R A D I O N I C S

Omegalarm 8112:MAIN
Program Entry Guide
for the D8112 Control/Communicator (all models)

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INTRODUCTION

The Omegalarm D8112 Control/Communicator represents a new generation in electronic security technology. Its microprocessor based programming makes it capable of the greatest versatility ever offered by a control/communicator. The 8112:MAIN Product Handler Program offers over 120 programming options; with these options, the D8112 can be custom fitted to almost any system application.

There are several models of the D8112 Control/Communicator: D8112E, E1, G, G1, G2, J and A. Other product handler programs are available for these control/communicators, but the *8112:MAIN* product handler *is used with all models to set the basic operating characteristics of the panel.*

The D8112 Control/Communicator is easily and conveniently programmed with the Omegalarm D5100 Bar Code Programmer. In addition, it can be remotely programmed and interrogated from a D9300 Remote Account Manager (R.A.M.). This feature gives the alarm dealer/central station operator complete system control.

This manual provides specific programming instructions for the D8112 Control/Communicator (8112:MAIN). For operation and installation (hardware) specifications, consult the *Omegalarm D8112 Control/Communicator Operation and Installation Manual.*

Instructions for the use of the Omegalarm D5100 Programmer are provided with the Programmer. Before attempting to program a D8112 control/communicator, read these manuals in the following order:

D8112 Manuals
1.   D8112 Control/Communicator Operation and Installation Manual
2.   D5100 Bar Code Programmer Operation Manual
3.   8112:MAIN Program Entry Guide
4.   8112:AUX Program Entry Guide
5.   8112:Comex Program Entry Guide (D8112G2 and D8112J)
6.   8112:PText Program Entry Guide (Optional for D8112G series, D8112J)
7.   8112:Skeds Program Entry Guide (Optional for D8112G2 and D8112A)
8.   8112:Access, 8112:Assign, and 8112:Cards Program Entry Guide (D8112A only)

Arming Station Manuals
1.   D1252 Alpha II Command Center Installation Sheet
2.   Alpha II Command Center User's Guide
3.   D360 Command Center Installation Sheet
4.   Model 360 Command Center User's Guide
5.   *Other reading material valuable to the installer for programming and operation of the advanced features of the various models of the D8112 may be required for certain applications and optional equipment. Check the related operation/installation and programming manuals for specific reference materials.*

HOW TO USE THIS MANUAL

The *8112:MAIN Program Entry Guide* describes the programming options available to the Omegalarm D8112 Control/Communicator. Each program option is listed with:

- The program item **Prompt and Default** setting as it will appear in the Programmer
- Program Entry **Selections** and a
- Program Entry **Description**.

An example is shown below:

Prompt & Default	Selections	Description
1 Off No	YES or NO	Turn OFF all functions of the Control/Communicator except remote programming. Enter NO for an operating system.

The **Prompt & Default** represents the actual display in the D5100 Programmer; it shows the Program Item Number, the Prompt and the Default Value of the Program Option.

Program entry **Selections** are listed next to the Prompt & Default. Only the selections listed can be used for a particular Program Item. Inappropriate entries are not accepted by the Programmer.

The Program Item **Description** is a concise, informative paragraph describing the functions that can occur with the various entry Selections. Read the descriptions carefully as misunderstanding can result in improperly programmed equipment.

The 8112:MAIN program comes with default settings for all programming options. Most default settings are listed as "blank entries" or "NO" disabling the programming option. You can use default settings in a program by simply stroking the ADVANCE bar code on the D5100 programmer, but always check to ensure the default settings are correct for your particular application.

SECTIONAL PROGRAMMING

The 8112:MAIN program has been set up in a specific order. Related program entries are grouped together in sections (i.e.: Primary Central Station, Force Arming, Test Commands, etc.). When programming the D8112, certain sections may not be needed for a particular installation. Since the 8112:MAIN program defaults most entries to "NO" or off, sections you are not going to use can be passed over.

The default program or "NEW FILE" will allow the D8112 to operate in a very basic mode. To customize your program, you simply turn on the features needed for your application.

Field Retrofitting the D8112 with new EPROM chips: When you replace selected EPROM chips on the D8112's CPU board (D8105) it is VERY IMPORTANT that you load an 8112:MAIN "NEW FILE" into the D8112 *after* the new chips are installed. NEW FILEs for other product handler programs may also need to be loaded into the D8112 (see the instructions provided with the retrofit kit), however, the 8112:MAIN NEW FILE must always be loaded *AFTER* all other NEW FILES to clear program checksums. Custom product handler programs can then be safely loaded into the D8112. Again, the custom 8112:MAIN program should be loaded into the D8112 *AFTER* all other custom programs.

> ## Loading or copying programs to/from the D8112...
> The number of serial devices connected to D8112 terminal 31 can interfere with loading and copying programs with the D5100. If you get repeated messages such as "Plug in 8112" or "Reset Panel", or if the D5100 gets stuck in "Copying 8112", disconnect all devices from Teriminal 31, then repeat the desired operation. When you have finished loading or copying ANY program to/from the D8112, YOU MUST PERFORM A **DISABLE/RESTART** AFTER DISCONNECTING the D5100 Programmer from the panel.

8112:MAIN PROGRAM ENTRY GUIDE TABLE OF CONTENTS

This manual contains 19 sections of Program Options. Each section is preceded with an introduction describing particular characteristics and accessory equipment required for program selections. For easy reference the 19 Program Option sections are arranged in four basic groups. There is a fifth group for indexes and an appendix.

1. PRIMARY CENTRAL STATION

Before a Control/Communicator can report to a central station, it must be programmed with a telephone number to call, given an acknowledgement tone frequency, and a transmitting format. This section describes these Primary Central Station programming options. If the Control/Communicator is used in a non-reporting system, see item *2 Local*, for local alarm only.

Prompt & Default	Selections	Description
1 Off *No*	YES or NO	Turn **Off** all functions of the Control Communicator except remote programming. Enter NO for an operating system. **IMPORTANT: Item #1 turns the Control/Communicator off!** You must reprogram the Communicator either on site or remotely from the central station to turn it on again. Item *1 Off*, should be programmed "**NO**" for a functioning system.
2 Local *No*	YES or NO	**Local** alarm system only, with no central station reporting. Enter NO for a reporting system. If YES, advance to item *28 BatSupv*, program it "NO", then advance to *55 Comb 1*. **NOTE:** This item should always be "NO" for D8112G2, D8112J, and D8112A. To disable reporting from these panels, see the *8112:AUX Program Entry Guide, Logger Subhandler*.
3 CS	1–7 or Blank	Primary Central Station Format is:
	7	Radionics: Modem II *D6500 Receiver, and D8112G2 or D8112J Control/Communicator Required*
	6	Radionics: BFSK superfast single round
	5	Radionics: Fast double round *See item 4 SgRd*
	4	Ademco: High speed double round
	3	Silent Knight: High speed double round
	2	Ademco: Low speed double round
	1	Silent Knight: Low speed double round
	Blank	Sescoa, Franklin: High speed double round (Blank Entry)
4 SgRd *No*	YES or NO	Transmit **Single Round** with a checksum instead of double round to primary central station. Enter YES for Radionics single round with a checksum format, and program item *3 CS* as "5". For all other Central Station Formats, enter NO.
5 Ack 14 *No*	YES or NO	Accept a 1400 Hz **Acknowledgement** tone from the central station receiver. If item *3 CS* is programmed "7", enter NO (it enables its own special Ack tone from the D6500).
6 Ack 23 *Yes*	YES or NO	Accept a 2300 Hz **Acknowledgement** tone from the central station receiver. If item *3 CS* is programmed "7", enter NO (it enables its own special Ack tone from the D6500).
7 P	Ø–9, C, D, or Blank	Telephone number Prefix/area code for the Primary Central Station. Enter up to eight characters. The D8112 is pre-programmed with a 3-second pause, then a 7-second dial tone detect period. When dial tone is detected or the waiting period ends, the D8112 begins to dial. To extend the pause or dial tone detect, program a C and/or D before the prefix/area code. **Blank entry** = No prefix/area code. **C** = Additional 3-second pause **D** = Additional 7-second dial tone detect

| | Ø–9 or Blank | TelePhone number for the Primary Central Station. Enter up to seven digits. Blank entry = No telephone number. |

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2. ADDITIONAL PHONE OPTIONS

Section 2 describes telephone options available to the D8112 Control/Communicator. Some of the options below require accessory modules and/or the Omegalarm D6000 UL Listed Receiver, or D6500 UL Listed Receiver for proper operation. See notes where applicable.

