CK Application Notes

Discovering Serial Numbers Using EtherSAS

How to discover lost or inaccessible fixture serial numbers using EtherSAS?

The serial number for a Color Kinetics fixture[1] can be found on a barcode label, typically located on the back of the unit. When this sticker is removed or fixtures are installed in manner where the label is not visible, a problematic scenario often results (provided that serial numbers were not previously recorded). Fortunately, for some applications or configurations, missing serial numbers can be obtained from a fixture's circuitry via Ethernet-based EtherSAS software.

Power Data Supplies (PDS) that have a valid Ethernet port allow EtherSAS, a Color Kinetics program designed to address fixtures over Ethernet networks, to "discover" a fixture's serial number. Unfortunately, EtherSAS cannot communicate with DMX-only power/data supplies or some older Color Kinetics fixtures[2]; therefore, it cannot be used to discover fixture serial numbers in every situation. For any application using DMX or Pre-programmed PDS units, recording the serial number before installation is strongly advised.

Serial numbers can be discovered using EtherSAS provided that:

1) the fixtures in a configuration have serial numbers and work with EtherSAS
2) the PDS to which they are attached has a viable Ethernet port

> ➤ *To determine whether or not a particular PDS unit has an Ethernet Port[3], please visit:* *www.colorkinetics.com/support/datasheets*

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[1] It should be noted that only some fixtures have serial numbers. Color Kinetics fixtures that employ Chromasic technology do not have serial numbers.

[2] Older fixtures which are not accessible via EtherSAS include: iColor Fresco, all C-series fixtures, and older models of ColorBlast 12 and iColor Cove.

[3] The PDS-60 and PDS-60ca (both DMX and Pre-Programmed version) supplies have the text "Ethernet/DMX in" silk screened beside the DMX in port. This is not a viable Ethernet port.

> ➤ *To obtain a copy of EtherSAS, please email:* *technicalsupport@colorkinetics.com*

## Using EtherSAS to Obtain Fixture Serial Number Information

To obtain a fixture's serial number using EtherSAS, a proper connection must first be made. To do so, either:

1. Connect a **cross-over Cat 5e cable** from a computer (PC or MAC) to the Ethernet port on the PDS. If a factory-made cross-over cable is not available, one can be made by crimping the two ends of a standard Cat 5e using the following wire-to-pin diagram.

EIA/TIA T568B Straight Through Diagram
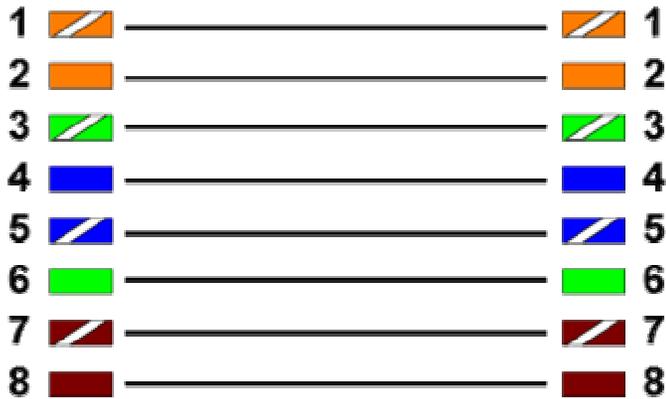
EIA/TIA T568B Crossover Diagram
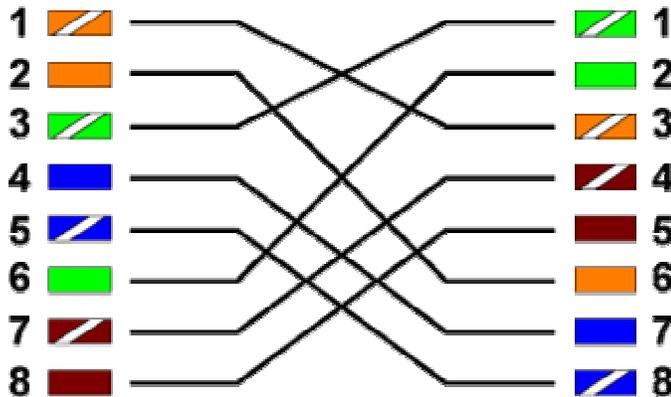
Cross-over cable wiring diagram from www.networkgeek.com

2. Or, use two standard Cat 5e cables in conjunction with an Ethernet switch or hub to obtain a functional connection between a computer and a PDS unit.

