## ACCESSPLUS – LAN APPLICATIONS

Model 1812-AccessPlus: This training guide will focus on the TCP/IP Network interface, and Ethernet connection to a Local Area Network.

LAN: In a Local Area Network (LAN) application, a Router or Gateway is used to interconnect various devices. Requirements for connection to a LAN

☑ **Ethernet Connection**: An Ethernet Cable, or wireless connection must be provided between the AccessPLUS unit and the Router

☑ **Gateway (Router) IP address**: The Router has an IP address that affects all devices connected within this network. first 3 segments of this number must be shared for all devices connected within this network. Default: 192.168.001.001

☑ **IP Address for AccessPLUS system**: The AccessPLUS unit must have a unique IP address within the network. Default: 192.168.001.030

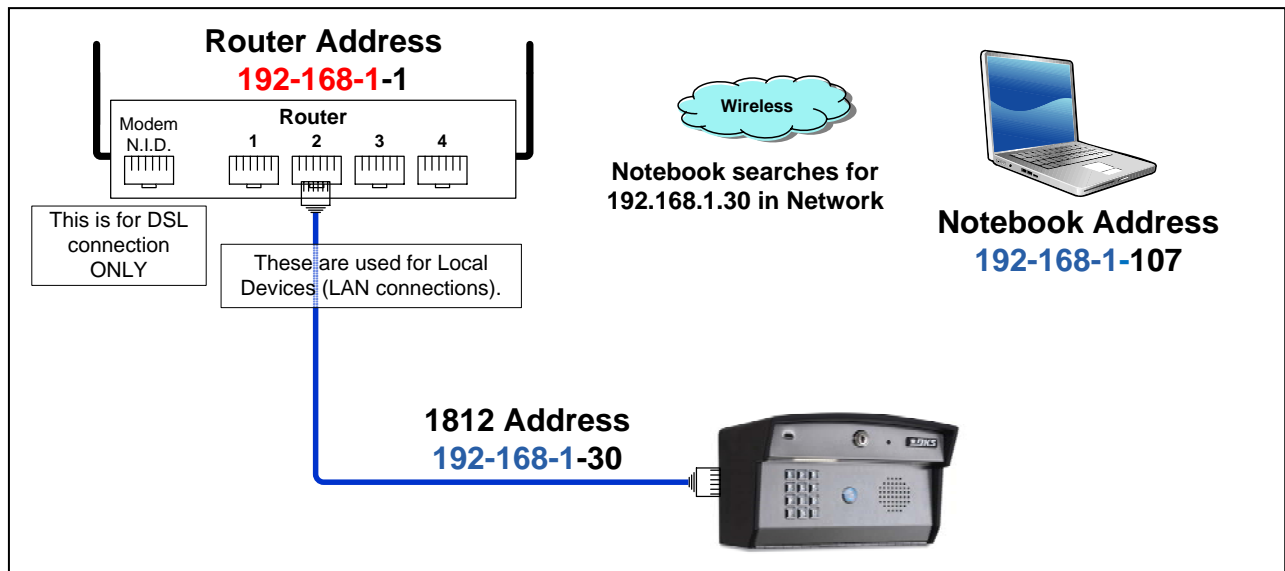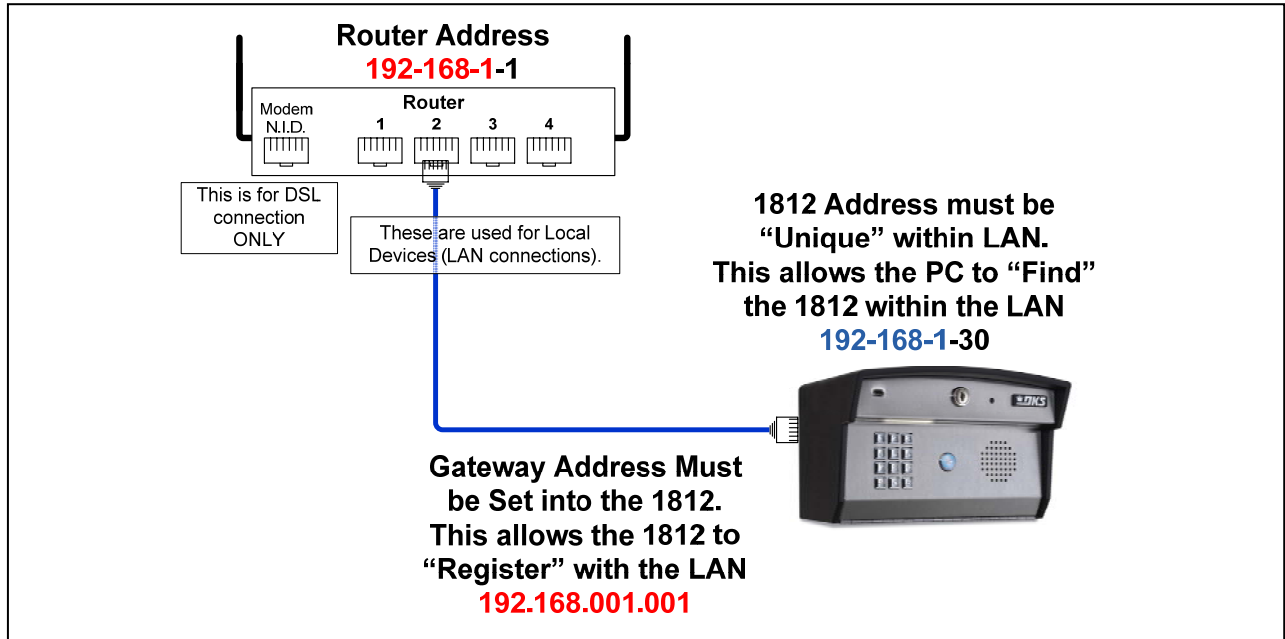☑ **Programming PC**: This must also be connected within the local network
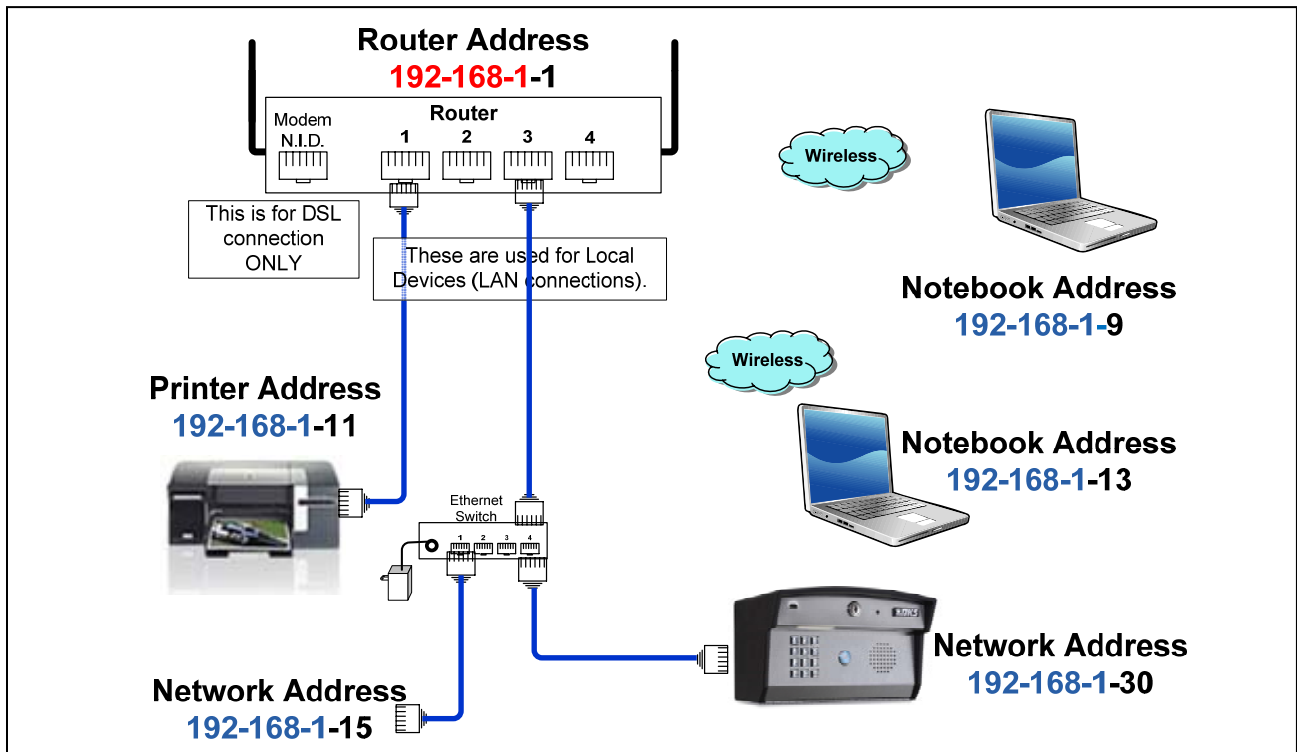
☑ Each device within the LAN must match the first 3 segments of the Router address, and have a unique 4th segment..