Prompt & Default	Selections	Description
9 DTMF No	YES or NO	Use Dual Tone Multi-Frequency dialing of the phone numbers? (Touch-tone®). If programmed "YES" and the D8112 is unable to reach the receiver after two attempts, it will revert back to rotary dialing for two more attempts. This cycle repeats two more times before the panel goes into CommFail.
10 BzFail Yes	YES or NO	Pulse Buzzer after Failure to report to the central station after ten attempts?
11 PhSupv	1Ø–15Ø or Blank	Phone line Supervision trouble delay time. This entry sets the time the phone line monitor *tests* a faulted line *before* initiating phone line trouble responses. Make settings in ten-second increments. BLANK ENTRY = no phone line supervision.
12 PhBel No	YES or NO	Ring alarm Bell for Phone line trouble? Standard bell time setting equals duration of alarm. (See *72 Bell* for bell time.)
13 2Line No	YES or NO	Communicator using 2 (two) phone Lines? NOTE: Omegalarm D128 Dual Phone Line Module required for this feature. Both lines must be of the same operation: Ground or loop start; rotary or DTMF dialing.
14 PhLite No	YES or NO	System using Phone line status Lites (lights)? NOTE: D128 Module required. LED's light to indicate primary or secondary line trouble and failure to communicate.
15 PhT/R No	YES or NO	Send Phone line Trouble and Restoral reports? Primary Line = Reports as Zone B Secondary Line = Reports as Zone C NOTE: D128 Module required. Item *25 ExT/R* must be YES.

3. CALL ROUTING

Call routing is the process of distributing reports between two separate phone numbers (Primary and Alternate #). The numbers can be connected to different receivers, or different lines on the same receiver. The D8112 dials the designated phone number twice before switching to the second number. If the second number is not reached, the sequence is repeated. Many different combinations of call routing are available, and the various options are described in this section.

IMPORTANT: Call routing can be affected by selections in the 8112:AUX program (see the Logger and AltTx Subhandlers), and the Central Station Format selected (8112:MAIN program item *3 CS*).
Modem II Format (*3 CS 7*) sends expanded Zonex and Comex reports to the *FIRST Central Station receiving the message*, regardless of which Central Station is programmed as "primary." Only Zonex master zone, and Comex group identification is sent to the second Central Station.

*Alarm Reports: Receive alarm reports (i.e.: Fire, Burglary, Panic). Supervisory reports included only when accompanied with alarm message.

Back-Up: If the first telephone number attempted is busy or not operating, the call goes to the back-up number.

*Designated Zone Reports: Only designated zones (See item 17 AltZn for example) transmit reports to the Alternate telephone number.

Duplicate Reports: Sends a copy of the original report to secondary number, with the exception of test reports.

Status Report (CMD 42): System status report is sent only to the Primary telephone number. No duplicate or back-up status reports are generated.

*Supervisory Reports: Include Opening, Closing, Trouble, Restoral, and Cancel.

*Zone Reports: Zone reports consist of Alarm, Trouble, Restoral reports by zone. Opening/Closing reports and other system reports are not included.

CALL ROUTING CHART

PROGRAM ENTRY	1	2	3	4	5	6	7
PRIMARY TELEPHONE NUMBER	ALL REPORTS	ALL REPORTS	ALL REPORTS	ALL REPORTS	ALL REPORTS	SUPERVISORY * AND BACK-UP ALARM REPORTS	SUPERVISORY * AND BACK-UP ALL REPORTS
ALTERNATE TELEPHONE NUMBER	DUPLICATE REPORTS	ZONE REPORTS FROM DESIGNATED ZONES * (SEE 17 AltZn)	ALARM REPORTS FROM DESIGNATED ZONES * (SEE 17 AltZn)	BACK-UP ALARM * REPORTS	BACK-UP ALL REPORTS	ALARM * REPORTS	ALARM *AND BACK-UP ZONE REPORTS

* Reports which are to be sent to *only one* of the phone numbers could be sent to the undesignated phone number if the event occurs while the D8112 is transmitting a report to the other phone number. When these reports "tag-along" with other reports, they are not re-transmitted to the designated phone number. For example: Route entry "6" could be transmitting a supervisory report to the primary phone number when an alarm event occurs. The alarm event will not be sent to the alternate number.

Prompt & Default	Selections	Description

16 Route

Selections: 1–7 or Blank

Route reports to Primary or Alternate Telephone Number as follows (see Call Routing Chart and definitions above):

Blank —— No Alternate Telephone Number. All reports are sent to the Primary Telephone Number.

1—— Primary #: Receives ALL reports.
Alternate #: Receives DUPLICATE reports.

2—— Primary #: Receives ALL reports.
Alternate #: Receives ZONE reports from DESIGNATED ZONES. See Item 17 AltZn.

3—— Primary #: Receives ALL reports.
Alternate #: Receives only ALARM reports from DESIGNATED ZONES. See item 17 AltZn.

4—— Primary #: Receives ALL reports.
Alternate #: Used to BACK UP Primary for ALARM reports.

5—— Primary #: Receives ALL reports.
Alternate #: Used to BACK UP Primary for ALL reports.

6—— Alternate #: Receives ALARM reports.
Primary #: Receives SUPERVISORY reports.
Used to BACK UP ALARM reports.

7—— Alternate #: Receives ALARM reports. Will BACK UP ZONE reports.
Primary #: Receives SUPERVISORY reports. Used to BACK UP ALL reports.

IMPORTANT:
Do not use Call Routing with a Listen-In system if you have programmed any 24-hour zones.

17 AltZn

Selections: 1–8 or Blank

This entry designates the highest Zone number of the D8112 reporting to the Alternate telephone number. Used only with 16 Route format 2 or 3.

Examples: If entry is 5, then zones 1 through 5 are enabled to report to the Alternate Telephone Number.
If entry is 3, then zones 1 through 3 are enabled to report to the Alternate Telephone Number.

4. ALTERNATE CENTRAL STATION

Alternate central stations supply back-up reporting capability and can be used to divide the workload between supervisory reports and alarm reports. (See Section 3. CALL ROUTING). If this Control/Communicator reports to an Alternate central station, it must be programmed with a telephone number and a transmitting format.

Section 4 describes the Alternate central station programming options. Central station receiver formats are listed in item *3 CS*. Use this list to program item *18 ACS* and item *19 ASgRd*.

Prompt & Default	Selections	Description
18 ACS	1–7 or Blank	**Alternate Central Station** format. See item *3 CS* for detailed entry description. **NOTE:** If *3 CS* is programmed with a "7" for Modem II format, *18 ACS* must also be programmed with a "7" if *21 APh* is programmed.
19 ASgRd　　　No	YES or NO	Send **Single Round** with checksum to **Alternate Central** Station? See item *4 SgRd* for entry description.
20 AP	Ø–9, C, D, or Blank	**Alternate** telephone number **Prefix/area code.** Enter up to eight characters. The D8112 is pre-programmed with a 3-second pause, then a 7-second dial tone detect period. When dial tone is detected or the waiting period ends, the D8112 begins to dial. To extend the pause or dial tone detect, program a C and/or D before the prefix/area code. **Blank entry** = No prefix/area code. **C** = 3-second pause **D** = Dial tone wait
21 APh	Ø–9 or Blank	**Alternate Central Station Phone** number. Enter up to seven digits. Blank entry equals no phone number.

5. ACCOUNT NUMBER AND SUPERVISION REPORTS

Section 5 describes supervision reports, including trouble and restoral reporting, battery supervision, AC restoral, and expanded reports. Also in this section is the account number used in all transmitted reports.

Prompt & Default	Selections	Description
22 Acct	Ø–9, B–F or Blank	**Account number.** (3 characters maximum when *3 CS* is programmed with formats "Blank through 6." Up to 4 characters can be transmitted in *CS* format "7", Radionics Modem II). When reporting to a D6000 Receiver, the account number can begin with a letter (B through F) to initiate Listen-In. *BFSK (3 CS 6)* and *Modem II (3 CS 7)* transmission fromats initiate Listen-In without special account numbers. Simply make an appropriate entry in program item *76 Listen.*

IMPORTANT: Only the last three digits are transmitted *unless using Modem II format.* Insert a blank space as the first digit of account number if the D8112 is reporting to a D6000 Receiver. The Omegalarm *D6500 Receiver* can accept four-digit account account numbers when the reporting format is Modem II (*3 CS* must be programmed "7").

EXAMPLES

22 Acct _ 2 3 4	22 Acct 1 2 3 4
3 CS FORMATS Ø THROUGH 6	*3 CS* FORMAT 7, MODEM II

23 Tbl	Ø–9, B–F or Blank	**T**rou**bl**e report code. Blank = no report. Omegalarm Receiver, enter F. (*3 CS formats 6 and 7 generate "F" automatically.*)
24 Res	Ø–9, B–F or Blank	**Res**toral report code. Blank = no report. Omegalarm Receiver, enter E. (*3 CS formats 6 and 7 generate "E" automatically.*)
25 ExT/R *No*	YES or NO	**Ex**panded **T**rouble and **R**estoral reports by master zone number. Omegalarm Receiver, enter Yes. (*3 CS formats 6 and 7 are YES automatically.*)
26 DlyRes *No*	YES or NO	**D**ela**y** **Res**toral reports until bell time expires. See item *72 Bell* for bell time.
27 ACRes *No*	YES or NO	**AC** Power **Res**toral reports "ZONE 0." **BFSK or Modem II format required,** see item *3 CS* and item *18 ACS*. **NOTE: If no AC trouble is transmitted, no restoral will be transmitted.** AC trouble is reported *only when AC is off at the time that another report is being transmitted.*
28 BatSupv *Yes*	YES or NO	**Bat**tery **Sup**er**v**ision reports "ZONE 9." Trouble and restoral reports for the battery and D8112 software initialization (disable/restart or D9300 "ResetBye" command).

