

PRINCIPAL CHANGES IN THIS ISSUE ARE INDICATED BY MARGIN LINES

**GENERAL INFORMATION**

The No. 7620ULF is a self-contained, microprocessor-based, RF alarm communication system consisting of the No.7620ADV2 Remote Subscriber Equipment (transmitter, transmitter interface), a power supply and battery packaged in a metal cabinet, and is functionally comparable to a digital communicator in a system connected to a Central Monitoring Station by telephone line. The No. 7620ULF is primarily intended for use with a Fire Alarm System (such as Fire-Lite MS4812), but serves equally well with Burglary Systems.

This document provides installation and wiring information for the No. 7620ULF Cabinet Mounted Subscriber Radio. For information regarding the system description, operating instructions, and electrical specifications, refer to the No. 7620ADV2 Remote Subscriber Equipment Installation Instructions (P9918-1V1), which are included with the No.7620ULF.

**SELECTING A SITE**

Before proceeding with the installation procedures, it is necessary that the installer first verify that the prospective site is suitable for radio communication with the Master Station network. This is accomplished by using the FAST mode of the No. 7920SE, or with the Ademco No. 7915 Field Alarm Signal Tester (FAST). The FAST Tool is a remote field strength indicator that receives transmissions from the network Master Stations. Refer to the No. 7920SE or No. 7915 operating instructions for information regarding FAST mode usage.

**IMPORTANT!**  
The No. 7620ULF cannot be mounted outdoors. If it is necessary to mount the antenna outside, follow the procedures provided on this page for mounting antennas away from the cabinet. When mounting the antenna, avoid obstructions such as metal ducts, pipes, foil backed insulation, etc. as these will adversely affect transmission.

**MOUNTING THE ANTENNA**

The antenna (No. 7625) can be mounted either remotely, or directly to the cabinet, and either indoors or outdoors. In the event that reliable communication cannot be achieved, optional Nos. 7625-3db, 7674 or 7674-13 antennas may be used.

**Note:** The No. 7622CDM Transmitter must be installed before mounting the antenna. Refer to the procedures described in the *MOUNTING THE 7622CDM TRANSMITTER* section.

**Mounting the 7625 or 7625-3db Antenna Directly to the Cabinet:**

1. Find the best antenna location by using the FAST Tool.
2. Mount the cabinet using the procedures described in the *MOUNTING THE 7620ULF CABINET* section.
3. Connect the antenna to the cabinet antenna connector.

**Mounting the 7625 or 7625-3db Antenna Away from the Cabinet:**

1. Find the best antenna location by using the FAST Tool.
2. Secure the Ademco No. 7670 Subscriber Antenna Bracket to the mounting surface using #10 screws. Connect the antenna to the bracket connector.
3. Connect the antenna cable (50 ohm coaxial cable) to the bracket antenna connector and to the cabinet antenna connector. To avoid signal loss through attenuation, cable lengths should be 50 feet or less. Use only the cables listed in Table 1. Tape antenna connections to seal against moisture.

**Using the Optional 7674 or 7674-13 Antenna:**

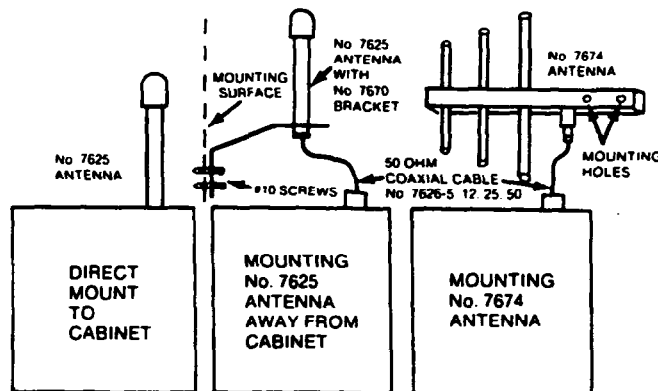
In the event that an acceptable signal strength cannot be achieved using the No. 7625 antenna, as determined by the FAST Tool, the optional No. 7674 or No. 7674-13 antenna may be installed outdoors in a suitable location.

