



Introduction

The D168A is a remote control module providing a user with the ability to arm or disarm a security system remotely or locally via a telephone.

Specifications

- **Included:** D168A Remote Telephone Arming Module, D134 Relay Module, Installation Instructions
- **Dimensions:** 4.0 inches x 4.0 inches (10.16 cm x 10.16 cm)
- **Operating voltage:** Nominal 12 VDC supplied by the control/communicator
- **Current requirement:** 40 mA Standby / 80 mA Active

Compatibility

The D168A is compatible with the 2000 Series Control/Communicators (D2412U, D2412UE, D2212B, D2212BE). The D168A may also be configured to work with other manufacturers' panels. See *Configuring for Use With Other Manufacturers' Products* below.

Installation and Programming

Radionics suggests the procedure below to install and program the D168A Remote Telephone Arming Module. Each step is explained further in the sections that follow.

- Wire the D168A to the control/communicator. Program the control/communicator (see *Programming* in the next column).
- Mount the D168A and D134 inside the enclosure.
- Call the D168A from an internal or external phone line and change the Primary and/or Secondary Access Codes if necessary.
- If the D168A is installed with products from other manufacturers, program the D168A to work with the desired panel.

Wiring and Configuring the D168A

1. Wire the D168A to the D134 and 2000 Series Control/Communicator as shown in Figure 1 or Figure 2 below. The configuration shown in Figure 1 allows the D168A to announce both the arming state and alarms (this is the recommended configuration). The configuration shown in Figure 2 allows the D168A to announce only the arming state.

2. Program the control/communicator as described in *Programming* below. (If the D168A is connected to a non-Radionics panel, consult *Configuring for Use With Other Manufacturers' Products* below.)
3. Program the point you've wired to the D168A for keyswitch operation. See the *2000 Series Control/Communicator Program Entry Guide* (P/N: 35114). If the D168A is connected to a non-Radionics panel, consult *Configuring for Use With Other Manufacturers' Products* below.

Mounting the Unit

Use the attached tape to mount the non-component side of the D168A to the enclosure. Mount the D134 inside the enclosure also.

Programming

After wiring the D168A to the control/communicator, program the outputs as follows:

- Relay 1 Logic = "Or"
- Relay 1 Function 1 = "All On"
- Relay 1 Function 2 = "Part On"
- Relay 2 Logic = "And"
- Relay 2 Function 1 = "Alarm Memory"
- Relay 2 Function 2 = "Pulse"

Program the control/communicator's point wired to the D168A for keyswitch operation.

Changing Access Codes

The D168A supports three access passcode types:

- **Maintenance Code:** This code is used by the installation company to change system programming. The Maintenance Code cannot be used to activate the D168A's control relay nor can it be used to reprogram the Primary or Secondary Access Codes. The default Maintenance Code is **1234**.
- **Primary Access Code:** This code is used to activate the D168A's control relay. The default Primary Access Code is **5678**.
- **Secondary Access Code:** Similar to the Primary Access Code, this Code can only be used to turn the control panel **On**. The default Secondary Access Code is **9192**.

To change Access Codes:

1. Contact the D168A.
If contacting the panel from an internal telephone, press the [*] key and the two digit Local Access Code (default is 5 5). If calling the panel from a remote telephone, dial the telephone number the D168A is connected to.
2. After the D168A answers, press the [*] key and then the 9 key. The D168A will respond with "Code Change Mode: Please enter your Access Code."
3. Enter the Access Code you wish to change. The D168A will respond with "Enter new Access Code."
4. Enter the new Access Code. The D168A will respond with "New Access Code is..." and will repeat the four numbers you entered for verification. The D168A automatically exits the code-programming mode.

Configuring for Use With Other Manufacturers' Products

The D168A comes pre-programmed for use with Radionics panels. If you will be using the D168A with other manufacturers' products, follow the procedures below to adapt the module to the specific application. Use the telephone's touchpad to input your selections.

If you wish to exit for any reason without saving the changes you've made, press the [*] key twice. Once out of Programming Mode, the system returns to normal operating mode.

1. Contact the D168A.
If contacting the panel from an internal telephone, press the [*] key and the two digit Local Access Code (default is 5 5). If calling the panel from a remote telephone, dial the telephone number the D168A is connected to.
2. After the D168A answers, press the [*] key and then the [0] key. The D168A responds with "Program Change Mode. Please enter your Access Code."
3. Enter the Maintenance Code.
NOTE: Only use the Maintenance Code to reprogram the system.
When you enter the last digit of the Maintenance Code, the D168A responds with "Enter new program."
4. Programming of system options starts at Address 0 and progresses sequentially to the last digit of the Maintenance Code, which is at Address 13. You may not skip an option, even if you do not wish to change that option. System options are shown in the *Programming Form* in this document.
5. Although the options must be changed in sequential order, you can leave the Programming mode at any time. For example, to change Option 2, re-enter the data for Option 1 first, and then enter the data for Option 2. At this point you can

save your changes and exit Programming Mode (without having to re-program the remaining options) by pressing [*] and then [#].

