

AUDIOACCESS[®]
Simply Ingenious

CATC/2WSI Intelligent Two Way Serial Interface

Firmware Version 1.1.0.0 and higher

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AND
HARDWARE CONNECTION GUIDE

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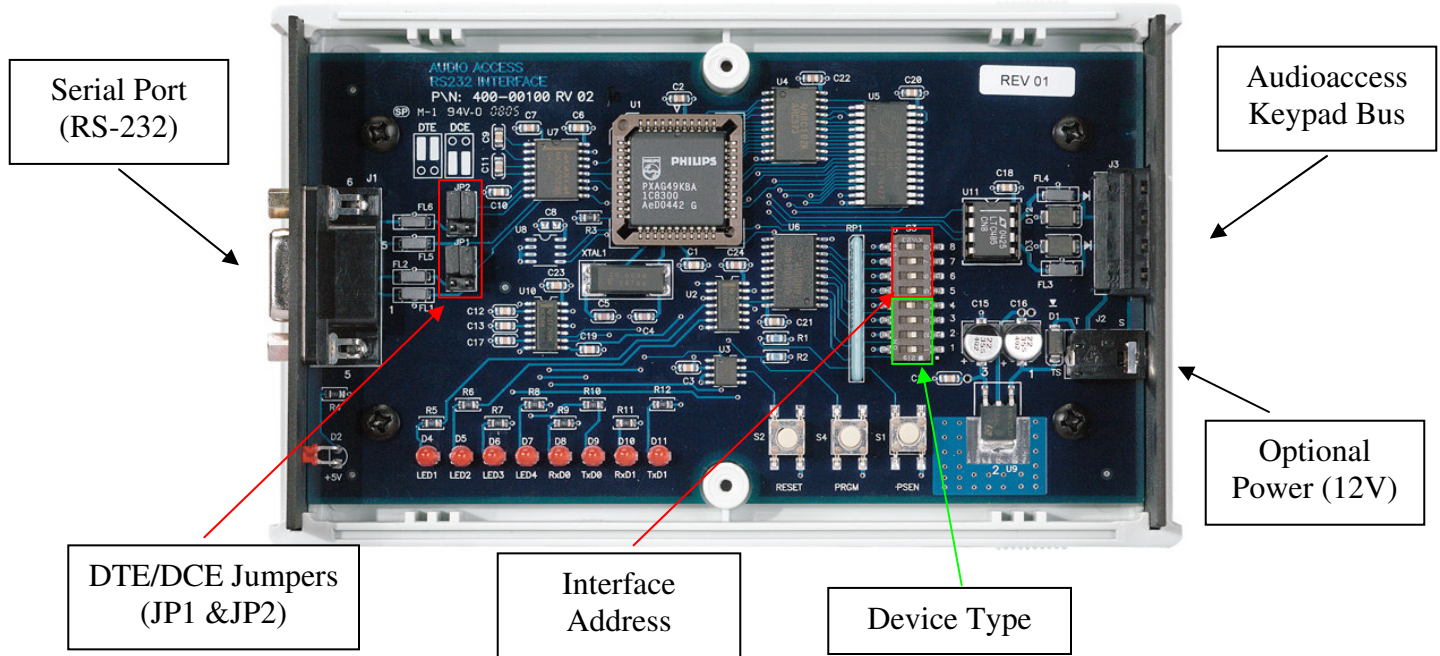
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Detailed Diagram



Hardware Connection

There are two connections on the interface: a four wire phoenix connector for the Audioaccess keypad bus, and a nine pin female for the serial connection to the device being controlled. The unit uses a straight through serial cable. Depending on your particular device, you may need a turnaround adaptor.

