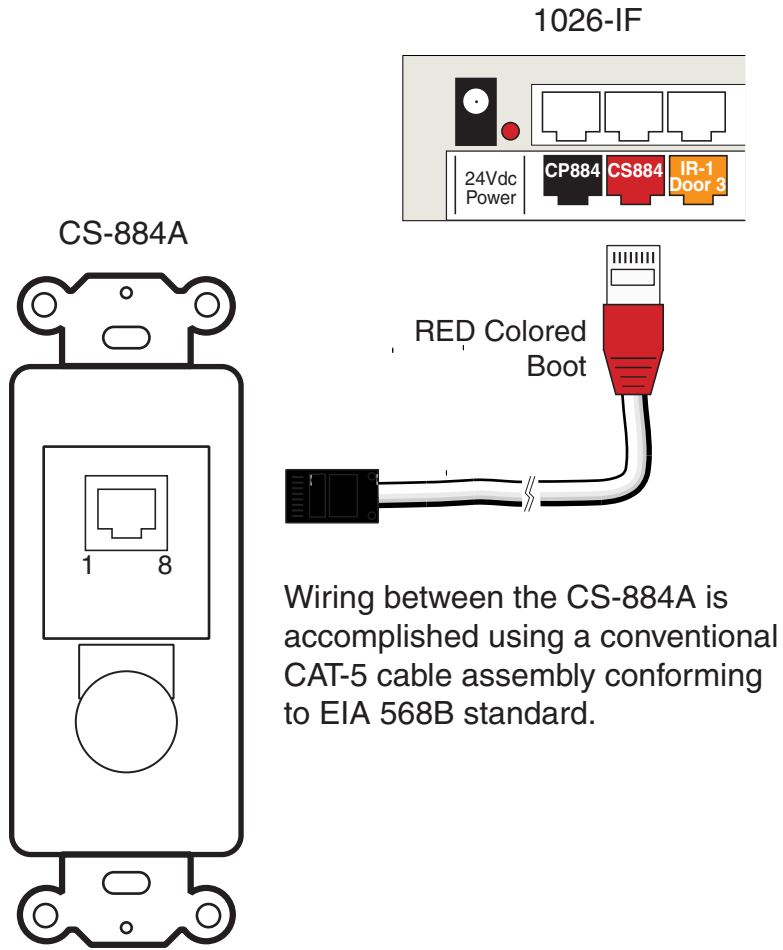


Ethernet Crossover Cable



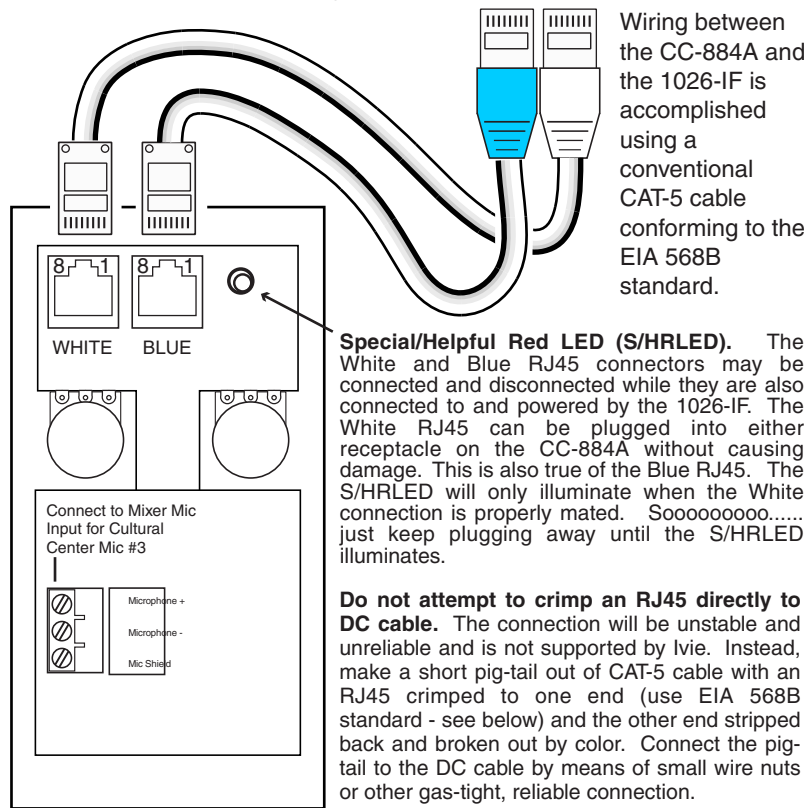
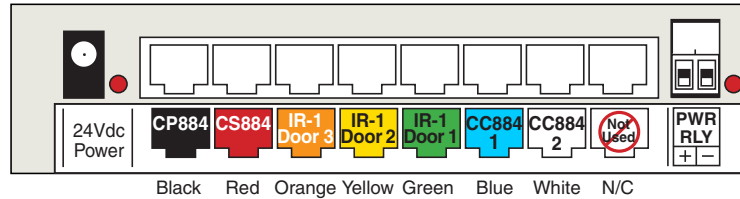
A good way of remembering how to wire a Crossover Ethernet cable is to wire one end using the T-568A standard and the other end using the T-568B standard. Another way of remembering the color coding is to simply switch the Green set of wires in place with the Orange set of wires. Specifically, switch the solid Green (G) with the solid Orange, and switch the green/white with the orange/white.

