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# 5250 Repeater Technical Specifications

## Host Connection

IBM® S/3x (System 34, 36, 38), AS/400™ Host or remote controllers

## Physical Dimensions

6.5" x 4.1" x 1.6" (165 mm x 105 mm x 41 mm)

## Input Power

### Power Supply Adapter

#### AC Input:

TN PN	Requirement	Location
3500	120 volts, 60 hertz, 28 watts	USA/Canada/Mexico
3501	230 volts, 50 hertz, 28 watts	Europe
3508	100 volts, 50-60 hertz, 28 watts	Japan
3506	240 volts, 50 hertz, 28 watts	United Kingdom
3510	240 volts, 50 hertz, 28 watts	Australia

#### DC Output:

12 volts at 1.5 A maximum

## MTBF:

45655 hours	including power supply
525468 hours	NOT including power supply

## Environment

Temperature:	0-50°C (32° to 122° F)
Humidity	10-90%, non condensing
Altitude	0-10,000 feet

## Warranty

5 years

# Twinax to Fiber 5250 Repeater

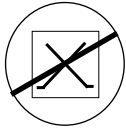
(5250-CV-T-F/11)

7336.E

**For assistance** in installing, using, or maintaining the TRANSITION Networks 5250 Repeater, contact TRANSITION Networks Technical Support at:

**(800) 260-1312**

or contact your local distributor.



**CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.**

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

### Compliance Information

UL Listed

C-UL Listed (Canada)

CISPR/EN55022 Class A

### FCC Regulations

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

### Canadian Regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

### European Regulations

#### Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Copyright Restrictions

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## Fiber Cable and Connector Specifications

The physical characteristics of the fiber cable must meet or exceed the following:

### Cable Characteristics:

Fiber Optic Cable Recommended:	62.5 / 125 $\mu$ m multimode fiber
Optional:	100 / 140 $\mu$ m multimode fiber 85 / 125 $\mu$ m multimode fiber 50 / 125 $\mu$ m multimode fiber
Fiber Optic Transmitter Power:	Average power: -15.0 dBm Peak power: -12.0 dBm $\pm$ 1dBm
Fiber Optic Receiver Sensitivity:	Average sensitivity: -27.4 dBm Bit error rate: $\leq 10^{-10}$

### Minimum Cable Distance:

Host to Product	7.6 meters (25 feet)
Product to Product	7.6 meters (25 feet)
Product to Terminal Device	not applicable

### Maximum Cable Distance:

Host to Product	3000 meters (10,000 feet)
Product to Product	3000 meters (10,000 feet)
Product to Terminal Device	not applicable

### Connector Characteristics:

ST type connectors (SMA type available upon request)

## Twinax Cable and Connector Specifications

### Cable Characteristics:

Differential Characteristic Impedance	100 $\Omega$ $\pm$ 10% @ 10 MHz
Shielding:	Foil plus braid

### Cable Type

Twinax Plenum	IBM PN or equivalent 7362061
Twinax PVC	7362211

### Minimum Cable Distance:

Host to Product	7.6 meters (25 feet)
Product to Product	7.6 meters (25 feet)
Product to Terminal Device	not applicable

### Maximum Cable Distance:

Host to Product	1500 meters (5,000 feet)
Product to Product	1500 meters (5,000 feet)
Product to Terminal Device	not applicable

### Connector Characteristics:

Twinax connectors (IBM or equivalent) can be connected to twinax cable. (The last twinax connection in a daisy-chain must be terminated.)

# AS/400 & S/3x Cable Specifications

## Twisted Pair Cable and Connector Specifications

The physical characteristics of the twisted pair cable must meet or exceed the following:

### Cable Characteristics:

Category 3 wire or better is required; category 5 wire is recommended. Either shielded twisted pair (STP) or unshielded twisted pair (UTP) can be used. DO NOT USE FLAT OR SILVER SATIN WIRE.

