



Manufacturer: Barco N.V.  
 Model: E2  
 Device Type: Screen Management System

GENERAL INFORMATION	
SIMPLWINDOWS NAME:	Barco E2
CATEGORY:	Screen Management System
VERSION:	1.01
SUMMARY:	Control of the E2 device.
GENERAL NOTES:	This module is used to control an E2 via TCP/IP. The ports used are 9876 & 9999. After connecting, the module will automatically retrieve the list of sources, destinations, backgrounds, presets & stills.
CRESTRON HARDWARE REQUIRED:	3-Series controller.
SETUP OF CRESTRON HARDWARE:	TCP/IP: Fill in the IP address of the E2 as parameter.
VENDOR FIRMWARE:	E2 V5.2
VENDOR SETUP:	Install and configure E2
CABLE DIAGRAM:	None

CONTROL:		
<u>Signal/Function Name</u>	<u>D,S,A</u>	<u>Digital, Serial, Analog signal property definition.</u>
connect	D	High to connect on port 9876, to receive notifications.
powerOn	D	Pulse to turn on E2 via Wake-On-LAN.
LogCommunication	D	Flag to log communication to and from E2
queueScreenDestChanges	D	Pulse to enable queueing of the following actions: activateSource activateSourceOnLeftside activateSourceOnRightside activateSourceOnTop



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		activateSourceOnBottom activateSourceFullScreen activateSourceTopLeftAligned activateSourceTopRightAligned activateSourceBottomLeftAligned activateSourceBottomRightAligned removeSource (only for screen destinations) activateBackground removeBackground
<b>commitScreenDestChanges</b>	D	Pulse to execute the queued changes with one command per destination.
<b>getFrameInfo</b>	D	Pulse to retrieve the configuration of the device.
<b>getSources</b>	D	Pulse to retrieve the list of sources.
<b>activateSource</b>	D	Pulse to activate a source on the selected screen destination on position x, y. The source is positioned in the area with width & height, the alignment is set with the source Alignment signal.
<b>activateSourceOnLeftside</b>	D	Pulse to activate the selected source on the left half side of the selected screen destination.
<b>activateSourceOnRightside</b>	D	Pulse to activate the selected source on the right half side of the selected screen destination.
<b>activateSourceOnTop</b>	D	Pulse to activate the selected source on top half of the selected screen destination.
<b>activateSourceOnBottom</b>	D	Pulse to activate the selected source on bottom half of the selected screen destination.
<b>activateSourceFullScreen</b>	D	Pulse to activate the selected source full screen of the selected screen destination.
<b>activateSourceTopLeftAligned</b>	D	Pulse to activate the selected source on the top left part of the selected screen destination.
<b>activateSourceTopRightAligned</b>	D	Pulse to activate the selected source on the top right part of the selected screen destination.
<b>activateSourceBottomLeftAligned</b>	D	Pulse to activate the selected source on the bottom left part of the selected screen destination.
<b>activateSourceBottomRightAligned</b>	D	Pulse to activate the selected source on the bottom right part of the selected screen destination.
<b>activateSourceOnAuxDestination</b>	D	Pulse to activate the selected source on the selected aux destination.



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<b>removeSource</b>	D	Pulse to remove the selected source from the selected aux or screen destination.
<b>freezeSource</b>	D	Pulse to freeze the selected source on the selected aux or screen destination.
<b>unfreezeSource</b>	D	Pulse to unfreeze the selected source on the selected aux or screen destination.
<b>enableSource3D</b>	D	Pulse to enable 3D on the selected source.
<b>disableSource3D</b>	D	Pulse to disable 3D on the selected source.
<b>activateSourceLeftAligned</b>	D	Pulse to activate the selected source on the left part of the selected screen destination. (using PercentageWidthForCornerPIP)
<b>activateSourceRightAligned</b>	D	Pulse to activate the selected source on the right part of the selected screen destination. (using PercentageWidthForCornerPIP)
<b>activateSourceTopAligned</b>	D	Pulse to activate the selected source on the top part of the selected screen destination. (using PercentageHeightForCornerPIP)
<b>activateSourceBottomAligned</b>	D	Pulse to activate the selected source on the bottom part of the selected screen destination. (using PercentageHeightForCornerPIP)
<b>iSourceID</b>	A	This is the source ID.
<b>XPos</b>	A	This is the horizontal position to be used with activateSource.
<b>YPos</b>	A	This is the vertical position to be used with activateSource.
<b>Width</b>	A	This is the width of the area to be used with activateSource.
<b>Height</b>	A	This is the height of the area to be used with activateSource.
<b>SourceAlignment</b>	A	This is the alignment to be used with activateSource. This can a combination of following values : ALIGNMENT_CENTER = 0, ALIGNMENT_LEFT = 1, ALIGNMENT_RIGHT = 2, ALIGNMENT_TOP = 4, ALIGNMENT_BOTTOM = 8,
<b>PercentageHeightForCornerPIP</b>	A	This is the percentage of the destination height used for the ActivateSource- Aligned functions.
<b>PercentageWidthForCornerPIP</b>	A	This is the percentage of the destination width used for the ActivateSource- Aligned functions.
<b>selectSource_#</b>	D	Pulse to select a source.



