SIMPLWINDOWS NAME:	Arrakis DC6-1000 v301 Multi-Zone Multi-Port Zone Control
CATEGORY:	Transport Decks
VERSION:	1.0
SUMMARY:	Controls transport, search, status, etc.
GENERAL NOTES:	This module provides all the standard controls for an Arrakis DC6-1000 system. You must have "v3.01 3/21-2" or later firmware installed on the Arrakis system for this module to work correctly.

This module uses the auto-update feature of the Arrakis. When this feature is enabled, the Arrakis will automatically notify the Crestron system when any of the parameters of the unit changes. Therefore, there is no need to poll the Arrakis system. To enable the auto-update feature, you must pulse the Initialize input of this module before performing any other functions. While the initialization is in progress, the Initialize_Busy" output will be high.

This module allows any of the 6 available zones to be selected and controlled. When a new zone is selected, the status of that zone will be automatically reflected on this module. This module provides all of the standard transport controls (play/stop/pause/ track-/track+/disc-/disc+) as well as control of single-play/all-play mode, and Random on/off mode. In addition, you can also browse for a disc by either disc title, or by artist order. You can also browse through any playlists (groups) that have been stored on the Arrakis system.

Browsing is accomplished using pages of entries. You can define the number of entries you want to display per page using the Entries Per Page parameter field. It must be set to a value between 1d and 6d. You can then use the first/previous/next inputs to scroll between pages.

You must first select the browsing function. You can choose to:

1. Browse by Disc Title
2. Browse by Artist
3. Browse playlists (groups)

You can automatically have the list of entries go to a letter or search string that you specify. You can enter the search string two different ways:

1. Use the Search_Letter_Up/Down inputs to scroll through the letters of the alphabet. When you get to the letter you want, press the Search_Letter_Enter input. The list will automatically scroll to that letter in the list.

2. Use the Text$ input to enter a string of text to search for. This input can be driven with the "Full IBM Keyboard" module which implements a full computer keyboard. After entering the search string at the Text$ input, pulse the Search_Text_Go input.

From the list of entries displayed, you can select any of the six selections using the CD/Group_Select_* input. The disc will then be played.

For whatever cd is currently playing, a list of up to six tracks on that CD can be displayed. You can scroll

through the list of tracks just as you scrolled through the list of CD's. However, no searching can be performed. You can also select any of the six tracks displayed to be played. This module also allows you to select which Genres you want to hear in a zone. You scroll through the list of Genres in the same way as scrolling through discs or tracks. Pressing one of the Genre_Select_1-6 inputs will mark that genre for playback. You can select as many genres as you like. Then pulse the Genre_Play_Selected input to send the command to the Arrakis system. If you would like to play all genres in the zone, pulse to Genre_Play_ All input. To clear the selected genres from the list being displayed, pulse the Genre_Clear_All input. The Genre names will be read by the processor module when the system is initialized.

This module was designed to be used with a single module per Arrakis com port. So if you are using six copies of this module, you must be using six separate com ports on the Arrakis system.

CRESTRON HARDWARE REQUIRED:	ST-COM CNXCOM
SETUP OF CRESTRON HARDWARE:	Baud Rate - 9600 Parity - None Bits - 8 Stop Bits - 1
VENDOR FIRMWARE:	v3.01 3/21-2
VENDOR SETUP:	None
CABLE NUMBER:	CNSP-121

CONTROL:

INITIALIZE	D	Pulse to enable proper communications with the Arrakis system. This should be pulsed befire using any other functions
ZONE_1-6	D	Select any of zones 1-6 for control
PLAY	D	Activate PLAY for current track
STOP	D	Activate STOP
PAUSE	D	Activate PAUSE, if pressed again, will resume playing
TRACK_PREVIOUS	D	Step back 1 track. If at the first track, there will be no change
TRACK_NEXT	D	Advance 1 track. If at the last track, there will be no change
DISC_PREVIOUS	D	Step back 1 CD. If at the first CD there will be no change
DISC_NEXT	D	Advance forward 1 CD. If at the last CD there will be no change
RANDOM-OFF	D	Turn off the random mode
RANDOM-ON	D	Turn on the random mode
ALL-OFF	D	Turn off the all play mode
ALL-ON	D	Turn on the all play mode
SORT_ORDER_TITLE	D	Activate search by title. CD+ and CD- will now go alphabetically by CD title
		Activate search by artist. CD+ and