6. INTERROGATION & REMOTE PROGRAMMING

There are two ways to interrogate a D8112 Control/Communicator: (1) using an Omegalarm D6225 Interrogator Central Control and an Omegalarm D6000 or D6500 Central Station Receiver, or (2) using a D9300 Remote Account Manager (R.A.M.). The D6225 Interrogator can provide basic system status information reported to the receiver (see the *D6225 Installation Sheet* for details of operation). The D9300 Remote Account Manager is capable of interrogating the D8112 and "downloading", storing and printing the last 400 events stored in the D8112's memory (see the *8112:AUX Program Entry Guide, Logger Subhandler* for programming details), as well as remotely programming the D8112, and other account management functions. Program item *29 AnsArm* and/or *30 AnsDis* must be programmed to enable interrogation reports. If the D9300 Remote Account Manager is used, program item *32 CSPrg*, and a security code must be entered in *34 Pass*.

Prompt & Default	Selections	Description
29 AnsArm	1–15 or Blank	Set ring counter* to **Ans**wer phone for interrogation/status report and/or R.A.M. access while the system is master **Arm**ed. Blank Entry = Communicator won't answer while the system is master armed.

* The ring counter counts the number of times the telephone rings at the premises before a programmed function can occur (e.g.: The Communicator answers the phone.)

30 AnsDis	1–15 or Blank	Set ring counter to **Ans**wer phone for interrogation/status report and/or R.A.M. access, when system is **Dis**armed (not master armed). Blank Entry = Communicator won't answer while the system is *not* master armed.
31 Ring *No*	YES or NO	Is the subscriber's telephone **Ring** one second or less? (Time of one ring pulse. *If in doubt, program this item "Yes".*)

32 CSPrg	No	YES or NO	Allow **Central Station** to *initiate* R.A.M. access for **Programming**, interrogation, diagnostics, and relay control? If YES you must program "passcode." See item *34 Pass*.
33 Cmd43	No	YES or NO	Allow **Command 43** (entered at a Command Center) to *initiate* R.A.M. access for remote programming, interrogation, etc.? **NOTE:** If YES you must program item *34 Pass*.
34 Pass		Ø–9, B–F or Blank	Remote programming security **Pass**code. Four characters required. Blank Entry = No remote programming.

7. AUTOMATIC TEST REPORT

The D8112 can generate automatic test reports in programmable intervals (1 hr. to 28 days). The interval is the amount of time between automatic test reports. The D8112 can be programmed to defer the test cycle (item *45 TsDef*) if the Communicator generates any report other than the automatic test report. After the report is sent, the time of the next test report is advanced the amount of the interval time set in the program.

The automatic test reports can be used to test the telephone lines when using the D128 Dual Phone Line Switcher. When item *35 Intvl* is programmed with an odd number (1, 7, 15, etc.) and program item *40 TsE* "YES," the test reports will alternate between the primary line and the secondary line. (This feature is *not* available with D8112G1, G2, J, or A panels.) When a test report is attempted twice on one line and is not received, the D8112 switches to the other line to send the report. A "TROUBLE ZONE E" message is sent with the test report if the D8112 is unable to reach the central station on the first attempt (this applies to single line *and* dual line systems). A "RESTORAL ZONE E" message is transmitted the next time the "troubled" line is used successfully.

When item *35 Intvl* is programmed with an even number, the test reports have a primary phone line priority.

IMPORTANT: The D8112's clock and calendar are set from the Alpha II Command Center using COMMANDs 45 and 46. The time of the first test report is set using COMMAND 48. You may enter any time between 00:01 and 23:59. DO NOT use a time of 24:00 for the test report time. BE SURE TO EXIT EACH COMMAND USING THE *COMMAND BAR* AFTER YOU HAVE FINISHED SETTING THE DATE AND TIMES.

Prompt & Default		Selections	Description
35 Intvl		Ø–99 or Blank	Select automatic test report and set the **Interval** time in hours. See item *36 Days* for intervals longer than 24 hours. Ø or Blank Entry = No automatic test report. **See Table below for maximum settings.**
36 Days	No	YES or NO	Convert test interval (item *35 Intvl*) to **Days**. NO = Hours YES = Days
37 Month	No	YES or NO	**Month** sets the D8112 calendar on either a weekly or monthly schedule. When programmed NO, calendar runs a 7-day cycle, when programmed YES, calendar runs a 28-day cycle.

TEST SCHEDULE	35 Intvl	36 Days	37 Month	EXAMPLE TEST INTERVAL 35 Intvl	
HOURS	1–24	NO	YES or NO*	12	Test sent every 12 hours
DAYS	1–7	YES	NO	1	Test sent every day
MONTH	1–28	YES	YES *	14	Test sent every 14 days

* These entries determine how the "Time of Next Test" is displayed at the Alpha Command Center. See "MONTH PROGRAMMING EXAMPLE CHART."

IMPORTANT! If *35 Intvl* is set for more than 7, and *36 Days* is programmed YES, and *37 Month* is programmed NO, *a test report is never sent.*

MONTH PROGRAMMING EXAMPLE CHART

E-8112-040-100

COMMAND ENTRY	37 Month YES Alpha Display	37 Month NO Alpha Display	FUNCTION
Cmd 4	HH:MM	HH:MM	Current Time
Cmd 46	MONTH/DD	DAY #	Current Date
Cmd 48	DD/HH:MM	#/HH:MM	Time of Next Test

KEY TO CHART: H = hours   M = minutes   D = date   # = DAY Number

Prompt & Default	Selections	Description
38 50Hz No	YES or NO	Clock correction for **50 Hz** AC electrical system. Enter No for U. S. installations.
39 TsCode	Ø–9, B–F, or Blank	Send non-expanded **Test Code** message. If numbers 1 - 8 are entered, a 24-hour, invisible, silent, loop code (i.e.: 1115) must be programmed on the zone specified in order for the report to be sent. (If the D8112 is unable to reach the receiver after two dialing attempts while the system is master armed, bell output begins. See *72 Bell*.) *A number code is interpreted as an alarm by the D6000 and D6500. For these Receivers, use program item 40 TsE to program test report codes.*
40 TsE No	YES or NO	Send "Restoral Zone **E**" at **Test** time. *If using a D128 Dual Phone Line Switcher, after two unsuccessful attempts at sending the test report on one line, the D8112 switches to the other line. The D8112 sends a "TROUBLE ZONE E" using the secondary line to indicate that the first attempt was unsuccessful.*
41 TsAlt No	YES or NO	Send "Restoral Zone E" only to the **Alt**ernate central station at **Test** time. Works independently from item *16 Route* setting.
42 TsStat No	YES or NO	Send system **Stat**us report at **Test** time. Status report includes: arm/disarm, summary status by zone, AC status, and battery status. If any zone is in alarm memory, the alarm report is sent with the status report. If any zones are not restored, trouble reports for the zones are sent with the status report.
43 TsDis Yes	YES or NO	Permit automatic **Test** report while system is **Dis**armed (NOT MASTER ARMED).
44 TsArm Yes	YES or NO	Permit automatic **Test** report while system is MASTER **Arm**ed.
45 TsDef No	YES or NO	**Test** report **Def**ered if any other report was sent during the test interval. When a report is generated, the interval time is added to the present time to set the time of next test report ahead. The automatic test report may never be sent if the time of next test is continuously being deferred by other reports.
46 TsClr No	YES or NO	At **Test** time, **Clr** all shunts, including Selective Zone Shunting, Command 8, Swinger Shunt, and Sked Shunts.
47 ArmSys No	YES or NO	Unconditionally **Arm Sys**tem at test time. *Faulted priority zones will NOT inhibit arming. Requires status report (42 TsStat) to indicate zones shunted during arming. Exit time provided if programmed (70 DlyOut).*

8. ARM/DISARM SUPERVISION REPORTS

This section describes opening/closing reports, cancel reports, duress reports, and passcode combinations.

Prompt & Default	Selections	Description
48 Open	Ø–9, B–F or Blank	**Open**ing report code. Blank Entry = No report. Omegalarm Receivers enter B.
49 Close	Ø–9, B–F or Blank	**Clos(e)**ing report code. Blank Entry = No report. Omegalarm Receivers enter C.
50 ReO/C No	YES or NO	**R**estricted **O**pening and **C**losing reports. Opening reports only when disarming after an alarm and closing reports only when force arming or selective zone shunting.
51 Supv9 No	YES or NO	**Supe**rvision of combo 9s. Forces Opening and Closing reports for combinations starting with a 9 (see table below).

NOTE: When *50 ReO/C & 51 Supv 9* are programmed, *48 Open & 49 Close* must also be programmed.

