

**SIMPLWINDOWS
NAME:**

xiva Selectable Zone Control Version 4

CATEGORY:

TRANSPORT DECKS

VERSION:

1.0

SUMMARY:

Controls all zone specific functions/feedback for any of up to 16 zones.

GENERAL NOTES:

xiva is a communications protocol which is utilized by multiple manufacturers. Since these different manufacturers use the same communications protocol, this single set of Crestron control modules can be used to control multiple devices made by multiple manufacturers. If the device indicates it is "powered by xiva", then you can probably use this set of modules to control it.

This module provides all of the zone specific control/feedback functions for up to 16 zones on a xiva system. You can select which zone you want to control using the ZONE-* inputs. As soon as a zone is selected, the appropriate feedback for the new zone will be reflected at the outputs of the module.

This module must be used in conjunction with the xiva Single Zone Storage module. A separate copy of the Storage module must be used for each zone that you want to control. The Storage module keeps track of the status of each zone on the system, while the Selectable Zone Control module is only monitoring the zone which it is controlling. When a new zone is selected, the REACLL-ZONE-INFORMATION input of the proper Storage module should also be pulsed. This will cause all of the current information for the newly selected zone to be sendt into this module. See the demo program for an example of how this is implemented.

This module must also be used in conjunction with the xiva Global Processor module. The Global processor will process all the information received from the xiva system, and will decode the information per zone. The ZONE-STATUS and ZONE-INFORMATION\$ inputs of this module should be connected to the appropriate ZONE-*STATUS and ZONE-*INFORMATION\$ outputs of the global processor module. The remaining *-MARKER\$ and *-COUNT\$ inputs should be connected to the corresponding outputs of the global processor module.

To enable feedback reporting for this zone, you must pulse the ENABLE-UPDATES input. This will cause the xiva system to send real-time status updates to the Crestron system. Typically, this only needs to be turned on when a zone is actually in use. At other times, the real-time status updates can be turned off by pulsing the DISABLE-UPDATES input.

This module provides all standard transport control, and true feedback. The CD- and CD+ functions may be of limited use since they do not select discs in any special order (like alphabetically). A better method of selecting discs is using the Browse and search functions.

You can browse by either title, artist, category, or playlist. Start by selecting the browse method with the BROWSE-BY-* inputs. As soon as one of these is selected, the first entry found will be displayed at the BROWSE-*\$ outputs. You can then scroll through the selections using the BROWSE-FWD and BROWSE-REV inputs. When you find the entry you want, pulse the BROWSE-SELECT input. If you were browsing by Disc or

playlist, pulsing the BROWSE-SELECT input will immediately select the disc. If you were browsing by artist or category, pulsing BROWSE-SELECT will select the currently displayed artist or category, and you will now be browsing through the discs associated with that artist or category. Pressing BROWSE-SELECT a second time will actually select the disc.

When browsing by artist or genre, after selecting an artist or genre, you can choose to play all selections by that artist or genre by pulsing the BROWSE-PLAY-ALL input.

Note that only certain text fields will be updated depending which type of browsing is being performed. For Browse by disc or category, the disc, artist, and genre fields will be updated. For browse by artist, the disc and artist fields will be updated. For browse by playlist, only the playlist field will be updated. Typically, a separate subpage would be used for each type of browsing to display only the relevant text fields.

Also note that since all functions for all zones are passed through a single com port or TCP/IP Client, if multiple zones are accessing the system simultaneously, a slowdown in response time may be observed. These modules were tested on a 2-zone xiva system at Crestron.

In addition to browsing through the available discs, you can also search for the first letter, or up to 20 letters of a disc, artist, genre, or playlist. Choose the type of search to perform using the BROWSE-BY-* inputs. The letter(s) can be entered two different ways. Using the SEARCH-LETTER-UP, SEARCH-LETTER-DOWN and SEARCH-LETTER/TEXT-ENTER inputs, you can scroll through the letters of the alphabet and select the first letter for which to search. This is useful on small touch panels where space is limited. Using the SEARCH-TEXT-* and SEARCH-LETTER/TEXT-ENTER inputs, you can implement an alpha-numeric keyboard, allowing up to 20 characters to be entered and searched for. This is applicable to larger touch panels. Once a search has been performed, you can use the BROWSE-FWD/REV/SELECT inputs to scroll through the entries and select the desired disc.

This module also implements a scroller for tracks. Using the TRACKS-PER-SCREEN (1d-8d) parameter, you can define how many entries the scroller should have. It can contain from 1 to 8 entries. It will display the available tracks on the disc using the TRACK-* -TITLE\$ outputs. It will allow the direct selection of any of the displayed tracks using the TRACK-* inputs, and it will indicate which of the tracks is currently selected using the TRACK-* -FB output. You can scroll through multiple screens using the TRACKS-FIRST/PREVIOUS/NEXT/LAST inputs.

Note that when tested at Crestron, certain transport controls had a small time-lag before the requested function would be executed. It was noted that the pause and stop functions may take up to 1-2 seconds to execute. The same behavior was observed when using the controls on the front of the xiva unit.

Also, keep in mind that while playing the CD in the tray, other functions on the xiva system may react more slowly, and data could be missed. Therefore it is advisable to limit the use of other xiva functions while

playing a CD directly from the CD tray.

Several xiva systems can be controlled either using RS232 control, or using TCP/IP control. All sixteen zones can be controlled through a single RS232 port, or a single TCP/IP Client. Due to the large amount of data being transferred, you must enable RTS/CTS handshaking when using RS232 control. If using TCP/IP control, use port number 6789d. You will need to establish the TCP/IP connection before any control will be possible. See the demo program for an example of the TCP/IP application.

