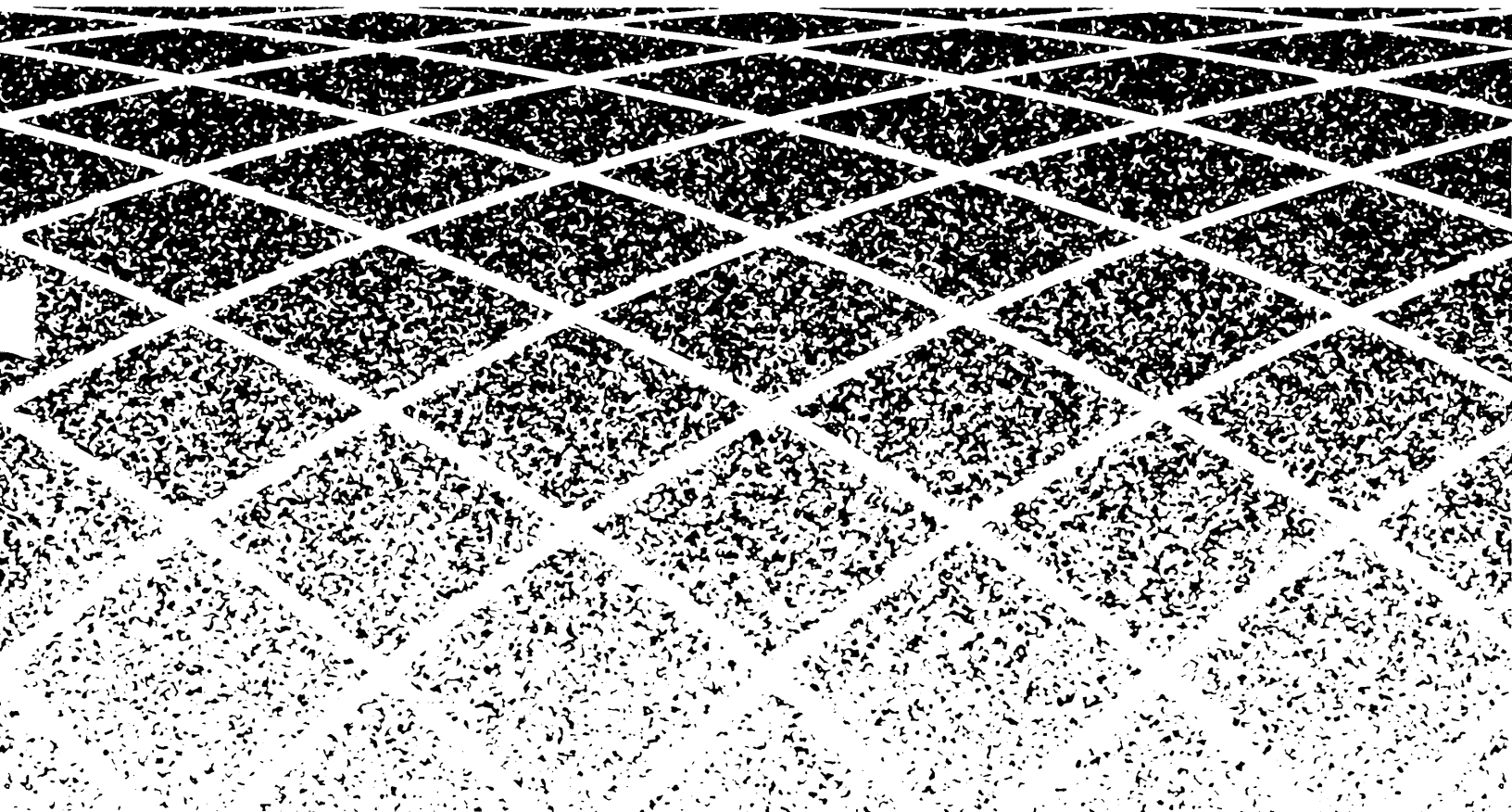
AT&T

# SPIRIT®
# Communications System
# Model 2448
# 2448 Expansion Unit
# Installation Instructions



*NOTICE: While reasonable efforts were made to ensure that the information in this document was complete and accurate at the time of printing, AT&T assumes no responsibility for any errors. Changes or corrections to the information contained in this document may be incorporated into future re-issues.*

# IMPORTANT SAFETY INSTRUCTIONS

**SPIRIT® Communications System -2448 Controller/2448 Expansion Unit**

The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance instructions in the literature accompanying the product.