### Category 3:

Gauge	24 to 22 AWG
Attenuation	28 dB/1000' @ 10 MHz
Differential Characteristic Impedance	100 $\Omega$ $\pm$ 10% @ 10 MHz

### Category 5:

Gauge	24 to 22 AWG
Attenuation	20 dB/1000' @ 10 MHz
Differential Characteristic Impedance	100 $\Omega$ $\pm$ 10% @ 10 MHz

### Minimum Cable Distance:

Host to Product	7.6 meters (25 feet)
Product to Product	7.6 meters (25 feet)
Product to Terminal Device	7.6 meters (25 feet)

### Maximum Cable Distance:

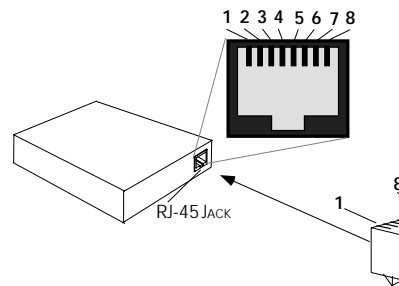
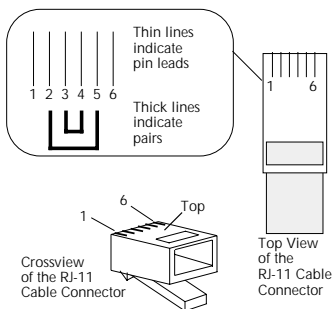
Host to Product	762 meters (2500 feet)
Product to Product	762 meters (2500 feet)
Product to Terminal Device	762 meters (2500 feet)

### Connector Characteristics:

Twisted pair connection requires one active pair configured as straight through.

When using RJ-11 connectors, the active pair can be pins 2 & 5 or pins 3 & 4.

When using RJ-45 connectors, the active pair can be pins 1 & 2, pins 4 & 5 or pins 3 & 6.



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# 1. INTRODUCTION

This guide is intended for the system or network administrator responsible for installing and monitoring a TRANSITION Networks 5250 Repeater. A working knowledge of local area network (LAN) operations, including familiarity with communications protocols used on interconnected LANs, is assumed.

## The 5250 Repeater

The Twinax to Fiber 5250 Repeater (5250-CV-T-F/11) extends the signal distance between an AS/400™, S/3x, or 5x94 host and terminal equipment.



- Distance of twinax controller to last DTE can be extended to 6 km (20,000 feet).
- Designed to support all 5250 compliant devices including devices operating at a non-standard rate.
- UTP hot redundant backup to fiber connection can be installed, for distances between 5250 Repeaters of up to 750 m (2500 ft).

NOTE: When the 5250 Repeater receives a 5250 data signal, the 5250 Repeater recognizes the 5250 start sequence, loads the data into an internal buffer, creates a new start sequence, re-clocks the data, and transmits a completely rebuilt data packet. In this way, signal distortions caused by line length and external noise are eliminated.

The sole purpose of this remedy shall be provided the customer with the replacement or repair of non-conforming goods in the manner described in this Warranty statement. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as TN is willing and able to repair or replace the defective item(s) or refund the purchase price.

TN reserves the right to inspect products claimed to be defective under warranty either at the customer's location or at TN's plant. TN assumes no liability for liability charges incidental to the adjustment, service, repairing, removal or replacement of the product, or other costs, or the expense of repairs made outside of its factory, except when made with TN's prior written consent. Additionally, Transition Networks reserves the right to charge for all testing and shipping incurred, if after testing, a return is classified as "No Problem Found".

TN's total liability in connection with the products and their installation to all persons and from all causes in the aggregate, whether in contract, tort, or strict liability, shall not exceed the amount paid to TN for the product directly related to the alleged damage. However, in no event shall TN have any liability to a customer or any third party for products manufactures according to the customer's specifications.

### C. Return Procedure

The customer must follow this procedure for the return of defective items:

1. Locate the serial number(s) of the item(s) to be returned.
2. Determine the date the item(s) was received.
3. Contact Transition Networks Technical Support to determine if the problem can be corrected on site.

#### If not, and the product is covered by warranty, then:

- Call the distributor directly or contact TN.
- Request a Return Material Authorization (RMA).
- Ship the item, prepaid in original packaging to Transition Networks at the above address.
- Include the RMA number on the outside of the carton and/or on the Packing List.
- Include a copy of the RMA form.
- Include a copy of the original invoice or packing list (if possible) to expedite processing.
- The item(s) may be shipped by the customer or the distributor.
- Transition Networks will repair or replace the unit, at TN's discretion, and cover the cost of the return freight to the distributor or to the customer, whichever requested the RMA number.

