
TELOS SERIES 2101

Advanced All Digital Multi-line Multi-studio Broadcast Telephone System



USER'S MANUAL VOLUME 2

PART III – The Series 2101 Hub

PART IV – Series 2101 Studio Interface

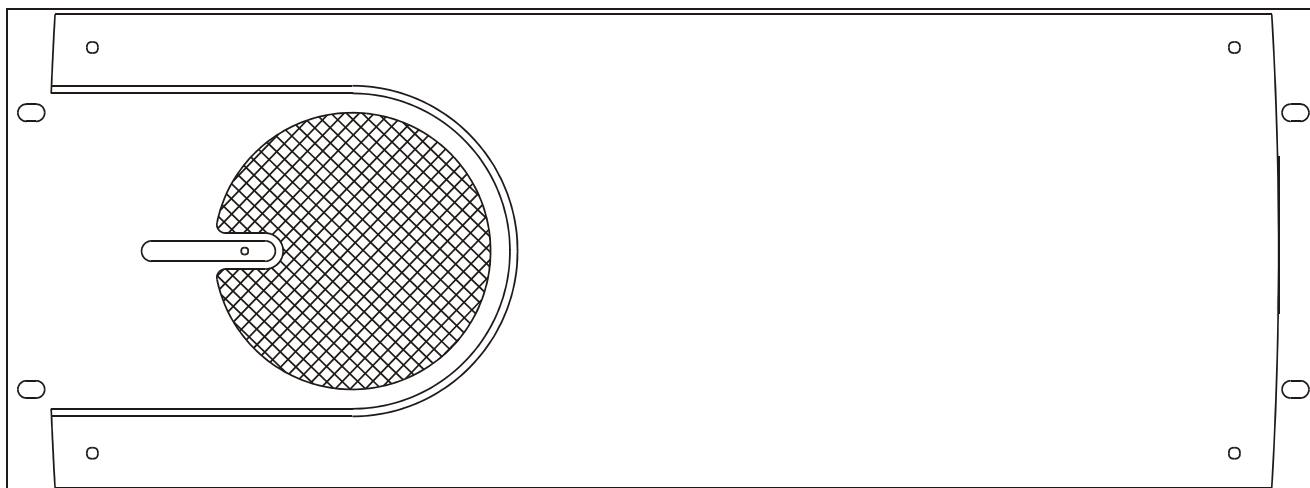
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TELOS SERIES 2101

Advanced All Digital Multi-line Multi-studio Broadcast Telephone
System

PART III

The Series 2101 Hub



V 2.0

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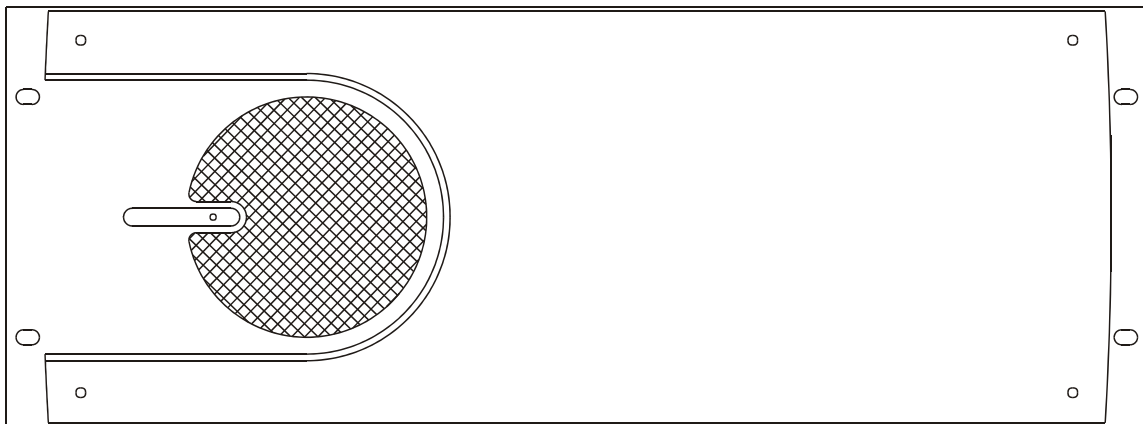
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1 Introduction – What is the Series 2101 Hub?

The 2101 Hub is a highly specialized microprocessor-controlled telephone switch, optimized for easy management and flexible control. It supports up to two Telco Trunk Interfaces cards to connect to the digital trunks from your telephone company. Each Telco interface supports one or two Telco circuits, for a total capacity of up to four circuits. The 2101 hub also has up to 32 T-Link interface ports that are the “Line side” interface from the System Hub to the 2101 Studio Interface(s) and Desktop Directors™. Each Studio Interface acts similarly to a “Key” telephone system, with 12-24 “lines” coming from the Hub.

A significant feature of the system hub is the fact that it can be easily configured with a number of *Show Configurations*. Each *Show Configuration* assigns a specific group of “line appearances” to a specific Studio Interface. Lines may be shared among one or more *Show Configurations*, if desired.

An IP (Internet Protocol) connection over 10/100 Base-T Ethernet allows communication directly between the 2101 Hub and the Studio Interfaces to accomplish coordination and control.

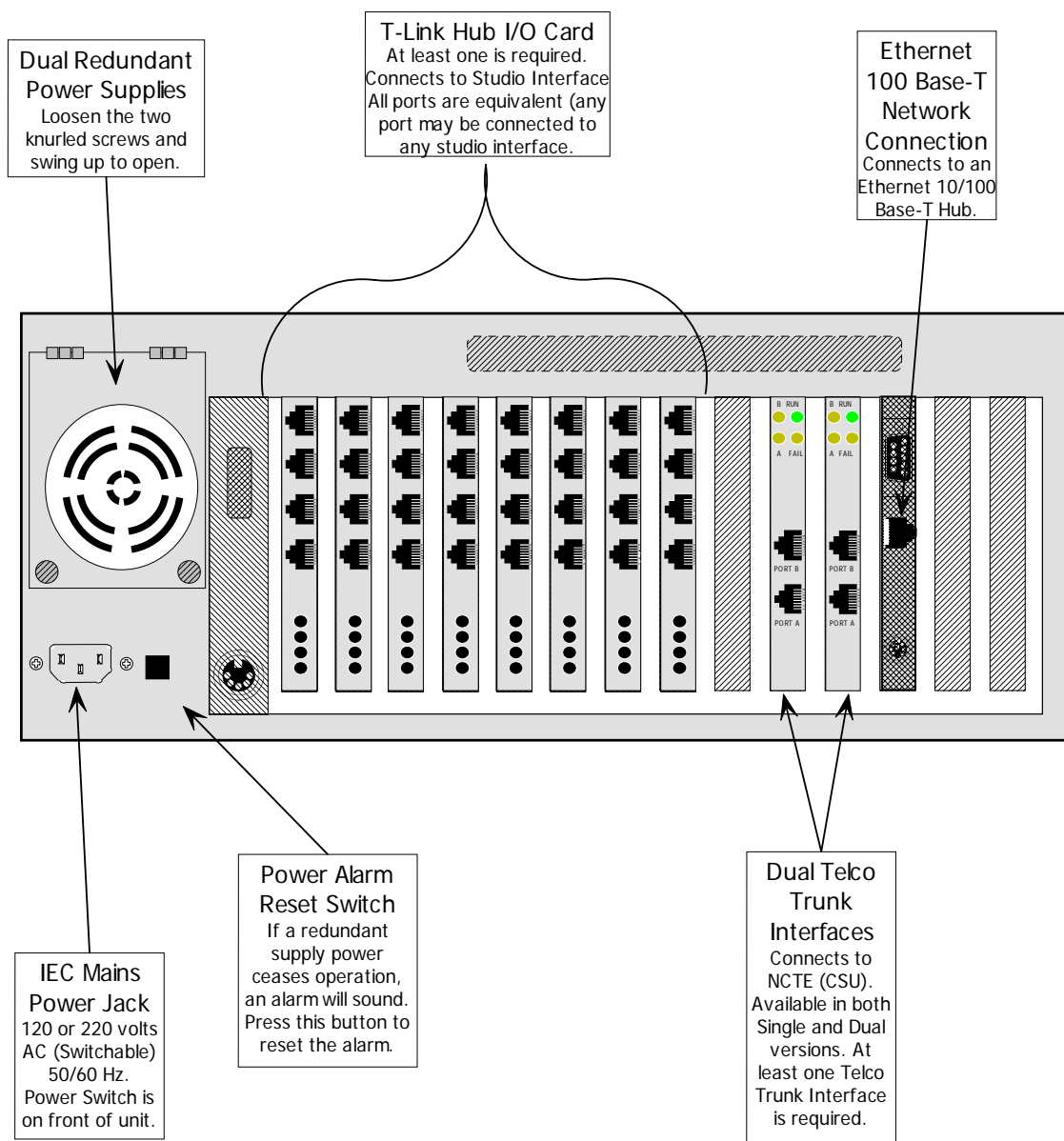


Series 2101 Hub, front panel

IMPORTANT SAFETY NOTICE!

Before connecting AC Mains power, you must check the power supply voltage select switches. You must loosen the small knurled knob and open the power supply compartment to expose the two power supplies. Each power supply has a voltage select switch that can be set to either 120 Volts AC or 240 volts AC.



