
RCS

Application Note 4 **Interfacing CommStar Controllers to Jandy AquaLink RS Pool Controllers**

INTRODUCTION

This Application Note describes how to interface the Jandy AquaLink RS Pool Controller to RCS CommStar controllers (CS30/CS308/CS48) 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 CommStar controller. 3 CommStar/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 the RCS KPG8 keypads that can be distributed around a home.

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

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 CommStar.

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

Material Needed

Jandy AquaLink RS Serial Adapter
CommStar 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 CommStar-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 CommStar-AquaLink adapter.
- 5) Connect the other end of the 6-conductor data cable into COM2 or COM3 of CommStar.

SOFTWARE

- 1) Configure the CommStar 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
 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 CommStar.
- 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.

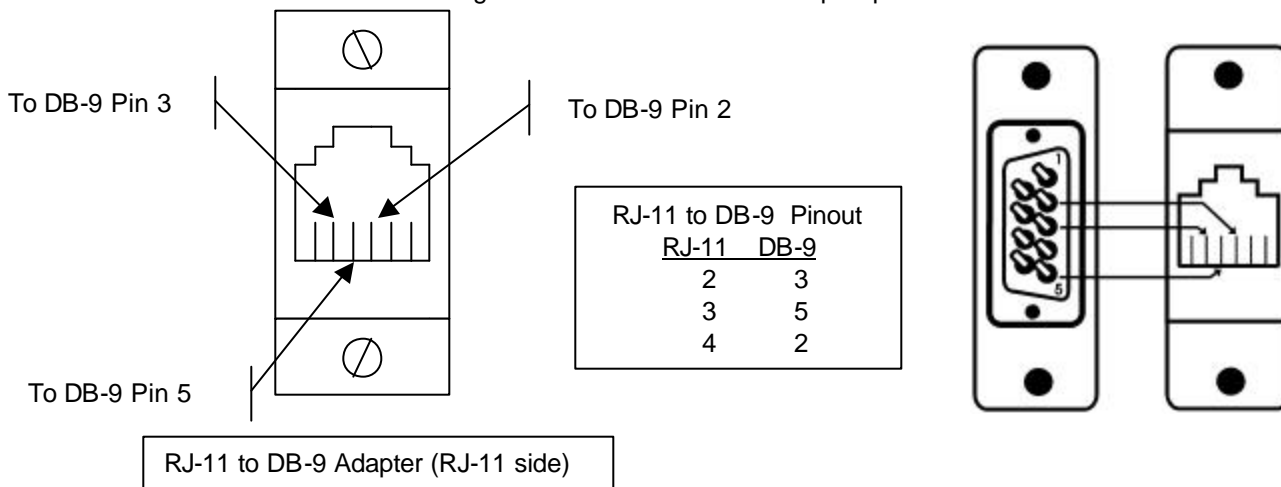
TROUBLESHOOTING

If AquaLink does not respond to commands sent by the CommStar 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 CommStar’s Self-Test to test COM2/COM3 functionality. After the Self-Test you will need to re-download your schedule..

CommStar to Jandy AquaLink Serial ADAPTER

The CommStar 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.



REFERENCES

Jandy Controls

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