

INSTALLATION INSTRUCTIONS

MARGIN LINES INDICATE PRINCIPAL CHANGES IN THIS ISSUE

GENERAL INFORMATION

The No. 690 PROM Programmer is used to program No. 691 PROMs for use with various Ademco products, including:

- Digital Communicators - 678, 678UL-B, 678UL-F, 693 and 694 series
- Control/Communicators - 4150, 4160, 4160-12, 4180EC, 4180-12
- Digital Receivers - 685, 685-8
- Derived Channel STU - 698, 698UL
- Long Range Radio Transmitter Interfaces - 7621, 7621SE
- RF Receiver/Control - 5620, 5720

The reader should be thoroughly familiar with the product and its installation instructions before attempting to use the No. 690.

The information and various options that may be programmed into a PROM are described in the product's installation instructions.

The No. 690 possesses the following capabilities:

1. All required information and desired options may be programmed into the PROM.
2. The PROM contents may be viewed at any time.
3. Information that remains the same from PROM to PROM (such as the central monitoring station's telephone number) may be programmed into a Master PROM for convenient and rapid copying into successive PROMs.

IMPORTANT: EACH PROM CAN BE PROGRAMMED ONLY ONCE. Changes or erasures cannot be made after information is programmed.

PRELIMINARY (for VIEWING, PROGRAMMING or COPYING)

1. **Connect AC Power:** The No. 690 operates from 16.5 VAC supplied by a No. 1321/TF2 Step-Up Transformer (furnished). Connect the wires extending from the rear of the No. 690 to the terminals on the No. 1321/TF2 and plug the transformer into a 120 VAC outlet. The AC POWER LED on the No. 690 will light. (In areas where only 220 VAC is available, use the No. 1321/TF2 Transformer. Substitute a 220 VAC, 60 Hz, 12 VA transformer with an output of 16.5 VAC.)
2. **Turn the rotary switch on the No. 690 to its OFF position.** CAUTION: The rotary switch must always be in its OFF position before inserting or removing a PROM from its socket.
3. **Set the PROM TYPE selector to RED or BLUE** to match the color on the PROM label. Programming or viewing of a PROM of one color may be used with the other.
4. **Insert the PROM in the NEW PROM socket as follows:** (a) Make

sure the rotary switch is in the OFF position. (b) Orient the PROM so that the marked corner on its label is lined up with the triangle adjacent to the PROM socket. (c) Insert the PROM in the socket.

Note: The printing on the PROM label may be upside down when the PROM is properly inserted.

5. **Examine the PROM programming sheet provided with the product to be programmed.** If a new PROM is to be programmed, a copy of the sheet should be filled out before programming is begun. If a previously programmed PROM is to be viewed (see next section) the programming contained in the PROM may be noted on a copy of the form as viewing proceeds. If no ACCESS NUMBER is needed, leave these spaces blank. As noted on the form, leave blank spaces at the right of each telephone-number group if there are more spaces than digits.

VIEWING PREVIOUSLY PROGRAMMED PROM

Information that is programmed with digits (e.g. Phone Number, Subscriber's ID Number) can be viewed in the digital DISPLAY window provided on the No. 690. A dual purpose row of LEDs is provided on the No. 690 to read out which system option bits have been programmed and which channels have been programmed to a particular channel option.

Viewing Phone Numbers and Subscriber's ID Number:

1. **Complete Steps 1 through 5 of the PRELIMINARY Section.**
2. **Turn the rotary switch to the desired PHONE NUMBER group (ACCESS # or MAIN #) or SUB'S ID # position.** (Suggested order of viewing: PRIMARY ACCESS #, PRIMARY MAIN #, SECONDARY ACCESS #, SECONDARY MAIN #, SUB'S ID #.)
3. **Set the PHONE NUMBER slide switch to PRIMARY or SECONDARY as desired.** Note: When viewing SUB'S ID#, the PRIMARY position must be used, unless SECONDARY is appropriate for the PROM's application.
4. **Press the VIEW BUTTON (*) on the keypad and hold it down.** The first digit of the group being viewed will appear in the DISPLAY window, followed by a decimal point; second digit, decimal point, third digit, etc. When the last digit has been displayed, a buzzer will sound momentarily to indicate that the end of the group has been reached. Scanning will return to the first digit in the group and continue until the VIEW BUTTON is released.

