

Application Note 3

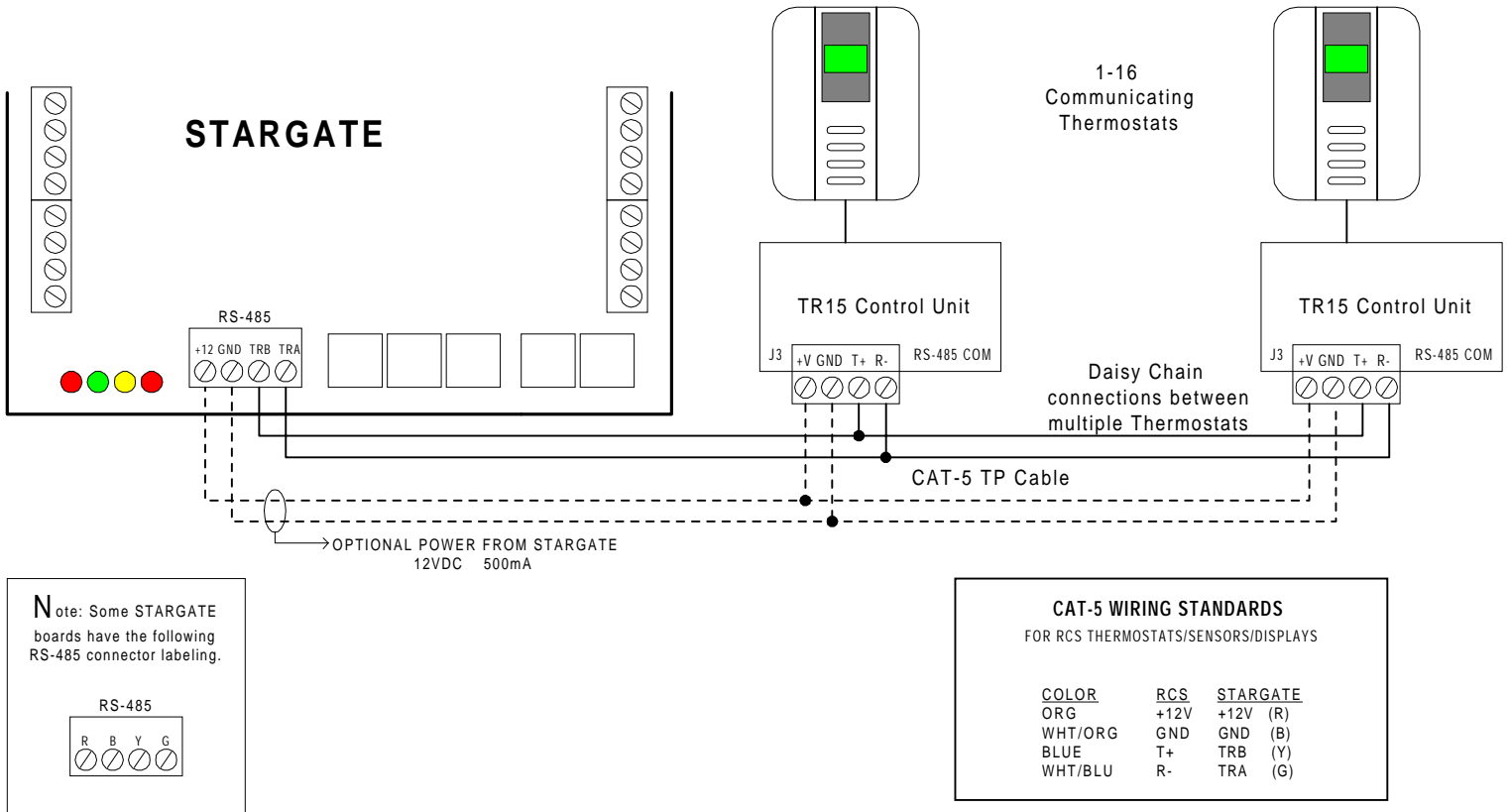
Interfacing STARGATE to RCS Communicating Thermostats

INTRODUCTION

This Application Note describes how to interface the RCS Communicating Thermostats (RCS TR15) to the JDS STARGATE controller.

Support for RCS Communicating Thermostats require Version 2.42 (or above) Firmware/Software for the JDS STARGATE controller. Up to 16 individual HVAC zones are supported.

The typical Thermostat configuration consists of 1 to 16 RCS Communicating Thermostats, connecting directly to the RS485 interface of the STARGATE.