CS-884A connection to Ivie 884-IF



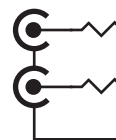
CC-884A connection to Ivie 1026-IF

1026-IF

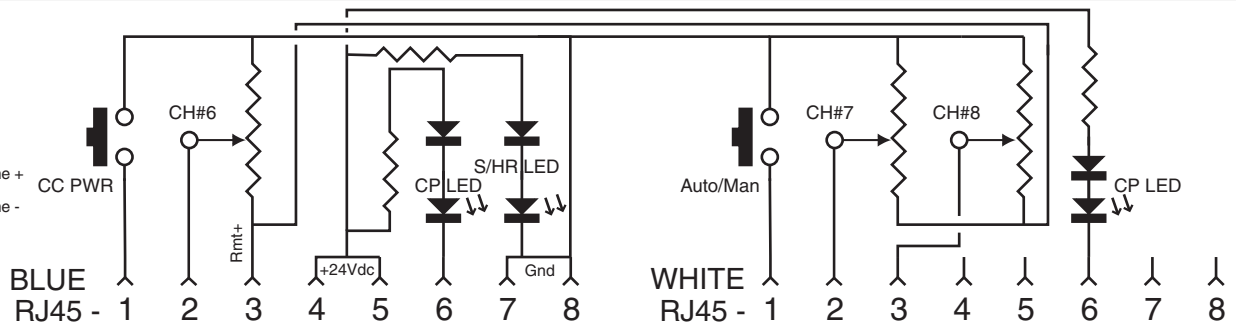
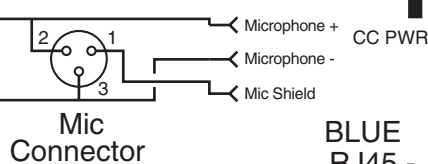