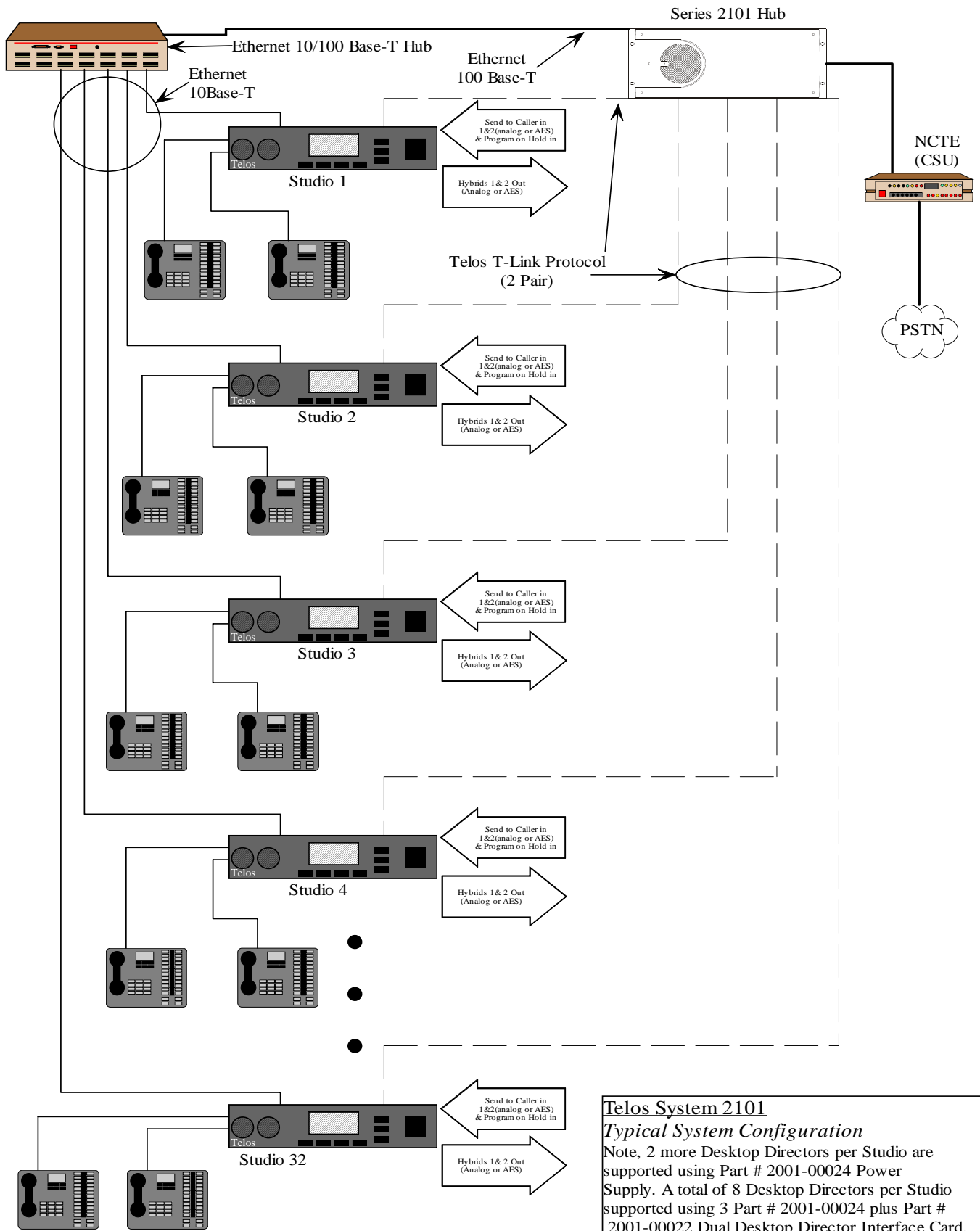


The Series 2101 Hub rear panel. CPU/Ethernet cards may vary. Locations of cards in slots may vary. The connectors covered by "hash marks" are not used.

Models with the dual redundant power supply will have a door near the power jack. Inside this door are the two power supplies. Make sure to check the voltage settings on both of these power supplies.

The Telos 2101 Hub Configuration Web Pages are used to configure the Hub and create Show Configurations. See Section 4 for details on this.

As you will recall from Part II of this manual, the hub connects to each 2101 studio interface, as illustrated on the next page.



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2 Preparing the Hub for Installation

The 2101 Hub requires at least one Telco Trunk Interface and at least one T-Link Interface. Together with your Sales Engineer, you will have determined which components are needed for your situation. The first thing you will need to do is to install those components.

2.1 Installing Interface Cards in the Hub

Identifying the Cards

You will need to install various interface cards in your system. As description of each the various cards is included in the following table:

2101 Hub Interface Cards			
Telos Part Number	Description	Max # in System	Notes:
1701-00049	T-Link Hub I/O Card	8	Has 4 ports for connection to Series 2101 Studio Interfaces. May be installed in slots 1-8
2091-00013	PRI/T1 Telco Interface	Cards may be mixed.	Supports a single T1 connection or 23B+D PRI connection (1.544 Mbps) as used in North America. May be installed in slots 10&11
2091-00014	Dual PRI/T1 Telco Interface		Supports two T1 connections or 23B+D PRI connections (2 x 1.544 Mbps) as used in North America. May be installed in slots 10&11
2091-00015	PRI/E1 Telco Interface	Cards may be mixed.	Supports a single E1 connection or 30B+D PRI connection (2.048 Mbps) as used in Europe. May be installed in slots 10&11
2091-00016	Dual PRI/E1 Telco Interface		Supports 2 E1 connections or 30B+D PRI connections (2 x 2.048 Mbps) as used in Europe. May be installed in slots 10&11

You can identify these cards by looking at the face plate and connectors. The different types of cards are pictured below:



The T-Link Hub I/O Card, Rev B Style.

Each card supports connections for up to four Studio Interfaces. The system manages the T-Link connections and any port can be used for any Studio Interface.

The four amber LEDs at the bottom indicate "Loss of Signal" and should be extinguished if a Studio Interface is present and active. The top LED corresponds to the top T-Link port and so forth.



The T-Link Hub I/O Card, Rev A style.

Each card supports connections for up to four Studio Interfaces. The system manages the T-Link connections and any port can be used for any Studio Interface.

The four amber LEDs at the top indicate "Loss of Signal" and should be extinguished if a Studio Interface is present and active. The top LED corresponds to the top T-Link port and so forth.

NOTE: The Rev A version requires a custom "Crossover Cable" to connect to the Studio Interface. See Appendix 3.



The Dual Telco Interface Card.

The single Interface card is the same but only has one port.

If only one port is to be used, you must use Port A (lower port). Pin 1 is at the top.

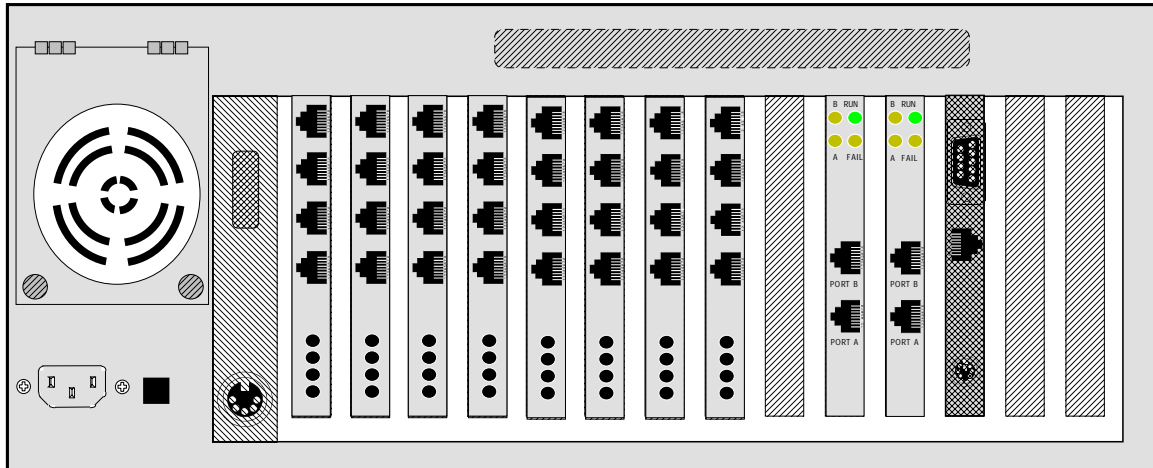
The two amber LEDs to the left indicate “Loss of Signal” on Port A or B and should be extinguished if an active line is present. See the table below for additional information on the diagnostic LEDs.

NAME	COLOR	INDICATES
Run	Green	Off = Board Not Running On = Normal Activity
Fail	Amber (Yellow)	Off = Normal Operation On = Telco Interface Board failure
B (LOS)	Amber (Yellow)	Off = Normal Operation On = Loss Of Signal (carrier failure, Red Alarm or Yellow Alarm) on B
A (LOS)	Amber (Yellow)	Off = Normal Operation On = Loss Of Signal (carrier failure, Red Alarm or Yellow Alarm) on A

Diagnostic LED interpretation for the Telco Trunk Interface Cards

Installing cards in the Hub

The Series 2101 Hub has slots 14 slots. We shall refer to them as slots one through fourteen left to right as viewed from the rear of the Hub. Note however, the slots are not numbered on the chassis of the unit.



Rear view of the Series 2101 Hub fully populated. Note the T-Link Studio I/O Cards in Slots One through Eight and the Telco Interface Cards in Slots Ten & Eleven. Position of cards may vary depending on number of Telco cards Installed.



IMPORTANT!

- 1) Slots 13 & 14 must remain unused.
- 2) Slots 1, 2, 3, 4, 5, 6, 7, 8 (sometimes 9) are for use with T-Link Hub I/O cards only.
- 3) Slots 9 & 10 or 10 & 11 are for use with Telco Trunk Interface cards.
- 4) Slot 12 is reserved for the Processor/100 Base-T Card (Provided with Hub).



Follow these steps to install a card in the 2101 Hub:



IMPORTANT!

- The following instructions are to be followed by qualified Technical Personnel ONLY.
- Handling appropriate for Static Sensitive Electronic Devices (such as personnel grounding straps) must be employed whenever the Hub is open. Damage caused by a failure to do so is not covered by the equipment Warranty.

1. Disconnect the power cable and any other cables present from the Hub.
2. Remove the four Phillips- head screws that hold the top cover in place (two on each side of the Hub).
3. Lift the cover straight up and set aside.
4. Determine the correct slot for the card(s) to be installed (See above).
5. Remove the blank Slot Cover- plate from the slot(s) to be populated by removing a single Phillip- head screw located at the top of the Slot Cover- plate. Remove the blank Slot Cover- plate by lifting it straight up.
6. Remove the multi- conductor ribbon cable connector plugs from as many of the existing cards as necessary to allow access to install the new card(s).
7. Align the card(s) to be installed with the socket on the main board and the opening in the rear panel of the chassis. Seat the board in place by pushing firmly straight down. If the board fails to seat properly lift it straight up and out and try again.
8. Reconnect the ribbon cable connectors to each of the cards disconnected in step 6 as well as the newly installed card(s).
9. Using the screw(s) remove in step 5 (above) fasten the card(s) in place.
10. Replace the cover on the Hub and fasten with the four screws removed in step 2 (above).