<u>Network Settings:</u> Next, make sure that the fixtures are connected to a powered PDS or Data Enabler. Once physical setup is complete, configure the computer to communicate with the fixtures by adjusting the TCP/IP settings to match the following:

- IP address: 10.1.3.20
- Subnet-mask: 255.0.0.0
- Default Gateway: does not matter – leave default, even if it is blank
- DNS server address: blank

The procedure for altering a computer's TCP/IP settings varies between computers and also between operating systems. By opening a computer's network settings and viewing the Local Area Network (LAN) properties (Microsoft Windows based operating system), one can typically find a window resembling the one below.
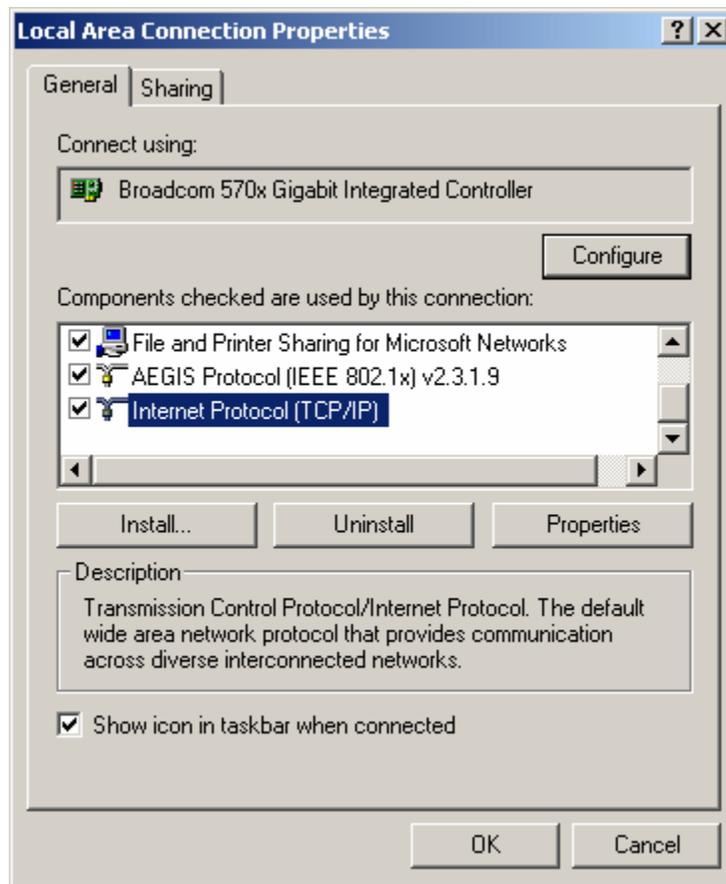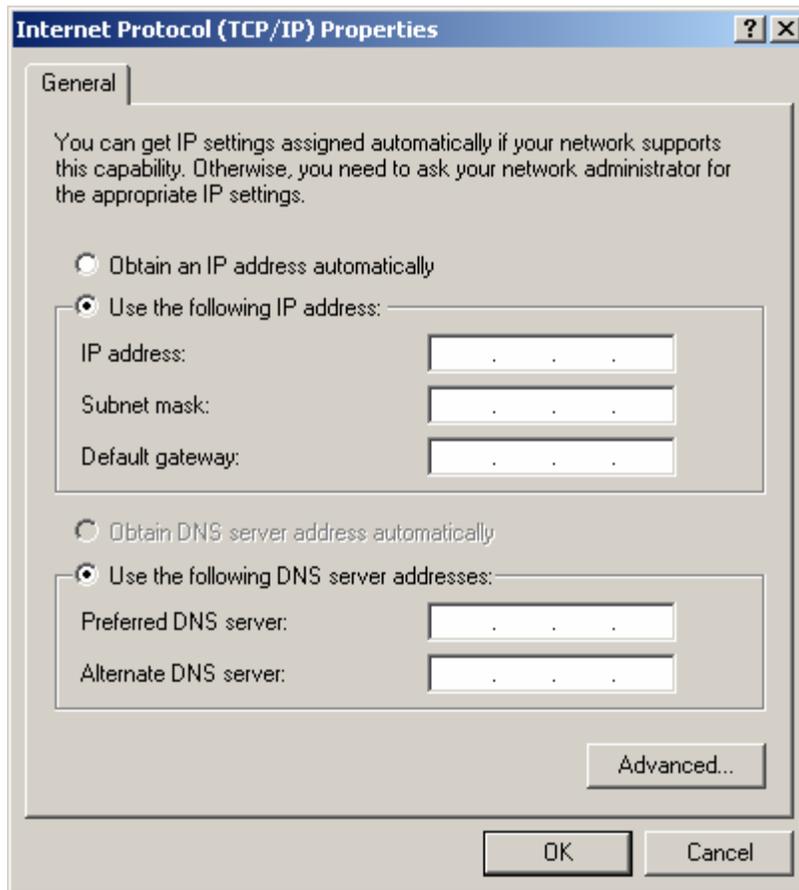
TCP/IP settings (Windows XP/2000)

By selecting Internet Protocol (TCP/IP) and clicking the "Properties" button, the TCP/IP settings can be changed manually.

