

# QUICKSTART "BASIC" HARDWIRE TRACKER EXPANSION BOARD TO RELAY 2/WIEGAND 2 GUIDELINES

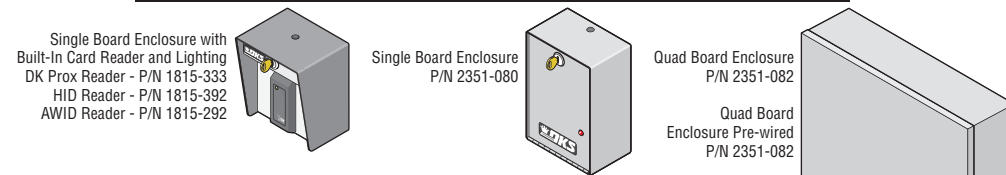
For COMPLETE installation instructions, please refer to the HARDWired Installation/Owner's manual P/N 2358-065.



120 S. Glasgow Avenue  
Inglewood, California 90301  
U.S.A.

## Tracker Expansion Board Enclosure Options

This access control equipment must be installed inside of a controlled, protected or restricted area to comply with UL 294 certification.



**CONTROLLED AREA:** A room, office, building, facility, premises, or grounds to which access is monitored, limited, or controlled.

**PROTECTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and/or controlled, whereby the authorized person of the Access Control System may grant access to non-authorized persons.

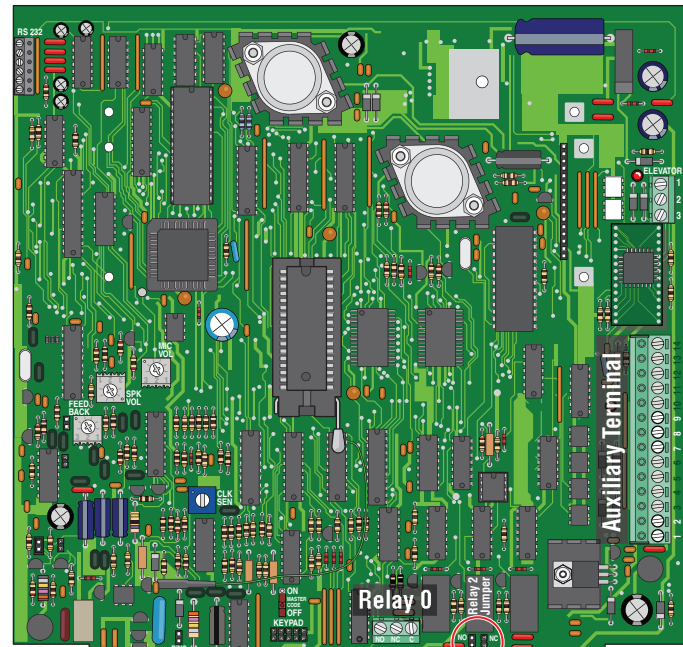
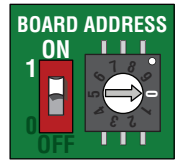
**RESTRICTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and strictly controlled, whereby only the administrator of the Access Control System shall issue credentials that will lead to access.

### Tracker Expansion Board Notes:

All tracker expansion boards can be wired with desired options for their access points like shown on tracker expansion board address 3.

Communication line will continue for each board like shown on tracker expansion board address 4.

Board addresses **MUST** start at 3 and continue thru board address 10 (up to 12 boards using Zone Addresses) if required.