	<p>WARNINGS!</p> <p><i>- The interface cards and blank cover- plates in the Hub must be fastened in place with a screw as described above, or the System may not meet safety and radio frequency emission requirements.</i></p> <p><i>- Each slot must contain an approved card or a blank cover plate, or the System may not meet safety and radio frequency emission requirements.</i></p>	
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3 Installing the Series 2101 Hub

3.1 A note on rebooting the 2101 Hub

Since the 2101 Hub is a computer, there is a right and a wrong way to reboot it. Here are the ways to restart your 2101 listed in the order of most preferable to least preferable:

1. From the administration computers web browser, navigate to the *Software Update* page and click on the *Reboot* option. Technically, this is not a reboot in that this simply restarts the 2101 and 2101 web server applications. This is typically required if you have made changes to the trunk configuration. This is also the first thing to try if you have a problem effecting multiple studios (if you have a problem that only effects a single studio, you should power cycle that studio interface only)
2. Press and hold the Hub's front panel pushbutton for five seconds, then release. This is a CPU reset and should be used as a last resort, as it could cause registry corruption.
3. Disconnect power from the hub, wait ten seconds and restore power. As with option 2, this should be used as a last resort, as it could cause registry corruption.

If you are finding that frequent reboots are necessary it is important to contact Telos and work with a Support Engineer to determine the root cause of your problems; frequent reboots should not be necessary.

3.2 Connecting it up

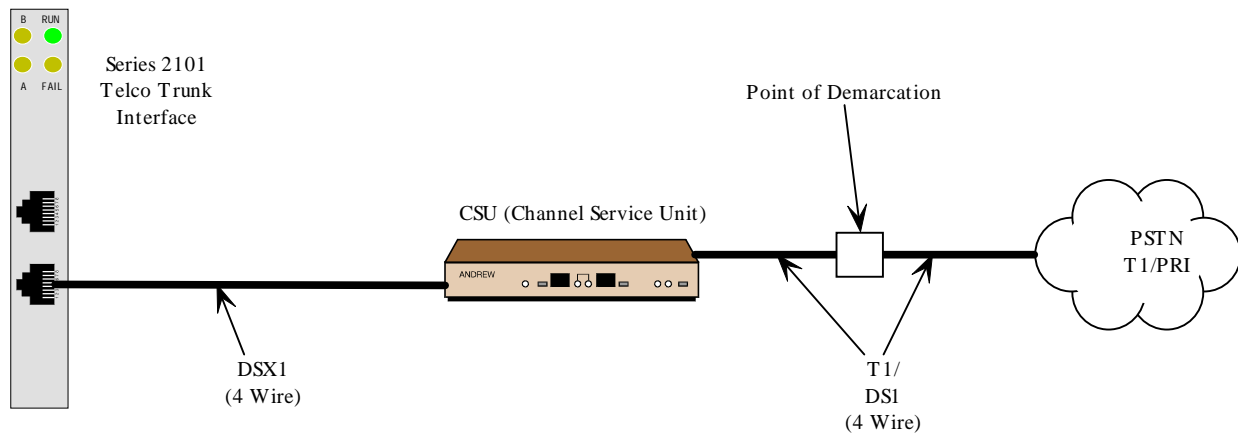
This section is your guided tour of the connections required to the Hub. Much of the information here is also covered in Part IV of this manual where we will discuss the Series 2101 Studio Interface.

You will be connecting your Hub to the Telco Trunks, the Studio Interfaces, and to the Local Area Network (LAN) to be used for the Series 2101 system.

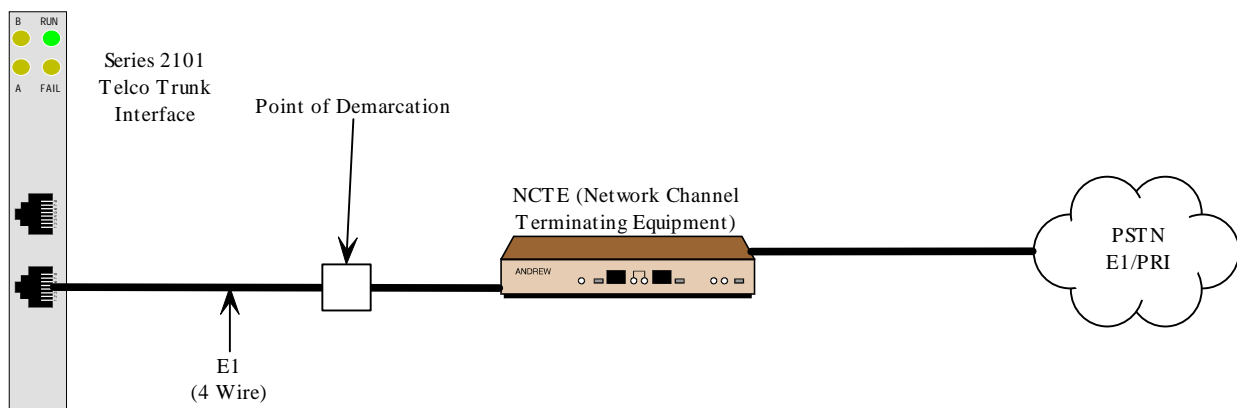
3.2.1 Telco Trunk Connections

The Telco Interface card(s) connect to the NCTE (Network Channel Terminating Equipment) provided by the Telco or user. In most countries, this is provided by the Telco.

In some countries, including the USA & Canada, it is provided by the user. In the USA & Canada, the NCTE is called a CSU (Channel Service Unit). If user provided, the NCTE should be installed according to the manufacturer's specifications.



In the USA and Canada the NCTE is called a CSU (Channel Service Unit) and is the responsibility of the end user. Therefore the handoff from the Telco to the end user (the point of demarcation) is before the CSU.



Outside the USA and Canada the NCTE is generally the responsibility of the Telco. Therefore the handoff from the Telco to the end user (the point of demarcation) is after the NCTE.

The Telco Trunk Connection requires two pairs of Category 3 (Cat. 3) or greater cable. We recommend Category 5 cable. An 8-position/8-pin miniature modular (RJ-45 style) jack is required at the Hub end.

If, as is usually the case, the NCTE also uses this jack all that is needed is a 2-pair twisted pair cable wired to the TIA/EIA-568-A T568A or T568B standard.

**IMPORTANT!**

If your 2101 Hub has a dual Telco interface card, and you plan on using only one line from the Telco, the line should be connected to the bottom (A) jack.

**HOT TIP!**

TIA/EIA- 568- A T568A and T568B are electrically identical. However the Green and Orange pairs are reversed between these two wiring standards. For that reason, we suggest that you choose one and use it throughout your facility since both ends will need to be the same for most of the system wiring. We will use the T568A color codes in the cable illustrations of this manual. See Appendix 3 for a summary of the different cables used throughout the Series 2101 System.

<i>PIN</i>	<i>COLOR</i>	<i>DESCRIPTION</i>
1	White/Green	Receive from Network (Ring)
2	Green	Receive from Network (Tip)
3	Orange/White	Not Used
4	Blue	Transmit to Network (Ring)
5	Blue/White	Transmit to Network (Tip)
6	Orange	Not Used
7	Brown/White	Not Used
8	Brown	Not Used

Telco Interface(T1/E1) pin functions and wiring diagram. Pin 1 is the bottom pin of the jack.

**HOT TIP!**

While this cable only has 2 twisted pairs, the pairing is the same as standard EIA/TIA- 568- A T568A (T568B is electrically equivalent) and this can be used.

NOTE: If your 2101 Hub has a dual Telco interface card, and you plan on using only one line from the Telco, the line should be connected to the bottom (A) jack.

Once the Hub is connected to the Telco trunks, you should power up the system, wait for it to boot up, and observe the LEDs on the Telco Trunk card to see if the connections are correct. The LOS LED for each Trunk you have connected should not be illuminated. The chart, below, shows the meanings of the different LEDs.



IMPORTANT!

Once the Telco trunks are connected, you should examine the amber (yellow) LOS LED for each circuit connected. If this LED illuminates there is a very basic low level problem that should be resolved before you proceed further. The NCTE may have indicators that will help you isolate the problem. The cause could be:

- *The cable from the NCTE (CSU) to the 2101 Hub*
- *The NCTE (CSU)*
- *The Line*
- *The cable from the jack to the NCTE/CSU (Customer owned NCTE only)*
- *The Telco Trunk Interface card.*

<i>NAME</i>	<i>COLOR</i>	<i>INDICATES</i>
Run	Green	Off = Board Not Running On = Normal Activity
Fail	Amber (Yellow)	Off = Normal Operation On = Telco Interface Board failure
B (LOS)	Amber (Yellow)	Off = Normal Operation On = Loss Of Signal (carrier failure, Red Alarm or Yellow Alarm) on B
A (LOS)	Amber (Yellow)	Off = Normal Operation On = Loss Of Signal (carrier failure, Red Alarm or Yellow Alarm) on A

Diagnostic LED interpretation for the Telco Trunk Interface Cards

3.2.2 The T-Link Connections to the Studio Interfaces

The 2101 Hub uses internal plug-in T-Link module(s) to connect to the Studio Interfaces. These module(s) each have four modular jacks and can be located in slots three (1) through ten (8) of the Hub. These are 8-position/8-pin miniature modular connector (RJ-45) style. Four Amber (Yellow) LEDs below these connectors indicate a Loss Of Signal (LOS) and should not be illuminated under normal circumstances. The top LED corresponds to the top jack, and the bottom LED corresponds to the bottom jack, etc.

The Series 2101 Hub generally ships with one or more T-Link modules installed. If you are building a system with more than four studios you may need to add additional T-Link module(s) (**Telos Part # 1701-00049**). Section 2.1 has information on installing or replacing these modules.



You will be running a connection from each System 2101 Studio Interface back to one of the T-Link ports on the 2101 Hub. The T-Link jacks on the Hub are all interchangeable – you may connect a given studio interface to any T-Link jack on the Hub. You should use unshielded twisted pair cable rated Category 3 (Cat. 3) or higher. We suggest you use Category 5 (Cat. 5) cable.