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury.

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
4. Slots and openings in the housing are provided for ventilation. To protect it from overheating, these openings must not be blocked or covered. This product should never be installed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
5. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home or business, consult your dealer or local power company.
6. This product is equipped with a three wire grounding type plug. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your outlet. Do not defeat the safety purpose of the grounding type plug.
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.
8. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
9. Never push objects of any kind into this product through housing slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
10. To reduce the risk of electric shock, do not disassemble this product. Call your AT&T representative when service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly may cause electric shock when the appliance is subsequently used.

11. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - when the power supply cord or plug is damaged or frayed.
    - if liquid has been spilled into the product.
    - if the product has been exposed to rain or water.
    - if the product has been dropped or the housing has been damaged.
    - if the product exhibits a distinct change in performance.
12. Avoid using a telephone during an electrical storm. There may be a remote risk of electric shock from lightning.
13. Do not use the telephone in the vicinity of a gas leak. To report a gas leak, use a telephone away from the area of the leak.

Basic safety precautions should always be followed when your telephone equipment is installed.

**WARNING:** The SPIRIT Communications System, Model 2448 must be installed by an AT&T service technician or a qualified installer.

**WARNING:** If you need to install a SPIRIT Communications System telephone in a different building but not more than 1000 feet from the control unit, In Range-Out of Building (IROB) protectors, AT&T Order Number 31304 (TII Model 371 or ITW Model SP69073), are required. The IROB protectors must be installed by an AT&T service technician or a qualified installer. Contact your AT&T representative for additional information.

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.
5. Do not attach the power supply cord to building surfaces.

**SAVE THESE INSTRUCTIONS**

## Introduction

This manual will show you how to install the **SPIRIT**® 2448 Expansion Unit with your **SPIRIT** Communications System. Please read the instructions carefully before beginning installation.

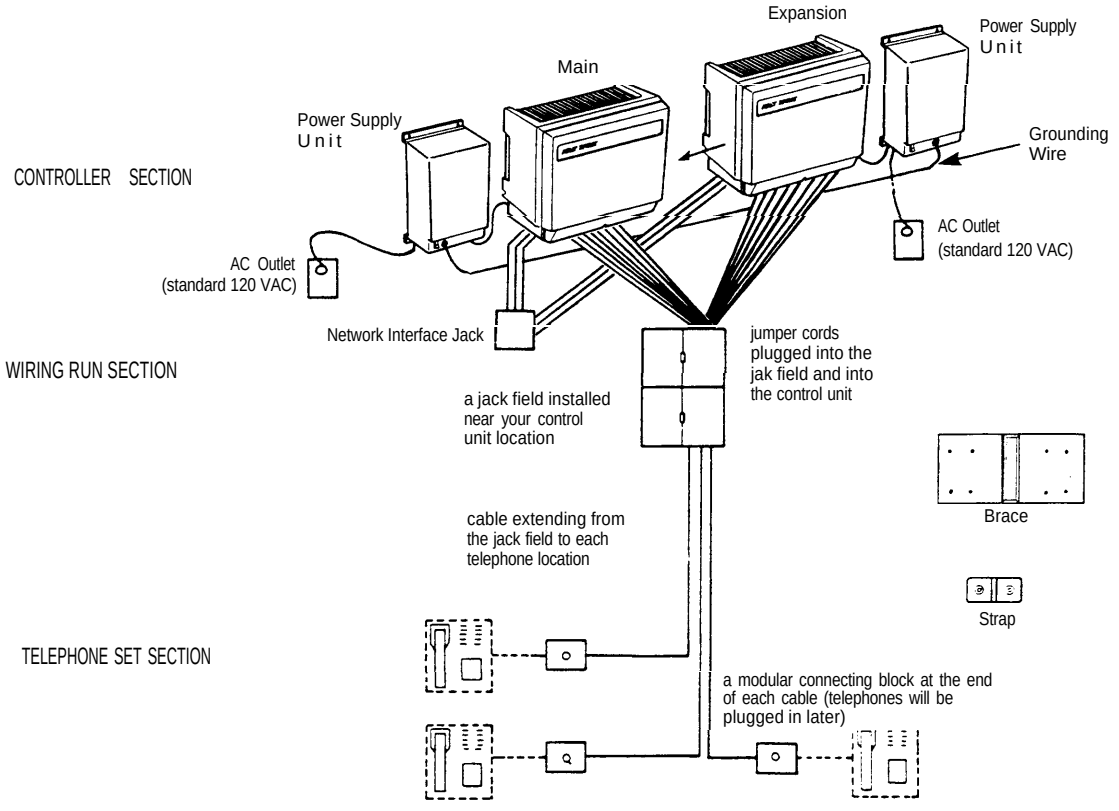
Instructions for installing wiring runs and telephones are part of the installation manual provided with the **SPIRIT** 1224 Controller.