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<b>getBackgrounds</b>	D	Pulse to retrieve the list of backgrounds.
<b>activateBackground</b>	D	Pulse to activate the selected background on the selected screen destination.
<b>removeBackground</b>	D	Pulse to remove the background from the selected screen destination.
<b>freezeBackground</b>	D	Pulse to freeze the background on the selected screen destination.
<b>unfreezeBackground</b>	D	Pulse to unfreeze the background on the selected screen destination.
<b>iBackgroundID</b>	A	This is the background ID.
<b>selectBackground_#</b>	D	Pulse to select a background.
<b>getDestinations</b>	D	Pulse to retrieve the list of destinations.
<b>freezeDestination</b>	D	Pulse to freeze the selected destination.
<b>unfreezeDestination</b>	D	Pulse to unfreeze the selected destination.
<b>iDestinationID</b>	A	This is the destination ID.
<b>iDestinationType</b>	A	This is the destination type ID.
<b>selectDestination_#</b>	D	Pulse to select a destination.
<b>iLayerID</b>	A	This is the layer ID.
<b>selectLayer_#</b>	D	Pulse to select a layer.
<b>getPresets</b>	D	Pulse to retrieve the list of presets.
<b>activatePreset</b>	D	Pulse to activate the selected preset.
<b>savePreset</b>	D	Pulse to save the selected preset.
<b>saveAsNewPreset</b>	D	Pulse to save as a new preset.
<b>deletePreset</b>	D	Pulse to delete the selected preset.
<b>renamePreset</b>	D	Pulse to rename the selected preset
<b>iPresetID</b>	A	This is the preset ID.
<b>NewPresetName\$</b>	S	The preset name to be used with SaveAsNewPreset



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selectPreset_#	D	Pulse to select a preset.
getContentForDestinations	D	Pulse to retrieve the current content for all destinations.
getStills	D	Pulse to retrieve the list of stills.
takeStillSource	D	Pulse to take a still of a source
takeStillBackground	D	Pulse to delete a still of a background.
deleteStill	D	Pulse to delete a still.
iStillID	A	This is the still ID.
selectStill_#	D	Pulse to select a still

<b>FEEDBACK:</b>		
Connected	D	High when connected on port 9876.
NotificationReceived	D	High to indicate a change occurred on the device.
FrameName\$	S	Serial signal containing the name of the device.
FrameType\$	S	Serial signal containing the type (E2/S3).
FrameVersion\$	S	Serial signal containing the version number of the firmware.
FrameOSVersion\$	S	Serial signal containing the version number of the OS.
FrameIPAddress\$	S	Serial signal containing the IP address.
FrameMACAddress\$	S	Serial signal containing the MAC address.
NumSources	A	Indicates the number of sources.
oSourceID	A	Indicates the source ID of the selected source.
SourceType	A	Indicates the source type ID of the selected source.
SourceFrozen	D	High to indicate if the selected source is frozen.



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SourceCapacity	A	Indicates the capacity of the selected source. Values: 1=SL, 2=DL, 4=4K.
SourceWidth	A	Indicates the width of the selected source.
SourceHeight	A	Indicates the height of the selected source.
SourceName\$	S	Serial signal containing the source name of the selected source.
SourceStillName\$	S	Serial signal containing the source still name of the selected source.
SelectedSource_#	D	High to indicate the selected source.
SourceFrozen_#	D	High to indicate if the selected source is frozen.
SourceType_#	A	Indicates the source type ID for all sources
SourceWidth_#	A	Indicates the source width for all sources
SourceHeight_#	A	Indicates the source height for all sources
SourceCapacity_#	A	Indicates the capacity for all sources. Values: 1=SL, 2=DL, 4=4K.
SourceName\$_#	S	Serial signal containing the names of all sources.
SourceStillName\$_#	S	Serial signal containing the names of the stills of all sources.
NumBackgrounds	A	Indicates the number of backgrounds.
oBackgroundID	A	Indicates the background ID of the selected background.
BackgroundType	A	Indicates the background type ID of the selected background.
BackgroundFrozen	D	High to indicate if the selected background is frozen.
BackgroundHeight	A	Indicates the height of the selected background.
BackgroundWidth	A	Indicates the width of the selected background.
BackgroundCapacity	A	Indicates the capacity of the selected background. Values: 1=SL, 2=DL, 4=4K.
BackgroundName\$	S	Serial signal indicating the background name of the selected background.
SelectedBackground_#	D	High to indicate the selected background.
BackgroundFrozen_#	D	High to indicate if the selected background is frozen.