IMPORTANT!

Your T-Link connection(s) are in the Hub's Interface slots one through eight counting from the left side of the unit as viewed from the rear. The RJ-45 style connectors closer to the right side (slots 10 & 11) are for the Telco Trunks, while the jack furthest to the right (slot 12) is the Ethernet 100 Base-T jack.

T-Link interface connector (Rev B T-Link card)

<i>PIN</i>	<i>FUNCTION</i>
1	R1 (Output- to Studio)
2	T1 (Output- to Studio)
3	Not Connected
4	R (Input- from Studio)
5	T (Input- from Studio)
6	Not Connected
7	Not Connected
8	Not Connected

The T-Link interface connector (Rev B) is a standard modular RJ-45 style jack with the pin-out shown above. Pin 1 is at the bottom.

T-Link Interface Connector (Rev A T-Link Card)

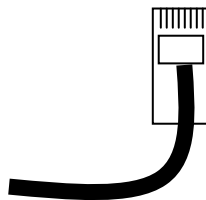
<i>PIN</i>	<i>FUNCTION</i>
1	R1 (Input- from Studio)
2	T1 (Input- from Studio)
3	Not Connected
4	R (Output- to Studio)
5	T (Output- to Studio)
6	Not Connected
7	Not Connected
8	Not Connected

The T-Link Interface (Rev A) is a standard modular RJ-45 style jack with the pin-out shown above. Pin 1 is at the bottom. Since the Rev A version jack is identical on the Hub and the Studio Interface, a special "crossover" cable is required (see Appendix 3).

**IMPORTANT!**

As with any piece of modern electronic gear, it is advisable that precautions be taken to prevent damage caused by power surges. Special "T1" interface surge protectors can be used to offer some degree of protection at the T-Link interface jack. If the T-Link connection will run between two buildings this protection is required. It is the user's responsibility to ensure that adequate protection is provided.

T-Link interface cable (for use with Rev B T-Link card)



T-Link Interface cable.

Note: Pin 1 is to the left when viewed as above (with pins facing you and at the top).

<i>PIN</i>	<i>COLOR</i>
1	White/Green
2	Green
3*	White/Orange
4	Blue
5	White/Blue
6*	Orange
7*	White/Brown
8*	Brown
* = Not required	

The T-Link connection between a Rev B T-Link card in the 2101 hub and a 2101 Studio Interface can be made using a standard EIA/TIA-568-A T568A category 5 cable. Optionally, the cable can be wired with only two pairs as indicated above.



HOT TIP!

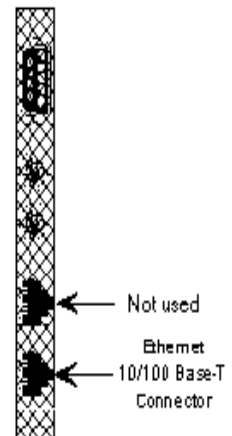
Early model 2101 Hubs have the Rev A T-Link cards and must use a special “crossover” cable. See Appendix 3 for the configuration of this cable.

3.2.3 Ethernet 10/100 Base-T Connection to the LAN

The Ethernet connection is on the processor card. Your card may vary slightly from the one pictured.

This is an Ethernet 10/100Base-T connector for connection to an Ethernet Local Area Network. This allows the Series 2101 Hub to communicate with the Studio Interface. This connection is required for the system to operate. The Series 2101 uses IP (Internet Protocol) for its communications. Therefore each 2101 Studio Interface and the Series 2101 Hub will each need an IP address and subnet mask (for more on entering this in the Hub see Section 4).

Since this connection is essential, we suggest that a separate local area network (collision domain) be used for the Series 2101 equipment. Each Studio Interface can be accessed using a Telnet connection over this LAN to configure or test the unit. Use of a combined 10/100 Base-T hub is recommended.



This can be linked to the Internet or your office LAN. If connecting it to another LAN a Router or Switching Ethernet Hub should be used to isolate traffic between the two LANs.



HOT TIP!

If you are not familiar with computer networking using Internet Protocol (IP), please consult your network administrator regarding IP addresses for the System 2101 Hub and Studio Interfaces. If you do not have a system administrator you may wish to purchase an introductory book on Networking. For additional information see Volume 1 Part II section 2.6.

Computers running Telos Assistant Producer 3.5 for TWOx12 and 2101 call screening software will also use this LAN to connect to the Series 2101 to allow call screening and control.



IMPORTANT TIP!

Assistant Producer 3.5 for TWOx12 and 2101 is required for use with the Series 2101, the older Assistant Producer 1.17 and Assistant Producer 2.0 will not work with the Series 2101.

This is an industry standard 100Base-T Ethernet connector on the usual 8-pin/8-position miniature modular (RJ-45 style) jack. This cable must be Category 5 (Cat. 5) unshielded twisted pair cable.

A standard Category 5 Ethernet cable can be used to connect from this connector on the 2101 Hub to a connector on the 10/100Base-T Ethernet Hub to be used for the Series 2101 components. This cable requires 2 pairs. A TIA/EIA-568-A T568A or TIA/EIA-568-A T568B configured cable is acceptable. These cables are documented in Appendix 3 of this manual.

3.2.3 AC Mains Power, Operating Environment

AC (mains) Power



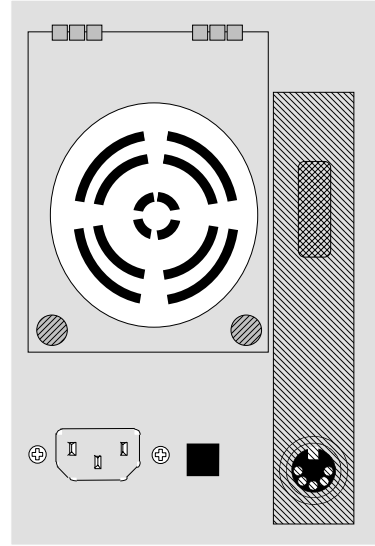
IMPORTANT SAFETY NOTICE!

Before connecting AC Mains power you must check the power supply voltage select switch. This is located on the rear of the unit near the AC Mains connection. If the dual redundant power supply is present you must loosen the small knurled knob and open the power supply compartment to expose the two power supplies. Each power supply has a voltage select switch that can be set to either 120 Volts AC or 240 volts AC.



READ THE FOLLOWING BEFORE CONNECTING POWER:

The AC receptacle connects mains power to the unit with a standard IEC (International Electrotechnical Committee) power cord. The power supply can handle 120 volts AC or 240 volts AC. To change the line voltage, you must open loosen the two knurled screws and open the small door over the AC Mains connector to access the power supplies inside. Then remove each power supply by pulling on its handle and set the voltage select switch appropriately. The correct voltage setting must be selected on both power supplies. **Do not connect power until both power supplies have been set to the local line voltage.** Please consult the markings on the switch and Power Supply ratings plate for additional information.



WARNING!

The power supply can handle 120 volts AC or 240 volts AC depending on the position of the voltage select switch located on each of the two redundant power supplies.

In order to prevent damage to the power supply, or a potential safety hazard, please sure to consult the markings on the switch and Power Supply ratings plate for additional information.



IMPORTANT!

As with any piece of modern electronic gear, it is advisable that precautions be taken to prevent damage caused by power surges. Standard line surge protectors can be used to offer some degree of protection. It is the user's responsibility to ensure protection adequate for their conditions is provided.





WARNING!

This equipment is designed to be operated from a power source anotherh anotheres a third "grounding" connection in addition to the power leads.

Do not defeat this safety feature. In addition to creating a potentially hazardous situation, defeating this safety ground will prevent the internal line noise filter from functioning.



	<p>IMPORTANT SAFETY INFORMATION!</p> <p><i>If fuse replacement is required, please note: For continued protection against fire, replace fuse only with same type and value.</i></p>	
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As with any microprocessor-based equipment, it is highly desirable that the Series 2101 Hub be fed from a reliable source of clean power. We recommend that a UPS (Uninterruptible Power Supply) and quality noise suppressor be employed. Surge protection is also desirable. Our first choice would be a top-of-the-line unit containing a ferroresonant transformer as well as a UPS. You will want to avoid “bargain basement” brands which can cause more problems than they solve.

One possible source is Best Power Technology with its ferroresonant transformer/UPS combination for extremely clean UPS power. See: http://www.bestpower.com/products/ferrups/price/ferrupsfe60hz_price_usd.htm

Another source is American Power Conversion. Their Back-Ups Pro series is well suited for microprocessor-based equipment such as the Series 2101 Hub and Studio Interface. See: http://www.apc.com/products/back-ups_pro/index.cfm

Be sure that UPS battery replacement goes on your preventative maintenance schedule.

It is essential that the third “grounding” pin not be defeated on the power cord and that the power cord be connected to a properly grounded receptacle.

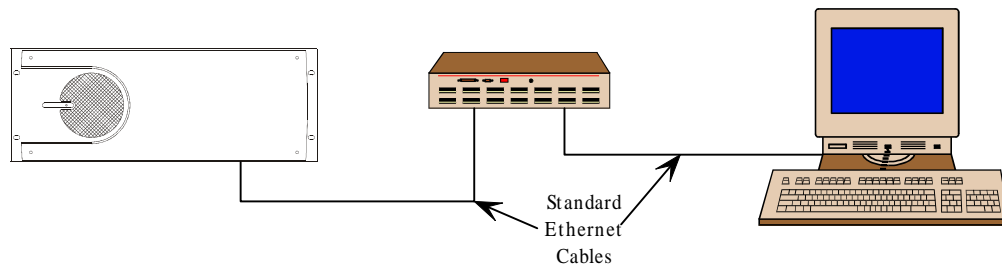
Environmental Considerations

For optimal reliability it is necessary to avoid exceeding the maximum allowable ambient air temperatures surrounding the components of the Series 2101. Ambient air temperature should be maintained between 0 to 40 degrees Celsius (32 to 104 degrees Fahrenheit). Relative Humidity be between 0 to 99% (non-condensing). The 2101 is capable of operation within this temperature range, even if the chassis cooling fan becomes disabled.

