

Lucent Technologies
Bell Labs Innovations



CIB 3006

Wiring Installation Instructions

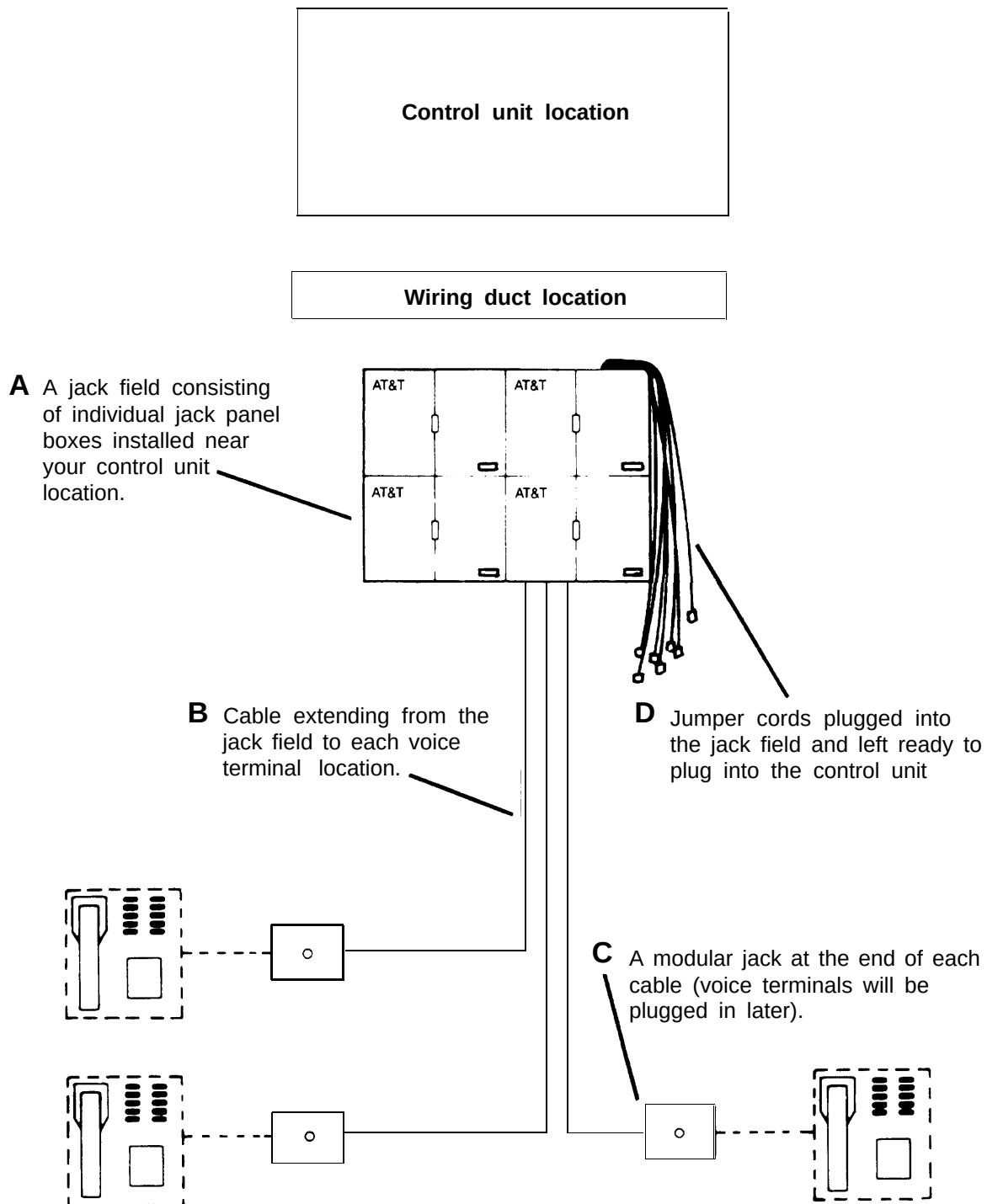
CIB 3006
Comcode 105-413-959
Issue 3

CIB 3006

Wiring Installation Instructions

These instructions explain how to install building wiring for voice terminals. The instructions are intended for someone familiar with building construction.

When you finish these procedures, you will have:



Installing your wiring involves these four steps:

- 1 Getting started.
- 2 Mounting the jack panel boxes.
- 3 Running cable and installing modular jacks.
- 4 Connecting jumper cords.

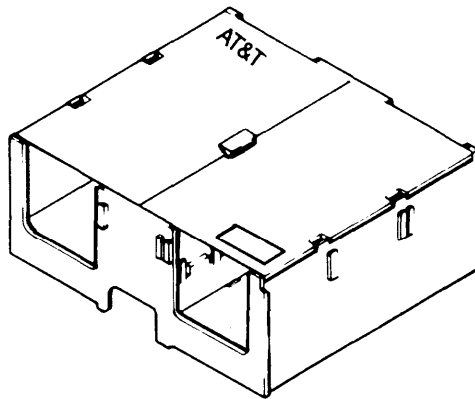
WARNING: National and local building codes and fire regulations forbid routing flammable wiring inside or on top of air plenums or ducts or along hot pipes. Consult your local ordinances and regulations for routing flammable wiring through walls or floors. The manufacturers, distributors, and their agents will not be responsible for damage due to improperly installed wiring.

Getting Started

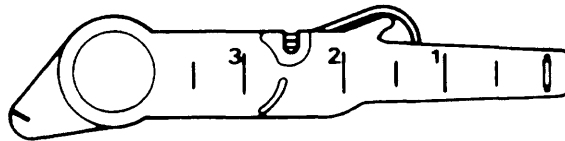
- 1 You will need the following:
 - a floor plan of your building that shows the cable routes between your communication system's control unit and voice terminal locations
 - a screwdriver
 - scissors
 - a drill and bits appropriate for 3/16" cable
 - a stapler and staples
 - cable ties
 - large cable clips (small cable clips are provided)
 - plywood or similar board (3/8" thick and 2 inches bigger on all sides than the jack field) if you have chosen a brick, concrete, or hollow wall mounting surface
- 2 You will also need the contents of three orderable kits. Use the following illustrations to:
 - make sure that you ordered the right number of each of the kits for your communications system.

