INSTALLATION/ PROGRAMMING INSTRUCTIONS

AVENGER IV ALARM SYSTEM

MODEL AV-4000

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TABLE OF CONTENTS

SECTION I — INSTALLATION INSTRUCTIONS

1.0 SYSTEM DESCRIPTION

The Acron Model AV-4000 "AVENGER IV" is an eight-zone control panel/digital communicator alarm system that consists of one AV-4000 panel and one model DK-IIE digital control station. The AV-4000 can be custom tailored for each installation by programming an Electrically Erasable Programmable Read Only Memory (EEPROM) which is included with the system. Programming can be accomplished using either the DK-IIE or the Acron Model P-4000 EEPROM Programmer. For complete information concerning programmable features and use of the DK-IIE to enter data and commands into the EEPROM, see Sections II and III AV-4000 "Programming Instructions". *NOTE: THE SYSTEM WILL NOT WORK WITHOUT A PROGRAMMED EEPROM.*

1.1 INSTALLATION

— CAUTION —

1. Don't short terminals 7, 8 or 12 to 3, 9 or 25 or either the Bell Power or Auxiliary output fuse will blow.
2. Don't connect battery until installation is complete.
3. Do not apply power until after step 14.

1. An AUDIBLE WARNING DEVICE may be connected between terminals 7 and 30. The device may be located in the cabinet or it may be remote. The sounding device should operate at 12 Vdc, and must not require more than 50 mA. The device will produce a steady sound during Entrance Delay Time. The device will pulsate when the system has been Forcibly Armed (for the Exit delay time), and when in the Test mode. When Kiss-Off is received, it will sound momentarily, and if a receiver is not reached after 8 attempts, it will sound continuously while the fault LED is on.

NOTE: WHEN A TRIP OCCURS ON A ZONE(S) PROGRAMMED FOR SILENT PANIC, THE KISS-OFF (FAULT) INDICATOR WILL NOT OPERATE AND THE LED'S WILL NOT FLASH.

2. Connect a 12 Vdc Burglary Bell or Siren to terminals 3 and 4. Observe polarity.

3. Connect a 12 Vdc Fire Bell or Siren to terminals 3 and 5. Observe polarity.

4. 12 Vdc is available at terminals 6 and 7 for auxiliary devices.

5. If smoke detectors are used, their 12 volt power should be supplied through terminal 12 (+12 V) and terminal 9 (common). This 12 volt source will be interrupted for approximately 5 seconds, resetting the smoke detectors, whenever "FIRE RESET" on the DK-IIE (keys 1 and 3 pressed simultaneously) is activated. The same reset can be achieved by connecting any momentary normally open contact push button between pin V2 on the AV-4000 P.C. board and common negative (terminal 25). A normally open contact of the same relay which provides this reset signal is available at terminal 6. If desired, this output will provide a 5-second 12-volt output whenever keys 1 & 3 are presed on the digi-key.

NOTE: UNSWITCHED 12 VOLT POWER FOR AUXILIARY DEVICES IS AVAILABLE AT TERMINAL 7 (+12 VDC) AND TERMINAL 6 (COMMON NEGATIVE). SWITCHED SMOKE DETECTOR POWER IS AVAILABLE AT 12 (+12 V) AND 9 (COMMON). THE TOTAL AMOUNT OF AVAILABLE CURRENT IS 600 mA (INCLUDING ANY DK-IIE'S EVEN THOUGH THEY ARE NOT CONNECTED TO TERMINAL 7). TO DETERMINE THE TOTAL CURRENT REQUIREMENT FOR AN INSTALLATION, ADD THE CURRENT REQUIREMENTS FOR ALL ITEMS TO BE CONNECTED TO THE AUXILIARY OUTPUT AS WELL AS THE DK-IIE'S. CURRENT REQUIREMENTS FOR ALL APPLICABLE ACRON ITEMS ARE:

MODEL	CURRENT
DK-IIE	80mA
EOL-8	30mA

DO NOT EXCEED 600 mA TOTAL

6. If the COURTESY OUTPUT is to be used to turn on a light during Exit and Entrance delay times, install a BSR BA-284 Burglar Alarm interface, Ademco 477 (or equivalent). Connect the positive (+) terminal of the interface unit to the COURTESY OUTPUT TERMINAL 28 and the negative (–) lead to terminal 25.

7. Connect the eight (8) input zones to terminals 13-24. The loops will be N.C. or N.O. according to the EEPROM program.

JUMPER SELECTABLE OPTION

For normal operation, jumper J3 should be located in the upper position connecting pins 1 & 2. If the EOL-8 module or 8 zone open collector RF receiver is used, move jumper to lower position connecting pins 2 & 3.

8. If an OPERATE LED is desired (ON when unit is in reporting cycle), connect the cathode to terminal 31 and the anode to one end of a 560 ohm resistor. Connect the other end of the resistor to terminal 7.

9. If remote "READY" and "ARM" LED's are desired, connect the anodes to terminal 7 and the cathodes to terminals 27 and 26 respectively.

10. If keyswitch operation is desired, connect the Momentary normally open switch between terminals 7 and 29.

11. Connect the F.C.C. Approved telephone connection cable to terminals 32, 34, 35 and 36 as shown. Insulate all unused leads. *THE CABLE MUST BE PHYSICALLY SEPARATED FROM POWER AND SIGNAL LINES.*

12. Connect DK-IIE to AV-4000. Red lead to terminal 8. Blue lead to terminal 10. Black lead to terminal 9. Remaining lead to terminal 11. Refer to DK-IIE Installers Manual for complete instructions regarding DK-IIE installation and options. *WIRES CONNECTING DK-IIE TO AV-4000 MUST BE KEPT AWAY FROM A.C. AND TELCO WIRING TO MINIMIZE TRANSIENT PROBLEMS DUE TO LIGHTNING.*

13. Connect Terminal 33 and Cabinet to an EARTH GROUND.

NOTE: 1) SUGGESTED EARTH GROUND AND PROTECTION LEVELS ARE:
A) PREFERRED PROTECTION—SEPARATE METAL GROUNDING ROD
B) ACCEPTABLE PROTECTION—METAL COLD WATER PIPE
2) USE AT LEAST 16 GAUGE WIRE BETWEEN TERMINAL 33 AND EARTH GROUND.
3) KEEP WIRE RUN AS SHORT AS POSSIBLE AND AWAY FROM OTHER PANEL WIRING.
4) DO NOT USE AN EXISTING LIGHTNING ROD GROUND, IT CAN PROVIDE A PATH FOR LIGHTNING STRIKES TO PANEL.

14. Check all connections, verifying polarity.

15. Connect the transformer to terminals 1 and 2. Polarity is not important.

16. Plug the transformer to an unswitched 125 Vac receptacle. The AC LED on the panel and indicators on the DK-IIE should light.