SORT_ORDER_ARTIST	D	CD- will now go alphabetically by artist name
SORT_ORDER_DISC	D	Activate sort by disc. CD+ and CD- will now go numerically by disc number
CD_PAGE_FIRST/PREV/NEXT	D	Pulse to scroll through pages of discs
GROUP_PAGE_FIRST/PREV/NEXT	D	Pulse to scroll through pages of groups (playlists)
CD/GROUP_SELECT_1 -6	D	Pulse to select a CD or group to play
TRACK_PAGE_FIRST/PREV/NEXT	D	Pulse to scroll through pages of tracks
TRACK_SELECT_1-6	D	Pulse to select a track to display
BROWSE_BY_TITLE	D	Pulse to list discs sorted by title
BROWSE_BY_ARTIST	D	Pulse to list discs sorted by artist
BROWSE_BY_GROUP	D	Pulse to list playlists (groups)
SEARCH_LETTER_UP/DN	D	Pulse to scroll through the alphabet to specify a letter to search for
SEARCH_LETTER_GO	D	Pulse to perform a search for the previously selected letter
TEXT$	S	Used to specify a text string to search for
SEARCH_TEXT_GO	D	Pulse to perform a search for the previously selected text
GENRE_FIRST/PREV/NEXT	D	Pulse to scroll through pages of genres
GENRE_SELECT_1-6	D	Pulse to mark/unmark genres to play
GENRE_CLEAR_ALL	S	Pulse to clear all genre selections being displayed
GENRE_PLAY_SELECTED	D	Pulse to play the previously marked genres
GENRE_PLAY_ALL	D	Pulse to play all genres
REFRESH-TEXT	D	Pulse to resend the serial information for the currently playing title/artist/disc/genre
FROM_DEVICE$	S	Serial signal to be routed from a 2-way RS232 port

FEEDBACK:

INITIALIZE_BUSY	D	High while initialization is in progress
ZONE-1-6-*-FB	D	Real feedback indicating which zone is selected for status and control
PLAY-FB	D	Real feedback indicating that the currently selected zone is playing
STOP-FB	D	Real feedback indicating that the currently selected zone is stopped
PAUSE-FB	D	Real feedback indicating that the currently selected zone is in pause
RANDOM-OFF-FB	D	Real feedback indicating that random mode is off
RANDOM-ON-FB	D	Real feedback indicating that random mode is on
ALL-OFF-FB	D	Real feedback indicating that random mode is off

ALL-ON-FB	D	Real feedback indicating that all play mode is on
SORT_ORDER_TITLE_FB	D	Real feedback indicating that sort by title is active
SORT_ORDER_ARTIST_FB	D	Real feedback indicating that sort by artist is active
SORT_ORDER_DISC_FB	D	Real feedback indicating that sort by disc number is active
CD/GROUP_SELECT_*_FB	D	True feedback indicating which disc is currently playing
CD/GROUP_TITLE_*$	S	Indicates Disc/Group titles for display on browsing screen
CD/GROUP_ARTIST_*$	S	Indicates Disc/Group artist for display on browsing screen
TRACK_SELECT_*_FB	D	True feedback indicating which track is currently playing
TRACK_TITLE_*$	S	Indicates track title for display on browsing screen
TRACK_ARTIST_*$	S	Indicates track artist for display on browsing screen
TRACK_TIME_*$	S	Indicates track time for display on browsing screen
BROWSE_BY_*_FB	D	Indicates which browse mode is currently active
SEARCH_LETTER$	S	Indicates which letter will be used for searching
GENRE_SELECT_*_FB	D	Indicates which genres on the current page have been marked
GENRE_1-6$	S	Contains the names of the genres for the current genre page.
CURRENT_*$	S	Indicates the currently playing disc number/ title/ artist/track/genre
TIME_REMAINING	A	Analog indicating the playback time remaining for the currently playing track. Should be routed to a time object on a touch panel
SYSTEM_STATUS$	S	Contains Arrakis system status messages.
TO_DEVICE$	S	Serial signal to be routed to a 2-way RS232 port

OPS USED FOR TESTING:	5.12.63x / Pro2 - v1.012
COMPILER USED FOR TESTING:	SimplWindows Version 2.01.03
SAMPLE PROGRAM:	Arrakis Multi-Zone Multi-Port Demo
REVISION HISTORY:	None