








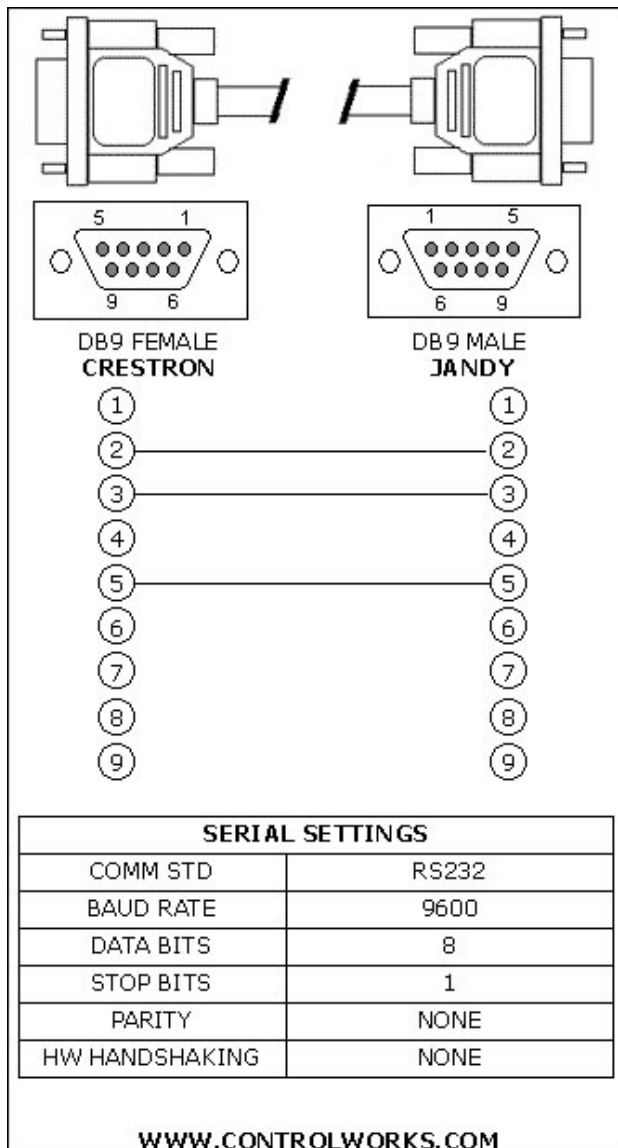
Jandy RS Control Modules V2 Module Application Guide

Description

This suite of three modules supports the Jandy RS series of pool and spa controllers via the Jandy RS Serial adapter. Full control and real time feedback is available for all functions of the controller. Version two of the module adds Extra Aux and discreet commands for pool functions in addition to the toggle. It also adds a low battery flag for the memory backup battery and addresses a few bug fixes. Version two includes two new modules. One that parses the LED feedback from the controller. The LED feedback is sometimes the only way to read the intermediate status of some controller functions that have delays and timeouts. The other module allows you to control a Chlorinator that is connected to the same buss as the pool controller.

Compatibility			Processor Requirements	
 2-Series Compatible	 CNMSX Compatible	 NOT System Builder Compatible	 Ethernet NOT NEEDED	 Compact Flash NOT NEEDED

Serial Cable Pinout



Module Application

Successful application of this module assumes working knowledge of pool and spa equipment in general. It also assumes that you are familiar with the Jandy RS series of wall controls and power centers. As the RS series can support multiple types of equipment setups it is important that you understand the configuration of these setups and the terminology of the equipment involved.

Supported Jandy Controllers

This module will support any of the RS series family of controllers such as: RS-2/6, RS-4, RS-6, RS-8, RS-12, RS-16, RS2/10, RS-2/14, RS2/22 and their "combo" equivalents. In order to communicate with these systems you will need a Jandy "RS Serial Adapter" part number 7620. This adapter can be wired to the keypad buss at any point. Power and data for the adapter is supplied from the Jandy Power Center. As the data on Jandy's buss is RS-485 it is suggested that you extend the keypad buss to the equipment area, connect the RS Serial Adapter and then plug in the Adapter directly into the Crestron Com port. Baud rates on the Adapter can be changed but the module tests well at the default of 9600, N, 8, 1. Lightning protection is recommended on the RS-485 run as we have seen several instances of damage to a Crestron processor's com port.