If the item(s) was received **more than five years ago**, or if the item(s) is **no longer covered by warranty** for other reasons, then:

- Call the distributor or contact TN.
- Request a Material Repair Authorization number (MRA).
- Ship the item(s), prepaid, in the original packaging to Transition Networks at the above address.
- Include the MRA number on the outside of the carton add/or on the Packing List.
- Include a copy of the MRA form.
- Include a copy of the original invoice or packing list (if possible) to expedite processing.
- Only the customer (end-user) may send the items(s) to TN.
- TN will contact the customer after the item(s) have been received, inspected, and a cost estimate of the repair determined.
- The repair charges may be billed, with customer's approval, though the distributor, or on a prepaid or C.O.D. basis directly to the customer. The charges will include the cost of shipping.

The return authorization numbers are valid only for 90 days from the date issued.

## Warranty Statement

### A. Five Year Warranty

Transition Networks, Inc. (TN) warrants, for a period of five years, that TN products (with the exception of power supplies and fans that TN warrants for two years) will be free from defects in materials and workmanship, and will be in conformity with TN's specifications.

TN's warranty on products manufactured by or assembled for TN in accordance with a customer's specifications, is a five-year warranty that the goods conform to such specifications.

The warranty is invalidated if the goods have been subject to alterations, misuse, accident, Acts of God (e.g., damage by floods, lightning strikes, Etc.), tampering, improper maintenance, improper installation, or abuse. If the user is unsure about the proper means of installing or using the equipment, contact TN's free Technical Support or Network Design Services, which can be reached by:

**Telephone** 1.800.LAN.WANS or 612.941.7600  
**Fax** 612.941.2322  
**E-mail** techsupport@transition.com  
**Internet** http://www.transition.com

THE ABOVE WARRANTY IS EXCLUSIVE AND EXTENDS ONLY TO PRODUCTS ASSEMBLED BY TRANSITION NETWORKS, INC. TO THE EXTENT PERMITTED BY LAW, TN DOES NOT MAKE AND DISCLAIMS ALL OTHER WARRANTIES, EXCEPT TITLE, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF DESCRIPTION, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, AND ANY WARRANTY BASED UPON PRIOR WRITTEN OR ORAL REPRESENTATIONS REGARDING SUCH PRODUCTS MADE BY TN, ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES.

### B. Limitations and Exclusions

If the customer believes any goods sold by TN are defective and within the warranty period, the following general procedure will be followed:

1. Locate the serial number and delivery date of the item(s).
2. Notify TN within the warranty period.
3. TN will promptly issue a return authorization form for the goods.
4. Upon receiving the form, the customer will promptly return the item(s) at customer's own expense, shipped prepaid, to the distributor from which it was purchased, or directly to TN.

TN will only accept goods for return if the following conditions have been met:

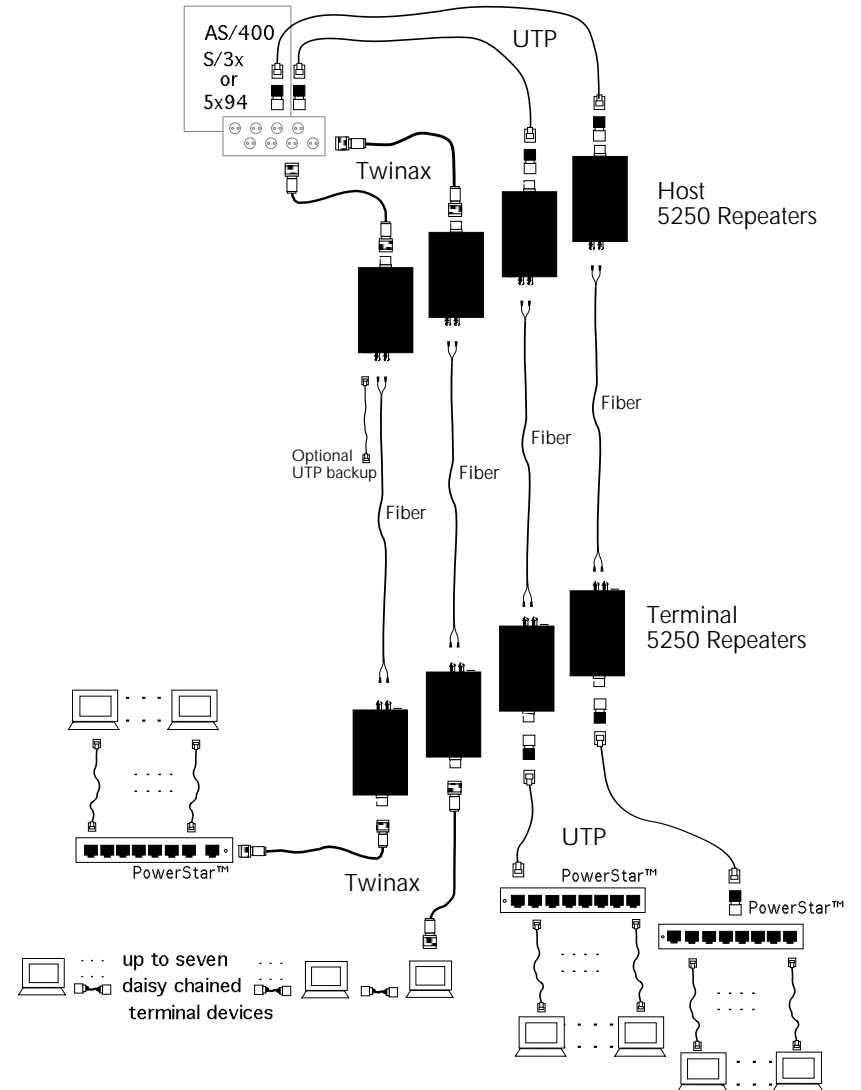
1. A return form is obtained from TN.
2. The freight charges have been prepaid by the customer.
3. Goods are re-packed in their original packaging.

