

DMX Programmer Instructions

Documentation & Software © 2011-2012 HolidayCoro.com
Revision 3.0 / 10-Oct-12 | **For Programmer Application Version 1.0 (PC)**

The most current version of this document can be found here:

http://www.holidaycoro.com/kb_results.asp?ID=10

Additional instructions and videos for the HolidayCoro programmer can be found here:

http://www.holidaycoro.com/kb_results.asp?ID=67

The Windows programming software can be downloaded from our website by logging into your account.

For information about how to download the programmer, see:

http://www.holidaycoro.com/kb_results.asp?ID=2

This documentation covers the use of the HolidayCoro 3 Channel DMX Controller address software. This application can be used to perform the following functions:

- Program the DMX start address of the DMX controller (V1 and V2)
- Read the DMX start address of the DMX controller (V1 and V2)

This software is designed to work with ONLY programmer/dongle hardware based on the FTDI 232 chip set. We have tested and confirmed that the PC based software works with the following hardware:



Vendor	Model	Web Site	Wiring	Limits
HolidayCoro	Item #54-2	http://www.holidaycoro.com/product-p/54-2.htm	Output on RJ45 E1.11 Standard Pin 1 – Positive White/Orange Pin 2 – Negative Solid Orange	Write/ Read Address

NOTE: HolidayCoro does not provide support for non-HolidayCoro programmers or programming of non-HolidayCoro DMX controllers.

Unsupported Adapters

The following dongles or adapters cannot be used with this application:

- Lynx Dongle (Do-it-yourself-light-animation)
- RPM Dongle (Do-it-yourself-Christmas)
- Enttec Open Dongle (non-active)
- Enttec Pro Dongle

Wiring the Programmer and Controller

To successfully program your controller, you will need to connect the appropriate wiring from the programmer to the controller. Be aware that you **MUST** have power applied to the DMX controller to program the DMX controller.

NOTE: Shorting or crossing pins 1 and 2 from the programmer dongle output will result in permanent damage to your programmer! This is not covered under warranty.

NOTE: Plugging the programmer cable into a LOR controller will cause damage to the programmer and/or LOR controllers and this is not covered under warranty.

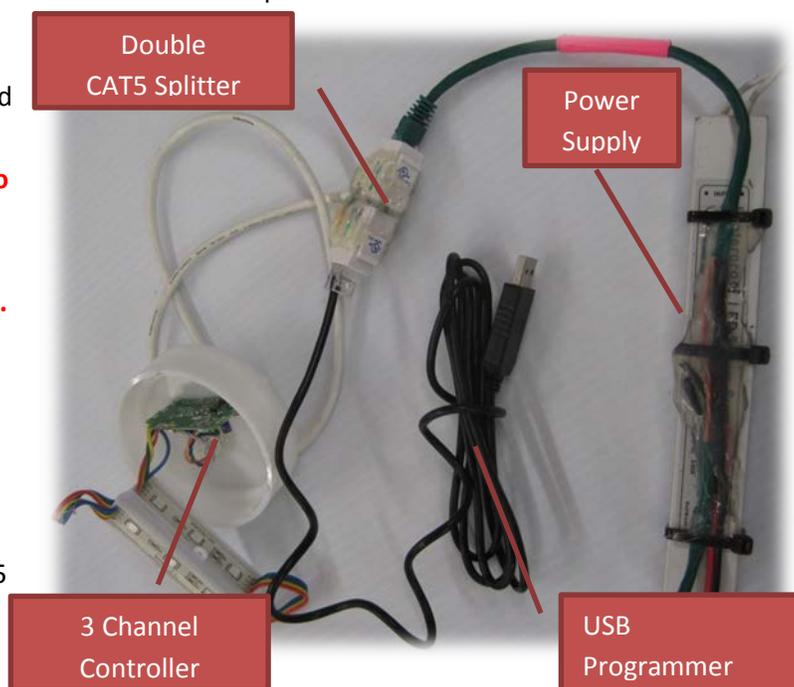
NOTE: You should not have ANY other COM port showing in device manager other than the USB programmer being used. Check device manager for a list of COM ports currently in use. This includes LOR dongles which should NOT be plugged in at the same time as the HolidayCoro programmer dongle.