Connection for RS-232 Control

The RS-232 Port can be configured as either Data Terminal Equipment (DTE) or Data Computer Equipment (DCE). When configured as DTE (both jumpers at JP1 in the TOP position), pin 2 of the nine-pin D connector will be TxD, and pin 3 will be RxD. When configured as DCE (both jumpers at JP1 in the BOTTOM position), pin 2 will be RxD and pin 3 will be TxD. When using the CATC to control a subsystem, consult the manufacturer's manual for pin 2 and 3 use. The pin outs must be opposite at the other end of the RS-232 connection. If pin 2 is TxD at the Interface Board, pin 2 at the computer or subsystem end must be RxD. Set the CATC/2WSI JP1 jumper accordingly (refer to the chart on page 4).

- Both JP1 and JP2 should be configured the same way for proper operation.
- Certain models of Escient Fireball® will need to have the jumpers at JP2 removed completely. If you have problems with your unit locking up, please remove these jumpers.
- Please see the Audioaccess website for any additional information regarding your specific installation.
- **Note: Please consult your manufacturer’s information to determine the correct connection of the below pins for proper send and receive of RS-232 data.**

Our research has shown that if you are using a straight through serial cable (not null modem) you will need to have the jumpers in the Top (DTE) position for:

- **Connecting to your PC for firmware updates**
- **Audio ReQuest Music Servers**
- **Escient Fireball Servers**
- **Audioaccess aDock**

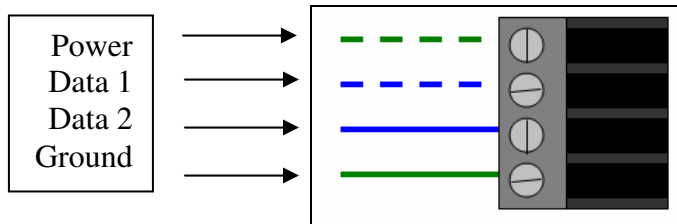
Our Research has shown that if you using a straight through serial cable (not null modem) you will need to have the jumpers in the Bottom (DCE) position for:

- **Lutron Homeworks**
- **Russound ST2**

| Serial Port Pin # | Interface Board in DTE position | Subsystem |
|-------------------|----------------------------------------|------------------|
| Pin 2 | TxD (TOP) | RxD |
| Pin 3 | RxD (TOP) | TxD |
| | Interface Board in DCE position | Subsystem |
| Pin 2 | RxD (BOTTOM) | TxD |
| Pin 3 | TxD (BOTTOM) | RxD |

Connection to Audioaccess® Bus

Connect the four wire phoenix connector using the standard four wire keypad wiring. From top to bottom the connections are:

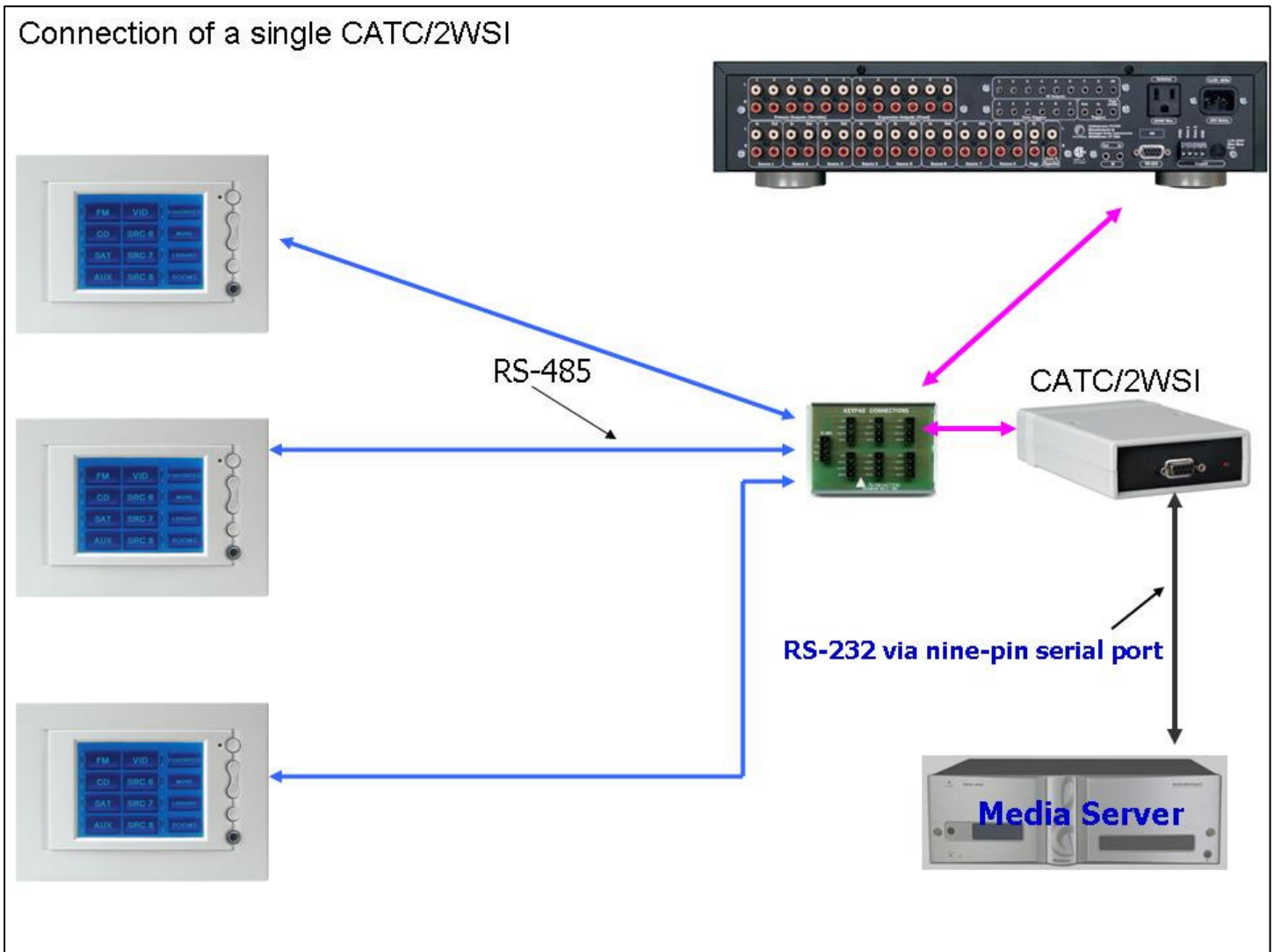


Optional 12 Volt Power Connection

Select an AC to DC adaptor of at least 12VDC @ 500mA with a mono 3.5mm (1/8" mini) plug, tip positive. Insert the mini plug into J1 on the CATC/IB and the adaptor into an unswitched outlet. Do NOT use the switched outlet on the PX-700!

If you are using the CATC/2WSI with the optional power, you may still be able to use the touchscreens to access the attached devices if the PX-700 becomes nonfunctional, or needs to be removed for service. This would be most useful for non-audio control such as Lutron Lighting systems. This optional power connection can also be used to power the unit during a firmware update if you do not have a PX-700 to supply power to the unit.

NOTE: The plug in J1 on the CATC/2WSI automatically disconnects power from the keypad bus – you do not have to disconnect the power wire between the Interface Board and the KPT.



Interface Setup

The 2WSI has the communication protocol built into the unit. Depending on which dipswitch selections are made within the interface will determine which device type it is controlling and which interface number this particular unit is. In this way you can have several interfaces "talking to" multiple devices on the same system.