PROGRAMMING RESTRICTED OPENING/CLOSING REPORTS	50 ReO/C	51 Supv9
REPORTS FROM ALL COMBOS	NO	NO
REPORTS FROM ALL COMBOS	NO	YES
ALL COMBOS: OPENING REPORTS WHEN DISARMING AFTER ALARM, CLOSING REPORTS WHEN FORCE ARMING COMBO 9's: OPENING/CLOSING REPORTS FOR ARMING/DISARMING	YES	YES
ALL COMBOS: OPENING REPORTS WHEN DISARMING AFTER ALARM, CLOSING REPORTS WHEN FORCE ARMING	YES	NO

Prompt & Default	Selections	Description
52 Cancel	Ø–9, B–F or Blank	**Cancel** report code. Reports when a protective zone in alarm has been disarmed before bell time out. Blank Entry = No report. Omegalarm Receivers enter D. (*3 CS formats 6 and 7 generate "D" automatically.*)
53 Duress	Ø–9 or Blank	**Duress** alarm zone assignment. Duress code will trip zone assigned. Program zone as silent and "invisible." See Zone Code Index. Blank Entry = No duress report.
54 CombID No	YES or NO	**Comb**ination **ID**entification at the central station. *The Omegalarm D6000 and D6500 Receivers use different report formats for opening/closing reports using CombID (see explanations below).*

IMPORTANT: When using Independent Zone Controls (I.Z.C.) to send opening/closing reports by zone, do not duplicate reporting independent zone numbers with combination ID reports (opening/closing report number). *For example*: If an I.Z.C. is connected to zone 8, Combination (or ComboGroup) 8 should not be used.

D6000: Opening/closing combinations are identified at the receiver as "ZONEs" (same identification as independent zones). The "ZONE" numbers are the *ComboGroup(s)* programmed in 8112Comex, and combination "9"s programmed in 8112:MAIN items 63 through 68. (See the *8112Comex Program Entry Guide* for reporting format.). In D8112 control/communicators which do not use 8112Comex, the reports are based on 8112:MAIN program items *55 Comb 1* through *68 Comb 96*.

Comb 1 = ZONE **B**	Comb 6 = ZONE 6	Comb 93 = ZONE 3
Comb 2 = ZONE **C**	Comb 7 = ZONE 7	Comb 94 = ZONE 4
Comb 3 = ZONE **D**	Comb 8 = ZONE 8	Comb 95 = ZONE 5
Comb 4 = ZONE **E**	Comb 91 = ZONE 1	Comb 96 = ZONE 0
Comb 5 = ZONE **F**	Comb 92 = ZONE 2	COMMAND 1 = ZONE 9 (only closing)

Note: If *8112Comex* is used to program combinations, Comb 1 through Comb 8 above represent *ComboGroup* numbers and reporting codes.

D6500 Receiving Modem II format: When the D8112 is communicating in Modem II format, all opening/closing reports identify combinations — even if 8112:MAIN program item *54 CombID* is programmed "NO" (unless restricted by program items 50 and 51). Opening/closing combinations are identified at the receiver as "ID". The "ID" numbers are based on the *ComboGroup(s)* programmed in 8112Comex, and combination "9"s programmed in 8112:MAIN items 63 through 68. (See the *8112Comex Program Entry Guide* for reporting format.) Opening/closing reports from independent zone controls are identified by zone number (ZN), however it is still inappropriate to duplicate reporting independent zone numbers with combination ID reports (opening/closing report number).

D6500 Receiving Pulse or BFSK format: *54 CombID* must be programmed "YES" to send Combination ID reports. Opening/closing combinations are identified at the receiver as "ZN" (same identification as independent zones). The "ZN" numbers are based on the *ComboGroup(s)* programmed in 8112Comex, and combination "9"s programmed in 8112:MAIN items 63 through 68. (See the *8112Comex Program Entry Guide* for reporting format.). In D8112 control/communicators which do not use 8112Comex, the reports are based on 8112:MAIN program items *55 Comb 1* through *68 Comb 96*.

9. COMBINATION CODES

The following codes are used at Command Centers to arm and disarm the system, enter certain "COMMAND 5" functions, Force Arm, shunt zones, and initiate Duress alarms.

IMPORTANT: In D8112G2 and D8112J Control/Communicators, COMBINATIONS 1 – 8 ARE NOT USED. (*55 Comb 1* through *62 Comb 8* should be left blank.) Instead, the 8112:Comex Product Handler Program is used to program "ComboGroups" 1 through 8, making 70 combinations available to the D8112G2 and D8112J. See the *8112Comex Program Entry Guide* for further details.

Prompt & Default	Selections	Description
55 Comb 1	1–9* or Blank	**Combination codes.** Each combination must begin with the pre-determined number(s) shown in the Programmer's display (i.e.: Item *55 Comb 1* has a pre-determined number of "1", item *56 Comb 2* has a pre-determined number of "2", etc.). The pre-determined number is hard-coded and cannot be changed. Combinations may be skipped over to utilize a different combination.
56 Comb 2	1–9* or Blank	
57 Comb 3	1–9* or Blank	
58 Comb 4	1–9* or Blank	**To program the combination...** enter four (4) digits into the display. All four digits MUST be used; blank or incomplete combinations will NOT work, and the programmer will not accept "Ø" in a combination entry.
59 Comb 5	1–9* or Blank	EXAMPLE: Item *63 Comb 91* can be programmed with "2-3-4-5." The combination is now "9-1-2-3-4-5." The combination is formed as follows: "91" is the pre-determined number, "2345" is the programmable entry.
60 Comb 6	1–9* or Blank	
61 Comb 7	1–9* or Blank	**The combinations entered at the Command Center are five or six digits long** depending on the pre-determined number. The pre-determined number is part of the combination and must be used to address the panel. The combinations entered in items *55 Comb 1* through *62 Comb 8* are five digits long.
62 Comb 8	1–9* or Blank	

* **DO NOT** program "9" as the **last** digit.

Using D9300 R.A.M. or Command Center to Program Combinations: If a Ø is used in a combination, that combination cannot be used to enter Command 5's which require a combination (see 8112:AUX). This feature can be used to restrict access to certain Command 5 functions.

63 Comb 91	1–9* or Blank	The combinations entered in items *63 Comb 91* through *68 Comb 96* are six digits long. Each of these combinations has two pre-determined numbers and four programmable numbers which must be used to address the panel.
64 Comb 92	1–9* or Blank	
65 Comb 93	1–9* or Blank	
66 Comb 94	1–9* or Blank	Program items *63 Comb 91* through *68 Comb 96* CAN BE used in all models of the D8112, including D8112G2 and D8112J control/communicators.
67 Comb 95	1–9* or Blank	
68 Comb 96	1–9* or Blank	

10. ENTRY/EXIT DELAY TIME

This section describes entry and exit delay times. Entry delay is the time allowed to disarm the system before causing an alarm. Exit delay is the time allowed after arming to exit the secured area.

Prompt & Default	Selections	Description
69 DlyIn	1Ø–15Ø or Blank	**Delay time In**. Entry Delay is set in ten-second increments. Blank Entry = No entry time.
70 DlyOut	1Ø–15Ø or Blank	**Delay time Out**. Exit Delay is set in ten-second increments. Blank Entry = No exit time. *When programmed for Modem II transmission (3 CS 7)* **and** *unconditional arming at test time (47 ArmSys), enter at least 20 seconds of Exit Delay.*
71 Prewarn No	YES or NO	**Prewarn**ing buzzer during entry delay? *Only Command Center buzzer annunciation is available for entry delay. Buzzer at panel will* **not** *sound.*

11. BELL OUTPUT AND LISTEN-IN

This section describes alarm voltage output for audible sounding devices. Voltage specifications are listed in the *D8112 Control/Communicator Operation and Installation Manual*. Listen-in functions (item *76 Listen* and *77 Hush*) require a D180-A Amplifier Module and a Radionics Receiver for operation.

Prompt & Default	Selections	Description
72 Bell ØØ	2–99 or ØØ	Set **Bell** output time in minutes. Time restarts with each new alarm tripped. "00" entry = No bell output.

REMEMBER: Audible *AND* silent alarms start bell time. Zones programmed "silent" *will become audible* if the communicator is unable to reach the receiver after two dialing attempts while the system is master armed. After 10 attempts, the D8112 goes into the failure to communicate mode: the Alpha II Command Center will display "*FAIL TO COMM*", the Command Center buzzer sounds, and the bell output time is restarted if program item *12 PhBel* is programmed "YES".

|		
73 1Ring No	YES or NO	1 (one) **Ring** per zone for non-fire alarms. Non-fire zones will not restart bell output with second violation. Fire alarm zones *will* restart bell time.

74 TsBel	No	YES or NO	**Test Bell** automatically at arming. (Follows closing report for supervised accounts.) Bell test lasts for two seconds.
75 Pulse	Yes	YES or NO	**Pulse** bell output terminal 6 for fire alarm. See the *D8112 Operation and Installation Manual* for details.
76 Listen	Ø	1–15 or Ø	Set **Listen**-in time in minutes. *(D180A Audio Amplifier or OmegaVision transmitter required.)* A setting of 1 minute will provide automatic restart from the central station when using BFSK format (see *3 CS*). "0" entry = No listen-in time. (Also see item *16 Route*.)
77 Hush	No	YES or NO	Burglar (non-fire) alarm bell silenced during listen-in. Fire alarm output will not be interrupted.

12. TERMINAL ㉖ ARMING OPTIONS

This section describes options for arming the D8112 using devices connected to terminal 26 (MASTER ARM). Master arming devices can be used in conjunction with Command Centers (except as noted), however, *Terminal 26 arming DOES NOT WORK while the D8112 system is in any COMMAND 5 Mode.*

Prompt & Default		**Selections**	**Description**
78 MCArm	No	YES or NO	**Maintained Closure** keyswitch **Arm**ing. Program YES for maintained closure switches; program NO for momentary closure switches and digital Command Centers.

