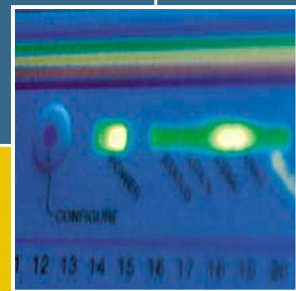
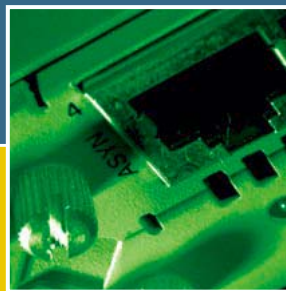
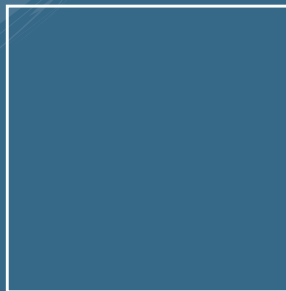


AR700 SERIES ROUTER

QUICK INSTALL GUIDE



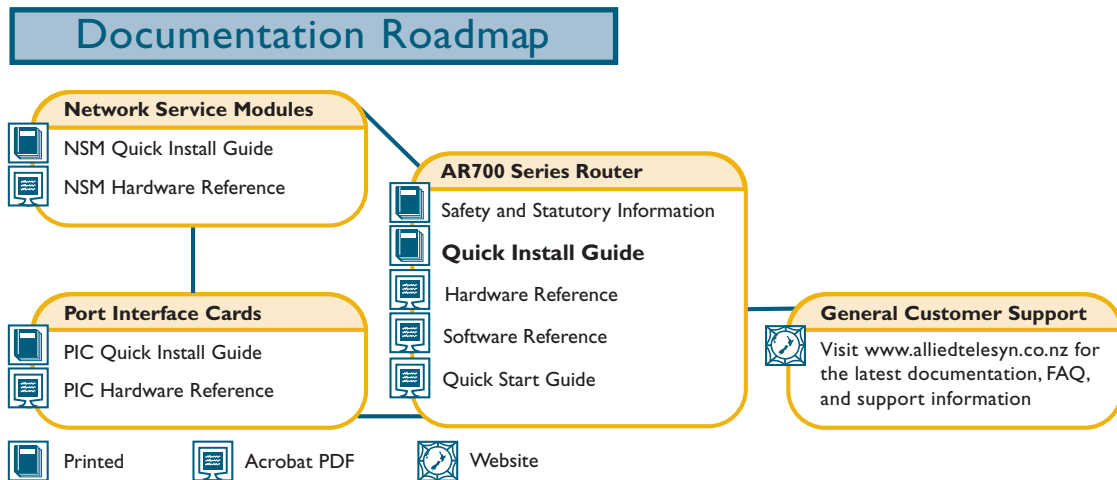
AR700 Series Router Quick Install Guide
Document Number C613-04027-01 REV C.

Copyright © 1999-2002 Allied Telesyn International, Corp.
19800 North Creek Parkway, Suite 200, Bothell, WA 98011, USA.

All rights reserved. No part of this publication may be reproduced without prior written permission from Allied Telesyn.

Allied Telesyn International, Corp. reserves the right to make changes in specifications and other information contained in this document without prior written notice. The information provided herein is subject to change without notice. In no event shall Allied Telesyn be liable for any incidental, special, indirect, or consequential damages whatsoever, including but not limited to lost profits, arising out of or related to this manual or the information contained herein, even if Allied Telesyn has been advised of, known, or should have known, the possibility of such damages.

All trademarks are the property of their respective owners.



Models Covered By This Guide

This Quick Install Guide includes information on the following models:

- AR720
- AR725
- AR740
- AR745

Quick Install Guide updates can be found at www.alliedtelesyn.co.nz/documentation/documentation.html.

Package Contents

The following items are included with each AR700 Series router. Contact your sales representative if any items are damaged or missing.

- One AR700 Series router.
- One AC power cord (AC models only).
- One power cord retaining clip (AR725 and AR745 models only).
- One 19 inch rack-mount kit.
- One terminal cable for connecting the router to a terminal or PC.
- Two CAT 5 cables for connecting the router to an Ethernet LAN. (The AR720 package includes one CAT 5 cable.)

- One AR700 Series Router Quick Install Guide.
- One Safety and Statutory Information booklet.
- One AR700 Series Router Documentation and Tools CD-ROM (which includes the complete AR700 Series Document Set and utilities).
- One warranty card.