Scanning may be stopped (and the display held) at any desired point by releasing the VIEW BUTTON; however, if the VIEW BUTTON is pressed again, scanning will resume at the first digit in the group.

The display will, in fact, reset to the first digit of a group under any of the following circumstances:

- a. When the VIEW BUTTON is pressed.
- b. If the rotary switch is moved.
- c. If the PHONE NUMBER (PRIMARY/SECONDARY) switch is moved.
- d. If the PROM is removed from its socket.
- e. If the "End-of-Group" buzzer sounds.

The display will indicate the following for special cases:

This location is unprogrammed.

Flickering: PROM may not be fully programmed. Try reprogramming this location (see next section for programming procedure).

Blank (with decimal point off):

This location was probably programmed for two different digits. Unless intentional, discard the PROM. Note: Some products require a two-pass programming procedure (e.g. Programming hexadecimal B-F digits for a No. 693XT, 693AT or 694AT Digital Communicator). This will result in a blank display at that location during viewing. Proper programming can be confirmed with a subsequent printout by the receiver.

5. **Repeat Steps 2, 3 and 4 for the other digit groups.**

Viewing System Options:

- Turn the rotary switch to its **SYS. OPTIONS** position. The **SYSTEM OPTION MODE LED** will light as will the LED below each of the system options which have been programmed.

- ## Viewing Channel Options:
- Turn the rotary switch to any of its five **CHANNEL OPTION** positions. The **CHANNEL OPTION MODE LED** will light as well as the

- LED above each of the channel numbers which have the option programmed.
- Repeat Step 7 for each of the rotary switch's other four **CHANNEL OPTION** positions.
 - Turn the rotary switch to its **OFF** position and remove the **PROM** from its socket. Pry gently with a small screwdriver if necessary.

PROGRAMMING A PROM

Caution: Proceed carefully. Once a digit or option has been programmed it may not be changed or erased. Unprogrammed spaces or options may, however, be added at a later time.

Programming Phone Numbers and Subscriber's ID Number:

- Complete Steps 1 through 5 of the **PRELIMINARY** section. **MAKE SURE THAT THE PROM TYPE SWITCH IS IN THE PROPER POSITION TO MATCH THE LABEL COLOR OF THE PROM TO BE PROGRAMMED.**
- Turn the rotary switch to the desired **PHONE NUMBER** group (**ACCESS # OR MAIN #**) or **SUB'S ID #** position. (Suggested order of programming: **PRIMARY ACCESS #, PRIMARY MAIN #, SECONDARY ACCESS #, SECONDARY MAIN #, SUB'S ID #.**)
- Set the **PHONE NUMBER** slide switch to **PRIMARY** or **SECONDARY** as desired. Note: unless **SECONDARY** is appropriate for the **PHONE NUMBER**, unless **SECONDARY** is appropriate for the **PHONE NUMBER**.
- A "□" should be observed in the **DISPLAY** window, indicating that this digit has not yet been programmed.

Note: If the **VIEW** BUTTON has been used to examine the contents of this group, the No. 690 must be reset to the first digit of the group so that programming will begin at the proper location. To reset: Move the **PHONE NUMBER** slide switch to the opposite position and back again.

- Pull down and hold the **PROGRAM** switch and press and hold the button on the keyboard corresponding to the desired digit. The **DISPLAY** should then indicate the digit being pressed.
- Continue to hold down the **PROGRAM** switch, but release the keyboard button. The system will advance to the next digit position and display a "□".
- Repeat Steps 5 and 6 for the next and subsequent digits until all required digits in the group have been programmed. Then release the **PROGRAM** switch as well as the last keyboard button to be

pressed. A buzzer will sound if the last space in the group is reached. The system (and **DISPLAY**) will subsequently return to the first digit in the group, if programming of the last space takes place.