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<b>BackgroundType_#</b>	A	Indicates the background type for all backgrounds.
<b>BackgroundWidth_#</b>	A	Indicates the background width for all backgrounds.
<b>BackgroundHeight_#</b>	A	Indicates the background height for all backgrounds.
<b>BackgroundCapacity_#</b>	A	Indicates the background capacity for all backgrounds. Values: 1=SL, 2=DL, 4=4K.
<b>BackgroundName\$_#</b>	S	Serial signal containing the names of all backgrounds.
<b>NumDestinations</b>	A	Indicates the number of destinations.
<b>oDestinationID</b>	A	Indicates the destination ID of the selected destination.
<b>oDestinationType</b>	A	Indicates the destination type ID of the selected destination.
<b>DestinationHeight</b>	A	Indicates the height of the selected destination.
<b>DestinationWidth</b>	A	Indicates the width of the selected destination.
<b>DestinationNumLayers</b>	A	Indicates the number of available layers on the selected destination.
<b>DestinationFrozen</b>	D	High to indicate if the selected destination is frozen.
<b>DestinationName\$</b>	S	Serial signal containing the name of the selected destination.
<b>SelectedDestination_#</b>	D	High to indicate the selected destination.
<b>DestinationType_#</b>	A	Indicates the destination type of all destinations.
<b>DestinationFrozen_#</b>	D	High to indicate which destinations are frozen.
<b>NumLayers_#</b>	A	Serial signal containing the number of layers for each destination.
<b>DestinationWidth_#</b>	A	Indicates the width of all destinations.
<b>DestinationHeight_#</b>	A	Indicates the height of all destinations.
<b>DestinationName\$_#</b>	S	Serial signal containing the destination name of all destinations.
<b>oLayerID</b>	A	Indicates the layer ID of the selected layer for a selected destination.
<b>WindowSourceName\$</b>	S	Serial signal containing the source name of the source on the selected destination & layer.
<b>WindowSourceHeight</b>	A	Indicates the height of the source on the selected destination & layer.



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WindowSourceWidth	A	Indicates the width of the source on the selected destination & layer.
WindowSourceXPos	A	Indicates the horizontal position of the source on the selected destination & layer.
WindowSourceYPos	A	Indicates the vertical position of the source on the selected destination & layer.
WindowSourceStillName\$	S	Serial signal containing the source still name of the source on the selected destination & layer.
oLayerCapacity	A	Indicates the capacity of selected destination & layer. Values: 1=SL, 2=DL, 4=4K.
WindowSourceFrozen	D	High to indicate if the source on the selected destination & layer is frozen.
WindowSourceID	A	Indicates the Window Source ID
SelectedLayer_#	D	High to indicate the selected layer on the selected destination.
NumPresets	A	Indicates the number of presets.
oPresetID	A	Indicates the preset ID of the selected preset.
PresetName\$	S	Serial signal containing the name of the preset.
SelectedPreset_#	D	High to indicate the selected preset.
PresetName\$_#	S	Serial signal containing the names of all presets.
LayerID_##	A	Indicates the layer ID of all layers for the first 8 destinations.
LayerCapacity_##	A	Indicates the layer capacity of all layers for the first 8 destinations. Values: 1=SL, 2=DL, 4=4K.
WindowWidth_##	A	Indicates the width of the sources on all layers for the first 8 destinations.
WindowHeight_##	A	Indicates the height of the sources on all layers for the first 8 destinations.
WindowXPos_##	A	Indicates the horizontal position of the sources on all layers for the first 8 destinations.
WindowYPos_##	A	Indicates the vertical position of the sources on all layers for the first 8 destinations.
WindowSourceID_##	A	Indicates the source ID of the sources on all layers for the first 8 destinations.
BackgroundSourceID_#	A	Indicates the background ID of all destinations.
WindowSourceName\$_##	S	Serial signal containing the names of the sources on all layers for the first 8 destinations.





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<b>WindowSourceStillName\$_##</b>	S	Serial signal containing the source still names of the sources on all layers for the first 8 destinations.
<b>BackgroundSourceName\$_#</b>	S	Serial signal containing the background name on all destinations.
<b>NumStills</b>	A	Indicates the number of stills.
<b>oStillID</b>	A	Indicates the still ID.
<b>StillName\$</b>	S	Serial signal containing the name of the selected still.
<b>StillHeight</b>	A	Indicates the height of the selected still.
<b>StillWidth</b>	A	Indicates the width of the selected still.
<b>StillURL\$</b>	S	Serial signal containing the URL of the selected still.
<b>SelectedStill#</b>	D	High to indicate the selected still.
<b>StillWidth_#</b>	A	Indicates the width of all stills.
<b>StillHeight_#</b>	A	Indicates the height of all stills.
<b>StillName\$_#</b>	S	Serial signal containing the name of all selected still.
<b>StillURL\$_#</b>	S	Serial signal containing the URL of all selected still.



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**PARAMETERS:**

IP-Address	P	IP address of the device.
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**TESTING:**

OPS USED FOR TESTING:	1.503.0016
SIMPL WINDOWS USED FOR TESTING:	4.09.04
DEVICE DB USED FOR TESTING:	93.00.002.00
CRESTRON DB USED FOR TESTING:	67.05.006.00
SYMBOL LIBRARY USED FOR TESTING:	508
SAMPLE PROGRAM:	Barco E2 Demo V1.01
REVISION HISTORY:	V. 1.0 – Original Release V. 1.01 GetPresets fixed (for E2 versions starting with V5.1 or higher). Show all layers (program+preview) Added enable/disable3D functions. Added some extra ActivateSource functions.