

**SPIRIT<sup>®</sup>**  
**Communications System**  
**ConnecT/R**  
**Owner's Manual**

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# Table of Contents

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Introduction	1
Installation	4
Step 1—Set the MODE switch	5
Step 2—Set the ADMIN switch	8
Step 3—Mount the Connect/R	9
Step 4—Connect the Connect/R	10
Step 5—Test the Equipment	13
Using the Telephone Device	14
Answering Calls	14
Placing Calls	14
Paging	15
Interactions with <b>SPiRiT</b> Features	16
Troubleshooting	19
Appendix A—Wiring Requirements	25
Appendix B—Warranty	26

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# IMPORTANT SAFETY INSTRUCTIONS

To reduce risk of injury from fire or electric shock, always follow basic safety precautions when using this product. The safety symbol (exclamation point inside a triangle) on the Connect/R alerts you to the important operating and maintenance instructions below.

1. **Read and understand all instructions** in this *Owner's Manual*.
2. **Observe all warnings and instructions** marked on the product.
3. **Unplug this product from wall outlets and telephone jacks before cleaning.** Clean exposed parts with a soft, damp cloth. Do not use liquid or aerosol cleaners, and never immerse in water.
4. **Do not use the product near water or when you are wet.** For example, do not use it in a wet basement or near a swimming pool, bathtub, shower, sink, or laundry tub. If the product comes in contact with any liquids, unplug the power and line cords immediately. Do not plug the product back in until it has been dried thoroughly.
5. **Install this product securely on a stable surface.** Damage may result if the product falls.
6. **Install this product in a protected location** where no one can step on or trip over power and line cords. Do not place objects on the cords that may cause damage or abrasion.
7. **Do not allow anything to rest on the power cord.** Do not locate this product where the cord will be abused by persons walking on it. **Do not overload wall outlets,** as this can result in the risk of fire or electric shock.
8. **Never push objects of any kind into this product through housing openings** because they may touch dangerous voltage points or short out parts, resulting in possible fire or electric shock.
9. **If this product does not operate normally, see the Troubleshooting section of this manual.** If you cannot resolve the problem, or if the product is damaged, Call the AT&T Helpline at 1-800-628-2888. Do not open the

product. Opening the product may expose you to dangerous voltages or other risks.

10. **During thunderstorms, avoid using telephones except cordless models.** There may be a slight chance of electric shock from lightning.
11. **Do not use a telephone in the vicinity of a gas leak.** If you suspect a gas leak, report it immediately, but use a telephone away from the area where gas is leaking.
12. **This product should be operated only from the type of power source indicated on the power transformer** (see Item 13, below). If you are not sure of the type of power supply to your business or home, consult your local power company.

13. **Use only a UL Listed wall plug-in power transformer that has Class 2 outputs and the following characteristics:**

Input rating:        99-127 V AC rms 60 Hz  
                             150 mA maximum

Output rating:       27-35 V DC at 200 mA  
                             14-18 V DC at 200 mA

The power transformer supplied with the product has these characteristics.

## SAVE THESE INSTRUCTIONS

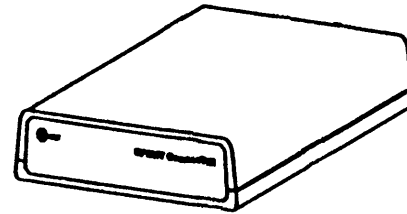
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## Introduction

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The following descriptions define important terms used in this manual.

- The **SPIRIT<sup>®</sup> Communications System Connect/R** provides you with the ability to add telephone devices to your **SPIRIT** System. It connects to the controller.
- The **controller** is the central processor through which all **SPIRIT** calls in your company are processed.
- The **SPIRIT Telephone** (with the *AT&T* **SPIRIT** logo on it) is specialized to work within the **SPIRIT** Communications System. You do not need a **SPIRIT** Telephone attached to the Connect/R.
- The **telephone device** is a modem, answering machine, standard telephone, etc., you can add to the **SPIRIT** System via the Connect/R. You can add up to two telephone devices to a single Connect/R, and use them to place and receive calls. Interactions with specific **SPIRIT** System features are described later in this book.



**Figure 1. SPIRIT Connect/R**

The Connect/R allows you to add telephone devices to your **SPIRIT** System in a way that gives you much more flexibility than before. Although it has always been possible to connect answering machines, facsimile machines, modems, or standard telephones via the "line auxiliary jack" on the controller, that jack restricts their access to a single telephone line within the **SPIRIT** System. But since the Connect/R connects to ports designed for **SPIRIT** Telephones themselves (which can access multiple lines), the telephone devices can function on as many telephone lines as the port was customized to handle.

\* SPIRIT is a registered trademark of AT&T.