CC-884A Schematic

RCA Connectors

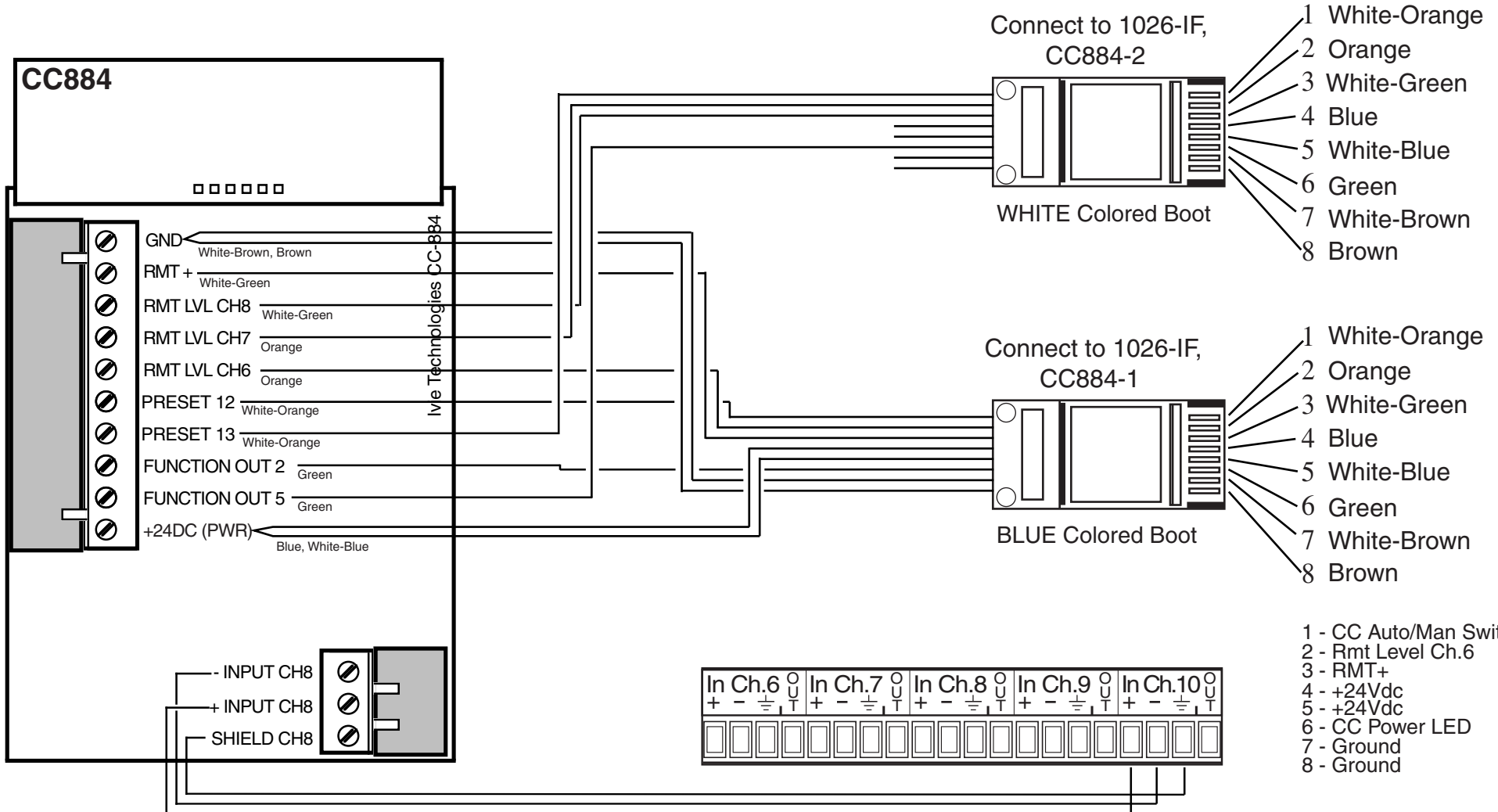


3-pin Euro Block

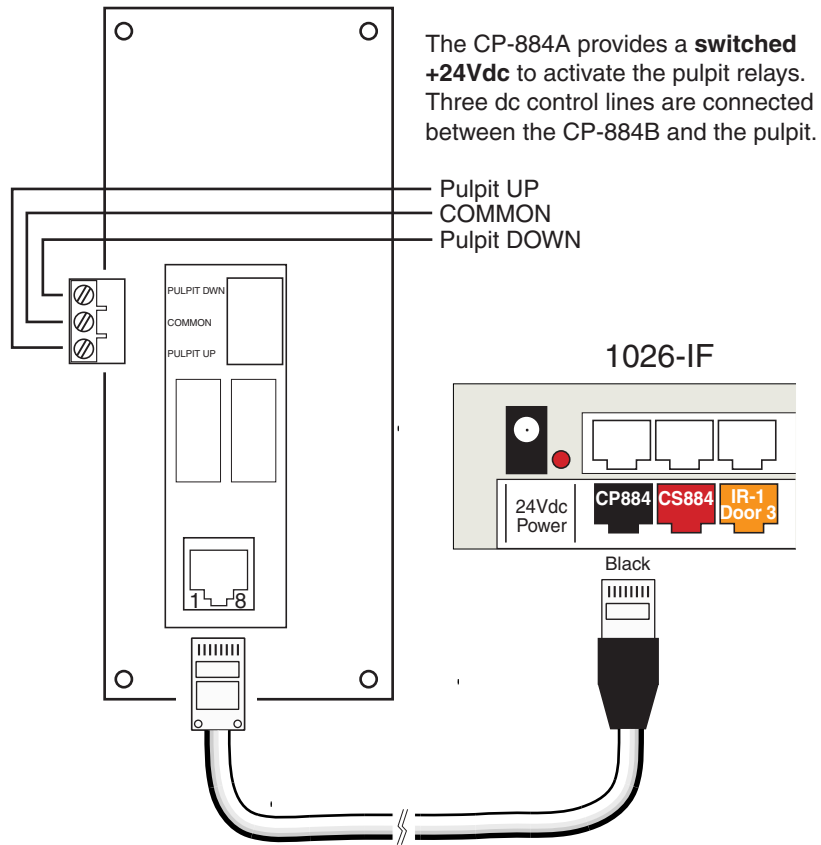


BE CAREFUL! Since there are two 8 conductor cables with IDENTICAL color-coding it is very easy to interchange wires of