INNCOM international, inc.

B573 User Manual

B573 Ethernet Router and B573 Media Connector Software TCT Router and FLN5 RS-485 Floor Bridge Applications

Overview

INNCOM's B573 Ethernet Router

The B573 is configured by the software loaded into it at the factory to support 4 types of applications:

TCT Router (MBX) Application : Inncom related data (room temperature, occupancy, rental status, etc) to/from the guestroom is sent through a TCT room gateway device located in each guestroom. The TCT is connected to a network hub or switch inside the guestroom that is connected to the hotels "guest-side" (or public) network. A **single** B573 connected to the "guest-side" (or public) network is programmed to rout Inncom data to and from all of the TCT's , and then make this data available to the Inncom software running on the Inncom server.

RS-485 FLN5 (Floor Level Network 5) Floor Bridge Application: Inncom related data (room temperature, occupancy, rental status, etc) to/from the guestroom is sent via an RS-485 twisted pair wiring network connected between the room gateway device (ie E528 thermostat, X529 , TCC, B485, etc) and the RS-485 Com ports on the rear of the B573. This data is then made available to the Inncom software running on the Inncom server.

Room Gateway Application: Whereas the above mentioned TCT Router (MBX) and RS-485 FLN5 Floor Bridge modes of the B573 are intended to rout data from all connected room gateway devices toward the Inncom Server computer, the B573 itself can be programmed to act as an advanced room gateway device in installations where guestrooms contain a tablet PC device. The specialized wireless communication protocols used by the tablet PC device require a special B573 room gateway device to be installed. The B573 programmed as a Room Gateway acts as an advanced TCT and bridges these specialized tablet PC protocols to a B573 TCT Router (MBX), which in turn makes the information available to the Inncom Server.

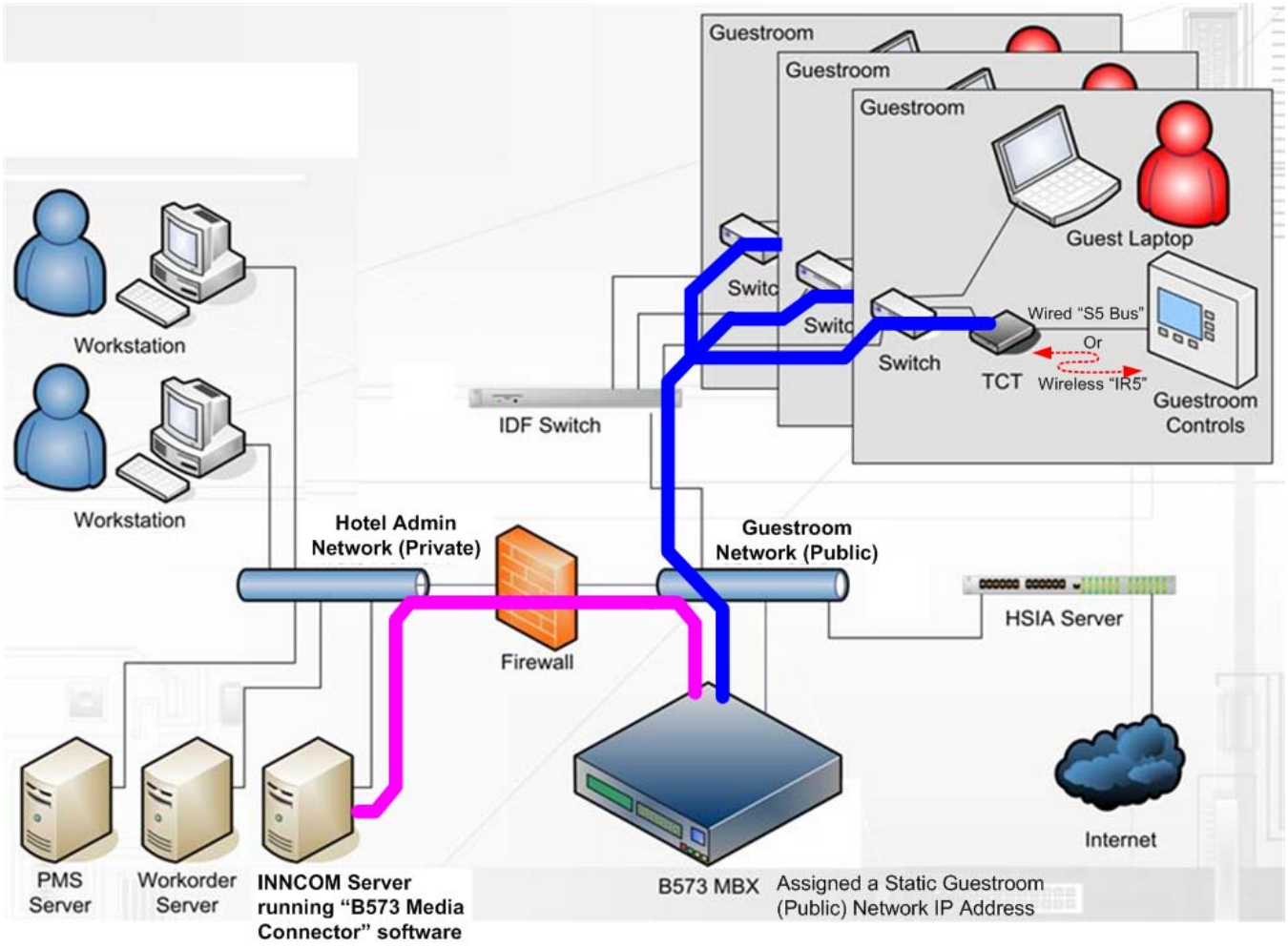
FLN5 (Floor Level Network 5) Reflector Application: A B573 programmed as an "FLN5 Reflector" is used at installations containing large, multi room suites that can not be adequately managed by the normal Inncom suite linking functionality.

The **TCT Router (MBX)** and **RS-485 FLN5 Floor Bridge** applications are the most common. In both of these applications, the B573 routs Inncom related messages from all connected room gateway devices to/from the Inncom Server. The only difference being the type of physical network used to connect the room gateway device to the B573. For the **TCT MBX** application, the hotels TCP/IP Ethernet network is utilized. For the RS-485 FLN5 application, a serial RS-485 twisted pair network is utilized. The TCT Router (MBX) and RS-485 FLN5 Floor Bridge applications will be covered in detail by this document.

The **Room Gateway** and **FLN5 Reflector** applications are much less commonly used and are not covered by this document. Refer to Inncom application note "AN214 Suite Linking with Reflection" for details on the FLN5 Reflector mode, and Section 3.4 of the B573 Engineering manual for details on the B573 Room Gateway mode.

B573 MBX (TCT Router) Application

A single B573 configured as an "MBX" is used at a hotel that has a pre-existing TCP/IP Ethernet network installed. An Inncom TCT "room Ethernet gateway" device is installed in each guestroom. The TCT sends/receives Inncom related room information to and from the B573 MBX router over the “guestroom” (public) Ethernet network.

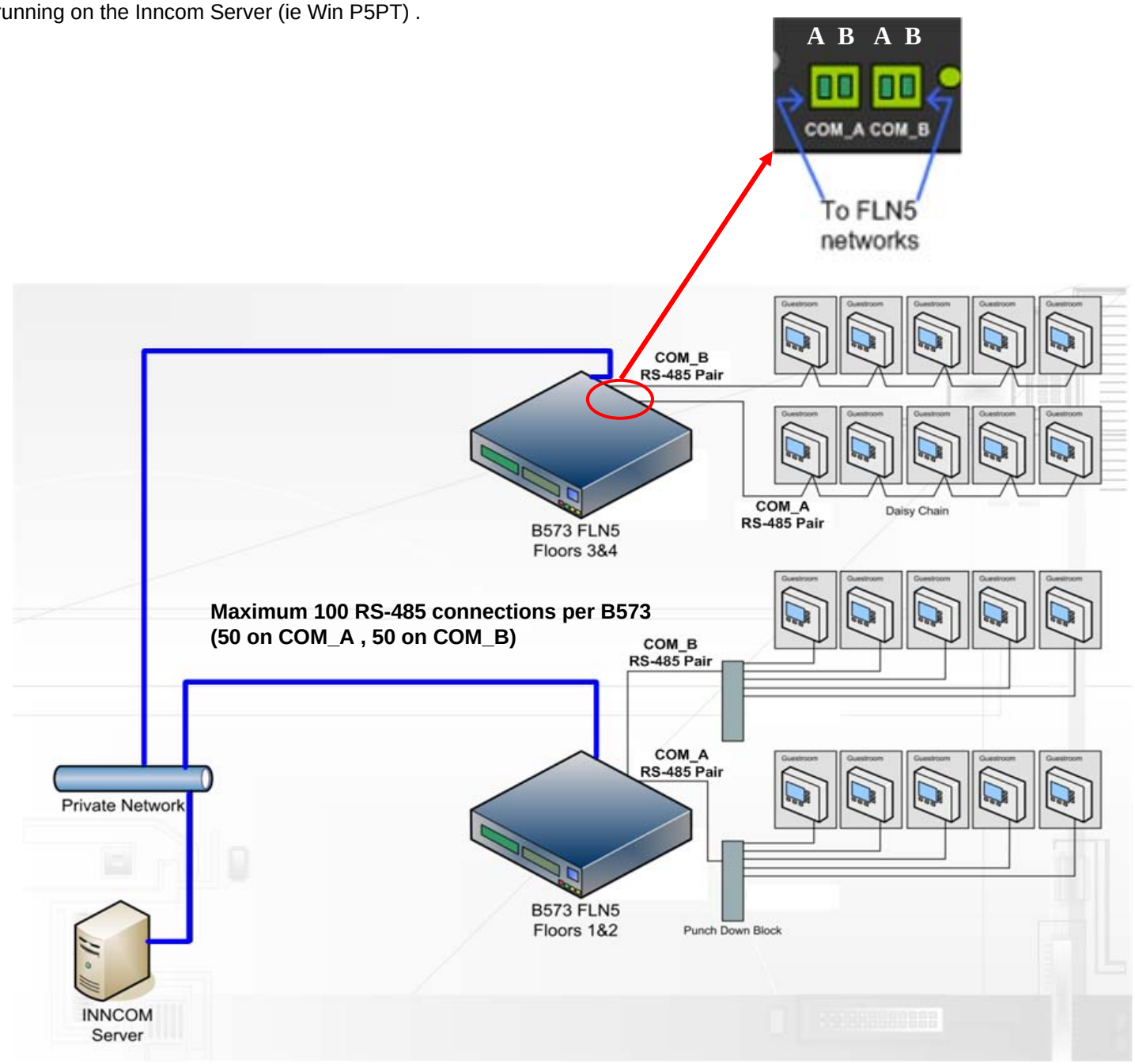


Inncom related room information (ie temperature, control messages ,etc) sent/received between the TCT “Room Gateway” and B573 MBX over the Guestroom Network using Layer-2 (MAC address based) protocol via UDP Port 23210. TCT’s have NO IP address assigned. Only a unique MAC address programmed at the factory.

“B573 Media Connector” software running on Inncom Server communicates with B573 MBX via UDP Port 3008 to send/receive Inncom guestroom data. This link is typically routed through a Firewall that must be configured to bi-directionally pass UDP Port 3008 traffic. If a firewall is present, it must be configured to pass UDP Port 3008 data. The “B573 Media Connector” software also makes the room data available to other software components running on the Inncom Server (ie WinP5PT).

B573 FLN5 Floor Bridge Application

The B573 when configured as an FLN5 (Floor Level Network 5) Floor Bridge can maintain two RS485 twisted pair communication links (A + B). Each RS485 link can support up to 50 "room gateway" device connections (ie TCC , E528, X529 , B485 or K592). The Inncom data from the "room gateway" device entering the B573 via the RS485 Com A or COM B ports is routed to the Ethernet network by the B573, where it is picked up by the "B573 Media Connector" software running on the Inncom Server computer and made available to other Inncom software running on the Inncom Server (ie Win P5PT) .



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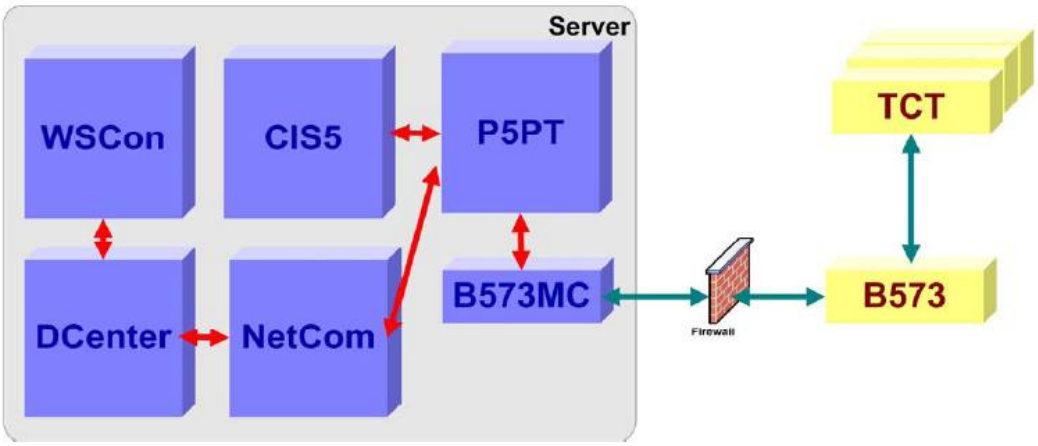
Section 1: B573 Installation

Read First:
The B573 is not a stand-alone device like its predecessor, the B572. For its intended operation as a bridge/router, the B573 hardware relies on being "connected" to a software program called the "B573_MC.exe" (B573 Media Connector) that must always be running on the Inncom server computer:

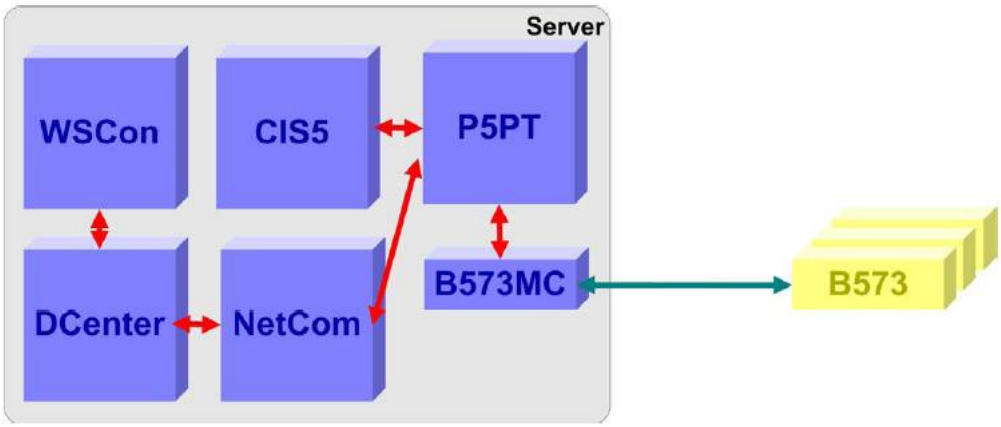
The B573 is "dumb" without being connected to the "B573_MC.exe" software, and only provides the ability to locally configure its network IP address and Subnet, reset itself and a perform a few other troubleshooting functions.

The "B573_MC.exe" software connects to the B573 using the IP address and Subnet defined in the "B573_MC.cfg" script file that must be present in the "C:\Inncom\Scripts" folder on the Inncom server. This script file defines the IP address(s) of any B573(s) physically installed. When the "B573_MC.exe" program first starts up, it scans the network for the defined B573 IP addresses defined in the "B573_MC.cfg" script file. Once the "B573_MC.exe" program connects to the defined B573(s), the room data passing through the B573(s) now becomes available to other software running on the Inncom server, specifically the "WinP5PT.exe" program.

The "WinP5PT.exe" software on the Inncom server handles gathering and routing "process images" to/from rooms via the above mentioned "B573_MC.exe" program. WinP5PT.exe then makes this room information available to other software components running on the Inncom server, such as Netcom.exe, WSCon.exe (Workstation Concentrator) and DCenter.exe (Data Center).



Single B573 "MBX" Configured for TCT's Application



Multiple B573's Configured for "FLN5" RS-485 Floor Bridge Application

Installation Considerations:

1. Determine the mounting location for the B573(s) using the following considerations:
   - The B573 is designed for a 1U, 19" wide rack mount installation using the brackets and bracket mounting screws provided, but it can also be placed on a flat surface or mounted vertically on a wall.
   - It should be installed so that the front panel LCD display and buttons are easily accessible.
   - The mounting location should have a 100-240VAC , 1 Amp minimum power source in the vicinity of the B573 mounting location. If the B573 has the optional 01-9981.A1 100-240VAC power supply installed, a 6 foot AC line cord is provided.
   - The B573 consumes about 4 watts (300mA @ 12VDC) when powered, therefore it does not require any forced ventilation. But, it should be mounted in a location where the ambient temperature is 50-104 F (10-40 C).
   - The B573 communicates with the Inncom Server computer via a network connection. Therefore the B573 location must provide a connection to the same network that the Inncom Server is connected to.