6. The D168A reads the program back to you when you finish entering the selections for each option. Use the last column in the *Programming Form* to record your selections.

D168A Operation

Depending on the programming options set by the installer, the D168A answers incoming calls after a predetermined number of rings. You can program the D168A to answer the phone after a different number of rings depending on the armed status of the panel. For example, the D168A could be programmed to answer the phone after one ring if it is armed and after two rings if it is not armed. See Options 6 and 7 in the *Programming Form* for the specific number of rings the D168A is set to answer the phone in.

When the D168A answers the incoming call, it responds with voice messages. The caller enters a four-digit Access Code. If the code is not received within 15 seconds, the D168A hangs up. The user can check current on/off status and change it by entering the Access Code when prompted. If a valid code is entered, a relay closes causing the panel's on/off status to toggle.

The panel's on/off status can be changed as many times as desired during the same call. A voice message is generated each time status is changed, confirming the action.

Follow this procedure to turn the control/communicator on and off or to check current system status.

1. Contact the D168A.
If calling the panel from an internal telephone, press the [*] key and the two digit Local Access Code (default is 5 5). If calling the panel from a remote telephone, dial the telephone number the D168A is connected to.
2. After the D168A answers, it responds "System status. Please enter your Access Code." You now have 15 seconds to enter your four-digit Access Code.
3. Enter your Access Code. Current status is announced. If the control panel is turned on, the system responds with "Security system is on. To turn it off, please enter your Access Code." If the system is off, it responds with "Security system is off. To turn it on, please enter your Access Code."
4. To change system status, enter your Access Code again. The new status is announced.
5. When finished, press the [*] key twice. The system responds "Good-bye." If you do not hang-up the D168A it will automatically hang-up 30 seconds after the last touch-tone digit is received, even if you are still on the line.

Programming Form

The following form shows a description of and available selections for each option. Space is also provided for you to enter the selections for this installation.

Option	Description	Available Selections	Default	Selection
1	[Address 0] Arm/Disarm relay, momentary or alternating.	1 = Momentary 2 = Alternating	1	_____
2*	[Address 1] This option selects either the standard or custom setting for the momentary relay closure.	1 = Standard 2 = Custom	1	_____
3	[Address 2] This option tell the D168A how to interpret system status input.	1 = A voltage greater than 2 VDC = the panel is armed 2 = A voltage greater than 2 VDC = the panel is NOT armed	2	_____
4	[Address 3] Disarming capabilities of the Secondary Access Code.	1 = Secondary Access Code can only ARM the system 2 = Secondary Access Code can ARM and DISARM the system	1	_____
5	[Address 4] Selects the activation time of the control relay if the relay is selected by Option 1 as momentary and custom.	1 – 9, or 0 (0 = 10) Each number is multiplied by 0.75 seconds (e.g., 3 = 2.25 seconds).	1	_____
6	[Address 5] Number of rings before the D168A answers when panel is armed.	1 – 9, or 0 (0 = 10)	1	_____
7	[Address 6] Number of rings before the D168A answers when the panel is not armed.	1 – 9, or 0 (0 = 10)	2	_____
8	[Address 7] Selects Voice Message Bypass option. This allows a ring-pause-ring to access the module.	0 = Voice Message Bypass is disabled 1 = Voice Message Bypass is enabled (the required number of initial rings is set to the number entered)	1	_____
9	[Addresses 8 and 9] Local Access Code (this is the two digit code required to access the D168A from a telephone connected to the D168A).	Two digits, each 0 –9	55	_____
10	[Addresses 10 - 13] Maintenance Code.	Four digits, each 0-9	1234	_____

* If Option 2 is set to STANDARD, the relay activates for two seconds regardless of the selection for Option 5 each time the correct Access Code is entered. The D168A will not state the status of the panel until the end of the two-second relay closure. Also, the D168A will respond to a pulsing ARMED LED input with the message “*Security system is in alarm.*” The pulse rate range is from two to ten pulses per second.

If Option 2 is set to CUSTOM, the relay activation time is selected by Option 5. Also, the D168A will NOT respond to a pulsing ARMED LED input. The D168A will state the status of the panel as soon as a change is detected.

Return to Defaults

To return the D168A to its factory default settings:

1. Apply power to the D168A.
2. Momentarily short the pins of connector P1.

Command Menu

Here is a summary of D168A commands:

- Entering Program Modes:
 - [*] + [9] + (any code) - Accesses New Code Program Mode.
 - [*] + [0] + (Maintenance Code) - Accesses the Programming Mode.

- Programming Mode Control:
 - [*] - Returns to Option 1 without saving changes.
 - [*] + [#] - Saves all changes and exits Programming Mode.
 - [*] + [*] - Exits Programming Mode without saving any changes.
- Normal Operating Mode:
 - [*] + [*] - Hangs up the D168A.