☑ Many systems will automatically obtain an IP address from the Router. The 1812 is manually set from the System Keypad.

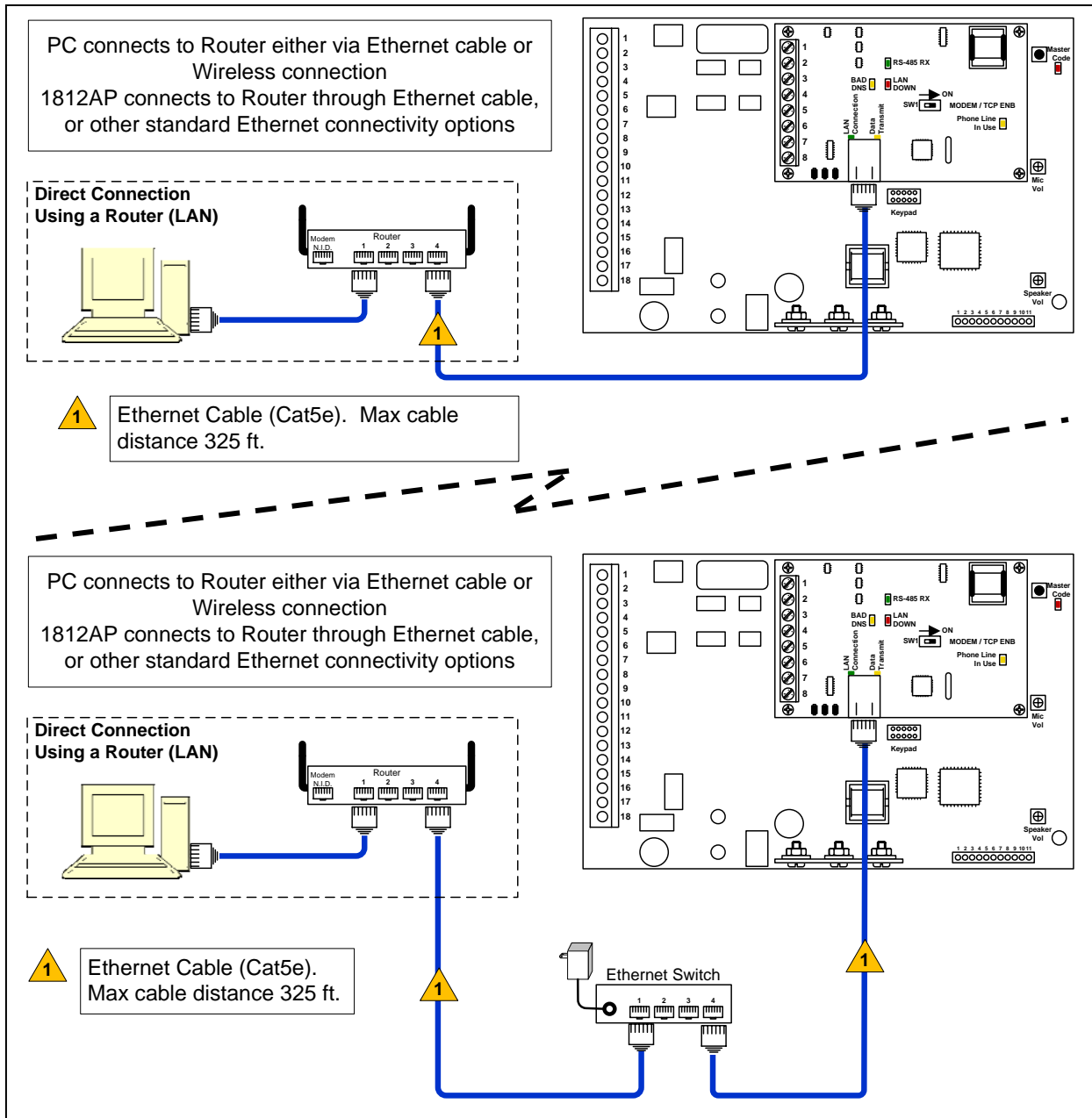# MODEL 1812- ACCESSPLUS, NETWORK CONNECTIONS

LAN CONNECTIONS:

☑ **Registering with the LAN** – The Gateway Address must be programmed into the 1812 (from the system keypad). This allows the 1812 to locate and register with the LAN.

☑ **1812 IP Address** – The 1812 must also have a unique IP address within the LAN. The default of 192.168.001.030 is typically available. However, if the Gateway Address utilizes a different number in the first 2 segments, for example: 192.168.2.1, this must be changed in the 1812.

Router Address
192-168-1-1

Modem N.I.D.

Router
1   2   3   4

This is for DSL connection ONLY

These are used for Local Devices (LAN connections).

1812 Address must be "Unique" within LAN. This allows the PC to "Find" the 1812 within the LAN
192-168-1-30

Gateway Address Must be Set into the 1812. This allows the 1812 to "Register" with the LAN
192.168.001.001

Router Address
192-168-1-1

Modem N.I.D.

Router
1   2   3   4

This is for DSL connection ONLY

These are used for Local Devices (LAN connections).