Selecting a Site

The router can be installed in a standard 19-inch rack or on a level surface such as a desktop or bench. When installing the router, choose a site that:

- Allows adequate airflow around the router and its vents.
- Is free of dust and moisture.
- Will allow the router to operate within a temperature range of 0 to 40° C (32 to 104° F) and a humidity range of 5 to 95% non-condensing.
- Has a reliable and earthed (grounded), preferably dedicated and filtered power supply circuit.
- Does not expose cabling to sources of electrical noise, such as radios, transmitters, broadband amplifiers, power lines, electric motors, and fluorescent fixtures.
- Allows easy access to the router's power and cable connections.

Installing the Router



All AC and DC versions of this equipment must be earthed.

Follow these steps to install the router:

1. Read the safety information

For safety information, see the *Safety and Statutory Information booklet*. A copy of this booklet is supplied with each router, and can also be found on the Documentation and Tools CD-ROM or at www.alliedtelesyn/documentation/documentation.html.

2. Gather the tools and equipment you will need

If installing a DC version of the router you will need a DC power source, DC supply cable, and wire strippers (see step 10).

If the router is to be connected to a redundant power supply, you will need a redundant power supply unit and cable (see step 9).

3. Choose a suitable site for the router

Either a flat surface or 19 inch rack.

4. Unpack the router

Verify the package contents. If any items are damaged or missing, contact your sales representative.

5. Place the router in its operating location

See the previous Selecting a Site section for guidelines on choosing a suitable location.

6. Install expansion options

If you purchased optional Port Interface Cards (PICs) or a Network Service Modules (NSM), install them now by following their individual Quick Install Guides. These guides can be found on the Documentation and Tools CD-ROM or at www.alliedtelesyn.co.nz/documentation/documentation.html.

PICs can be used with all AR700 Series routers. NSMs can be used only with the AR740 and AR745.

Installation instructions for PACs can be found in the *AR Router Hardware Reference*.

7. Check the supply voltage and the router's rated voltage

AC versions of AR700 Series routers are fitted with a universal mains power supply that will function over the range 100-240 VAC and 50-60Hz.

DC versions of AR700 Series routers require a supply voltage in the range 39 to 59V DC.



The specific power supply requirements for a particular model are clearly displayed on the rear or underside of the router. If the supply is outside the accepted range for the router, the router may not operate, or damage to the router may result.

8. Apply AC power to the router (for AC models)

Fit the power cord retaining clip to the AC power inlet on the router's rear panel (for AR725 and AR745 models).

Plug the power cord into the AC power inlet and check that the power switch is in the ON position (see Figure 1). The Power LED on the router's front panel will light, and the System LED (also on the front panel) will light briefly.

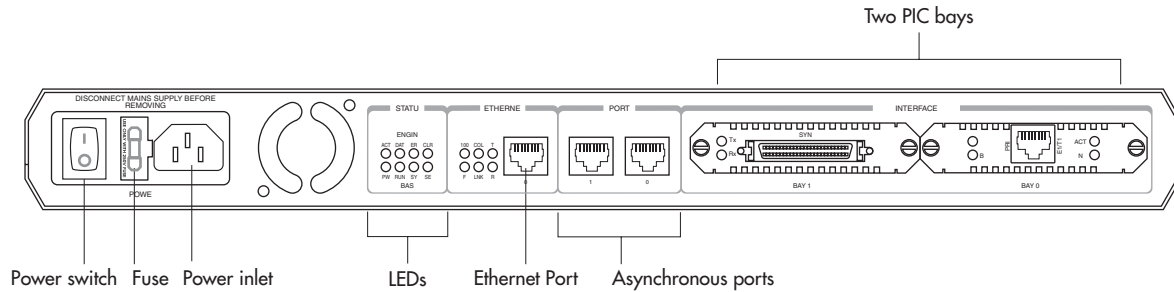
If the power LED fails to light, or the System LED lights continuously, refer to the troubleshooting section later in this guide.

9. Connect the redundant power supply (optional for AC models of the AR725, AR740, and AR745)

If you purchased an AT-RPS 740 (redundant power supply), install it now by following the instructions in its Quick Install Guide. The guide can be found on your router's Documentation and Tools CD-ROM, or can be downloaded from www.alliedtelesyn.co.nz/support/atrps740/index.html.

The AT-RPS 740 can be used with all AR700 Series routers *except* the AR720.

Figure 1: Rear panel of an AR720, showing the AC power inlet, power switch, and asynchronous ports.