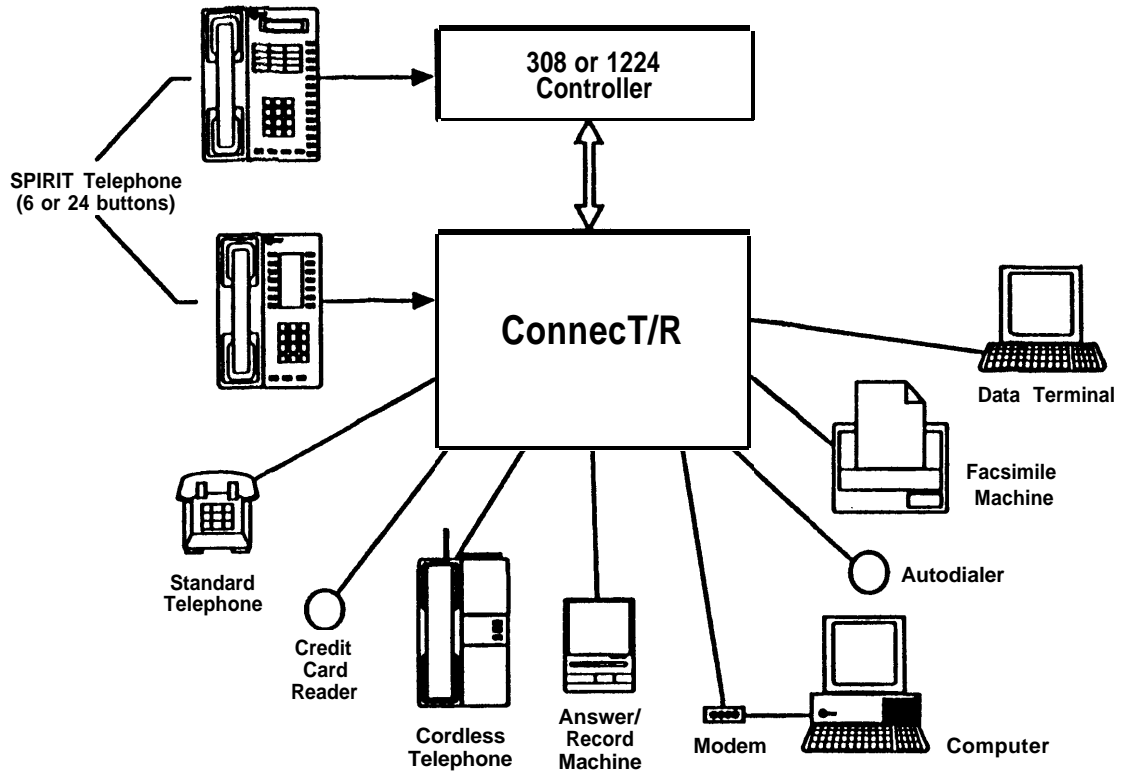
Although you can have a **SPiRiT** Telephone connected to the **SPiRiT** Connect/R, it isn't necessary. In fact, many business uses, such as telephones in hotel lobbies or facsimile machines with built-in telephones, will not have a **SPiRiT** Telephone attached to the Connect/R.

Examples of the kinds of telephone devices you can add to your **SPiRiT** Communications System via the Connect/R are:

- Standard telephones
- Cordless telephones
- Answer/record machines
- Credit card readers
- Facsimile machines
- Auto-dialers
- Modems

The devices must be *single-line* (requiring only one line for operation) and *stand-alone* (able to process calls without being attached to a controller or other system device).

This *Owner's Manual* will help you set up your **SPiRiT** Connect/R for your particular business needs.



**Figure 2. SPIRIT Connect/R Applications**

## Installation

A complete Connect/R has the components shown in Figures 3 and 4. You could have two telephone devices attached and you do not have to have a **SPiRiT** Telephone attached.