Additional information on the hardware connections and Adapter setup can be found in Jandy's Doc. 7622 rev B. This manual ships with the Adapter. It can also be found at www.jandy.com/html/productsupport/#manuals.

Signal and Parameter Descriptions

Bracketed signals such as “[signal_name]” are optional signals

Jandy RS Series Module V2 I/O:

DIGITAL INPUTS

pool_sp+ and pool_sp-	adjusts the pool setpoint up or down
pool2_sp+ and pool2_sp-	adjusts the pool #2 setpoint up or down
spa_sp+ and spa_sp	adjusts the spa setpoint up or down
filter_pump_toggle/on/off	turns the filter pump on and off (subject to delays)
filter_pump_low_speed_toggle	toggles the filter pump speed between low and high
cleaner_toggle/on/off	turns the cleaner pump on and off
waterfall_toggle/on/off	turns the waterfall relay on and off
spa_toggle/on/off	turns the system between spa and pool mode
pool_heater_toggle/on/off	turns the pool heater on and off
pool_heater2_toggle/on/off	turns the second pool heater on and off
spa_heater_toggle/on/off	turns the spa heater on and off
aux(x)_relay_toggle/on/off	turns the specified aux relay on and off
extra_aux_toggle/on/off	controls the solar heater relay output as an aux function when no solar system is present
aux(x)_dim+ and dim-	steps the aux dimming relay up and down in levels of 25%, 50%, 75% and 100%
startup	when pulsed it queries for the current settings of the system

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

jandy_rx\$	connect to rx of the com port
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DIGITAL OUTPUTS

pump_on and pump_off	feeds back the filter pump status
pump_lowspeed_on and off	feeds back the filter pump speed status
cleaner_on and cleaner_off	feeds back the cleaner pump status
waterfall_on and waterfall_off	feeds back the waterfall pump status
spa_on and spa_off	feeds back the current spa state
pool_heater_on and off	feeds back the primary heater status
pool_heater_firing	held high when the heater is actively firing
pool_heat2_on and off	feeds back the secondary heater status
pool_heat2_firing	held high when the heater is actively firing
spa_heater_on and off	feeds back the spa heater status
spa_heater_firing	held high when the heater is actively firing
solar_heater_on and off	feeds back the solar heat source status
solar_heater_firing	held high when the pump output is on
aux(x)_realy_on and off	feeds back current state of the specified relay
aux(x)_dimmer_25/50/75/100%	feeds back the current level of the aux dimmer relay
auto_mode	feeds back that the Power Center is in auto mode
service_mode	feeds back that the Power Center is in service mode
timeout_mode	feeds back that the Power Center is in timeout mode
startup_busy	is high when the system is being polled on startup for current settings, about 43 seconds for the whole cycle to complete
low_battery_fb	is high when the backup 9 volt battery needs to be replaced

ANALOG OUTPUTS

pool_setpoint current pool setpoint
pool_temperature pool temperature reported as above only when pump is running
pool_setpoint2 second pool heater setpoint
spa_setpoint current spa setpoint
spa_temperature spa temperature when in spa mode
air_temperature air or freeze temperature
solar_temperature temperature of solar sensor
battery_voltage current voltage of the 9 volt memory battery

Note: All temperatures are reported as three digits. Battery voltage is also three digits but with tenths and hundreds IE 8.97. Also the pool temperature will display 0 if the filter pump is off. The spa temperature will also display 0 if the Spa mode is not high.

SERIAL OUTPUTS

jandy_tx\$ connect to tx of the com port

PARAMETERS

This module does not utilize any parameters.