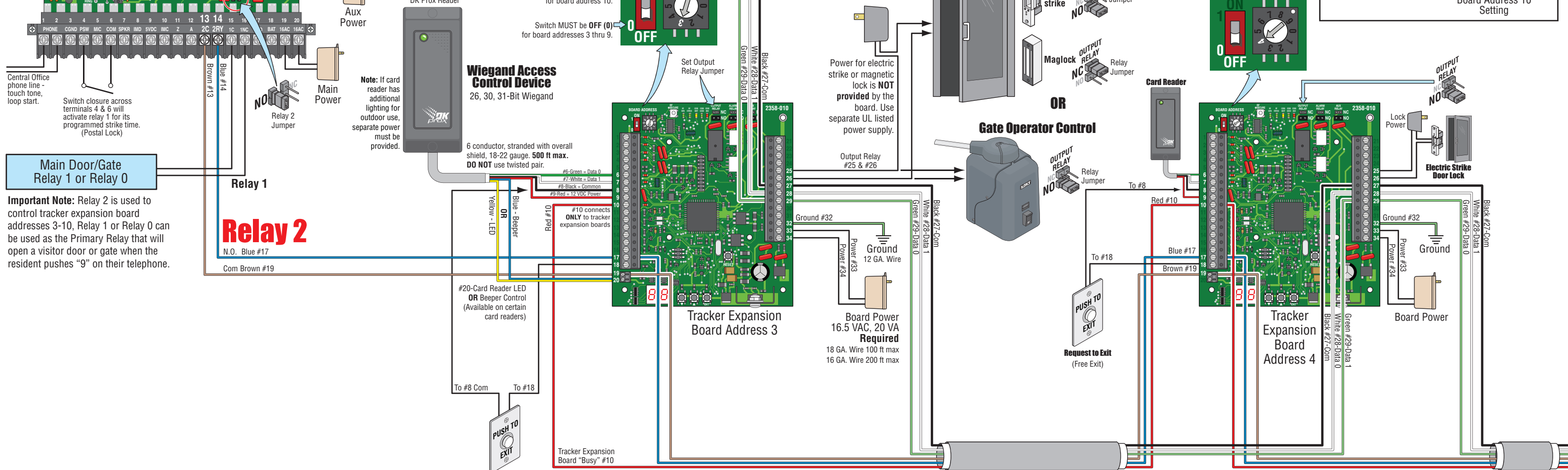


Access Control System Board

**Auxiliary Terminal**  
Black #9-Com  
White #8-Data 1  
Green #7-Data 0

## Communication 2

Tracker expansion boards connected to Wiegand 2 will activate Relay 2 in the access control system.



**Main Door/Gate Relay 1 or Relay 0**

**Important Note:** Relay 2 is used to control tracker expansion board addresses 3-10, Relay 1 or Relay 0 can be used as the Primary Relay that will open a visitor door or gate when the resident pushes "9" on their telephone.

## Relay 2

N.O. Blue #17  
Com Brown #19

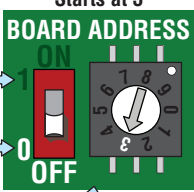
**Card Reader**  
DK Prox Reader

**Wiegand Access Control Device**  
26, 30, 31-Bit Wiegand

Note: If card reader has additional lighting for outdoor use, separate power must be provided.

6 conductor, stranded with overall shield, 18-22 gauge. 500 ft max. DO NOT use twisted pair.

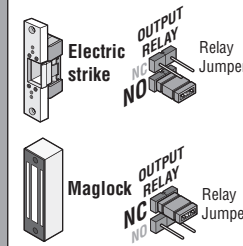
First Board Address Starts at 3



Switch MUST be ON (1) for board address 10.  
Switch MUST be OFF (0) for board addresses 3 thru 9.

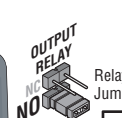
Set Output Relay Jumper

**Door Lock Control**



OR

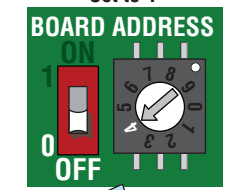
**Gate Operator Control**



Power for electric strike or magnetic lock is **NOT** provided by the board. Use separate UL listed power supply.

Output Relay #25 & #26

Second Board Address Set to 4



OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

OUTPUT RELAY NO

## Typical BASIC Tracker Expansion Board Wiring Options for Access Point

NO "optional" tracker features or battery back-up wiring shown, see manual for details.

## Communication Line

Up to 12 tracker expansion boards can be HARDwired to relay 2/wiegand 2 at the access control system.