Each of these antennas has directional characteristics, and must be aimed in the direction which provides the strongest signal. Once this direction has been determined, using the FAST Tool, the antenna should be permanently mounted in precisely the same position. Connect the antenna to the transmitter using the shortest of the available fifty ohm coaxial cables which will reach. Tape all connections with a good quality insulating tape. The No. 7670 BRACKET is not required.

Table 1.

Ademco Part No.	Cable Lengths
7626-5	5 feet
7626-12	12 feet
7626-25LL	25 feet
7626-50LL	50 feet

**Important!** To ensure the integrity of the security system, use only the cables available from ADEMCO. **DO NOT** assemble your own extension cables.



## MOUNTING THE No. 7620ULF CABINET

The No. 7620ULF cabinet should be mounted indoors, and in an area where it will be undisturbed. To facilitate system testing, the cabinet should also be located in an easily accessible area.

### Cabinet Mounting and Wiring Procedures:

1. Mount the transformer plate (packed separately) to the two standoffs using #10 screws.
2. Using the template provided, locate and drill pilot holes for the four mounting screws.
3. Install the two top corner screws, but leave their heads slightly protruding from the mounting surface. Slip the cabinet keyslot holes over the screws.
4. Install the bottom two corner screws, and tighten all screws securely.
5. Connect the antenna (or antenna cable if antenna is mounted remotely) to the cabinet antenna connector.

### CAUTION!

To prevent dislodging from sheetrock, the No. 7620ULF should be mounted such that at least the two screws on the door hinge side of the cabinet are secured to a wall stud.

**IMPORTANT!** Although the specification sheet states an operating range of  $-22^{\circ}\text{F}$  to  $140^{\circ}\text{F}$  ( $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ ), it is recommended that these temperature extremes be avoided. The most appropriate installation site (one which enables long-term, trouble-free operation) will avoid environmental extremes and will preferably be climate controlled.

6. Connect the Alarm Control Panel to the No. 7620ULF by using either shielded or twisted, 22AWG multi-conductor cable. Route the wiring through the cabinet knockout hole and connect the wires to cabinet TB1 terminals as shown in the Summary of Connections Diagram. **IMPORTANT!** Do not exceed wire lengths of 125 feet. Use copper wire, not steel wire.
7. Place the battery in the lower left corner of the cabinet.
8. Route the AC input wires through the cabinet knockout hole and connect to the two floating black transformer wires. **DO NOT CONNECT TO POWER SOURCE AT THIS TIME!**

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## POWERING THE SYSTEM

The No. 7620ULF requires a non-switchable, 24 hour continuous, 120VAC, 60Hz input voltage.

1. Verify that all internal cabinet connections are complete, and be sure that the transformer input connections are adequately insulated to prevent electrical shock.
2. Plug the battery cable into the No. 488CH Power Supply receptacle.
3. Connect the transformer input wires to a 120VAC, 60Hz

power source, using the insulated wire splices provided.

### WARNING!

**WHEN POWER IS APPLIED, THE TRANSFORMER WIRES CARRY HIGH VOLTAGE (120VAC) WHICH CAN CAUSE SEVERE INJURY OR DEATH. BE SURE TO INSULATE THIS CONNECTION ADEQUATELY, TO PREVENT ELECTRICAL SHOCK TO PERSONNEL.**

## - SPECIAL U.L. INSTALLATION INSTRUCTIONS -

If the No. 7620ULF is used for Fire Service, note the following requirements:

- 1) Channel inputs must be connected to the "Alarm" and "System Trouble" outputs of the Listed Fire Control Panel. See Note 1.
- 2) The No. 7620ULF must be close-nipple connected to the Listed Fire Control Panel.
- 3) If a digital communicator is installed in the Fire Control Panel, an outdoor and/or long antenna cable length may be used if:
  - a. The No. 7620ULF is programmed to monitor the antenna circuit at least once every 180 seconds, and
  - b. The "XMIT OK" output is connected to the "Radio Fail" trigger input of the Listed Fire Control Panel. See Note 2.