Single Controller Items

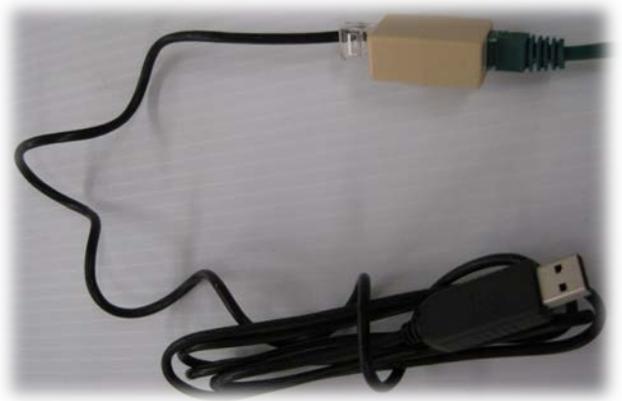
If you are programming our RGB MegaBall, RGB CoroStar, RGB CoroTree or any other single controller, stand-alone device that uses our standard RJ45 connections you will be able to directly plug the HolidayCoro programmer directly into the device's female RJ45 plug using the included female to female adapter.

NOTE: If you have several items such as the RGB CoroTrees, RGB MegaBalls or CoroStars all connected together on a single cable, you will need to disconnect all but one at a time. **DO NOT attempt to program one controller while other controllers are on the same DMX cable as this will result in all the controllers being programmed to the same address.**

Show in the photo to the right, you can see the power injector supplying power to one side of the female jack of the RGB MegaBall and the HolidayCoro programmer plugged into the other female side of the jack/CAT5 splitter. The power injector provides the power to the controller on RJ45 pins 3-8 and the DMX programming signal is sent on pins 1 and 2. For more information on power injectors, see our website.



If you have a HolidayCoro item such as a RGB CoroTree that has a male plug and a single controller, attach the double female adapter included with the HolidayCoro programmer to allow connection of the two male cables. Refer to the photo to the right for an example.



Multi Controller Items

If you have an item that contains more than a single controller you will need to program each controller separately. **NEVER attempt to program a single controller when all the controllers are connected in a parallel or star fashion as this will result in all controllers being programmed with the same address.**

We generally recommend programming and testing your modules prior to installation into your display element. Programming the modules after they are soldered together will require them to be separated. How you program each controller will vary depending on your needs but in most cases you will be attaching directly to bare controller leads. The easiest method is to take a CAT5 cable that has been cut in-half and the orange pair of wires exposed. Then connect the RJ45 cable with the female/female coupler to the HolidayCoro programmer as shown in the photo to the right. **MAKE SURE TO NEVER SHORT THE TWO WIRES OF THE DONGLE OUTPUT.**

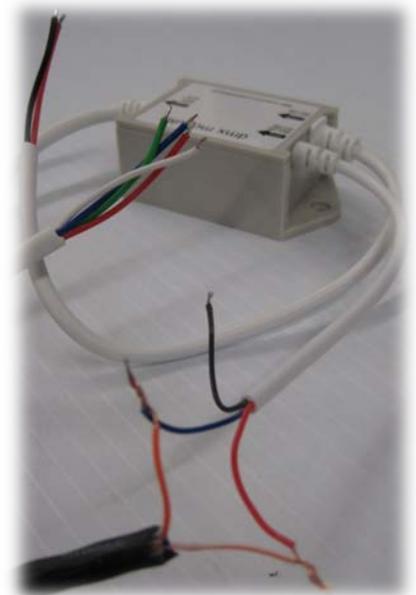


You can now just twist the wires of the CAT5 cable around those of the DMX controller as shown in the photo to the right (using a HolidayCoro programmer.)

Connect the wires according to the chart below:

Controller	DMX Controller Side	CAT5 Side
HolidayCoro	BLUE	Orange
	RED	Orange/White

It is not necessary to connect the black ground wire. Remember that you will still need to provide power to the DMX module to program it.

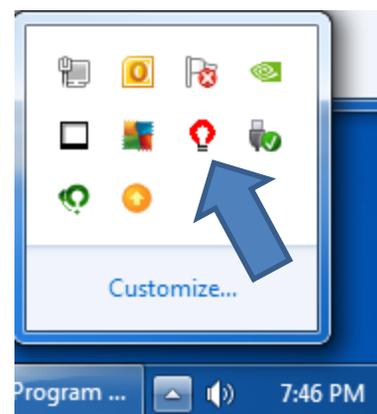


Using the Programmer Application to Read or Write the Address

- 1) Remove ANY other dongle including LOR, Enttec or other “USB Serial Port” devices that maybe connected to the PC before starting the programmer application. “Regular” COM ports built into a machine are ok.
- 2) Insert the HolidayCoro programming dongle into an available USB port on your computer. If no other FTDI based “dongle” has been installed in the past, either Windows will automatically download the driver and indicate that the port is available or if it does not automatically install, you will need to download the drivers from the FTDI website: <http://www.ftdichip.com/Drivers/D2XX.htm> Step-by-Step instructions for each version of Windows can be found on FTDI’s website here:

<http://www.ftdichip.com/Support/Documents/InstallGuides.htm>

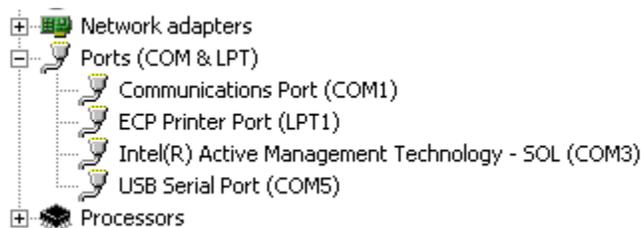
- 3) If you have installed Light-o-Rama S3 on the computer where the controller will be programmed and you have the LOR “Control Panel” installed (look in the Windows system tray for the red or blue LOR “Light Bulb” icon as shown in the photo to the right) – you will need to unload/close it before running the HoliayCoro DMX programming utility. Right click the icon and select “Unload Light-O-Rama”.



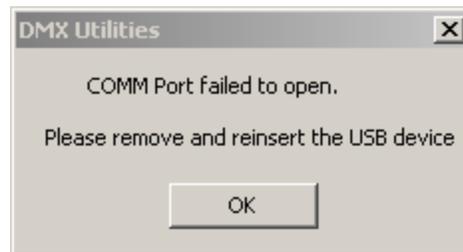
- 4) If you have other applications that could be using a serial port – plotters, CNC controllers, PLC software, vinyl cutters, security devices, etc – we recommend closing those applications as they may be “holding open” or locking the COM port so that the programmer application cannot use it to program the module.
- 5) You are now ready to install the HolidayCoro programmer application.
 - a. Open the .ZIP file and run the “Setup.exe” file
 - b. Click OK to start the install
 - c. Click the Button to install (you can change the default installation directory here if you need to)
 - d. Click Continue (you can change the group where you want the start menu icon to be located)
 - e. Click OK on the “DMX Utilities Setup was completed successfully” message
 - f. Go to the Start button, select All Programs and then DMX Utilities and then finally the DMX Utilities icon
 - g. The application should now be running

- 6) If you start the application and no USB programmer dongle attached, you will receive an error and the application will close (see right).

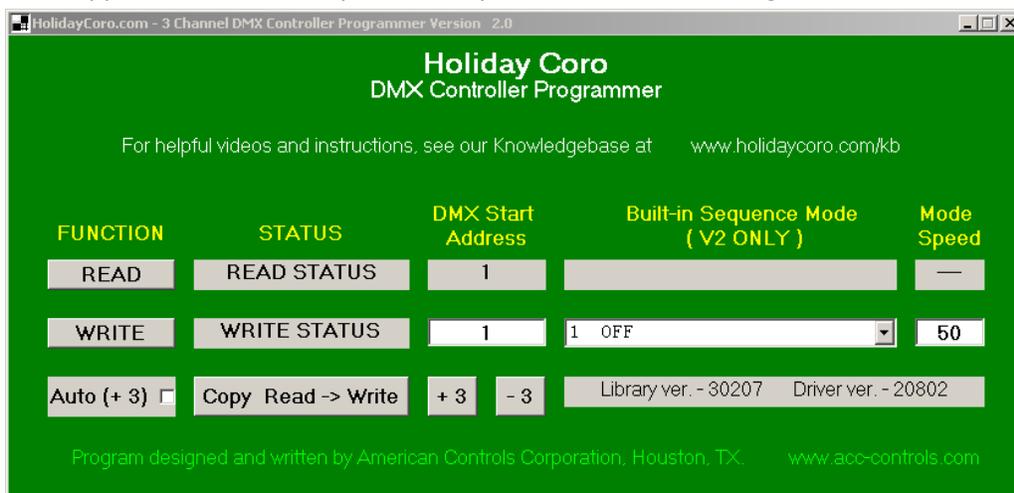
You can determine if the dongle is installed in Windows by going to Device Manager within Windows (varies by Windows version) and expanding “Ports (COM & LPT)” and looking for “USB Serial Port (COMxx)” where “xx” is the specific COM port used by the dongle. If you do not see a “USB Serial Port (COMxx)”, check the USB port or move the programming dongle to another USB port on the computer. If you see a red X on a serial device, this indicates that the device driver has not been installed or is not the correct device driver for the dongle – see above for how to properly install the drivers.