If under warranty TN shall, at its option, (1) repair the goods free of charge (2) replace the goods free of charge, or (3) accept the return of the item(s) and credit the current price to the reseller (within 90 days of purchase), or (4) if the goods are not under warranty, will repair the item(s) at a minimum charge of USD \$200 (two hundred U.S. dollars) per item.

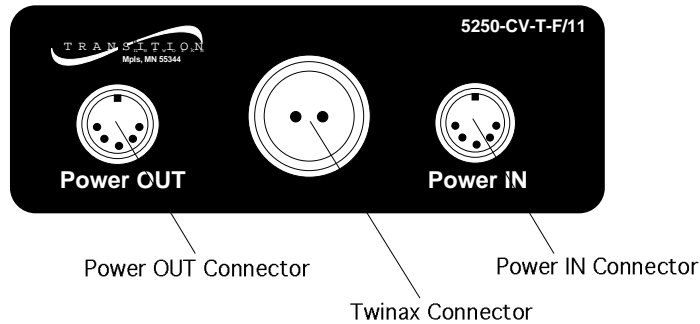
THIS IS THE EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY. IN NO EVENT SHALL TRANSITION NETWORKS BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER FOR BREACH OF ANY CONDITION OF SALE, FOR NEGLIGENCE, ON THE BASIS OF STRICT LIABILITY, CONTRACT, OR OTHERWISE AND IRRESPECTIVE OF WHETHER TN IS INFORMED BY CUSTOMER OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE OF THIS SALE.

## Networking the 5250 Repeater

Twinax to Fiber 5250 Repeaters are installed, in pairs, between a host and remote terminal equipment. The connecting medium between the pairs is fiber, with optional unshielded twisted pair (UTP) backup. The connecting medium between the 5250 repeaters and both the host and the terminal equipment is twinax cable or UTP cable and baluns.



## Connectors, Switches and Status Indicators



### Connectors

The **Power OUT** connector provides power to up to four connected 5250 Repeaters.

The **twinax** connector (unlabeled) allows AS/400™, S/3x, or 5x94 signal input from host OR signal output to terminal equipment.

The **Power IN** connector provides connection to external AC power.

The **Fiber** transmit (**TX**) and receive (**RX**) connectors provide fiber connection between 5250 Repeaters.

The **UTP Backup** connector provides optional unshielded RJ-11 twisted pair backup connection between 5250 Repeaters.

### Switches

The **Fiber/UTP Polarity** switch allows selection of either fiber or unshielded twisted pair media connection between 5250 Repeaters.

The **Reset** switch reinitializes the 5250 Repeater.

### Status Indicators (LEDs)

The **Fiber/UTP** LED at **Sync** level indicates reception of valid 5250 packet from fiber or UTP connection.

The **Fiber/UTP** LED at **Error** level indicates detection of parity error at fiber or UTP connection.