AR720FP

10. Apply DC power to the router (for DC models)

Before connecting the DC supply:

Read the *Safety and Statutory Information* booklet. A copy of this booklet is included with each router. It is also included on the Documentation and Tools CD-ROM, or can be downloaded from www.alliedtelesyn.co.nz/documentation/documentation.html.

Only trained and qualified personnel should connect a DC power supply. Due to exposed terminals, DC powered routers should only be installed in restricted access areas.

DC supply cable specifications:

- Number of wires (cores): 3
- Minimum size: 2.1mm² (14 AWG)
- Minimum cable rating: 600V, 90 degrees Celsius

DC power supply specifications:

- 48V DC (39-59V DC is acceptable)
- Either positive grounded or negative grounded

Circuit protection:

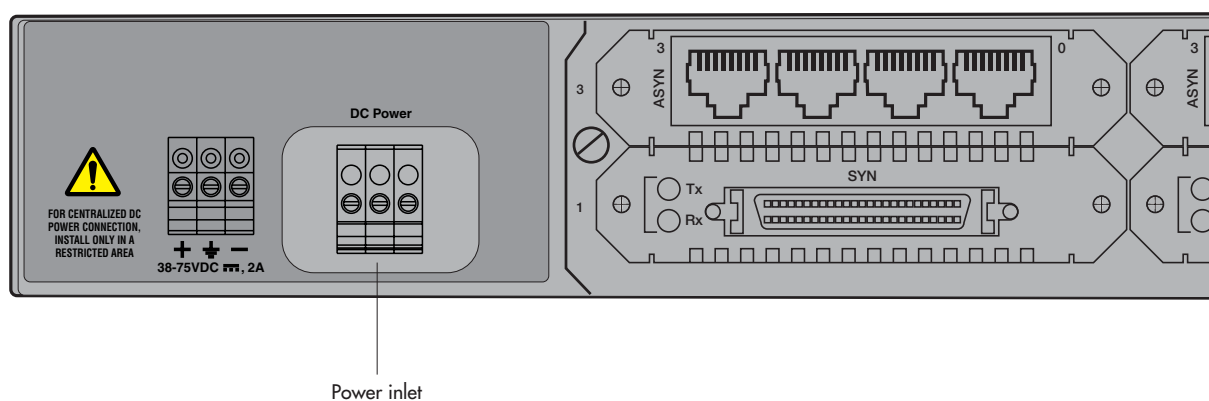
- Use a 10 Amp circuit breaker

To connect the DC supply:

- Ensure that the supply cable is not live
- Strip the supply cable wires to expose 8mm (0.31 in.) of bare conductor
- At the router, connect the ground wire to the ground terminal (The terminals can be identified by the diagram on the router's rear panel, see Figure 2). Tighten the terminal to 0.6 to 0.8 Nm (0.041 to 0.055 pound-force per foot)
- At the router, connect the positive feed to the + (positive) terminal and the negative feed to the - (negative) terminal. Tighten the terminals to between 0.6 and 0.8 Nm (0.041 to 0.055 pound-force per foot)
- Ensure that there are no exposed conductor strands
- Secure the supply cable (to the rack framework or similar object) so that the connections are isolated from any forces applied to the cable

- Ensure that the circuit breaker (for the supply circuit) and the power switch (on the router) are in the OFF position
- Connect the supply-cable wires to the circuit breaker
- Energise the circuit breaker
- Switch the power switch to the ON position

Figure 2: DC Power inlet terminals on an AR740.



The System LED should flash for approximately 10 seconds as the router runs internal tests. If the LED continues to flash or remains lit, refer to the *AR Router Hardware Reference* for troubleshooting information.

DC models of the AR725, AR740, and AR745 do not have RPS connectors.

11. Connect the data cables

Make sure that each cable connection is secure.

12. Initiate router start-up

Using the terminal cable supplied, connect a VT100-compatible terminal, or the COM port of a PC running a terminal emulation program such as Windows Terminal, to the console port (port 0) on the router's rear panel.

Set the communication parameters on your terminal or terminal emulation program to:

- Baud rate: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Hardware

See the *AR Router Hardware Reference* for more information on configuring emulation software.

13. Log in and set password

The log in prompt appears on the terminal or PC. If the log in prompt doesn't appear, press [Enter] two or three times.

When the router boots for the first time it automatically creates an account with manager privileges. The account has the log in name “manager” and the password is “friend”.

At the log in prompt, enter the log in name and password.

```
Login: manager
```

```
Password: friend
```

The router’s command prompt appears and you can now configure the router using the command line interface.