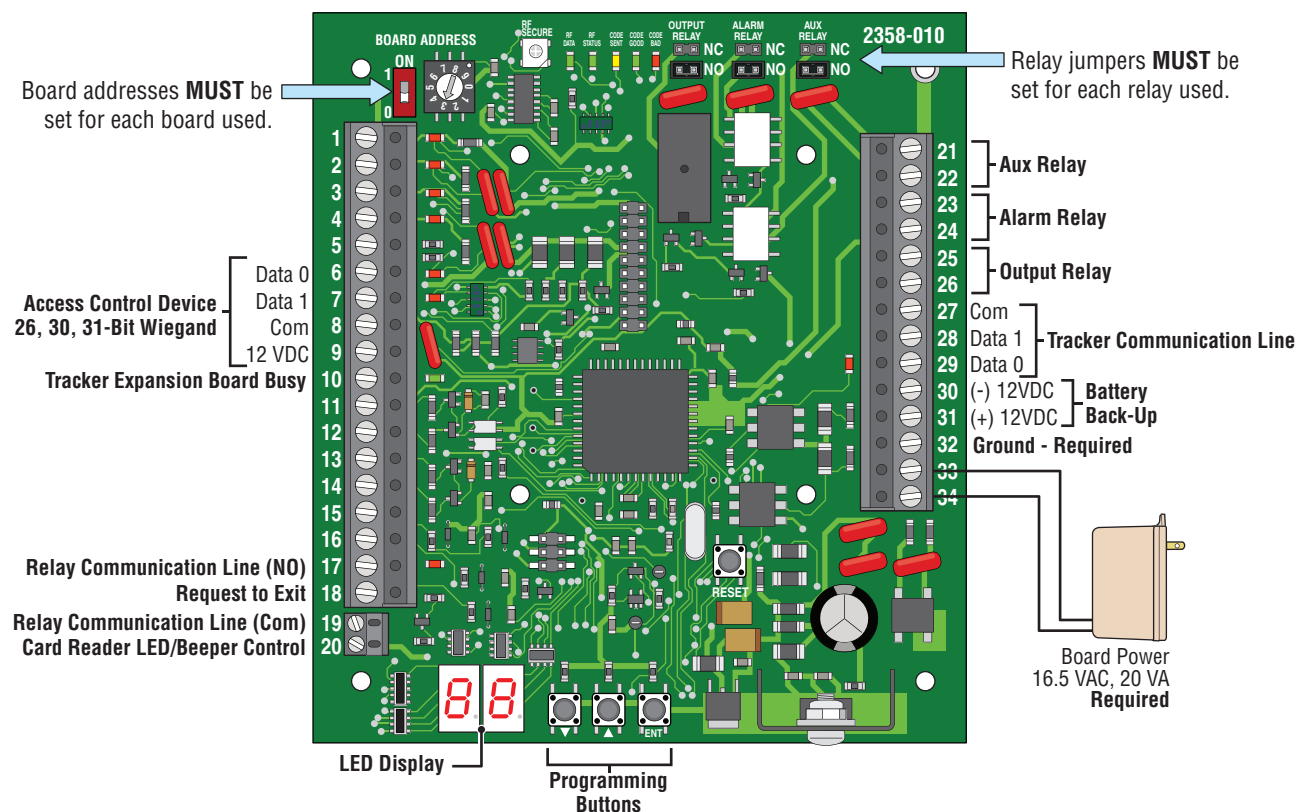
**IMPORTANT:** The maximum distance for a tracker expansion board HARDwire run is 4000 feet TOTAL (1 to 12 boards can be in a HARDwire run). The farthest board can be NO more than 2000 feet away from the access control system. See manual for multiple tracker expansion boards layout limitations.

# QUICKSTART PROGRAMMING OPTIONS ON EACH HARDWIRED TRACKER EXPANSION BOARD GUIDELINES



120 S. Glasgow Avenue  
Inglewood, California 90301  
U.S.A.

For COMPLETE programming instructions, please refer to the HARDWIRED Installation/Owner's manual P/N 2358-065.