## 5. MAINTENANCE

**WARNING: DO NOT, UNDER ANY CIRCUMSTANCES, open and attempt to repair the 5250 Repeater or power supply adapter unit. Failure to observe this warning could result in personal injury or death from electrical shock.**

**NOTE:** Failure to observe the above warning will immediately void the warranty.

### Fault Isolation

Fault	Possible Cause
POWER LED not illuminated.	Power Supply is not properly attached or is not functional.
POWER LED illuminated., but units do not come up.	Controller balun uses incorrect pins. Controller Polarity Switch set to incorrect polarity.
POWER LED is on, LINK Sync LED flashes regularly (10 second minimum interval), but one or more units do not come up	Controller Polarity setting and baluns correct, but balun between repeater and device in question uses incorrect pins. Controller Polarity setting and baluns are correct, but device Polarity setting is incorrect.
Intermittent Flashing ERROR LEDs.	Poor cable connections.

### Technical Support Contact

For assistance in fault isolation and in maintaining the 5250 Repeater Pocket Hub, contact:

**Technical Support** (800) 260-1312  
or contact your local distributor.

## 4. OPERATION

The 5250 Repeater requires no intervention beyond occasionally monitoring the LEDs.

LED	Color	Indication
<b>Power</b>	Green	Illuminated when the 5250 Repeater is connected to external power.
<b>Sync: Fiber/UTP</b>	Green	Flashes rapidly during reception of valid 5250 packet from fiber or UTP connection
<b>Sync: Twinax</b>	Green	Flashes rapidly during reception of valid 5250 packet from twinax connection
<b>Error: Fiber/UTP</b>	Red	Blinks at detection of parity error at fiber or UTP connection
<b>Error: Twinax</b>	Red	Blinks at detection of parity error at twinax connection
<b>Backup Active</b>	Red	Illuminated when data reception at fiber port is not detected but connection integrity is maintained by the UTP Backup.

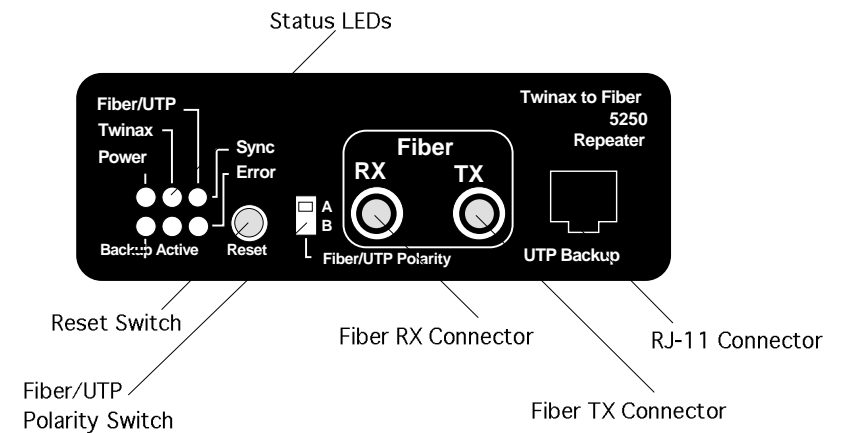
NOTE: With S/3x host connection, the **Sync** LED's may appear to become brighter intermittently during large data exchanges between host controller and terminal equipment.

The **Twinax** LED at **Sync** level indicates reception of valid 5250 packet from twinax connection.

The **Twinax** LED at **Error** level indicates detection of parity error at twinax connection.

The **Power** LED indicates connection to external power.

The **Backup Active** LED indicates failed data reception at fiber port AND unshielded twisted pair backup connection.



## 2. SITE CONSIDERATIONS

The site for the 5250 Repeater must provide:

- AC power outlet for each 5250 Repeater or cascaded set of 5250 Repeaters. (NOTE: Up to four (4) cascaded 5250 repeaters can be powered through one power adapter.)
- Adequate ventilation
- Standard environmental conditions
- Isolation from electrical noise, including radio transmitters and broadband amplifiers, motors, high power electrical lines, or fluorescent light fixtures.

Additionally:

- The twisted pair cables should not run in the same conduit with power line cables,
- Phone lines should be separated from data cables,
- Flat or "silver satin" wires should not be used,
- RJ-11 connected cables should be configured as straight through.