MAC users can feel free to email technicalsupport@colorkinetics.com for help with IP settings.

*To obtain a copy of EtherSAS, please email: technicalsupport@colorkinetics.com*

TCP/IP settings (Windows XP/2000)
*Do not worry about the DNS server addresses or the Default Gateway as all three can be left blank

A Single Active Connection: It is also important to ensure that only one network connection is active while using EtherSAS, as data sent out the wrong connection will not reach the fixtures. To view or disable active connections, open network connections. If any except a single LAN connection is active, such as a wireless or VPN connection, deactivate by right clicking and selecting "disable" before

continuing. Firewalls and other restrictive features should also be deactivated while using EtherSAS.

<u>Open EtherSAS:</u> It should appear as shown below:
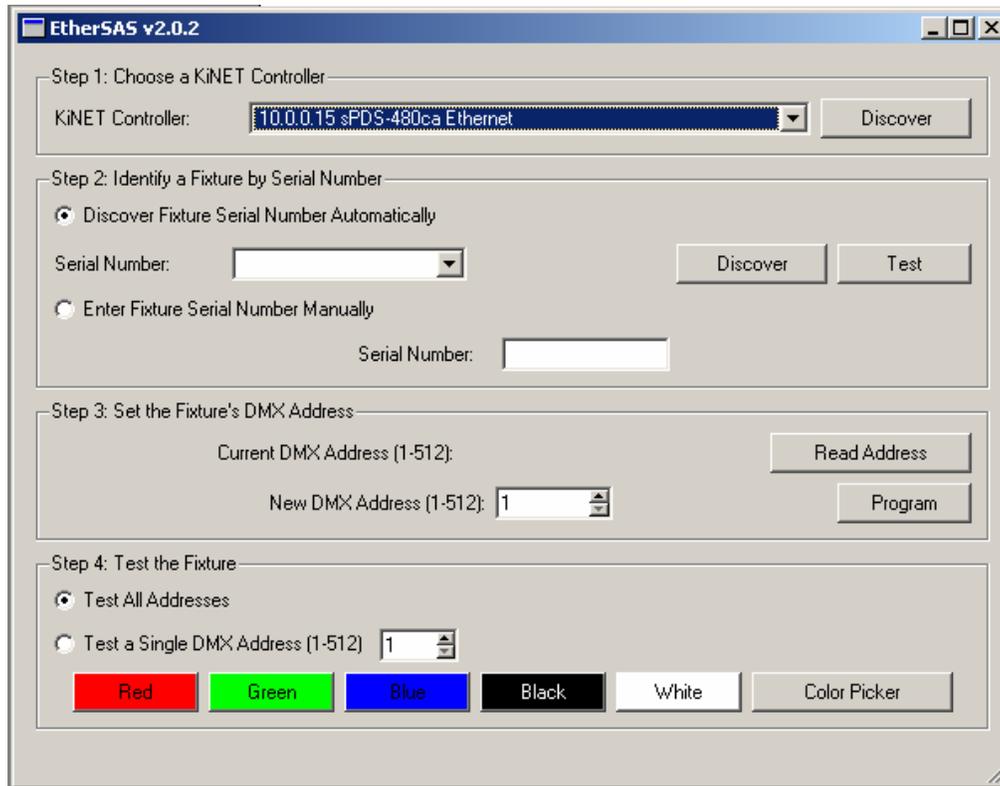
EtherSAS Graphic User Interface

To discover serial numbers:

1. Click the "Discover" button in "Step 1" to discover all controllers (PDS units, in this case) connected to your network

2. From the "KiNET Controller" drop down list, select an interface

3. Click the "Discover Fixture Serial Number Automatically" radio button

4. Click the "Discover" button and then select a serial number from the "Serial Number" drop down list

5. Click "Test" to verify that the fixture of interest lights

6. Record the corresponding serial number

7. Repeat for all fixtures of interest