### INSTALLATION INSTRUCTIONS

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

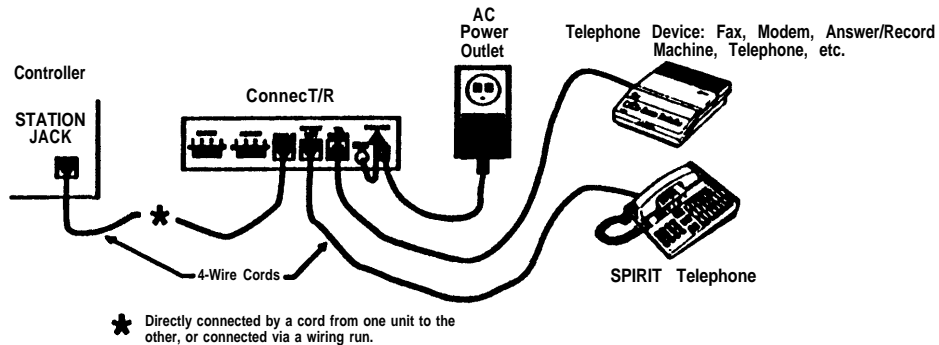


Figure 3. SPiRiT Connect/R with Attached SPiRiT Telephone and Telephone Device



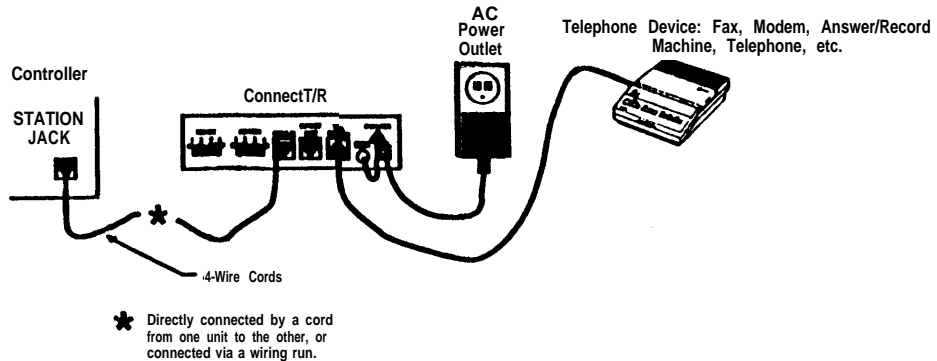


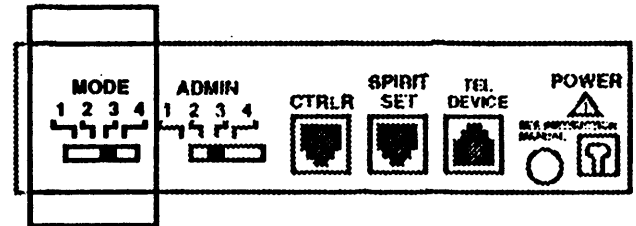
Figure 4. SPIRIT ConnectT/R without Attached SPIRIT Telephone

**Step 1 — If you attach a SPIRIT Telephone and a telephone device, set MODE for call access priority.**

**NOTES:**

- If you attach more than one telephone device to the ConnectT/R, this setting applies to them equally.
- If you don't have a **SPIRIT** Telephone attached, the **MODE** setting has no effect.

With the ConnectT/R, a **SPIRIT** Telephone and a telephone device share a single connection to the controller. Therefore, you need to establish



which will have priority in any given situation. You do this by setting **MODE** on the back of the ConnectT/R. The examples in the table on the next page and the descriptions that follow will help you decide which setting is appropriate for your needs. The table is not an exhaustive list; your own business needs will determine how you set the mode. *You can change the **MODE** setting any time your needs change.*

<b>Telephone Device</b>	<b>Business Requirement</b>	<b>MODE</b>
Corded or cordless telephone	Have another phone that acts like an extension to the attached <b>SPiRiT</b> Telephone.	1
Corded or cordless telephone located somewhere other than the <b>SPiRiT</b> Telephone	Ensure privacy between the <b>SPiRiT</b> Telephone and the other attached phone.	2,3,4
Answer/record machine	Record a conversation while talking on the attached <b>SPiRiT</b> Telephone*.	1
	Disconnect the answer/record machine when someone picks up the <b>SPiRiT</b> Telephone.	2
Facsimile machine	Prevent interruption of data transmission if someone picks up the <b>SPiRiT</b> Telephone.	3,4
Modem	Prevent interruption of data transmission if someone picks up the <b>SPiRiT</b> Telephone.	3,4
Telephone with autodialing capability or stand-alone dialer	Provide more memory than available from <b>SPiRiT</b> System.	1
Credit card reader	Prevent interruption of data transmission if someone picks up the <b>SPiRiT</b> Telephone.	3,4
Autodial modem	Prevent modem from interrupting call on attached <b>SPiRiT</b> Telephone, and Telephone from interrupting ongoing data call.	4

\* The recording of calls is governed by federal, state, and local laws. It is your responsibility to comply with all applicable laws and regulations.

- **Mode 1 (equal access)** gives the telephone device and the **SPiRiT** Telephone equal access to the connection, regardless of which made the connection first (like an extension phone in your home). You could use this mode, for example, if the attached device is a cordless phone and you want to use it as an extension. If you attached an answer/record machine, this mode would allow you to record conversations because both the recorder and the **SPiRiT** Telephone can be on the call at the same time\*.
- **Mode 2 (SPiRiT Telephone has priority)** always gives priority to the **SPiRiT** Telephone whenever it is "off-hook" (that is, when its receiver is up or the speakerphone is on), regardless of whether the telephone device is also off-hook or was off-hook first. For example, if you have an answer/record machine and you want to be able to intercept a call being answered by that device, this mode setting is ideal because as soon as the **SPiRiT** Telephone goes off-hook, it will disconnect the answer/record machine.

If the telephone device remains off-hook when the **SPiRiT** Telephone gets control, the

\* The recording of calls is governed by federal, state, and local laws. It is your responsibility to comply with all applicable laws and regulations.

telephone device will be disconnected, but will be reconnected to the call when the **SPiRiT** Telephone is hung up.

***NOTE** In modes 2 and 4, if the **SPiRiT** telephone is connected to the call and you try to use the telephone device, you won't hear anything because the telephone device won't be connected.*

- **Mode 3 (telephone device has priority)** always gives priority to the telephone device, regardless of whether the **SPiRiT** Telephone is off-hook or was off-hook first. This is the most appropriate setting for facsimile machines and computer modems because it prevents the data transmission from being interrupted if someone inadvertently picks up the **SPiRiT** Telephone receiver.
- NOTE:** In modes 3 and 4, if the telephone device is connected to the call and you try to use the **SPiRiT** Telephone, you won't hear anything because the **SPiRiT** Telephone won't be connected.*
- **Mode 4 (first-on has priority)** gives priority to the first device that makes the connection. For example, if the **SPiRiT** Telephone has control, the telephone device can't access the call until the **SPiRiT** Telephone is on-hook—and vice versa.