## Overview Of Unit

### What You Should Find in the Boxes

expansion unit
power supply unit
brace
strap
six ½" screws
4-foot grounding wire
System Directory Label (attached to the back of the panel)
label sheets
Installation Instructions

*If your network interface jack (where the telephone company lines come into your building or office has two lines on a single jack you should purchase a 267C adapter and a line cord (D4BU) from your phone store or from your AT&T representative. If you need longer line and telephone cords, you should purchase them also.*



## Installation

You will need the following to mount your controller on the wall:

- eight screws
  For drywall, tile, or masonry use size 6 to 8 x ¾ inch plastic anchors with size 6 x 1 inch slotted screws. For wood, use size 6 x 1 inch slotted round head wood screws. These screws are available at your local hardware store.
- 36-inch rule (yardstick or meter stick)
- flathead screwdriver
- drill with the drill bit recommended for the type of screws
- pencil

The expansion unit will be mounted to the right of the main controller. The power supply units should be located within five feet of a grounded (three prong) AC outlet that is not controlled by a switch. Each controller must be within six inches of where the power cable will connect to its power supply unit.

If you are installing both the main controller and the expansion unit you will need four feet of free wall space. The instructions for this begin with Step 2; you should skip Step 1.

If you are adding the expansion unit to your existing **SPIRIT** Communications System, there must be adequate room (at least two feet) for the expansion unit and power supply unit. If there is not adequate room to the right of the main controller, the main controller must be relocated.

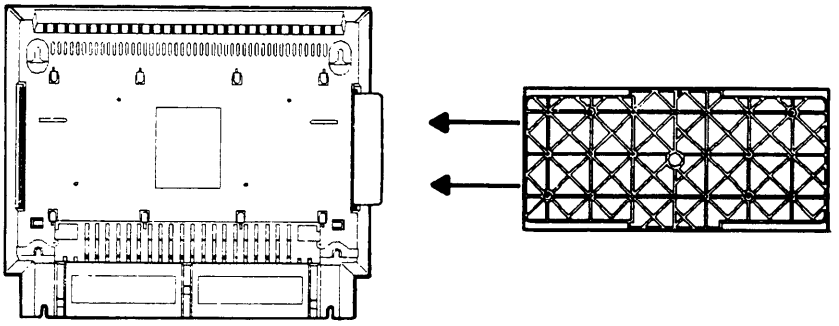
### ■ STEP 1 REMOVE MAIN CONTROLLER FROM WALL.

