

Partner: Sony
Model: BRC-300
Device Type: Camera



GENERAL INFORMATION

SIMPLWINDOWS NAME:	Sony BRC-300 with Joystick Controls and Picture Adjustments
CATEGORY:	Camera
VERSION:	3.0
SUMMARY:	This module will control the Sony BRC-300. It uses 2-way RS232 communications, stores up to 25 presets on the Crestron system, and allows camera control using joysticks as well as standard buttons. Either the Crestron CPC-2000 or C2N-CAMIDJ Joystick Controller can be used, however they cannot both be used in the same system. Note that the C2N-CAMIDJ is not supported on systems prior to the 2-Series processors. White Balance and Exposure controls are also included.
GENERAL NOTES:	<p>There are two ways to control the camera using the digital Pan/Tilt inputs. One way automatically changes speeds the longer you hold the input high. The pan inputs have three speeds. The tilt inputs have two speeds. The speed changes occur at two-second intervals. It is possible to enter the same speed for the speed parameters, thus eliminating the speed changes. Also, selecting the speed of default will use the default speeds preprogrammed into the module. The digital inputs for zoom will also automatically change speeds.</p> <p>The second way uses proportional pan tilt speeds. The current zoom position is determined. Then the speed is set based on that zoom position.</p> <p>Saving a preset is a three step process:</p> <ol style="list-style-type: none">1. Move the camera to the desired position2. Press Save (the Save_Fb will go high)3. Press the preset you wish to save the location to. <p>To recall a preset, just press the preset number.</p> <p>There are two sets of joystick inputs that can be used. The signals prefaced with CPC-2000 are designed to be connected to the corresponding signals on a Crestron CPC-2000A Joystick Controller. The signals prefaced with C2N-CAMIDJ are designed to be connected to the corresponding signals on a Crestron C2N-CAMIDJ Joystick Controller. Note that you cannot use both the CPC-2000A and the C2N-CAMIDJ in the same system with this module.</p> <p>Unused inputs can have a "0" assigned to them. Unused outputs should have unique commented out signal names assigned to them.</p> <p>It is very important to pulse the Start_RS232 input before attempting to use any functions on this module. This will request the maximum speeds that the camera will support. It will also request the firmware version in the camera. This must be done once for each camera. After the maximum speeds have been requested, they will be saved to non-volatile RAM.</p> <p>Speeds are set on the CPC-2000 by using the Speed knobs. On the C2N-CAMIDJ, two sets of speeds can be saved – High and Low. Speeds are set on the C2N-CAMIDJ as follows:</p> <ol style="list-style-type: none">1. Select high or low speed by pressing the top (high) or bottom (low) button on the top of the joystick handle. The corresponding High or Low LED will illuminate.2. Press the function that you want to set the speed for (Zoom, Pan, Tilt). The

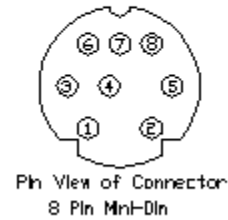
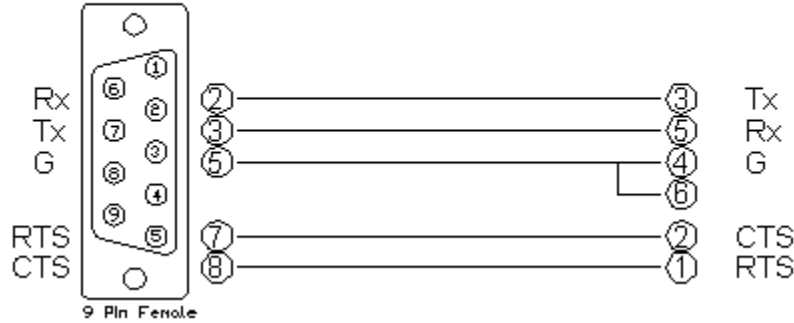