17. Connect the BLACK FLYING LEAD to the negative (–) terminal of a 12 volt rechargeable gel type battery. Connect the RED FLYING LEAD to the positive (+) terminal of the battery. If the battery is not fully charged, allow 36 hours for battery to reach full charge.

18. Program the EEPROM for the desired system configuration and features. Refer to the AV-4000 Programming Instructions (Sections II and III) for proper procedures. After programming is completed, restore the system back to the panel and keypad modes.

19. Plug the telephone connection cable into the RJ31-X jack.

20. The system may now be Disarmed and Armed from the DK-IIE using the (Factory Programmed) Access code 123 or a keyswitch.

Leave system disarmed.

21. TESTING THE LOCAL SYSTEM USING THE DK-IIE: Arm the system in the TEST MODE. (Press: Access Code, MODE, TEST, then ENTR). The audible warning devices will pulsate continuously during TEST, except when testing an Entrance Delay zone. During Entrance Delay time, the audible warning devices will change to a steady sound (for 5 seconds in the TEST MODE) and then return to a pulsating sound. All loops may now be tested independently. Violate each loop separately. The Arm and zone LED's will flash on alarm. No need to reset panel after each zone test. Bell or siren will shut off in 2 seconds and another zone can be tested. NOTE: Zones violated while in the TEST MODE will not report to the Central Reporting Station. After all zones are tested, Disarm the panel. All audible warning devices will shut off and the master Arm LED will turn off. The zone annunciator LED's will remain flashing.

22. TESTING COMMUNICATION TO THE CENTRAL REPORTING STATION: Arm the Panel. The flashing zone annunciator LED's will turn off. Violate a zone. The Siren/Bell should turn on, the zone and Arm LED's should flash and the premises telephone should be inoperative (DEAD). After the Central Reporting Station receives a good transmission of this violation, it will send a Kiss-off signal back to the panel and disconnect from the telephone line. The panel will light the Fault LED, sound the local audible warning device (if provided) for 5 seconds and restore the telephone line back to the premises telephone.

NOTE: Silent Panic zones must be tested separately after testing the above Audible zones. Silent Panic inhibits the flashing Arm LED, the 5 second lighting of the Fault LED and if provided the sounding of the Audible Warning device.

23. For additional information on DK-IIE operation and reprogramming the access code, refer to the AV-4000 DK-IIE Installer's and User's Manual.

24. Fill in the appropriate information in the User's Manual, and give it to your customer when you explain how the system operates. Provision is made on the back page for your business card.

1.2 TROUBLESHOOTING

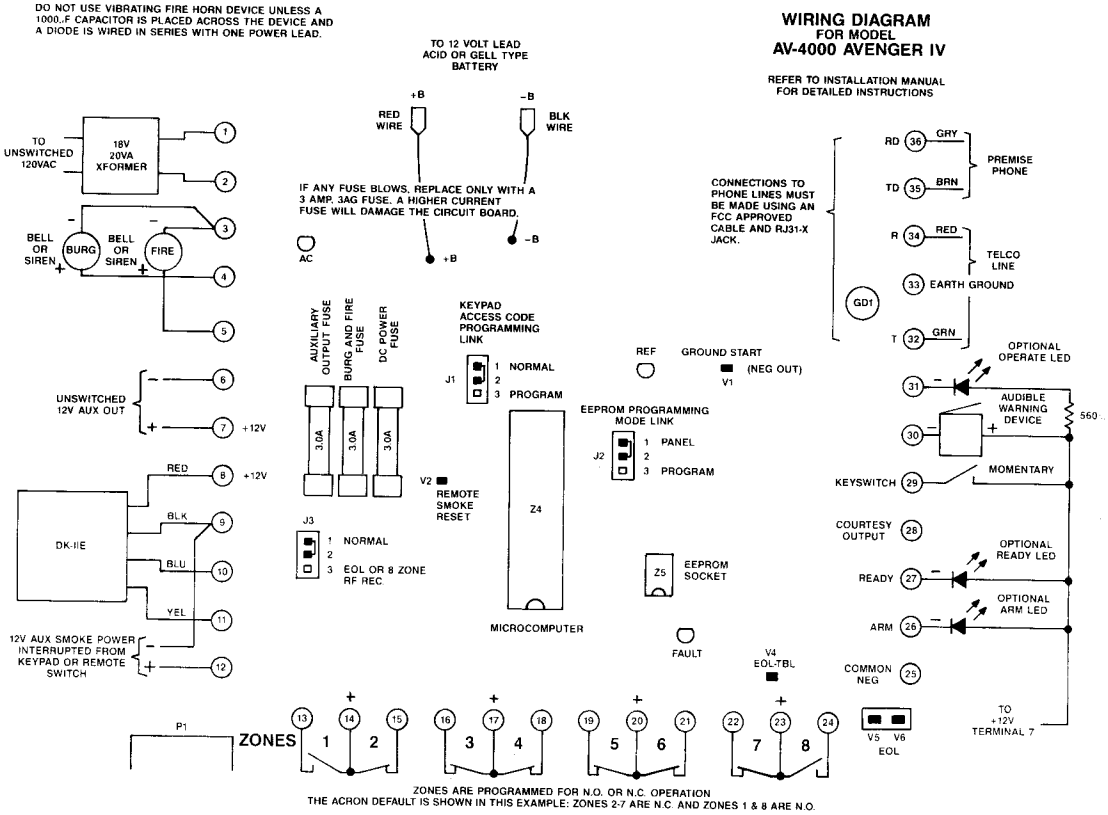
SYMPTOM	CHECK
No indicators light	**Make sure system is connected to either a good battery or AC. (Test battery under load.)**
	Check Auxiliary output fuse.
AC ON doesn't light	**Transformer and connections.**
Bells won't ring	**Check Bell power and D.C. power fuses.**
Fault Light ON	**System failed to communicate with a receiver after 8 attempts. If an Audible Warning Device is connected to Terminal 30, it will sound.**

1.3 ADDITIONAL NOTES

After 8 unsuccessful attempts, the system will wait for one hour before additional attempts unless a new alarm condition occurs. To silence the Audible Warning Device and clear the Alarm Memory to prevent further attempts to report the initial alarm, remove AC power and disconnect one of the battery leads for 30 seconds. This will clear the Alarm Memory and reset the system.

You may wish to advise your customer over the phone to use this method to clear the Alarm Memory until you can cure the problem.

1.4 FIGURE 1 (AV-4000 WIRING DIAGRAM)



NOTES:
1. EARTH GROUND GOES TO TERMINAL 33.
2. FCC REGULATION NUMBER AB798Z-67793-AL-E RINGER EQUIVALENCE: 0.1B
3. WHEN USING EOL MODULE OR 8-ZONE RF RECEIVER, MOVE J3 LINK TO POSITION 2 AND 3.
4. LINKS J1, J2, AND J3 ARE SHOWN IN NORMAL POSITION.