MAINTAINED CONTACTS: Open contacts arm the panel, closed contacts disarm the panel. [*Faulted non-priority zones can be force armed (unless 87 FAMax is exceeded), however, "Hold to Forc Arm" is not displayed.* Commands 2, 3, and 8 do not operate in D8112G1 and D8112A panels if *78 MCArm* is YES.]
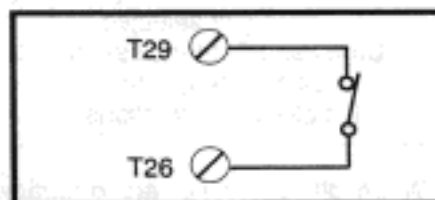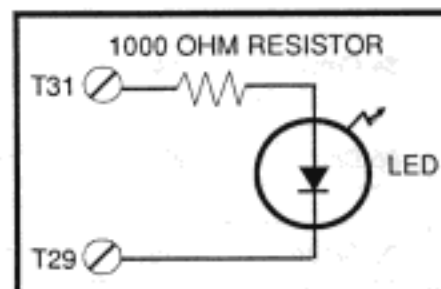

WIRING DIAGRAM: KEYSWITCH ARMING
Use terminals 26 and 29 for switch contact connections.

MOMENTARY CONTACTS: Switching contact status changes arm/disarm status. Force Arming operates as described above, however, hold the momentary keyswitch for at least 15 seconds.

79 ArmLED	No	YES or NO	**Arm**ed status **LED** output for keyswitch arming. When the LED is ON, the system is Armed. When the LED is OFF, the system is Disarmed. When this item is programmed "YES" the green "Operation Monitor" LED on the D8112's I/O board does not flicker–it follows the armed status.

IMPORTANT: When item *79 LED* is programmed "YES," serial data devices (i.e.: D1252/D350/D360 Command Centers, D8129, D8125, etc.) can NOT be used. When item *79 LED* is programmed "YES," Terminal 31 (Serial Data Out) switches to positive (+) 9 VDC when the system is armed. When the system is disarmed, Terminal 31 goes to zero voltage. During exit delay, the voltage output alternates between +9VDC and zero. This output is used to drive armed status LED's. See the adjacent wiring diagram.

If serial data and LED output is required, program item *79 LED NO,* and use a D8129 OctoRelay Module.

WIRING DIAGRAM: KEYSWITCH ARM/DISARM LED

80 Blink	No	YES or NO	**Blink** armed status LED after an alarm except for zones designated as "invisible." *Use only if item 79 ArmLED is programmed "YES."*
81 Slave	No	YES or NO	This program item is not used and should be programmed "NO".

13. ARMING COMMANDS

This section describes arming COMMAND functions of the Alpha Command Center and D360 Command Centers. For complete details of the COMMAND functions, consult the appropriate Command Center User's Guide.

Item *82 Cmd 99* is a combination used to restrict the use of the COMMAND Bar functions. Where command centers are accessible to unauthorized users, and a higher degree of COMMAND Bar security is desired, the use of item *82 Cmd 99* is strongly recommended. When item *82 Cmd 99* is programmed with a combination (1 to 4 digits), the COMMAND Bar is locked and will not function until the combination is entered. After the combination is entered, the COMMAND Bar will function as programmed. See the appropriate Command Center manual for detailed COMMAND Bar functions.

Prompt & Default	Selections	Description
82 Cmd99	1–9 or Blank	Unlock the **COMMAND** Bar by using a "99" combination. When an entry is made here, the COMMAND Bar is locked on all Command Centers, and will not function until the combination is entered. The first two digits of the combination (99) are hard-coded and cannot be changed. The combination is completed with a programmable entry of one to four digits. Enter one to four digits. Do NOT use zero. Do NOT use "9" as the last digit if Duress is enabled. If this entry is BLANK, use of the COMMAND Bar is not restricted and it operates normally.

NOTE:
To disable the COMMAND Bar only at selected Command Centers, see the Command Center Installation Instructions.

When all four digits are programmed (i.e.: a six-digit COMMAND Bar combination), entering the six-digit combination at the Command Center puts the system directly into command mode.

IMPORTANT: **This entry must be flush left in the Programmer's display!**

One-digit entry:	Enter three spaces behind entry	Three-digit entry:	Enter one space behind entry
Two-digit entry:	Enter two spaces behind entry	Four-digit entry:	No space behind entry (entering the combination at the Command Center automatically puts the system in command mode—you do not need to press COMMAND BAR.)

83 Cmd1	No	YES or NO	Use **COMMAND 1** to master arm the system. Entry/Exit delays provided.
84 Cmd2	No	YES or NO	Use **COMMAND 2** for instant perimeter arming with no Entry/Exit delay provided.
85 Cmd3	No	YES or NO	Use **COMMAND 3** for delayed perimeter arming with Entry/Exit delays provided.
86 Cmd8	No	YES or NO	Use **COMMAND 8** for perimeter arming and to shunt faulted perimeter zones. Entry/Exit delays provided.

14. FORCE ARMING

Force arming is a function which allows the system, or part of the system to be armed when zones are not normal or "ready." The zones which are not normal are bypassed by the arming procedure, and will NOT detect violations. All other zones operate as programmed.

When a zone programmed with "swinger shunt" is not normal (faulted), it can be bypassed by force arming. However, if the zone is restored after arming, it is returned to the protective circuit and **will** detect violations and initiate alarms. (When swinger shunt zones are force armed, the LED on the D360 does not blink.) Zones not incorporating the swinger shunt option will be bypassed until the system is disarmed. The swinger shunt option is controlled by the fourth digit of the Zone Code. (See Section 20. Zone Code Index.)

Reporting Force Arming: Trouble reports can be sent for force arming if item *49 Close* is programmed.

Priority zones cannot be force armed. When a priority zone is faulted, the D8112 cannot be armed [except at test time (see item *47 ArmSys*)]. All priority zones must be normal to arm the system. If a sub-zone control is connected to a priority zone, the sub-zone control **must** be armed before the system can be master armed. The priority zone option is controlled by the fourth digit of the Zone Code.

Prompt & Default	Selections	Description
87 FAMax	1–9* or Blank	When Force Arming, **Max**imum number of faulted zones (or points-of-protection in a Zonex system) allowed. Blank Entry = No force arming allowed.

* A "9" entry is used to allow more faulted points-of-protection for Zonex systems. The "9" entry is interpreted differently, depending on the model of D8112 used:

    D8112G1 panels allow up to 16 faulted points-of-protection during Force Arming.
    D8112G2 and D8112J panels allow up to 134 faulted points-of-protection during Force Arming.

Prompt & Default		Selections	Description
88 FA1	No	YES or NO	Force Arm using COMMAND **1** master arm. Requires item *83 Cmd 1* be set to "YES."
89 FA2	No	YES or NO	Force Arm using COMMAND **2** perimeter instant arming. Requires item *84 Cmd 2* be set to "YES."
90 FA3	No	YES or NO	Force Arm using COMMAND **3** perimeter delay. Requires item *85 Cmd 3* be set to "YES."

15. TEST COMMANDS

This section deals with test commands initiated with an Alpha Command Center and D360 Command Command Center. If Command Centers are not used, this section should be left in the default settings. Consult the appropriate Command Center manual for detailed instructions of the following features.

Prompt & Default		Selections	Description
91 Cmd41	No	YES or NO	Enable COMMAND **41** to send unexpanded restoral reports to the central station.
92 Cmd42	No	YES or NO	Enable COMMAND **42** to send complete system status report to the central station.
93 Cmd44	No	YES or NO	Enable COMMAND **44** to initiate local system test. *For Zonex systems, a "YES" entry will cause the Alpha Command Center to display point-of-protection status, and alarm memory, before local test is initiated.*

16. SPECIAL COMMANDS

Special Commands require an Alpha Command Center or D360 Command Center to operate listed functions. If not using a Command Center, this section should be left in default settings.

Prompt & Default	Selections	Description
94 Cmd47 No	YES or NO	Enable **COMMAND 47**. Command 47 is used to interrupt power to Terminal 8. See the *D8112 Operation and Installation Manual* for details.
95 Cmd5 No	YES or NO	Enable **COMMAND 5**. Command 5 is used to allow user to change combination codes from the Command Center. *Note: When this item is programmed "YES" the combination change mode is initiated with Command 55 in D8112G2, and other panels in which Command 5 functions are enabled (see the* 8112:AUX Program Entry Guide, *Cmd 5's Subhandler).*
96 Cmd6 No	YES or NO	Enable **COMMAND 6** "Watch Mode" which sounds Command Center buzzers for *perimeter* zone faults.
97 Cmd7	Ø–9 or Blank	Enable **COMMAND 7** to initiate "Special" alarm report from the Command Center. Report appears as "ALARM ZONE ___" at the central station. Enter code to complete this report. Blank = No report. 1 – 8 = Alarm Zone 1 – 8 *bell response is determined by zone code for the zone assigned.* 0 or 9 = Alarm Zone 0 or 9 *does not provide any bell response.*
98 Cmd9	Ø–9 or Blank	Enable COMMAND 9 to initiate "Police" alarm report from the Command Center. Report appears as "ALARM ZONE ___" at the central station. Enter code to complete this report. Blank = No report. 1 – 8 = Alarm Zone 1 – 8 *bell response is determined by zone code for the zone assigned.* 0 or 9 = Alarm Zone 0 or 9 *does not provide any bell response.*

17. OMEGALARM COMMAND CENTER OPTIONS

Programmable features in this section require an Alpha Command Center or D360 Command Center to operate. For detailed information on functions, consult the appropriate Command Center manual.
NOTE: To report shunted zones, item *49 Close, 23 Tbl, 25ExT/R*, and appropriate zone codes must be programmed.