the same color-code between the two cables.

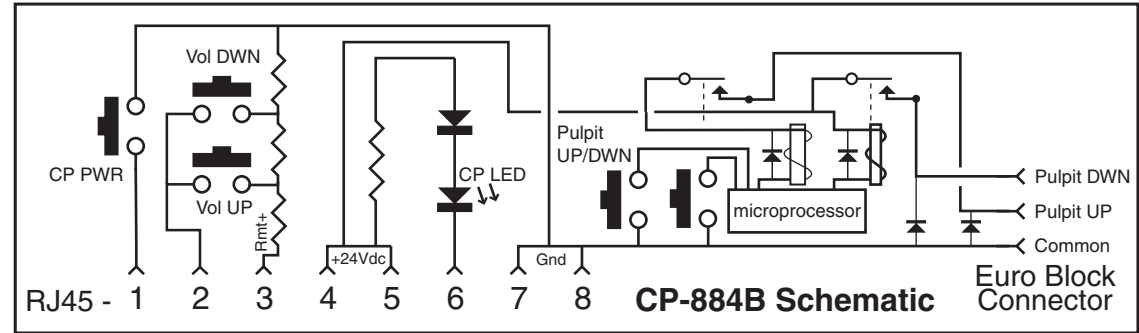
- 1 - CC Auto/Man Switch
- 2 - Rmt Level Ch.7
- 3 - Rmt Level Ch.8
- 4 - No Connection
- 5 - No Connection
- 6 - CC Auto/Man LED
- 7 - No Connection
- 8 - No Connection