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1.5 SPECIFICATIONS

POWER REQUIREMENTS: 120 Vac, 20 VA, 18V transformer supplied. 12 volt battery, rechargeable gel type, not supplied.
TEMPERATURE OPERATING RANGE: 35 Fahrenheit to 135 Fahrenheit.
BELL OUTPUTS: Burglary and Fire Outputs, 12 Vdc, total current not to exceed 3 Amps. (Includes Auxiliary Power Output.)
AUXILIARY POWER OUTPUT: 12 Vdc, regulated, 600 mA. See NOTE preceding Step 6.
TRANSIENT AND LIGHTNING PROTECTION: Lightning and surge protection provided on all input, power, and telephone lines.
ZONE RESPONSE TIME: 220 mSec. During reporting cycle, response time increases to approximately 1 sec.
MAXIMUM LOOP RESISTANCE: Do Not exceed 300 ohms on any zone loop (does not apply when Supervised End of Line Module is used).
DIMENSIONS: 13" H x 10¾" W x 2¾" D
SHIPPING WEIGHT: 10 lbs.
FCC REGISTRATION NUMBER: AB798Z-67793-AL-E
RINGER EQUIVALENCE: 0.1B

1.6 OPTIONAL ACCESSORIES

In addition to the ability to select control panel and digital communicator characteristics, the system can be expanded through the use of one or more of the following optional modules:

DK-IIE: A digital arming station that allows full system control and displays full system status from one or more convenient locations. 8 LED's display zone status and alarm memory for each zone; 8 LED's display armed status of each burglary zone; 3 LED's display general loop status, instant/delay mode and general armed status. Up to 5 DK-IIE's may be used.

EOL-8: Supervised End Of Line resistor module converts the eight input zones to fully supervised zones. Each zone has a link to select Burglary or Fire operation. In the Fire position, an open will trigger a Trouble signal.

COURTESY OUTPUT: A +5 Vdc voltage is available at terminal 28 during Exit/Entrance times, and can be used to operate a line carrier lamp driver, etc. A BSR BA-285 Burglar Alarm Interface, Ademco 477 Burglar Alarm Interface or equivalent product can be used.

P-4000: An EEPROM portable field programmer with complete digital read out of both data and memory location makes programming even easier. The P-4000 enables duplicate EEPROMS to be made from a master while permitting the addition of account numbers and other individual programming if desired.

1.7 FCC COMPLIANCE

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 of Subpart J of 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:

1. Reorient the TV or radio antenna.
2. Relocate or move the alarm control away from the receiver.
3. Plug the transformer for the alarm control into a different outlet so that the receiver and the alarm are on different branch circuits.
4. If necessary, the user should consult the alarm dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, stock #004-000-00345-4.

NOTES

SECTION II — PROGRAMMING INSTRUCTIONS

Using The DK-IIE as a Programmer

GENERAL

2.0 INTRODUCTION

Whether you are an experienced installer/programmer or a newcomer you will find programming and installing the AV-4000 simple and easy to understand. For those familiar with programming Acron or other products a reading of Section II with an occasional glance at Section III (DEFINITIONS) is probably all that is necessary. For those new to programming, a thorough reading of Sections II and III is recommended.

The EEPROM in the AV-4000 may be programmed either by a separate programmer or by the DK-IIE, which comes with the system. These instructions describe how the DK-IIE is used for this purpose. A free permanent aluminum overlay for the DK-IIE is available from your distributor or Acron to simplify the use of the digi-key as a programmer.

2.1 PROGRAMMING MODE

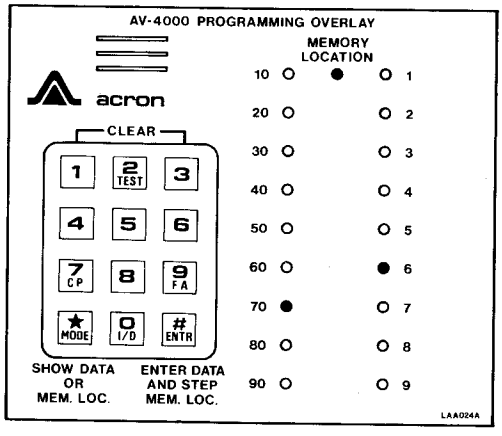
Two links must be moved in order to program the AV-4000 from the DK-IIE. Link J4 on the back of the DK-IIE should be moved from the "OFF" to the "ON" position see Figure 2 in the AV-4000 DK-IIE Installation Instructions and Mode Link J2 on the AV-4000 should be in the "program" position see Figure 1, Section I.

Next, connect the DK-IIE to the AV-4000 system (see Section I installation instructions). When programming is complete, both links must be replaced to their original positions in order for the system to work as a panel. NOTE: Yellow "instant" LED must be off before changing to programming mode.

DISPLAY

2.2 LED ARRANGEMENT

The two columns of 9 LED's may be thought of as a two-digit decimal display with the left column representing the tens digit and the right column representing the units digit. The top LED represents a "one", the bottom LED represents a "nine". When all LED's are off, a "zero" is being displayed. When the yellow LED is on, the display is showing a memory location; when the yellow LED is off, the display is showing the data. For example, the figure below indicates memory location 76 (• indicates the LED is on).



NOTE: A Free Programming overlay may be obtained from your distributor or by calling Acron.

The "MODE" key is used to switch back and forth between these two display modes. When in the memory location mode, the display shows the current memory location and the keypad can be used to move to any desired location.

When in the data mode (the yellow LED off), the display shows the contents of the current memory location and the keypad can be used to modify that data. The EEPROM is capable of storing two types of data, each of which is displayed and manipulated differently.

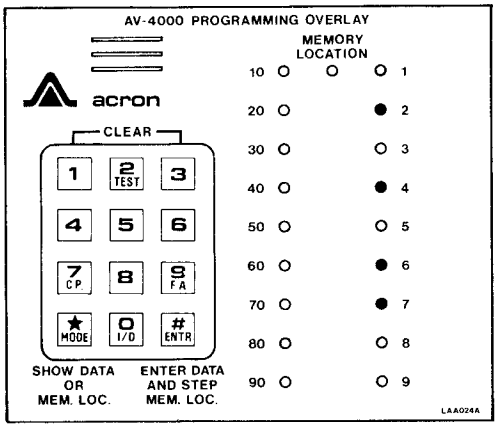
2.3 NUMERIC DATA

Numeric data is used to store telephone numbers, account codes, entrance/exit delays, etc.

2.4 SELECTION DATA

SELECTION DATA displays specific data selected for special functions (burglary zones or fire zones, for example) or (Touch Tone dialing and False Alarm shutdown, for example).

DISPLAY of Selection data uses only the top 8 LED's of the right hand column and specifies the functions selected. For example, the figure below indicates that zones 2, 4, 6, and 7 have been selected.



