

INTRODUCTION

This Application Note describes RCS CommStar controllers, Models CS30/CS308/CS48 and StarGate Lite support for controlling UPB Powerline devices. These controllers, when connected to the powerline by a UPB Powerline Interface Module, can control a network of up to 250 UPB lighting dimmers and other UPB devices. This application note assumes a working knowledge of UPB and that the UPB devices have been installed and properly configured using the UPStart program (available from PCS or Simply Automated Websites).

Support for UPB requires a UPB Powerline Interface Module (PIM, also call a Computer Interface Module or CIM) and a RCS UPB serial adapter and cable. The PIM is connected to COM2 or COM3 of the controllers by the UPB serial adapter cable. Once configured, the UPB devices are fully integrated into the CommStar and can be controlled in the same manor as X10 or ALC lighting devices.

CommStar Controllers

NEW Controllers

CommStar CS30/308/48 and StarGate Lite Controllers shipped with firmware 4.0.0 or later are modified and ready for UPB support. These units are shipped with a UPB serial adapter and cable for connection to a UPB Powerline Interface Module with a RS232 DB9 connector (PIM not supplied).

The UPB Powerline Interface Module (PCS PIM) or Computer Interface Module (Simply Automated CIM) are available from various distributors such as Home Controls Inc. Reference HCI part number: SAUMCDB9W

Older Controllers

Users who have older controllers (shipped prior to the release of Version 4.00.0) will need to purchase a special UPB adapter cable kit, **Model 001-00729**. This cable comes with an extra power wire that needs to be connected to a source of 12VDC on the controller board. See connection diagram.

WinEVM 4.0.0 UPB Device Support

There are important changes with WinEVM version 4.0.0 to support UPB devices. Lighting type devices such as X10, ALC and now UPB are referenced under the more general “**Lighting**” term. The device DEFINE function is now labeled as **Define | Lighting**. This was done to support the more advanced lighting systems such as ALC, UPB, Zwave, and to allow them to map into the existing WinEVM structure.

There are now 255 “Lighting” devices available for use, numbered 1-255. UPB device ID’s use a range from 1-250.

MegaController Lighting Grid

Controlling lighting devices using the WinEVM MegaController grid will require visually mapping the UPB addresses into the current X10 address format display. Refer to Appendix A for a grid map for UPB devices.

X10 Support

The CommStar's X10 interface is still functional when using UPB. You can intermix X10, UPB and ALC lighting types in the Define | Lighting grid. The protocols are not compatible but can co-exist in most cases.