Wireless

Notebook searches for 192.168.1.30 in Network

Notebook Address
192-168-1-107

1812 Address
192-168-1-30
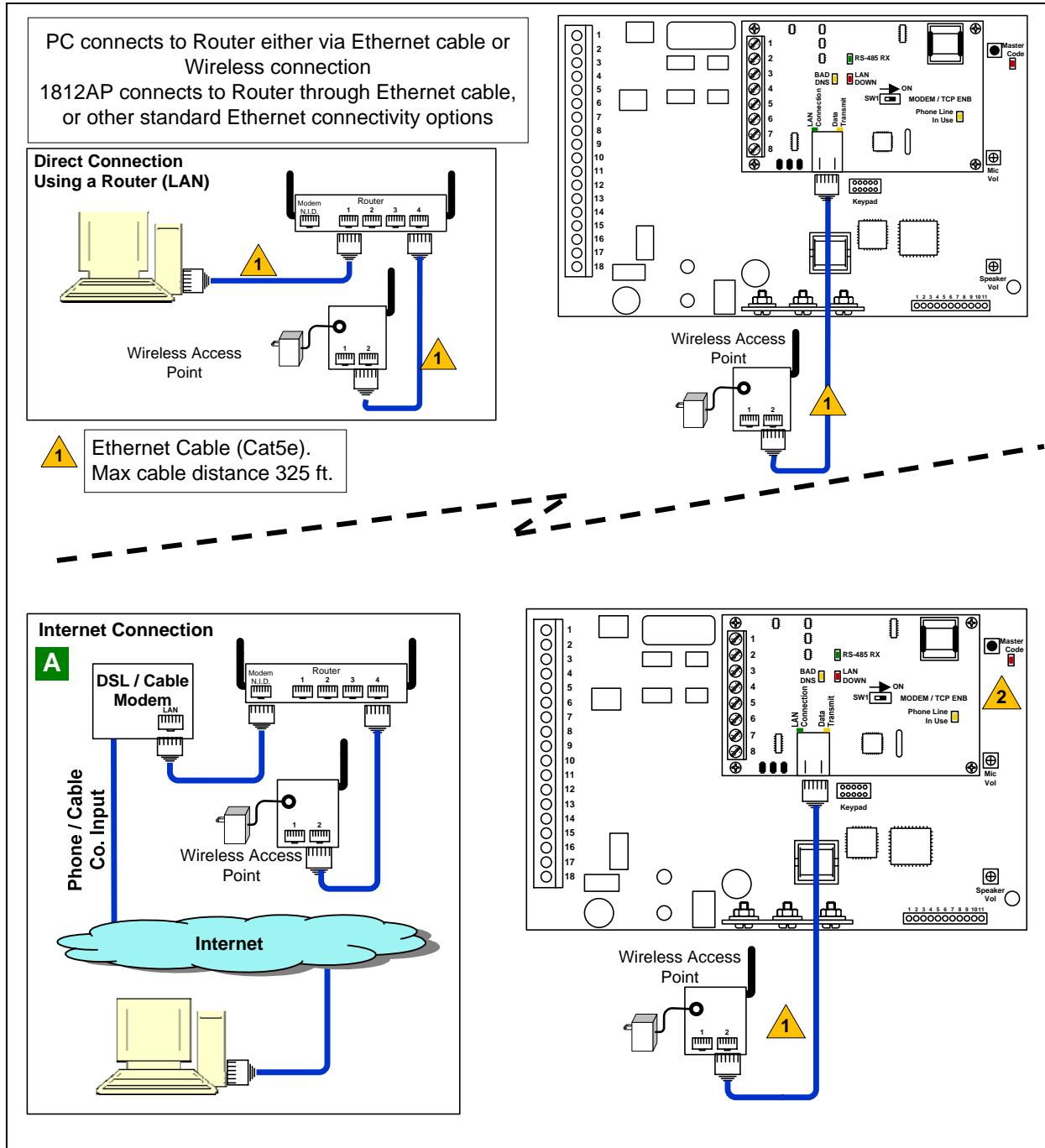
MODEL 1812- ACCESSPLUS, NETWORK CONNECTIONS

LAN – CONNECTING TO ROUTER: The AccessPLUS systems utilize a standard TCP\IP Ethernet protocol, making this system compatible with standard network connectivity options, including Ethernet Switches, Wireless Access Points and Wireless Routers.

☑ **Ethernet Cables:** A standard Cat5e Network Cable can be run up to 325ft. This point to point wiring is between a network device and the Router, Hub, or Ethernet Switch. To extend this distance, you can add an Ethernet Switch in the connection. This will allow you to run 325ft to the switch, and another 325ft to the 1812 system.

PC connects to Router either via Ethernet cable or Wireless connection
1812AP connects to Router through Ethernet cable, or other standard Ethernet connectivity options

Direct Connection Using a Router (LAN)

Ethernet Cable (Cat5e). Max cable distance 325 ft.

PC connects to Router either via Ethernet cable or Wireless connection
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Direct Connection Using a Router (LAN)

Ethernet Cable (Cat5e). Max cable distance 325 ft.

Ethernet Switch

☑ **Wireless Access Points:** The 1812AP is also compatible with "Off the Shelf" Ethernet extending devices, such as Wireless Access Points. These can also be used in a WAN Applications, as needed to fit your site requirements.

PC connects to Router either via Ethernet cable or Wireless connection
1812AP connects to Router through Ethernet cable, or other standard Ethernet connectivity options

Direct Connection Using a Router (LAN)

Modem N.I.D.
Router 1 2 3 4

Wireless Access Point

⚠1 Ethernet Cable (Cat5e). Max cable distance 325 ft.

Wireless Access Point

Internet Connection

A

DSL / Cable Modem

Modem N.I.D.
Router 1 2 3 4

Wireless Access Point

Phone / Cable Co. Input

Internet

Wireless Access Point

RS-485 RX
BAD DNS
LAN DOWN
SW1 ON
MODEM / TCP ENB
Phone Line In Use
Master Code
Mic Vol
Keypad
Speaker Vol

ROUTER SET UP

In many home or business computer systems, the Router may already be set up. This typically is providing connections to Printers, DSL Modems, Remote PC's, etc. Routers may also provide Wireless connectivity to some of these system devices. To add the 1812 into this Local Area Network, you will need to identify the Router Address. This may require working with the Network administrator, or the Homeowner.

NOTE: Be cautious about entering into the Router Software. You may inadvertently change some router settings that will affect the Local Network performance. We recommend checking the IP addresses using a PC on the network. If a Router is not in operation, the client will need to install the Router and set up through the clients Computer.

The following are steps that will need to be taken to add the 1812 into the Network.

Note: In Router programming or when viewing IP addresses, leading Zero's may not be shown. For Example, 168.001 may display as 168.1, or Port 01030 may be displayed as 1030.

☑ **Router (Gateway) Address:** You will need the IP address of the Router (Default Gateway). This will allow you to program the 1812 to join the Local Network. You can check the Router Address from a PC that is active in the Local Network:

1. On the PC, click on the START button, and then select RUN. This will open the 'Run' command window
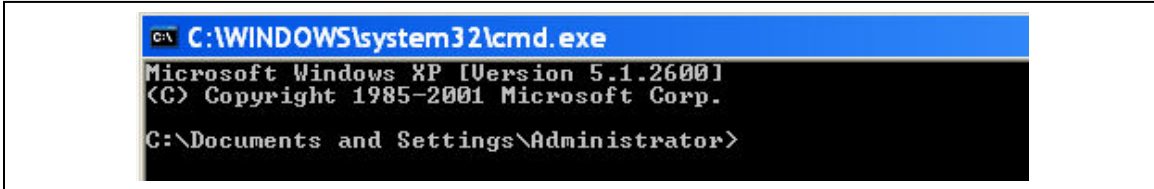