## Programming Options on EACH Tracker Expansion Board

Rev-E 1-13-14

Program Step	Description	Options	Selection Number	Function	Factory Default
1	Door Strike Timer	00 - 99	00	<b>Sets Strike Time for output relay (term 25 &amp; 26)</b> 0.25 second strike time Strike time in 1-second increments	01 - 1 second
2	Free Exit Timer, Strike Time	00 - 99	00	<b>Set Strike Time for RX (Request to Exit) of output relay (input at term 18)</b> 0.25 second Egress Strike time Egress Strike time in 1-second increments	01 - 1 second
3	Door Ajar Timer	00 - 99	00	<b>Timer starts when valid access has been granted.</b> 1 second Door Ajar Timer Timer set in 5-second increments: 01 = 5 seconds, 10 = 50 seconds	12 - 60 secs
4	Aux Relay Timer	00 - 99	00	<b>Timer setting for Aux Relay activation in 5-second increments</b> 1 second Door Ajar Timer Timer set in 5-second increments: 01 = 5 seconds, 10 = 50 seconds	12 - 60 secs
5	Free Exit Timer, Aux Relay	00 - 99	00	<b>Set Strike Time for RX (Request to Exit) of Aux relay (ONLY available if Dual Door Mode step 12 is ON)</b> 0.25 second Egress Strike time Egress Strike time in 1-second increments	01 - 1 second
6	Free Exit, No Strike	0 or 1	0	<b>Set RX (Request to Exit) function. Activate Output Relay or do not Activate Output Relay</b> Do Not Activate Output Relay or Reader Beeper/LED when RX input is received	1 - Activate
7	Not Used				
8	Door Contact Switch Logic	0 or 1	0	<b>Sets type of Door Switch contacts</b> N.O. contact from door switch with Door Closed (Circuit Open - CO) N.C. contact from door switch with Door Closed (Circuit Close - CC)	0 - N.O.
9	Auto Relock	0 or 1	0	<b>Turns on Auto Relock function (not available if Dual Door Mode, step 12 is ON)</b> Output Relay is activated for Strike Time Door Contact Switch required. If door returns to closed position during Strike Time door will "relock" after 1 second, even if strike time has not expired.	0 - Disabled
10	Beeper / LED Hold Open	0 or 1	0	<b>Sets how BEEPER or LED will function during Hold Open</b> When Hold Open occurs, Beeper or LED is active only during Strike Timer When Hold Open occurs, Beeper or LED will remain active during Hold Open	0
11	Hold Open or Hold Egress functions	0 or 1	0	<b>Sets how Aux &amp; Alarm Relay responds during Hold Open or Hold Egress situation</b> No Aux Relay functions. Alarm will be in "Reset". If Alarm Relay is set for "integral" mode, Alarm relay will not activate. If Alarm Relay set for "Bypass" mode, Alarm Relay will activate for Hold Open period or Extended Egress Hold. Aux Relay will function for all settings. If Alarm Relay is set for "integral" mode, Alarm relay will not activate. If Alarm Relay set for "Bypass" mode, Alarm Relay will activate for Hold Open period or Extended Egress Hold.	0 - No relay functions
12	Dual Door Mode	0 or 1	0	<b>Sets Tracker to function as 2 Access Points (2 tracker addresses)</b> Disabled, Tracker functions as single access point Dual Mode: Tracker functions as set board address and next sequential address Card Read will be sent to controller as set board address, access is granted or denied Card then sent as set address +1, access granted or denied. Aux Relay becomes 2nd output relay. All other Aux Relay functions disabled. Door Contact switch becomes RX (Request to Exit) for 2nd address.	0 - Disabled
13	Not Used				
14	Not Used				
15	Aux Relay Functions	0 - 12	0	<b>Sets function for Aux Relay</b> 0 Aux Relay Disabled 1 No Door Ajar Timer: Requires Door Contact Switch. Aux Relay activates when Door Not Closed. 2 No Door Ajar Timer, Pulse: Requires Door Contact Switch. Aux Relay "pulses" when Door Not Closed. 3 Door Ajar Timer: Requires Door Contact Switch. When door opens, start Door Ajar Timer. When timer expires Aux Relay activates for Aux Relay timer or until door closes, whichever occurs first. 4 Door Ajar Timer, Pulse: Requires Door Contact Switch. When door opens, start Door Ajar Timer. When timer expires Aux Relay Pulses for Aux Relay timer or until door closes, whichever occurs first. 5 Door Ajar, Pulse warning the ON: Requires Door Contact Switch. When door opens, Pulse Aux Relay and start Door Ajar Timer. When timer expires Aux Relay ON for Aux Relay timer or until door closes, whichever occurs first. 6 Door opens for any reason, Start Door Ajar timer and pulse Aux Relay. When Door Ajar timer expires, start Aux Timer and continue Pulsing Aux Relay. 7 When Door Closes or both timers expire, turn off Aux Relay 7 Aux Relay as 2nd Alarm Relay: Aux Relay will mirror Alarm Relay functions. 8 Aux Relay as 2nd Alarm Relay, PULSE: Aux relay will Pulse during any Alarm Relay activation. 9 Good Card: Aux Relay will activate for Aux Relay timer for any Access Granted Card 10 Any Card: Aux Relay will activate for Aux Relay Timer when any card has been presented. 11 Bad Card: Aux Relay will activate for Aux Relay timer when a card has been denied 12 Warn before Hold Open or Release of Hold Open: Aux relay will activate for Aux Relay timer when scheduled Hold Open begins or ends. Output Relay will be delayed until Aux Timer expires. <b>DO NOT</b> set Aux Timer above 60 seconds in this mode.	0 - Disabled
16	Alarm Relay Functions	0 - 4	0	<b>Sets function for Alarm Relay</b> 0 Aux Relay Disabled <b>Door Operation Note:</b> <b>PROPER Condition:</b> The access control system OR request to exit device HAS activated the OUTPUT RELAY on the tracker expansion board and the door contact switch is CLOSED (Door is OPEN). This indicates that the door has been PROPERLY OPENED. <b>FORCED Condition:</b> The access control system OR request to exit device has NOT activated the OUTPUT RELAY on the tracker expansion board and the door contact switch is CLOSED (Door is OPEN). This indicates that the door has been FORCED OPENED. 1 <b>Bypass Mode:</b> Alarm Relay provides "Bypass" to Alarm Door Switch. With proper door input (access or egress) activate Alarm Relay, start Strike timer and Door Ajar timer. When Door Ajar timer expires, deactivate Alarm Relay. If second Door Contact Switch is provided, generate transaction for Door Ajar and Door Closed following Door Forced condition. Also generate transaction for Door Forced condition. 2 <b>Integral Mode, Door Ajar Timer:</b> Door Contact Switch connected to Tracker, Alarm Relay provides connection directly to Alarm System. When door is opened for any reason, start Door Ajar timer. When Door Ajar timer expires and Door is still OPEN, activate Alarm Relay. Reset when door closes. 3 <b>Integral Mode, Proper and Forced condition:</b> Door Contact Switch connected to Tracker, Alarm Relay provides connection directly to Alarm System. With proper door input (access or egress) start Strike timer and Door Ajar timer. When Door Ajar timer expires and Door is still OPEN, activate Alarm Relay. Reset when door closes. 4 <b>Gate Alarm Function:</b> Alarm Relay will activate for 1 second when tracker board receives a "Gate Forced" or "Gate Obstructed" transaction from the operator control board.	0 - Disabled
17	Not Used				
18	Not Used				
19	Reset to Factory Defaults		5	<b>Sets all parameters to Factory Default</b>	
20	View RF POT Setting	Adjustable Setting		<b>Sets maximum amount of allowable signal strength loss</b>	
21	View RF Signal Loss	Displays on LED		<b>Displays current signal loss between Base and Tracker.</b>	
22	Card Code Forwarding	0 or 1		<b>Sets Wireless Tracker to act as Repeater</b> ONLY USE AS DIRECTED BY DOOR KING TECH SUPPORT 0=Repeater Mode OFF 1=Repeater Mode ON	0 - Off