- examine and identify the contents of the kits.

Wiring Installation Kit
(one per communications system)



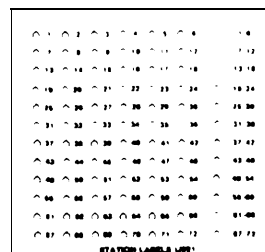
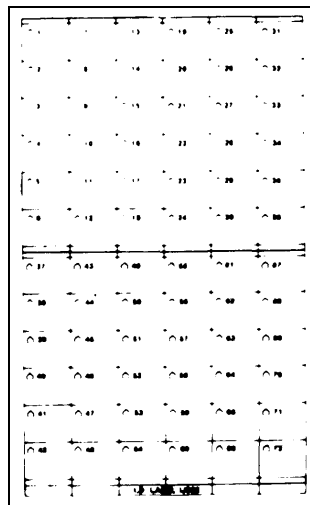
- **Jack panel box** (The number required depends on the number of voice terminals in your communications system. You will need one jack panel box per six voice terminals.)



- **Cable installation tool**

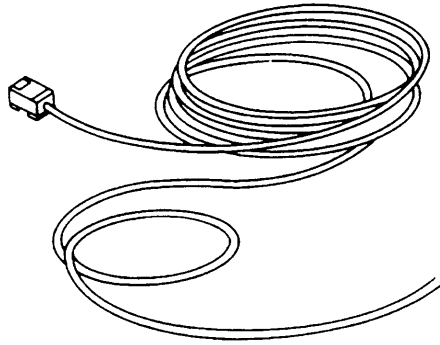
TELEPHONE
LOCATION

- **Telephone location stickers** (to identify voice terminal locations)

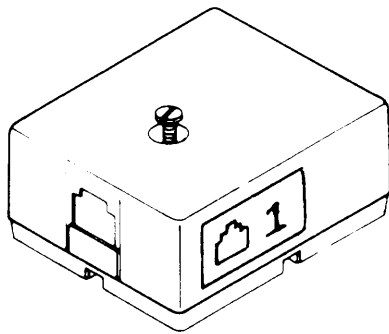


- **Voice terminal labeling stickers**

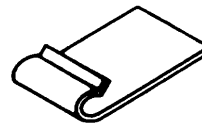
Cable Extension Kit
(one per voice terminal more than
10 feet from the control unit)



- **100-foot or 200-foot length of cable** (Length depends on the distance between the control unit and voice terminal.)

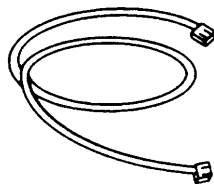


- **Modular jack**

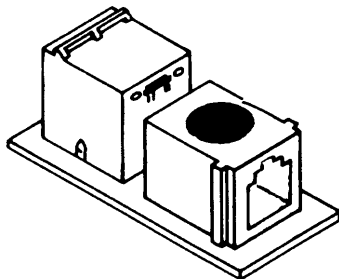


- **Cable clips**

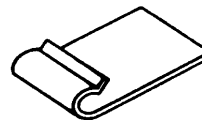
Wiring Termination Kit
(one per voice terminal)