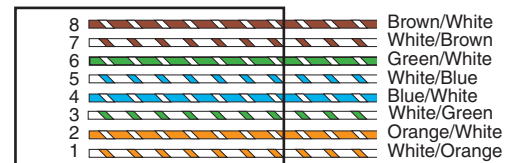
CP-884A connection to Ivie 1026-IF



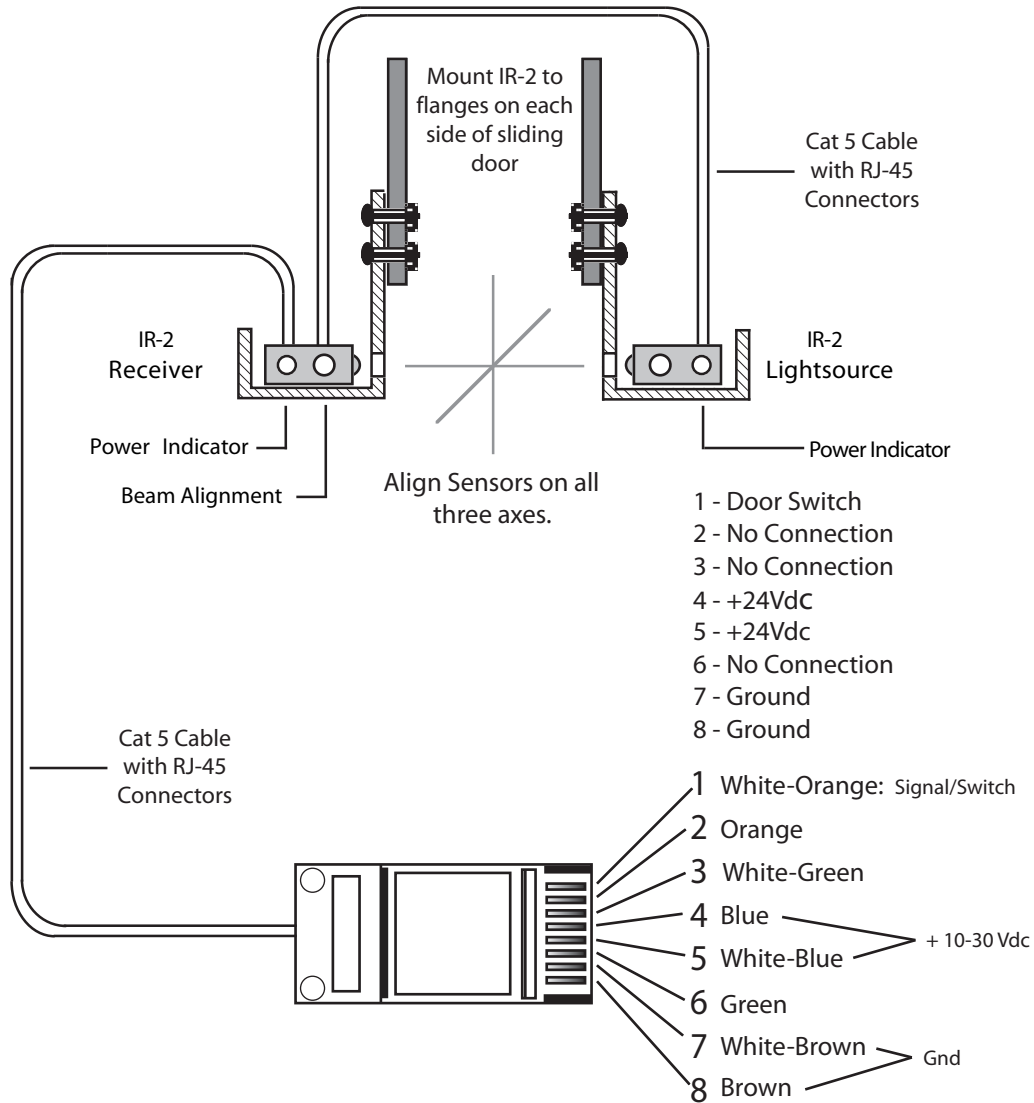
Wiring between the CP-884B and the 1026-IF is accomplished using a conventional CAT-5 cable conforming to the EIA 568B standard.