1. Remove two screws holding cover on.
2. Remove cover.

Setting Device Type

Using a small screwdriver set the first four dip switches according to the following:

► Note: You must have firmware version 1.1.0.0 or higher to control all devices listed on the below chart. If you do not have this firmware please call Audioaccess Technical Support for the upgrade instructions. Please contact Technical Support if you need help determining your version. All units shipped after November 1, 2006 have the version 1.1.0.15.

| Device | # | DIP 1 | DIP 2 | DIP 3 | DIP 4 |
|--------------------------------------------------|---|-------|-------|-------|-------|
| Self Test | 0 | Down | Down | Down | Down |
| Audio Request – All single zone models | 1 | Down | Down | Down | Up |
| Escient Fireball | 2 | Down | Down | Up | Down |
| n/a | 3 | Down | Down | Up | Up |
| Russound ST2 AM/FM & XM / SIRIUS | 4 | Down | Up | Down | Down |
| Lutron Home Works | 5 | Down | Up | Down | Up |
| Audioaccess aDock+ for iPod® | 6 | Down | Up | Up | Down |
| Russound ST2 DUAL XM or SIRIUS | 7 | Down | Up | Up | Up |
| Audio ReQuest F.Series 2 and 4 Zone and Z.Series | 8 | Up | Down | Down | Down |

Setting Interface Address

The next four dip switches are used to set the interface address. This is also used in the CATC Easy Touch II programming. In order for the interface to work properly the device address must be set on both the hardware and the software. If you have more than one of each type of device, you will need to set each corresponding interface to a unique address.

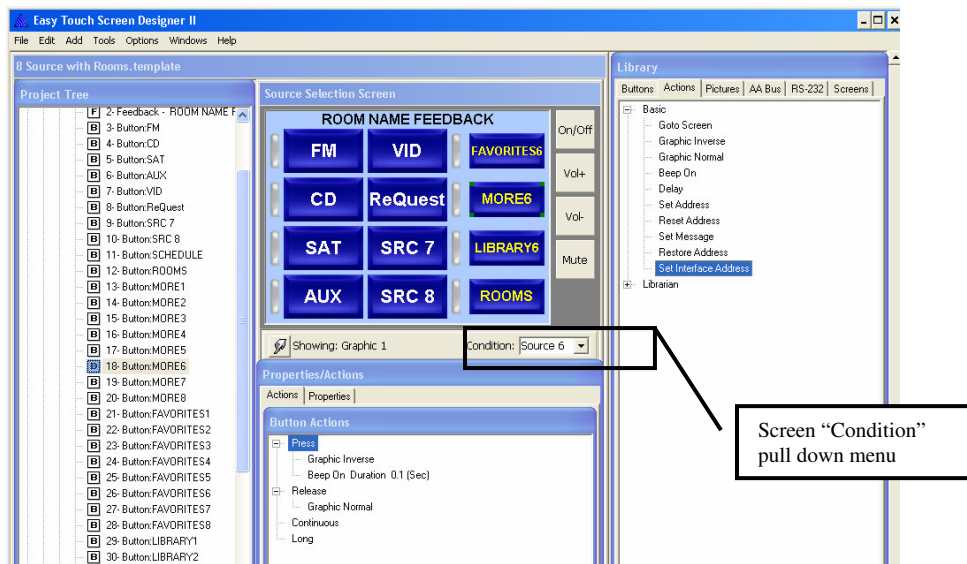
| Interface Address | DIP 5 | DIP 6 | DIP 7 | DIP 8 |
|-------------------|-------|-------|-------|-------|
| 1 | Down | Down | Down | Up |
| 2 | Down | Down | Up | Down |
| 3 | Down | Down | Up | Up |
| 4 | Down | Up | Down | Down |
| 5 | Down | Up | Down | Up |
| 6 | Down | Up | Up | Down |
| 7 | Down | Up | Up | Up |
| 8 | Up | Down | Down | Down |
| 9 | Up | Down | Down | Up |
| 10 | Up | Down | Up | Down |

CATC Easy Touch II Programming

The programming for the interface is self contained within the template file we have provided you. You should have downloaded and installed the v1.2a update and any additional updates available. Please check www.support.audioaccess.com for the latest download.