2. In the 'Open' field type 'cmd' and click 'OK'.

   You may also access the Command Prompt from the Program Files/Accessories/
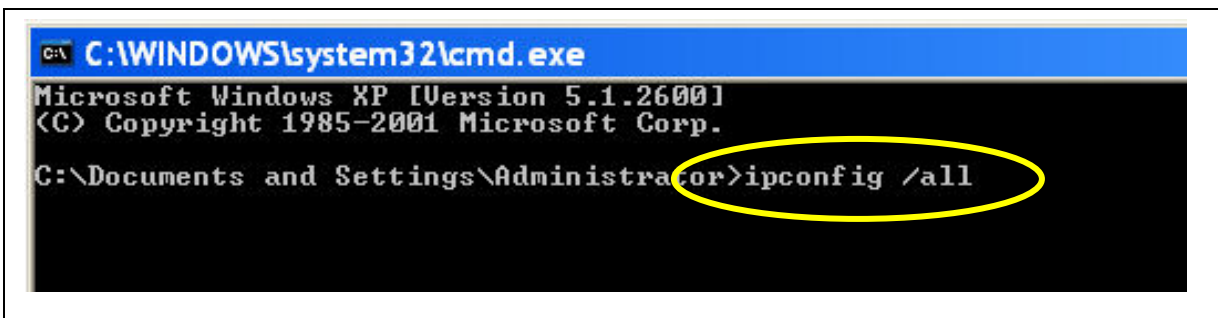
   Look for: Command Prompt
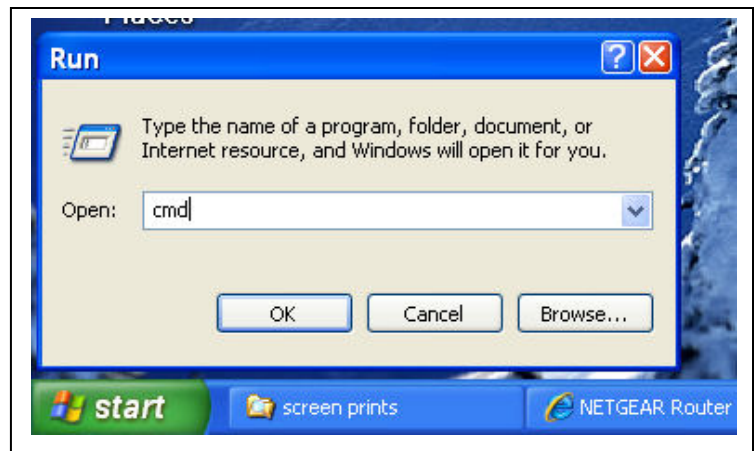
☑ **Router Address (continued):**

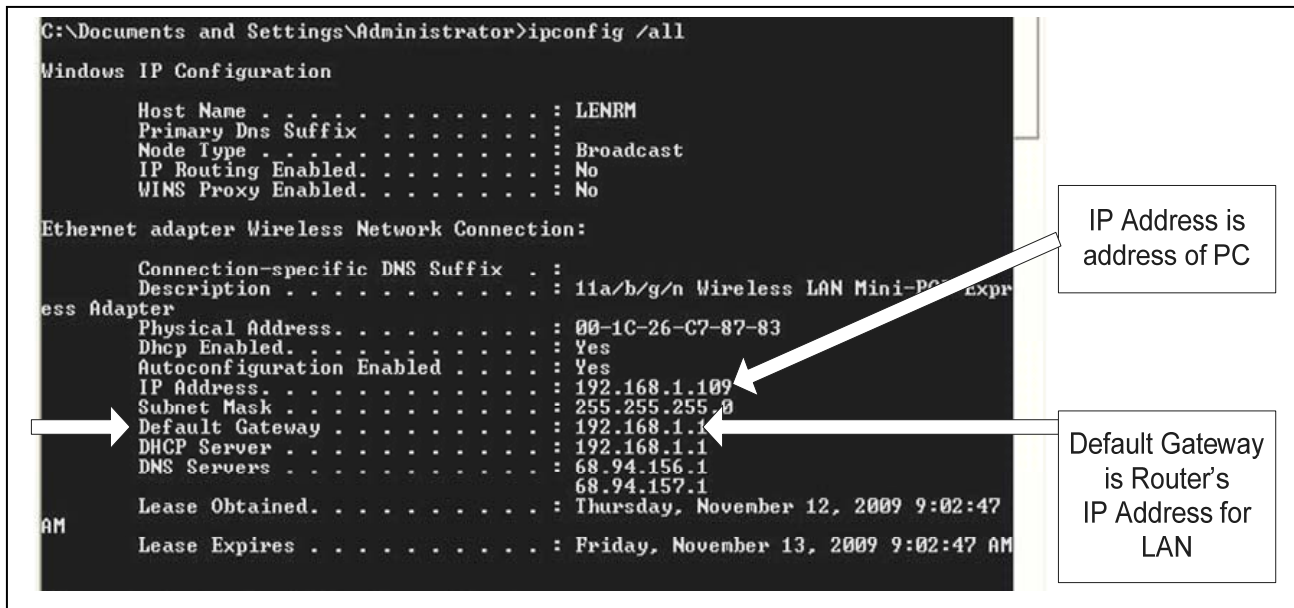3. This will open the Windows/system command prompt.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>
```

4. After the > prompt, type: ipconfig /all, and hit the 'enter' key (space before the /)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig /all
```