2. Network connectivity considerations:
   - The B573 requires a fixed (static) network IP Address. This is programmed into the B573 using the front panel LCD display and buttons. The B573 DOES NOT support DHCP. You must coordinate with the hotels IT department to obtain a fixed IP address for each installed B573 and program it into the B573.
   - The Inncom "B573_MC.exe" program running on the Inncom Server must know the IP addresses of all B573's in order to connect to them. The B573 IP addresses must manually be defined in the "B573_MC.cfg" script file located in the "C:\Inncom\Scripts" folder on the Inncom Server. If any B573 IP address is changed, the "B573_MC.cfg" script file must be updated to match and the "B573_MC.exe" program restarted.
   - The B573 communicates with the "B573_MC.exe" program running on the Inncom Server via network UDP Port 3008. If a network Firewall is installed to separate the network that the B573 connects to and the network that the Inncom Server connects to, the Firewall must be configured to bi-directionally pass UDP Port 3008 traffic. This situation is typical for an installation using a B573 "MBX" with TCT room gateway devices installed. The B573 MBX and all TCTs are connected to the guestroom (public) network, and the Inncom Server is connected to the hotels administrative (private) network.
   - If Inncom TCT "room gateway" devices are installed, the TCT's communicate with the installed B573 MBX router via network UDP Port 23210. This Port must be open and available on the network connecting all TCT's to the B573 MBX, which it typically is open by default.

3. Room device connectivity considerations:
   - The B573 configured as an "MBX TCT Router" can support virtually an unlimited number of TCT room gateway connections.
     However, the B573 configured as an "FLN5 RS-485 Floor Bridge" can only support a maximum of 100 room gateway connections (50 on COM_A, 50 on COM_B). This limitation must be considered when deciding what rooms connect to what B573 FLN5 RS-485 bridge. Note that "room gateway connection" refers to the termination of the RS-485 wiring pair at a particular Inncom device (ie E528, B485, X529,etc). For instance, if a hotel has an E528 and a K592 Lock Gateway installed in each room, this counts as 2 RS-485 terminations and you would be limited to 50 total "room" connections (100 total devices).

Typical B573 Installation Steps:

1. Install the B573 hardware.
2. Connect communication wiring to the B573.
3. Apply power to the B573.
4. Obtain and set the IP Address and Subnet into the B573.
5. Set/verify the "TCTPort Offset" in the B573 MBX (only if property has a single B573 MBX with TCTs).
6. Configure and save the "B573_MC.cfg" script file to contain the IP addresses of all B573(s).
7. Configure and save the "WinP5PT.p5s" script file to tell WinP5PT it will "locally" connect to the "B573_MC.exe" program (they both run on the same Inncom Server computer).
8. Start (or Re-Start) "B573_MC.exe" and "WinP5PT.exe" programs and verify operation.

1.1 Mount the B573:

The B573 is packaged in a 1U rack mount configuration, designed for a 19" server rack. It is shipped with 2 removable mounting brackets and 6 machine screws to attach the brackets to the B573 body. The brackets enable the installer to rack-mount or wall-mount the B573. Figure 1 shows rack-mounting the B573 and Figure 2 shows a wall-mounting the B573.

To Rack Mount the B573:

- Attach the mounting brackets to the B573 body using the provided machine screws as shown in Figure 1. Three tapped holes are on the left and right sides of the B573 near the front of the B573 to accept the machine screws.
- Insert the B573 into the Rack and attach using the mounting screws/bolts provided with the rack.

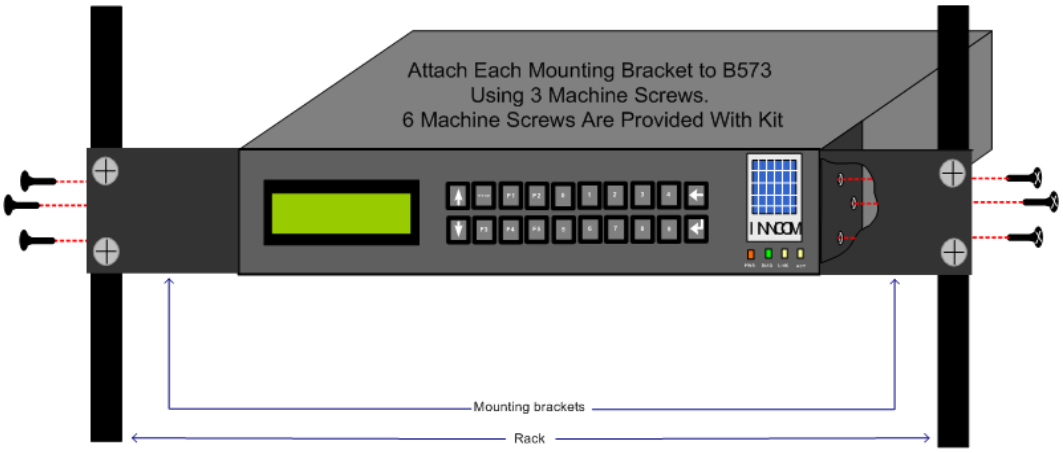


Figure 1. B573 Rack-Mounted, Front View

To Surface Mount (To a Wall) the B573:

- Attach the mounting brackets to the sides of the B573 body using the provided machine screws as shown in Figure 2. Three tapped holes are on the left and right sides of the B573 near the middle to accept the machine screws to attach the mounting brackets to the B573.
- Mount the B573 to the wall/surface using appropriate anchors and screws.

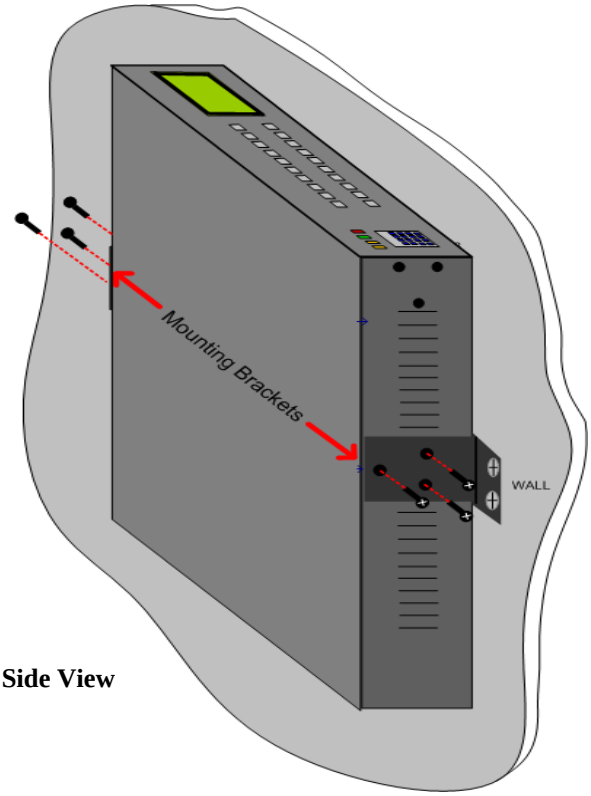
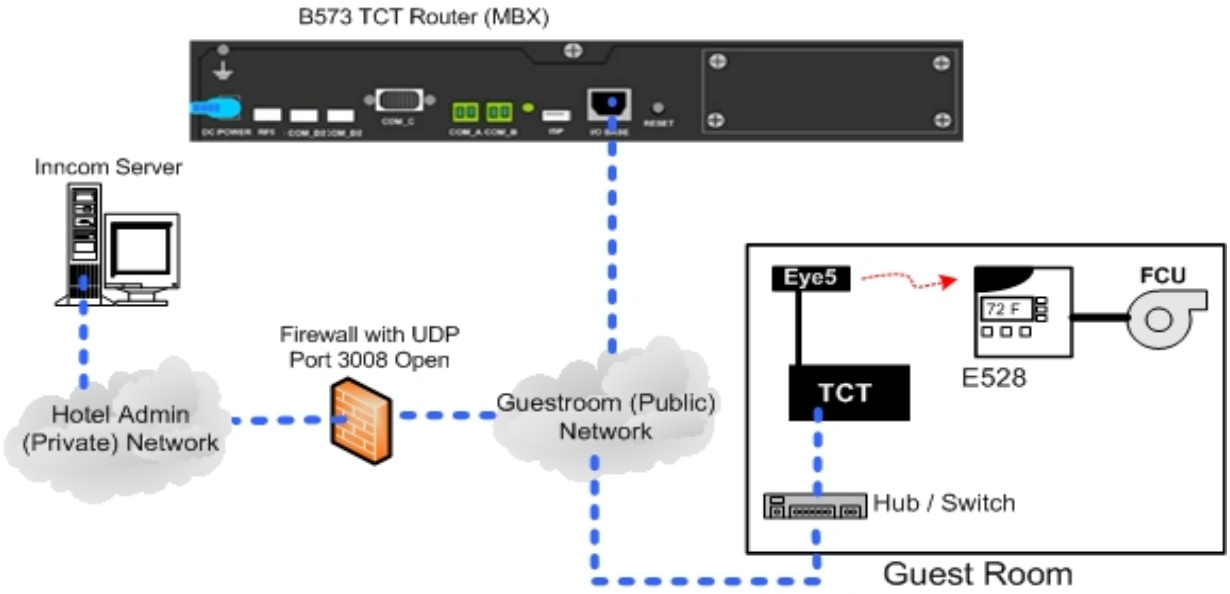


Figure 2. B573 Wall-Mounted, Side View

1.2 Connect Communication Wiring to the B573

For B573 MBX (TCT Router) Installation:
When the B573 is configured as a TCT router (MBX), the only communication wiring to connect is the CAT5 Ethernet patch cable that connects the B573 to the same network that has all the TCT's attached.

Connect the network patch cable from the switch or hub that places the B573 on the TCT network to the RJ45 network jack (labeled I/O Base) on the rear of the B573

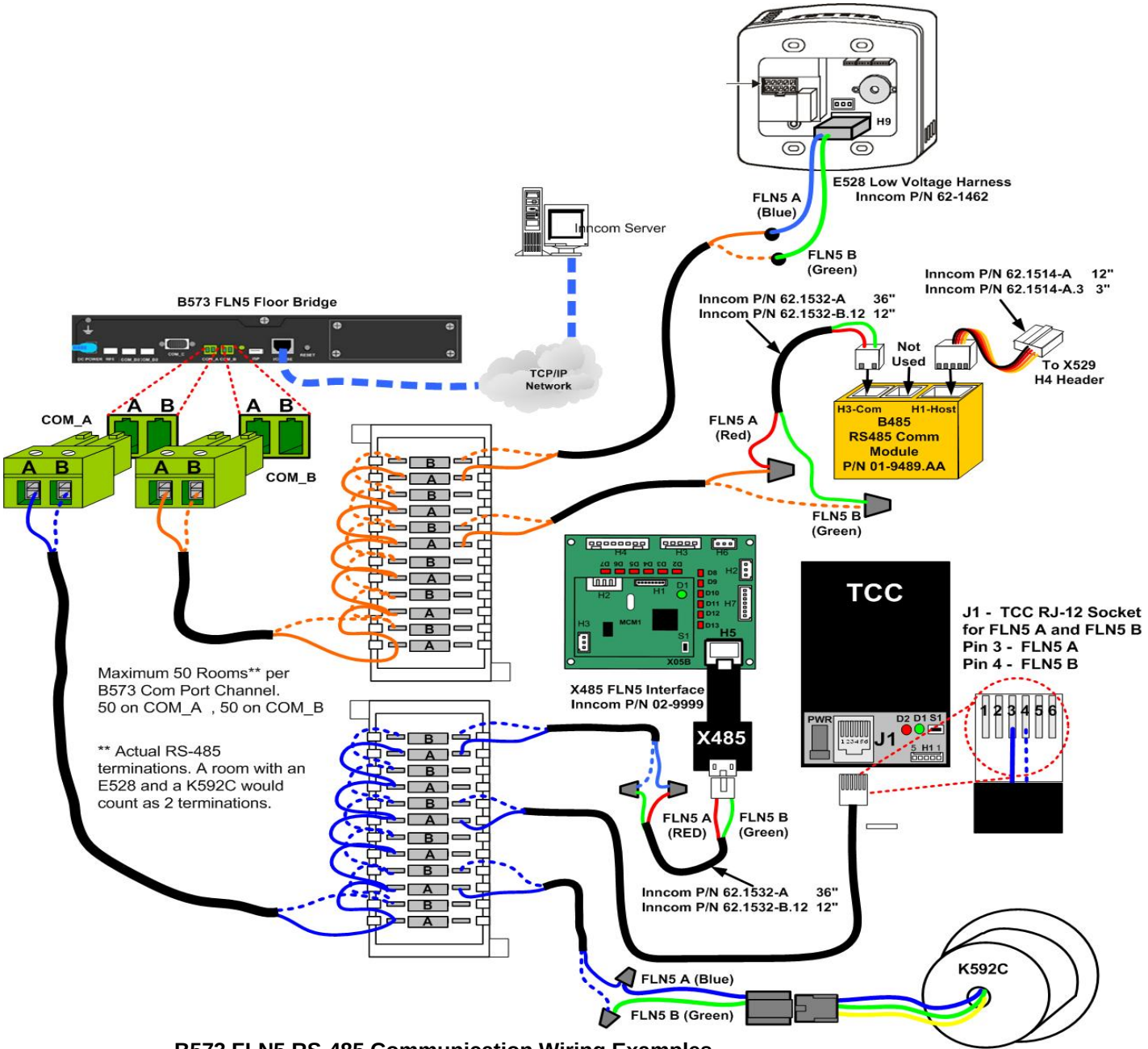


For B573 FLN5 RS-485 Twisted Pair Floor Bridge Installation:

1. Connect the B573 COM_A and COM_B terminals to the RS-485 twisted pair wiring going out to the appropriate room punch block(s) ("home run" wiring scheme) or room "daisy chain" wiring using the removable 2-pin green terminal blocks provided with the B573. Read the notes on page 10.

2. Connect the network patch cable from the switch or hub that places the B573 on the same network as the Inncom server to the RJ45 network jack (labeled I/O Base) on the rear of the B573.

Note: The sample wiring diagram below is meant to show only the general FLN5 RS-485 communication related wiring. This example shows a "home run" type wiring scheme where the RS-485 pair from each room terminates at a punch-down block. A "daisy-chain" scheme can also be utilized. Power and other signals that may also be present in the cabling are not shown. Refer to the specific device documentation for details.



B573 FLN5 RS-485 Communication Wiring Examples

IMPORTANT:

- Each B573 FLN5 COM Port (COM_A and COM_B) can typically support up to 50 RS-485 "room gateway device" connections. Therefore 100 total connections per B573. These "room gateway devices" include:
  01-9560 E528 Thermostat
  TCC
  B485
  X485
  K592C

- The FLN5 RS-485 twisted pair wiring is polarity sensitive. The two wires that make up the pair are referred to as the "**A**" wire and the "**B**" wire. You must maintain consistency when connecting the RS-485 wiring pair as shown in the image on page 9 (ie A to A and B to B in all of the terminations).

- The wiring used for the RS-485 wiring should be twisted pair cable such as CAT5 or similar. Typical wiring used is 22-24 AWG STP but this will depend on the length of the cable runs. The specified maximum cable lengths for RS-485 is 4000 feet, but this may be shorter depending on quality and type of twisted pair wiring used and the number of devices connected.

- Before making any actual termination between the RS-485 pair coming from a particular room and the B573 COM port , verify the pair has no shorts or excessive voltage present that may indicate the wiring pair has a problem that could damage the B573 when connected.

  A Fluke meter (or similar) should be used to check the RS-485 pair from a particular room before connecting it to the punch down block or "daisy chain" wiring connected between rooms. This check should include measuring the resistance across "**A**" and "**B**" to verify a dead short does not exist and measuring both AC and DC voltages across the RS-485 pair ("**A**" wire to "**B**" wire) AND from the "**A**" wire to Earth ground and the "**B**" wire to Earth ground.

  Typical Expected Values:
  Resistance "A" to "B" : Greater than 1Mega Ohm (meter may indicate "open")
  AC Voltages: With meter set to measure AC voltage, there should be **NO** discernible AC voltage from **A** to **B**, **A** to Ground or **B** to Ground. Any AC voltage > 100-200 mV AC is suspect and should be investigated.
  DC Voltages: With meter set to measure DC voltage the following typical voltages are expected with the RS-485 wiring pair connected to the Room Gateway device ONLY (ie the device has not been connected to any other room wiring pairs at the punch down/daisy chain or has not been connected to the B573 COM port).