- 7) If you receive the warning “COMM Port failed to open.” (see right), this indicates that another application on your computer or another copy of the DMX programming application is already running. Locate the application that is “holding open” the dongle/COM port and close it.



- 8) The programmer application, which is for use with HolidayCoro DMX 3 Channel Controllers, is simple and included with your hardware purchase. When the application starts, it will automatically determine the location of programmer and there is no need to indicate the COM port it should use.
- 9) If the application successfully launches, you will see the following screen:



- 10) At this point you should have attached the DMX Programmer cable to the DMX Controller (see instructions on wiring in the prior section of in videos on our website at www.holidaycoro.com/KB) and the controller should be powered up. We also highly recommend having your LEDs hooked up to the unit as this will help in troubleshooting.
- 11) By default, a new DMX controller will have the DMX start address of 1. Clicking the “READ” button will query the module, determine if it is a V1 or V2 and then display the address on the “READ” line. If the module is a V1, it will display:



If the module is a V2, it will display:



Note that the built-in sequence mode and mode speed may vary.

Note that when reading, the lights connected to the DMX controller will briefly go off and then the built-in sequence will resume. This is an indication that the application is accessing the controller.

12) If you receive an error such as the following:

FUNCTION	STATUS	DMX Start Address	Built-in Sequence Mode (V2 ONLY)	Mode Speed
READ	No Controller Found	---		

This is an indication that the programmer application cannot contact the controller or dongle. If so, then check the following:

- Check to see if you can control the DMX controller using xLights (see our other videos on troubleshooting.) If the controller cannot be used with xLights, even before programming, it will not be possible to write or read the address.
- The red wire from the controller input signal should be connected to the Orange/White CAT5 cable wire and the blue wire from the controller input signal should be connected to the Solid Orange CAT5 cable wire.
- Check to make sure that there are no problems with the CAT5 splitter and that the pins are all aligned correctly. Try also manually “pushing together” the CAT5 cables going into the female to female coupler if you are using one.
- Make sure the controller is powered – is the controller going through its built-in sequence? If not, check the power input and power connections.
- Is your programmer cable working ok? If the programmer cable output has been shorted, plugged into an LOR controller or network or power has been connected to the input, the dongle will be permanently damaged. Look for a small melted spot on top of the dongle casing for signs of damage. “Fried” dongles are not covered under warranty.

13) If your controller responded to the READ command and returns a valid address, you are now ready to write the new address:

- Enter the DMX start address of the controller. For example, if you want the controller to respond to address 410, 411 and 412, enter 410 in the “DMX Start Address” column on the “WRITE” line. You will be limited to entering addresses 1 through 510.
- V2 Controllers Only: You can select one of the 22 built-in modes. These modes or sequences will display when the controller is NOT receiving a DMX signal. If you never want your controller to display any lights when it does not receive a DMX signal, select “1 OFF”. A good test sequence for RGB is “9 RGB Sequence” which will go through all three colors allowing you to find any bad LEDs you may have connected to the controller. You will also be able to select the Mode Speed which controls how fast sequences or flashing occurs – 1 is slowest, 100 is the fastest. This Mode Speed does not apply to solid colors or off.
- Click the WRITE button. The controller will first perform a check to make sure the controller is connected and it’s version type (V1/V2) and then it will write the requested start address and/or mode information. It will then read back the address from the controller and verify that it was set to the requested address. If the address is programmed to the correct address, “--- SUCCESS ---” will be displayed on the WRITE line as shown below:

WRITE	--- SUCCESS ---	1	0 V1 Default Sequence	50
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V1 controllers will always default to “0 V1 Default Sequence” as the V1 built-in sequence cannot be changed. V2 controllers will display the respective sequence and mode speed.

- The controller is now programmed to the new address.

14) Additional features:

- a. The option “Auto (+3)” when checked, will increment the address in the write field by 3 channels each time a controller is successfully programmed. If you have a large number of controllers to program with sequential addresses, this will speed the process. If the address is not programmed correctly or there is an error, the address will not increment.
- b. The “+3” and “-3” buttons simply add or remove 3 channels to the current address in the write field.
- c. The “Copy Read -> Write” option will transfer the current settings, after a read, down to the write field. This is useful where you want to retain settings on a V2 controller.

How to use the HolidayCoro DMX Controller with popular sequencing applications