### Straight Through Cable at RJ-11 Plug

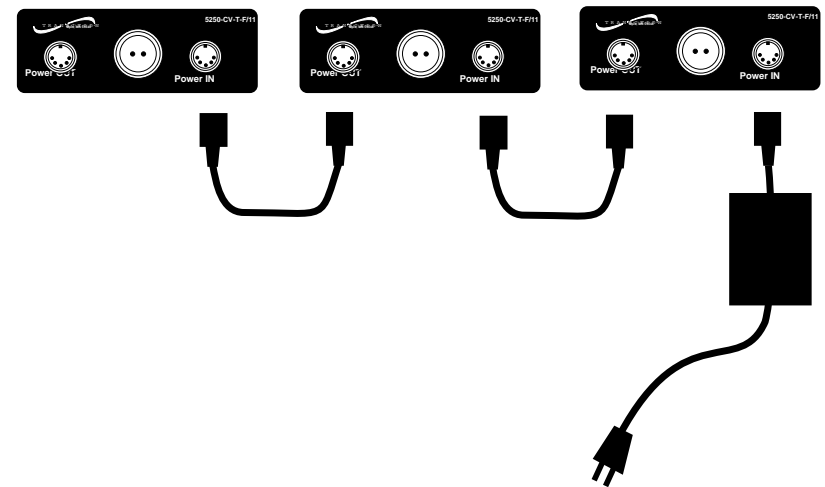
Repeater	.....	Repeater
RJ-11 Male	.....	RJ-11 Male
1	.....	1
2	.....	2
3	.....	3
4	.....	4
5	.....	5
6	.....	6

## Optionally Cascading 5250 Repeaters

NOTE: Optionally cascade up to four (4) 5250 Repeaters to external power through one power supply adapter.

To cascade 5250 Repeaters:

1. Locate the **Power OUT** receptacle on first 5250 Repeater Pocket Hub.
2. Connect one 5250 Repeater DIN cable connector to the 5250 Repeater **Power OUT** receptacle.
3. Connect the other 5250 Repeater DIN cable connector to the **Power IN** receptacle of an adjacent 5250 Repeater.
4. Connect second 5250 Repeater DIN cable connector to the adjacent 5250 Repeater **Power OUT** receptacle.
5. Continue steps 3 and 4 until *up to four* 5250 Repeaters are cascaded.
6. Connect the 5250 Repeater power connector end of the power supply adapter to the first 5250 Repeater **Power IN** receptacle.
7. Connect the external power connector end of the power supply adapter to external AC power.



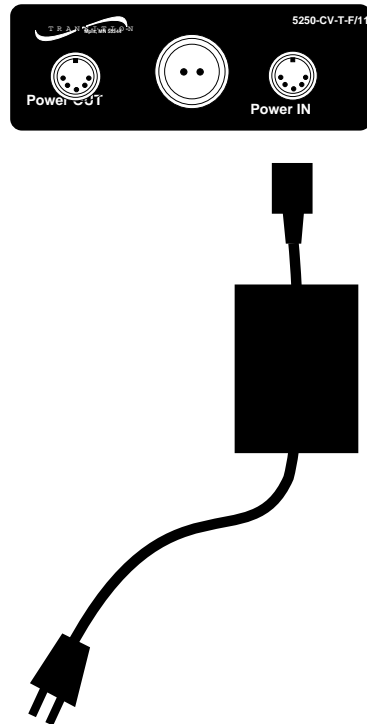
## Connecting Power to 5250 Repeaters

NOTE: After the power supply adapter is connected to the 5250 Repeater and to external power, the green **Power** LED is illuminated.

### Connecting Single 5250 Repeater to Power

To power ON the 5250 Repeater:

1. Locate the **Power IN** receptacle on the 5250 Repeater Pocket Hub.
2. Connect the 5250 Repeater power connector end of the power supply adapter to the 5250 Repeater **Power IN** receptacle.
3. Connect the external power connector end of the power supply adapter to external AC power.



## 3. INSTALLATION

NOTE: 5250 Repeaters are installed in pairs as a *Host 5250 Repeater* with a *Terminal 5250 Repeater*.

To install the 5250 Repeater:

- Unpack the 5250 Repeaters and equipment.
- Connect host signal to *Host 5250 Repeater*.
- Connect *Host 5250 Repeater* to *Terminal 5250 Repeater*.
- Connect *Terminal 5250 Repeater* to terminal equipment.
- Connect 5250 Repeaters to power.

Direction is provided in the pages that follow.

