

# Interfacing STARGATE to Jandy AquaLink RS Pool Controllers

## INTRODUCTION

This Application Note describes how to interface the Jandy AquaLink RS Pool Controller to STARGATE-IP, STARGATE-Lite and STARGATE SG-1 using ASCII in and out commands. This application note assumes the Jandy AquaLink Pool Controller has been installed and is operating properly.

Support for the Jandy Pool Controller requires the Jandy AquaLink RS Serial Adapter and requires the use of COM2 or COM3 of the STARGATE controller. 3 STARGATE/WinEVM variables and 1 X10 address are also used in this application to monitor the Air and Pool Temperature and Pump status from the Jandy AquaLink. These variables can also be displayed on LCD-96M keypads, Web-Xpander web pages, and HomeRunner screens.

Commands can also be sent to the Jandy AquaLink through ASCII Out commands from the STARGATE.

By using the examples in this application note, other variables available from the Jandy AquaLink can be accessed and used by a schedule running on the STARGATE.

The typical Jandy AquaLink configuration consists of a Power Center, Control Panel and the RS Serial Adapter.

### Materials Needed

Jandy AquaLink RS Serial Adapter  
STARGATE to AquaLink Adapter & Cable

## IMPLEMENTATION

### Hardware

- 1) Install and test the Jandy AquaLink RS Serial Adapter. Configure the adapter to communicate at 9600 baud, following the installation instructions included in the Serial Adapter documentation. If you are unsure of the installation procedures or have questions, Jandy provides consultation services to ensure a successful installation.
- 2) Verify proper serial communication with the AquaLink RS Serial Adapter using the instructions included in the AquaLink Serial Adapter Owners & Installation Manual.
- 3) Connect the STARGATE-AquaLink RJ11-to-DB9M adapter to the DB9 cable supplied with the AquaLink RS Serial Adapter.
- 4) Connect one end of the 6-conductor data cable into the STARGATE-AquaLink adapter.
- 5) Connect the other end of the 6-conductor data cable into COM2 or COM3 of STARGATE.

## SOFTWARE

1) Configure the COM port being used to communicate to the AquaLink: Select Define – COM Ports – COM2 (or COM3).

Set the following Serial Port parameters:

Mode: General Purpose

Baud Rate: 9600

Comm Parameters: N81

2) Define 2 Variables in the WinEVM program: “AirTemp” and “PoolTemp”

3) Define 1 X10 address in the WinEVM program, there does not have to be an actual X10 device at this address, it is only used as a status indicator: “PumpStatus”

4) Enter the following Events:

EVENT: POWER RESTORE OR DOWNLOAD

If

Power is Restored

or First pass through schedule

Then

“Enable Change of State”

ASCII-Out: '#COSMSGS=1' [COM2]

End

EVENT: AIRTEMP

If

ASCII-In: Match '!00 AIRTMP = ' starting at character number 1 [COM2]

Then

Put value of received char # 14-16 into user\_VAR [COM2]

(V:AirTemp) load with user\_VAR

LCDKP: Update LCD Variable <V:AirTemp> [KP:ALL]

End

EVENT: POOL TEMP

If

ASCII-In: Match '!00 POOLTMP = ' starting at character number 1 [COM2]

Then

Put value of received char # 15-17 into user\_VAR [COM2]

(V:PoolTemp) load with user\_VAR

LCDKP: Update LCD Variable <V:PoolTemp> [KP:ALL]

End

EVENT: PUMP STATUS

If

ASCII-In: Match '!00 PUMP = ' starting at character number 1 [COM2]

Then

Put value of received char # 12-14 into user\_VAR [COM2]

(V:PumpState) load with user\_VAR

If

(V:PumpState) = 1

Then

X10: A-1 (PumpStatus) Set State to ON

Else

X10: A-1 (PumpStatus) Set State to OFF

Nest End

End

EVENT: WATERFALL ON

If

Time is 7:00 PM SMTWTFS

Then

ASCII-Out: '#WFALL=ON' [COM2]

End

EVENT: WATERFALL OFF

If

Time is 10:00 PM SMTWTFS

Then

ASCII-Out: '#WFALL=OFF' [COM2]

End

## TESTING

1) Open the MegaController.

2) Click the "Logging Messages" checkbox (directly above the activity log). Make sure the Variable checkbox is selected. If not, the Variable screens will not update with the AquaLink commands being sent to the STARGATE.

3) Click on the ASCII button. A window will appear with a text field and serial port selections.

Enter #PUMP=ON in the text field

Select Out of Controller and COM2

Press the SEND button. You should see the X10 address you defined for the Pump Status go ON.

Enter #PUMP=OFF in the text field and press the SEND button. You should see the X10 address go OFF.

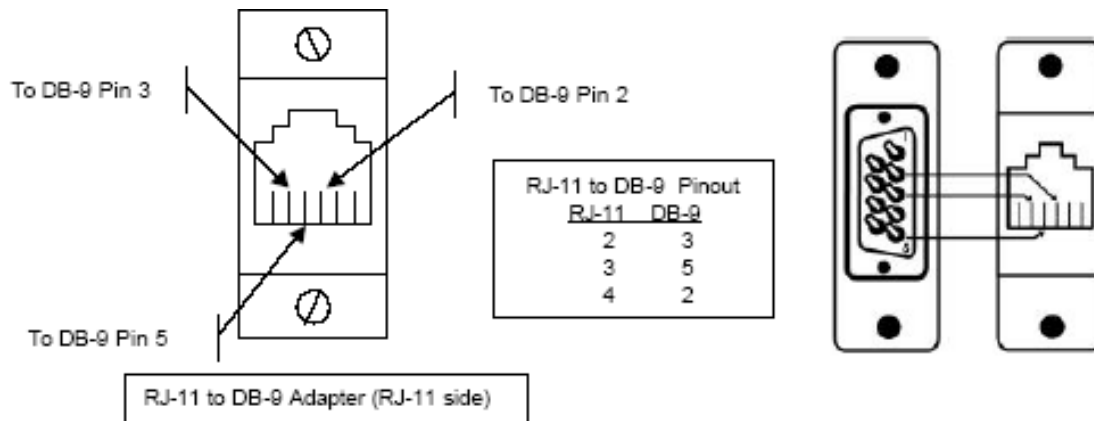
## TROUBLESHOOTING

If AquaLink does not respond to commands sent by STARGATE verify the following:

- Serial Port configuration is valid for "General Purpose" and 9600: N81
- All Cables/Connections are still intact
- Verify proper AquaLink Serial Adapter operation by connecting directly to a PC using an ASCII terminal program as documented in the AquaLink documentation.
- Run STARGATE's Self-Test to test COM2/COM3 functionality. (NOTE: After the Self-Test you will need to redownload your schedule.)

### STARGATE to Jandy AquaLink Serial ADAPTER

The STARGATE to Jandy AquaLink Serial Adapter consists of a 6 Conductor RJ11 to DB-9 Male adapter, and a 6 Conductor Data Cable. The diagram below illustrates the Adapter pinout.



## REFERENCE

**Jandy Controls**  
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(707) 776-8200, ext. 260  
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