Since this module uses Simpl+, it can only be used on a Generation CNX type control system.

**CRESTRON
HARDWARE
REQUIRED:** CNXCOM
ST-COM
CNXENET+

**SETUP OF CRESTRON
HARDWARE:** **For RS232:**
Baud Rate - 38400
Parity - Even
Data Bits - 7
Stop Bits - 1
RTS/CTS handshaking must be enabled

For ethernet communications:
Must have a CNXENET+ card
Use the TCP/IP Client
Use port # 6789d

VENDOR FIRMWARE: xiva-Link Version 1.03

VENDOR SETUP: None

CABLE NUMBER: CNSP-532

CONTROL:

ZONE-*	D	Selects which zone is to be controlled. The currently selected zone will be reflected at the ZONE-* -FB outputs
PLAY	D	Start playing the previously selected disc/track
STOP	D	Stop the current playback
PAUSE	D	Pause the current playback. You must press play to restart playing
TRACK-/+	D	Select the next or previous track on a disc
CD-/+	D	Select the next or previous CD. It is better to select CD's by browsing
RANDOM-OFF/ON	D	Activate/deactivate random mode
REPEAT-OFF/ON	D	Activate/deactivate repeat mode
TRACKS-FIRST	D	Go to the first screen of tracks
TRACKS-PREVIOUS	D	Go to the previous screen of tracks
TRACKS-NEXT	D	Go to the next screen of tracks
TRACKS-LAST	D	Go to the last screen of tracks
TRACK-*	D	Select a specific track from the list currently displayed
BROWSE-BY-DISC	D	Activate browse-by-disc mode
BROWSE-BY-ARTIST	D	Activate browse-by-artist mode
BROWSE-BY-CATEGORY	D	Activate browse-by category-mode

BROWSE-BY-PLAYLIST	D	Activate browse-by-playlist mode
BROWSE-FWD/REV	D	Browse to the next or previous entries in the previously selected browsing mode
BROWSE-SELECT	D	Select the currently displayed selection
BROWSE-PLAY-ALL	D	Pulse to play all selections for the currently selected genre or artist. Playing all genre will access the hidden genre playlists that were previously generated by the AUTO-GENERATE-GENRE-PLAYLISTS function on the global processor module. Playing all artist will generate and play a hidden playlist for the currently selected artist
SEARCH-LETTER-UP/DOWN	D	Increment/decrement the letter for which to search
SEARCH-TEXT-*	D	Used to implement a full alpha-numeric keypad for searching
SEARCH-LETTER/TEXT-ENTER	D	Pulse to search for the previously entered letter or text string
ENABLE-UPDATES	D	Pulse to enable real-time updates for this zone. Must be done for feedback to be displayed properly
DISABLE-UPDATES	D	Pulse to disable real-time status updates for this zone
ZONE-*-STATUS	A	Zone status information to be routed from the xiva Global Processor module
ZONE-*-INFORMATION\$	S	Zone status information to be routed from the xiva Global Processor module
GENRE-MARKER/COUNT\$	S	Global status information to be routed from the corresponding output of the xiva Global Processor module
ARTIST-MARKER/COUNT\$	S	Global status information to be routed from the corresponding output of the Imerge SoundServer Global Processor module
MEDIA-MARKER/COUNT\$	S	Global status information to be routed from the corresponding output of the xiva Global Processor module
PLAYLIST-MARKER/COUNT\$	S	Global status information to be routed from the corresponding output of the xiva Global Processor module
TRACKS-PER-SCREEN (1D-8D)	P	Indicates how many tracks are to be diaplyed per screen

FEEDBACK:

ZONE-*-FB	D	Indicates which zone is selected for control
PLAY-FB	D	True feedback indicating Play is active
STOP-FB	D	True feedback indicating Stop is active
PAUSE-FB	D	True feedback indicating Pause is active
RANDOM-OFF/ON-FB	D	True feedback indicating the state of random mode
REPEAT-OFF/ON-FB	D	True feedback indicating the state of repeat mode
TRACK-*-FB	D	Indicates which of the displayed tracks is currently selected
BROWSE-BY-*-FB	D	Indicates which browse mode was last selected
CURRENT-CD-TITLE\$	S	Indicates the title of the currently playing cd
CURRENT-CD-ARTIST\$	S	Indicates the artist of the currently playing cd

CURRENT-TRACK-TITLE\$	S	Indicates the title of the currently playing track
CURRENT-TRACK-ARTIST\$	S	Indicates the artist of the currently playing track
TRACK-*-TITLES	S	Indicates the titles of the tracks on the current cd
BROWSE-TITLES\$	S	Indicates the disc title which has been browsed to
BROWSE-ARTIST\$	S	Indicates the disc artist which has been browsed to
BROWSE-GENRE\$	S	Indicates the category which has been browsed to
BROWSE-PLAYLIST\$	S	Indicates the playlist which has been browsed to
SEARCH-LETTER\$	S	Indicates which single letter has been entered for searching
SEARCH-TEXT\$	S	Indicates the string of letters which has been entered for searching
xiva-TX\$	S	Serial signal to be routed to a 2-way RS232 port

OPS USED FOR TESTING: v3.029.cuz
COMPILER USED FOR TESTING: SimplWindows Ver 2.03.18
SAMPLE PROGRAM: xiva Demo Program Version 4
REVISION HISTORY: Version 4 - Added Play-All Genre/artist functions
Added Play CD in tray function