5. This will display the IP configuration of the LAN. Look for the 'Default Gateway'. This is the Router's IP address. The first 3 sets of numbers are important in programming the 1812. The 1812 must match these numbers.

```
C:\Documents and Settings\Administrator>ipconfig /all

Windows IP Configuration

        Host Name . . . . . . . . . . . . : LENRM
        Primary Dns Suffix  . . . . . . . :
        Node Type . . . . . . . . . . . . : Broadcast
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Wireless Network Connection:

        Connection-specific DNS Suffix  . :
        Description . . . . . . . . . . . : 11a/b/g/n Wireless LAN Mini-PC   expr
ess Adapter
        Physical Address. . . . . . . . . : 00-1C-26-C7-87-83
        Dhcp Enabled. . . . . . . . . . . : Yes
        Autoconfiguration Enabled . . . . : Yes
        IP Address. . . . . . . . . . . . : 192.168.1.109
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.1.1
        DHCP Server . . . . . . . . . . . : 192.168.1.1
        DNS Servers . . . . . . . . . . . : 68.94.156.1
                                            68.94.157.1
        Lease Obtained. . . . . . . . . . : Thursday, November 12, 2009 9:02:47
AM
        Lease Expires . . . . . . . . . . : Friday, November 13, 2009 9:02:47 AM
```

IP Address is address of PC

Default Gateway is Router's IP Address for LAN

Things to program at the 1812AP unit: These are set up parameters that will be manually programmed at the 1812 Keypad. In all programming steps you must enter all digits. If a number starts with 0, you must enter this leading 0 when programming from the keypad. Refer to the product manual for details on this programming.

Note 1: The IP Address of the 1812 system (step 2) must be unique within the LAN. If another device has this address, choose a different address. If there are more than one 1812AP in the Network, each must be provided with a unique IP Address.

Note 2: In LAN applications, the Port Number is not a critical factor. It must match what has been programmed into the AccessPLUS Software. However, when working with a WAN application, we recommend changing the port number away from the default value. See WAN section of this training guide for more details.

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1 – Master Code

Blinking LED - power is applied to the 1812 and the processor is working.

Steady LED - system is in Master Code programming mode.
(Reverts to blinking if master code is not entered within 10-seconds)

1. Press the Master Code push button (the LED will stay on steady).
2. Enter a four digit Master Code number then press *.
   _ _ _ _ ✶ (beep)

2 – IP Address (reboot required)

Default Value will work in many network applications. Reprogram if this address conflicts with other devices connected to the Router.
1. Press ✶ 51 and enter the Master Code.
   ✶ 5 1 _ _ _ _ (beep)
2. Enter the IP address. Use the * key to enter the "dot".
   _ _ _ ✶ (beep) _ _ _✶ (beep) _ _ _ ✶(beep) _ _ _✶(beep)
   (valid value for any 3-digit number is 000 to 255)
   Default value is: 192.168.001.030
3. Press 0 # Together to end.
   0 # (beeeeeep)

4 – Gateway (router) Address (reboot required)   **1**

1. Press ✶ 53 and enter the Master Code.
   ✶ 5 3 _ _ _ _ (beep)
2. Enter gateway (router) address (Use the * key to enter the "dot").
   _ _ _ ✶ (beep) _ _ _ ✶ (beep) _ _ _ ✶(beep) _ _ _✶(beep)
   (valid value for any 3-digit number is 000 to 255)
   Default value is: 192.168.001.001
3. Press 0 # Together to end.
   0 # (beeeeeep)

If the 1812 is connected directly to the PC with a crossover cable, this address MUST be set to 000.000.000.000.

5 – Set the Port Number (reboot required)

Default Value will work in many network applications. Reprogram if this address conflicts with other devices connected to the Router.
1. Press ✶ 56 and enter the Master Code.   **2**
   ✶ 5 6 _ _ _ _ (beep)
2. Enter the port number.
   _ _ _ _ _ ✶ (beep)
   (valid values are 01024 to 65535)
   *Default value is: 01030*
3. Press 0 # Together to end.
   0 # (beeeeeep)

6 – Enable/Disable TCP/IP Support and System Reboot

1. Press ✶ 50 and enter the Master Code.
   ✶5 0 _ _ _ _ (beep)
2. Press **0 ✶** (beep) to disable **or** press **1 ✶** (beep) to enable.
   Default is disabled.
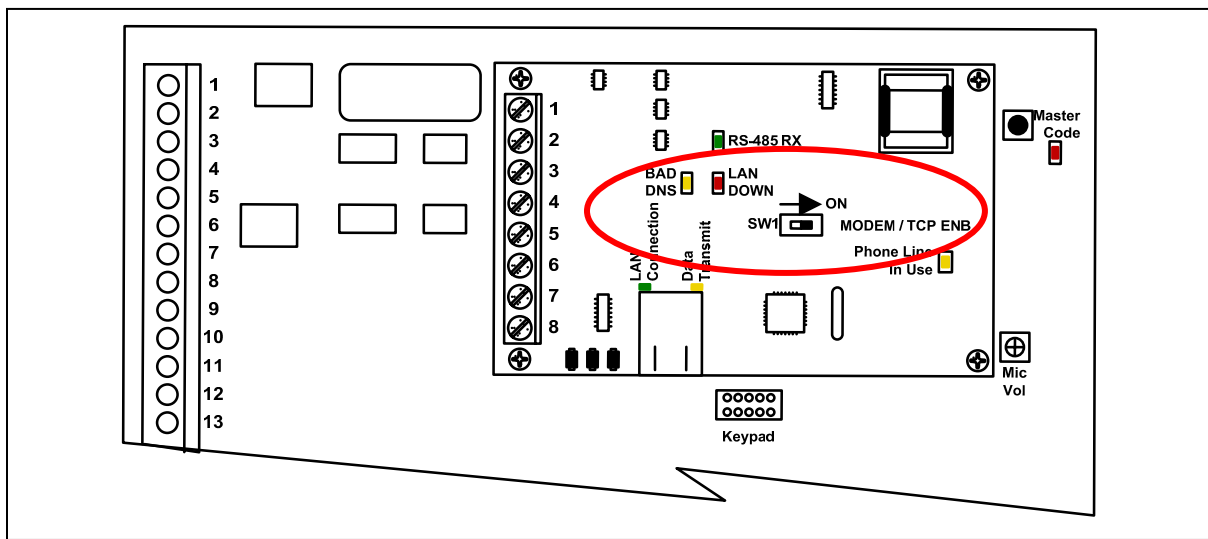3. The system will reboot automatically.