Prompt & Default	Selections	Description
99 ShntMA No	YES or NO	Enable selective zone **Shunting** when **Master Arming** from Command Center. **Note:** *If COMMAND 7 is enabled (97 Cmd7) Zone 7 cannot be shunted; an asterisk (*) appears in the 7th digit position of the Alpha Command Center display. Pressing the "7" key initiates a "Command 7" response.*
100 ShntPA No	YES or NO	Enable selective zone **Shunting** when **Perimeter Arming** from Command Center. **Note:** *If COMMAND 7 is enabled (97 Cmd7) Zone 7 cannot be shunted; an asterisk (*) appears in the 7th digit position of the Alpha Command Center display if zone 7 is a perimeter zone. Pressing the "7" key initiates a "Command 7" response.*

101 Clock No	YES or NO	Enable **Clock**, calendar, and time of next test display at Alpha Command Center. *The Clock display should be checked and adjusted (if needed) at least once a month.*
102 Serv Yes	YES or NO	Alpha display **Serv**ice for non-fire zone trouble. (Service display for zones that "buzz on fault" cannot be suppressed. See third digit of zone code.)
103 Show Yes	YES or NO	**Show** zone faults at D360 or D350 Command Center while system is *disarmed.*
104 OnBat No	YES or NO	Enables Alpha display "On Batry" and turns on buzzer when battery is draining faster than it is charging, i.e.: power load on D8112 is more than AC can supply alone. *If this item is programmed YES, the Alpha Command Center will buzz during test reports.*

18. ZONE FUNCTION CODES & ALPHA CUSTOM DISPLAY

This section contains the program items for programming the eight protective zones. Each zone that is used must be programmed with a four-digit zone code number *(aka: Loop Code)* to determine when and how it responds to loop faults and Command Centers. All four digits must be used, blank or incomplete codes will not work. These codes are created from the ZONE CODE INDEX in section 20. **Unused zones must be left blank (not programmed) and terminated with a 1000 ohm resistor.**

When using Alpha Command Centers, custom displays for each zone can be programmed to identify each event more precisely than the standard display alone. Up to eight characters may be entered for each zone display. See the *8112 Commercial* or *Residential Custom Text Booklet* for a list of pre-formed Alpha displays. The displays may also be formed one character at a time using the Entry Bar Codes located on the front of the Programmer.

Custom Text for D8112G1, G2, and J Panels: The 8112:PText Product Handler Program is used to program custom text for Zonex points-of-protection, and Master Zones. Command 44 and Command 6 only display 8112:PText custom text in response to faulted zones. When enabling these commands in D8112G1, G2, and J panels, Master Zone Text (8112:PText program item *MSTR*) must be programmed in order to provide Custom Alpha Displays.

Prompt & Default	Selections	Description
105 Zone1	1–8 or Blank	**Zone 1** response code. Enter four digits. Blank Entry = Disabled zone
106 D1	A–Z, Ø–9, Symbol,Blank	Custom Alpha Display for zone **1**. Enter up to eight characters. Blank Entry = No display
107 Zone2	1–8 or Blank	**Zone 2** response code. Enter four digits. Blank Entry = Disabled zone
108 D2	A–Z, Ø–9, Symbol,Blank	Custom Alpha Display for zone **2**. Enter up to eight characters. Blank Entry = No display
109 Zone3	1–8 or Blank	**Zone 3** response code. Enter four digits. Blank Entry = Disabled Zone
110 D3	A–Z, Ø–9, Symbol,Blank	Custom Alpha Display for zone **3**. Enter up to eight characters. Blank Entry = No display

Prompt & Default	Selections	Description
111 Zone4	1–8 or Blank	**Zone 4** response code. Enter four digits. Blank Entry = Disabled zone
112 D4	A–Z, Ø–9, Symbol,Blank	Custom Alpha **D**isplay for zone 4. Enter up to 8 characters. Blank Entry = No display
113 Zone5	1–8 or Blank	**Zone 5** response code. Enter four digits. Blank Entry = Disabled zone
114 D5	A–Z, Ø–9, Symbol,Blank	Custom Alpha **D**isplay entry for zone **5**. Blank Entry = No display
115 Zone6	1–8 or Blank	**Zone 6** response code. Enter four digits. Blank Entry = Disabled zone
116 D6	A–Z, Ø–9, Symbol,Blank	Custom Alpha **D**isplay entry for zone 6. Blank Entry = No display
117 Zone7	1–8 or Blank	**Zone 7** response code. Enter four digits. Blank Entry = Disabled zone
118 D7	A–Z, Ø–9, Symbol,Blank	Custom Alpha **D**isplay entry for zone 7. Blank Entry = No display
119 Zone8	1–8 or Blank	**Zone 8** response code. Enter four digits. Blank Entry = Disabled zone
120 D8	A–Z, Ø–9, Symbol,Blank	Custom Alpha **D**isplay entry for zone 8. Blank Entry = No display

19. MODEM, EXRAM, and 16 CHARACTER DISPLAY

Prompt & Default	Selections	Description
121 Modem No	YES or NO	**This program item must be programmed "NO" for all models of the D8112.** *To enable Modem II format transmission, program item 3 CS (and 18 ACS) as a "7".*
122 ExRam No	YES or NO	**Expanded RAM** capacity in the D8112? Enter "YES" when the D8112 is loaded with the 8112:AUX product handler. This program item is "hard-coded" YES in D8112G2 and D8112A .
		IMPORTANT: D8112*E* and D8112*E1* panels can be "crashed" (non-operating condition) if this item is "YES" and 8112:AUX is not loaded into the panel *before* the 8112:MAIN program is loaded.
123 16ChDisp No	YES or NO	Enable **16-C**haracter **D**isplay for the Alpha II Command Center? Enter "YES" for 16-character display, enter "NO" for 8-character display. ***NOTE:*** *This program item MUST BE "YES" to use certain Command 5 functions (see the 8112:AUX Cmd 5's Subhandler program). 16-character display is only functional with the D1252 Alpha II and the appropriate model of D8112. See the* Installation Instructions *provided with your D1252 for proper programming.*

20. ZONE CODE INDEX

Section 20 contains the Zone Code Index for programming the eight individual protective zones of the D8112 Control/Communicator. This section is used to form the program entries found in Section 18 (Zone Function Codes). A four-digit code is composed by using the tables below. These codes determine how each zone responds to Comand Centers and loop inputs. Unused zones should be left blank and terminated with a 1000 ohm resistor. (See Section 21. "Zone Definitions" for definition of terms used in ZONE CODE INDEX.)

IMPORTANT: All four digits must be used. Blank or incomplete entries will not work.

Zone codes are more easily understood if examined one digit at a time, by asking the following questions:

FIRST DIGIT

— Is the zone armed **24 hours** or **Controlled** from a Command Center?
— Do you want trouble supervision on this zone, or not?
— If using supervision, does a loop open or short mean trouble?

FIRST DIGIT			
24 HOUR ZONE (Fire, Panic, Duress) Trouble supervision—Open or Short		**CONTROLLED ZONE (Burglary)** Trouble Supervision—Open or Short	
1	Alarm: loop open & short No trouble reports	**5**	Armed: Alarm open & short Disarmed: No trouble report
2	Alarm: loop open Trouble: loop short	**6**	Armed: Alarm open & short Disarmed: Trouble on short
3	Alarm: loop short Trouble: loop open	**7**	Armed: Alarm open & short Disarmed: Trouble on open
4	No alarm reports Trouble: loop open & short	**8**	Armed: Alarm open & short Disarmed: Trouble on open & short

NOTE: D8112G2, D8112A, and D8112J Control/Communicators using ALL 24-HOUR ZONE CODES—The Alpha Command Center display for panels using all 24-hour zone codes is changed to more accurately reflect 24-hour system status:

In an "All 24-Hour" panel, the displays *READY TO ARM, NOT READY TO ARM,* and *ALL SECURE* do not appear. Instead, when the panel is in normal status, the D1252 display will show two asterisks (one near the left side of the display and one near the right side of the display) which alternate blinking on and off. Alarm displays are in the same format as a combination burglary/fire system (asterisk display is not shown). Alarm Memory displays alternate with the asterisk displays until cleared using COMMAND 4. Zone Trouble displays alternate with the asterisk displays until the faulted zone returns to normal.

SECOND DIGIT

— How is the controlled zone armed—**Master** or **Perimeter**?
— When armed is the zone's alarm response instant or delayed?
— If delayed, what type of fault starts delay, an open or shorted loop?

