

**OnQ Advanced Lighting Control (ALC) Switch Support  
by CommStar CS30/308 Controllers  
and WinEVM**

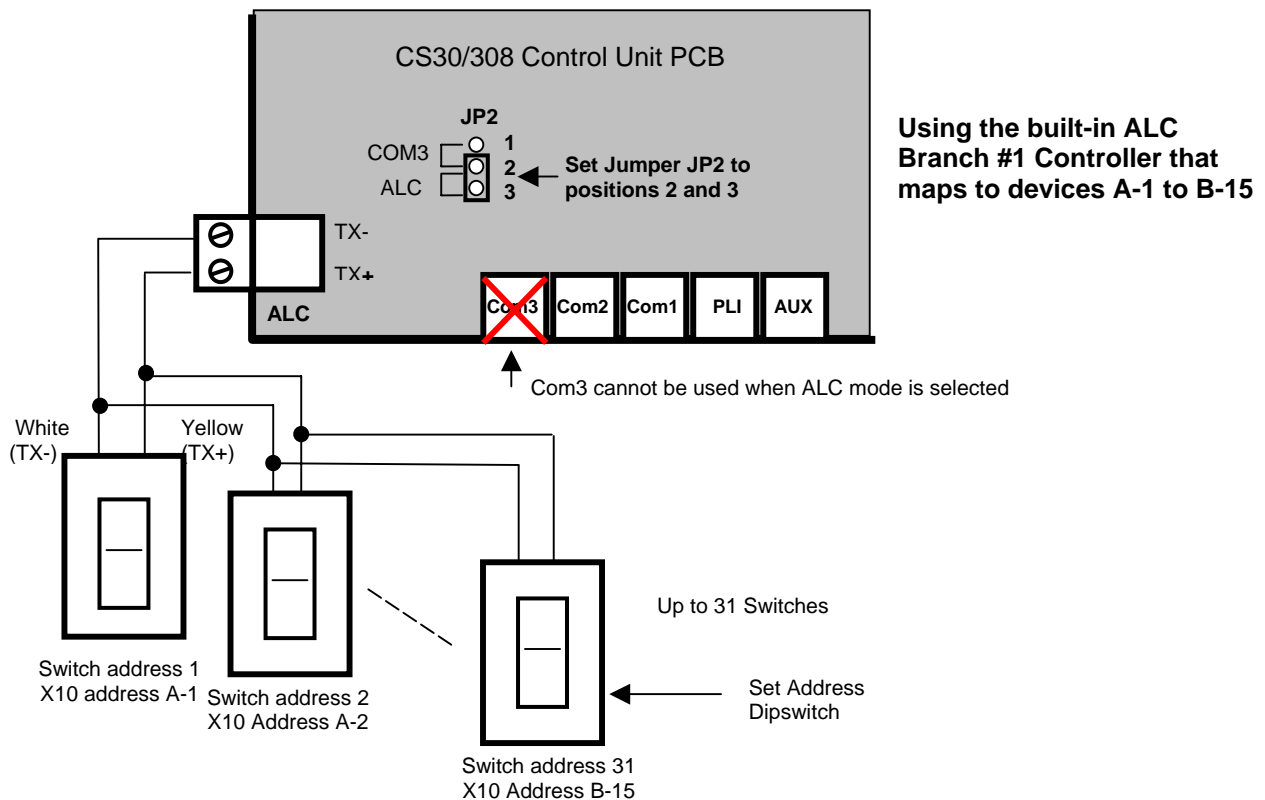
**1.0 ALC Switch Control**

The CommStar CS30 and CS308 Controllers, along with WinEVM, provide OnQ ALC lighting control functionality. The CS30/308 can control up to 8 OnQ ALC Branches (31 switches per branch) for a total of 248 ALC switches and dimmers (with optional RCS ALC Branch Controllers). The CS30/308 has a built-in ALC Branch 1 Controller and can use up to 8 external RCS ALC Branch Controllers. ALC device support includes On, Off and set Preset Dim level (32 levels). Two-way status feedback is supported in CS30/308 firmware version 3.08.3 or later.