Room Gateway Device	"A" to "B"	"A" to Ground	"B" to Ground
01-9560 E528 Thermostat	3.8 VDC	4.2 VDC	0.4 VDC
TCC	0.28 VDC	0.32 VDC	0.04 VDC
B485	1.0 VDC	1.0 VDC	0.0 VDC
X485	3.8 VDC	4.2 VDC	0.4 VDC
K592C	1.0 VDC	1.0 VDC	0.0 VDC

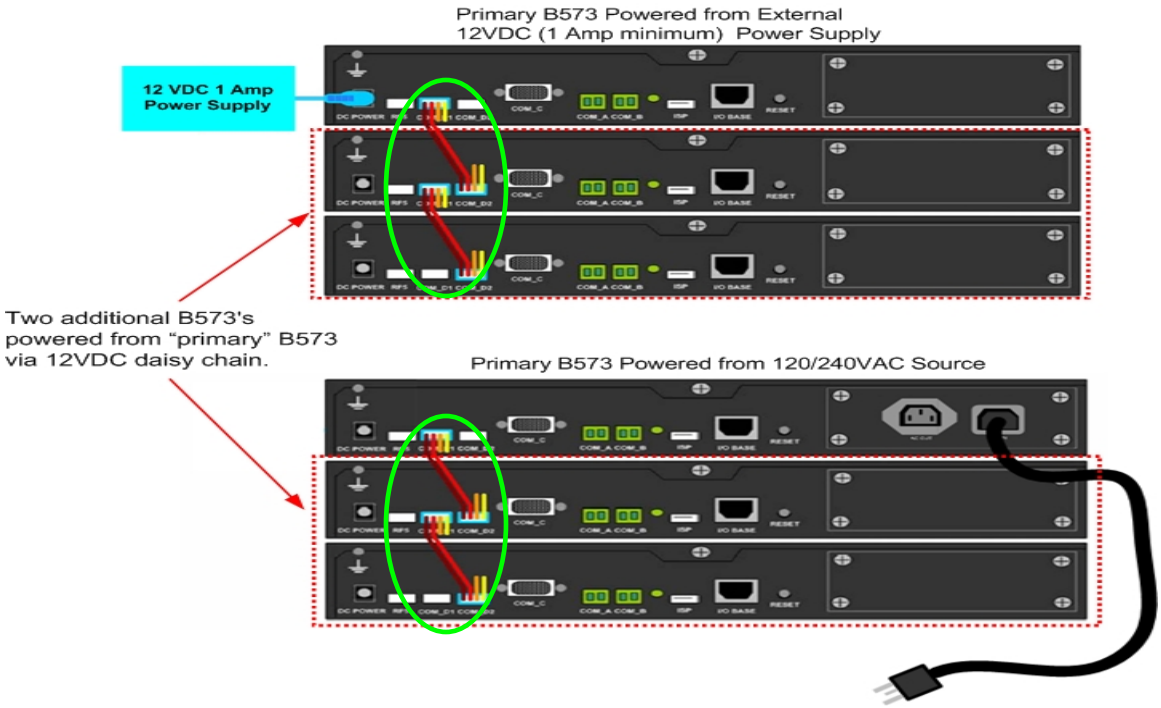
1.3 Power the B573

The B573 can be powered using one of the three options shown below. Please read the note on grounding the B573 that follows the power option descriptions.

Power Option 1: B573 receives power from 12VDC power connected to the 12VDC Power jack (red circle shown below). A 2.1mm, center pin positive DC power jack is provided at the lower right on the back of the B573 to connect a 12VDC power supply. The 12VDC power supply used must supply at a minimum **300mA** to power this single B573. A 120VAC to dual 12VDC output power supply (Inncom P/N 04-4040) is available that can power 2 B573's.

Power Option 2: B573 receives power via COM_D1/COM_D2 "Daisy Chain" (green circles shown below). If installing multiple B573's in the same location, it is possible to "daisy chain" 12VDC power from one B573 (the one connected to the 12VDC power supply or 120VAC) to additional B573's.

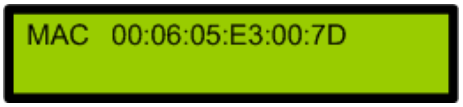
Note 1: If powering additional B573's via the 12VDC power daisy chain connectors COM_D1/D2, the 12VDC power supply must be sized to provide at least 300mA per B573 (including the B573 connected to the 12VDC power supply). For example, a minimum 900mA 12V power supply would be required to power 3 B573s.



Power Option 3: B573 has optional 100/240 VAC power supply installed (dotted yellow section in image below). This power supply is rated at 1A DC.
Plug the AC line cord provided with the B573 into the "AC IN" socket as shown below.

When you first apply power to the B573, the following information will appear on the B573 LCD display:

1. First, the network MAC address programmed into the B573 will appear for a few seconds. This is programmed at the factory.



2. Next, the Network IP Address and Subnet programmed into the B573 will appear for a few seconds. The IP Address and Subnet can easily be changed using the LCD display and buttons on the front of the B573. This is covered in Section 1.4 on page 13.

3. Then, the B573 type and software version of the B573 will appear:

B573 is programmed as an "MBX" TCT router and its software version is Version 1.6.

B573 is programmed as an "FLN5 Gateway" (Floor Bridge with 2 RS-485 channels) and its software version is Version 1.10.

At this point, the B573 LCD display will remain displaying the B573 type and software version as shown in Step 3 above and the GREEN "DIAG" LED on the lower right of the B573 front panel will flash once/second **UNTIL** :

- The desired IP Address and Subnet values are set into the B573 using the B573 LCD and front panel buttons. This will be covered in Section 1.4 on page 13.
- The "B573_MC.cfg" script file is created (or modified if it already exists) to include the IP Address(s) of any B573(s). This will be covered in Section 1.6 on page 16.
- The "B573_MC.exe" (B573 Media Connector Software) is running and has connected to the B573(s). When the "B573_MC.exe" program connects to the B573, the GREEN "DIAG" LED will begin to flash twice / second. This will be covered Section 1.8 on page 19.

IMPORTANT: Notes on Grounding the B573

For communication reliability and equipment protection, the B573 must be connected to earth ground.

If the B573 has the optional 120/240VAC power supply installed, the AC power source that you connect the AC line cord from the B573 to must have a valid earth ground connection. The ground pin on the "AC In" socket on the rear of the B573 is physically connected to the B573 metal housing and to any "common" pins on any of the connectors on the B573.

If powering the B573 with a 120/240 VAC to 12VDC power supply via the "DC Power" input jack on the bottom left rear of the B573 , the power supply should internally bond its 12VDC Common output to the 120/240 VAC input Earth ground connection. Any 120/240 VAC to 12VDC power supplies provided by Inncom (including P/N 04-4040) will have the 12V DC output common internally connected to the Earth connection.

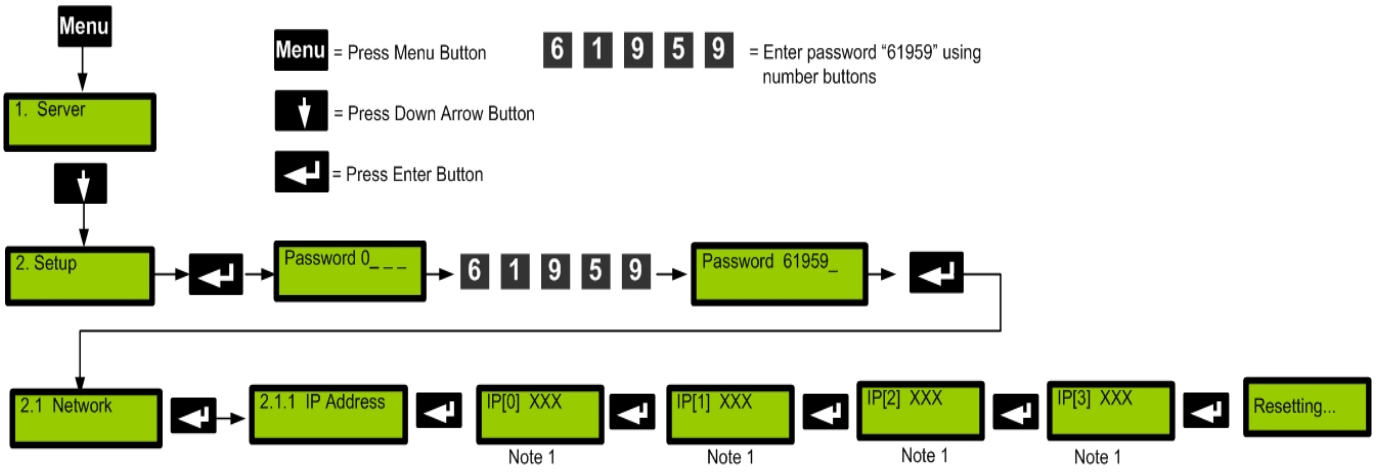
If using a 12VDC power supply that does NOT internally bond the 12VDC common to earth, there is a marked Earth ground connection screw and lug on the upper left on the back of the B573 that can be used to physically connect the B573 chassis to Earth ground.

1.4 Set the Network IP Address and Subnet Mask of the B573

The B573 does not support DHCP dynamic addressing and requires a static IP Address be programmed into it using the B573 front panel buttons and display. . You may need to consult with the properties IT department to obtain the IP address and Subnet to be set into the B573. If installing multiple B573's, **you will need a unique IP address for each B573**. If the Subnet has not been provided to you, this is typically set to 255.255.255.0.

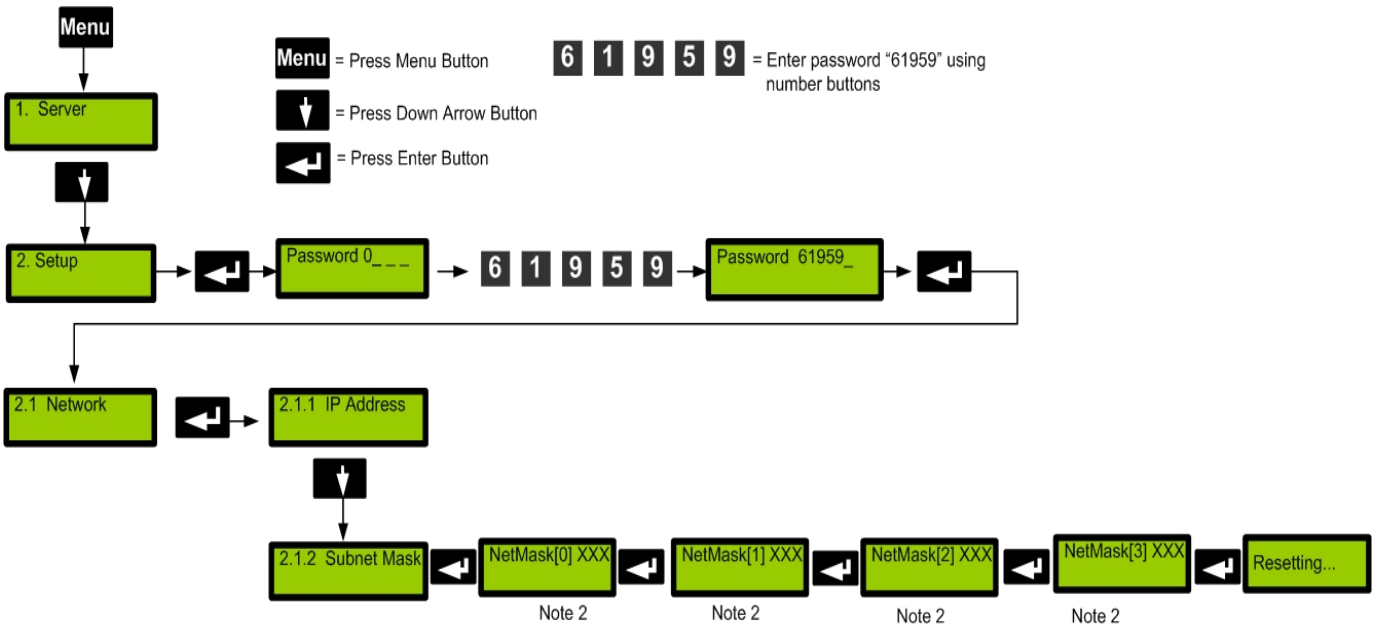
The B573 "2. Setup" menu is used to change the IP address and Subnet. Accessing the Setup menu requires a password of **61959** as shown below.

Set the **IP address** in the B573 using the following steps :



Note 1: For each IP address segment (IP[0] to P[3]), if current value is correct press the Enter button ↵ to go to the next segment.
To change a segment, use the back arrow button ← to clear the current value, then enter desired value using keypad numbers 0-9.
The B573 will automatically Reset after entering the IP[3] value.

Set the **Subnet Mask** in the B573 using the following steps:

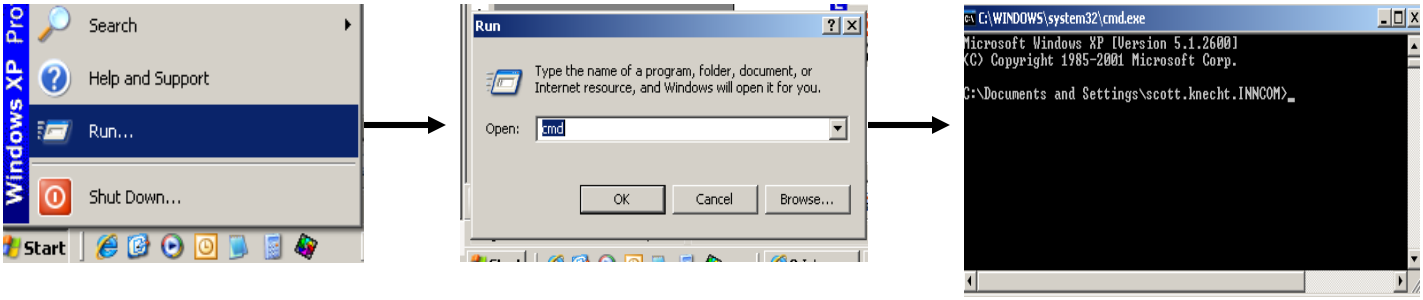


Note 2: For each Subnet Mask segment (NetMask[0] to NetMask[3]), if current value is correct press the Enter button ↵ to go to the next segment.
To change a segment, use the back arrow button ← to clear the current value, then enter desired value using keypad numbers 0-9.
The B573 will automatically Reset after entering the NetMask[3] value.

"Ping" B573 IP Address From Inncom Server Computer

With the correct IP address and Subnet programmed into the B573(s) and the B573(s) powered and connected to the network, "Ping" the B573 IP address from the Inncom Server computer to verify network communication.

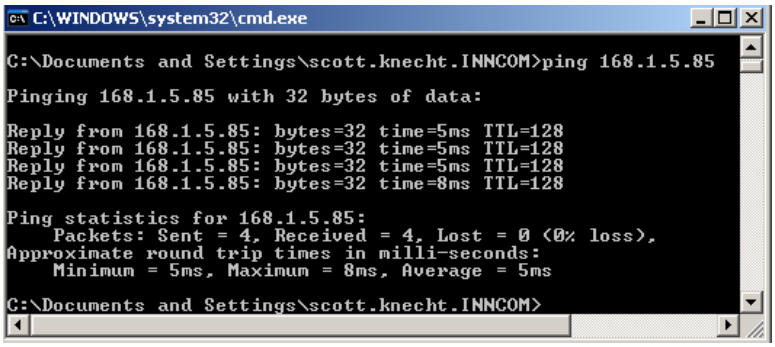
On the Inncom Server:
a. Open a DOS "Command Prompt" by selecting "Start>Run" and entering "cmd" in the input field, then click "OK"



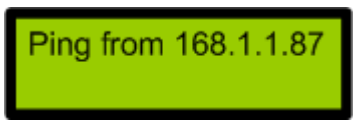
b. Enter "ping xxx.xxx.xxx.xxx" where "xxx.xxx.xxx.xxx" is the IP address of the B573 into the DOS window and press the Enter key.

c. If the B573 with the defined IP address replies, you will see 4 replies appear in the DOS window , here an audible "click" from the B573 and see the IP Address of the "pinging" computer on the B573 display (see note below) for each of the 4 replies.

This example shows "pinging" an the B573 with IP Address of "168.1.5.85" from a computer with IP Address "168.1.1.87" and getting replies from the B573 with that IP Address.



Note: If the B573 is configured to do so , the B573 will emit an audible "click" and display the IP Address of the computer "pinging" the B573 (see image below) when it receives a network "ping". This feature is enabled by default but can be disabled from B573 front panel. If you do not here an audible "click" or see the pinging computers IP Address on the LCD display, it is possible that this has been disabled in the B573. B573 menu item "2.2.2 Show Ping" is used to configure this feature and is covered on page 26.



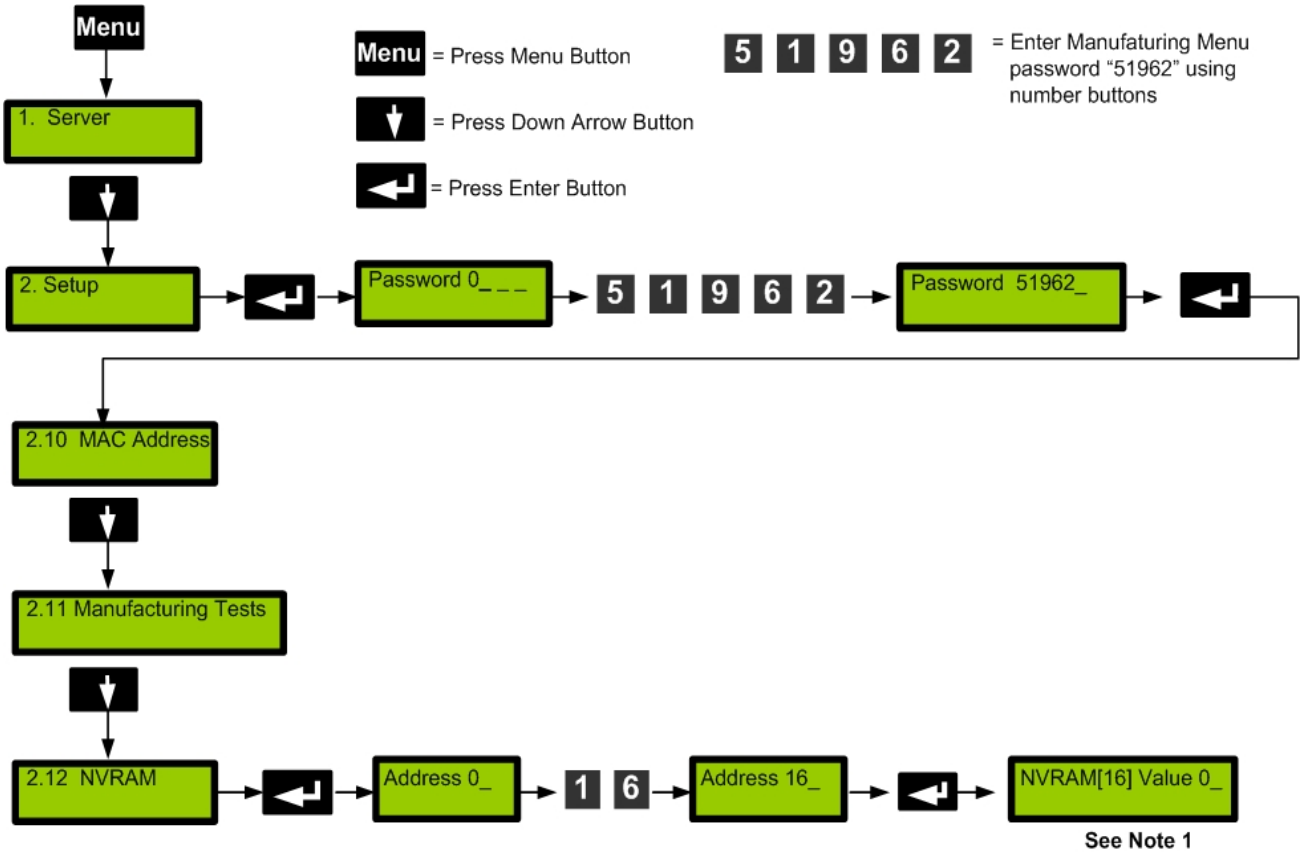
d. If the B573 does not reply to the Ping, verify the IP Address you are "pinging" is matches the IP Address programmed into the B573. Is the intended B573 powered and connected to the same network as the Inncom Server? Was the Subnet programmed into the B573 correctly?