*NOTE: If there is not enough slack in the cords so that the controller can be placed on a surface away from the wall, remove the panel from the main controller and disconnect all cords.*
**CAUTION: Be sure all cords are marked so that they can be reconnected to the appropriate jacks.**

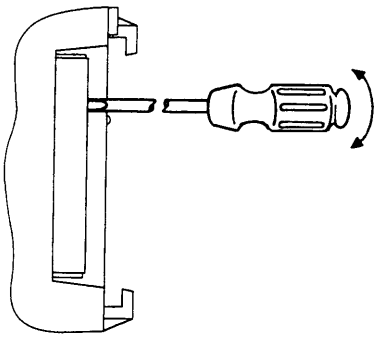
- Turn off the power switch on the power supply unit of the main controller (green LED will go off.) Customization information will be retained.
- Unplug the power supply unit power cord from the AC outlet.
- At the power supply unit, disconnect the power cable that connects the main controller with its power supply unit.
- Loosen the two mounting screws located at the bottom of the main controller.
- Remove the main controller from the wall by gently lifting up. Place the main controller on a flat surface with adequate room for both the main and expansion controllers.

■ **STEP 2 ATTACH EXPANSION UNIT TO MAIN CONTROLLER.**

**CAUTION: Do not place either the main controller or the expansion unit face down.**
Remove the expansion unit, brace, strap, and ½" screws from the box. Slide the brace into the four guides on the back of the expansion unit on the side with the exposed connector. If the brace does not go on easily, do not force it. Turn the brace around and try the other side. Using two of the ½" screws, attach the brace to the expansion unit.

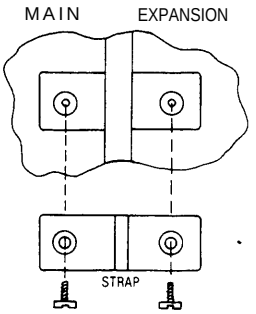


Remove the small strip of plastic from the recessed area on the right side of the main controller by prying with a flathead screwdriver between the back of the controller and the strip. Break the tabs and discard the strip.



Place the two controllers side by side, with the brace in the center. Using the brace as a guide, push the two controllers together until the connectors are fully engaged. Using two of the ½" screws, fasten the brace to the main controller.

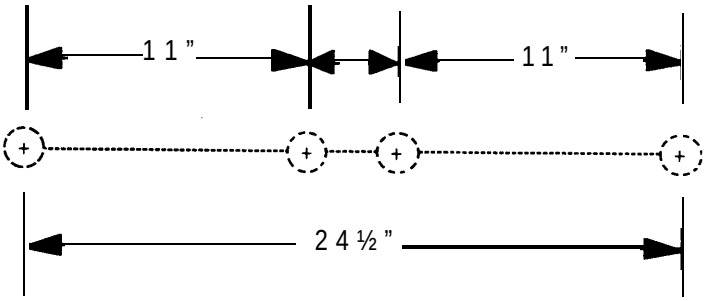
Remove the panel (front cover) from each controller by first loosening the screw located at the bottom center of each controller. Lift the panel up and away from the controller; the screw will still be in the panel. Remove and discard the packing material inside the panel. Using the remaining ½" screws, attach the strap between the main and expansion controllers in the middle of the front faces.



■ **STEP 3 MOUNT THE CONTROLLERS ON THE WALL.**

If you are adding the expansion unit to an existing SPIRIT system, drill two additional holes in the positions shown in the figure below. If you are installing both the main controller and the expansion unit, drill four holes in the positions shown in the figure below. **Drill the holes in a straight line and as level as possible.** The center two mounting screws are not necessary, but will provide additional support, if installed. Install all of the mounting screws so that the screw heads are about 3/16 of an inch from the wall.