- **Jumper cord**



- **Modjack-to-modjack adapter**

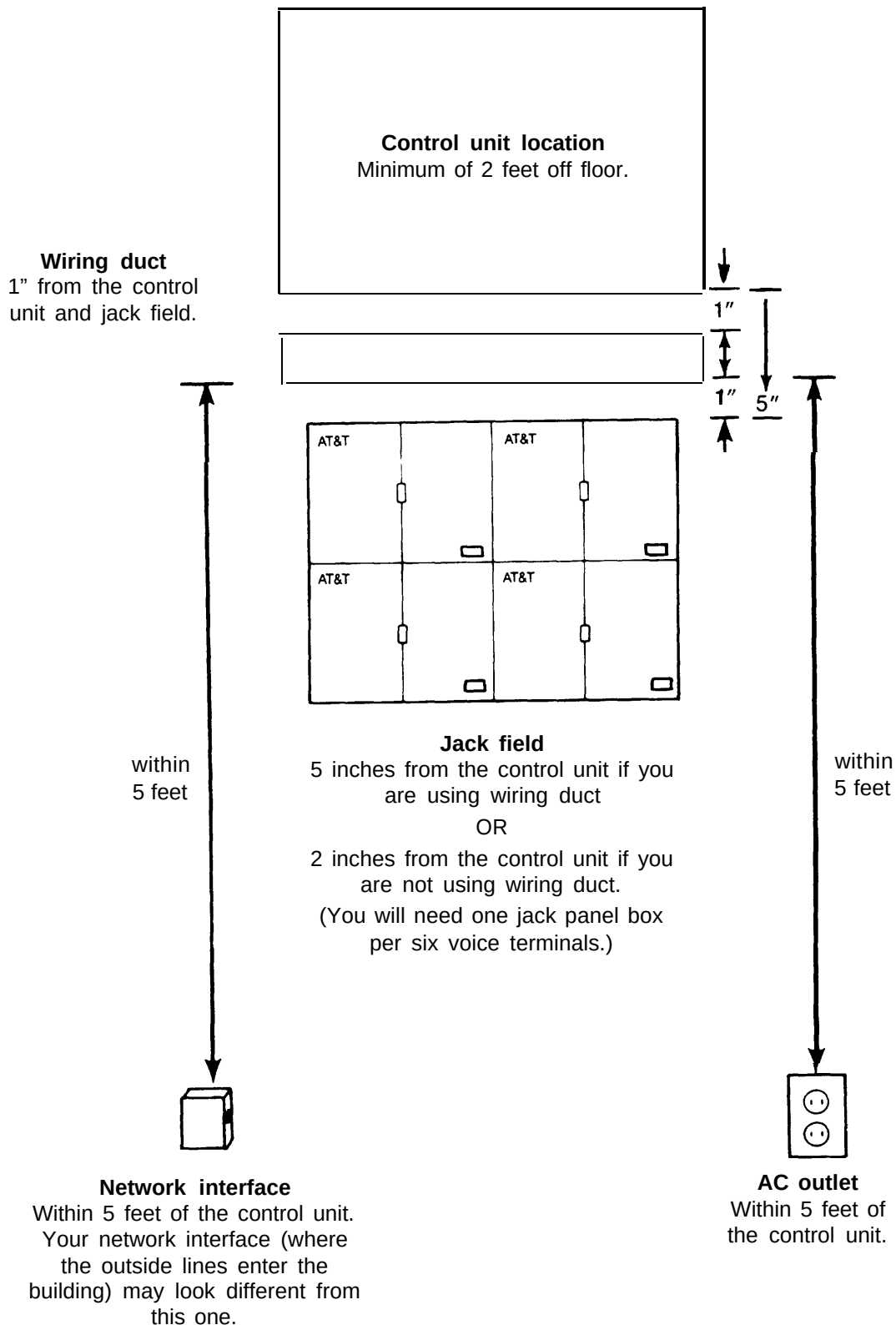


- **Cable clips**

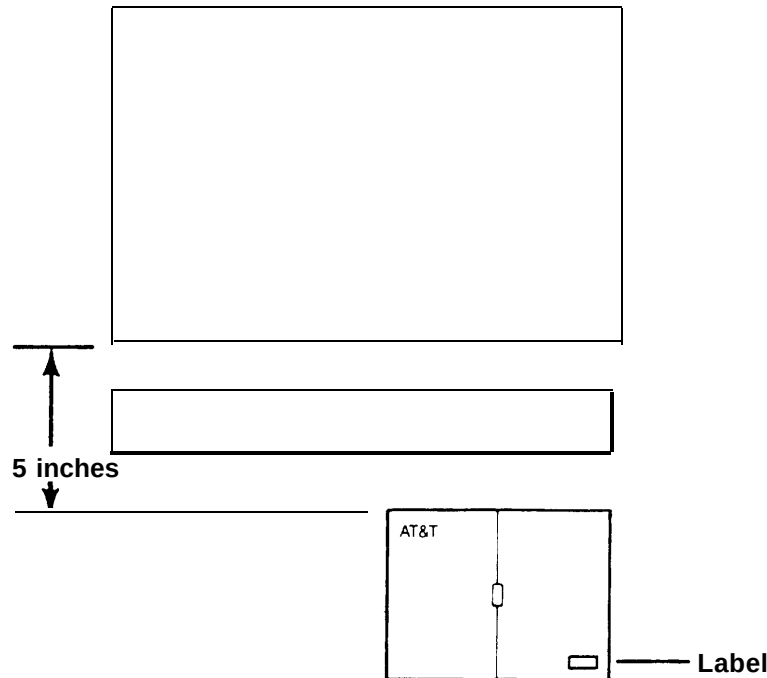
- 3 Find the voice terminal locations on your building floor plan. Affix a telephone location sticker to the wall at each voice terminal location.

Mounting The Jack Panel Boxes

- 1 On your building floor plan, pencil in the control unit location. The location must comply with the measurements shown in the following figure.

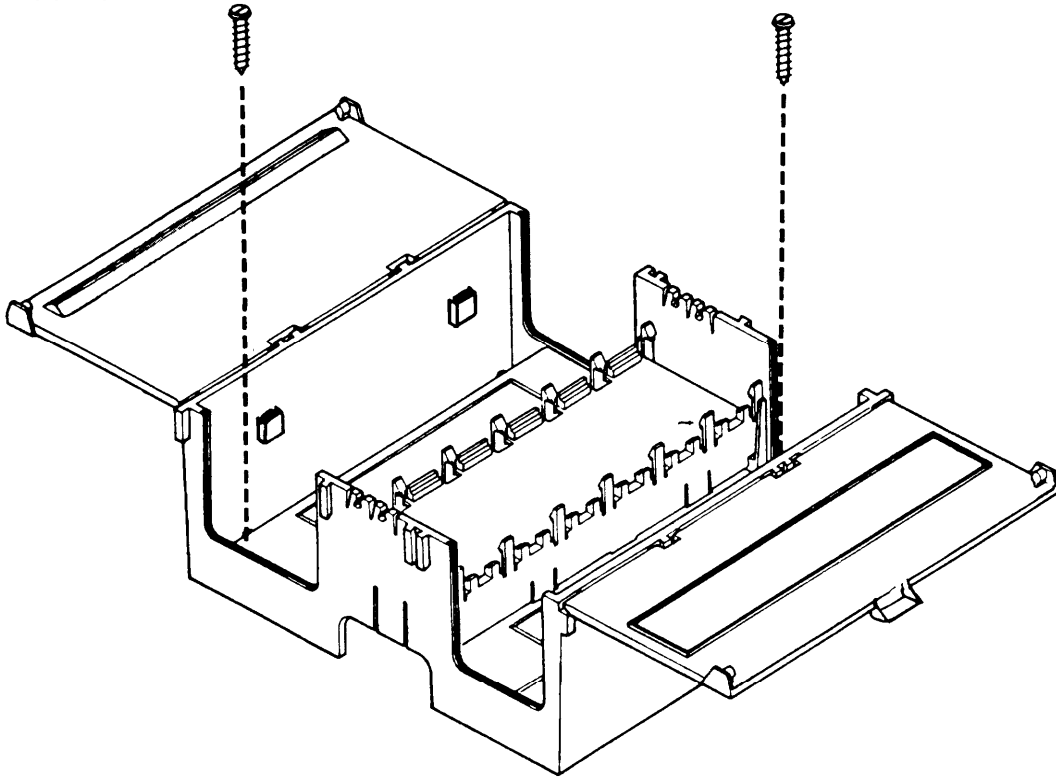


- 2 Mark the wall where the following items will be mounted:
- The bottom of the control unit or shelf (if the control unit will rest on a shelf).
 - The bottom of the wiring duct if you have a Model 206, 410 or 820 control unit.
 - The position of the first jack panel box.