4 The 2101 Hub Web Configuration Pages

The Series 2101 Hub is configured using an Administration Computer connected to the 2101 Hub over an Ethernet connection. The hub includes a Web server, which allows the Administration Computer to connect remotely and access the setup via a Web browser.

The Administration Computer must have an Ethernet card installed and must be running the Windows 98, NT, 2000 or XP operating system. A Web browser is used to access the 2101 Hub's configuration pages. The usual connection between the Administration Computer and the 2101 Hub is shown below:



The usual method of connection using standard Ethernet Cable cables to connect the Administration Computer and the 2101 Hub.

*If the Hub is a 10/100 Base-T type the work station can be either 10 Base-T or 100 Base-T.
If the Hub is 100 Base-T only then the network interface card in the workstation must support 100 Base-T.*

You should make sure your Digital Telco Trunks are connected to the Series 2101 Hub before proceeding.

4.1 Administration PC Requirements:

Peripherals: Ethernet card

Graphics Card: SVGA capable of at least 256 colors.

Network: Ethernet 10 Base-T or 100 Base-T LAN, TCP/IP

Web browser: Microsoft Internet Explorer version 5.0 and above (other browsers may work, but have not been tested by Telos)

4.2 Accessing the 2101 Hub Web Configuration Pages

You will need to know the IP address of the desired Series 2101 Hub to proceed (see below).

**IMPORTANT!**

Since all 2101 Hubs are shipped with the same IP address and name, it is essential that you connect only one Series 2101 Hub to the network until you have completed assigning a new IP address and name. If more than one factory configured 2101 Hub is simultaneously connected to the network, an IP conflict will occur and the access to the Web page will not be possible.

**HOT TIP!**

If you are not familiar with computer networking using Internet Protocol (IP) please consult your network administrator regarding configuring IP on the Administration Computer. Your network administrator can also provide IP addresses for the System 2101 Hub and Studio Interfaces. If you do not have a system administrator you may wish to purchase an introductory book on Networking.

**IMPORTANT!**

The 2101 Hub is shipped from Telos with the IP address set to: 192.168.21.1 and the Name 2101 Hub. Make sure no other computer on your network is using this address before connecting the 2101 Hub to an existing network.

Note that even if a Domain Name Server is present on your network you will not be able to use the name to access the 2101 Hub until after you have configured the 2101 Hub. You MUST use the IP address.

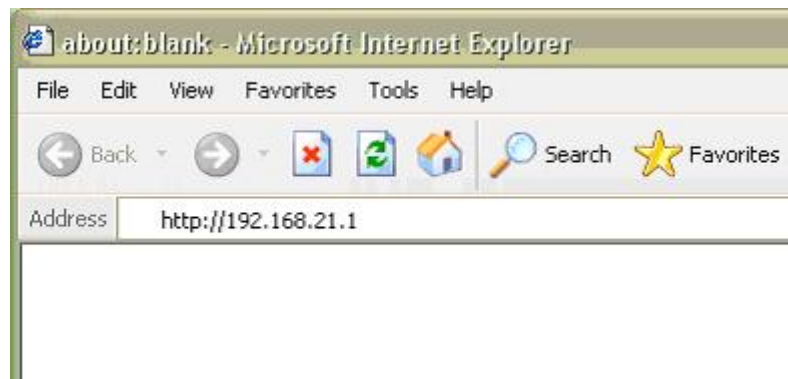
IP addresses in the range of 192.168.0.0 to 192.168.255.255 are considered to be safe for internal network purposes. They are not assigned to any server on the internet.

Ask your network administrator to assign a permanent IP address for the 2101 Hub and each Studio Interface.

The first time you connect to the 2101 Hub Web Page you will need to change the IP address of the Administration Computer to one within the above range. You can then change the IP address of the 2101 Hub as shown below.

If your 2101 LAN will be connected to another LAN you will need to change the IP address to one within your subnet. Your network administrator can assign you an IP address for the 2101 Hub and each Studio Interface.

To access to the 2101 Hub Web page, launch the Web browser on the Administration Computer. In the 'Address' field, type the Hub IP address as follows: <http://192.168.21.1>



IMPORTANT!



192.168.21.1 Is the default IP address. If the address of the 2101 Hub Is modified later, the new address will have to be used to access to the Web Configuration Utility. Be sure to note the new IP address if you change it.

If the Administration Computer cannot connect to the Web Configuration utility, please check that the Administration Computer IP address Is In the same range (e.g. that the first two of the 4 IP address number match) of address as the 2101 Hub, see above. Also, verify the Subnet Mask.

HOT TIP!



*In rare cases, where the browser on the Administration computer has be specially configured, you may need to specify port 80. IN this case you would enter **http://192.168.21.1:80**.*

You will see the following window on the screen of the Administration Computer:



4.2.1 Logging in to 2101


The Web Configuration Utility is password-protected. It is not case sensitive. The default password is the following: *Telos*

Enter the password and press *Submit*. If a mistake is made while entering the password, press *Reset* and type it again. We will see later how to change the password.

After submitting the password, the main page of the Web Configuration Utility appears:



The main page is divided in three sections. The upper section never changes. The bottom-left section is the Menu window. The bottom-right section concerns the current menu's selections.




IMPORTANT!

The number of ports appearing on the main screen depends on the number of ports Installed on the 2101 Hub. The picture above shows a 2101 Hub configured with 4 PRI ports.

4.3 System Options Menu (Hub Configuration)

From the main web page, choose *System Options* to program basic hub characteristics such as IP address. The following page will be displayed.



SERIES 2101

MULTI-STUDIO TALKSHOW SYSTEM

Line Status

System Options

Show Configuration

Studio Configuration

User Manager

Security

Software Update

Configuration Management

About

Advertise Port: (Must be set to same value on all studio (VO) units)

Host ID: (Must be unique between hosts)

Law Mode: ▼

Time Out for Dial Out: (seconds)

Time Out on Seized: (seconds)

Generate Local Busy: ☒

Private Outgoing Caller ID: ☐

Computer Name:

IP Address:

Subnet Mask:

Gateway:

DNS:

WARNING:

the Hub must be reset to apply the IP changes.

(Reset button on the front panel)

The first time you access the Hub's configuration pages you'll want to set the Hub's *Advertise Port*, *Host ID*, *Law Mode*, *Computer Name*, *IP address*, and *Subnet Mask*. Most other items in this menu can be left at their default settings. If you are using a system with dual redundant 2101 hubs, see Section 5.

**IMPORTANT!**

To apply the IP changes (IP address, Hub name, Subnet Mask, Gateway), the 2101 Hub must be 'hardware' rebooted. To do so, press the Reset button on the Hub front panel.

If the 2101 Hub Is 'hardware' rebooted, all phone calls and the communication with the Web Configuration Utility will get lost. Reconnect and log in again once the reboot is complete.

A complete list of all *System Options* follows:

Advertise Port

The first field is the Advertise Port that the system will use. The default is port 8100. This should not be changed. In the event that it is changed, you must be certain that no other device on your network is using this port.

Host ID

The Host ID needs to be a “2101 System” wide unique number. It is recommended that each 2101 hub in you system have a unique Host ID of less than 256. Most users can leave the default. The only exception is when a two 2101 Hubs share the same LAN, as when creating a dual redundant hub system. See Section 5 for more on this. If your Series 2101 System includes two 2101 Hubs, then you will need to change this number on one of them.

Law Mode

This field two different choices: *MU-LAW* and *A-LAW*. This is the voice coding mode used and varies by country. *MU-LAW* is the U.S. standard (Default) and *A-LAW* is the European standard. See Part IV section 3.3.2 for a chart of different countries and the correct setting for each.

Time Out for Dial Out

This represents the amount of time in seconds before the system times out between each dialed digit. The default is five seconds. For example, after dialing the first digit of the number you are calling, you will have five seconds to dial the next digit before the system times out.

Time Out on Seized

This field represents the amount of time in seconds it takes the system to Time Out if a number is not dialed after picking up (seizing) a line. The default is ten seconds.

Generate Local Busy

When checked, this causes the 2101 to generate a busy tone to the local user in case an outgoing call is rejected. By disabling it, the caller will only hear silence.

Private Outgoing Caller ID

When checked, this causes the 2101 to mask the calling party number for outgoing call from the 2101 system. This feature works by changing the “presentation bits” in the Calling Party Number Information Element in outgoing Call Setup messages.

Enter the Hub name (the default name is *2101HUB*), a valid IP address, subnet mask, Gateway and Domain Name Server (if required).

Click on the *Submit* button to complete your results. Click on *Reset* to get back to the previous settings.

4.4 Line Status

When first connecting to the Web Configuration Utility, the main page is the *Line Status* (see above). To get back to this page at any time, press *Line Status* in the Menu window. The *Line Status* screen has information about each of the 4 possible Telco Trunk Ports. You must configure each Telco Trunk Interface card as follows:

4.4.1 Configuring the Telco Trunk Ports



IMPORTANT!

If your system is operational and running (i.e. it is functional) your Telco Trunk Interface configuration must not be changed. Changing the following settings could prevent the system from working properly. In addition, changing these settings will disrupt any calls in progress on the selected port.

Configuring the Telco Trunk Hardware & Protocol Settings

Each Telco Interface card installed will have one or two ports present. You will need to configure each port of each Telco Trunk Interface port separately. To configure a particular port select *Line Status* (Menu window) and click on the corresponding “Configure” button for that port. The form below will then be displayed.

SERIES 2101
MULTI-STUDIO TALKSHOW SYSTEM

Line Status
System Options
Show Configuration
Studio Configuration
User Manager
Security
Software Update
Configuration Management
About

NetAccess Configuration Port 1

Framing	FrmESF
LineCode	codB8ZS
LineLength	len133h
Circuit Type	RBS
Wink Start Signaling	Variant Type: Not available
Protocol Type	Switch Type: Not available

Config trunk
Submit Reset

Hardware Settings: Framing / Line Code / Line length

These settings reflect the physical parameters related to the underlying transport mechanism of the digital circuit (E1 or T1). You will recall that PRI is “delivered” over an E1 or T1. These settings are independent from the higher level protocol used, although not all combinations occur. These settings should be made first. You will need to set the following parameters (for additional information on what these parameters mean see the Glossary, and Appendix 5). The options shown will depend on which *Telco Trunk Interface Card* is installed.