CS30/308 Controllers treat lighting loads as **X10 Devices** and each device has an X10 Address such as A1. Lighting devices are “defined” in the WinEVM setup program and downloading to the controllers. If the internal ALC Branch Controller is enabled, or an external ALC Branch Controller is connected, the ALC Branch Switch Addresses are mapped to X10 Device Addresses (ex: ALC Branch 1 Switch Address 1 is mapped to X10 Device Address A1). When you define and name the installed ALC lighting loads, you configure them as a Device Type: **LAMP – ALC**. Once the ALC Switches are defined they can be controlled and used by any of the X10 device functions in WinEVM schedules or from KPG8 and KPL7 Keypads.

**2.0 Built-in ACL Branch 1 Controller**

CS30/308 Controllers have a built-in ALC Branch 1 Controller. It shares the use of the Com 3 serial port and the board must be configured for either ALC or Com 3 use (not both). The internal ALC Branch Controller is assigned (and fixed) to address group 1, which maps to X10 addresses beginning with house codes A and B. Address A-1 controls ALC switch #1, A-2 controls #2, A-16 controls #16, B-1 controls #17 and so on. (B-16 is not used).



## 2.1 ALC Branch #1 Setup – Using the Built-in ALC Controller

### 2.1.1 CS30/308 Setup

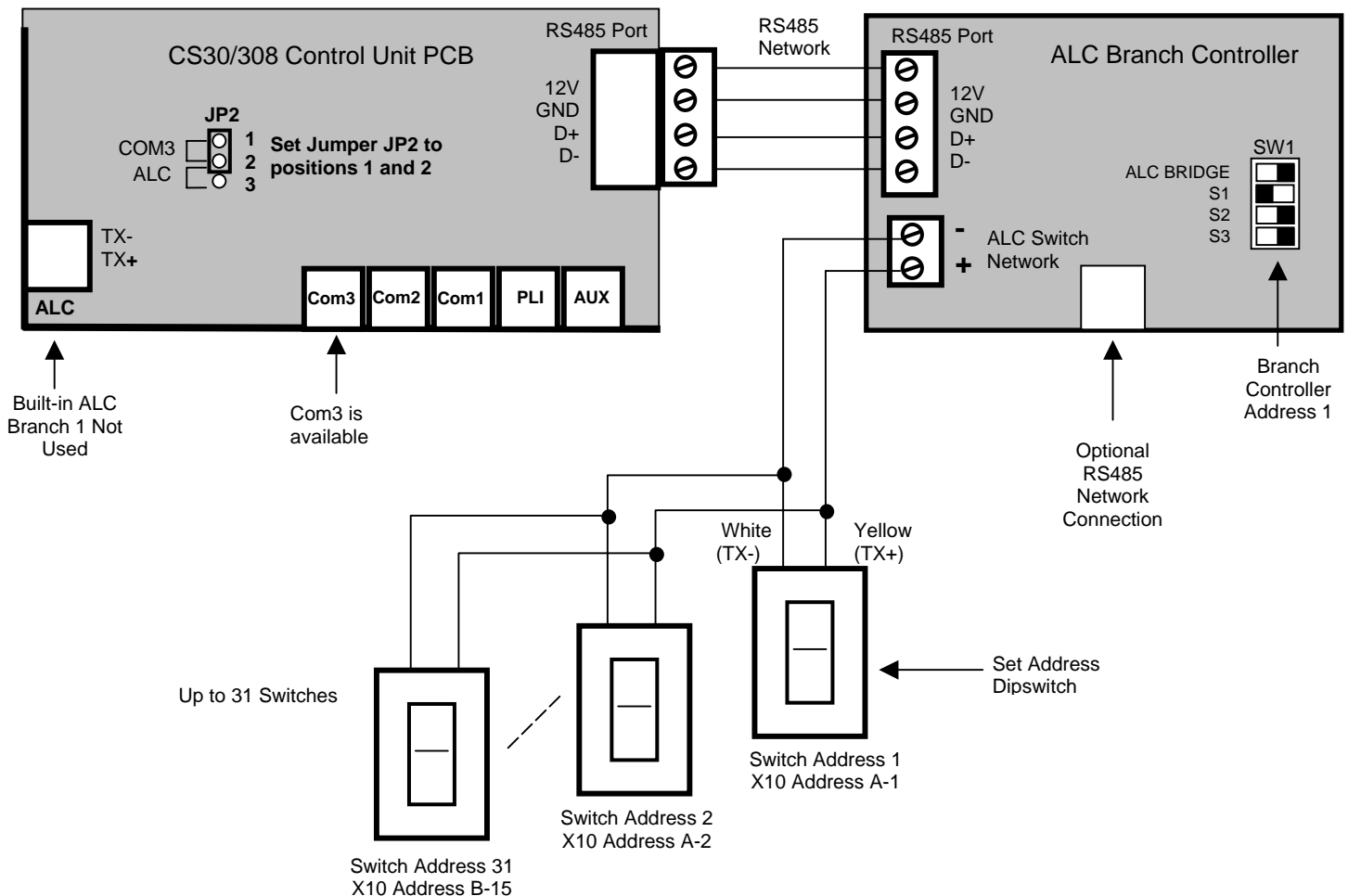
Set the CS30/308 COM3 jumper (JP2) to the “**ALC**” position. (across pins 2 and 3)  
 Set each ALC Switch address dipswitch to the appropriate address (1-31).  
 Connect all the ALC switch Yellow (+) connections to the CS30/308 ALC + connection.  
 Connect all the ALC switch White (-) connections to the CS30/308 ALC - connection.