KEYPAD

2.5 CHANGING MEMORY LOCATIONS AND VIEWING DATA

Changing Memory Locations and Viewing Data is accomplished in the following manner. If the display is not showing a Memory Location (Yellow LED ON), press the Mode key.

THE NUMERIC KEYS enter numbers into the display in the same way as a standard calculator; that is, each entry shifts the contents of the units digit into the tens digit and then places the new entry in the units digit. For example:

To go to location 76, enter 76. To go to location 1, enter 01.

2.6 PROGRAMMING NUMERIC DATA

The following example shows how to program a telephone number. Let's program the primary phone number to dial 3647200.

A review of the programming work sheet (Figure 4) shows that the first digit of the first number starts in memory location "1". To program the telephone number, display memory location "1". Next press the MODE key to switch the display to show data. Next, press key 3, press ENTR, press key 6, press ENTR, press key 4, press ENTR, and continue this sequence until the last digit "0" is entered. Notice that the digit "0" is displayed as a 10. This is similar to the "0" on a rotary telephone dial. Although the dial is marked with a "0", the actual number of pulses transmitted is 10.

After programming the last telephone digit the "1" & "3" keys must be pressed simultaneously. This will "clear" the next memory location by entering a true "0", which must be done to inform the AV-4000 that the dialing sequence is complete.

2.7 REVIEWING THE DATA

In order to review the telephone number or any other data, the following procedure is used. Go to memory location "1" (start of the first telephone number). Switch the display to view data, a 3 will be displayed (first dialed digit); press ENTR again a 6 will be displayed; press ENTR, a 4 will be displayed. Every time the ENTR key is pressed, the memory location is advanced and the associated data is displayed. When the last digit is displayed, switch the display to show the Memory Location. Since the last dialed digit is the 7th digit, the display will show 7. This last step is not necessary, and is intended to show the relationship between the Memory Location and its associated data. It also shows a way to check for errors.

2.8 REPROGRAMMING NUMERIC DATA

It is not necessary to "clear" the old data when reprogramming numeric data, just reprogram over the old data. This is not true for Selection data, as is explained in section 2.9.

2.9 PROGRAMMING SELECTION DATA

The following example shows how to select Zones 2, 4, 6 and 7 for Burglary. A review of the Programming worksheet shows Burglary Functions are assigned to Memory Location 84.

Set the display to Memory Location 84. Change display to show data. If random data appears, press clear key combination (1 & 3). The display will indicate no zones selected (all LED's in right hand column are out). Press key 2, press key 4, press key 6, press key 7. Notice as you press each key, its associated LED lights up in the right column indicating you have selected that zone. If the information is correct press ENTR key. That location is now programmed. If incorrect press the clear keys again and re-select zones. Unlike numeric data (entry where a new entry overwrites an old entry) selection data must be cleared if an error is made.

PROGRAMMING SELECTION DATA other then Zone Data is the same as Programming Zone Data. Example: Select Touch Tone Dialing and Dial No Dial Tone. The Memory Assignment Chart shows location 53 contains the numbers to be entered. A "1" for Touch Tone Dialing and a "2" for Dial No Dial Tone.

Set the display to show the data in Memory Location 53. If clearing is required, do so. If not, press the "1" and "2" key. Display will now show the "1" and "2" LEDs lit in the right hand column. Press the ENTR Key. This location is now programmed.

2.10 ENTERING FACTORY PROGRAMMED VALUES

Pressing keys 7 & 9 simultaneously will cause the EEPROM to be overwritten with the Acron factory program listed in the programming work sheet. Telephone numbers and account codes are unaltered; all other locations will be overwritten with the factory programmed values listed. Where no value is specified, the location will be "cleared". Access code will also be "cleared". When EEPROM programming is completed, return panel link J2 and DK-IIE link J4 to normal mode. Enter new access code. (Leave panel link J1 in the "normal" position)

SUMMARY

2.11 MODE KEY

Changes the display. Display can view a memory location or its associated data, but not both at the same time. Pressing the MODE key allows alternating between viewing a memory location or its contents (data).

2.12 ENTER KEY

When the display shows a memory location, pressing the ENTR KEY will advance that memory location. When the display shows data, pressing the ENTR KEY enters the displayed data into EEPROM and advances the memory location.

2.13 NUMERIC KEYS

WHEN DISPLAY SHOWS MEMORY LOCATIONS. Used to change memory locations. Examples: display shows 76 and 1 is desired, press 0, then press 1. The display now shows 1.

WHEN DISPLAY SHOWS DATA AND NUMERIC DATA ENTRY IS REQUIRED. Use numbers 0 thru 15 to enter data, and press "CLEAR" keys ("1" and "3" simultaneously) to terminate a telephone number. A "0" entry will program and display 10.

WHEN DISPLAY SHOWS DATA AND SELECTION DATA ENTRY IS REQUIRED. Use keys 1 thru 8 to enter Function data. Key 9 will select all function numbers (1 thru 8). "Clear" keys will deselect all function numbers.

2.14 SELECT ACRON FACTORY PROGRAMMED VALUES

Pressing the 7 & 9 keys simultaneously will program Acron factory programmed values, as shown on programming worksheet, regardless of what is displayed.

EXAMPLES AND FIGURES

2.15 PROGRAMMING EXAMPLE

This programming example shows two telephone numbers programmed to access second (outside) Dial Tone. Zones, Mode Selection and Reporting Codes are as follows:

ZONES AND MODES SELECTED	REPORTING CODES SELECTED
Touch Tone Dialing False Alarm Shutdown Extended Format All Zones (not used with SK 4+2) Restore Zones 2, 3, 4 N.C. Zones 2-7 (Factory Prog.) Fire Zone 1 (Factory Prog.) Keypad Emergency (★ & #) Zone 1 Burg Zones 2-7 (Factory Prog.) Silent Panic Zone 8 (Factory Prog.) Keypad Emergency (4 & 6) Zone 8 Test Cancel Zones 4 & 5 Delayed Burglary 2 & 3	Acct Number = 123 *Test Cancel Code = 9 - Change to "0" for SK 4+2 *Restore Code = 0 (STD) A (ACRON) - Change to "2" for SK 4+2 Forced Arming Code = 15 (F) Low Battery Code = 13 (D) Opening Code = 11 (B) Closing Code = 12 (C) 24-Hour Self-Test = 14 (E) Zone 2 Reporting Code = 3 (Not Allowed in SK 4+2 All other zones report Factory Programmed Codes

* = Factory Programmed Value (may be changed)

This example is shown on the sample programming worksheet. See Figure 2.