T1Interface Card Hardware Settings (USA & CANADA)

For the PRI/T1 Interfaces (Telos Part #2091-00013 and 2091-00014) you will have the following options:

- **Framing Mode.** *Set to match your digital telephone circuit. Options for this parameter are:*
 - *FrmESF – Extended Super Frame (ESF): This is the usual option for PRI or T1 in the USA & Canada*
 - *FrmSF – Superframe (SF/D4): This Framing Mode is not applicable for PRI. It can be used for Channelized T1 circuits, if ESF is not available*

- *FrmRESRV* – For use by Telos only
- *FrmSF-SLC96* – For special applications only
- **Line Code.** Set to match your digital telephone circuit. Options for this parameter are:
 - *CodB8ZS* – B8ZS Line Coding: This is the usual option for PRI or T1 in the USA & Canada.
 - *CodB7ZS* – For special applications only
 - *CodAMI* – AMI Line Coding
- **Line Length.** This represents the number of feet of cable between the CSU and the 2101 Hub. Select the value closest to the amount of cable (in feet) used.

E1 Interface Card Hardware Settings (EUROPE AND MOST COUNTRIES OUTSIDE THE USA & CANADA)

For the PRI/E1 Interfaces (Telos Part #'s 2091-00015 and 2091-00016) you will have the following options:

- **Framing Mode.** Set to match your digital telephone circuit. The most common choice is *FrmCRC4*. Options for this parameter are:
 - *FrmCRC4* – CRC-4 Multiframe with Si= FEBE (Far End Block Error).
 - *FrmBASIC* – Basic framing with no CRC4, Si=1. For special applications only
 - *FrmFEBE_CAS* – CRC-4 with FEBE with TS16 Channel Associated Signaling. For special applications only
 - *FrmBASIC-CAS* – Basic framing with TS16 Channel Associated Signalling. For special applications only
 - *FrmDISABLED* – Framing on Timeslot 0 disabled. For special applications only
 - *FrmTS014-FEBE* – TS014, Si=FEBE.=0 when not in frame alignment. For special applications only
- **Line Code.** Set to match your digital telephone circuit. Options for this parameter are:
 - *CodHDB3* – High Density Bipolar 3. This is the usual option for E1 based PRI as used in Europe.
 - *CodTRANSPARENT* – AMI: For special applications

- **Line Length** (*Impedance*). Options for this parameter are:
 - 120 Ohm – This is the usual setting (twisted pair cable)
 - 75 Ohms – This setting is for when coaxial cable is used.

Protocol Settings: Circuit Type / Protocol Type

Circuit Type

This selection determines what type of circuit is delivered over the hardware transport layer define above. The options for this setting are:

- RBS – *Robbed bit Signaling. This option should be used for T1 or E1*
- PRI – *Primary Rate ISDN*

Protocol Type

Within each *Circuit Type* there are certain specific protocols. The *Protocol Type* drop down list includes the most common protocols used in the USA/Canada and Europe. One of these pre-defined options for *Protocol Type* should work in approximately 97% of installations on the public telephone network. The protocols listed will depend on the setting of the *Circuit Type* and the type of Telco Trunk Interface installed in your 2101 Hub.

If RBS is selected as your Circuit Type then the following options are available (applies to all Telco Trunk Interface versions):

The *Protocol Types* for RBS are listed below.

- Wink Start Signaling – *E&M Wink Start Signaling*
- Delay Dial Signaling
- Wink Start with Group B+D
- Immediate Start/Fixed Pause Signaling
- Ground Start FXO Signaling
- Ground Start FXS Signaling
- Loop Start FXO Signaling
- Loop Start FXS Signaling

If PRI is selected for your *Circuit Type* then the options available will vary depending on the 2101 *Telco Trunk Interface* installed.

T1 PRI Protocol Types (USA & CANADA)

For the PRI/T1 Interfaces (USA/Canada version, Telos Part #2091-00013 and 2091-00014) you will have the following options

- Nortel DMS 100 – *For National ISDN-1 on the DMS 100 switch*
- Nortel DMS 250 – *For Nortel “Custom” ISDN on the DMS 250 switch*
- AT&T-5ESS - *For National ISDN-1 on the 5ESS switch*

- *MD-110(T1) – For general ITU-T on the Ericsson MD-110 switch*
- *NTT – For Nippon Telephone & Telegraph Switch (Japan)*

E1 PRI Protocol Types (EUROPE AND MOST COUNTRIES OUTSIDE THE USA & CANADA)
For the PRI/E1 Interfaces (International version, Telos Part #'s 2091-00015 and 2091-00016) you will have the following options:

- *General ITU-T – For European switches other than those listed below running ETS 300 Euro ISDN protocol*
- *MD-110(E1) – For Euro ISDN (ITU-T) on the Ericsson MD-110 switch*
- *Siemens EWSD – For Euro ISDN (ITU-T) on the Siemens EWSD switch*

For each *Protocol Type*, the *Variant type* and *Switch type* appear in the appropriate boxes. Generally these can be ignored.

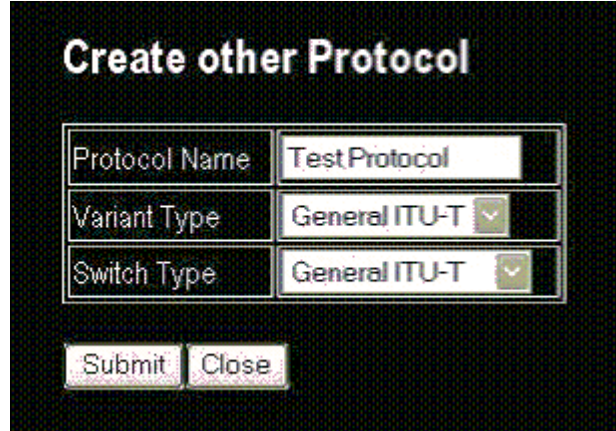
In rare cases, none of the predefined *Protocol Types* is correct for a given installation. In this case, you should contact the Telco and find out the name or type of switch used to provide your ISDN PRI service. You should also determine what protocol variant is being used for the PRI circuit. You can then create your own *Protocol Type* as follows:



IMPORTANT!

Protocols other than shown in the Specification page and Appendix 5 are not supported and have not been tested. Telos offers support only for those protocols shown on the Specifications page and Appendix 5.

1. Click on *Create other*. The following window will then be displayed.
2. Enter a name for your protocol.
3. Select a *Variant Type* from the drop down list
4. Select a *Switch Type* from the drop down list
5. Click the *Submit* button and your other protocol will be created.



If you need help, please contact Telco to determine the switch model and protocol variant used to provide your ISDN PRI service. Telos Systems Customer Support may be able can advise you on the proper choices.

4.4.2 Configuring your Telco Trunks

To allow your system to work properly you must configure its Telco trunks. In the case of PRI circuits, this can be used to reserve channels for outbound calls in case the system is flooded with inbound traffic. In the case of channelized T1 this process identifies the one-to-one relationship between telephone numbers and channels on the T1.

**HOT TIP!**

Failure to configure trunks will prevent the system from recognizing incoming calls.

The trunks are configured by clicking on the *Config trunk* button for the desired port from the *NetAccess Configuration* window (see picture in section 4.4.1 above). The following *Trunk Configuration* screen will then be displayed:

To configure the trunks you must specify each telephone number used on the circuit connected to this port. If you are using Channelized T1 you must also specify with which channel of the T1 each telephone number is associated. If you are using a PRI line that has no trunk groups and all channels are 2 way (inbound and outbound) you can leave the Channel field blank.

If your PRI line has trunk groups OR has specific channels assigned for outbound calls OR is provisioned with LESS than the 23 channel capability you can specify a range of channels that the 2101 must use for outbound calls for that phone number* (ie. 1-6 entered in the Channel field next to a trunk number allows that phone number to make outbound calls on channels 1-6 only). Studio facilities sharing the 2101 system simultaneously should investigate trunk group options with their Telco provider to prevent overwhelming the PRI line with a flood of calls during contesting and other high call volume shows. Please refer to the 2101 PRI Ordering Form for more information on Trunk Groups.



IMPORTANT!

Be sure to enter this information carefully. For a Channelized T1 line failure to associate the correct channel with each phone number will cause the inability to receive calls on that channel (far end party will hear ringing but the Series 2101 will not recognize this incoming call). For a PRI line failure to enter the correct phone numbers will prevent inbound calls from being properly routed to the Studio Interfaces. (Far end party will hear a busy signal)

If you are using PRI, or a T1 protocol that uses Direct Inward Dialing/ANI (DID), you should just enter each of your DID numbers associated with the digital telephone circuit connected to that port. **You must enter the same number of digits that will be provided by the Telco on incoming calls.** If your DID numbers are in a consecutive range you can specify a range of numbers in the Phone Number field separated by a hyphen.* If your PRI has been provisioned with trunk groups you may need to also specify the channels used.

**HOT Programming Tip**

The HYPHEN character " - " is a valid character in the Phone Number and Channel fields ONLY when entering a RANGE of phone numbers and channels. Sometimes your web browser may not allow you to type this hyphen character. To get around this problem you can use Notepad to create your DID and channel ranges then Cut & Paste the text into the appropriate field. Entering 100 DIDS as 1000- 1099 into ONE field sure is easier than entering 100 DID numbers separately.

Entering the trunk information

You will need to do the following procedure for each of your digital telephone circuits.

To add phone numbers to the list just click in the appropriate phone number box and type the exact number(s) expected to be sent to the 2101 and then the channels it uses (if applicable). If the *Channels* field is left blank for a telephone number it is defaulted to allow use on all available channels.

To add a new entry press the *add* button and a blank row will be added to the list. To remove an entry select the row by either clicking in the Phone number list field then press the *Remove* button.

To delete the whole phone number list field, press the *Clear All* button.

When finished entering Phone Numbers and Channels press the *Submit* button and your Telco trunk configuration will be complete. Press *Close* to close the window.

You should now repeat the steps of configuring ports and trunks (outlined above in sections 4.4.1 – 4.4.2) for each Telco Trunk Interface port in the 2101 Hub that you will be using.

Checking your port & trunk configuration

Next you should power the Series 2101 Hub off and then back on again. Reconnect to the 2101 Hub using the *2101 Hub Web Configuration Utility* and check the status of each port to which you have a digital telephone circuit connected. For each port you will see a green field marked by a string of text.