IMPORTANT: If the first digit of the zone code is 1, 2, 3, or 4, program the second digit as 1. *If any other digit is used in the second position, the zone will not report or operate properly.* See Sections 22.2 through 22.5 for exceptions to this rule.

SECOND DIGIT			
INTERIOR ZONE: Response while armed – Instant or Delayed		**PERIMETER ZONE: Response while** armed – Instant or Delayed	
1	Instant Alarm: loop open & short No entry delay	**5**	Instant Alarm: loop open & short No entry delay
2	Instant Alarm: loop open Delay: loop short	**6**	Instant Alarm: loop open Delay: loop short
3	Instant Alarm: loop short Delay: loop open	**7**	Instant Alarm: loop short Delay: loop open
4	No instant alarm Delay: loop open & short	**8**	No instant alarm Delay: loop open & short

THIRD DIGIT

— Do you want zone restoral reports?
— Do you want a **Silent** alarm from this zone?*
— Do you want a buzzer for any loop fault and no bell? *
— Do you want a steady or pulsed† bell for alarm?

* Silent alarms become audible if the D8112 is unable to reach the receiver after two dialing attempts.

† Item *75 Pulse* must be programmed "YES" for pulse output on terminal 6. If Pulse is programmed "NO" only steady output on terminal 7 is available. See the *D8112 Operation and Installation Manual* for more detail on bell output operation.

	THIRD DIGIT			
	NO RESTORAL REPORTS **Bell and Buzzer Response**			**RESTORAL REPORTS** **Bell and Buzzer Response**
1	No bell on alarm * No buzz on any loop fault		5	No bell on alarm * No buzz on loop fault
2	No bell on alarm * Buzz on loop fault		6	No bell on alarm * Buzz on any loop fault
3	Steady alarm bell No buzz on any loop fault		7	Steady alarm bell No buzz on loop fault
4	Pulsed †alarm bell Buzz on any loop fault		8	Pulsed †alarm bell Buzz on any loop fault

FOURTH DIGIT

— Should the Command Centers show a **Visible** display for alarm and trouble on this zone?
— Is this a **Priority** zone?
— Do you want automatic **Swinger Shunt** on this zone?

	FOURTH DIGIT			
	STANDARD ALPHA/360 DISPLAY – VISIBLE **Priority – Swinger Shunt**			**STANDARD ALPHA/360 DISPLAY – INVISIBLE** **Priority – Swinger Shunt**
1	Not a priority zone No swinger shunt		5	Not a priority zone No swinger shunt
2	Not a priority zone Swinger shunt active		6	Not a priority zone Swinger shunt active
3	Priority zone No swinger shunt		7	Priority zone No swinger shunt
4	Priority zone Swinger shunt active		8	Priority zone Swinger shunt active

CAUTION: Using Swinger shunt in systems programmed for *all* 24-hour zones (see FIRST DIGIT) is *not recommended, for the following reason:* If the zone is shunted by the Swinger shunt, the only way that it is restored to the system is by entering an arm/disarm combination at a Command Center. Since the system is not routinely armed and disarmed, the zone could remain shunted for long periods of time.

SECTION 21. ZONE DEFINITIONS

24 HOUR OR CONTROLLED ZONE

Each protective zone is designated by the first digit of the zone code as either 24 HOUR for fire, panic, and duress alarms; or CONTROLLED for burglar alarms. Zones programmed as 24 hour are armed all the time, while those programmed controlled can be armed and disarmed.

PERIMETER OR INTERIOR ZONE

Controlled zones are further designated by the second digit of the zone code as either *perimeter* or *interior.* Arming perimeter and interior zones can be instant or delayed, depending on zone code programming (second digit) and arming commands used. If faulted after arming, zones respond as instant or delayed depending on their individual programs. (To set delay times see *69 Dly In,* and *70 DlyOut.*) *Once entry delay is started by one zone, all zones are delayed. If you want alarms to be generated during entry delay from faulted zones programmed for "instant alarm", see the* 8112:AUX Program Entry Guide, DlyAll Subhandler.

PERIMETER ZONE ARMING - Zones programmed as "perimeter" may be armed as a group separately from zones programmed as "interior." This permits the user to partially arm the system to establish perimeter protection and still occupy the interior of the protected premises.

INTERIOR ZONES - Zones programmed as interior are not armed during perimeter arming. These zones are bypassed and do not generate alarms when the system is perimeter armed.

MASTER ARMING - All controlled zones (perimeter and interior) are armed by master arming. MASTER ARMING IS DELAYED by the amount of time entered in program item *70 DlyOut* for exit delay.

PRIORITY ZONES - Priority zones cannot be force armed. Priority zones must be in a normal condition during arming, or the D8112 Control/Communicator cannot be armed. The only exception to this rule is unconditional arming at test time. See item *47 ArmSys* for details.

SILENT ZONES - Zones programmed for no bell on alarm are considered silent zones. These zones initiate bell time (even though it is silent) and transmit alarm reports, if programmed. If a <u>controlled</u> silent zone is programmed to report alarms to the central station and has not reached the receiver after two attempts, the system automatically initiates an audible output for the programmed bell time.

SWINGER SHUNT ZONES - Swinger shunt zones can initiate only four alarm or trouble events during one clock-hour (i.e.: from 02:00 to 02:59). After four events have been transmitted from one zone in the same hour, the D8112 shunts that zone. When a zone is shunted because of a swinger shunt condition, a trouble report is transmitted. The report is sent with whatever other message the zone is transmitting. Swinger shunt zones which have a partial count (less than four reports during an hour) have their report count reset to zero on the hour. Swinger shunt zones are reset every time a valid passcode combination is entered at a Command Center.

When force armed, a swinger shunt zone will rearm itself if it restores while the system is armed. (D360 LED for force armed swinger shunt zones do not blink.) Zones not programmed with swinger shunt will not rearm after being force armed until the entire system is rearmed.

Zonex Points and Swinger Shunt in the D8112G2 and D8112J: Zonex Points-of-Protection may be assigned to zones programmed with swinger shunt. In the D8112G2/J, a separate count is kept for each point. After four events occur on the point during the hour, the point is shunted. If programmed for Modem II transmission, swinger shunts report by point. If a second point on the same master zone is swinger shunted, the first shunted point is included with the report.

VISIBLE OR INVISIBLE ZONE DISPLAY

Each protective zone has a standard Command Center display when in trouble or alarm (i.e.: ALARM 8, TROUBLE 8, for zone 8). These displays can be made invisible with the last digit of the zone code. If made invisible, the Command Center will show these particular displays only when all the following conditions occur:

1. The D8112 Control/Communicator is disarmed.
2. A loop fault condition must exist. The Alpha displays *"NOT READY TO ARM"* indicating loop fault.
3. By pushing any key at an Alpha/D360 Command Center, the display will show which invisible zone is faulted.

22. APPENDIX

22.1 QUICK ACCESS CARD (8112:MAIN) — The Quick Access Card contains 16 bar codes. Next to each bar code are a series of prompts. The Quick Access Card lets you access an 8112:MAIN program at different points without stepping through each line of the program. By stroking a bar code, the Programmer's display is advanced to the item identified by the primary prompt.

The series of prompts next to the bar code is the consecutive order of items listed after the primary prompt. (For example, stroking the bar code identified as 87 FAMax brings *87 FAMax* to the Programmer's display. Notice FAMax is the first prompt listed next to the bar code. Stroke ADVANCE and the display shows *88 FA1*.)

The 8112:MAIN Quick Access Card can only be used when the D5100 Programmer is in the 8112:MAIN programming level mode. See the D5100 Programmer Operation Manual for details.

22.2 SPECIAL ZONE CODES — Special Zone Codes are distinctive codes which do not follow the typical zone code programming rules. A Special Zone Code contains two to four specific digits which program special responses for a protective zone.

Special Zone Codes with only **two** digits (e.g.: Local Zone Codes, Independent Zone Control Zone Codes) are completed by programming the last two digits of the zone code using the Zone Code Index. The last two digits will follow the typical zone code programming rules and responses.

22.3 LOCAL ZONE CODES — Local Zone Codes program individual protective zones to annunciate alarms locally, without transmitting reports to a central station. Only the zones programmed as local will suppress reports; all others will transmit reports as normal.

Local Zone Codes are two-digit codes (1 7 _ _ or 1 5 _ _) and are completed by programming the last two digits of the zone code using the Zone Code Index (tables "THIRD DIGIT" and "FOURTH DIGIT"). Selectable responses include: Bell and buzzer output, Command Center display (visible or invisible), Priority zone, Swinger shunt.

22.3.1 CONTROLLED LOCAL ZONE CODES — A Controlled Local Zone is armed and disarmed by the system's Command Centers. This zone is a perimeter delay zone. By using different arming commands the Controlled Local Zone can perform in different detection modes. See the chart below for detection responses.

Arming Command	Response	Arming Command	Response
Combination or COMMAND 1	Loop open initiates entry delay Loop short initiates instant alarm	COMMAND 3 or COMMAND 8	Loop open initiates entry delay **Loop short is not detected**
COMMAND 2	Will not arm Local Only Controlled Zone.		

The Controlled Local Zone Code is **1 7 _ _**. Complete the code by filling in the last two digits.