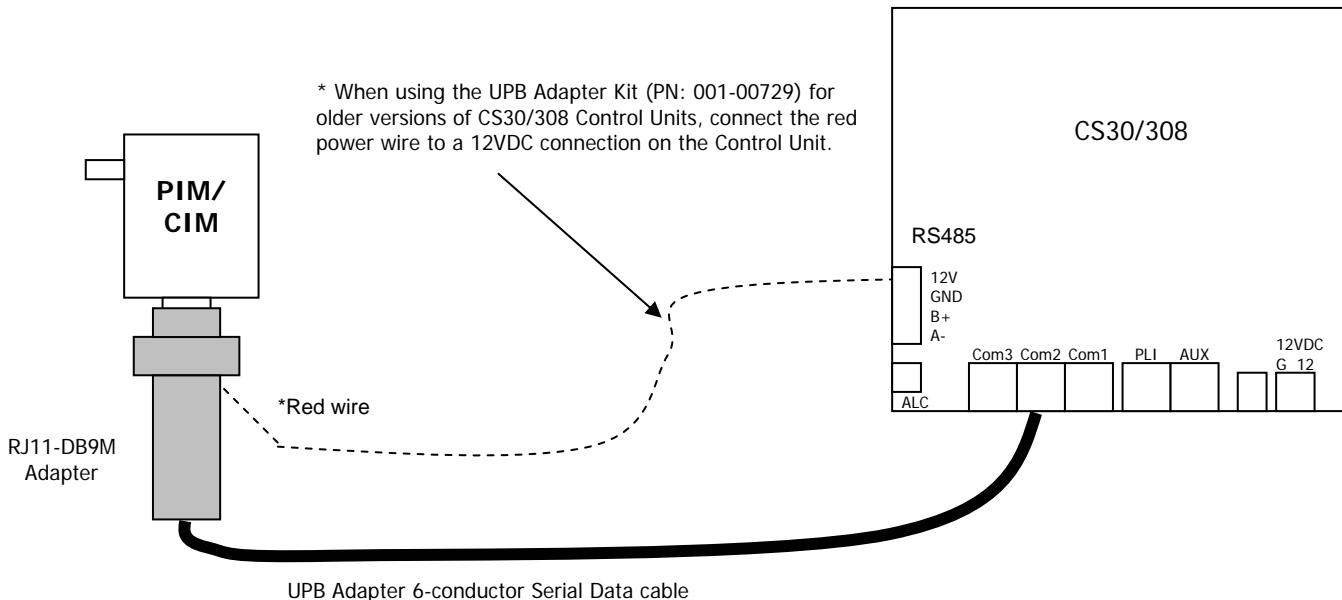
What's Needed

- CommStar Control Unit
- UPB Serial Cable (comes with Version 4.0.0 units)
- UPB Adapter Kit RCS p/n 001-00729 (only required for older control units) (Not Supplied)
- UPB PowerLine Interface Module - RS232 DB9 version. (Not Supplied)
- UPB Lighting Dimmers or other UPB devices
- UPStart UPB Configuration Software (download from PCS or Simply Automated Websites)

IMPLEMENTATION

HARDWARE

- 1) Setup and configure your UPB devices using the UPStart program. This program is available from either the PCS or Simply Automated web sites. It's essential that UPStart be used; as WinEVM does not attempt to configure the devices, only control them. If you only have 1 PIM, you will need to move it between the CommStar and your PC as you go from configuring your UPB network with UPStart to controlling your network with CommStar.
- 2) Connect the UPB adapter cable into the controller's COM2 or COM3 ports.
- 3) For older controllers connect the UPB adapter cable's flying red wire to a source of 12VDC on the control unit. The RS485 connector's 12VDC is a convenient place to attach this wire. Purchase PN: 001-00729 from RCS. (NOT required for units shipped with Version 4.00.0)
- 4) Connect the UPB interface cable w/RJ11-DB9M adapter to the PIM.



COMMSTAR UPB CONFIGURATION

Configuring CommStar controllers for UPB support is a 2-step process. The WinEVM PC program provided with the CommStar controllers is used to setup and configure the units for UPB support. The steps are:

- 1) Configuring the CommStar controller to communicate with the UPB Powerline Interface Module
- 2) Defining the UPB Network and Devices.

REMEMBER: You cannot configure the UPB Devices themselves with WinEVM. You must use the UpStart program available from PCS or Simply Automated.

Configure the CommStar to communicate with UPB Powerline Interface Module

Select Define – UPB System.

Set the following UPB parameters:

Serial Port Used: Select the physical Com port (Com2 or Com3) the PIM is connected to.

Network ID: The Network ID created with the UPStart program.

Link Name: Link names created with the UPStart program.

Import from UPStart: You can also import UPB information (Network ID, Devices, Links) into WinEVM instead of manually entering the information:

- 1) Export the information from the UPStart program – (UPStart) Select **File | Export**. Remember where you place the file on your computer.
- 2) Import the information into WinEVM – (WinEVM) Select **Define | UPB System**, select the **“Import from UPB”** button.
- 3) Navigate to where you saved the file and select it. WinEVM will read in the file, replace the Network ID, any defined Links and any defined devices into the Lighting database.
- 4) Press OK, WinEVM will download the information to the CommStar (if connected).

Defining your UPB Devices

- 1) Select **Define | Lighting**. If you have imported a file from UPStart, your lighting devices will automatically be defined. Review the Lighting Define table to confirm the file import was correct.
- 2) If you do not import an UPStart file, then you need to individually select and set the Lighting Device's Type to **“UPB”** for each UPB device you have. The Lighting Devices are numbered 1 to 250. This corresponds to the Unit-IDs used by the UPB devices and set with the UPStart program.
- 3) Press the APPLY button to download the Lighting Device information to the CommStar. This step is necessary for the CommStar to properly control the lighting devices.

UPB Device Setup

When setting up devices with the UPStart program follow these rules:

1. Limit UPB device names, locations and Link Names to 16 characters as used in WinEVM. WinEVM will only import the first 16 characters.
2. Under the device setup **Options** tab, select the “**Report light level after rocker switch is pressed**” checkbox. This will allow CommStar Controllers to track the state when the switch is manually turned on or off.

Device Status When Using Link Commands

UPB devices do not report their status when changed using a Link command. CommStar controllers will not be able to track their state when this occurs. If you need to track the state of a device create an Event that looks for the Link command, then use the “Set State” feature in the Lighting Action to set the devices state.