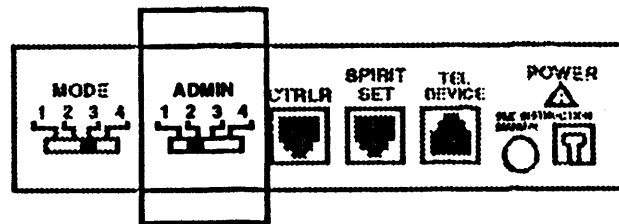
## Step 2 — If the telephone device has touch tone dialing, set ADMIN for call restrictions.

Both rotary and touch tone devices can be restricted from making certain kinds of calls. The difference is that rotary devices are restricted at the port (along with the attached **SPiRiT** Telephone, according to the way the port was customized) and touch-tone devices are restricted by setting ADMIN on the back of the Connect/R.

This step is required if the telephone device is touch tone only or has been set to touch tone. If the telephone device can be set to either touch tone or rotary, we recommend this step so that if the telephone is ever set to touch tone, its calls will be restricted in the way you want. *You can change the ADMIN setting any time your needs change.*

### NOTES:

- *If you have more than one telephone device attached to the Connect/R this setting applies only to those set as touch tone, and applies to them equally.*



- *If you have a **SPiRiT** Telephone or rotary dial telephone attached, their toll restrictions will not be affected by the ADMIN setting.*
- *The ADMIN setting you choose doesn't have to match the call restrictions set for the **SPiRiT** Telephone.*
- *If you have to dial a single digit (usually a 9) before dialing an outside number, and you **DO NOT** have to dial a 0 or 1 before dialing a toll call, the telephone device cannot be toll-restricted.*
- *Regardless of how you set the ADMIN switch, the emergency number 911 is always available.*

Use the following table to choose the setting appropriate for your needs.

ADMIN Setting	Restrictions
1	None. (Allows unrestricted calling.)
2	Prohibits dialing 0 or 1 as the first digit.
3	Prohibits dialing 0 or 1 as the first or second digit.
4	Prohibits dialing outside calls. (Allows making intercom calls only.)

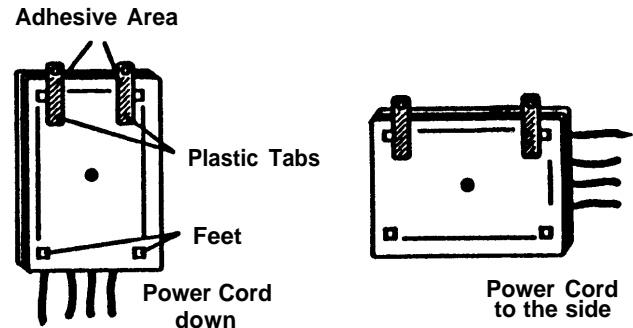
### Step 3 — Mount the Connect/R (optional).

The Connect/R is designed to be placed on your desk or mounted on any vertical surface. *Do not place it on the floor.* Hardware has been included to mount the Connect/R on the wall: two plastic wall-mount tabs, two anchors, and two #6 screws.

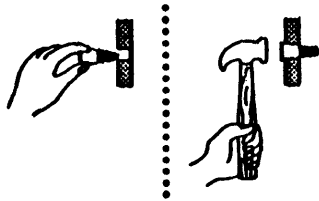
1. Select an appropriate location. The Connect/R can be no more than six feet

from its power supply (an AC outlet that isn't controlled by a wall switch) and no more than six feet from the devices attached to it. The bottom of the Connect/R should be at least two feet from the floor.

2. Position the Connect/R so the side with the jacks and settings is down or to the side, but not up.
3. Remove the backing from the plastic tabs.
4. Gently position a tab by aligning the end of the adhesive with the outside edge of the Connect/R and the side of the tab against the inside of one of the feet. Repeat for the second tab.



5. Press the tabs firmly into position.
6. With the tabs at the top, hold the Connect/R against the wall where you plan to mount it and use a pencil to mark the location of the holes in the tabs. The bottom of the Connect/R should be at least two feet from the floor.
7. If you have plywood walls or walls with a sturdy supporting structure (either wood studs or cross members), partially screw the two screws into the wall at the marks, remove them, hang the tabs on the screws, and then tighten the screws.



For plaster, plasterboard, cinder block or brick surfaces, drill a 3/16" hole at each mark and insert an anchor into each of the holes. Gently tap each anchor with a hammer until

it is flush with the surface. Screw the screws partially into the anchors, remove them, hang the tabs on the screws, and then tighten the screws.

#### **Step 4 — Connect the Connect/R to the controller, and the telephone device and optional SPIRIT Telephone to the Connect/R.**

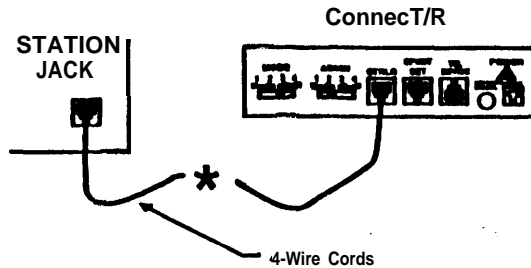
Please check the cabling requirements in Appendix A before proceeding. Consult with the person who customized your **SPIRIT** System before attaching the Connect/R to the controller.