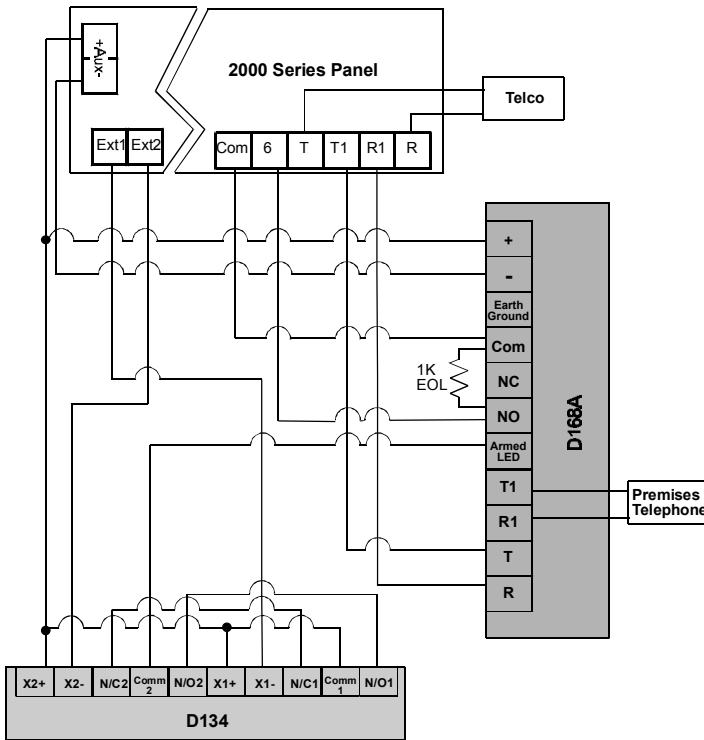


Figure 1: D168A Wiring Using Two Outputs.
(Announces alarms and arming states.)

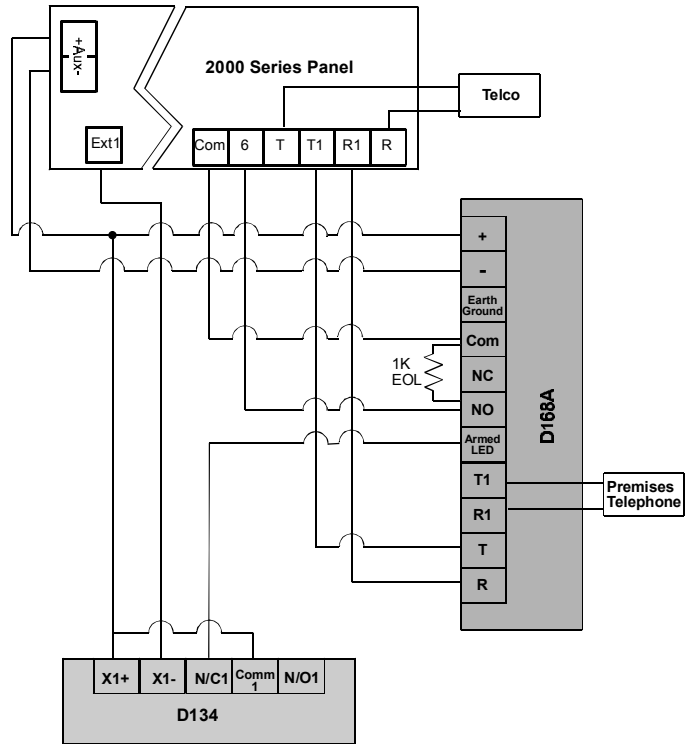


Figure 2: D168A Wiring Using One Output.
(Announces arming states only.)

USER REFERENCE

- My panel's telephone number is _____.
- To call my panel from an internal telephone, press [*] _____.
- My panel answers the telephone in _____ rings if it is armed.
- My panel answers the telephone in _____ rings if it is NOT armed.
- My Primary Access Code is: _____.
- My Secondary Access Code is: _____.

Checking and Changing System Status

1. Contact panel (enter the Local Access Code or dial the panel's phone number).
2. After the prompt enter your Access Code.
3. After the system's status is announced, enter your Access Code again to change the panel's armed status or silence an alarm. NOTE: When an alarm is silenced, no change is announced (arming state is not changed); enter the Access Code a second time to change the arming state.
4. Press [*][*] to end the call.

Changing Access Codes

1. Contact panel (enter the Local Access Code or dial the panel's phone number).
2. Press [*] [9].
3. After the prompt enter the OLD Access Code
4. After the prompt enter the NEW four-digit Access Code.
5. After the new Access Code is repeated to you, press [*][*] to end the call.

(INSTALLER: Photocopy or cut out the above User Reference and provide it to the security system owner.)



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