EIA/ 568B Color Code for RJ45

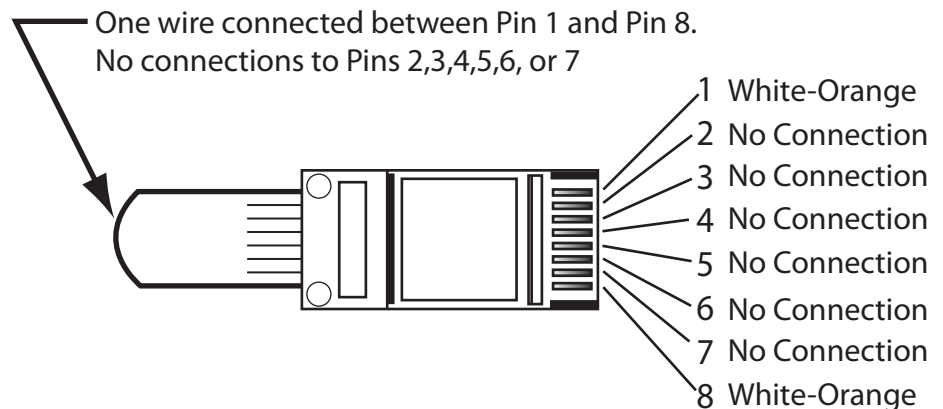


Contact side showing
Tab on back

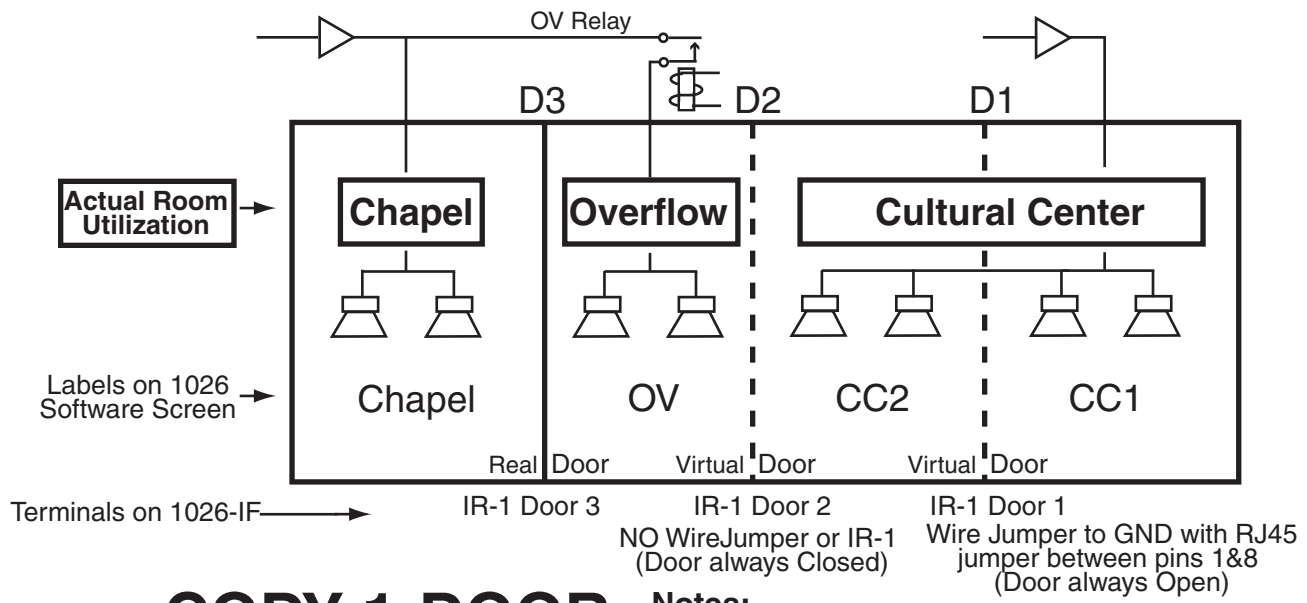


Ivie IR-2 to Ivie 1026-IF+ Wiring Diagram

The HERITAGE plan has only two sliding doors (1 & 2). Door three does not exist so a "Jumper" plug is plugged into the Door #3 RJ45 socket on the 1026-IF to simulate an open door condition. Other plans and or retrofits may also require one or more "Jumpers."