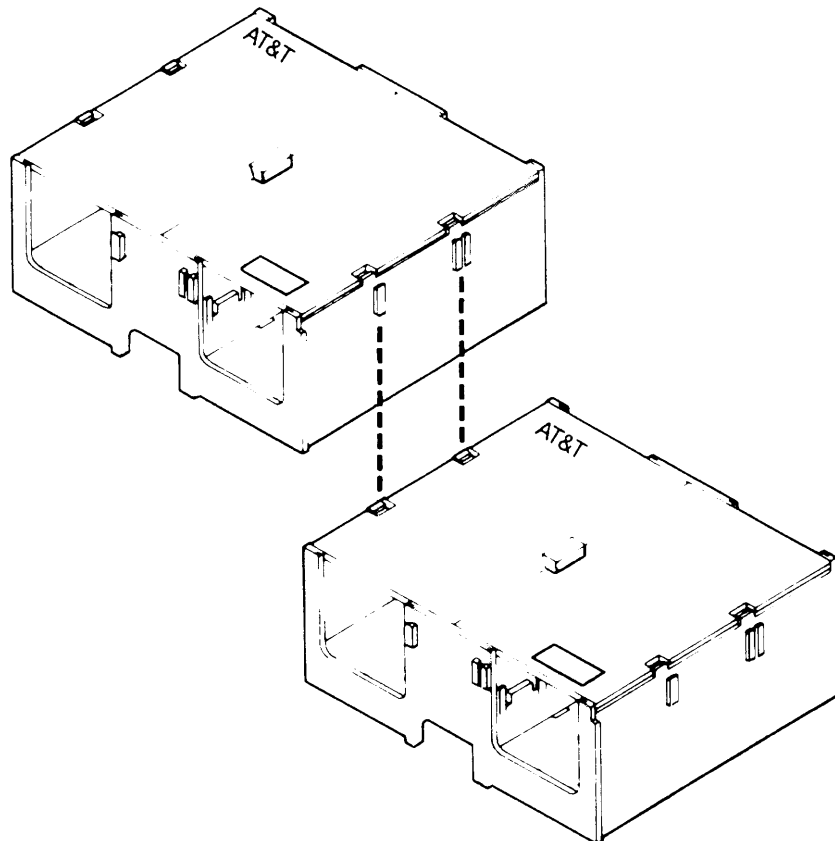


- 3 Affix a blue-on-white rectangular label on each jack panel box. The blue-on-white label identifies which voice terminal cords are in each jack panel box and distinguishes voice terminal wiring boxes from the boxes used for line adapters which have green-on-white labels.
- 4 Follow the instruction below for the type of mounting surface you have selected for mounting the jack panel boxes (don't mount the boxes yet):
- For walls with a sturdy supporting structure (studs or cross members), mount the jack panel boxes using the 7/8" screws provided or fasteners appropriate for your walls.
 - For hollow walls and concrete or brick surfaces, you will need a plywood or similar board about 3/8" thick and about 2 inches bigger on all sides than the jack field. (Each jack panel box is 5-1/2" long and 6-1/2" wide.) Mount the board on the wall, then fasten the jack panel boxes to the board.

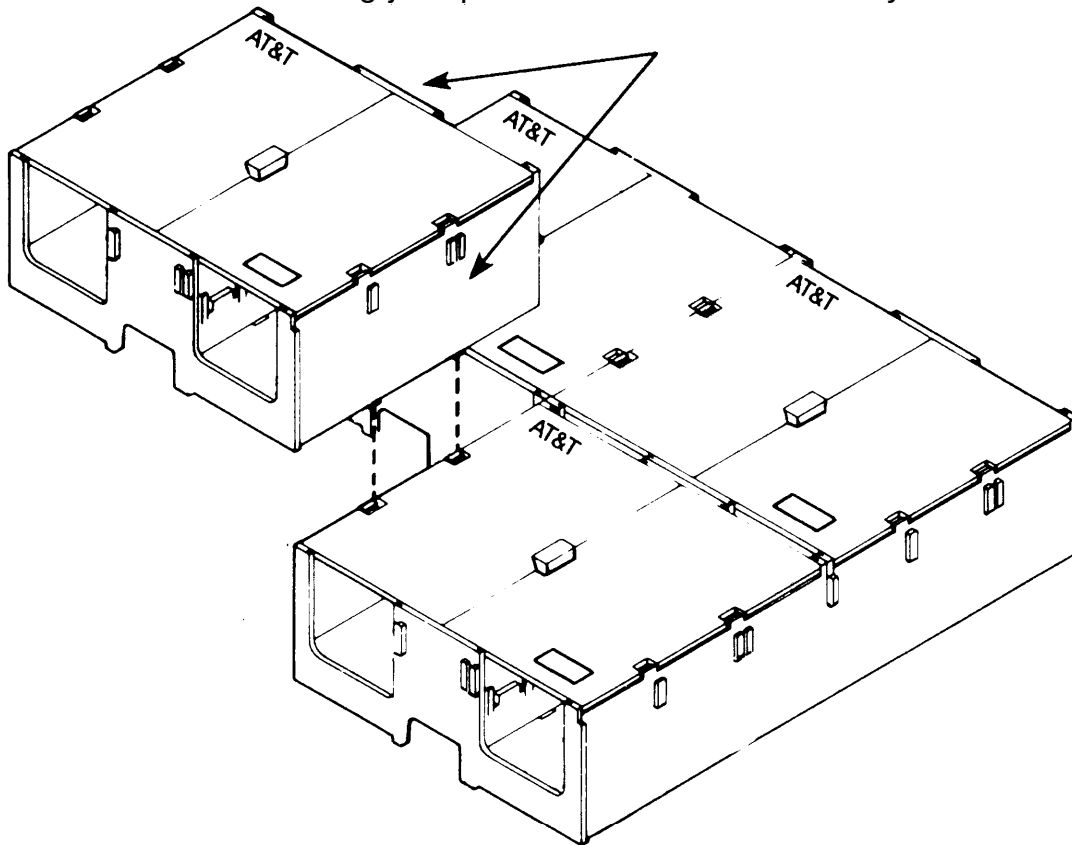
- 5 Mount the jack panel box with the screws provided or fasteners appropriate for the mounting surface you selected.