- Verify that the proper digits have been programmed by pressing the **VIEW** BUTTON on the keyboard and viewing the contents of the group as described in Step 4 of the **VIEWING** section above.
 - Repeat Steps 1 through 8 for the other digit groups.
- ### Programming System Options:

- Turn the rotary switch to its **SYS. OPTIONS** position. The **SYSTEM OPTION MODE LED** will light.
 - Raise the **OPTION/CHANNEL SELECTION** switch(es) corresponding to the system option(s) to be programmed. Switches for those system options not to be programmed must be down.
- Caution:** It is possible to add System (and Channel) Options at a later time, however, once an option has been programmed, it may not be erased.

- Pull down the **PROGRAM** switch and release. The individual LEDs corresponding to the system options that have thus been programmed will light.

Programming Channel Options:

- Turn the rotary switch to one of the **CHANNEL OPTIONS** to be programmed. The **CHANNEL OPTION MODE LED** will light.
- Raise the **OPTION/CHANNEL SELECTION** switch(es) corresponding to the channel(s) to be programmed with the selected channel option. Switches for those channels not to be programmed must be down. (See **Caution** note at Step 11).
- Pull down the **PROGRAM** switch and release. The individual LEDs corresponding to the channels that have thus been programmed will light.
- Repeat Steps 13, 14 and 15 for the other selected channel options.
- Turn the rotary switch to its **OFF** position and remove the **PROM** from its socket. Pry gently with a small screwdriver if necessary.

COPYING WITH A MASTER PROM

A Master PROM can be used for quick copying when a number of PROMS must be programmed with the same information, such as: central monitoring station telephone numbers, system options and/or channel options (subscriber's ID #, of course, will differ from installation to installation).

The common information should first be programmed into a PROM that will be used as a Master PROM. Follow the procedure described in the **PROGRAMMING** Section (use the **NEW PROM** socket when programming).

Copying Procedure:

- Move all 8 **OPTION/CHANNEL SELECTION** switches to their down positions.
- Turn the rotary switch to its **OFF** position.
- Insert the Master PROM into the **MASTER PROM** socket.
- Insert an unprogrammed PROM into the **NEW PROM** socket.
- Make sure the **PROM TYPE** switch is set to match the label color (**RED** or **BLUE**) of the unprogrammed PROM (it may be different from the **MASTER PROM**).
- Turn the rotary switch to its **COPY** position.
- If only the phone numbers are to be copied from the **MASTER**

PROM, pull down the **COPY PHONE NUMBER ONLY** switch momentarily.

If all information (except **SUB'S ID #**) is to be copied, pull down the **COPY ALL EXCEPT SUB'S ID #** switch momentarily.

The No. 690 will begin flashing as the copying proceeds. When the flashing stops, copying has been completed.