1.5 Verify / Set the TCT Port Offset If Configuring a B573 MBX TCT Router

If a B573 is installed at a property that uses TCT room gateway devices, the TCT devices are supposed to communicate with the B573 over the Ethernet network using a default "TCT Port" value of "23210". 23210 is the TCP/IP network port# that the B573 and the TCT's communicate over.

The B573 MBX supports changing this TCT Port value by adding an offset value to the baseline value of 23210. This is done to allow more than one B573 MBX to be used on the same network. However using more than one B573 MBX is only done under special rare circumstances. This "TCT Port Offset" value stored in the B573 MBX should ALWAYS be set to "0", which then sets the actual TCT Port to 23210 (ie baseline 23210 + offset 0 = 23210) . The "TCT Port Offset" value is stored in the "non-volatile" memory (NVRAM) of the B573 MBX at NVRAM Offset "16".

Use the following steps to verify the B573 TCT Port Offset value is set to "0". This procedure leads you through entering the B573 "manufacturing" menu, then selecting NVRAM offset 16 to view the current TCT Port Offset value.



Note 1: In most cases, the NVRAM Offset "16" should be set to "0", which adds an offset of "0" to the base B573 MBX TCT Port 23210. Thus making the B573 MBX TCT Port = 23210 (ie 23210 + 0 = 23210).

If the current value of Offset 16 is NOT set to "0" and the TCT Port value is supposed to be "23210", use the backspace button to clear the current NVRAM[16] value , then enter "0" as the value.

1.6 Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)

The "B573_MC.cfg" file is a text file that must be present in the "C\Inncom\Scripts" folder on the Inncom server computer. This file tells the "B573 Media Connector" software (B573_MC.exe) running on the Inncom server the IP addresses of any B573 devices installed. The "B573_MC.exe" program scans this file on startup for any line that begins with **"$B573**:" without a semi-colon (;) in front and begins searching for the B573(s) with the defined IP address.

**** Any B573 installed must have a line item in the "B573_MC.cfg" script file defining its IP address ****

The exact format of this line item is:

If using a *SINGLE* B573 MBX configured to support TCTs:

An installation with TCT room gateway devices installed will have only one B573 installed. The "B573_MC.cfg" script file should only define **ONE** B573 IP address. The single *active line* (doesn't start with a semicolon) in the "B573_MC.cfg" script file should have the following format to define the IP address of the single MBX B573:

$B573: IP: xxx.xxx.xxx.xxx Port: 3008 Name: "Descriptive Name" Rooms: yyy

If using one or more B573(s) configured for an FLN5 RS485 twisted pair network:

A line with the following format must be placed in the "B573_MC.cfg" file for **EACH** B573 configure for FLN5 RS485 mode:

$B573: IP: xxx.xxx.xxx.xxx Port: 3008 Name: "Descriptive Name" Rooms: yyy FLN5: Y

- **xxx.xxx.xxx.xxx** is the network IP Address of the particular B573.
- **Port: 3008** is the network port that the B573 communicates over to reach the "B573_MC.exe" program. DO NOT CHANGE this value. It must be 3008.
- The text placed into the "Descriptive Name" field appears on the top line of the B573 LCD display when the B573 Media Connector software is running and has successfully connected to the B573.
- The number of rooms defined by "yyy" in the B573_MC.cfg script file tells the WinP5PT program running on the Inncom Server how many rooms are ***supposed*** to be communicating through that particular B573. The ***actual*** number of rooms communicating through a particular B573 are displayed on the bottom line of the B573 LCD display once the B573 has connected to the "B573_MC.exe" program. If the # rooms is not known, set the "Rooms: yyy" field to "0" (Rooms: 0).
- If the B573 is configured for an FLN5 RS-485 twisted pair network, the line **MUST** end with "FLN5: Y"

A default "B573_MC.cfg" file similar to the one below will typically be present in the "C\Inncom\Scripts" folder on a new server computer to show the required format. This default file has 2 example B573 line items showing the format needed to connect the "B573_MC.exe" program to either a B573 MBX TCT router or a B573 FLN5 Floor Bridge. You must open and edit this file using Windows "Notepad" or "Wordpad" text editor to include the actual IP address(s) of any B573(s). Notice both of these B573 lines are commented out (leading semi-colon). If this file is not present in the "C\Inncom\Scripts" folder , you must create it using Notepad or Wordpad and save it to the "C\Inncom\Scripts" folder with the **exact** name of "B573_MC.cfg".

Default B573_MC.cfg file that will typically be present in the "C\Inncom\Scripts" folder:

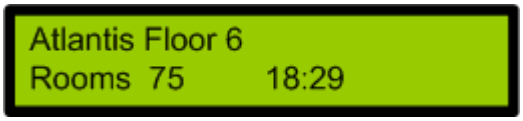
```
; Test script file for B573 Media Connector
; One line per B573 connected.
; If using TCTs as room gateways, there will be only one connection.
; If using FLN5 room gateways, the FLN5 tag must be set in each line.
; If the number of rooms is not known, leave at 0. If set, B573 will display "x rooms of y", quickly showing
; how many non-communicating rooms are on that bridge.
;$B573: IP:10.101.112.255 Port: 3008 Name:"FLN5 Test" Rooms: 0 FLN5: Y
;$B573: IP:192.168.254.88 Port: 3008 Name:"TCT Test" Rooms: 0
```

Example B573_MC.cfg script files:

; B573_MC.cfg script file for single B573 MBX with TCTs installed
; Park Plaza MBX will be displayed as the B573 description on the LCD display
; 425 actual rooms exist
$B573: IP:168.1.5.60 Port: 3008 Name: "Park Plaza MBX" Rooms: 425

B573 display with above B573_MC.cfg script file once the B573_MC.exe program has connected with the B573 with IP address 168.1.5.60 and 400 rooms communicating

; B573_MC.cfg script file for 3 B573 FLN5 Floor Bridges
; One line per B573 connected.
; The FLN5: Y tag MUST be at the end of each line.
; Atlantis Floor 6,7,8 displayed as B573 descriptions
; 75,63 and 80 actual rooms are scripted
$B573: IP:168.1.5.85 Port: 3008 Name: "Atlantis Floor 6" Rooms: 75 FLN5: Y
$B573: IP:168.1.5.86 Port: 3008 Name: "Atlantis Floor 7" Rooms: 63 FLN5: Y
$B573: IP:168.1.5.87 Port: 3008 Name: "Atlantis Floor 8" Rooms: 80 FLN5: Y



B573 with IP 168.1.5.85 display with above B573_MC.cfg script file once the B573_MC.exe program has connected with the B573 and 75 rooms communicating

IMPORTANT:

- Once you create or modify the "B573_MC.cfg" script file, you must save it to the "C:\Inncom\Scripts" folder on the Inncom server computer, and then restart the "B573_MC.exe" program (see note below) on the Inncom server for the changes to take affect.

  Note: Before manually shutting down the "B573_MC.exe" program, check to see if the "Watchdog" program has been installed on the computer and configured to restart the "B573_MC.exe" program in case it is closed. If that is the case, used "Watchdog" to restart the "B573_MC.exe" program.

- If the IP address of any B573 changes, the "B573_MC.cfg" script file must be updated with the new IP address and saved. The "B573_MC.exe" program must then be re-started for the change to take effect.
- Make sure the port defined in any "$B573: ……" line is "Port: 3008.

1.7 Configure and Save the WinP5PT.p5s script file to Support B573(s)

The "WinP5PT.exe" program must be told how to establish a link with the "B573_MC.exe" (B573 Media Connector) program. Add (or verify it is already there) the following line to the "WinP5PT.p5s" script file to do this:
$Media: B573 IP:localhost Port: 7002

The section in the WinP5PT.p5s script file where this line belongs immediately follows the commented section that explains Media Connections as shown below:

```
;*******************************************************
; There can be any number of Media Connection lines for
; the B572s or other devices connecting P5PT to the rooms.
; The Media: "IP: and "Port: are required fields.
; The "IP:" field is the address assigned to each device.
; One line in the script file is required for each media
; connection. The same format is used for the B572/MBX
;*******************************************************
$Media: B573 IP: localhost  Port: 7002
```

IMPORTANT: Notice that no actual IP address for a B573 is defined in the "WinP5PT.p5s" script file. The "WinP5PT.exe" program does not connect to the physical B573 hardware. The "WinP5PT.exe" program connects to the "B573_MC.exe" program, which actually connects to the physical B573(s). Since both programs run locally on the same computer , "localhost" is entered as the IP address.

Depending on the particular setup at the property, there may be one or more existing "$Media: ….." lines in the WinP5PT.p5s script file.

a. If the property was using an older **B572** MBX to support TCT's and you are replacing it with a new B573 MBX, there will be a pre-existiing line in the Media section of the WinP5PT.p5s script file that defined the IP address of the existing B572 MBX similar to:
$Media: B572 IP: XXX.XXX.XXX Port: 7002 (XXX.XXX.XXX is IP address of existing B572)
This line should be removed and replaced with "$Media: B573 IP: localhost Port: 7002" as shown above.

b. If keeping the existing B572(s) and adding an additional B573 (or B573's), leave any existing "$Media: B572 IP: XXX.XXX.XXX Port: 7002 " lines and add a **SINGLE** "$Media: B573 IP: localhost Port: 7002" line to establish the link to the "B573_MC.exe" program.
For example:

```
; Media connection section with 2 B572 IP addresses defined and a SINGLE line item
; for the B573 to define WinP5PT.exe and B573_MC.exe link locally
;*****************************************************************
$Media: B573 IP: localhost  Port: 7002
$Media: B572 IP: 168.1.5.41  Port: 7002
$Media: B572 IP: 168.1.5.40  Port: 7002
```

IMPORTANT:

- Once you modify the "WinP5PT.p5s" script file, you must save it to the "C:\Inncom\Scripts" folder on the Inncom server computer, and then shutdown and restart the "WinP5PT.exe" program (see note below) on the Inncom server for the changes to take effect.

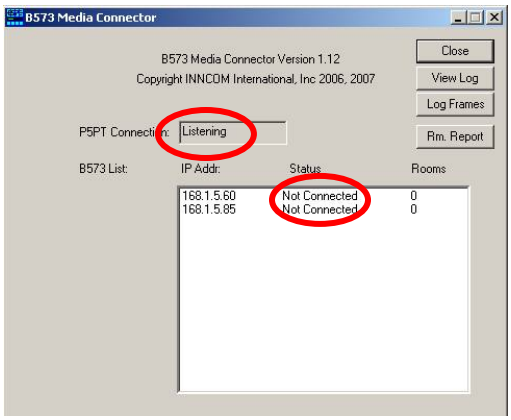
  Note: Before manually shutting down the "WinP5PT.exe" program, check to see if the "Watchdog" program has been installed on the computer and configured to restart the "WinP5PT.exe" program in case it is closed. If that is the case, use "Watchdog" to restart the "WinP5PT.exe" program.

- Make sure the network port defined in the "$Media: B573 IP: localhost **Port: 7002**" line is in fact set to "7002".

1.8 Start "WinP5PT.exe" and "B573_MC.exe" Programs and Verify Operation

With the "WinP5PT.p5s" script file modified to include the **"$Media: B573 IP: localhost Port: 7002"** line and the "B573_MC.cfg" script file modified to include the IP Addresses of all B573's, start or restart the "WinP5PT.exe" and "B573_MC.exe" programs to ensure any changes take effect.

a. When the B573 Media Connector (B573_MC.exe) program first starts, the following window will appear:

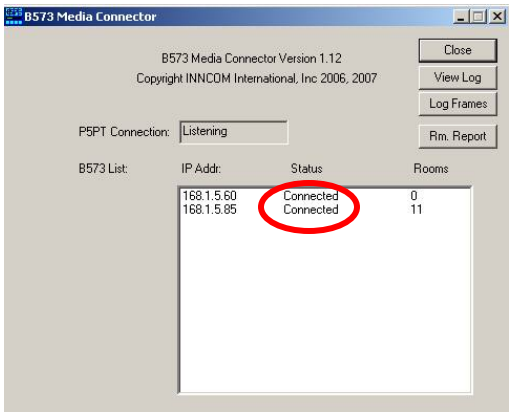


P5PT Connection: will initially indicate "Listening" because the "B573 Media Connector" program is waiting (listening) for the "WinP5PT.exe" program to connect.

B573 List: window section will display a list of the scripted B573 IP Addresses (ie B573 IP Addresses defined in the "B573_MC.cfg" script file configured in Section 1.6).

Until the "B573_MC.exe" program connects to a particular scripted B573, the "Status" will indicate "Not Connected" and "Rooms" will indicate "0" .

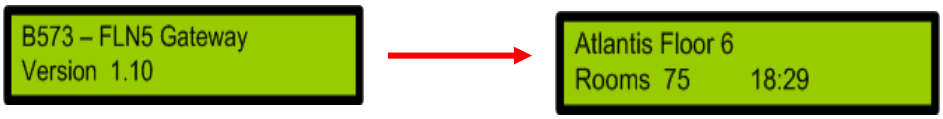
b. When the "B573_MC.exe" program connects to one of the scripted B573''s:



The "Status" for the particular B573 will indicate "Connected" and the number of room gateway devices (ie the room device connected to the communication network) currently connected to that particular B573 will be displayed in the B573Media Connector window. This number will increase as additional rooms connect.

Also, the LCD display on the actual B573 that has become connected to the "B573_MC.exe" program will change from displaying the B573 type and software version to displaying:

- The name scripted in the "B573_MC.cfg" script file for the particular B573 IP address that has become connected.
- The number of room gateway devices currently connected to the particular B573.
- The current Windows system time of the Inncom server.



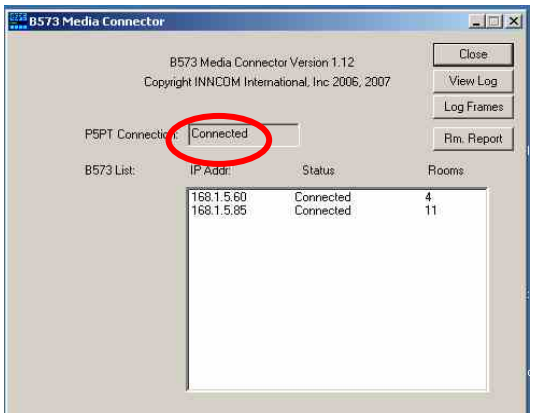
If after 1-2 minutes the "Status" for a defined B573 remains "Not Connected" and the LCD display on the particular B573 has not changed to the "connected" screen, verify the following:

- Verify the scripted IP address in the "B573_MC.cfg" script file for the B573 matches the IP address actually programmed into the particular B573. If you modify the "B573_MC.cfg" script file you must restart the "B573_MC.exe" program (see note below). If the scripted IP address is correct, verify the IP address programmed in to the particular B573 is correct and change to match the IP address scripted in the "B573_MC.cfg" file.

  Note: Before manually shutting down the "B573_MC.exe" program, check to see if the "Watchdog" program has been installed on the computer and configured to restart the "B573_MC.exe" program in case it is closed. If that is the case, used "Watchdog" to restart the "B573_MC.exe" program.

- Verify the particular B573 is configured as an FLN5 RS-485 bridge. Verify the line item for the particular B573 in the "B573_MC.cfg" script file has "FLN5: Y" at the end of the line.
- Verify the particular B573 is actually powered and connected to the network.
- Verify the TCP/IP network Port "3008" that the "B573_MC.exe" program and the B573's communicate over is not being blocked by a Firewall. Port 3008 must be open (which it typically is) to allow bi-directional traffic.

c. When the "B573_MC.exe" program connects to the "WinP5PT.exe" program (which can typically take 1-2 minutes), the "P5PT Connection" status will indicate "Connected"



At this point, you can start the Inncom "Netcom.exe", "DCenter.exe" (Data Center) and "WSCon.exe" (Workstation Concentrator) programs if not already running.
Also start the InnControl graphical user interface software and verify rooms begin to appear as communicating. You will need set the 5 digit "Room ID" in the room "gateway" device in each room if not already done.