	<p>current speed will be displayed on the 2-digit display on a scale of 00- 99.</p> <ol style="list-style-type: none"> 3. Rotate the wheel on the side of the C2N-CAMIDJ to the desired speed. The speed will be automatically saved. 4. Continue selecting and setting speeds until High and Low speeds have been set for Pan, Tilt, and Zoom. Focus speed cannot be set. <p>The normal use of the side wheel on the C2N-CAMI-DJ is for Focus Adjustments. When Fo is displayed, the wheel will control focus. When Ir is displayed, Iris is being controlled. When a number is displayed, a speed is being adjusted. Note that the wheel will only control focus if the camera has been put into Manual Focus mode.</p> <p>Some picture adjustments and white balance controls are only valid when the camera is in certain modes. Please see the demo program for an example of how to structure sub pages and button options for these functions.</p>
CRESTRON HARDWARE REQUIRED:	CNX Internal com ports, C2 Internal com ports, ST-COM, CNXCOM-2, C2COM-2, C2COM-3
SETUP OF CRESTRON HARDWARE:	<p>RS232</p> <p>Baud: 9600</p> <p>Parity: N</p> <p>Data Bits: 8</p> <p>Stop Bits: 1</p>
VENDOR FIRMWARE:	None
VENDOR SETUP:	<p>If you are using more than one camera with the VISCA inputs daisy chained, you must pulse the Set_Addresses input. This will set the address of each camera on the daisy chain. You should only pulse the Set_Addresses input on one of the modules in the program, not on all of them.</p>
CABLE DIAGRAM:	CNSP-504



CNSP-504

Rear View of Connector



Partner: Sony
Model: BRC-300
Device Type: Camera


CONTROL:

Start_RS232	D	Pulse to get the maximum speeds and firmware version for the camera. This only needs to be done once for each camera.
CPC-2000_Pan_Joystick	A	Analog signal from the pan_joy output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Tilt_Joystick	A	Analog signal from the tilt_joy output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Zoom_Joystick	A	Analog signal from the zoom_joy output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Focus_Joystick	A	Analog signal from the foc_joy output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Pan_Speed	A	Analog signal from the pan_spd output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Tilt_Speed	A	Analog signal from the tilt_spd output of the CPC-2000 Joystick Camera Control symbol.
CPC-2000_Zoom_Speed	A	Analog signal from the zoom_spd output of the CPC-2000 Joystick Camera Control symbol.
C2N-CAMIDJ_Focus_Button	D	Digital Signal connected to the FocusBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Zoom_Button	D	Digital Signal connected to the ZoomBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Pan_Button	D	Digital Signal connected to the PanBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Tilt_Button	D	Digital Signal connected to the TiltBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Speed_Fast	D	Digital Signal connected to the JoystickTopBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Speed_Slow	D	Digital Signal connected to the JoystickBtmBtn output of the C2N-CAMIDJ
C2N-CAMIDJ_Wheel_*	D	Digital Signals connected to the Wheel* outputs of the C2N-CAMIDJ
C2N-CAMIDJ_Pan	A	Analog signal connected to the Pan output of the C2N-CAMIDJ
C2N-CAMIDJ_Tilt	A	Analog signal connected to the Tilt output of the C2N-CAMIDJ
C2N-CAMIDJ_Zoom	A	Analog signal connected to the Zoom output of the C2N-CAMIDJ



C2N-CAMIDJ_Speed_Adjust	A	Analog signal connected to the SpeedAdjust output of the C2N-CAMIDJ
Tilt_Up/Down	D	Press and hold to tilt the camera.
Pan_Left/Right	D	Press and hold to pan the camera.
Zoom_In/Out	D	Press and hold to zoom the camera.
Focus_Near/Far	D	Press and hold to focus the camera. This will focus the camera if the camera is not in auto focus mode.
Auto_Focus_On/Off/Toggle	D	Pulse to turn the auto focus function on and off.
Preset_*	D	Pulse to go to the preset. If pulsed when the Preset_Save_Fb output is high, this will store the current camera position in the selected preset.
Save	D	Pulse to put the module into save mode to allow storage of presets.
Home	D	Pulse to send the camera to the home position for pan and tilt.
Power_On/Off	D	Pulse to turn the camera on and off.
Track_Commands	D	Pulse to activate and control the auto-tracking features of the camera.
Enable_Proportional_Pan_Tilt	D	Hold high to use proportional pan and tilt speeds. Hold low to use the auto speed change feature of the module.
Set_Addresses	D	Pulse once to set the addresses for the cameras with the VISCA inputs daisy chained.
White_Balance_Auto/Indoor/Outdoor/OnePush/Manual/OnePushTrigger	D	Pulse to select the desired White Balance mode
Red_Gain_Up/Down/Reset	D	Pulse to control the red gain level
Blue_Gain_Up/Down/Reset	D	Pulse to control the blue gain level
Auto_Exposure_Auto/Manual/Shutter Priority/Iris_Priority/Bright	D	Pulse to select the desired exposure mode
Shutter_Up/Down/Reset	D	Pulse to adjust the shutter speed
Iris_Up/Down/Reset	D	Pulse to adjust the Iris
Gain_Up/Down/Reset	D	Pulse to adjust the gain