MOUNTING HOLES AND DISTANCES




*NOTE: If a* 36 *inch rule is unavailable, the panel can be used as a guide. Four ribs are located along the top edge of the panel (front cover) where it touches the controller. The two outside ribs are 11 inches apart. The two inside ribs are 2 ½ inches apart.*

Hang the two-controller assembly on the installed mounting screws by placing the keyhole slots on the top back of the controllers against the screws and pulling down.

Using the controller(s) as a guide, make a mark at the center of the slots on the bottom back of the unit. Remove the controller assembly and drill holes at the marks. Install the mounting screws so that the screw heads are about 3/16 of an inch from the wall. Replace the controller assembly on the screws and tighten all bottom screws.

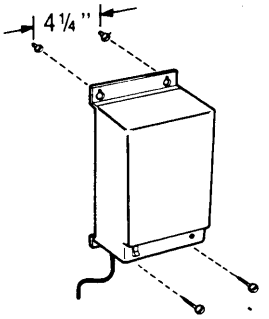
Write the date on the date installed label (DATE INST:) located on the label sheet and place it on the right side of the expansion unit.

*The controller and power supply may be installed on a table or desktop without mounting. Take special care to reduce the possibility of the equipment moving or falling.*

■ **STEP 4 MOUNT THE POWER SUPPLY UNIT**

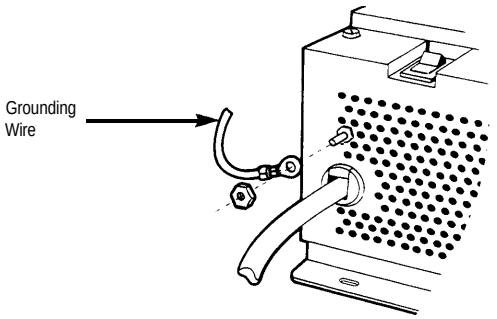
Mount the power supply unit within six inches of where the power cable will connect to the expansion unit and within five feet of a grounded AC outlet not controlled by a switch.

Drill two holes 4 ¼ inches apart and install two mounting screws. Loosen the screws enough to hang the power supply unit. Mark the location of the two holes on the bottom of the unit and remove the unit from the wall. Drill two more holes. Reinstall the power supply unit onto the wall. Insert the two bottom mounting screws, and firmly tighten all four screws.



■ **STEP 5 ATTACH THE GROUNDING WIRE.**

The grounding wire must be attached to both power supplies to ensure lightning protection. Anchor one end of the grounding wire to the grounding stud located by the power cord on each of the power supplies.




■ **STEP 6 INSTALL LINE AND STATION CARDS.**

If you purchased additional line and/or station cards, install them into the controller or expansion unit following the instructions provided with the cards.

Specific instructions for Steps 7 through 14 are located in the 1224 Controller Customer Installation Instructions.

■ **STEP 7 TEST INCOMING TELEPHONE LINES.**

Refer to Part D of Step 2.

■ **STEP 8 TEST THE MAIN CONTROLLER AND EXPANSION UNIT.**

Refer to Part E of Step 2.

■ **STEP 9 CONNECT TELEPHONE LINES TO CONTROLLER AND/OR EXPANSION UNIT.**

Refer to Part F of Step 2.

■ **STEP 10 COMPLETE WIRING RUNS.**

Refer to Step 3.

■ **STEP 11 INSTALL TELEPHONES.**

Refer to Step 4.

■ **STEP 12 CONNECT MAIN CONTROLLER AND/OR EXPANSION UNIT TO WIRING RUNS.**

Refer to Step 5.

■ **STEP 13 INSTALL OPTIONAL EQUIPMENT.**

Refer to Step 6.

■ **STEP 14 PUT THE PANEL BACK ON.**

Refer to Step 7.

■ **STEP 15 POWER UP THE SYSTEM.**

To turn the system on, turn on the power switch located on the bottom left of each power supply unit. The green LEDs will light. If either of the LEDs does not light, make sure that the power supply is plugged into a working AC outlet that is not controlled by a switch. If it still does not light or there are other problems, refer to the Troubleshooting information in your 1224 Controller Customer Installation Instructions.