FIGURE 2. SAMPLE PROGRAMMING WORKSHEET

	MEMORY LOCATION	DESCRIPTION	ENTER NUMBERS	DATA ENTERED (NEW)	FACTORY PROGRAMMED
DIALER FUNCTIONS	1-21	FIRST TELEPHONE NUMBER MEMORY LOCATIONS ▪		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	
		FIRST TELEPHONE NUMBER DIGITS		9 1 4 1 8 0 0 3 8 9 7 7 2 0	
	22-42	SECOND TELEPHONE NUMBER MEMORY LOCATIONS ▪		22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	
		SECOND TELEPHONE NUMBER DIGITS		9 1 4 4 6 4 8 2 0 0	
	43-46	ACCOUNT NUMBER MEMORY LOCATIONS ▪		43 44 45 46	
		ACCOUNT NUMBER DIGITS		1 2 3	
	47-50	FOR FUTURE USE			
				SELECT ZONE(S) 1 2 3 4 5 6 7 8	
	■ 51	DIAL SECOND NUMBER ONLY, SELECT ZONES			
	■ 52	DIAL BOTH NUMBERS, SELECT ZONES			
	53 ††	1 = TOUCHTONE DIALING, 2 = DIAL NO DIAL TONE 3 = FALSE ALARM SHUT DOWN, 5 = FAST SLOW INVERT		✓ ✓	ROTARY DIALTONE
	■■ 54	4 = DIAL BOTH NUMBERS, 8 = DIAL 2ND NUMBER ONLY			1ST NO. ONLY
	■■ 55	1 = FORCED EXTENDED, 2 = EXTENDED, 4 = SK4+2, 8 = ACRON			STD.
	■ 56	EXTENDED FORMAT, SELECT ZONES		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	NOT FOR SK4+2
	57	RESTORE, SELECT ZONES		✓ ✓ ✓	
	58	RESTORE CODE			0 (A†)
	59	TEST CANCEL, SELECT ZONES		✓ ✓	
	60	TEST CANCEL CODE			9
	61	REPORTING DELAY, SELECT ZONES			
	62	REPORTING DELAY TIME (×10 SEC)			1
	63	NORMALLY CLOSED, SELECT ZONES			2-7
				DESCRIPTION	
REPORTING CODES	64	ZONE 1 CODE		FIRE	1
	65	ZONE 2 CODE	3	FRONT DOOR	2
	66	ZONE 3 CODE		BACK DOOR	3
	67	ZONE 4 CODE		BASEMENT	4
	68	ZONE 5 CODE		INTERIOR MOTION DETECTORS	5
	69	ZONE 6 CODE		UPSTAIRS	6
	70	ZONE 7 CODE		WINDOWS	7
	71	ZONE 8 CODE		SILENT PANIC	8
	• 72	ZONE 9 CODE (24 HOUR TEST)	E		
	• 73	ZONE 10 CODE (LOW BATTERY)	D		
	• 74	ZONE 11 CODE (CLOSING)	C		
	• 75	ZONE 12 CODE (OPENING)	B		
	• 76	ZONE 13 CODE (FORCE ARMING)	F		
	77	ZONE 14 CODE (FOR FUTURE USE)			
	78	ZONE 15 CODE (FOR FUTURE USE)			
	79	ZONE 16 CODE (FOR FUTURE USE)			
				SELECT ZONE(S) 1 2 3 4 5 6 7 8	
PANEL FUNCTIONS	•• 80	KEYPAD EMERGENCY, SELECT ZONE		✓ ✓	
	81	AUDIBLE PANIC, SELECT ZONES (24 HR)			8
	82	SILENT PANIC, SELECT ZONES (24 HR)		✓	1
	83	AUDIBLE FIRE, SELECT ZONES (24 HR)			2-7
	84	AUDIBLE BURGLARY, SELECT ZONES		✓ ✓	3
	85	DELAYED BURGLARY, SELECT ZONES			3
	86	EXIT DELAY (×10 SEC)	2		3
	87	ENTRANCE DELAY (×10 SEC)	3		8 = 16 MIN.
	88	BELL SHUT OFF TIME (×2 MIN)			AUTO
	89	FIRE BELL TIME CL = AUTO 1 = MANUAL			SINGLE USER
	90	PANEL MODE CL = SINGLE USER 1 = MULTI USER			

Figure 3 shows how this information would be reported on various formats.

2.16 RECEIVER FORMAT EXAMPLE

FIGURE 3

CONDITION	STANDARD	FORCED EXTENDED	EXTENDED	4 + 2 SILENT KNIGHT	ACRON
A) Trip on Zone 1	123 1	123 1 111 1	123 1 111 1	1234 01	Account 123 Zone 1 2 3 4 5 6 7 8 Code F
B) Momentary Trip on Zone 2	123 3	123 3 333 2	123 3 333 2	1234 02	Account 123 Zone 1 2 3 4 5 6 7 8 Code T 3
C) Disarm after alarm report	123 0	123 0 000 2	123 0 000 2	1234 22	Account 123 Zone 1 2 3 4 5 6 7 8 Code T A
D) Momentary trip on Zone 3	123 3	123 3 333 3	123 3 333 3	1234 03	Account 123 Zone 1 2 3 4 5 6 7 8 Code T 3
E) Momentary trip on Zone 5, disarm before alarm report	123 9 123 0	123 9 999 5 123 0 000 3	123 9 999 5 123 0 000 3	1234 05 1234 23	Account 123 Zone 1 2 3 4 5 6 7 8 Code T A 9
F) Momentary trip on Zone 4 disarm before alarm report	123 9	123 9 999 4	123 9 999 4	1234 04	Account 123 Zone 1 2 3 4 5 6 7 8 Code T 9
G) Momentary trip on Zone 4	123 4	123 4 444 4	123 4 444 4	1234 04	Account 123 Zone 1 2 3 4 5 6 7 8 Code T 4
H) Disarm after alarm report	123 0	123 0 000 4	123 0 000 4	1234 24	Account 123 Zone 1 2 3 4 5 6 7 8 Code T A
I) Opening (Conventional)	123 B	123 9 999 0	123 B BBB 0	1234 90	Account 123 Zone 1 2 3 4 5 6 7 8 Code D D D D D D D D
J) Closing (Conventional)	123 C	123 9 999 9	123 C CCC 0	1234 40	Account 123 Zone 1 2 3 4 5 6 7 8 Code A A A A A A A A
K) Opening (By User)	123 B	123 9 999 0	†123 B BBB 3	1234 93	Account 123 Zone 1 2 3 4 5 6 7 8 ■ Code T D
L) Closing (By User)	123 C	123 9 999 9	†123 C CCC 3	1234 43	Account 123 Zone 1 2 3 4 5 6 7 8 ■ Code T A
M) Low Battery/Trouble	123 D	123 0 000 9	123 D DDD 0	1234 60	Account 123 Zone 1 2 3 4 5 6 7 8 Code B B B B B B B B
N) Forced Arming	123 F	123 0 000 9	123 F FFF 0	1234 50	Account 123 Zone 1 2 3 4 5 6 7 8 Code T T T T T T T T
O) 24-Hour Self-Test	123 E	123 0 000 0	123 E EEE 0	1234 30	Account 123 Zone 1 2 3 4 5 6 7 8 Code

NOTES

APPLIES TO FORCED EXTENDED ONLY

1) The Test Cancel and Restore Code Numbers should not be the same. If they are, a momentary trip will not be able to be distinguished from a restoral.
2) The Test Cancel and Restore Code Numbers should not be the same as a Zone Code Number.
3) The Test Cancel and Restore Codes are used in combination to report non-emergency alarm reports (1-0) in Fig. 1). In this example, the Restore Code is "0" and the Test Cancel Code is "9".
4) The "T" in Acron Format (conditions B-H) indicates zone 1 is still tripped. In addition to the alarm which caused the report, the status of all zones is reported during each alarm transmission; a "T" indicates a tripped zone, while a blank space indicates a zone which is not violated.
5) The Acron Format factory programmed value for zone 1 must be changed to any other value except 1.