Bright_Up/Down/Reset	D	Pulse to adjust the brightness level
Slow_Shutter_Auto/Manual	D	Pulse to adjust the slow shutter setting
Backlight_On/Off	D	Pulse to turn backlight on or off
Exposure_Compensation_On/Off/Reset/Up/Down	D	Pulse to adjust the exposure compensation.
Address (1-7)	P	The address number for the camera this module will control. This corresponds to the camera selector switch on the back of the camera.
Address+8 (9-F)	P	The address plus 8. Address = 1, address+8 = 9; Address = 7, address+8 = F
Pan Speed *	P	The desired speed for the pan function Select from the list. This is only used if the Enable_Proportional_Pan_Tilt input is held low.
Tilt Speed *	P	The desired speed for the tilt function Select from the list. This is only used if the Enable_Proportional_Pan_Tilt input is held low.
Zoom Speed *	P	The desired speed for the zoom function Select from the list.
From_Device\$	S	Serial signal to be routed from a 2 way serial com port.

Partner: Sony
Model: BRC-300
Device Type: Camera


FEEDBACK:

C2N-CAMIDJ_Focus_Button_Fb	D	Digital Signal connected to the FocusLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Zoom_Button_Fb	D	Digital Signal connected to the ZoomLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Pan_Button_Fb	D	Digital Signal connected to the PanLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Tilt_Button_Fb	D	Digital Signal connected to the TiltLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Speed_Fast_Fb	D	Digital Signal connected to the SpeedHighLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Speed_Slow_Fb	D	Digital Signal connected to the SpeedLowLED-F signal on the C2N-CAMIDJ
C2N-CAMIDJ_Display	A	Analog Signal connected to the Display signal on the C2N-CAMIDJ
C2N-CAMIDJ_Display_Mode	A	Analog Signal connected to the DisplayMode signal on the C2N-CAMIDJ
Preset_*_Fb	D	High to indicate the last preset selected.
Preset_Save_Fb	D	High to indicate that the module is in save mode. Pulsing one of the Preset inputs will store the current camera location to that preset.
Preset_Busy	D	High to indicate that a preset is being recalled. You cannot select another preset while this is high.
White_Balance_*_Fb	D	True feedback indicating white balance mode
Red_Gain_Level	A	True feedback indicating red gain setting. Should be routed to a Digital Gauge on a touch panel
Blue_Gain_Level	A	True feedback indicating blue gain setting. Should be routed to a Digital Gauge on a touch panel
Auto_Exposure_*_Fb	D	True feedback indicating Auto Exposure setting
Shutter_Speed\$	S	True feedback indicating shutter speed
Iris_Setting\$	S	True feedback indicating Iris setting
Gain_Setting\$	S	True feedback indicating Gain setting
Bright_Gain_Setting\$	S	True feedback indicating Bright Gain setting



Bright_Iris_Setting\$	S	True feedback indicating Brightht Iris setting
Slow_Shutter_*_Fb	D	True feedback indicating slow shutter setting
Backlight_On/Off_Fb	D	True feedback indicating backlight state
Exposure_Compensation_On/Off_Fb	D	True feedback indicating Exposure Compensation state
Exposure_Compensation_Setting\$	S	True feedback indicating Exposure Compensation setting
To_Device\$	S	Serial signal to be route to a 2 way serial com port.

TESTING:

OPS USED FOR TESTING:	PRO2: 3.137
COMPILER USED FOR TESTING:	Simpl Windows 2.05.20
SAMPLE PROGRAM:	PRO2: Sony BRC-300 Demo v3 PRO2
REVISION HISTORY:	<p>V1 – Original release.</p> <p>V2 – Added controls for C2N-CAMIDJ</p> <p>V3 – Added logic to detect camera firmware version, and adjust preset function accordingly. Also refined joystick controls.</p>