If the field is RED means you are connected to a 2101 Hub but the port link is down; and GREEN means you are connected to a hub and the port link is up. The text to the right of this square gives a brief description of the current Port status.

You should see a GREEN indication for each of the *Telco Trunk Interface* ports you have configured. An error message here may indicate that you have not properly configured the *Trunk Interface Card*. Check your settings. Note this message and contact Telos Customer Support if you cannot resolve the problem.

If you see the GREEN indication, you should proceed with creating *Show Configurations* and *Studios* and proceed to system testing.

4.5 Show Configurations

One of the most powerful features of the Telos Series 2101 is its ability to easily change its configuration based on how your station operates. In many cases, radio facilities would prefer to have their telephone system configured differently depending on the day-part, or for individual shows. This was difficult (or often impossible) using prior technology. Now, the Series 2101 allows you easily manage your Telephony needs by allowing multiple configurations that can be easily accessed by your staff.

There are two steps involved. First you will create one or more *Show Configurations*. Once the *Show Configurations* have been created, you will then assign one or more *Show Configurations* to each Studio, thereby permitting users in that Studio to access the shows assigned to it.

By “Studio” we are actually referring to the Series 2101 Studio Interface. The *Studio Configuration* allows you to restrict which *Shows Configurations* are permitted access in a given “Studio”. This is particularly useful in the case where groups of studios are designated for particular Stations within a multi-station cluster served by a single Series 2101 System. They also serve to limit the number of *Show Configurations* listed on the Desktop Director™ to make life simpler for your staff.

In the case where a “Special” studio is only used for a specific show this mechanism can be used to prevent accidentally changing the *Show Configuration* (by designating a single *Show Configuration* for that Studio).

The simplest method is to allow all studios access to all *Show Configurations*. Before you proceed, you will need the hostnames assigned to each of your 2101 Studio Interfaces. See manual Volume 2 Part IV Section 2.1 for more information.

Shared Lines

Often it may be desirable for a certain “line” to be accessible in more than one studio simultaneously. For example, the “Hotline” or “Warmline”. This can be accommodated by entering the number to be shared in multiple *Show Configurations*. The shared line must be programmed as the same line appearance in each studio to share the line.

The 2101 prevents accidental interaction between the studios in this scenario, lines that are on the hybrid in one studio become unavailable (e.g. the “x” Status Symbol would be displayed) in other studios. To pick up a line that has been answered in another studio, place the line on *Hold*. It will show the *Hold* Status Symbol, and can then be picked up in any studio with access to that line.



IMPORTANT!

When a telephone number is to be accessible in multiple studios simultaneously two rules must be followed:

- 1) The shared line must be programmed as the same line in each **Show Configuration**.*
- 2) If the shared number has multiple appearances in one **Show Configuration**, then it must have the same number of appearances in all other **Show Configurations**.*

Creating Show Configurations

First you may wish to review our introduction to the concept of *Show Configuration* in Volume 1 Part II Section 2.5. To quickly review here, a *Show Configuration* is simply a list of incoming telephone number digits which can assigned to a Desktop Director when that *Show Configuration* is selected.

In the case of a PRI circuit (and E&M Wink start RBS T1), these numbers can be any number included in the block of DID numbers associated with that PRI (you can order as many blocks of numbers as you desire). You may enter the same telephone number more than once – this serves to create a hunt group (rollover group or ICG).



IMPORTANT!

The numbers you will be entering in your show configurations must have been entered into the system previously using the Trunk Configuration process described earlier in section 4.3.5.

In the case of Channelized T1, the numbers are permanently assigned to the channels of the T1. If you wish to have hunt groups (Rollover lines or ISG) these must be created by the Telco. In this case, the *Show Configuration* must contain all numbers associated with these hunt groups or calls on the channels not included will be lost (ring no answer).

Configuring a show is simple and straightforward. To start configuring a show, select the “Show Configuration” option from the Menu window. The screen shown below will then be displayed:



IMPORTANT!

***Show** names should consist of the letters A- Z and the numbers 0- 9 ONLY. Do not use Spaces, symbols, punctuations, or other characters. The Hyphen character " - " is okay to use.*

Keep your show names short and simple! This name needs to fit in the Desktop Director LCD display.



To add a new show click on the “Add” button. The following screen will then be displayed:



Enter the show name in the horizontal field and select the number of lines requested for the Show: 12 or 24 lines. Use a short and simple name without spaces, other special characters, or punctuation. Only studios using the “Extended Desktop

Directors” can access 24 lines. Click “Add”. Then the form below will be displayed (example with 12 lines WITH *Show1* name).

	Phone Number	Line Name	Busy All Group
Line 1			<input type="checkbox"/>
Line 2			<input type="checkbox"/>
Line 3			<input type="checkbox"/>
Line 4			<input type="checkbox"/>
Line 5			<input type="checkbox"/>
Line 6			<input type="checkbox"/>
Line 7			<input type="checkbox"/>
Line 8			<input type="checkbox"/>
Line 9			<input type="checkbox"/>
Line 10			<input type="checkbox"/>
Line 11			<input type="checkbox"/>
Line 12			<input type="checkbox"/>

Key for outside line: No Key Required

Show Password:

Hold on NEXT: None

Cancel Apply

For each “Show” line you have three fields: *Phone Number*, *Line Name*, and *Busy All Group* (block all group). The *Phone Number* field represents the phone number to be used by that particular “show” line. The *Line Name* field represents the name that will be displayed in Assistant Producer for 2101 call screening software. The Busy All Group Check Box denotes whether that line will included in the Block All function. If the box is checked, that line will be affected by Block All. If it is left unchecked (default) that line will not be affected by this function. To configure the show, enter the phone number, line name (optional), and denote if the line will be in the busy all group.

Near the bottom of the form there is a drop down box for the *Key for Outside Line*. **This box is reserved for future use and should be left blank (the default setting).**

You can then choose whether or not the studio has a password. This is the password used by the Assistant Producer for 2101 clients to log into the show. This is helpful to allow only certifiable personnel access to shows with Assistant Producer for 2101. If the password field is left blank (default) then the show will not have a password.

The *Hold on Next* feature, if enabled, allows the user to seize a new line and put the previous caller back on hold in just one step, by pressing the NEXT key on the Desktop Director. It can be set up for *None* (default), *Talent Directors*, *Producer Directors* or *Both*. If set to *None*, pressing the NEXT key will seize the next caller and drop the previous one.

Press *Apply* to store the settings. Press *Cancel* to restore the previous settings.

After pressing **Apply**, the main **Show Configuration** page appears. To remove a show configuration, select the desired show from the list of shows by clicking on it (highlighting it). Then click on the **Remove** button.

To edit a *Show Configuration* choose the desired show from the list and click the edit button. The Configuration form will then be displayed, make the desired changes then select the **Apply** button to save the configuration upon exiting the configuration form.

Repeat this process as required. When using PRI you may choose to have a different *Show Configuration* for every show on your station since you can have an unlimited number of phone numbers associated with a PRI.

When using a channelized T1 your *Show Configurations* will reflect the hunt(s) groups provisioned (configured) by the Telco on the T1.

4.6 Creating Studio Configurations



IMPORTANT!

*Before configuring a **Studio** you must have already created the **Show Configurations** to be used in that studio. We suggest that you create all of your **Show Configurations** before proceeding with configuring your studios.*

To allow calls to be routed correctly within the 2101 system, you must configure each Studio you plan to use. Recall that a Studio corresponds to a Series 2101 Studio Interface. The Studio configuration process determines what *Show Configurations* can be accessed using the Desktop Directors attached to a given 2101 Studio Interface. The simplest, as well as the most flexible, approach is to allow each of your Studios access to all shows.



HOT TIP!

You will need the Host Names that you entered (or plan on entering) into each of your Series 2101 Studio Interfaces. See Volume 2 Part IV Section 2.1 for details on this operation.

To configure a Studio select the *Studio Configuration* option from the Menu window. You will see the following screen:

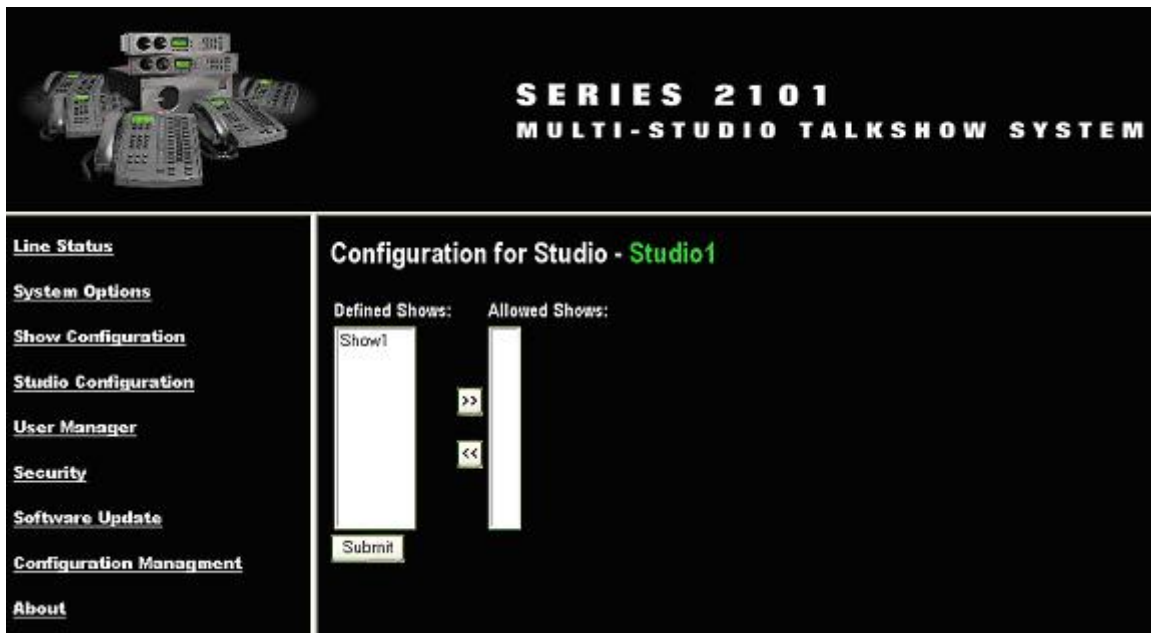
**IMPORTANT!**

***Studio Names** should consist of the letters a- z, A- Z and the numbers 0- 9 ONLY. Do not use spaces, symbols, punctuations, or other characters.*

*Keep your **Studio Names** short and simple!*

The first thing you need to do is enter the name of the *Studio* by typing it in the *new studio* field. Use a short and simple name without spaces or other special characters or punctuation. If a Studio has previously been created, you can make changes to it by selecting it from the drop down list of the *Configure* field and press *Configure*. At the top, you will see a list of the shows that have been defined on the system.