### 2.1.2 WinEVM Setup

Open the WinEVM program.  
 Select “**Define**” in main tool bar to open a drop down menu. Select “**COM Ports**”  
 Select “**COM3**”.  
 In the COM3 Define window, Set Mode to “**ALC**”  
 Set Baud Rate to “**9600**”  
 Set Comm Parameters to “**N81**”  
 Click **OK** to exit

## 3.0 External ALC Branch Controllers

If you do not want to use the built-in ALC Branch 1 Controller (you need to use COM3, for instance) or need more than 31 ALC switches, external ALC Branch Controllers can be connected to the CS30/308 via its CommStar RS485 network. Each Branch Controller adds another ALC branch of 31 switches. Up to 8 Branch Controllers can be connected, each one maps to a pair of lighting device X10 house codes as shown in mapping table later in this document. Note that Branch 1 is either the built-in Branch 1 or an external Branch Controller set to Branch 1, but not both.



## 3.1 ALC Branch #1 Setup – Using an External ALC Branch Controller

### 3.1.1 CS30/308 CommStar Setup

Disable the internal ALC Branch 1 by setting the COM3 jumper JP2 to the “COM” position. (Pins 1 and 2)

### 3.1.2 ALC Branch Controller Setup

Set dipswitch SW1 to ALC mode (position 1 to Off).

Set dipswitch SW1 address (positions 2-4) to address 1 (all Off). See addressing table in Appendix A

Wire the ALC Branch Controller RS485 port to one of the CS30/308 RS485 ports.

Connect all the ALC switches network +/- connections to the ALC Branch Controller ALC network +/- connections.

### 3.1.3 WinEVM Setup

Open the WinEVM program.

Select ”**Define**” in main tool bar to open a drop down menu. Select “**COM Ports**”.

Select “**COM3**”.