If after several minutes pass after starting the "B573_MC.exe" program and the "P5PT Connection" status remains "Listening" because the "B573_MC.exe" program has not connected to the "WinP5PT.exe" program, verify the following:

Important:

- Verify the "WinP5PT.exe" program is actually running on the Inncom server. Start it if it is not running.
- Verify the "WinP5PT.p5s" script file located in the "C:\Inncom\Scripts" folder contains the "**$Media: B573 IP:localhost Port: 7002"** line as discussed on page 16. The network port defined MUST be "7002" as shown. . If you modify the "WinP5PT.p5s" script file to correct a problem with this line, you must save the "WinP5PT.p5s" script file and restart the "WinP5PT.exe" program.
- Verify the network "port" **7002** that the "WinP5PT.exe" program and the "B573_MC.exe" program communicate over is not being blocked by the Windows XP Service Pack 2 built-in Firewall. Port 7002 must be open (which it typically is) to allow bi-directional traffic between the "B572_MC.exe" and "WinP5PT.exe" programs.

1.9 Verifying Room Communication

Once the B573(s) is/are installed and configured, several methods exist to verify the Inncom room gateway device(s) are actually communicating with the B573(s).

1. You can verify room gateway communication locally at the B573 **. This feature is useful if you do not have access to the Inncom Server or a remote Inncontrol terminal. From the B573 front panel using the LCD display and keypad, enter the "1.2 Function" menu. This menu provides 3 sub-menus:

Ping Room - Ping a single room by entering the Room ID.

Show Rooms - Shows a count of current connected rooms.

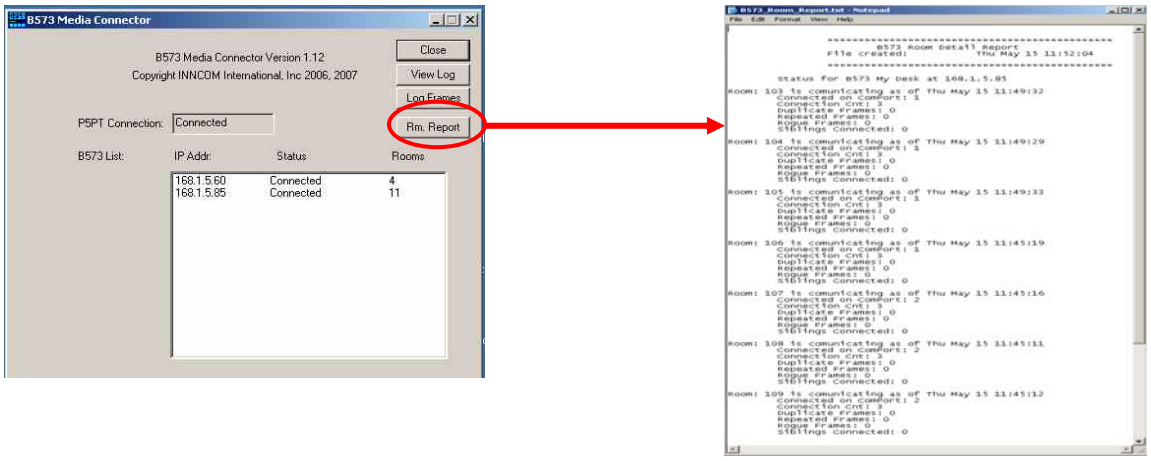
Scroll Room List - Scroll through a list of Room IDs from rooms that have reported.

** Note that you can only view rooms physically connected to that particular B573 and you must at a minimum have the "B573_MC.exe" program running with the "B573_MC.cfg" script file properly configured with the IP address of the B573.

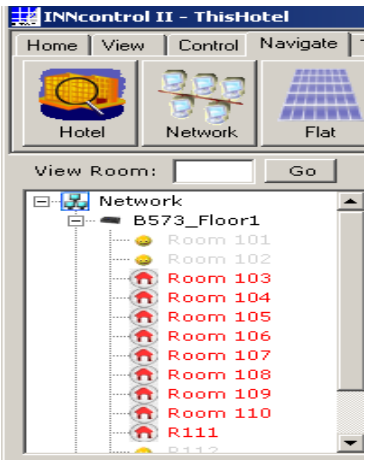
Refer to Section 1.2 Function Menu on page 26 of this document for additional details.

2. You can verify room gateway communication on the Inncom Server using the "B573_MC.exe" program.

On the "B573_MC.exe" window (you may need to "maximize" it because it normally runs minimized) , left-click the "Rm. Report" button and a text file will automatically open that displays a list of communicating rooms. This list will be organized by the particular B573 the room communicated through, and the actual COM Port of the B573 that the room communicated through will be indicated if the B573 is configured as an FLN5 Floor Bridge.



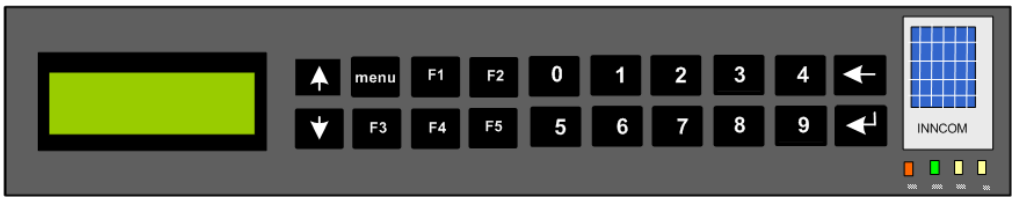
3. You can verify room gateway communication on the Inncom Server or remote INNControl terminal using the INNControl II program (WinP5PT.exe, Netcom.exe, WSCon.exe, DCenter.exe and B573_MC.exe programs must be running). If the "NetworkView" script file for INNControl II has been configured to add the particular B573 and the rooms that are supposed to be connected to it, open the "Network View" window and find the particular B573. Displayed under that B573 will be the rooms that should be connected to that B573 with the communication status indicated. Refer to the INNControl II User Guide for more details.



Section 2: Accessing and Using the B573 LCD Display Menu Screens

Section 1 covered installing the B573 , accessing the necessary B573 local menu functions from the B573 front panel to set the B573 IP address and subnet and configuring the "B573_MC.exe" (B573 Media Connector) software script file ("B573_MC.cfg") to connect to installed B573's.

Section 2 section covers using the various B573 menu options accessed using the B573 front panel LCD and buttons.



Front Panel Button Descriptions

Menu button. Press to enter the B573 menu screens.

Up-Arrow and Down-Arrow buttons. Used to scroll up or down through menus.

Number buttons. Use to enter numeric values in certain menus.

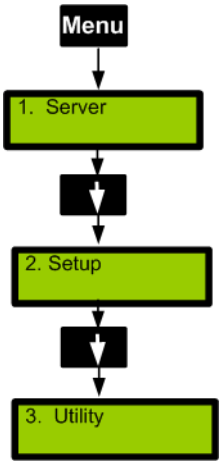
Back-Space button. Use to delete or clear a value from the display.

Enter button. Press to accept an entered value, or to enter a selected Menu.

F1 – F5 Function buttons. Currently Not Used

Entering the B573 Main Menus

To enter the B573 main menus, press the Menu button. The "**1. Server**" menu screen will appear first.



Three main menu groups are available and you can scroll up or down through the 3 main menu headings using the Up-Arrow or Down Arrow buttons.

1. **Server** - Provides functions to:
   - "Trace" messages passing through the particular B573 from connected rooms
   - "Ping" functions to check communication of a particular room connected to the particular B573.
   - Show lists of rooms communicating through the particular B573

   These "server" functions are only available once the B573 has "connected" to the "B573_MC.exe" software.
2. **Setup** – Provides functions to setup the network IP address and subnet of the B573, control the LCD display backlight and Re-Boot the B573.
3. **Utility** – Provides functions to view the network IP address and subnet of the B573, the network IP address of the Inncom computer running the "B573_MC.exe" program (if the B573 is connected to it) and reset the B573.

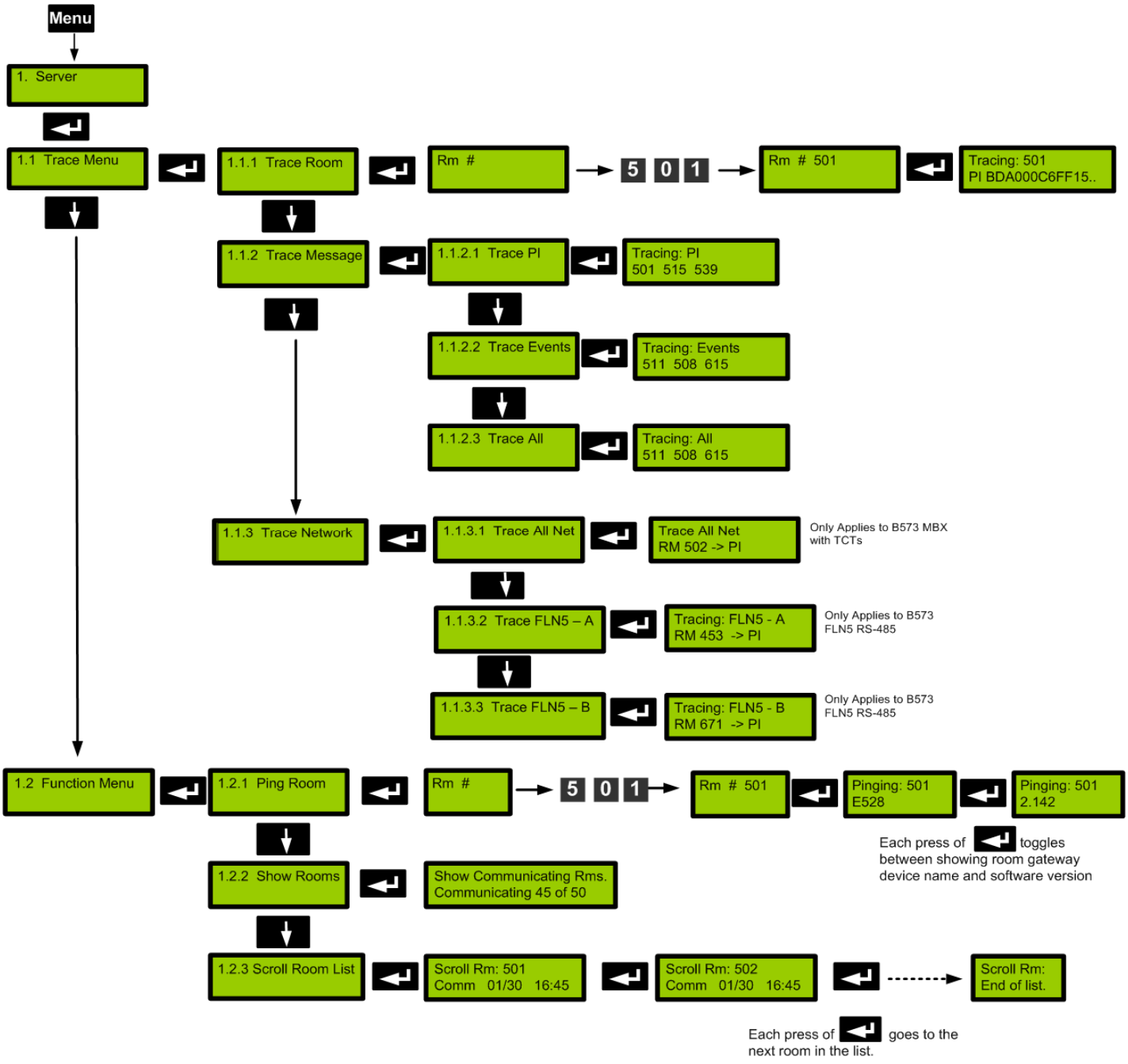
To enter the particular menu (ie 1,2 or 3), press the Enter button with the particular main menu displayed.

1. Server Menu

The “1. Server” menu contents are only available if the particular B573 has connected to the “B573 Media Connector” software (B573_MC.exe) running on the Inncom server. This menu is also referred to as the “connected” menu because the B573 must be “connected” to the “B573 Media Connector” (B573_MC.exe) program for any “Server” sub-menus to appear.

If the “B573_MC.exe” software is NOT running, or the particular B573 is NOT connected to the “B573_MC.exe” software because the IP address of the B573 does not match the IP address in the “B573_MC.cfg” script file, pressing the Enter ↵ button with “1. Server” in the LCD display will do nothing

The following image shows the entire “1. Server” menu and all of the available sub menus.

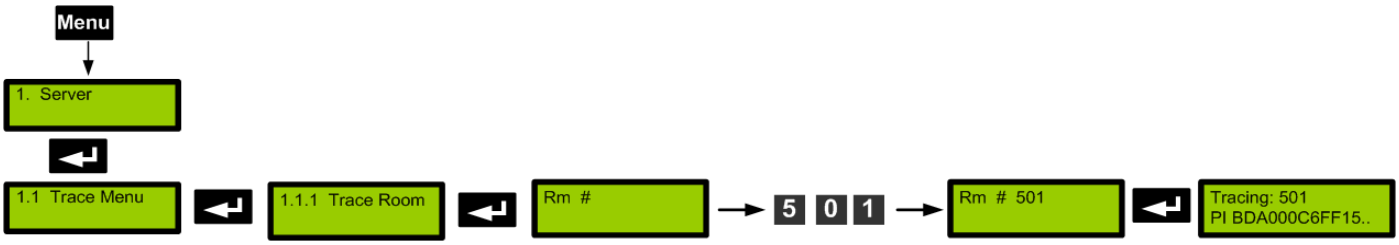


1.1 Trace Menu

The "1.1 Trace" menu provides access to 3 sub-menus that provide tracing functions for the data and messages passing through the B573.

1.1.1 Trace Room

Accessing the **1.1.1 Trace Room** menu provides the ability to trace any messages originating from the selected room. These messages will either be a "process image" (PI) or an event or reply (QER).



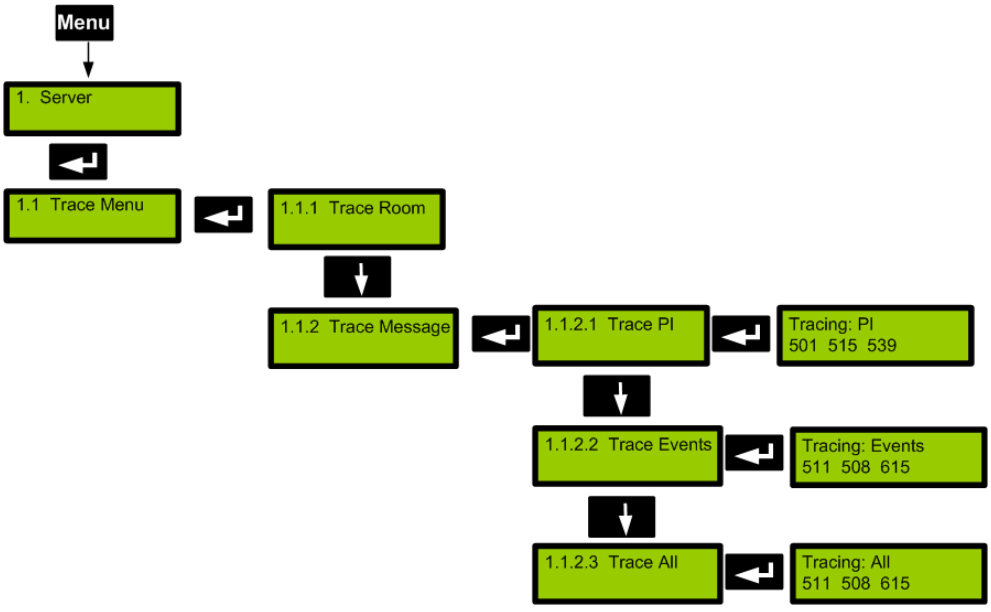
1.1.2 Trace Message

Accessing the **1.1.2 Trace Message** menu provides the ability to trace specific message types.

1.1.2.1 Trace PI – The B573 displays "Tracing: PI" on the first line, and room IDs of any rooms reporting a process image on the second line.

1.1.2.2 Trace Events – The B573 displays "Tracing: Events" on the first line, and room IDs of any rooms reporting an event or query message appear on the second line.

1.1.2.3 Trace All – The B573 displays "Tracing: All" on the first line, and room IDs of any rooms reporting any message appear on the second line.