If the No. 7620ULF is used for Burglary Service, note the following requirements:

- 1) Zone inputs must be connected to dry contact outputs of a listed Burglar Alarm Control Panel.
- 2) The No. 7620ULF must be close-nipple connected to the listed Control Panel.
- 3) For Grade B or C service, the antenna, antenna cable and

unit enclosure must be protected by a Listed Passive Infrared Detector which is connected to an input zone programmed for interior burglary protection. The antenna must be installed indoors and, if an antenna cable is used, it must be no longer than 12 feet.

- 4) For Grade A service, the Listed Burglar Alarm Control Panel must have an integral communicator or a Listed communicator must be installed. The No. 659EN line Monitor output must be connected to an input channel of the No. 7620ULF. The "XMIT OK" output must be connected to an initiating zone of the Listed Control Panel or communicator, and this zone must be programmed for "trouble on short circuit".

**Note 1:** The No. 7620ULF has been UL Listed for use with any Listed NFPA71 control panel, provided that the AC Fail/AC Brown-out supervision of the control panel is connected to a zone input of the 7620ULF.

**Note 2:** If a digital communicator is not installed in the control panel, and a remote mounting of either the antenna and/or the 7622CDM transmitter is desired, then supervision of the interconnecting wires between the 7621AD and the 7622CDM and/or between the 7622CDM and the antenna is required by connecting the Radio Fault input (pin 22 of the 7621AD) to an appropriate local annunciating means.

# MOUNTING THE 7622CDM TRANSMITTER

- Remove the scored break-off tab from bottom cover of the Transmitter by bending it up and down a few times.
- Connect wires from TB2 to the Transmitter as follows:
 