TESTING

- 1) Configure a UPB device with UPStart program.
- 2) Connect the UPB powerline interface module to the controller.
- 3) Connect a PC to the controller COM1.
- 4) Start WinEVM and open the MegaController window.
- 5) Click on the MegaController Lighting Grid address location for the UPB device to test.
- 6) UPB lighting dimmers should toggle on and off with each click on the MegaController address location.

TROUBLESHOOTING

If the UPB devices do not respond to commands sent by the CommStar, verify the following:

- Serial Port configuration is valid for “UPB” and 4800: N81
- PIM connected to the CommStar (not the PC as required to use UPStart)
- Your Network ID is correct
- All Cables/Connections are still intact
- Run CommStars Self-Test* to test COM2/COM3 functionality.

*** NOTE: After the Self-Test you will need to re-download your schedule!**

“TOUT #1” Display in MegaController Log

If you see “TOUT #1” or similar in the Mega Controller log when trying to send UPB commands from the Mega Controller Grid, you may have one of the following problems:

1. UPB com port not defined
2. UPB com port not configured correctly
3. UPB cable not connected or not correctly wired
4. UPB Powerline Interface Module not plugged in or outlet not powered
5. You have an older controller board that requires the UPB adapter cable with the extra red wire to be connected to 12VDC.

Appendix A

WinEVM MegaController Lighting Grid

Lighting Device Address Grid Conversion for UPB Device Addresses

UPB device ID range is 1 to 250

A	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16
B	1 17	2 18	3 19	4 20	5 21	6 22	7 23	8 24	9 25	10 26	11 27	12 28	13 29	14 30	15 31	16 32
C	1 33	2 34	3 35	4 36	5 37	6 38	7 39	8 40	9 41	10 42	11 43	12 44	13 45	14 46	15 47	16 48
D	1 49	2 50	3 51	4 52	5 53	6 54	7 55	8 56	9 57	10 58	11 59	12 60	13 61	14 62	15 63	16 64
E	1 65	2 66	3 67	4 68	5 69	6 70	7 71	8 72	9 73	10 74	11 75	12 76	13 77	14 78	15 79	16 80
F	1 81	2 82	3 83	4 84	5 85	6 86	7 87	8 88	9 89	10 90	11 91	12 92	13 93	14 94	15 95	16 96
G	1 97	2 98	3 99	4 100	5 101	6 102	7 103	8 104	9 105	10 106	11 107	12 108	13 109	14 110	15 111	16 112
H	1 113	2 114	3 115	4 116	5 117	6 118	7 119	8 120	9 121	10 122	11 123	12 124	13 125	14 126	15 127	16 128
I	1 129	2 130	3 131	4 132	5 133	6 134	7 135	8 136	9 137	10 138	11 139	12 140	13 141	14 142	15 143	16 144
J	1 145	2 146	3 147	4 148	5 149	6 150	7 151	8 152	9 153	10 154	11 155	12 156	13 157	14 158	15 159	16 160
K	1 161	2 162	3 163	4 164	5 165	6 166	7 167	8 168	9 169	10 170	11 171	12 172	13 173	14 174	15 175	16 176
L	1 177	2 178	3 179	4 180	5 181	6 182	7 183	8 184	9 185	10 186	11 187	12 188	13 189	14 190	15 191	16 192
M	1 193	2 194	3 195	4 196	5 197	6 198	7 199	8 200	9 201	10 202	11 203	12 204	13 205	14 206	15 207	16 208
N	1 209	2 210	3 211	4 212	5 213	6 214	7 215	8 216	9 217	10 218	11 219	12 220	13 221	14 222	15 223	16 224
O	1 225	2 226	3 227	4 228	5 229	6 230	7 231	8 232	9 233	10 234	11 235	12 236	13 237	14 238	15 239	16 240
P	1 241	2 242	3 243	4 244	5 245	6 246	7 247	8 248	9 249	10 250	11 NA	12 NA	13 NA	14 NA	15 NA	16 NA

REFERENCES

PCS

PowerLine Control Systems, Inc.
19201 Parthenia St., Suite J
Northridge, CA 91324

Support: (818) 701-9831

support@pcslighting.com

internet: <http://www.pcslighting.com>

Simply Automated

5825 Avenida Encinas, Suite 101
Carlsbad, CA 92008-4401

Support: 800-630-9234 x138

upbhelp@simply-automated.com

internet: <http://www.simply-automated.com>

Residential Control Systems

11460 Sunrise Gold Circle Suite A
Rancho Cordova, CA 95742

(916) 635-6784

(916) 635-7668 (fax)

e-mail: support@resconsys.com

internet: www.resconsys.com