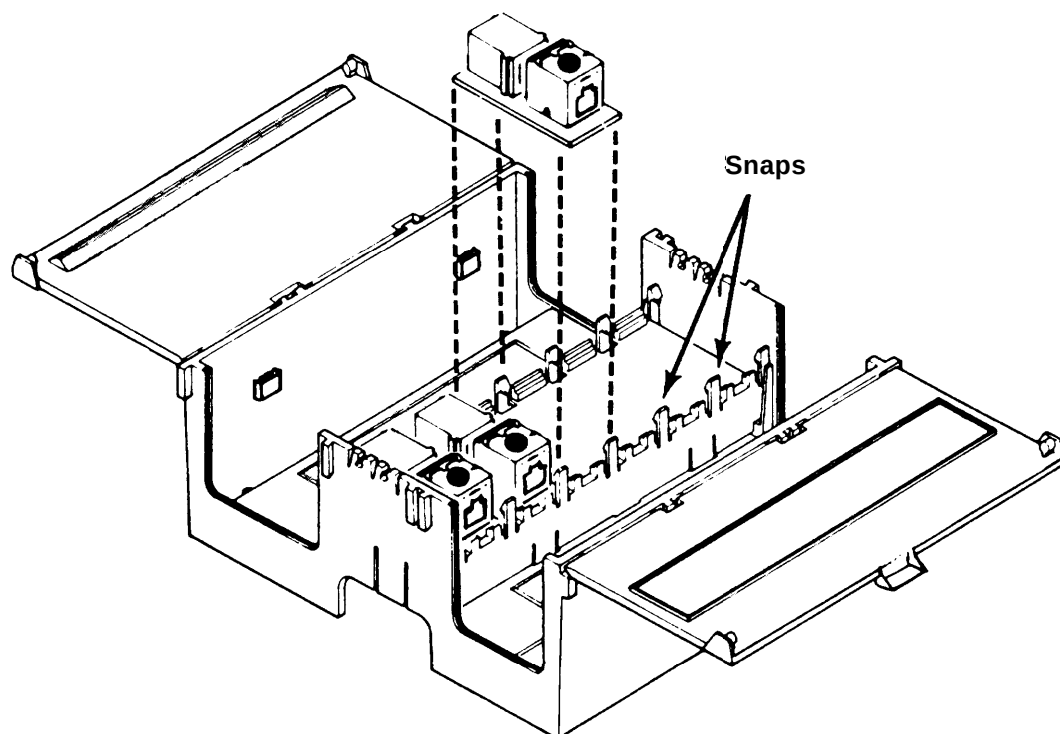
- 6 Mesh the tongue and groove of another jack panel box with the first. Mount the second box.



- 7 Mount the remaining jack panel boxes in the same way.

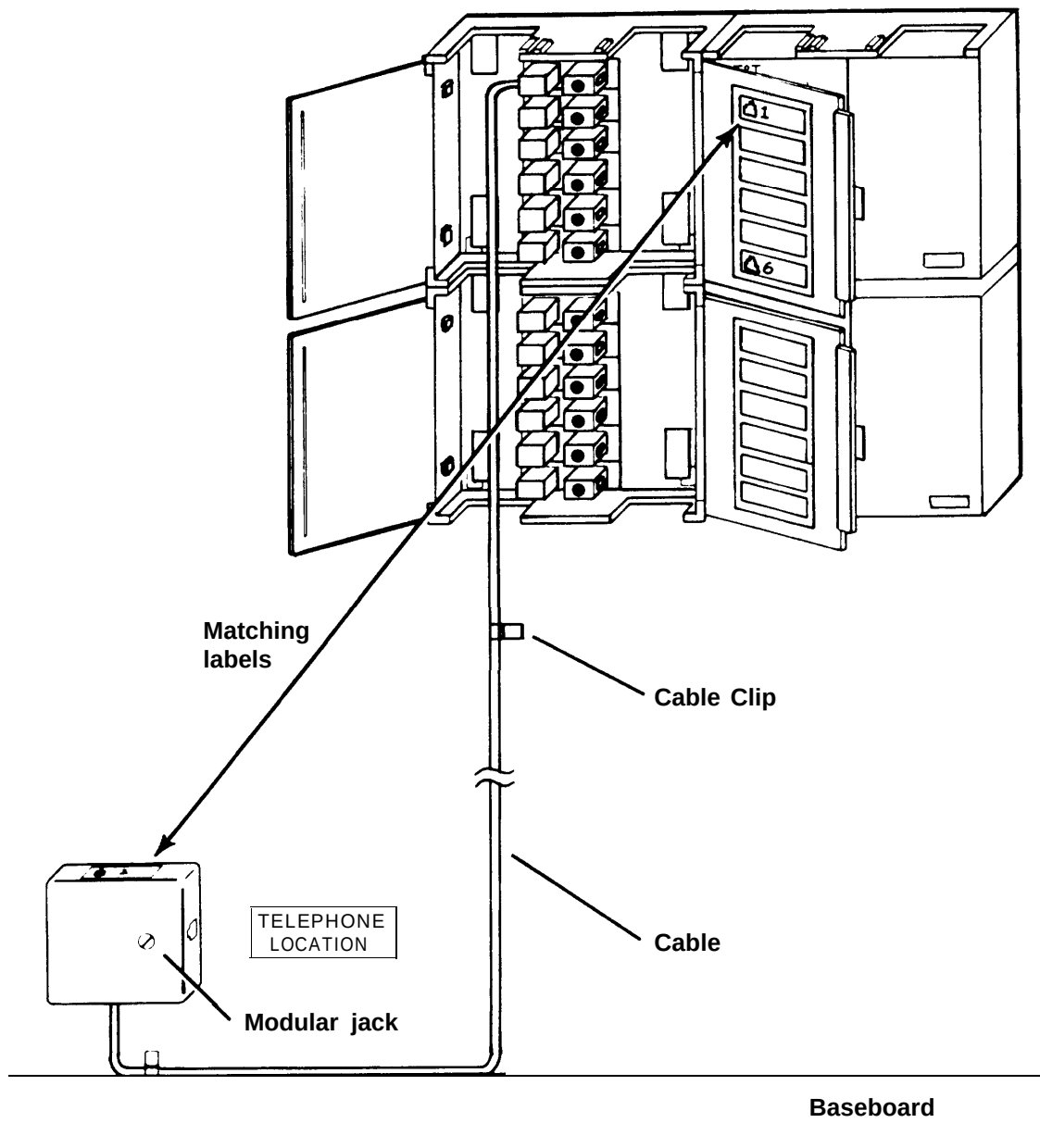


- 8 Position the modjack-to-modjack adapters so that the black dot is on the right side of the adapter. Insert the required number of adapters (up to 6 adapters per box) into the boxes. Break off snaps as required when installing an adapter such as the Z602A.