When pressing *Add* or *Configure*, the following window appears:



To “Allow” a show to run on the studio it must appear in the list of *Allowed Shows* on the right hand side of the form. To add a show to the *Allowed Shows* list select it from the *Defined Shows* list by clicking on it then press the “>>” button. To remove a show from the *Allowed Shows* list select the show in the *Allowed Shows* list by clicking on it, then press the “<<” button.

Note you can select more than one Show at a time by holding down the <Shift> key then selecting each show with the mouse. Then press the appropriate direction button to add/remove the shows.

When you have fully defined the Studio, and checked your work, press the *Submit* button.

Repeat the steps in the above section for each 2101 Studio Interface Installed.

4.7 Using the User Manager

The user manager allows the system administrator to restrict access to the system via the *Assistant Producer 3.5* call screening software. Individual user names and passwords should be assigned to all applicable personnel.



IMPORTANT!

*All users of Assistant Producer must have unique login names. Do not allow two or more users to log in using the same name. Assistant Producer relies on user names for the chat window feature and therefore failure to do so will cause problems with this feature. User names and passwords should consist of the letters A-Z and the numbers 0-9 ONLY. Do not use spaces, symbols, punctuations, or other characters. Keep your **Login Names** short and simple!*

Whenever a user tries to connect to the system with *Assistant Producer* they will have to supply their user name and password. If they do not have an account on the system, they will be denied access.

To access the user manager select the *User Manager* option from the Menu. The following form will then be displayed. All the user accounts that are setup will be displayed.

Users:

--

Add User Delete

To add a new user account select *Add New User* option. The below form will then be displayed. After entering in the user name and password click on the *Continue* button and the new user account is setup.

NOTE: Passwords are case sensitive.

To delete an account highlight the desired account by clicking on it then press the *delete* key from the *Users* menu.

Add New User

User Name:

Password:

Confirm Password:

Continue



HOT TIP!

Your staff will always have access to the shows allowed for a given Studio by using the Desktop Director™. The user procedure described above serves to prevent remote access, via Assistant Producer 3.5, without a password, and to provide unique screen names for use with the chat window feature.

4.8 System Security to restrict 2101 Hub access

Password protection can be enabled for the Web Configuration Utility to give the system an added layer of security. This allows only personnel with the password to configure the system.

To enable password protection, select the *Security* option from the Menu window. The following will then be displayed:

Enter the password and confirm it. The next time you run the 2101 Hub

Security

Change Password for Web configuration access

Password:

Confirm Password:

Continue

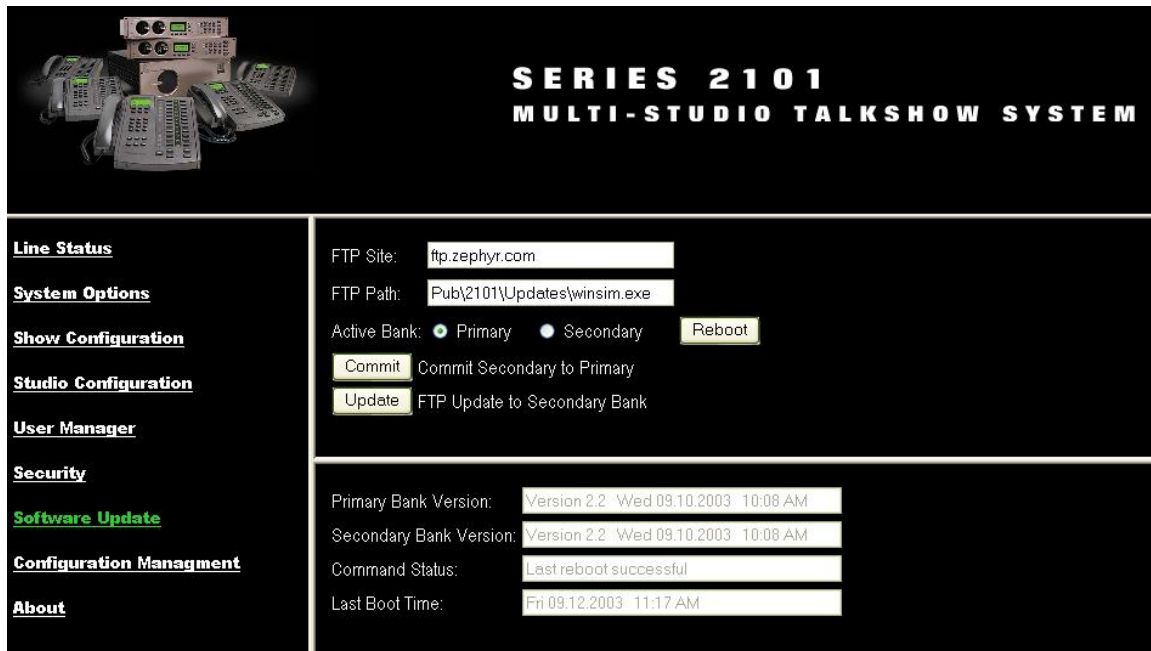
Web Configuration Utility will you be asked for this password. So, make sure you remember it.

4.9 Software Update

The 2101 Hub software application is upgradeable at any time via the network. The latest applications are accessible on Telos Systems public FTP site: <ftp.zephyr.com>

To do so, the 2101 Hub must be able to connect to the public network. Ask your Network Administrator for this type of configuration and configure the following settings: *Domain Name Server* and *Gateway* (see Vol. 3, Part IV, Section 1.2.2).

In the Web Configuration Utility, click on *Software Update* in the Menu window. The following window will be displayed:



The *FTP site* field contains the name of the FTP site where the 2101 Hub will download the new application. The default is <ftp.zephyr.com>. It can be changed.

The *FTP Path* represents the location and the name of the application on the FTP site. The default is *Pub\2101\Updates\Winsim.exe*

The 2101 Hub has the ability to store two different versions of application by using two different banks (or memory spaces). Therefore, it is always possible to reboot the system from the previous application if any problem is encountered with the latest download. To update the application, please follow the process below:

- Press Commit to copy the latest downloaded application from the secondary to the primary bank.
- Press Update to download the latest application to the secondary bank. This might take a couple of minutes. The Bank version fields are being updated.

- *Select the expected Active Bank you want to reboot the 2101 Hub from.*
- *Press Reboot*

**IMPORTANT!**

When the 2101 Hub Is rebooting, all active calls will be dropped!

This reboot process Is a 'software' reboot. It resets only the application, not the complete hardware.

**HOT TIP!**

*If the 2101Hub cannot be connected to the public network, there Is a possibility of running the update server application from a local server such the 2101 Hub Administrator Computer. Therefore, the software update application must be available on this computer and accessible over the network to the 2101 Hub. In this case the **FTP site** name on the 2101 Hub must be changed with the IP address of the Administration Computer.*

The *Command Status* field indicates the status of the Update process.

It is possible to know the last time the 2101 Hub application rebooted. The *Last Boot Time* field gives this information.

4.10 Configuration Management

If you have moved your Series 2101 Hub to a new group of digital telephone circuits, or otherwise need to start your configuration over from a fresh start, you can load the system defaults by selecting the “Load Defaults” option from the “Configuration Management” menu. This will not affect your Show or Studio configurations.

There is also the possibility to reset the whole settings by selecting *Clear and Load Default Settings*. This can be useful in case of data corruption.

**IMPORTANT!**

*By selecting **Clear and Load Default Settings**, all settings will be deleted and reinitialized to the defaults! All Show and Studio definitions will be lost!*

In addition, we strongly recommend you to save the 2101 Hub settings once configuration is complete. To do so, select *Save Settings* in the *Configuration Management* menu. A new Web page will be opened. This one contains all the

settings inserted in a text window. Select the “File” menu, and then save this page locally you want in an html format.

Should you need to reload those settings to the 2101 Hub (or in any other 2101Hub), first connect to the 2101 Hub by accessing to its Web Configuration Utility pages. Then, login using the main password. You can now download the saved settings (see above) by clicking on *Save Settings*. ***Do not close this window yet.***

Launch the Web page previously stored with the saved settings on the Administration Computer.. Enter the IP address of the expected 2101Hub in the “Hub IP Address” field, and press *Submit*. After a couple of seconds, the Web page indicates: “Saved settings loaded”.



HOT TIP!

If, during a saved settings download procedure, the following message is displayed, "A password is required to access this page!" it is because you are not connected to the 2101Hub via the Web Configuration Pages. You must first connect to the hub using the usual procedure and enter the main password for the settings download to be successful.



HOT TIP!

The "Save settings" procedure Is also frequently used for "Dual Hub" configurations, where the back up Hub must have the same settings as the main Hub (except IP settings).

4.11 About the Web Configuration Utility

The “About” option in the Menu window displays the current Web Configuration Utility version number. Telos Systems Customer Support may asked this version number.

4.12 2101 Hub Web Configuration Utility Error Messages

When trying to access to the Web Configuration Utility via a Web browser:

THE PAGE CANNOT BE DISPLAYED - This message can be given for several reasons. Check the following:

- Is the 2101 Hub Powered on?
- Is the 2101 Hub connected to a working Ethernet Hub?
- Is the Administration Computer Connected to a working Ethernet Hub?

- Check the Ethernet Link and Activity LEDs on the Administration Computer, 2101 Hub and Ethernet Hub
- Did you enter a valid IP address for the 2101 Hub?
- Is the IP address in the Administration Computer set to an IP address within the subnet of the IP address in the 2101 Hub?
- Is there one, and only one, device with this IP address on the local network?