***NOTE:** The "4-wire cord" mentioned in the steps below comes with the Connect/R. Any cord you may have that is connecting a **SPIRIT** Telephone to the controller is also 4-wire cord.*

1. **Disconnect the SPIRIT Telephone.** If one is already installed, disconnect it from the wall jack or the STATION jack on the controller, whichever is closest to where you want to locate the Connect/R.
2. **Connect the Connect/R to the Controller.** Using 4-wire cord, plug one end into the

CTRLR jack on the back of the Connect/R and connect the other end into the controller. You can do this either by plugging it into the STATION jack on the controller or by plugging it into a modular wall jack connected via a wiring run to the STATION jack on the controller.

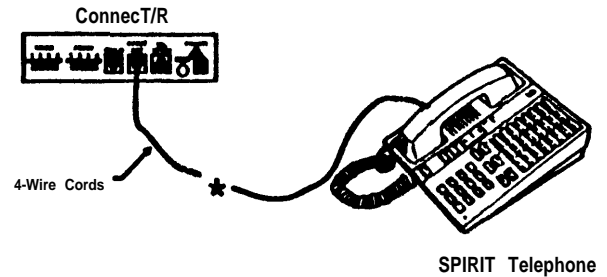
#### SPiRiT Controller



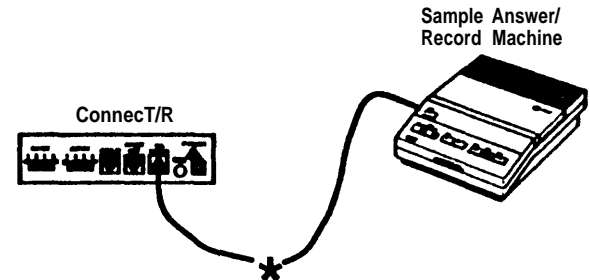
\* Directly connected by a cord from one unit to the other, or connected via a wiring run.

3. **Connect the SPiRiT Telephone to the Connect/R (optional).** Plug one end of a 4-wire cord into the jack on the underside of the SPiRiT Telephone and connect the other end into the **SPiRiT SET** jack on the back of the Connect/R. You can do this either by plugging it into the **SPiRiT SET** jack on the

back of the Connect/R or by plugging it into a wall jack that is connected to the **SPiRiT SET** jack on the Connect/R.



4. **Connect the telephone device to the Connect/R.** Using the line cord provided with the telephone device, plug one end into the **LINE** jack (or its equivalent) on the back of the telephone device and connect the other end to the **TEL DEVICE** jack on the



Connect/R. You can connect it by plugging it into the TEL DEVICE jack on the Connect/R or by plugging it into the wall jack that is connected to the TEL DEVICE jack on the Connect/R.

**To install two telephone devices on a Connect/R,** use a T-type adapter (AT&T part # 267A2 or 267A). Plug the adapter into the TEL DEVICE jack (either directly or indirectly through a wall jack, as described above) and plug the telephone devices into the adapter jack.

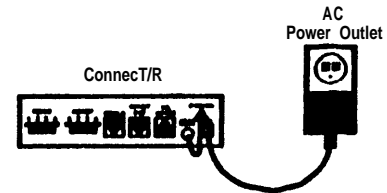
- 5. Connect the Connect/R to the AC power outlet.** Plug the power connector into the POWER jack on the back of the Connect/R. To prevent the power cord from pulling out easily, make a small loop of cord near the power connector and slip it behind the strain relief tab next to the POWER jack on the Connect/R. Plug the wall transformer into an AC power outlet that is at least 3 feet away from the controller and not controlled by a wall switch. (If it is any closer to the controller, you may hear a hum on your **SPIRIT** System.)

**NOTE:** Use only a UL Listed wall plug-in power transformer that has Class 2 outputs and the following characteristics:

*Input rating:* 99-127 V AC rms 60 Hz  
150 mA maximum

*Output rating:* 27-35 V DC at 200 mA  
14-18 V DC at 200 mA

*The power transformer supplied with the Connect/R has these characteristics.*





## Step 5 — Test the equipment.

After the Connect/R is installed, test the telephone device and **SPIRIT** Telephone as follows.

**1. To test for dial tone**, pick up the receiver (or its equivalent) of the telephone device and listen. If there is no dial tone

- Check whether the attached **SPIRIT** Telephone (if there is one) is in use and whether the **MODE** setting is 2 or 4.
- Check the wiring and power connections.
- Be sure that the port on the controller is administered for Automatic Line Selection.

**2. To test for ringing**, call the intercom number from another telephone. If the telephone device doesn't ring:

- Check that the ringer is turned on and that its volume is turned up.
- Make sure the attached **SPIRIT** Telephone (if there is one) is not in use.

- Check the wiring and power connections.
- Be sure the port on the controller is administered to ring for lines that are available.

You can check the **SPIRIT** Telephone in the same way.

If you have any problems, see the Troubleshooting section of this manual for more information.

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## Using the Telephone Device

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**Note that the Connect/R may feel warm under normal operation.**

Telephone devices attached to the Connect/R will operate similarly to the way they would if they were installed directly into a normal telephone line, but they will be affected by the way the station port was administered and the way you set MODE and ADMIN. If you experience difficulties or if the device behaves in unexpected ways, consult the Troubleshooting section of this guide. If difficulties persist, call the AT&T Helpline at 1-800-628-2888.