### Unpacking the 5250 Repeater

The 5250 Repeater packing contents should include the following:

Item	Part Number
5250 Repeater(s)	5250-CV-T-F/11
Power Supply Adapter	3500, 3501, 3506, 3508, or 3510 (depending upon power configuration in country where installed)
(optional) DIN cable	5070 (for cascading up to four 5250 Repeaters to one power supply adapter)
User's Guide	7336

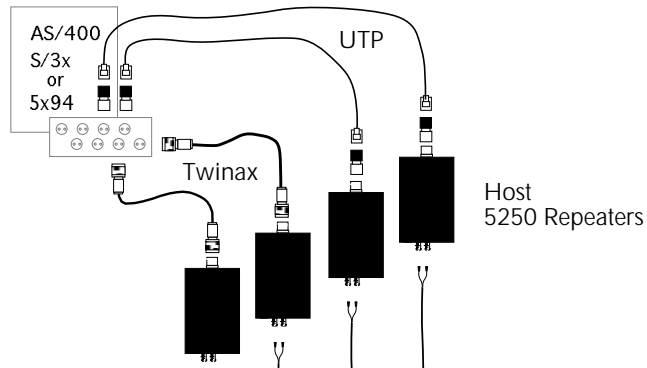
Additionally, for unshielded twisted pair installations, the installation requires:

Item	Part Number
baluns	3-4554 (RJ-45)
	3-1143 (RJ-11)

## Connecting Host Signal to *Host 5250 Repeater*

Connect the AS/400™, S/3X, or 5x94 host to the *Host 5250 Repeater* using either twinax cable or UTP cable and baluns.

**ALL cable connections to the 5250 Repeater MUST be AT LEAST 7.6 meters (25 feet) in length.**



### Twinax Connection

To connect twinax cable between AS/400™, S/3X, or 5x94 host and *Host 5250 Repeater*:

1. Locate or build twinax cable that conform to cable specifications and with male twinax connectors installed at both ends. (See page 20)
2. Connect twinax connector at one end of twinax cable to host twinax connector.
3. Connect twinax connector at other end of twinax cable to *Host 5250 Repeater* twinax connector.

2. Install balun at *Terminal 5250 Repeater* twinax connector.
3. Connect male RJ-11 or RJ-45 plug connector at one end of twisted pair cable to balun on *Terminal 5250 Repeater* twinax connector.

### UTP to RJ-11 or RJ-45:

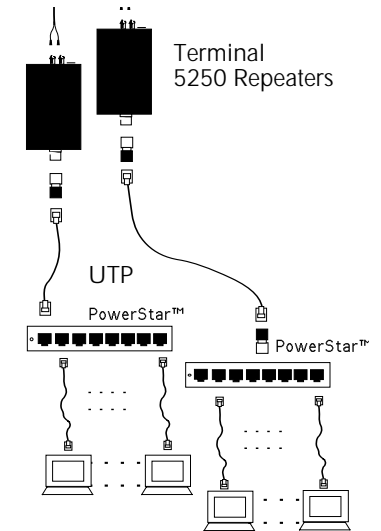
*If connecting to RJ-11 or RJ-45 connector on terminal equipment (as on PowerStar™):*

4. Connect other male RJ-11 or RJ-45 plug connector to RJ-11 or RJ-45 female connector on terminal equipment.

### UTP to Twinax:

*If connecting to twinax connector on terminal equipment (as on PowerStar™):*

4. Install balun at terminal equipment twinax connector.
5. Connect other male RJ-11 or RJ-45 plug connector to balun installed on terminal equipment twinax connector.



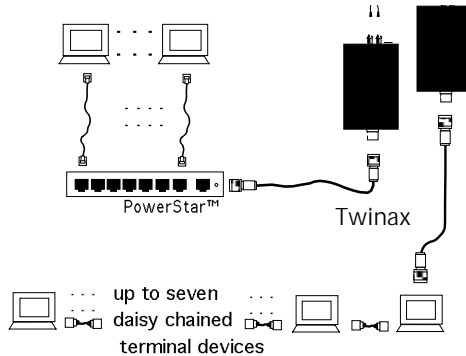
## Connecting *Terminal 5250 Repeater* to Terminal Equipment

Connect the *Terminal 5250 Repeater* to the terminal equipment using either twinax cable or UTP cable with baluns.

### Twinax Connection

To connect twinax cable between *Terminal 5250 Repeater* and terminal equipment:

1. Locate or build twinax cable that conform to cable specifications and with male twinax connectors installed at both ends. (See page 20)
2. Connect twinax connector at one end of twinax cable to *Terminal 5250 Repeater* twinax connector.
3. Connect twinax connector at other end of twinax cable to terminal equipment twinax connector.