☑ **Things to set up in the 1812 AccessPLUS Software:**

o **Master Code:**   This needs to match what has been set at the 1812AP system.

o **Network:**   Select Network as preferred connection method

o **IP Address:**   This is the Address of AccessPLUS unit, Default: 192.168.001.030

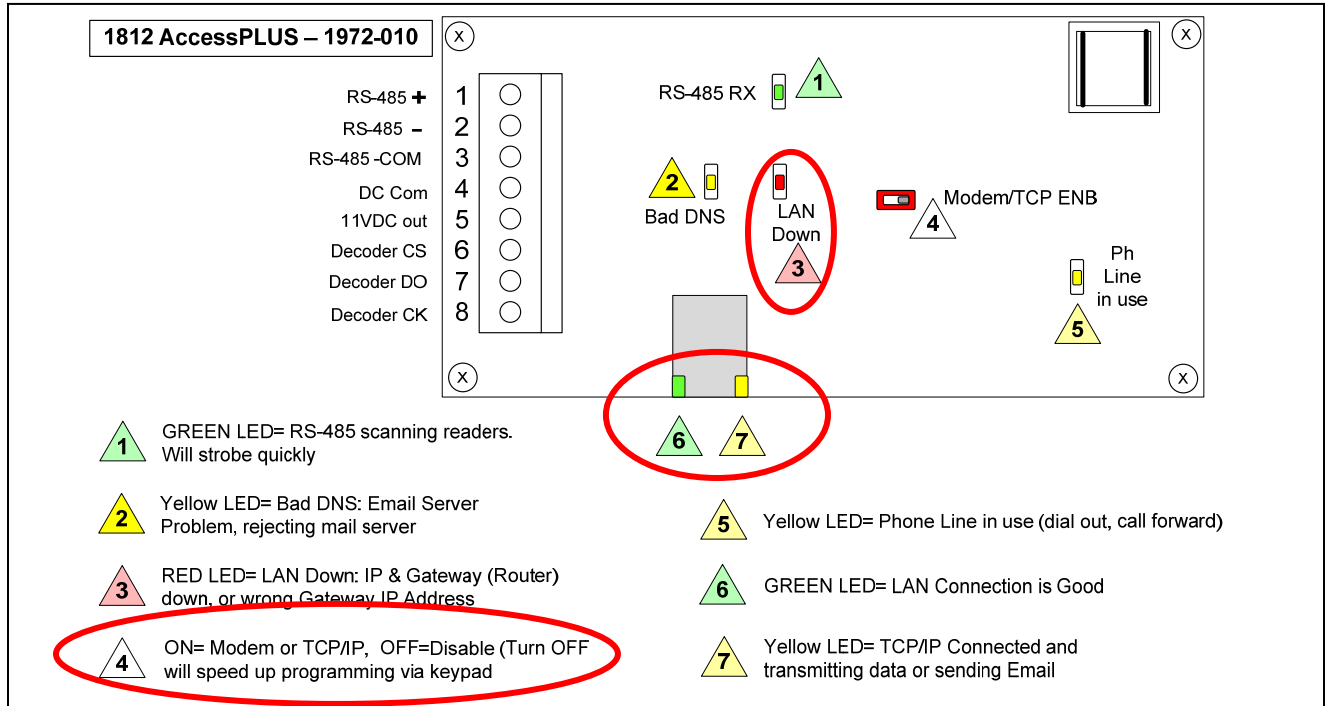o **Port Number:** Port for AccessPLUS unit in Router, Default: 1030
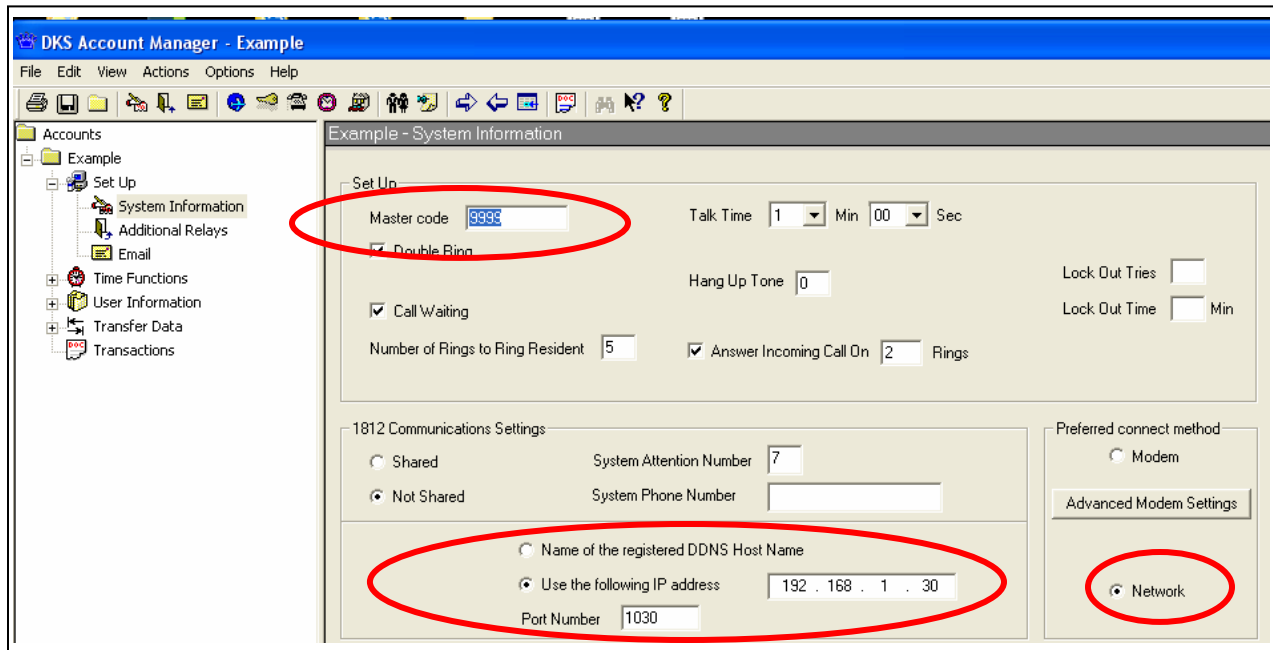
☑ **Control Board Settings:**