### Answering Calls

If the attached telephone device has ringing capability, it will ring according to the way the port was customized to ring for available lines. That is, if an intercom or external call would cause a **SPiRiT** Telephone attached to the port to ring, the telephone device will also ring under the same circumstances.

The following **SPiRiT** features are exceptions (they will make the **SPiRiT** Telephone ring, but

not the telephone device): HFAI (intercom calls will not ring), Busy Station Ringing and Manual Signalling.

***NOTE:** The **SPiRiT** Telephone and the telephone device share a connection. Therefore, if the **SPiRiT** Telephone is being used for an intercom or telephone conversation, the telephone device cannot answer other calls that may be ringing.*

### Placing Calls

**To place an *outside* call** from the telephone device, pick up the receiver or its equivalent and dial the number. In general, the telephone device will gain access to an outside line according to the way the port was customized for the Automatic Line Selection feature. That is, the device will be connected to whatever line the **SPiRiT** Telephone would connect to, if its receiver had been picked up instead. (If the port does not have Automatic Line Selection, there will not be a dial tone on the telephone device, and it will not be possible to originate an outside call.)

***NOTE:** The ability of a touch tone telephone device to place certain calls is based on the way ADMIN was set on the Connect/R. A rotary device is restricted according to the way the port was customized.*

**To place an intercom call,** lift the receiver or its equivalent and dial [#] [#] on a touch tone device or 1 1 on a rotary device. Then dial the 2-digit intercom extension. (You will hear an error tone if you dial an invalid internal extension.)

## **Paging**

To use the **SPIRIT** paging features, lift the receiver or its equivalent and dial [#] [#] if the device is touch tone or 1 1 if it is rotary. Then follow the directions below for your **SPIRIT** System type:

- **308/616 models:** For Page to All, dial 61 and make your announcement. For Loudspeaker Paging, dial 60 and make your announcement.
- **1224/2448 models:** For Group Page, dial the 2-digit group number (61-66) and make your announcement.

## Interactions with SPIRIT System Features

The following charts describe how the telephone device will interact with specific **SPIRIT** features.

Features	Interactions	Limitations
Auto Callback (1224/2448 models only)	If attached <b>SPIRIT</b> Telephone uses the feature, device will ring when callback occurs.	Telephone device cannot access this feature directly.
Automatic Line Selection	In general, telephone device will gain access to an outside line according to how this feature was administered for its port. (That is, device will be connected to whatever line the <b>SPIRIT</b> Telephone would connect to had it gone off hook at the same time.)	If port does not have Automatic Line Selection, there will not be a dial tone on the telephone device.
Bridging and Privacy	All privacy features administered at the controller establish privacy between <b>SPIRIT</b> Telephone and telephone devices at different ports; the <b>MODE</b> setting establishes privacy between the <b>SPIRIT</b> Telephone and telephone device attached to the same Connect/R.	None.
Call Forwarding Intercom (1224/2448 models only)	None.	Telephone device cannot turn this feature on or off.
Do Not Disturb	If the feature is activated for the port, incoming calls will not ring.	This feature cannot be activated from the telephone device.

Features	Interactions	Limitations
HFAI	If a <b>SPiRiT</b> Telephone is attached to the ConnecT/R and if HFAI is on, telephone device will not ring on intercom calls.	HFAI can't be turned on or off from telephone device.
Hold	If <b>SPiRiT</b> Telephone places a call on hold and telephone device goes off-hook, device may connect to next idle (available) line, depending on how you set MODE and whether <b>SPiRiT</b> Telephone is on- or off-hook.	Telephone device cannot pick up a call placed on hold by attached <b>SPiRiT</b> Telephone.
Line Reserve	Telephone device may ring with the special ring pattern associated with the feature if the attached <b>SPiRiT</b> Telephone has used the feature. If telephone device's receiver is picked up during line reserve ringing, it will be connected to the line reserved by attached <b>SPiRiT</b> Telephone.	Telephone device can't use this feature to reserve a specific line.
Manual Signaling	Not supported for telephone device.	Telephone device can't manually signal other <b>SPiRiT</b> Telephones or telephone devices and will not ring if someone signals its port.

Features	Interactions	Limitations
Message Light	When telephone device is in use, Message light on <b>SPiRiT</b> Telephone (if one is attached) will flash on and off as an alert. To turn this Alert feature off, press [ <u>1</u> ] [ <u>#</u> ] on the <b>SPiRiT</b> Telephone without lifting the receiver. To reactivate the Alert feature, press [ <u>1</u> ] [ <u>★</u> ] on the <b>SPiRiT</b> Telephone without lifting the receiver. After a power failure, the Alert feature will be reactivated.	None.
Night Service (1223/2448 models only)	If feature is on, device will behave according to night service ringing options administer for its port.	Telephone device can't turn feature on or off.
Paging	Telephone device can originate All Station Paging and Loudspeaker Paging (on <b>SPiRiT</b> 308/616 models) and Station Group Paging (on <b>SPiRiT</b> 1224/2448 models) as described in the Paging section of this manual.	Telephone device can't receive any pages.
Ringing Line Preference	When telephone device goes off hook, it will be connected to the line ringing for it.	None.
Speed Calling and Last Number Redial	These features can be used from the attached <b>SPiRiT</b> Telephone, then the telephone device can be connect to the call.	These features are not directly accessible from the telephone device.
Transfer	None.	Telephone device cannot transfer calls.