Change the password as soon as possible. Leaving the manager account with the default password is a serious security risk. Make sure you remember the new password as there is no way to retrieve it if it is lost.

Use the following command to change the account password:

```
set password
```

14. To access help, enter:

```
set help=help-filename
```

where *help-filename* is the name of a help file stored in flash.

To see a list of files stored in flash, enter:

```
show file
```

Help files have an HLP extension.

To display a list of help topics, enter:

```
help
```

To display help on a specific topic, enter:

```
help topic
```

Alternatively, type a question mark (?) at the end of a partially completed command to see a list of valid options.

See the *AR Series Router Software Reference* for more information on router start-up and configuration procedures (including a list of message definitions).

System LEDs and What They Mean

System LEDs indicate the router's operational status.

Table1: System LEDs.

LED		Function
Front panel	Rear panel	
Power	PWR	Lit when power is supplied and the router is switched on.
Run	Run	Lit when the internal processor is executing code. If the processor stops for any reason (a fault condition), then the LED will not be lit.
System	SYS	<p>This LED is not normally lit. It is used to signal various system conditions (e.g., when the processor executes the reboot sequence). Generally it signals a possible fault condition, but is lit during a power-up or operator initiated reboot, and remains lit until a release has been loaded from flash memory.</p> <p>On the AR725, AR740, and AR745, this LED will flash in specific sequences to indicate fan, PSU, or RPS faults:</p> <p>1 Flash: A router fan has failed.</p> <p>2 Flashes: If RPS monitoring is enabled, and an RPS is connected, the RPS fan has failed.</p> <p>3 Flashes: If an RPS is connected, the router's PSU (Power Supply Unit) has failed.</p> <p>4 Flashes: If RPS monitoring is enabled, the RPS PSU has failed.</p> <p>5 Flashes: If RPS monitoring is enabled, an RPS is not connected or is not operational</p>
Clear	CLR	Lit when a secure router has enabled PPP interfaces or Frame Relay circuits that are configured to send clear text.
Security	SEC	Lit when a user is logged in with SECURITY OFFICER privilege and the router is in SECURITY MODE.
-	ACT	Lit when a Mini Accelerator Card (MAC) is installed.
-	ERR	Lit when there is an error in data transmission to or from a MAC.

A full description of all AR700 Series router LEDs can be found in the *AR Router Hardware Reference*. Descriptions of NSM and PIC LEDs can be found in their respective Hardware References.

Troubleshooting Installation

If you have problems installing the router, try one or more of the following:

No LEDs Light

The most likely reason is that the router is not receiving power. Check the following:

1. Check that the supply outlet's switch is in the ON position.
2. Test the mains power outlet to verify that it is working.
3. The router's fuse may have failed? Contact your authorised Allied Telesyn distributor or reseller for assistance.

If the problem persists, please contact your authorised Allied Telesyn distributor or reseller.

LEDs Light Incorrectly

If the System LED stays on, the router software has encountered a fatal condition. Contact your authorised Allied Telesyn distributor or reseller.

No Response From the Terminal

1. Is the terminal cable correct for both the terminal and the router? Test the cable operation by connecting Txd and Rxd (pins 2 and 3) together at the router end of the cable. Characters typed on the terminal should be echoed back to the screen.
2. Are the terminal or terminal emulation software communication parameters set correctly? Refer to the *AR Router Hardware Reference* for more information on setting communications parameters.
3. Contact your authorised Allied Telesyn distributor or reseller for assistance.

Log in Name or Password Fails

1. Passwords are case sensitive. Check your spelling and that you are using the right combination of upper and lowercase characters.
2. Contact your authorised Allied Telesyn distributor or reseller for assistance.

Documentation and Tools CD-ROM

The Documentation and Tools CD-ROM bundled with each router contains the complete Document Set for your router. The CD-ROM also includes tools for managing your router.

The Document Set includes:

- The *Safety Booklet* for your router, which provides safety and statutory information.
- This *AR700 Series Router Quick Install Guide*, which outlines the procedure for installing an AR700 Series router.
- The *Quick Start Guide* for your router, which provides introductory information on network connections.
- The *AR Router Hardware Reference*, which provides detailed information on the hardware features of AR routers.
- The *Software Reference* for your router, which provides detailed information on configuring the router and its software.
- AT-TFTP Server for Windows, for downloading software releases.
- Adobe Acrobat Reader, for viewing online documentation.
- Microsoft Internet Explorer.

These documents can also be downloaded from the AR Router Support Site at www.alliedtelesyn.co.nz/documentation/documentation.html.