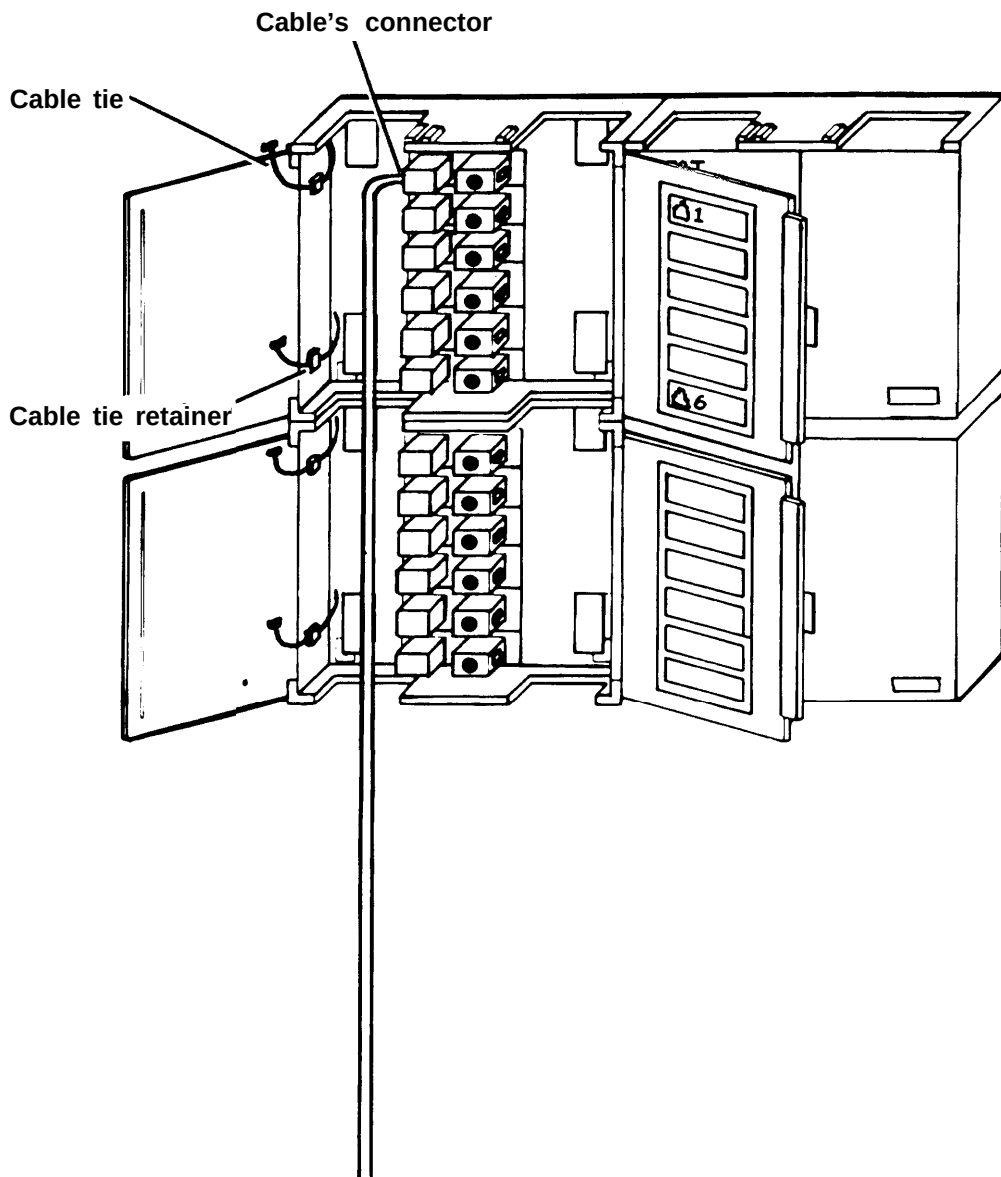


Running Cable And Installing Modular Jacks

When completed, a typical cable run will look like this. Special types of cable such as flat under-carpet cable, plenum wiring, flameproof wiring, and 25-pair cable may be available from your equipment supplier.

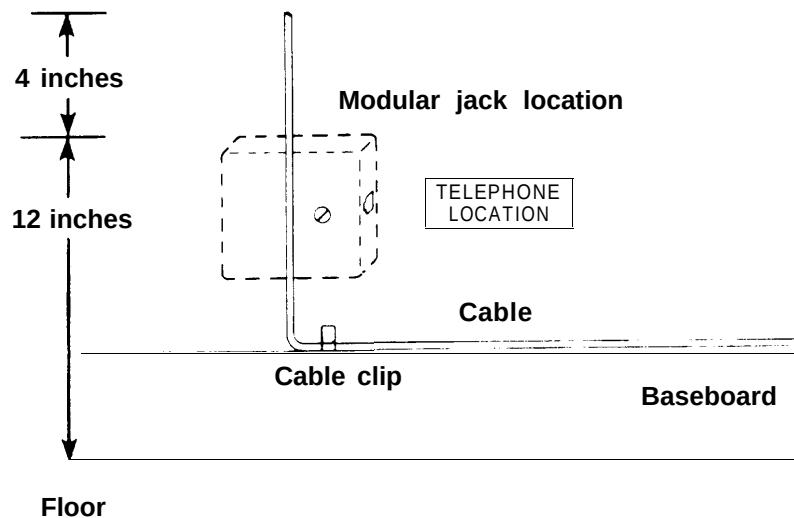


- 1 Select a Cable Extension Kit with the right length of cable (100 or 200 feet) for one cable run. For runs over 200 feet, you will have to run a 200 foot cable, terminate it in a modular jack and plug in another cable. The maximum length of any cable run is 1000 feet.