■ *Reports code D or code A under zones 1-8 according to user. This example shows user 3, all other zones show status.*

† *Reports user codes 1 through 8 for Opening/Closing by user. This example shows user 3. For additional information see AV-4000 DK-IIE instructions.*

2.17 PROGRAMMING WORKSHEET

Name _____ Acct. # _____

Address _____

_____

_____

FIGURE 4

PROGRAMMING WORKSHEET

	MEMORY LOCATION	DESCRIPTION	ENTER NUMBERS	DATA ENTERED (NEW)	FACTORY PROGRAMMED
DIALER FUNCTIONS	1-21	FIRST TELEPHONE NUMBER MEMORY LOCATIONS ➡		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	
		FIRST TELEPHONE NUMBER DIGITS			
	22-42	SECOND TELEPHONE NUMBER MEMORY LOCATIONS ➡		22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	
		SECOND TELEPHONE NUMBER DIGITS			
	43-46	ACCOUNT NUMBER MEMORY LOCATIONS ➡		43 44 45 46	
		ACCOUNT NUMBER DIGITS			
	47-50	FOR FUTURE USE			
			ENTER NUMBERS	SELECT ZONE(S) 1 2 3 4 5 6 7 8	
	■ 51	DIAL SECOND NUMBER ONLY, SELECT ZONES			
	■ 52	DIAL BOTH NUMBERS, SELECT ZONES			
	53 ††	1 = TOUCHTONE DIALING, 2 = DIAL NO DIAL TONE 3 = FALSE ALARM SHUT DOWN, 5 = FAST SLOW INVERT			ROTARY DIALTONE
	■■ 54	4 = DIAL BOTH NUMBERS, 8 = DIAL 2ND NUMBER ONLY			1ST NO. ONLY
	■■ 55	1 = FORCED EXTENDED, 2 = EXTENDED, 4 = SK4+2, 8 = ACRON			STD.
	■ 56	EXTENDED FORMAT, SELECT ZONES			NOT FOR SK4+2
	57	RESTORE, SELECT ZONES			
	58	RESTORE CODE			0 (A†)
	59	TEST CANCEL, SELECT ZONES			
	60	TEST CANCEL CODE			9
	61	REPORTING DELAY, SELECT ZONES			
	62	REPORTING DELAY TIME (×10 SEC)			1
	63	NORMALLY CLOSED, SELECT ZONES			2-7
REPORTING CODES				DESCRIPTION	
	64	ZONE 1 CODE			1
	65	ZONE 2 CODE			2
	66	ZONE 3 CODE			3
	67	ZONE 4 CODE			4
	68	ZONE 5 CODE			5
	69	ZONE 6 CODE			6
	70	ZONE 7 CODE			7
	71	ZONE 8 CODE			8
	• 72	ZONE 9 CODE (24 HOUR TEST)			
	• 73	ZONE 10 CODE (LOW BATTERY)			
	• 74	ZONE 11 CODE (CLOSING)			
	• 75	ZONE 12 CODE (OPENING)			
	• 76	ZONE 13 CODE (FORCE ARMING)			
	77	ZONE 14 CODE (FOR FUTURE USE)			
	78	ZONE 15 CODE (FOR FUTURE USE)			
	79	ZONE 16 CODE (FOR FUTURE USE)			
				SELECT ZONE(S) 1 2 3 4 5 6 7 8	
PANEL FUNCTIONS	•• 80	KEYPAD EMERGENCY, SELECT ZONE			
	81	AUDIBLE PANIC, SELECT ZONES (24 HR)			
	82	SILENT PANIC, SELECT ZONES (24 HR)			8
	83	AUDIBLE FIRE, SELECT ZONES (24 HR)			1
	84	AUDIBLE BURGLARY, SELECT ZONES			2-7
	85	DELAYED BURGLARY, SELECT ZONES			3
	86	EXIT DELAY (×10 SEC)			3
	87	ENTRANCE DELAY (×10 SEC)			3
	88	BELL SHUT OFF TIME (×2 MIN)			8 = 16 MIN.
	89	FIRE BELL TIME CL = AUTO 1 = MANUAL			AUTO
	90	PANEL MODE CL = SINGLE USER 1 = MULTI USER			SINGLE USER

■ ANY COMBINATION MAY BE SELECTED
■■ SELECTS ZONES 9 THRU 13 AS A GROUP (IF A 4 OR 8 IS ENTERED IN LOCATION 55, A 1 OR 2 SHOULD NOT BE ENTERED.)
• A NUMBER (1-15) MUST BE ENTERED TO ENABLE THIS REPORT
† VALUE FOR ACRON FORMAT
†† ALTHOUGH THESE ARE NOT ZONES, THEY ARE PROGRAMMED THE SAME WAY
•• 1 - ACTIVATED BY PRESSING ★&#
2 - ACTIVATED BY PRESSING 7&9
5 - ACTIVATED BY PRESSING 1&3 (SMOKE RESET)
8 - ACTIVATED BY PRESSING 4&6

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SECTION III — PROGRAMMING INSTRUCTIONS

MEMORY LOCATION	DEFINITIONS
1-42	**3.0 TELEPHONE NUMBERS**

The AV-4000 is capable of reporting to two different telephone numbers. Telephone numbers are entered into the appropriate Memory Locations.

Each number may be up to 20 digits long. The 1st number must be programmed in memory locations 1-21. The 2nd number in locations 22-41. *Each number must be **CLEARED** after the last digit.*

If the communicator function is not to be used, Location 1 must be cleared.

If more than 20 digits are required, the second telephone numbers' memory locations may be used to dial a single long number of up to 41 digits which must begin in memory location 1.

In addition to the telephone number, two special function numbers may be inserted:

SECOND DIAL TONE
In installations where two dial tones are received (first for internal line and second for outside line). The AV-4000 may be programmed to detect a second dial tone by entering a "14" between the internal line number and the outside line number.

DIALING PAUSE
In areas where a dialing pause is required a dialing pause may be programmed after any dialing digit by entering a "15". The dialing pause is approximately 5 seconds.