Jandy RS Series LED Parser Module V2 I/O:

DIGITAL INPUTS

[continuous_poll_enable]..... polls the controller for LED status at the rate defined in the parameter named "Poll Time" (see below)
[poll] pulse to poll once for the current LED status

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

jandy_rx\$..... connect to rx of the com port

DIGITAL OUTPUTS

led1/14_on..... indicates the current state of each LED on the wall control. Please note that the LED assignment is different for each RS system. Please see the table in the Jandy Aqualink RS Serial Adapter Manual to decode each assignment. It can be found on page 35-37
spa_status_led..... feeds back the spa mode status
filter_pump_status..... feeds back the filter pump status, flashes when in a delay
heater1_green_led_on..... high when the heater is enabled
heater1_red_led_on..... high when the heater is enabled and firing
heater1_led_off..... high when the heater is not enabled
heater2_green_led_on..... high when the heater is enabled
heater2_red_led_on..... high when the heater is enabled and firing
heater2_led_off..... high when the heater is not enabled
solar_green_led_on..... high when the heater is enabled
solar_red_led_on..... high when the heater is enabled and firing
solar_led_off..... high when the heater is not enabled

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

jandy_tx\$..... connect to tx of the com port

PARAMETERS

Poll Time..... the number in seconds for the polling interval. Should never be lower than 3 seconds.

Jandy Chlorinator V2 I/O:

DIGITAL INPUTS

chlorinator_on]..... pulse to turn the chlorinator on
[chlorinator_off] pulse to turn the chlorinator off

[poll] pulse to poll once for the current LED status

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

jandy_rx\$..... connect to rx of the com port

DIGITAL OUTPUTS

led1/14_on indicates the current state of each LED on the wall control. Please note that the LED assignment is different for each RS system. Please see the table in the Jandy Aqualink RS Serial Adapter Manual to decode each assignment. It can be found on page 35-37

spa_status_led feeds back the spa mode status

filter_pump_status..... feeds back the filter pump status, flashes when in a delay

heater1_green_led_on high when the heater is enabled

heater1_red_led_on high when the heater is enabled and firing

heater1_led_off high when the heater is not enabled

heater2_green_led_on high when the heater is enabled

heater2_red_led_on high when the heater is enabled and firing

heater2_led_off high when the heater is not enabled

solar_green_led_on high when the heater is enabled

solar_red_led_on high when the heater is enabled and firing

solar_led_off high when the heater is not enabled

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

jandy_tx\$..... connect to tx of the com port

PARAMETERS

This module does not utilize any parameters.

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-449-1100. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at <http://www.thecontrolworks.com/customerlogin.aspx>.

Distribution Package Contents

The distribution package for this module should include:

Jandy RS Series Module Help v2.pdf	this help file
Jandy_RS_Series_v2.umc	Crestron user module to insert in program
Jandy_Chlorinator_v2.....	Crestron user module to insert in program
Jandy_RS_Series_LED_Parser_v2	Crestron user module to insert in program
Jandy_LED_Parser_v2.USP.....	Crestron SIMPL+ for use in the above module
Jandy_ TPS4500_demo_panel_v2.vtp.....	example touchpanel (TPS-4500)
Jandy_ Xpanel_demo_panel_v2.vtp.....	example touchpanel (X-panel)
Jandy_RS_series_Demo_program_v2.smw.....	sample program for a PRO2

Revision History

V1 jim@controlworks.com 2006.06.27

- first release of version supporting all 22 relays of a RS-2/22 system.

V2 jim@controlworks.com 2006.09.08

- finalized Chlorinator module
- finalized LED parsing module
- fixed issue with parsing battery voltage
- fixed error in air temperature query on startup
- added low battery flag
- added Extra Aux control and feedback
- added on and off to each toggle command where applicable
- added heater firing output to the four heater status outputs

Development Environment

This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Hardware

Crestron PRO2 Processor 3.155.1143 (Jun 20 2006)
Jandy RS8 (6520) Power Center Version "I"
Jandy RS Serial Adapter Version "C01"

Software

Crestron SIMPL Windows Version 2.07.32
Crestron Database Version 18.1.5
Crestron Symbol Library Version 387
Crestron Device Library Version 387
Crestron VisionTools Pro-e Version 3.5.1.6 Build 200600818:1

ControlWorks Consulting, LLC Module License Agreement

Definitions:

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Provision of Support

We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous version of the module, modifications to the module not made by Us, to persons who have not purchased the module from Us. In addition, we may decline to provide support if the Demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should ControlWorks discontinue support for a module.

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You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Module in whole or part. You may modify the Demo Program. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from You modifying the Software in any manner.

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