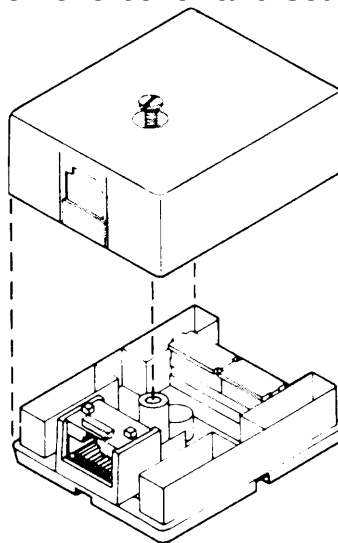


- 2 Slide a cable tie through the cable tie retainer.
- 3 Fill out a blue-on-white I.D. label with the voice terminal location of the first wiring run (for example, 1 shop, 2 sales, 3 Rm. 105). Affix the label to the inside of the jack panel box's right door next to the jack where the wiring run is terminated.
- 4 Plug the cable's connector in the left side of the adapter.

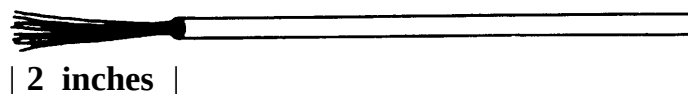
- 5 Run the cable out to the voice terminal location. Avoid sharp kinks or twists. Use cable clips or staples to dress the cable neatly along wall baseboards, molding, etc. Be careful not to damage the cable with staples.
- 6 Locate the modular jack from the Cable Extension Kit and the cable installation tool from the Wiring Installation Kit.
- 7 Choose the location for the modular jack following the guidelines in the figure below. Before cutting the cable, make sure you allow at least 4 inches of extra cable.



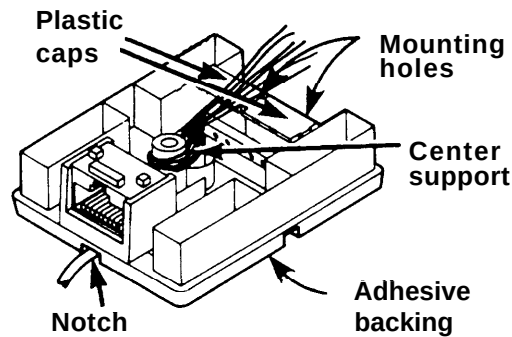
- 8 Fasten the cable to the jack as follows:
 - A Loosen screw. Remove cover and set aside.



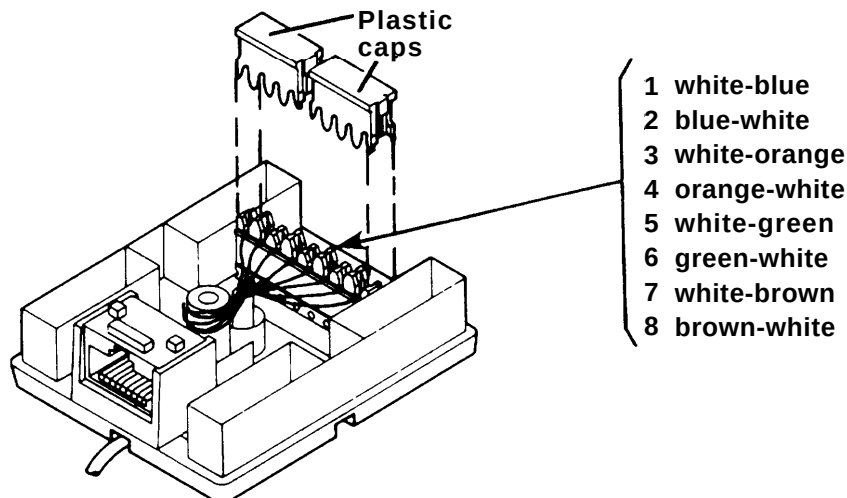
- B Remove 2 inches of cable cover using the cable stripping part of the cable installation tool.



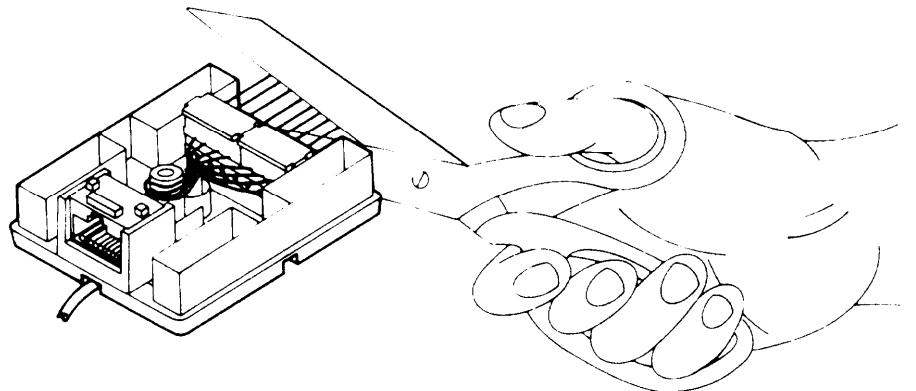
- C Thread cable through the center of the jack until 1/4 inch of cable cover shows.
- D Wrap cable around the center support until the wires extend over the plastic caps.
- E Align cable in one of the notches.



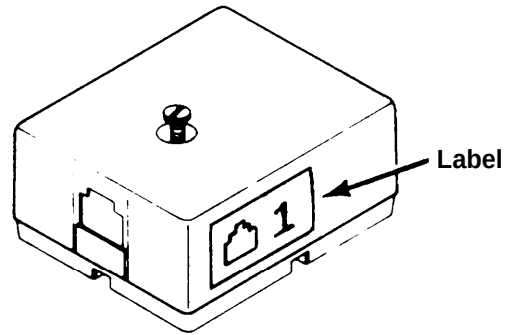
- F Mount the jack using screws or the adhesive backing provided.
- G Remove and set aside the plastic caps.
- H Insert wires in this order left to right:



- I Align the caps and press them down firmly until they snap in place.
- J Cut off the loose wire ends near the plastic caps. Make sure wires do not touch each other.