All Controlled Local Zone Codes have the following parameters:
> No central station reports generated for any condition,
> Delay alarm on loop open, Instant alarm on loop short,
> Zone is armed when the D8112 system is master armed using the combination or COMMAND 1.

NOTE: Local controlled zones cannot be force armed. If a local controlled zone is faulted during arming it does not prevent the rest of the system from arming, however, if it is not returned to normal before the exit delay expires the system will go into alarm or entry delay. *If it is necessary to exclude a local zone during arming, Selective Zone Shunting should be used.*

Some recommended Controlled Local Zone Codes and parameters are listed below:
1731: Steady bell on alarm, no swinger shunt or priority
1733: Steady bell on alarm, priority zone active
1735: Same as 1731, except Command Center display is invisible

22.3.2 24 HOUR LOCAL ZONE CODE — The 24 Hour Local Zone is always armed (24 hours). This zone is used for panic, fire, or environmental monitoring of temperature, waterflow, etc. The 24 Hour Local Zone Code is **1 5 _ _.** Complete the code by filling in the last two digits.

All 24 Hour Local Zone Codes have the following parameters:
>No central station reports are generated for any condition
>Open loop or shorted loop creates an alarm condition. No trouble conditions.
>Alarms are instant, not delayed

Some recommended 24 Hour Local Zone Codes and parameters listed below:
1541: Pulsed bell on alarm, no swinger shunt or priority
1543: Pulsed bell on alarm, priority zone active
1535: Steady bell on alarm, no swinger shunt or priority, Command Center display is invisible

22.4 INDEPENDENT ZONE CONTROL (I.Z.C.) ZONE CODES — I.Z.C. Zones are defined by the first two digits of the zone code. The first two digits (either 3 2 or 3 4) cannot be changed when using an I.Z.C. (i.e.: D268/269, D279); however, the last two digits of the code may be programmed for a variety of responses by using the Zone Code Index (tables THIRD DIGIT and FOURTH DIGIT). Selectable responses include: Restoral reports, Bell and buzzer output, Alpha display (visible or invisible), Priority, Swinger shunt. There are two versions of I.Z.C. Zone Codes: *supervised* or *non-supervised.*

22.4.1 SUPERVISED I.Z.C. (Opening/Closing Reports) — The Supervised I.Z.C. Zone Code is "3 2 _ _." Complete the zone code by filling in the last two digits.

All supervised I.Z.C. zone codes allow arming control independent of the D8112, opening/closing reports, an instant and delay loop, and many programmable responses. Some recommended supervised I.Z.C. zone codes and parameters are listed below:
3231: No restoral reports, steady bell on alarm, Alpha display visible.
3271: Same as 3231, except this code provides restoral reports following an alarm while the I.Z.C. is armed.
3232: Same as 3231, except this code includes swinger shunt for alarm reports.
3233: Same as 3231, except this code includes priority (i.e.: D8112 cannot be armed until I.Z.C. is armed).
3257: No audible output on alarm, includes priority and restoral reports.

Reminder: Do not duplicate reporting independent zone numbers with combination ID reports (opening/closing report number). *For example*: If an I.Z.C. is connected to zone 8, Combination (or ComboGroup) 8 should not be used.

22.4.2 NON-SUPERVISED I.Z.C. (No Opening/Closing Reports) — The Non-Supervised I.Z.C. Zone Code is "3 4 _ _." Complete the zone code by filling in the last two digits.

All non-supervised I.Z.C. zone codes allow arming control independent of the D8112, an instant and delay loop and many programmable responses. Some recommended non-supervised I.Z.C. zone codes and parameters are listed below:
3431: No restoral reports, steady bell on alarm, Alpha display visible.
3471: Same as 3431, except this code provides restoral reports following an alarm while the I.Z.C. is armed.
3432: Same as 3431, except this code includes swinger shunt for alarm reports.
3433: Same as 3431, except this code includes priority (i.e.: D8112 cannot be armed until I.Z.C. is armed.)
3457: No audible output on alarm, includes priority and restoral reports.

22.5 SPECIAL 24-HOUR ZONE CODES — Although the zone codes described in this section can be used for many purposes, normal applications for these zone codes are **fire zones**. The descriptions which follow will, therefore, refer to these zone codes as fire zone codes.

When a fire zone is faulted it is either in alarm or trouble, depending on the zone code program. Fire zone codes are formed by the **first three digits of the zone code**. A normal fire zone has a first digit of 1 through 4, a second digit of 1, and a third digit of 2, 4, 6, or 8. (The third digit represents buzz on loop fault. See the Zone Code Index for programming examples.)

By programming a **24-Hour Zone** (in this case a Fire Zone) to **buzz on loop fault**, an added feature not listed in the Zone Code Index is included in the zone code's functioning parameters: *Command Center fire **trouble** and fire **alarm annunciation***.

D8112G2, D8112A, and D8112J Control/Communicators using ALL 24-HOUR ZONE CODES: The Alpha Command Center display for panels using all 24-hour zone codes is changed to more accurately reflect 24-hour system status.

In an "All 24-Hour" panel, the displays *READY TO ARM, NOT READY TO ARM,* and *ALL SECURE* do not appear. Instead, when the panel is in normal status, the D1252 display will show two asterisks (one near the left side of the display and one near the right side of the display) which alternate blinking on and off. Alarm displays are in the same format as a combination burglary/fire system (asterisk display is not shown). Alarm Memory displays alternate with the asterisk displays until cleared using COMMAND 4. Zone Trouble displays alternate with the asterisk displays until the faulted zone returns to normal.

2.5.1 FIRE TROUBLE ANNUNCIATION: While in the TROUBLE mode, the zone's status is annunciated with a **buzzer output** and a **visual display** at the Command Center. The buzzer is automatically silenced when the zone returns to normal. (In a reporting system, the buzzer is not automatically silenced until the TROUBLE and RESTORAL reports are received at the central station.)

The visual display cannot be cleared before the zone is returned to normal; however, the buzzer can be silenced while the zone is faulted. To silence the buzzer while the zone is still faulted, enter a combination or COMMAND 4 at the Command Center.

22.5.2 FIRE ALARM ANNUNCIATION: When a fire zone is in alarm, the zone's status is annunciated with a **buzzer output**, a **visual display** and an **alarm output** (bell or siren).

The buzzer is automatically silenced when the zone is returned to normal. To silence the buzzer while the zone is still in alarm, enter a combination or COMMAND 4 at the Command Center.

The visual display can be cleared after the zone is returned to normal and a combination or COMMAND 4 is entered at the Command Center.

The alarm output is cleared by entering a combination or by timing out.

22.5.3 PRIORITY FIRE ALARM: The alarm output of 24-Hour Zones (in this case a Fire Zone) can be programmed as a priority. **A zone programmed for priority fire alarm cannot be silenced when in alarm or trouble until the zone is returned to normal.** To program a zone with alarm output priority the following conditions must be met:

1) The zone must be a 24 Hour Zone (first digit of Zone Code)
2) The zone must be programmed to buzz on fault (third digit of Zone Code)
3) The zone must be programmed as a priority zone (fourth digit of the Zone Code)

22.6 RECOMMENDED ZONE CODES FOR THE D8112

	Trouble and Restoral	Trouble No Restoral	No Trouble No Restoral	Local Only
DELAYED:				
Interior—Normally Closed	6371	6331	5331	
Priority & Swinger	6374	6334	5334	
Interior—Normally Open	7271	7231	5231	
Priority & Swinger	7274	7234	5234	
Perimeter—Normally Closed	6771	6731	5731	
Priority & Swinger	6774	6734	5734	
Perimeter—Normally Open	7671	7631	5631	
Priority & Swinger	7674	7634	5634	
FIRE:				
Standard	3181	3141	1141	1541
FOIL (No Contacts):				
Standard	8571	8531	5531	1731
Priority	8573	8533	5533	1733
Swinger Shunt	8572	8532	5532	1732
HOLD UP (Silent)				
No Alpha Display	3155	3115	1115	
INSTANT:				
Interior—Normally Closed	6171	6131	5131	
Priority & Swinger	6174	6134	5134	
Interior—Normally Open	7171	7131	5131	
Priority & Swinger	7174	7134	5134	
Perimeter—Normally Closed	6571	6531	5531	
Priority & Swinger	6574	6534	5534	
Perimeter—Normally Open	7571	7531	5531	
Priority & Swinger	7574	7534	5534	
LOCAL CONTROLLED ZONE:				
Standard				1731
Priority Zone				1733
No Alpha Display				1735
Priority & Swinger				1738
MATS:				
Standard	7171	7131	5131	1731
Priority Zone	7173	7133	5133	1733
No Alpha Display	7175	7135	5135	1735
Priority & Swinger	7174	7134	5134	1734
PANIC (Audible):				
Standard	3171	3131	1131	1531
Priority Zone	3173	3133	1133	1533
No Alpha Display	3175	3135	1135	1535
PANIC (Silent):				
Standard	3151	3111	1111	1511
Priority Zone	3153	3113	1113	1513
No Alpha Display	3155	3115	1115	1515
INDEPENDENT ZONE CONTROL:				
Supervised	3271	N/A	3231	N/A
Priority Zone	3273	N/A	3233	N/A
Non-Supervised	3471	N/A	3431	N/A
Priority Zone	3473	N/A	3433	N/A

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