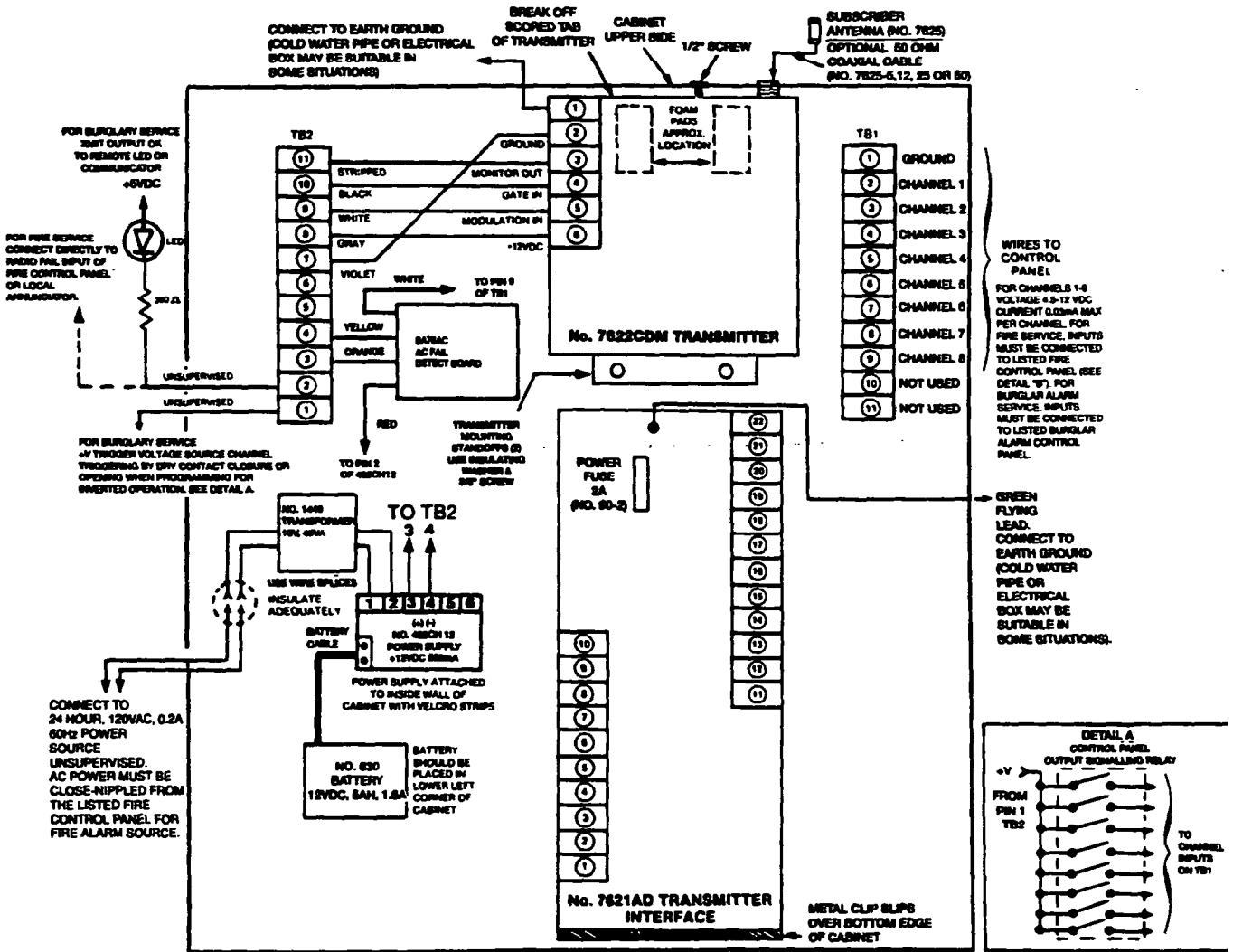
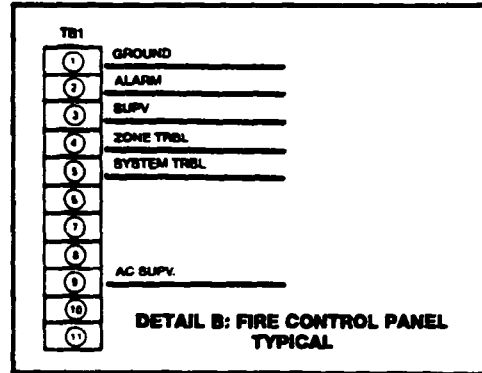
TB2	TRANSMITTER
7 (violet)	2 (ground)
8 (gray)	6 (+12VDC)
9 (white)	5 (modulation input)
10 (black)	4 (gate input)
11 (striped)	3 (monitor output)
- From the hardware kit provided, place the foam pads on the base of the cabinet, beneath the Transmitter, near the top of the cabinet. Place an insulating washer on top of each of the two mounting standoffs and carefully position the Transmitter on the standoffs and foam pads, aligning the holes in the bottom cover with the standoffs. Secure the Transmitter with the screws provided - two 3/8" long screws into the standoffs, and one 1/2" long screw into the top of the Transmitter.

### Programming Note:

When programming the PROM, program zone 8 for inverted operation, since terminal 9 (AC SUPV) is normally high.

# SPECIFICATIONS

Specifications for the No.7620ULF are identical to those listed in the No. 7620ADV2 Installation Instructions (included with the 7620ULF), with the addition of the physical size of the No. 7620ULF cabinet, which is:  
**Cabinet Dimensions: 12" L x 12" W x 4" D. Wt: 18 lbs.**



SUMMARY OF CONNECTIONS DIAGRAM

### **TO THE INSTALLER**

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system. The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's proper operation at all times.

### **FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT**

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the receiver away from the transmitter interface.
- Move the antenna leads away from any wire runs to the transmitter.
- Plug the transmitter's power source into a different outlet so that the transmitter and the receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or installer may find the following booklet prepared by the Federal Communications Commission helpful:

"Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. under Stock No. 004-000-00450-7.

*The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.*

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