## Troubleshooting

This section should help you determine the cause of problems you might encounter and help you resolve them. It begins with general problems, then is categorized according to the types of telephone devices you may have attached to your Connect/R.

Remember that the way your **SPIRIT** System was customized may influence how a particular device operates. Call the AT&T Helpline at 1-800-628-2888 if you need assistance.

Operational Difficulty	What to Check
<p><b>Ringing</b></p> <p>Outside call doesn't ring</p>	<p><i>Do Not Disturb</i> active  <i>Delayed Ringing</i> active*  <i>Abbreviated Ringing</i> active*  <i>No Ringing</i> active*  <i>No Access</i> active*  Ringer turned off on telephone device</p>
<p>Intercom call doesn't ring</p>	<p><i>Call Forward</i> active  <i>HFAI</i> active  Ringer turned off on telephone device</p>
<p>Rings, but nobody there</p>	<p><i>Abbreviated Ring</i> active*  <i>Delayed Ringing</i> active*  <b>SPIRIT</b> System sometimes rings once after party hangs up  <i>PBX Callback</i> active  <i>Line Reserve</i> active  <i>Hold Call Reminder</i> active</p>

19 \* Check with the person in your organization responsible for the **SPIRIT** System.

Operational Difficulty	What to Check
<p><b>Hold</b></p> <p>The call is lost</p>	<p>Someone else picked up the held call  Other party hung up  Telephone device can't access call put on hold by <b>SPIRIT</b> Telephone</p>
<p><b>Miscellaneous</b></p> <p>No dial tone</p> <hr/> <p>Won't dial out</p> <hr/> <p>[★] and [#] don't work on intercom</p> <hr/> <p>ConneCT/R is very warm to the touch</p>	<p>Not Eligible for Automatic Line Selection active*  All available lines are in use  Not Available active on some lines*</p> <hr/> <p>Outside Restriction active*  ADMIN switch set to 2,3, or 4</p> <hr/> <p>Telephone device can't access <b>SPIRIT</b> feature dial codes</p> <hr/> <p>This is normal, especially if the ConneCT/R has been covered by papers or other materials, or if the room temperature is warmer than average.</p>

\* Check with the person in your organization responsible for the **SPIRIT** System.



Operational Difficulty	What to Check
<p><b>Cordless Telephone</b></p> <p>Doesn't ring</p>	<p><b>SPiRiT</b> customized ringing and line-use options*  Receiver out of range  Low batteries in cordless phone  Ringing switch on cordless phone not on</p>
<p>Can't return to OFF mode</p>	<p>Re-extend antenna then return phone to OFF mode before collapsing antenna  Move closer to the cordless base station (conversation range may be greater than on/off range)</p>
<p>Calls are noisy or have static</p>	<p>Cordless telephones are subject to the same interferences when connected via the Connect/R as when connected to a normal telephone line. Poor call quality can be improved by moving toward the base station. You may be able to improve the general transmission quality by moving the location of the cordless base station or by changing the electrical outlets used by the base. Environments with large amounts of metal in the building structure will generally limit the use of cordless phones.  Make sure the Connect/R's transformer is at least three feet from the controller.</p>

\* Check with the person in your organization responsible for the **SPiRiT** System.

Operational Difficulty	What to Check
<p>Ring pattern not the same as <b>SPiRiT</b> Telephone</p> <hr/> <p>Range is short.</p>	<p>This is common; there is nothing wrong.</p> <hr/> <p>Move the base to a more central location.  Wall mount the base unit (elevating it may increase its range).  Be sure the base unit is at least three feet from metal structures or objects.  Locate the base at least six feet from electromagnetic sources or microprocessor equipment.  If the receiver is used outside, locate the base station near a window.</p>
<p><b>Answer/record Machine</b></p> <hr/> <p>Doesn't answer</p> <hr/> <p>Won't shut off when <b>SPiRiT</b> answered</p> <hr/> <p>Answers on <i>Held Call Reminder</i></p> <hr/> <p>Doesn't answer calls when <b>SPiRiT</b> Telephone in use</p>	<hr/> <p><b>SPiRiT</b> customized ringing options*</p> <hr/> <p>MODE switch setting</p> <hr/> <p>Set answer/record machine to answer after two or more rings</p> <hr/> <p>This is normal. The <b>SPiRiT</b> Telephone and the telephone device share a connection. If the <b>SPiRiT</b> Telephone is being used for an intercom or telephone conversation, the telephone device cannot answer other calls that may be ringing.</p>

\* Check with the person in your organization responsible for the **SPiRiT** System.