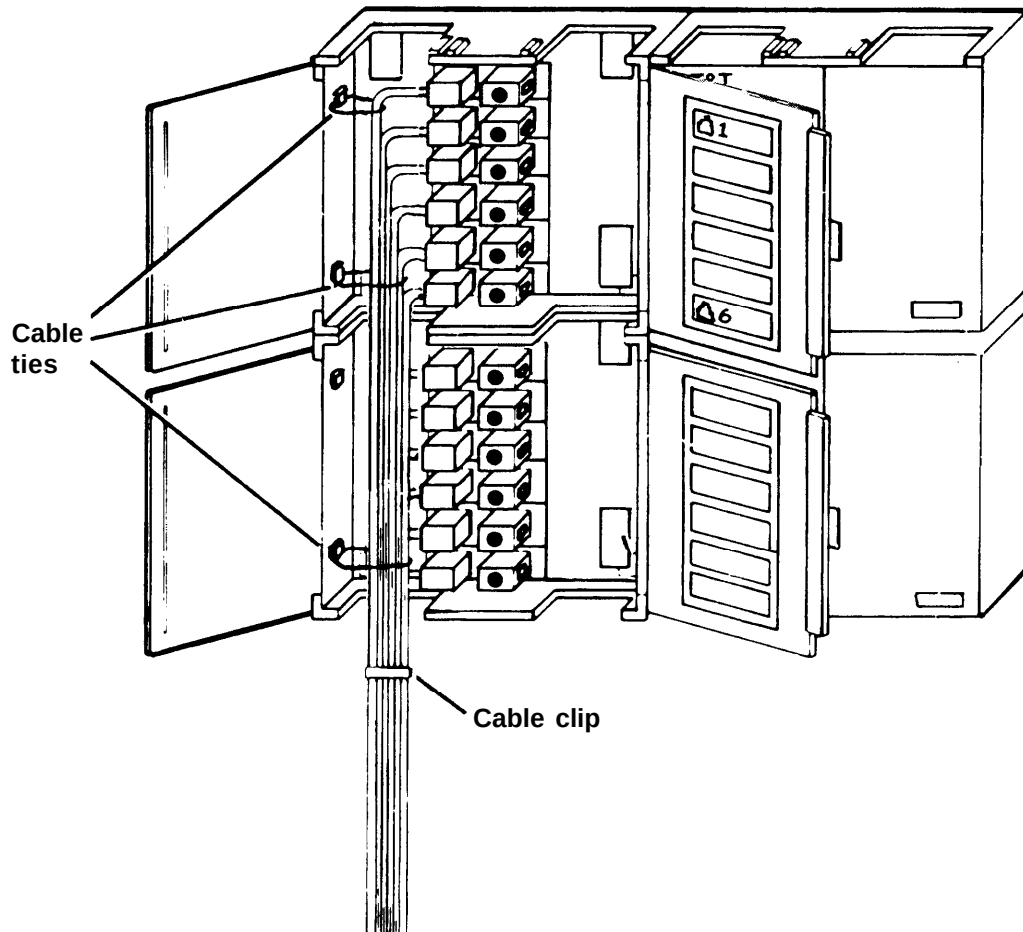


- K Attach the appropriate blue-on-white label to the outside of the modular jack.



- L Replace cover and tighten screw.

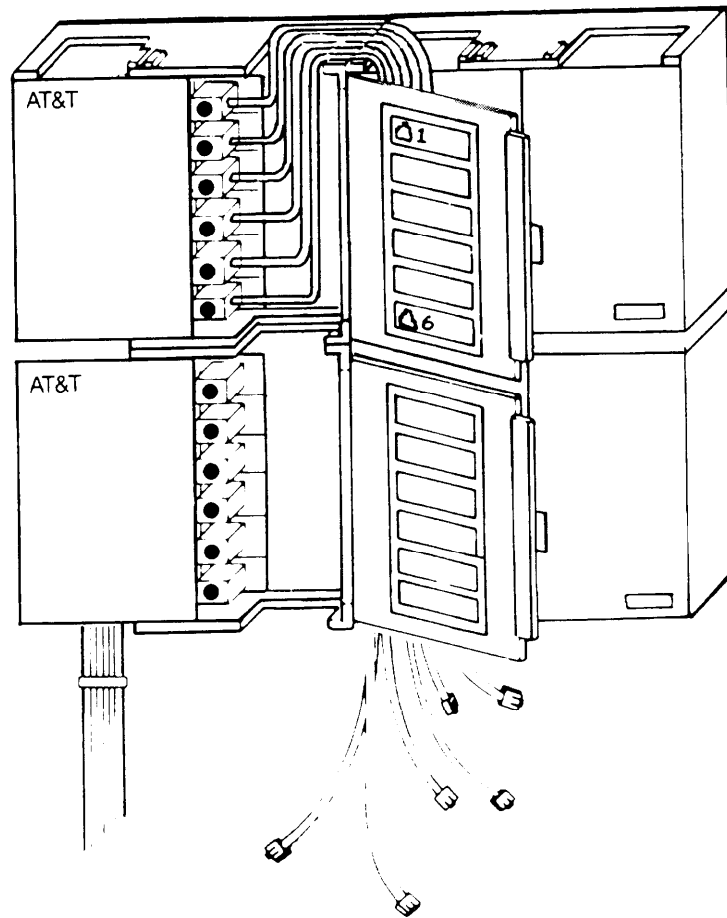
- 9 Route your other cables and terminate each one in a modular jack. Be sure that the labels on both ends of each cable run are numbered identically.
- 10 Dress the cables and, if you used cable ties, secure them around the cables.



- 11 Dress the cables neatly through the lower openings and secure them with cable clips or ties.

Connecting Jumper Cords

- 1 Plug a jumper cord (from a Wiring Termination Kit) into the right side of each adapter. Drape the cords as shown. You will connect them to the control unit later.



- 2 Close the left doors of the jack panel boxes.
- 3 Close the right doors of the jack panel boxes.

CONGRATULATIONS! You have completed the voice terminal wiring installation for your communications system.