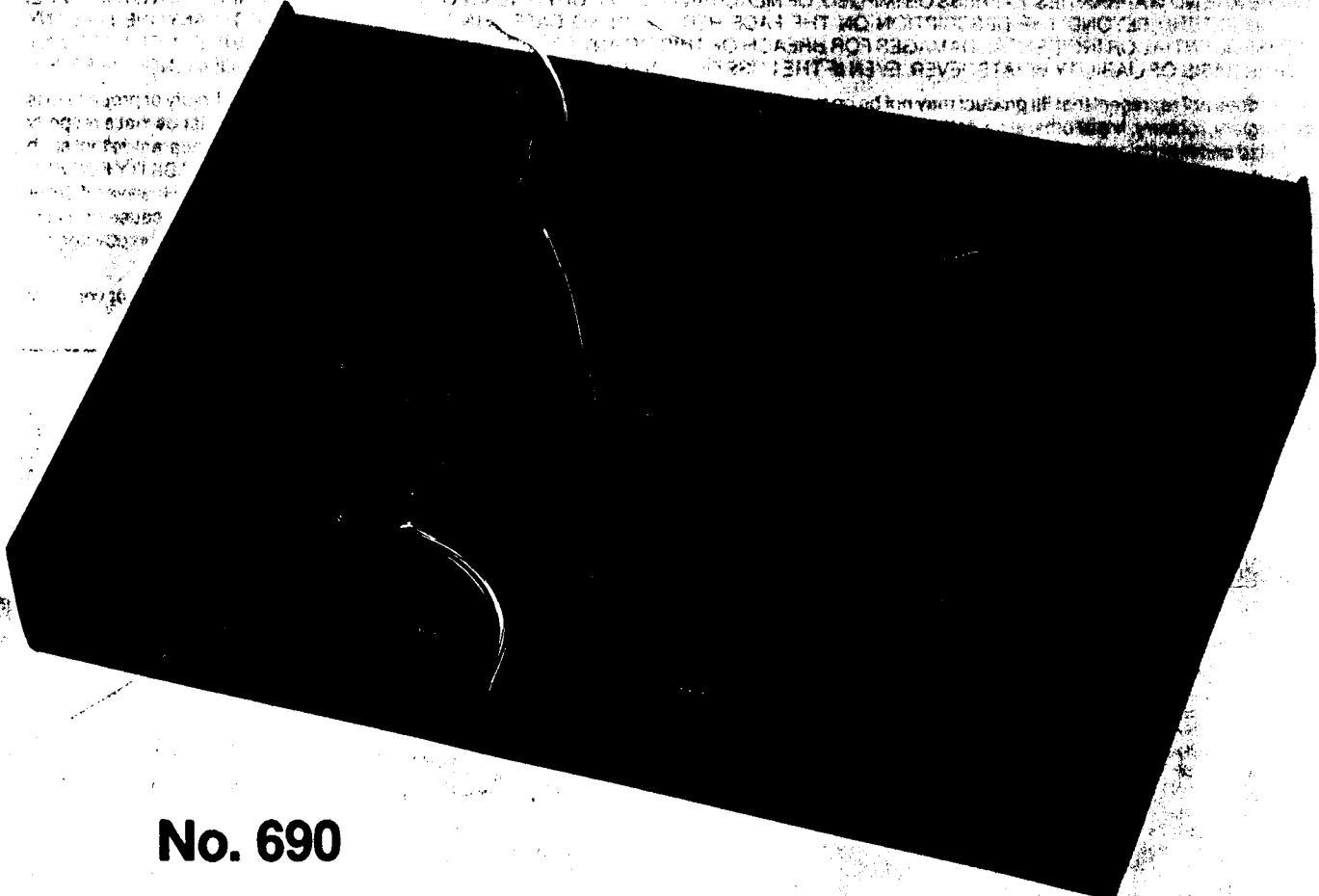
*Note: Applies only to Nos. 678, 678UL-B, 678UL-F, 693 and 694 series Digital Communicators, to No. 4150 Control/Communicator, and to Nos. 4160, 4160-12 and 4180/C/4180-12's communication PROMs.

- Program any additional information required, such as subscriber's ID #, system options or channel options. Follow the **PROGRAMMING** section procedure in the product's installation instructions.
- Verify that the information contained in the new PROM is correct by following the **VIEWING** section procedure herein.
- Turn the rotary switch to its **OFF** position and remove the newly programmed PROM.
- Repeat Steps 4 through 10 for each additional PROM to be programmed.

GENERAL SPECIFICATIONS

Physical: Width: 12" (305mm)
Height: 3-1/2" (89mm)
Depth: 8" (203mm)

Electrical: Voltage: 16.5 VAC, supplied by No. 1321/TF2 (16.5V, 20VA) Plug-in Transformer (furnished)



No. 690