<b>Operational Difficulty</b>	<b>What to Check</b>
Messages consist of <b>dial tone only</b>	This can occur if the calling party hangs up without leaving a message and the answer/record machine requires a signal from the Central Office before terminating the recording process. If the machine has a "voice activation" (VOX) setting, switching to VOX will often prevent the problem.
<b>Credit Card Readers</b> Won't dial out	<b>SPIRIT</b> customized line-use options* ADMIN switch setting
<b>Facsimile Machine</b> Won't dial out	<b>SPIRIT</b> customized line-use options* ADMIN switch setting
Data distortion or interruption	MODE switch setting
Doesn't answer	<b>SPIRIT</b> customized ringing options*
Answers on <i>Held Call Reminder</i>	Set facsimile machine to answer after two or more rings

\* Check with the person in your organization responsible for the **SPIRIT** System.

General Operational Difficulty	What to Check
<b>Modem</b>	
Won't dial out	<b>SPIRIT</b> customized line-use option* ADMIN switch setting
Data distortion or interruption	MODE switch setting
Doesn't answer	<b>SPIRIT</b> customized line-use option*
Answers on <i>Held Call Reminder</i>	Set modem to answer after two or more rings

\* Check with the person in your organization responsible for the **SPIRIT** System.

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## Appendix A — Wiring Requirements

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Note the following cabling requirements before connecting the equipment. If these limits (which are the same ones that apply to our current **SPiRiT** System) are exceeded, the Connect/R may not work properly.

- The total wiring length from the controller to the **SPiRiT** Telephone cannot exceed a total of 1000 feet of 24-gauge DIW (twisted-pair copper) wire or 22-gauge D station wire, plus 25 feet of 4-wire line cord.
- The total wire length from the controller to the telephone device cannot exceed a total of 1000 feet of 24-gauge DIW (twisted-pair copper) wire or 22-gauge D station wire, plus 25 feet of 4-wire line cord.
- If the Connect/R is installed outside the building where the controller is located, or away from the building where the attached **SPiRiT** Telephone is located (using exposed wiring), In-Range/ Out-of-Building protectors (IROB TII Model 371 or ITW Model SP69073, AT&T order number 31304) must be installed by a qualified technician.

Contact your AT&T representative for additional information.

- If the telephone device will be in a building other than where the Connect/R is located, a Block Protector must be installed by a qualified technician (one Block Protector for each "remote" telephone device). Order an AT&T Model 4C1S (comcode 104386545). In addition, you will need a Building Entrance Protector, which can house up to six 4C1S Block Protectors. Order Model 110ANA1-06 (comcode 105736482). Contact your AT&T representative for additional information.

## Appendix B — Limited Product Warranty and Limitation of Liability

AT&T warrants that the product will be free from defects in material and workmanship for one year from the date of purchase. If the product becomes defective and such defect is reported to AT&T within the one-year warranty period, AT&T will repair or replace the product, at its option, without charge. Any repair or replacement parts or products may be new, remanufactured or refurbished at the option of AT&T. If AT&T determines that the product cannot be repaired or replaced, AT&T will refund the purchase price of the product. All work under the warranty will be performed by AT&T or its agents during AT&T's normal business hours within a reasonable time after notice to AT&T of a defect.

The limited warranty provided above does not cover damages, defects, malfunctions or product failures caused by:

- Failure to follow AT&T's installation, operation or maintenance instructions.
- Unauthorized modification or alteration of the product.
- Product abuse, misuse or the negligent acts of persons not under the reasonable control of AT&T.
- Power failure or surges, lightning and other acts of God and the actions of third parties.

EXCEPT AS SPECIFICALLY SET FORTH ABOVE, AT&T, ITS AFFILIATES, SUPPLIERS AND DEALERS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Except for damages for personal injury, the liability of AT&T, its affiliates, suppliers and dealers for any loss or damage resulting from any product defector performance under this warranty and regardless of the form of action shall be limited to repair or replacement of the product or a refund of the product's purchase price. In no event shall AT&T, its affiliates, suppliers and dealers be liable for indirect, reliance, incidental or consequential damage or loss (including loss of profits) caused or alleged to have been caused by the product.

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# Index

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- Answer/record machines 2, 6
- Answering Calls 14
- Applications 3
- AT&T Helpline 19
- Automatic Line Selection 14, 16
  
- Call restrictions 8
- Controller 1
- CTRLR jack 11
  
- Emergency number 911 8
  
- Installation 4
  - Connect the Connect/R 10
  - Connect the equipment 10
  - Mode Settings 7
  - Mount the Connect/R 9
  - Set ADMIN switch 8
  - Set MODE 5
  - Test the equipment 13
  - Two telephone devices 12
- Interactions with SPIRIT Features 16
- Intercom call 15
  
- Line auxiliary jack 1
  
- MODE setting 5
  
- 1224/2448 models 15
  
- Outside call 14
  
- Paging 15, 18
- Placing Calls 14
- POWER jack 12
- Power transformer 12
  
- Safety Instructions 4
- Set ADMIN 8
- SPIRIT paging features 15
- SPIRIT SET jack 11
- SPIRIT Telephone
- STATION jack 10, 11
  
- 308/616 models 15
- T-type adapter 12
- TEL DEVICE jack 11, 12
- Telephone 6
  - Device 1
  - Rotary dial 8
  - Stand-alone dialer 6
  - Standard 2
- Test for dial tone 13
- Test for ringing 13

## *FCC Warning Statement*

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 this Owner's 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 his or her own expense.

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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