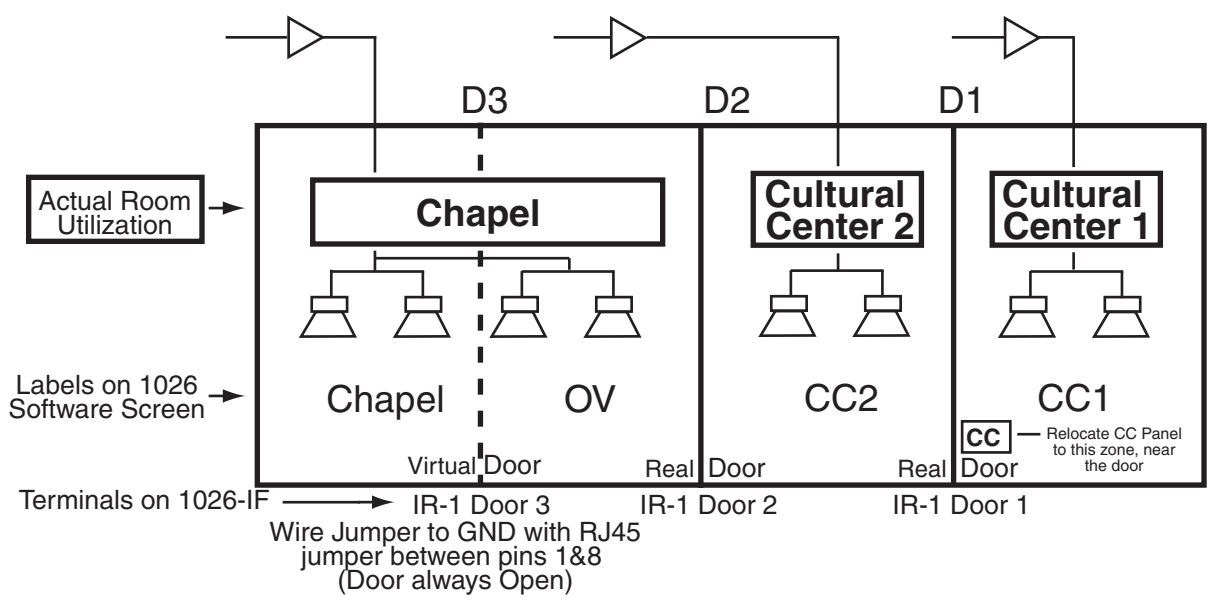
Ivie IR-2 Door "Jumper" plug



CODY 1-DOOR RETROFIT

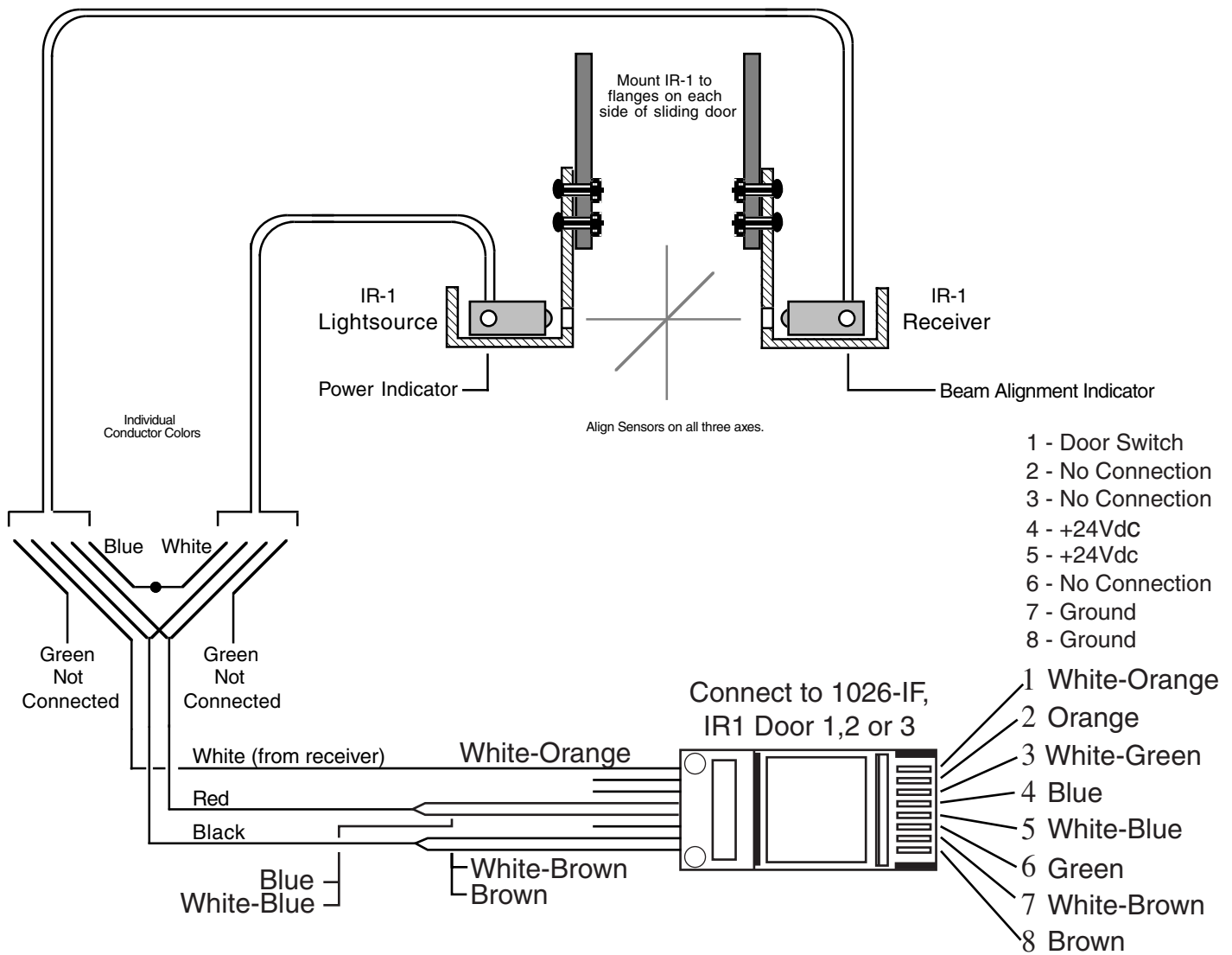
Notes:
 See Text Note
 OV Relay is optional:OV function may be activated either by relay or by routing through DSP and separate amp channel.

To bring Chapel sound into the Cultural Center the Overflow door must be open **AND** the sound system in the Cultural Center must be manually turned on.