Material Needed

- RCS Communicating Thermostats (1 – 16)
- CAT-5 Twisted Pair Wiring
- STARGATE Version 2.42 Firmware and WinEVM software

IMPLEMENTATION

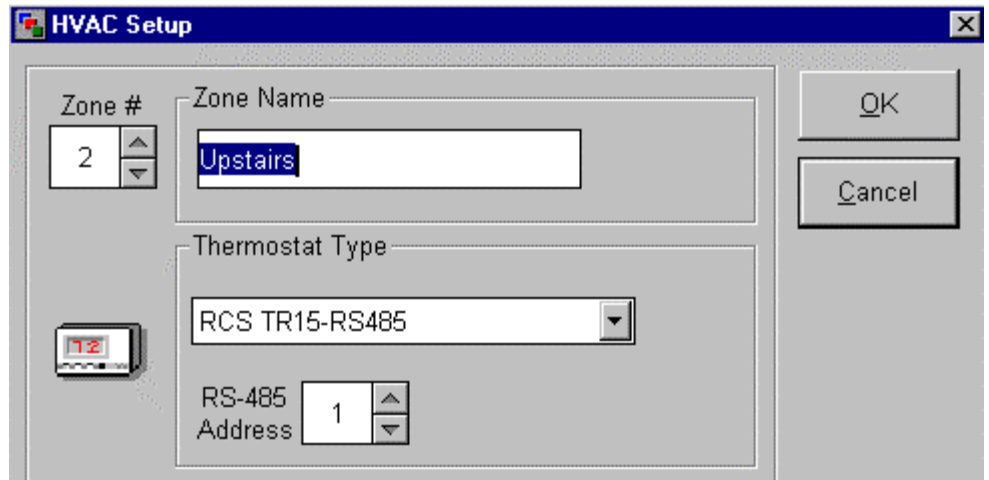
Hardware

- 1) Install and test the RCS Communicating Thermostat. Follow the installation instructions included in the RCS documentation. If you are unsure of the installation procedures or have questions, contact RCS.
- 2) Connect one end of a CAT-5 Twisted Pair to the STARGATE RS-485 terminal block.
- 3) Connect the other end of the CAT-5 Twisted Pair to the RCS Communicating Thermostat. Follow the wiring diagram on the previous page.
- 4) For multiple Thermostats, connect additional Thermostats in a daisy chain fashion.

SOFTWARE

- 1) Update your STARGATE with version 2.42 Firmware and WinEVM Software. This update is available on the JDS web site: www.jdstechologies.com. Follow the instructions in the readme.txt file if you are not familiar with the update procedure.

- 2) Define each Thermostat being used: Select Define – HVAC



- 3) Select the following parameters:
 - Zone Name: any name (e.g.: Upstairs, Downstairs, etc).
 - Thermostat Type: RCS TR15-RS485
 - RS-485 Address: Address- these are the jumper settings used for each RCS Thermostat.
- 4) Press the OK button (downloads all HVAC parameters into the STARGATE).

TESTING

- 1) Power up at least one RCS Thermostat and verify Wall Display Unit operation.
- 2) Open the MegaController.
- 3) Click the "Logging Messages" checkbox (directly above the activity log). Make sure the HVAC checkbox is selected. If not, the HVAC screens will not update with current temperature, setpoint, mode or fan status.
- 4) Click on the HVAC button. A window will appear with the temperature & setpoint for each defined zone shown.

To manually adjust a zone, click on the 'More...' button for the zone to be adjusted.

Adjust Setpoint, Fan or Mode settings, verify Thermostat updates accordingly.

Change settings at the Thermostat (Setpoint/Mode/Fan) and verify changes in the MegaController

TROUBLESHOOTING

TIMEOUTS

If a TR15 does not respond to commands sent by STARGATE, the MegaController will display the following message in the activity log: "HVAC: zonename TIMEOUT". The STARGATE waits approximately 5 seconds for a lack of response before a timeout is logged.

Verify the following:

- HVAC Setup correct. Verify RS-485 addresses match those in the HVAC Definitions.
- All Cables/Connections are still intact
- Verify proper RCS Communicating Thermostat operation by connecting directly to a PC using an ASCII terminal program as documented in the RCS documentation.

REFERENCES

Residential Control Systems
 3983 S. McCarran Blvd, Suite 190
 Reno, NV 89502
 (916) 635-6784
 (916) 635-7668 (fax)
 e-mail: resconsys@aol.net
 internet: www.resconsys.com

JDS Technologies
 12200 Thatcher Court
 Poway, CA 92064
 (619) 486-8787
 (619) 486-8789 (fax)
 e-mail: 75407.3534@compuserve.com
 internet: www.jdstechologies.com