### UTP Connection

To connect twisted pair cable between *Terminal 5250 Repeater* and terminal equipment:

1. Locate or build twisted pair cables with the following characteristics:
  - compliant with cable specifications (See page 19)
  - straight through cable configuration (See page 5)
  - male RJ-11 or RJ-45 plug connectors installed at both cable ends.

NOTE: TRANSITION Network's part numbers for baluns are:

RJ-45	3-4554
RJ-11	3-1143

### UTP/Balun Connection

To connect twisted pair cable between host and *Host 5250 Repeater*, using twisted pair cables and baluns:

1. Locate or build twisted pair cables with the following characteristics:
  - compliant with cable specifications (See pages 17 and 18)
  - correct (straight through) cable configuration for site installation (See page 5)
  - male RJ-11 or RJ-45 plug connectors installed at both cable ends.

NOTE: TRANSITION Network's part numbers for baluns are:

RJ-45	3-4554
RJ-11	3-1143

2. Install balun at host twinax connector.
3. Connect male RJ-11 or RJ-45 plug connector at one end of twisted pair cable to balun on host twinax connector.
4. Install balun at *Host 5250 Repeater* twinax connector.
5. Connect male RJ-11 or RJ-45 plug connector at other end of twisted pair cable to balun installed on *Host 5250 Repeater* twinax connector.

## Connecting *Host 5250 Repeater* to *Terminal 5250 Repeater*

Connect the *Host 5250 Repeater* to the *Terminal 5250 Repeater* using fiber cable with optional UTP backup.

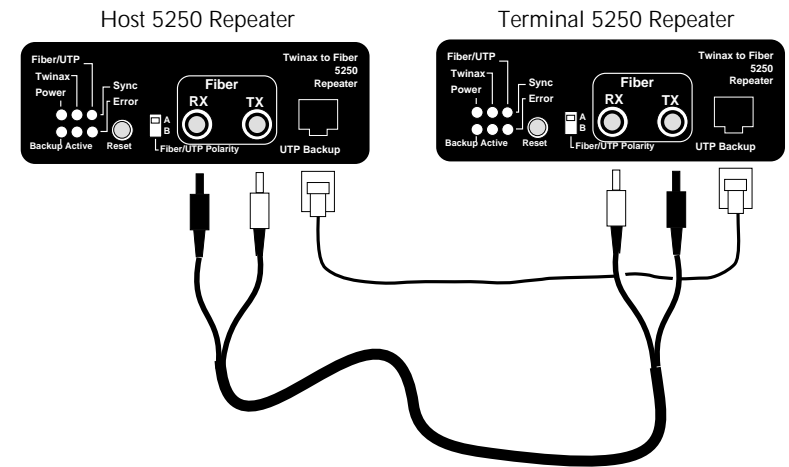
**ALL cable connections to the 5250 Repeater MUST be AT LEAST 7.6 meters (25 feet) in length.**

### Fiber Connection

NOTE: Fiber cables consist of two separately identified cables which may be color-coded.

To connect fiber cable between *Host 5250 Repeater* and *Terminal 5250 Repeater*:

1. Locate or build fiber cable that conform to cable specifications and with male fiber connectors installed at both ends. (See page 20)
2. Connect one end of one fiber cable to *Host 5250 Repeater* **TX** connector.
3. Connect other end of that fiber cable to *Terminal 5250 Repeater* **RX** connector.
4. Connect one end of second fiber cable to *Host 5250 Repeater* **RX** connector.
5. Connect other end of that fiber cable to *Terminal 5250 Repeater* **TX** connector.
6. Set Fiber/UTP Polarity Switches on **both** *Host 5250 Repeater* and *Terminal 5250 Repeater* **either** to A **or** to B.



### Optional UTP Backup Connection

To connect twisted pair cable between *Host 5250 Repeater* and *Terminal 5250 Repeater*:

1. Locate or build twisted pair cables with the following characteristics:
  - compliant with cable specifications (See page 20)
  - straight through cable configuration (See page 5)
  - male RJ-11 plug connectors installed at both cable ends.
2. Connect male RJ-11 plug connector at one end of twisted pair cable to RJ-11 connector on *Host 5250 Repeater*.
3. Connect male RJ-11 plug connector at other end of twisted pair cable to RJ-11 connector on *Terminal 5250 Repeater*.
4. Set Fiber/UTP Polarity Switches on **both** *Host 5250 Repeater* and *Terminal 5250 Repeater* **either** to A **or** to B.