1-21 **3.1 FIRST NUMBER DIALING**

Spaces 1-21 are reserved for entering the first telephone number. Start at Memory Location 1.

22-42 **3.2 SECOND NUMBER DIALING**

Spaces 22-41 are reserved for entering the second telephone number. Start at Memory Location 22. In special cases when a longer telephone number is required, these spaces may be used. There are three second number dialing modes.

BACK-UP REPORTING
If the primary receiver does not answer after 4 attempts, the second number will be called on the 5th, 6th, 7th, or 8th attempts.

DIAL-SECOND NUMBER ONLY — (See Memory Locations 51 & 54).
Zones may be selected to dial second number only. Useful for reporting non-emergncy conditions without tying up the primary receiver. For example using a zone for testing on demand.

DIAL BOTH NUMBERS — (See Memory Locations 52 & 54).
Zones may be selected to dial both numbers. Used in high security applications where redundant reporting is desired.

43-46 **3.3 ACCOUNT NUMBER**

A three or four digit account number can be used, beginning in Memory Location 43. If a 3 digit account number is required, location 46 must be cleared. Hexadecimal digits may be programmed when required. Although these are programmed as 11 through 15, some receivers will display them as letter B through F.

47-50 **3.4 RESERVED FOR FUTURE USE**

51 **3.5 DIAL SECOND NUMBER ONLY, SELECT ZONES**

Any combination of the 8 zones may be selected to Dial Second Number Only.

52 **3.6 DIAL BOTH NUMBERS, SELECT ZONES**

Any combination of the 8 zones may be selected to dial both numbers.

MEMORY LOCATION	DEFINITIONS
53	**3.7 ROTARY/TOUCH TONE DIALING**

Rotary dialing is factory programmed. If Touch Tone Dialing is desired, a "1" must be programmed in Memory Location 53. If touch tone dialing is to be changed to rotary dialing, the "1" in Memory Location 53 must be cleared.

3.8 WAIT FOR DIAL TONE/DIAL, NO DIAL TONE

Wait for Dial Tone is factory programmed. Dial, No Dial Tone may be selected by programming a "2" in Memory Location 53. If selected, the AV-4000 will dial after 7 seconds even though no dial tone is present. This is useful in areas with low dial tone, etc. If dial tone is present, unit will dial at receipt of dial tone. In areas where extended wait for dial tone is desirable, a "15" may be programmed prior to the first dialed digit.

If this feature is not selected dial tone must be present in order for dialing to occur. When Dial, no Dial Tone is to be changed to wait for dial tone the "2" in Memory Location 53 must be cleared.

3.9 FALSE ALARM SHUT DOWN (SWINGER REJECTION)

This feature is not factory programmed. This feature may be selected by programming a "3" in Memory Location 53. When this feature is selected 3 alarms on the same zone within a 2-hour period will shut down that zone and ignore alarm signals for 24 hours or until system is armed or disarmed again.

3.10 FAST/SLOW INVERT

This feature is not factory programmed. It is selected by entering a "5" in Memory Location 53. This feature is used to send data in Fast format when a Slow handshake is received and to send data in Slow format when a Fast handshake is received. This is useful when a receiver sends a Slow handshake first, but can receive Fast format; in this situation, Slow/Fast Invert reduces transmission time.

54* **3.11 NON-EMERGENCY REPORTING**

To dial both numbers enter a "4". To dial second number only enter an "8".

These non-emergency numbers must be dialed as a group. (All zones 9-13 must be selected as a group) for example you *CAN NOT* have zone 9 dial both numbers and zone 11 dial second number only.

55** **3.12 RECEIVER FORMATS**

If this Memory Location is cleared the standard reporting format will be selected.

Entering a 1 will select FORCED EXTENDED reporting for NON-EMERGENCY REPORTS. (This method is retained to allow backward compatibility with pre-existing receiver/computer software.

Entering a 2 will select EXTENDED reporting for non-emergency reports. (This method allows compatibility with Radionics receiver/computer formats.)

Entering a 4 will select SILENT KNIGHT 4+2 format.

When using Silent Knight 4+2 reporting format the AV-4000 must be programmed as follows:

1) 4 Account digits must be used.
2) Memory Locations 64 to 71 must contain "10" or "A".
3) If Restores are desired Memory Location 58 must contain "2".
4) Test Cancel should not be used.

Can only select **one.*
***See Figure 3 for detailed description of receiver formats.*

MEMORY LOCATION	DEFINITIONS

When using the non-emergency codes (Forced Arming, Low Battery, Opening, Closing and the 24 Hour Test) with Silent Knight 4+2 Format, these codes are reported as follows:

Forced Arming	**50**
Low Battery	**60**
Opening	**90**
Closing	**40**
24 Hr Test	**30**

Entering an 8 will select ACRON superfast format.

If neither SK 4+2 or Acron formats are selected and two number reporting is used, 2 different receivers may be used. Example Franklin "Fast' format receiver on one number and Ademco 660 "Slow" format receiver on the other.

56** **3.13 EXTENDED FORMAT, SELECT ZONES**

Select the zones which will report in the extended format, for zones 1-8. These zones should NOT be selected when using Silent Knight 4+2 or Acron Formats.

57 **3.14 RESTORE, SELECT ZONES**

Select zones which will report restores. A restore is defined as a return to normal after a zone has previously been tripped. If a burglary or any audible zone is tripped, a restore report will be sent when the panel is Disarmed after reporting to the receiver. Silent zones report Restorals when the zone restores after reporting to the receiver.

58 **3.15 RESTORE CODE**

Enter restore code desired in this location.

59 **3.16 TEST CANCEL, SELECT ZONES**

Select zones which will report test cancels. If a test cancel zone is tripped and restored before transmission of the alarm code is completed, the Test Cancel Code will be sent. On burglary or any audible zones the Test Cancel Code will be sent if the system is Disarmed prior to transmission. Silent zones report Test Cancel only if the zone restores before the transmission is completed.

60 **3.17 TEST CANCEL CODE**

Enter Test Cancel Code desired in this location.

61 **3.18 REPORTING DELAY, SELECT ZONES**

Select zones which will delay before dialing out to the receiver. If an alarm signal on a delay zone restores prior to expiration of the delay time, the zone will not report out.

If the panel is disarmed prior to the expiration of the delay time, all audible zones will not report out.

62 **3.19 REPORTING DELAY TIME**

Enter the reporting delay time desired in this location.

Delays from 10 to 150 seconds may be selected in 10-second increments. Enter a "1" for 10 seconds, a "2" for 20 seconds, up to a "15" for 150 seconds.

63 **3.20 NORMALLY CLOSED, SELECT ZONES**

Select those zones which are to be tripped by the opening of a normally closed circuit. The factory program is for zones 1 & 8 to be normally open; all others are normally closed.