## Basic Programming Sequence on EACH Tracker Expansion Board

Follow these basic steps to perform desired programming. See programming options table for PROGRAM STEPS.

1. Press ▼▲ arrow buttons or ENT button to **ACTIVATE** LED display.
2. Press ▼▲ arrow buttons again to **CHOOSE** desired **PROGRAM STEP**.
3. Press ENT button to **ENTER** desired **PROGRAM STEP**.  
(LED display number will blink after ENT button has been pressed).
4. Press ▼▲ arrow buttons to choose **SELECTION NUMBER** for desired function of program step.
5. Press ENT button to program **SELECTION NUMBER** for desired function of program step.  
(Function has now been programmed into board).
6. Press ENT button again to exit programming **OR** after 10 seconds, board will automatically exit programming.

**Note:** Repeat these steps for all other desired programming functions.

**Each** tracker expansion board will have to be **INDIVIDUALLY** programmed with desired functions.

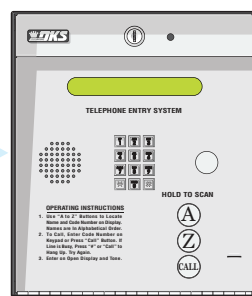
After all tracker expansion boards have been programmed.....

## Manage the Complete Access Control System from Your PC

Refer to the **DKS Remote Account Manager Software** to program and manage the complete system.



Your PC connected to the access control system. Either IM Server **OR** TCP/IP **OR** RS-232 **OR** Modem to Modem Connection. See **PC Programmable Telephone Entry and Access Control Systems Installation/Owner's manual** for more information about connection options.



### IMPORTANT Display Decimal Point Note