o **SW1:** Must be Turned ON for Modem or TCP Connections to be enabled.

☑ **Testing the Network Connection:** The control board LED's can help indicate when you have a live network connection.


```
1812 AccessPLUS – 1972-010

RS-485 +        1  ○
RS-485 –        2  ○
RS-485 -COM     3  ○
DC Com          4  ○
11VDC out       5  ○
Decoder CS      6  ○
Decoder DO      7  ○
Decoder CK      8  ○

RS-485 RX    1
                    2              Modem/TCP ENB
Bad DNS      LAN                    4
             Down                            Ph
              3                              Line
                                           in use
                                             5
                   6   7
```

1 GREEN LED= RS-485 scanning readers.
   Will strobe quickly

2 Yellow LED= Bad DNS: Email Server
   Problem, rejecting mail server

3 RED LED= LAN Down: IP & Gateway (Router)
   down, or wrong Gateway IP Address

4 ON= Modem or TCP/IP, OFF=Disable (Turn OFF
   will speed up programming via keypad

5 Yellow LED= Phone Line in use (dial out, call forward)

6 GREEN LED= LAN Connection is Good

7 Yellow LED= TCP/IP Connected and
   transmitting data or sending Email

☑ **"Pinging" the Network:** Another way to test the Router Connection is to "Ping" the 1812 from the PC. This is performed through the Start\Run\cmd prompt.

   o Click Start, then select Run. In the Open field type cmd and click OK

   o At the command prompt (>) type "ping 192.168.1.30" (or the current 1812 address)


```
C:\WINDOWS\system32\cmd.exe

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.1.30

Pinging 192.168.1.30 with 32 bytes of data:

Reply from 192.168.1.30: bytes=32 time=827ms TTL=64
Reply from 192.168.1.30: bytes=32 time=814ms TTL=64
Reply from 192.168.1.30: bytes=32 time=110ms TTL=64
Reply from 192.168.1.30: bytes=32 time=815ms TTL=64

Ping statistics for 192.168.1.30:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 110ms, Maximum = 827ms, Average = 641ms

C:\Documents and Settings\Administrator>
```
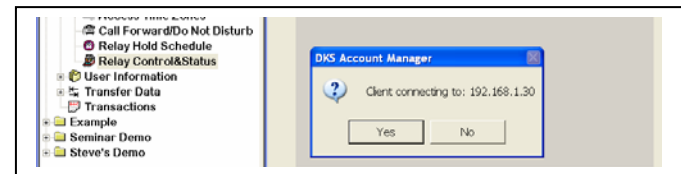
Testing the Connection through the 1812 Software: Once the 'System Information' programming has been completed, and the 1812 has been manually set up, you can try connecting to the unit through the DoorKing 1812 AccessPLUS software.

☑ **Select 'Relay Control & Status:**
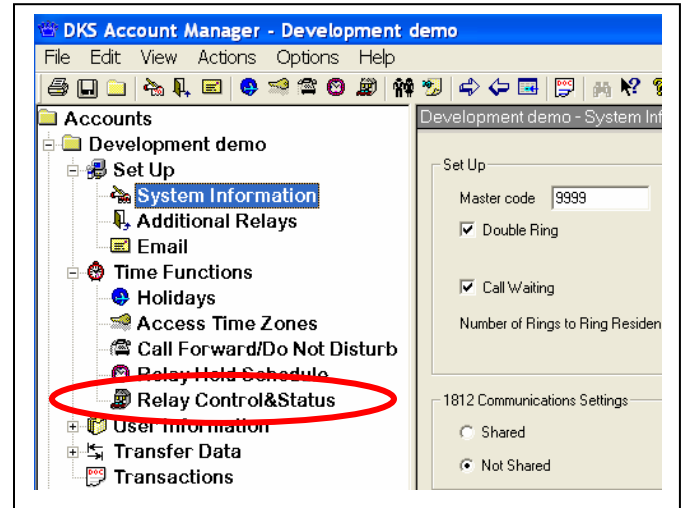
☑ **Select 'YES" to initiate connection with 1812 system.**

☑ **Software will verify connection with 1812. This should only take a second or two. Once verified, the screen will show the current status of System Relays:**