***See Figure 3 for detailed description of receiver formats.*

MEMORY LOCATION	DEFINITIONS
	3.21 ZONE REPORTING CODES
	Memory Locations 64 through 76 are reserved for entering zone reporting codes. Zone 1 through 8 are factory programmed, all others are cleared. The factory programmed code for Zone 1 is 1, Zone 2 is 2, and so on through Zone 8.
	Memory Locations 72 through 76 are non-emergency reporting zones.
64 THROUGH 71	**3.22 ZONE 1 THROUGH ZONE 8 REPORTING CODE**
72***	**ZONE 9 CODE (24-HOUR TEST)**
	Enter reporting codes to represent a 24-hour test report that will automatically report every 24 hours. The 24-hour timer resets and restarts after any report (Alarm, Test Cancel, Low Battery, etc.) has been transmitted.
73***	**ZONE 10 CODE (LOW BATTERY)**
	Enter reporting code to represent a low battery condition. An automatic Low Battery Report is generated when battery voltage falls to a low level.
74***	**ZONE 11 CODE (CLOSING)**
	Enter reporting code to represent a closing (arming) report. Closing report will be sent after exit delay time expires. If exit delay time is not programmed, closing report will be sent immediately.
75***	**ZONE 12 CODE (OPENING)**
	Enter reporting code to represent an opening (disarming) report. Opening report is sent when system is disarmed.
76***	**ZONE 13 CODE (FORCED ARMING)**
	Enter reporting code to represent a forced arming report. A forced arming report will be sent whenever the forced arming mode is used to arm the panel, while a zone is violated. For a description of Forced Arming see DK-IIE User's Manual.
77 THROUGH 79	**FOR FUTURE USE**
	3.23 PANEL FUNCTIONS
80	**KEYPAD EMERGENCY, SELECT ZONES**
	In order to allow emergency reporting from the keypad, one or more of the following keypad combinations must be selected.
	Entering a 1 will cause keys ★ & # to trip Zone 1 Entering a 2 will cause keys 7 & 9 to trip Zone 2 Entering a 5 will cause keys 1 & 3 to trip Zone 5 Entering a 8 will cause keys 4 & 6 to trip Zone 8
	Entering an 8 also enables the "duress" function (the customer entering a "0" after the access code trips zone 8 transmitting a silent alarm). Keys must be pressed simultaneously to initiate Emergency Codes. There is no conflict with using a keypad emergency zone for both keypad and hard-wired use. Zones 1, 2, 5, or 8 must be programmed for the emergency required.
81****	**AUDIBLE PANIC, SELECT ZONES (24 HR)**
	Select zones to be programmed for audible panic. The Armed LED will flash on alarm whether the panel is armed or disarmed. Zones selected for Audible Panic are always on. Any combination of zones 1-8 may be selected.

****A number (1-15) MUST BE ENTERED TO ENABLE THIS REPORT. In fast/slow and extended formats, the entered numbers will be the reported code. In Acron and Silent Knight 4+2 formats, factory programmed values will be reported regardless of what values are entered. See Figure 3.*

*****Any zone not PROGRAMMED IN ANY OF THESE 4 LOCATIONS (81 through 84) becomes a 24-Hour Silent Zone by default. The armed LED will flash when tripped, whether the panel is armed or disarmed.*

MEMORY LOCATION	DEFINITIONS
82****	**SILENT PANIC, SELECT ZONES (24 HR)** Select zones to be programmed for silent panic. Whether the panel is armed or disarmed the Armed LED will not flash on alarm and the Fault LED will not indicate receipt of Kiss-Off. Zones selected for Silent Panic are always on. Any combination of zones 1-8 may be selected.
83****	**AUDIBLE FIRE, SELECT ZONES (24 HR)** Select zones to be programmed for audible fire. The Armed LED will flash on alarm whether the panel is armed or disarmed. Zones selected for Audible Fire are always on. Any combination of zones 1-8 may be selected.
84****	**AUDIBLE BURGLARY, SELECT ZONES** Select zones to be programmed for audible burglary. Zones that are selected for Audible Burglary are on when armed and not bypassed.These zones can be armed and disarmed from either a keypad or keyswitch. Any combination of zones 1-8 may be selected.
85	**DELAYED BURGLARY, SELECT ZONES** Select zones to be programmed for delayed burglary. These zones must be selected if an Entrance Delay or Exit Delay is desired. Any combination of Zones 1-8 may be selected. These zones must also be selected for audible burglary.
86	**EXIT DELAY TIME** Delays from 10 to 150 seconds may be selected in 10-second increments. When using a closing report an exit delay time should be entered even though an exit delay zone is not selected. This will prevent nuisance reports caused by user immediately disarming the system after arming. Enter a "1" for 10 seconds, a "2" for 20 seconds, up to a "15" for 150 seconds.
87	**ENTRANCE DELAY TIME** Delays from 10 to 150 seconds may be selected in 10-second increments. Enter a "1" for 10 seconds, a "2" for 20 seconds, up to a "15" for 150 seconds.
88	**BELL SHUT OFF TIME (x2 MIN)** From 2 to 30 minutes may be entered in 2-minute increments. Enter a "1" for 2 minutes, a "2" for 4 minutes, etc., up to a "15" for 30 minutes.
89	**FIRE BELL SHUT-OFF** The Fire Bell will time out as determined by Memory Location 88 (Auto Shut-Off). If set to "1", the fire bell will not turn off unless manually reset. This is a requirement in some states (i.e., California). If the manual shut-off mode is to be changed to the auto shut-off mode, the "1" must be cleared.
90	**PANEL MODE** A "1" is entered if the Multi-User Mode is desired. Single user mode is factory programmed. If the Multi-User Mode is to be changed to the single user mode, the "1" must be cleared.

*****Any zone not PROGRAMMED IN ANY OF THESE 4 LOCATIONS (81 through 84) becomes a 24-Hour Silent Zone by default. The armed LED will flash when tripped, whether the panel is armed or disarmed.*

3.24 INSTALLERS KEYPAD REFERENCE GUIDE

FUNCTION	MODE SEQUENCE	KEY SEQUENCE
ENABLE BY-PASS	A A A ★MODE 8 ★MODE 3	Z Z Z #ENTR
MULTI USER	A A A ★MODE 8 ★MODE 4	N/A
OPEN/CLOSE BY USER	A A A ★MODE 8 ★MODE 6 #ENTR	N/A
PRIMARY ACCESS CODE CHANGE*	A A A ★MODE 7 CP	A A A #ENTR
SECONDARY ACCESS CODE CHANGE**	A A A ★MODE 7 CP ★MODE 2 TEST	S S S #ENTR

See pages 3 and 4 of AV-4000 DK-IIE Installation Instructions.

* Factory programmed for 1, 2, 3
** Factory programmed for 8, 7, 6, 5, 4, 3, 2, 1

Z Z Z = Zones enabled to be bypassed
S S S = Secondary Access Code
A A A = Primary Access Code

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