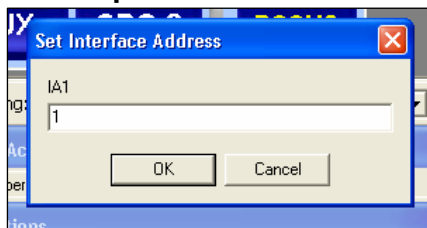
The below instructions are generic instructions for any interface and template. Please see detailed instructions for specific instructions for each interface. These are available on the Audioaccess Technical Support website. There are only three steps necessary to correctly program the CATC and CATC/2WSI. **If you are using the Lutron Homeworks interface please see the detailed instructions on the Audioaccess Technical Support Website before continuing.**

1. Add the "Set Interface Address" message from the Actions Library onto the Button Press of the correct MORE, FAVORITES or LIBRARY BUTTON for your installation. This is the button that will be used to GOTO the navigation and control screens for the connected device. You can rename this button at any time. In this example I am using Source 6 and Drag+Dropping the "Set Interface Address" action from the Actions Library (under Basic) to the press of the MORE button.
 - Make sure to use the "Condition" pull down menu to filter the buttons that are being shown on the screen to match the source # input that you are going to connect to the PX-700. If your device is going to be Source #6 on the PX-700, you should select "Source 6" on the pull down menu. Please see the CATC installation guide for detailed information.

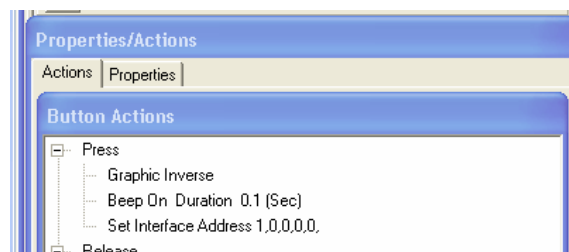


2. When you drag and drop the "Set Interface Address" action onto the "MORE" button you will be prompted to enter five (5) numbers for IA1, IA2, IA3, IA4 and IA5. When prompted for Interface address enter the number for IA1 that corresponds to the dip switch setting you set in the hardware setup above and click OK. **If you are using an Audio ReQuest F.Series, Russound Dual Tuner, or other multiple output device, use IA2 to specify the output of the unit from 1 to 4.** All other interface address numbers should be set to 0. The additional place holders will be used for future development.