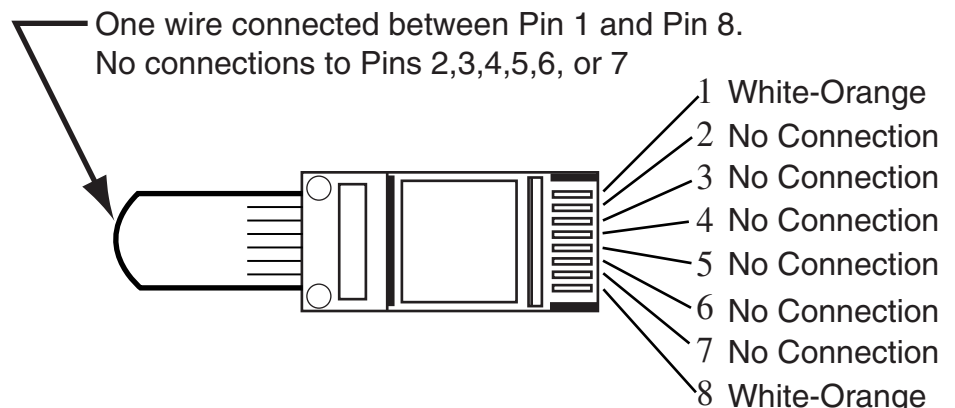
CODY 2-DOOR RETROFIT

Ivie 1026 LDS Building Configuration



Ivie IR-1 to Ivie 1026-IF+ Wiring Diagram

The HERITAGE plan has only two sliding doors (1 & 2). Door three does not exist so a "Jumper" plug is plugged into the Door #3 RJ45 socket on the 1026-IF to simulate an open door condition. Other plans and or retrofits may also require one or more "Jumpers."



Ivie IR-1 Door "Jumper" plug