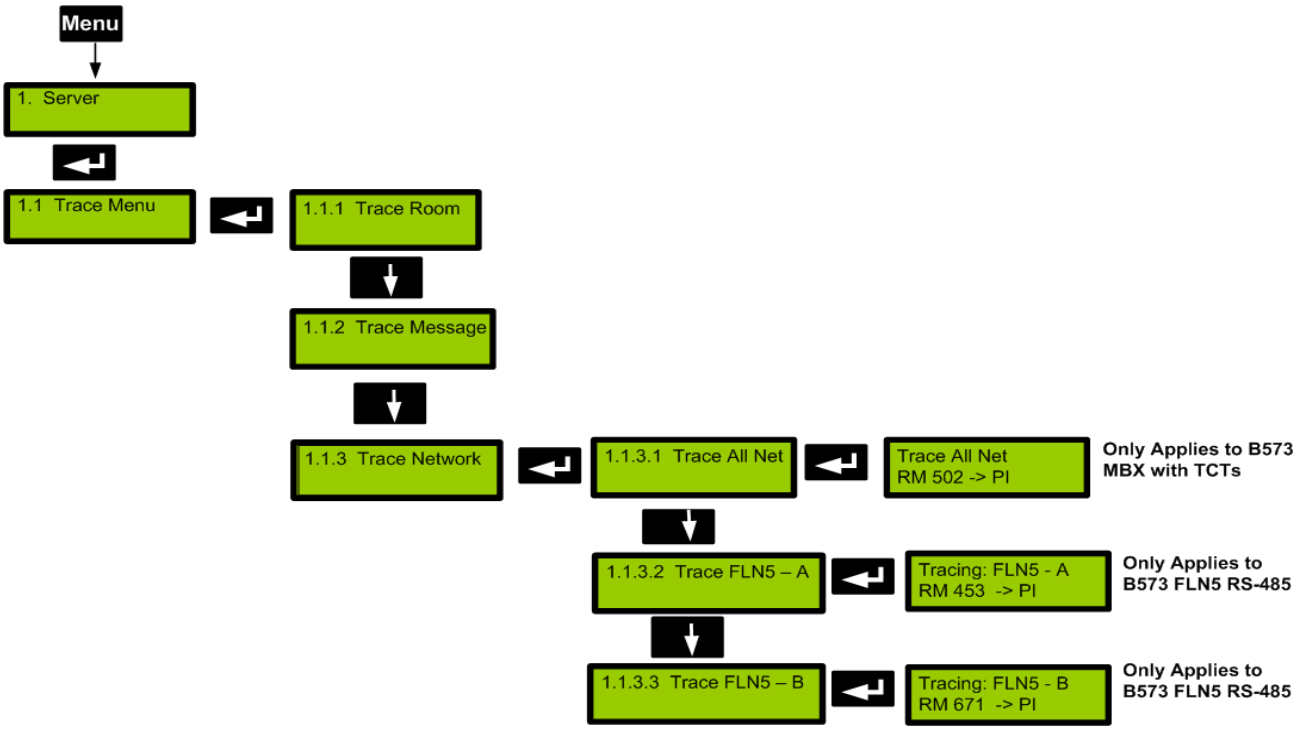
1.1.3 Trace Network

Accessing the **1.1.3 Trace Network** menu provides the ability to trace messages either originating from or addressed to rooms on the selected network segment. Each indicator shows the Room ID, a direction indicator of "->" for messages FROM the room of "<-" for messages TO the room, and an indicator of the message type.

1.1.3.1 Trace Net All: This option will only be available if the B573 is configured as an "MBX" B573 to support TCTs. Shows messages for all rooms (via the TCT in the room) connected to the B573 MBX. "Tracing: All Net" will be displayed on the first line and the room# and message on the second line.

1.1.3.2 Trace FLN5-A: This option will only be available if the B573 is configured as an FLN5 RS-485 Floor bridge. Shows messages for all rooms connected to the COM_A port on the back of the B573. "Tracing: FLN5-A" will be displayed on the first line and the room# and message on the second line.

1.1.3.3 Trace FLN5-B: This option will only be available if the B573 is configured as an FLN5 RS-485 Floor bridge. Shows messages for all rooms connected to the COM_B port on the back of the B573. "Tracing: FLN5-B" will be displayed on the first line and the room# and message on the second line.



1.2 Function Menu

1.2.1 Ping Room: Enter the room number you wish to "ping" using the number buttons and press the Enter button.
The first line of the B573 will display "Pinging: XXXX where XXXX is the room# just entered. The second line initially shows "Please Wait.." as the "ping" command is sent to the selected room. If 30 seconds pass without a reply, "Failed…" will appear.
If the room gateway device in the selected room replied, the hardware type ("E528 , TCT, etc) and software version of the room gateway device will alternately appear on the B573 LCD display each time you press the Enter button.

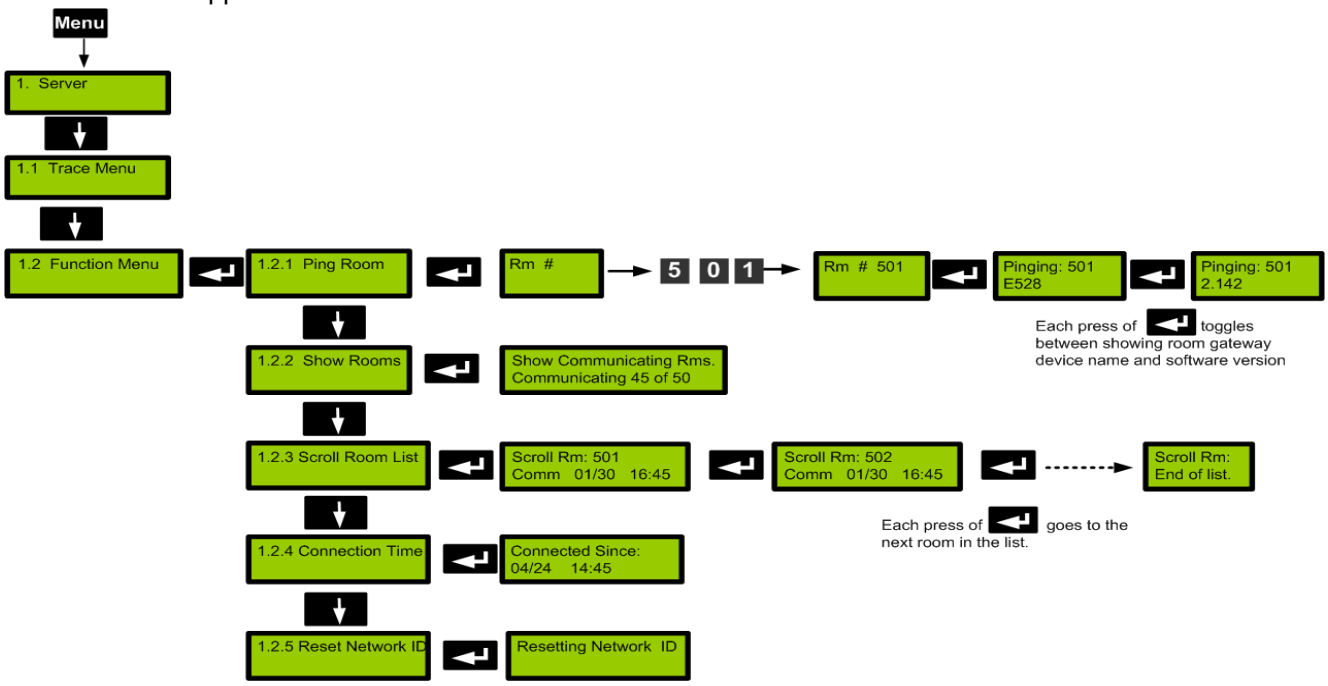
1.2.2 Show Rooms: This shows a count of the communicating rooms on the particular B573.
The first line displays "Show Communicating Rms"
The second line displays:

- If an MBX TCT Router B573, "Communicating x of y" where "x" is the number of communicating room TCTs and "y" is the scripted (in the B573_MC.cfg script file) number of expected rooms .
- If an FLN5 RS-485 B573, "Com A = x, Com B = " where "x" and "y" are the number of rooms actually communicating on the COM_A and COM_B RS-485 com port of the particular B573.

1.2.3 Scroll Room List: Allows user to manually scroll through a list of rooms that have reported to the Inncom server so far. Use the UP and DOWN arrow buttons to scroll. Once all reporting rooms have been displayed, "End of List" will appear.
The text "Scroll Rm:" and the room number will appear along the top of the LCD display, and "Comm" (communicating) or "Not Comm" (Not communicating) will appear on the second line to indicate the communication status of the particular room.

1.2.4 Server Connect Time: Displays the date and time the Inncom server most recently established a connection to the particular B573. The first line diplays "Connected Since:". The second line displays "XX/XX XX:XX" showing the Month and Day followed by the time.

1.2.5 Reset Network ID: This option will only appear if the particular B573 is programmed as an FLN5 RS-485 floor bridge. Use this option to Reset the value of the Network ID used in polling rooms connected to the RS-485 network to "0". Doing this "refreshes" what rooms the B573 thinks it has connected to it. "Resetting Network ID" will be displayed on the first line and "Done" will appear on the second line once the reset is finished.

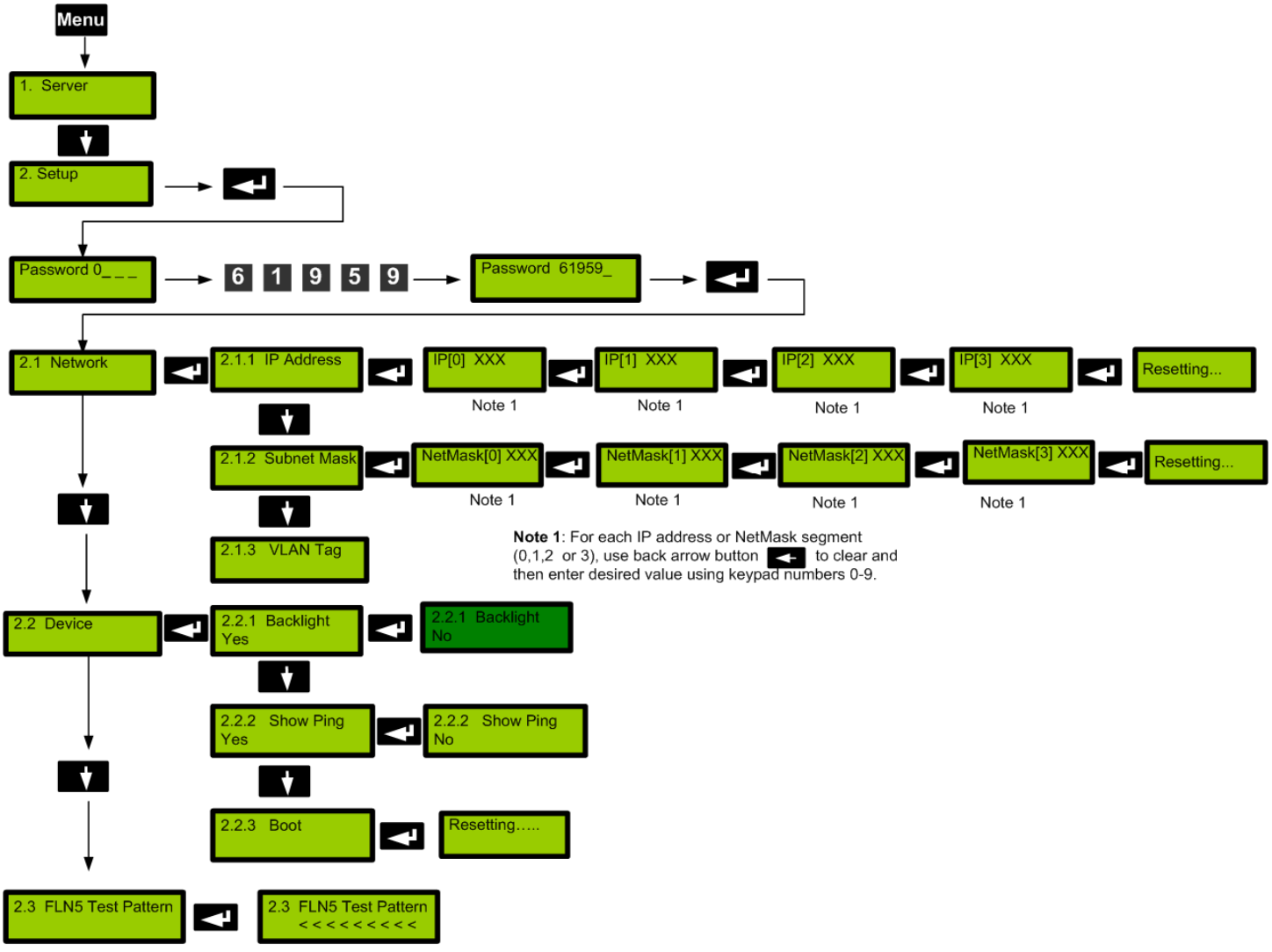


2. Setup Menu

Entering the **2. Setup** menu requires you to enter a numeric password using the number buttons on the B573. Two passwords exist as shown below. These passwords are hard coded into the B573 and can **NOT** be changed:

61959 : "Normal Setup Menu" access. Grants access to Setup menus **2.1 Network**, **2.2 Device** and **2.3 FLN5 Test Pattern** (only for B573 configured as FLN5 RS-485 Floor bridge).

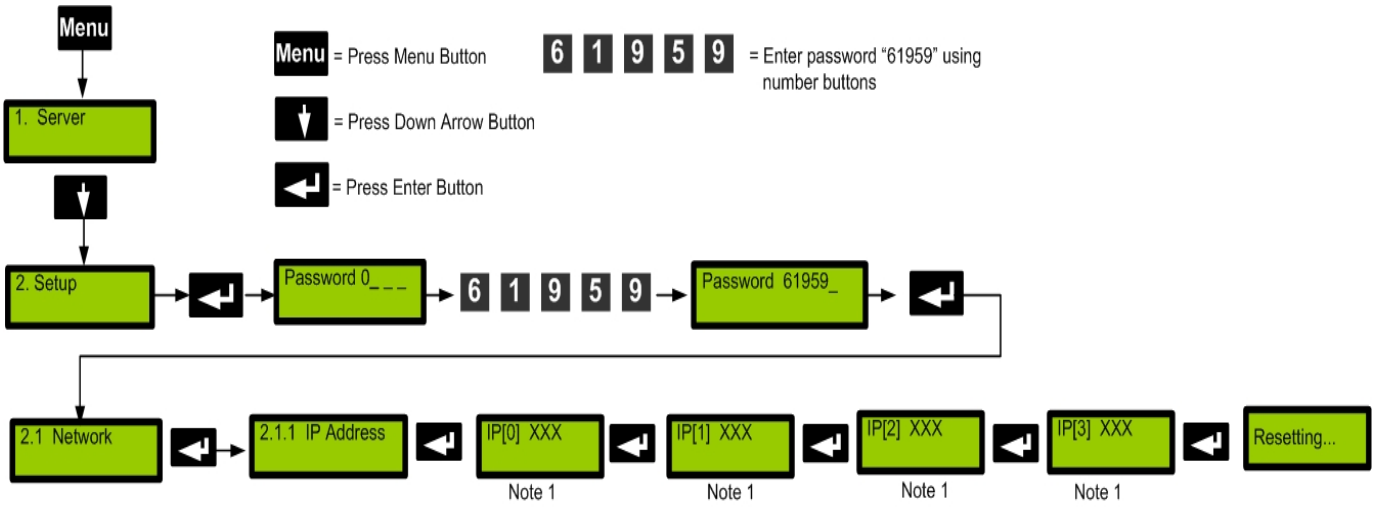
51962 : "Manufacturing Setup Menu" access. Grants access to Manufacturing Setup menus **2.10 MAC Address** , **2.11 Manufacturing Tests** , and **2.12 NVRAM**. The functions available in the "Manufacturing Setup Menus" are normally not used by the typical user. The only function that would possibly be used is to access the **2.12 NVRAM** menu to change the "TCT Port Offset" value if the B573 is configured as an "MBX" to support TCTs. This is covered in Section 1.5 on page 15 of this document.



2.1 Network Menu

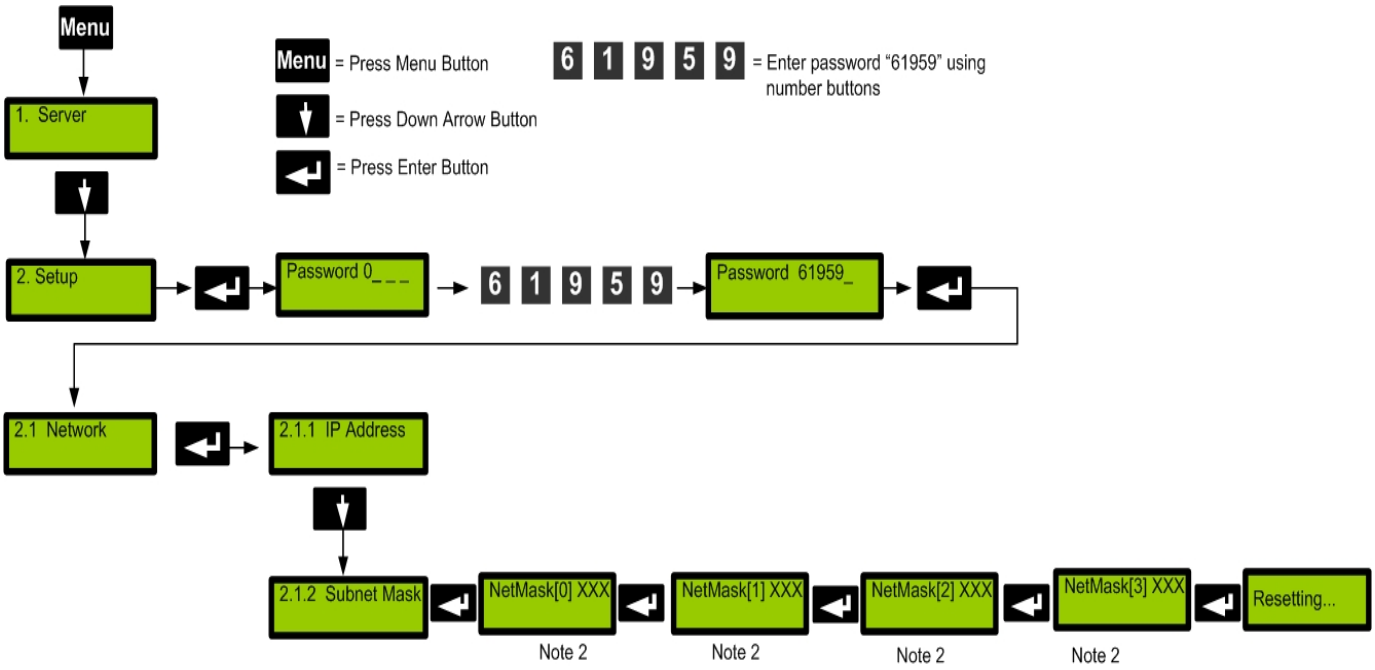
From the 2.1 Network menu, you can set the Network IP Address and Subnet of the B573

2.1.1 IP Address - Set IP Address of the B573 using the following steps :



Note 1: For each IP address segment (IP[0] to P[3]), if current value is correct press the Enter button to go to the next segment.
To change a segment, use the back arrow button to clear the current value, then enter desired value using keypad numbers 0-9.
The B573 will automatically Reset after entering the IP[3] value.