In the COM3 Define window, Set Mode to “**General Purpose**”, (unless you have previously defined this port for some other usage. *Do not leave it set “ALC”*)

Set Baud Rate to “**9600**” and “**N81**”

## 3.2 Setup – External ALC Branch #2 - #8 Controller (for more than 31 ALC loads)

### 3.2.1 CS30/308 CommStar Setup

Wire the RS485 connections between the ALC Branch Controller(s) and the CS30/308.

### 3.2.2 RCS ALC Branch Controller

Set the appropriate dipswitch setting of SW1 for each Branch Controller (see Appendix A)

Connect the ALC + connections on the ALC switches to the + connection on the ALC Branch Controller

Connect the ALC - connections on the ALC switches to the - connection on the ALC Branch Controller

## 4.0 WinEVM ALC Setup

1. Open WinEVM; select “Define” then “Lighting”.
2. The “X10 Device List” will open, an array of 256 addresses for house codes (A to P) and unit codes (1-16).
3. Select the “X10 Code” for the ALC Branch Controller to be defined, such as A1 for ALC Branch #1, ALC Switch address 1. You can enter a Switch name, description and location information.
4. Be sure the channel is “ENABLED”.
5. For the Address Code selected, scroll over to the “Type” field and select the drop down arrow.
6. Scroll down to the “Lamp – ALC” option and select it.
7. When all ALC Switches have been defined, click on “Apply” and then “OK” to exit setup.

## 4.1 ALC Functions

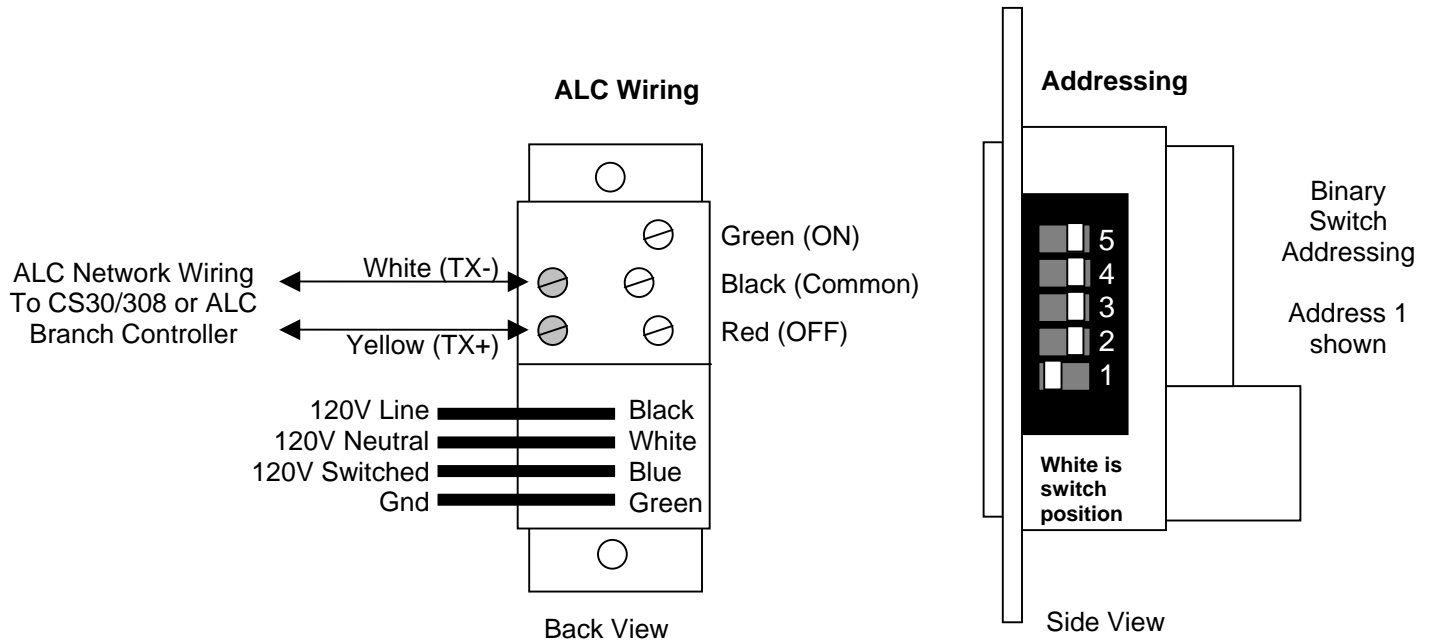
Once the ALC Switch “X10” address has been properly defined, the lighting channels can be controlled from the WinEVM Mega controller, Keypads, Macros or Schedules. Just reference the channel as an X10 device when building events or macros using the “Add” function drop down menu. ALC Switches support the following command options:

- On/Off
- Turn on to Preset Level: 0 to 100% in 32 steps

## 5.0 KPG8 LCD Keypad and KPL7 LED Keypad Setup

To control an ALC switch from a keypad button, define the button from the Action Menu by clicking on the Custom/X10 Two-way and drag to the desired button. Select one of the X10/ALC devices (ex: A1) that you have defined in the Define/Lighting setup in WinEVM. The button now performs On/Off functions for that address.

## 6.0 ALC Switch/Dimmer Setup



Refer to the instructions with the ALC Switches for more wiring and addressing information.

## 7.0 ALC Switch and Dimmer RCS Part Numbers

- 600W Dimmer Module, White, Smooth PN: 001-363143-11
- 900W Dimmer Module, White, Smooth PN: 001-364335-11
- Relay Switch Module, White, Smooth PN: 001-363142-11
- Aux Switch Module, White, Smooth PN: 001-363145-11
- 4 Button Scene Module, White PN: 001-364355-01

Others available, call for info.

































## References

**RCS Inc.**  
 11460 Sunrise Gold Circle  
 Rancho Cordova, CA 95742  
 916-635-6784  
[www.resconsys.com](http://www.resconsys.com)

**OnQ Technologies, Inc.**  
 Fulling Mill Rd,  
 Middletown, PA 17057  
 800-321-2343  
[www.onqtech.com](http://www.onqtech.com)

## APPENDIX A: ALC Branch Controller Addressing

The table below shows how ALC Branch Controllers and ALC Switch addresses are mapped to X10 addresses:

X10 House Code Group	X10 Address	ALC Switch Address	ALC Branch #	ALC Branch Controller Switch Setting
A B	A-1	1	1	Caution! Be sure you are not using the CS30/308 built-in ALC Branch 1 and an external controller set to Branch 1.  SW1 ALC BRIDGE  S1  S2  S3 
	A-2	2		
	...			
	A-16	16		
	B-1	17		
	...			
B-15	31			
C D	C-1	1	2	SW1 ALC BRIDGE  S1  S2  S3 
	C-2	2		
	...			
	C-16	16		
	D-1	17		
	...			
D-15	31			
E F	E-1	1	3	SW1 ALC BRIDGE  S1  S2  S3 
	E-2	2		
	...			
	E-16	16		
	F-1	17		
	...			
F-15	31			
G H	G-1	1	4	SW1 ALC BRIDGE  S1  S2  S3 
	G-2	2		
	...			
	G-16	16		
	H-1	17		
	...			
H-15	31			
I J	I-1	1	5	SW1 ALC BRIDGE  S1  S2  S3 
	I-2	2		
	...			
	I-16	16		
	J-1	17		
	...			
J-15	31			
K L	K-1	1	6	SW1 ALC BRIDGE  S1  S2  S3 
	K-2	2		
	...			
	K-16	16		
	L-1	17		
	...			
L-15	31			
M N	M-1	1	7	SW1 ALC BRIDGE  S1  S2  S3 
	M-2	2		
	...			
	M-16	16		
	N-1	17		
	...			
N-15	31			
O P	O-1	1	8	SW1 ALC BRIDGE  S1  S2  S3 
	O-2	2		
	...			
	O-16	16		
	P-1	17		
	...			
P-15	31			