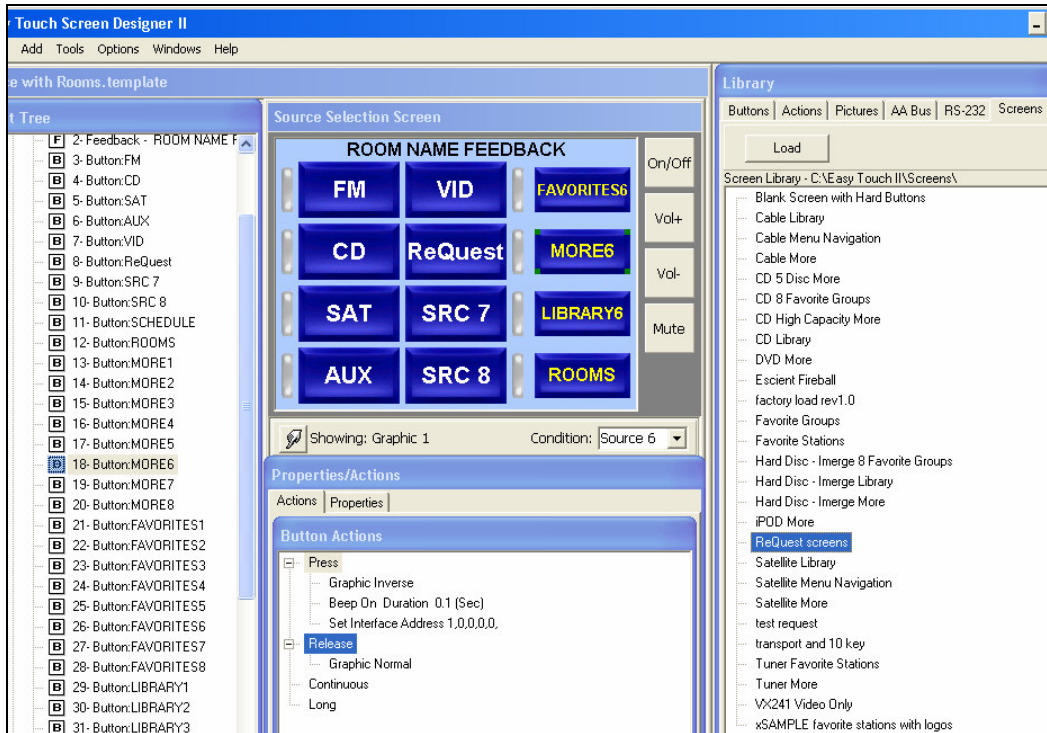
For example: Interface Address = 1



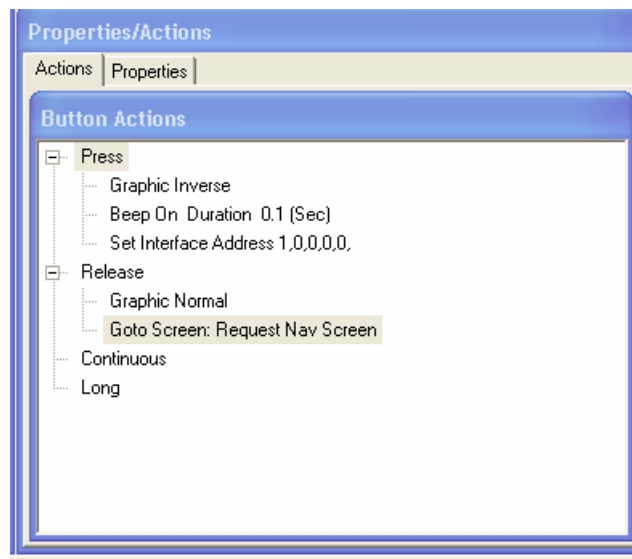
Your Actions should now look like this:



3. Drag and Drop the device template screens (in this example we are using the ReQuest Interface screens) from the Screens Templates onto the **RELEASE** of the More button (or any button that you will use to navigate to the additional control screens for this device). This will automatically add the control screens into your project and add the correct GOTO action. You can rename this button at any time.



Your button actions should now look like this (for example):



Congratulations!

You have now completed the programming for the 2 way interface and the necessary components of the CATC. Complete the rest of your project and download to the CATC when done.

Troubleshooting

| Symptom | Possible Cause | Solution |
|-------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No Feedback on CATC | No Power on CATC/2WSI | Check Power LED and Phoenix connections. |
| | Incorrect Dipswitch Settings for Device Type | Check Dipswitch setting for device type |
| | Incorrect dipswitch setting for Interface Address | Check CATC program and CATC/2WSI dipswitch setting and check for correct setting. They should match. |
| | No Interface Address is set in CATC programming | Set Interface Address action should be added to the button actions used to GOTO the control screens. |
| | RS232 send and receive are reversed | Use JP1 and JP2 to reverse |
| No feedback from iPod | iPod not connected properly in the dock | Remove the iPod from the dock, unlock and re-insert. |
| | No "OK to Disconnect" on iPod screen | Remove the iPod from the dock, unlock and re-insert. |
| No feedback from Escient Fireball | Escient has stopped and needs restart | Remove JP2 jumper first on CATC/2WSI, then power cycle Escient and restart |
| No feedback from Multizone Request Audio server | Interface address not set for discreet output. | In the Set Interface Address action, IA1 matches the dipswitch setting and IA2 matches the discreet output of the ReQuest |
| No feedback from any output of ReQuest Server | ReQuest is in standby | Make sure unit is powered on or add power on commands to PX-700 Source Events |
| No feedback from Russound ST2 tuner | Interface address not set for discreet output. | In the Set Interface Address action, IA1 matches the dipswitch setting and IA2 matches the discreet output of the ST2. In AM/FM & XM units, XM is output 1 and AM/FM is output 2. |

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