2.1.2 Subnet Mask – Set Network Subnet Address in the B573 using the following steps:



Note 2: For each Subnet Mask segment (NetMask[0] to NetMask[3]), if current value is correct press the Enter button to go to the next segment.
To change a segment, use the back arrow button to clear the current value, then enter desired value using keypad numbers 0-9.
The B573 will automatically Reset after entering the NetMask[3] value.

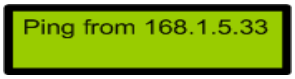
2.1.3 VLAN Tag - Not Required or utilized at this time

2.2 Device Menu

The 2.2 Device Menu provides the following functions:

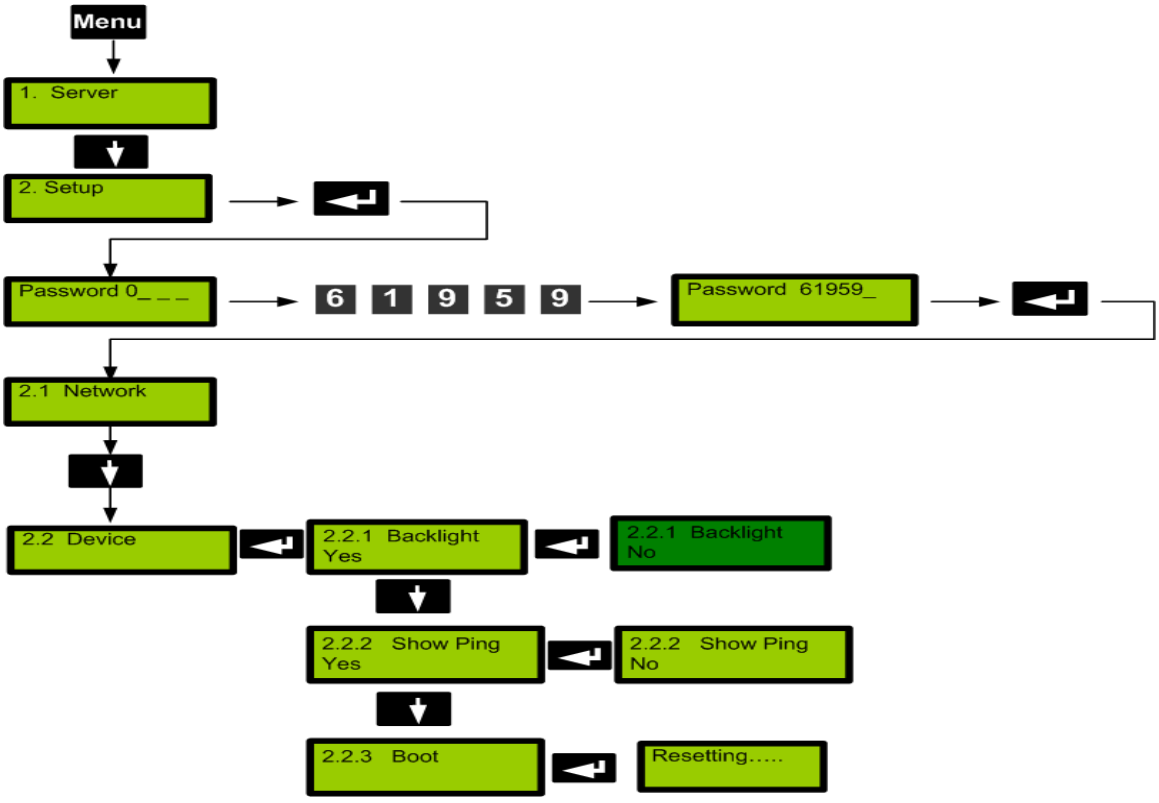
2.2.1 Backlight : Turn the B573 LCD display backlight On or Off

2.2.2 Show Ping : Turn On or OFF the setting to visually and audibly indicate the B573 IP Address is being "pinged" from a computer. When On, if you "ping" the B573 IP address from a computer, the B573 will emit an audible "click" and display the IP address of the computer "pinging" the B573.



B573 "pinged" from a computer with IP address 168.1.5.33

2.2.3 Boot : Labeled "Boot", but actually only Resets the B573. It does NOT change or reset the B573 IP Address or Subnet, or any other settings.



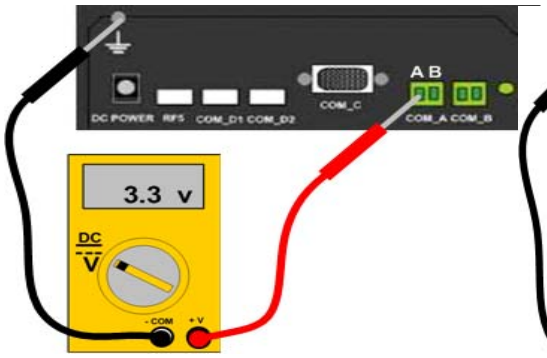
2.3 FLN5 Test Pattern Menu

The **2.3 FLN5 Test Pattern** function forces the B573 to generate a fixed 1Khz test pattern signal on both the COM_A and COM_B RS-485 outputs on the rear of the B573. This test pattern results in a fixed DC voltage on the "A" and "B" terminals for each FLN5 Com Port (COM_A and COM_B)

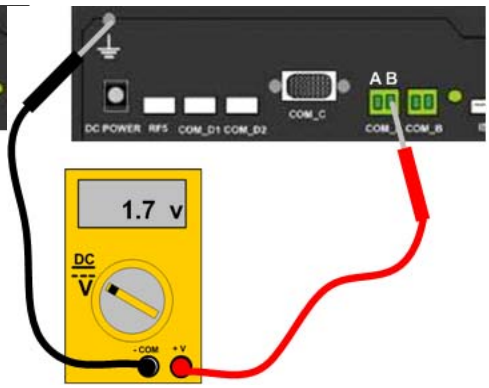
Press any button on the B573 front panel to STOP the FLN5 test pattern and Reset the B573.

With this test signal present, a fixed, known DC voltage will be present at the COM_A and COM_B RS-485 outputs of the B573 that can be measured with a meter set to measure DC voltage. This can be used to verify the COM_A and COM_B RS-485 outputs are working and are not damaged.

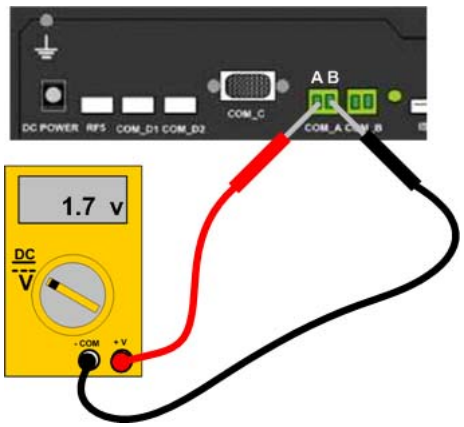
"A" to Earth Ground = **3.3 VDC**



"**B**" to Earth Ground = **1.7 VDC**

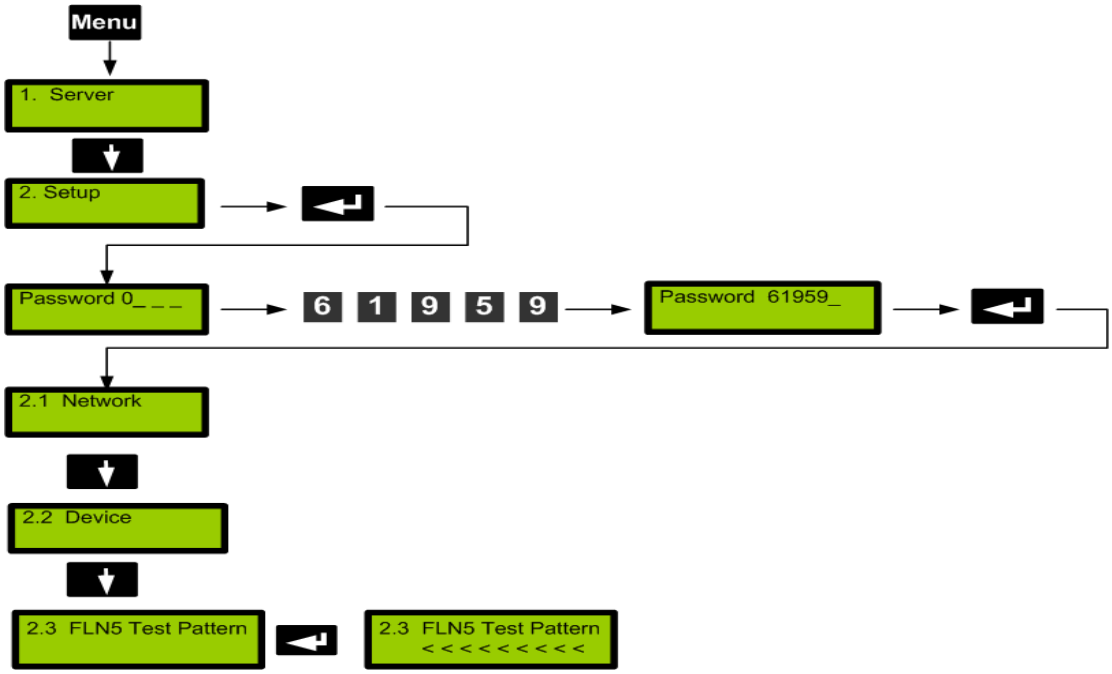


"**A**" to "**B**" = **1.7 VDC**



These same voltages should also be measurable at the 66 / 110 punch-down block or at the FLN5/CINET twisted pair connections at the room thermostat (for example the Blue (A) and Green (B) wires on E528 low voltage harness)

IMPORTANT: The voltages listed above are ONLY valid with the B573 generating the FLN5 Test pattern. **DO NOT** assume you will see these voltages with the B573 operating normally.



3. Utility Menu

Entering the **3. Utility** menu provides access to 3 sub-menus that provide the following functions:

3.1 View IP Setup

Displays the IP address and Subnet mask currently programmed into the B573. This is display only. You must go to the **2.1 Network** menu to change the B573 IP Address or Subnet Mask.

3.2 View Server Address

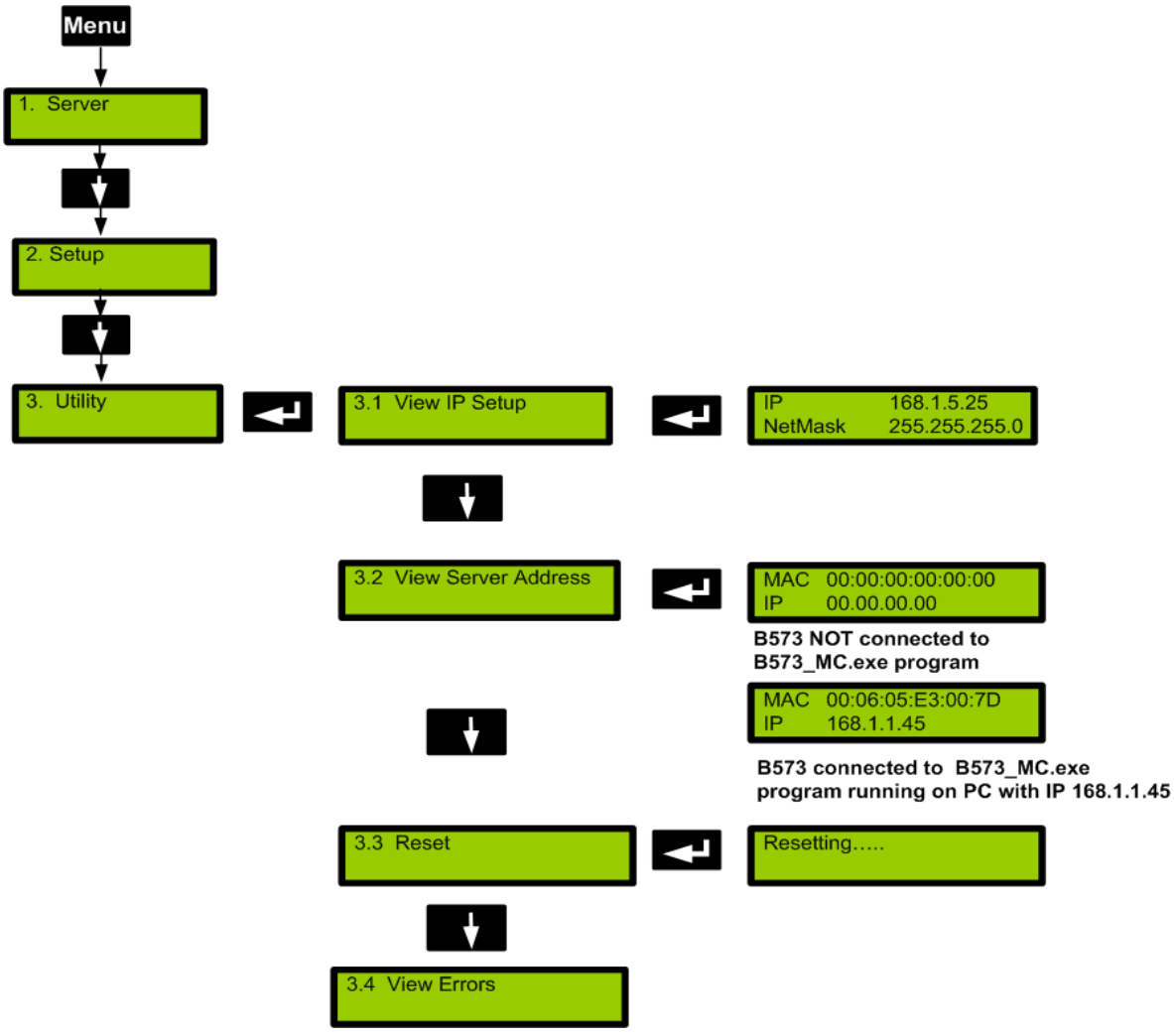
If the B573 has connected to the B573_MC.exe software, the IP Address and network MAC address of the Inncom Server computer (ie computer running the B573_MC.exe program) will be displayed.
If the B573 is NOT connected to the B573_MC.exe program, no MAC address or IP address will be displayed.

3.3 Reset

Resets the B573.

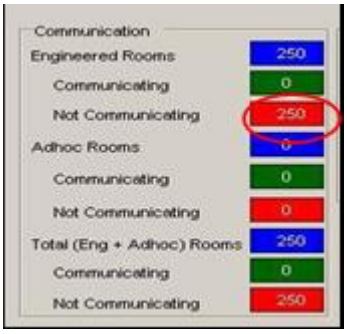
3.4 View Errors

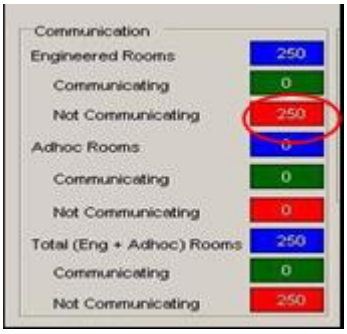
Details not covered in this document.



B573 Troubleshooting

Problem	Possible Cause	What to Check
B573 Front LCD Display is blank	1. B573 has no power applied.	1. Review the section on powering the B573 on page 11.
B573 Front LCD does not show the number of connected rooms to that B573 or the time, but only shows the B573 software version. You see this:  But you should see this: 	1. The B573 is not connected to the network. 2. The "B573_MC.exe" program is not running on the Inncom Server. 3. The IP address for the particular B573 is not defined (or defined incorrectly) in the "B573_MC.cfg" script file. 4. The IP Address programmed in the B573 does not match the IP Address defined in the "B573_MC.cfg" script file.	1. Is the network patch cable that connects the B573 to the network connected? 2. Verify the "B573_MC.exe" program is running on the Inncom server. If not, start it. If the B573_MC.exe program is running, there should be an icon for it in the Windows system tray in the lower right corner of the display  Or, if the program is not minimized you will see the "B573 Media Connector" window open on the desktop.  3. Refer to the "Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)" section on page 16. 4. Every B573 must have its IP address defined in the "B573_MC.cfg" script file. If you change the IP Address in the B573, you must update the IP address in the "B573_MC.cfg" script file to match. Refer to the "Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)" section on page 16.

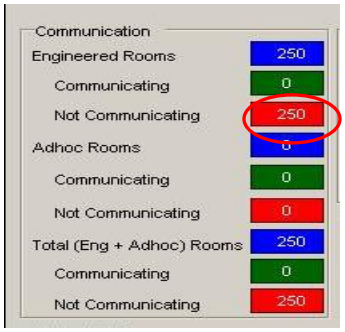
Problem	Possible Cause	What to Check
My property has TCT room gateway devices and a single B573 MBX installed, and no rooms appear as communicating on the INNControl software running on the Inncom server or terminal. 	1. Not all required Inncom software programs are running on the Inncom server. 2. A problem exists with the network hardware or wiring that connects the B573 MBX to the Inncom Server. 3. The IP address for the B573 MBX is not defined (or is defined incorrectly) in the "B573_MC.cfg" script file. 4. The IP Address programmed in the B573 does not match the IP Address defined in the "B573_MC.cfg" script file. 5. The "B573_MC.cfg" script file is not present in the "C:\Inncom\Scripts" folder on the Inncom Server. 6. The "TCT Port Offset" value set into the B573 MBX is incorrect.	1. Verify "WinP5PT.exe", "B573_MC.exe", "Netcom.exe", "WSCon.exe", "DCenter.exe" programs are running on the Inncom server. 2. Verify the B573 MBX is connected to the hotel "guest" network (ie the network that all the room TCT devices are connected to). * Is the network patch cable plugged into the B573's network port? * Has the network firewall that separates the "guest side" network (containing the B573 MBX and TCTs) and the "Admin" network (containing the Inncom Server) been configured to pass network port **3008** traffic? 3. Review the section on configuring the "B573_MC.cfg" script file on page 16 and verify the correct IP address of the B573 is entered correctly. 4. Every B573 must have its IP address defined in the "B573_MC.cfg" script file. If you change the IP Address in the B573, you must update the IP address in the "B573_MC.cfg" script file to match. Refer to the "Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)" section on page 16. 5. Review the section on configuring the "B573_MC.cfg" script file and create and save this file as outlined in the "Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)" section on page 16. 6. Review the section on checking/configuring the B573 MBX "TCT Port Offset" setting on page 15.

Problem	Possible Cause	What to Check
My property has multiple B573 FLN5 RS-485 floor bridges installed, and <u>not a single room</u> appears as communicating on INNControl software running on the Inncom server or terminal.  	1. Not all required Inncom software programs are running on the Inncom server. 2. A problem exists with the network hardware or wiring that connects the B573(s) to the Inncom Server. 3. The “B573_MC.cfg” script file is not present in the “C:\Inncom\Scripts” folder on the Inncom Server. 4. The IP addresses of the B573(s) are not defined correctly in the “B573_MC.cfg” script file. 5. Each line item in the “B573_MC.cfg” script file that defines the B573 connections is missing the “FLN5: Y” tag.	1. Verify “WinP5PT.exe”, “B573_MC.exe”, “Netcom.exe”, “WSCon.exe”, “DCenter.exe” programs are running on the Inncom server. 2. Verify the B573(s) is/are connected to the same network as the Inncom server. * Is the network patch cable plugged into the B573’s network port? 3. Review the section on configuring the “B573_MC.cfg” script file and create and save this file as outlined in the “Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)” section on page 16. 4. Review the section on configuring the “B573_MC.cfg” script file on page 16 and verify the correct IP address of the B573(s) is/are entered correctly. 5. The line item in the “B573_MC.cfg” script file for any B573 configured as an FLN5 RS-485 Floor Bridge must have “FLN5: Y” tag at the end of the line. Refer to the “Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)” section of page 16 for details.

Problem	Possible Cause	What to Check
My property has multiple B573 FLN5 RS-485 floor bridges installed, and a GROUP of rooms appear as NOT communicating on the INNControl software running on the Inncom server or terminal. Other rooms are communicating.	1. The RS-485 twisted pair wiring from those rooms is not connected to a B573, or there is an issue with the wiring (ie rooms not punched down, wiring shorts/opens, wiring punched down backwards,etc). 2. The B573 that the missing rooms connect to is not powered, is not connected to the network , has failed, or the COM port on the particular B573 that the missing rooms connect to is bad. 3. There is no line item in the "B573_MC.cfg" script file for the particular B573 that the missing rooms should be connected to. 4. The IP addresses of the B573(s) that the missing rooms should be connected to is/are not defined correctly in the "B573_MC.cfg" script file. 5. The line item in the "B573_MC.cfg" script file for the particular B573 with the missing rooms is missing the "FLN5: Y" tag.	1. Verify the green connector where the RS-485 wiring pair from the rooms connects to the B573 is fully plugged into the B573 Com Port, or that the actual wiring is fully inserted in to the green connector. Also verify the wiring pair was not connected to the green connector plug backwards, 2. Try to determine if the missing rooms all connect to a particular B573, or even to a particular COM port (COM_A or COM_B) on the B573. Create a "WinP5PT NetDev" report from the "WinP5PT" program running on the Inncom server (select "Cmd>Write Netdev File" from the WinP5PT menu bar). This will create a text file named "P5PT_NetDev.txt". Find the "Rm ID" of the missing rooms in the left most column of this text file and then look across to the right and you will see the IP address of the B573 that the room last communicated through. In addition, the B573 COM port that the particular room last communicated through will be the 2nd pair of numbers in the MAC address. A "01" means COM_A, a "02" means COM_B. Example: MAC 00.**01**.82.0A.00.68 = COM_A MAC 00.**02**.82.00.00.6A = COM_B 3. Review the section on configuring the "B573_MC.cfg" script file on page 16 and verify the particular B573 is defined correctly in the "B573_MC.cfg" script file. 4. Review the section on configuring the "B573_MC.cfg" script file on page 16 and verify the particular B573 is defined correctly in the "B573_MC.cfg" script file. 5. The line item in the "B573_MC.cfg" script file for any B573 configured as an FLN5 RS-485 Floor Bridge must have "FLN5: Y" tag at the end of the line. Refer to the "Configure and Save B573 Media Connector Software Script File (B573_MC.cfg)" section of page 16 for details.

Troubleshooting Examples

Problem:
The thermostats at my property communicate through a B573 bridge (or multiple B573 bridges), but not a single room appears as communicating on the INNControl software.



Probable Causes :

1. The “B573_MC.exe” (B573 Media Connector) program is <u>not</u> running.
2. If the “B573_MC.exe” program is running, then the “B573_MC.cfg” script file that tells the “B573_MC.exe” program the IP addresses of the actual B573’s may be missing or improperly setup.
3. If the B573(s) are configured for FLN5 RS-485 twisted pair communication, the “FLN5: Y” tag may be missing from the end all line items in the “B573_MC.cfg” script file

The "B573_MC.exe" (B573 Media Connector) software is not running on the Inncom server computer. When running, the B573_MC.exe program "links up" with the actual B573 bridges and makes data from the B573 bridges available to other Inncom programs running on the Inncom server (WinP5PT, Netcom,etc). No rooms would appear as communicating if the "B573_MC.exe" software was not running.

If the B573_MC.exe program is running, there should be an icon for it in the Windows system tray in the lower right corner of the display (Figure A.1), or if the program is not minimized you will see the "B573 Media Connector" window open on the desktop (Figure A.2).

If it appears the B573 Media Connector software is NOT running, start it by double-clicking on the B573_MC shortcut (Figure A.3) on the desktop. Also determine why the B573_MC.exe program was not running, because it should always be running on the Inncom server computer.

Figure A.1

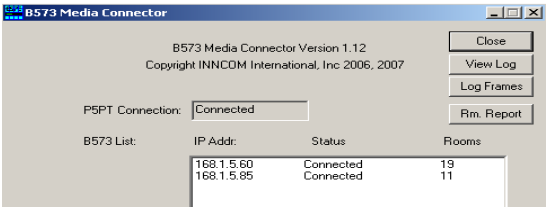


Figure A.2

Figure A.3

If the B573_MC.exe program IS running but there is no indication of communicating rooms on the INNControl software, there could be a problem with the script file for the “B573_MC.exe” program. This script file is a text file named “B573_MC.cfg” that must be present in the "C:\Inncom\Scripts" folder on the Inncom server. An example of this file is shown by Figure A.4 below. This file defines the IP address(s) of the installed B573(s). Verify this file exists and that the IP Addresses of any B573’s installed are correctly defined in the file.

A common mistake that has been made when editing or creating the “B573_MC.cfg” script for use with B573s configured for FLN5 mode (ie RS-485 Com_A and COM_B are used) is that the “**FLN5: Y**” tag has been left off of the end of each “$B573: IP:…….” line in the “B573_MC.cfg” script (see Figure A.4 below). The “FLN5: Y” is not used <u>only</u> when using a single B573 set to “MBX” mode to be used with TCT’s. It must be there for FLN5 Floor bridge mode B573s.

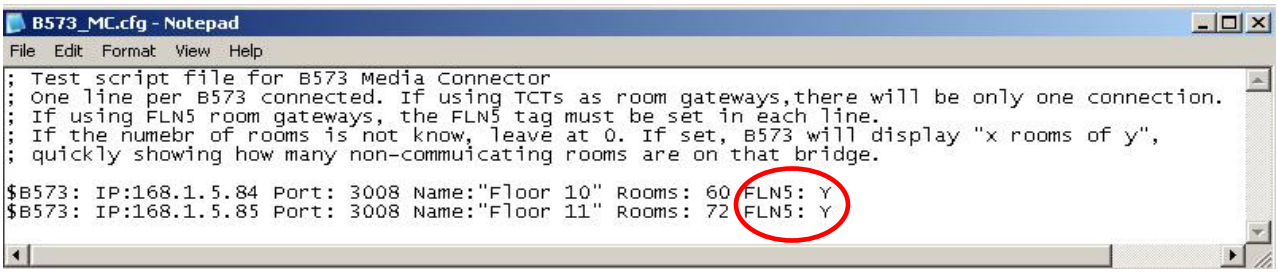


Figure A.4

Possible Cause 2:
A network problem is preventing the B573(s) from communicating with the “B573_MC.exe” program running on the Inncom server computer. This could include:

- The CAT5 network cable that connects the B573(s) to the hotels Ethernet network is not connected between the B573 and the network hardware (ie hub or switch) correctly, or the cable is bad.

- The hub or switch that the B573(s) is connected to is not powered.

- The Inncom server computer running the WinP5PT.exe, B573_MC.exe and Netcom.exe programs is physically not connected to the same network that the B573’s are connected to. Or the Inncom Server is assigned network IP address and subnet are not compatible with the IP address / subnet assigned to the B573.

  For example, if the Inncom Server was assigned IP address 168.1.1.50 / Subnet 255.255.255.0 but the B573 is assigned IP address 168.1.2.10 / Subnet 255.255.255.0, the B573 and the B573_MC.exe program would not be able to communicate.

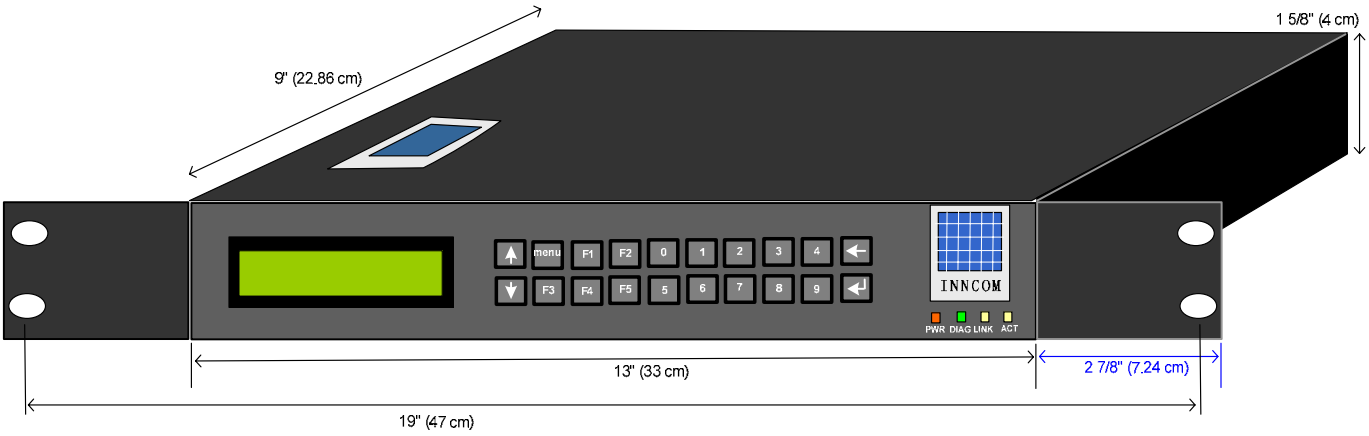
- The network IP address(s) programmed into to the particular B573(s) does not match the IP address listed in the “B573_MC.cfg” script file located in the “C:\Inncom\Scripts” folder on the Inncom Server. Refer to page 14 of this document which provides details on how the B573 IP address is defined in the “B573_MC.cfg” script file. You either must change the IP address of the B573 to match the IP address defined in the “B573_MC.cfg” script file, or alter the script file to match the IP address programmed into the B573.

The easiest test you can do to check the network connectivity between the B573 router and the Inncom server computer is to "Ping" the B573 from the Inncom server computer. You must first know the network IP address of the particular B573 . This may be written on a sticker applied to the particular B573, but the easiest way is to actually read the IP address from the B573 "Utility" menu on the actual B573. Refer to section 3.1 View IP Setup on page 31.

Technical Specifications

Table 1. Technical Specifications

Power requirement	12VDC (regulated), 300mA Line voltage power supply optional 100-240 50/60Hz , 1A
Storage	68-140 F, non condensing (20-60 C)
Operating	50-104 F, non condensing (10-40 C)
Display	LCD, 2x24 digits, alphanumeric
Backlight	On/off – user selectable
Protocols	ARP, ICMP, UDP, IP4
MAC addresses	00:06:05:xx:xx:xx
IP addressing	Static, configurable
Ethernet	10 baseT
VLAN	Optional, enforceable
Approvals	FCC Part 15, CEMark
Dimensions	See Figure 4.
Weight	5 lbs

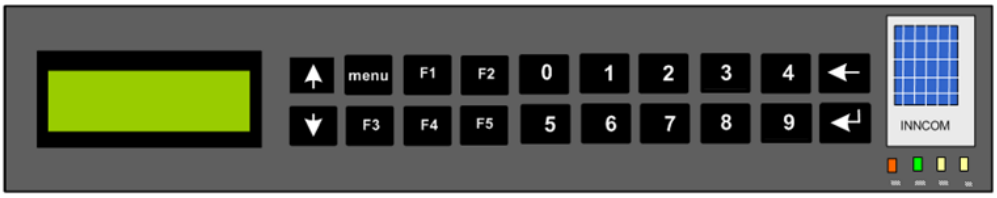


B573 Dimensions, Including Mounting Brackets

Ordering Specifications

B573 powered from 12VDC Only:	Inncom P/N 01-9981.
120VAC to Dual 12VDC power supply	Inncom P/N 04-4040
B573 with optional 100/240 VAC power supply:	Inncom P/N 01-9981.A1
B573 120VAC power supply:	Inncom P/N 02-9978
6 ft AC Line Cord (for 01-9981.A1 / 02-9978):	Inncom P/N 04-1012
Mounting Brackets:	Inncom P/N 53-8075

B573 Front Panel Button and LED Descriptions



Front Panel Button Descriptions

Menu button. Press to enter the B573 menu screens.

Number buttons. Use to enter numeric values in certain menus.

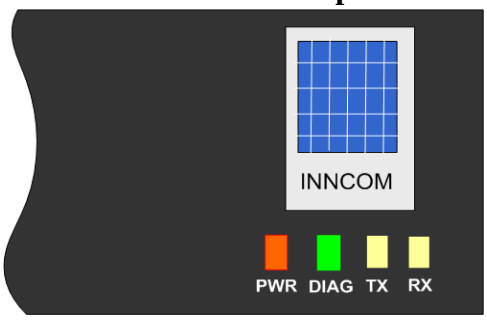
Up-Arrow and Down-Arrow buttons. Used to scroll up or down through menus.

Back-Space button. Use to delete or clear a value from the display.

Enter button. Press to accept an entered value, or to enter a selected Menu.

F1 – F5 Function buttons. Currently Not Used

Front Panel LED Descriptions



RED "PWR" LED : On when power is applied to B573.

GREEN "DIAG" LED : Blinks twice rapidly each second when B573 **IS** connected to "B573_MC.exe" program

Blinks once each second when B573 **IS NOT** connected to "B573_MC.exe" program. Verify the "B573_MC.exe" program is running and verify the IP Address of the B573 matches the defined IP Address in the "B573_MC.cfg" script file.

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YELLOW "TX" LED : Flashes whenever B573 sends data out from its TCP/IP network port.

YELLOW "RX" LED : Flashes whenever B573 receives data in from its TCP/IP network port.

References

B573 Engineering Manual

INNCOM B573 Media Connector User's Guide

IWAN User's Manual

Note: These manuals will be provided by INNCOM upon request.

Document Revision History

Table 2. Document Revision History

REVISION	DATE ISSUED	REASON FOR CHANGE
First issue 1.0	5/2/08	
1.1	5/5/08	Added description of Front Panel buttons and LEDs.
1.2	5/15/08	Added additional details to section 1.2 and added section 1.9.