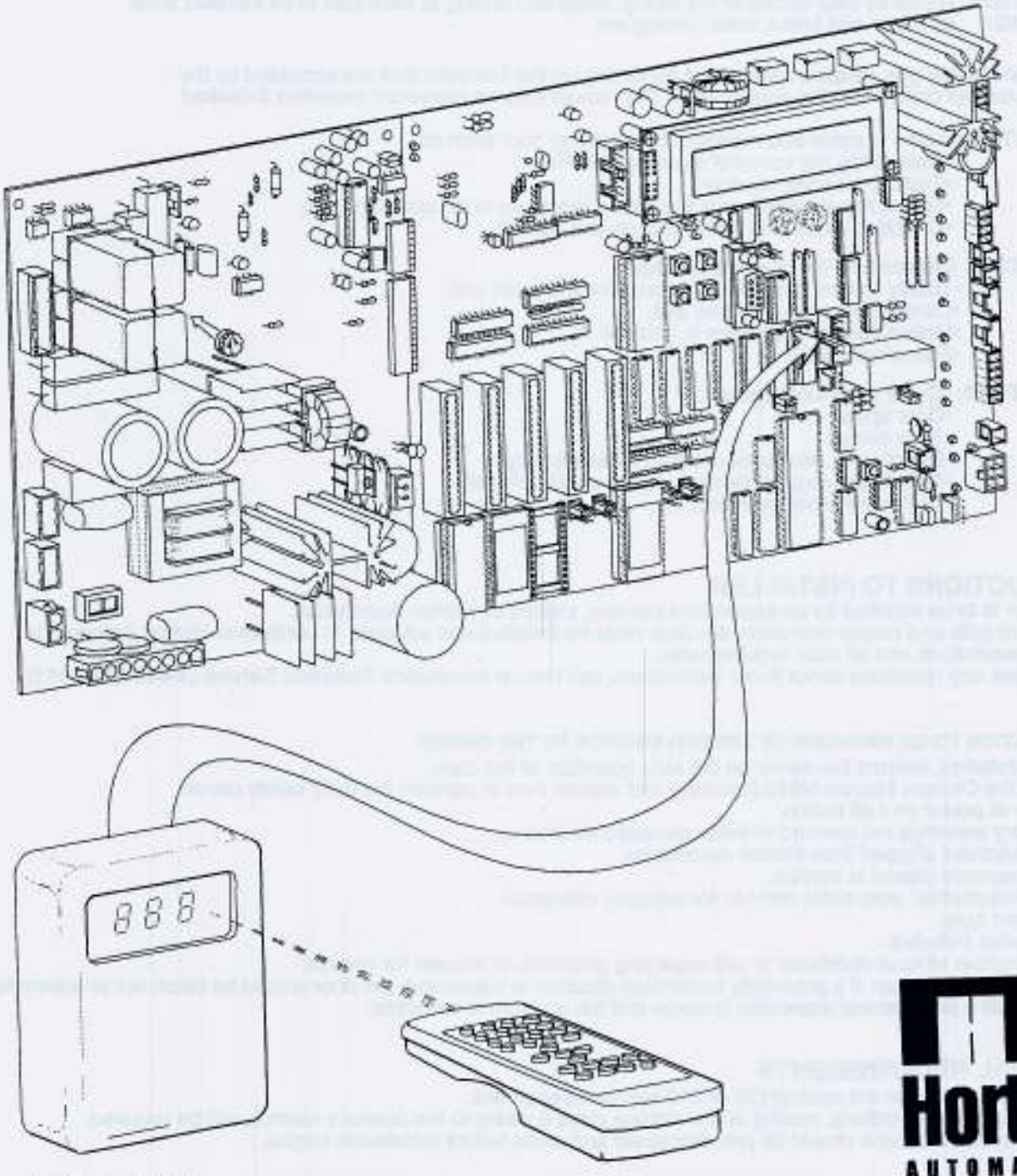
C9150-2 / 3 Control

for Series 9200 4-Wing 2-way Security Revolving Door

SETUP INSTRUCTIONS & TROUBLESHOOTING

To be used with G918 Installation Instructions



H915, JAN 2003

Horton AUTOMATICS

OVERVIEW OF THE C9150 2-WAY SECURITY REVOLVING DOOR CONTROL

This manual contains very detailed instructions for successful setup and adjustment of the C9150 control. All wiring and initial run of the door can be accomplished by following the directions in sections 1 through 14.2. The remainder of the manual contains reference material for options and features that may not be required in all applications.

The concise table of contents will be useful to find the pertinent section of the instructions required for each application.

The C9150 control offers greater flexibility than any revolver control offered before.The operation of the door can now be changed with the keyswitch or remote control. Previously, these functions were changed by changing the firmware (eprom chip). The C9150 has expansion slots for additional input, output or specialized cards that can be added to expand the capabilities of this versatile control.

THIS MANUAL CONTAINS THE FOLLOWING SECTIONS:

BASIC SETUP & TESTING: A step by step outline of the wiring, setup and testing of each part to be installed such as motor and brake, mats, nosing etc.

The sections below give detailed instructions on setting up the functions that are accessed by the keyswitch,remote control and the control itself. The remote may be password protected if desired.

DIAGNOSTICS: Used to setup and maintain the revolving door such as...
- •Calculating the speed of the door in RPM's
- •Testing the voice module.
- •Global relearn which sets the safety sensitivity to an optimum level.
- •Checking motor and brake voltage and current.

MODE: Defines how the door will be used
- •Totally secure, card reader access for entry and exit.
- •Card reader entry with free exit.
- •Motion detector activation in and out
- •Freewheel mode.

PARAMETERS: Cover such functions as...
- •Door speed
- •Time delays
- •Reaction to, and force required for safety stops.
- •Adjust card request storage, safety stops befor idle and many other variables.

INSTRUCTIONS TO INSTALLER

- •This door is to be installed by an experiencd installer, trained by Horton Automatics.
- •To ensure safe and proper operation, the door must be installed and adjusted to conform to Horton Automatics recommendations and all code requirements.
- •If there are any questions about these instructions, call Horton Automatics Technical Service (**1-800-531-3111**).

INFORMATION TO BE PROVIDED BY THE DISTRIBUTOR TO THE OWNER

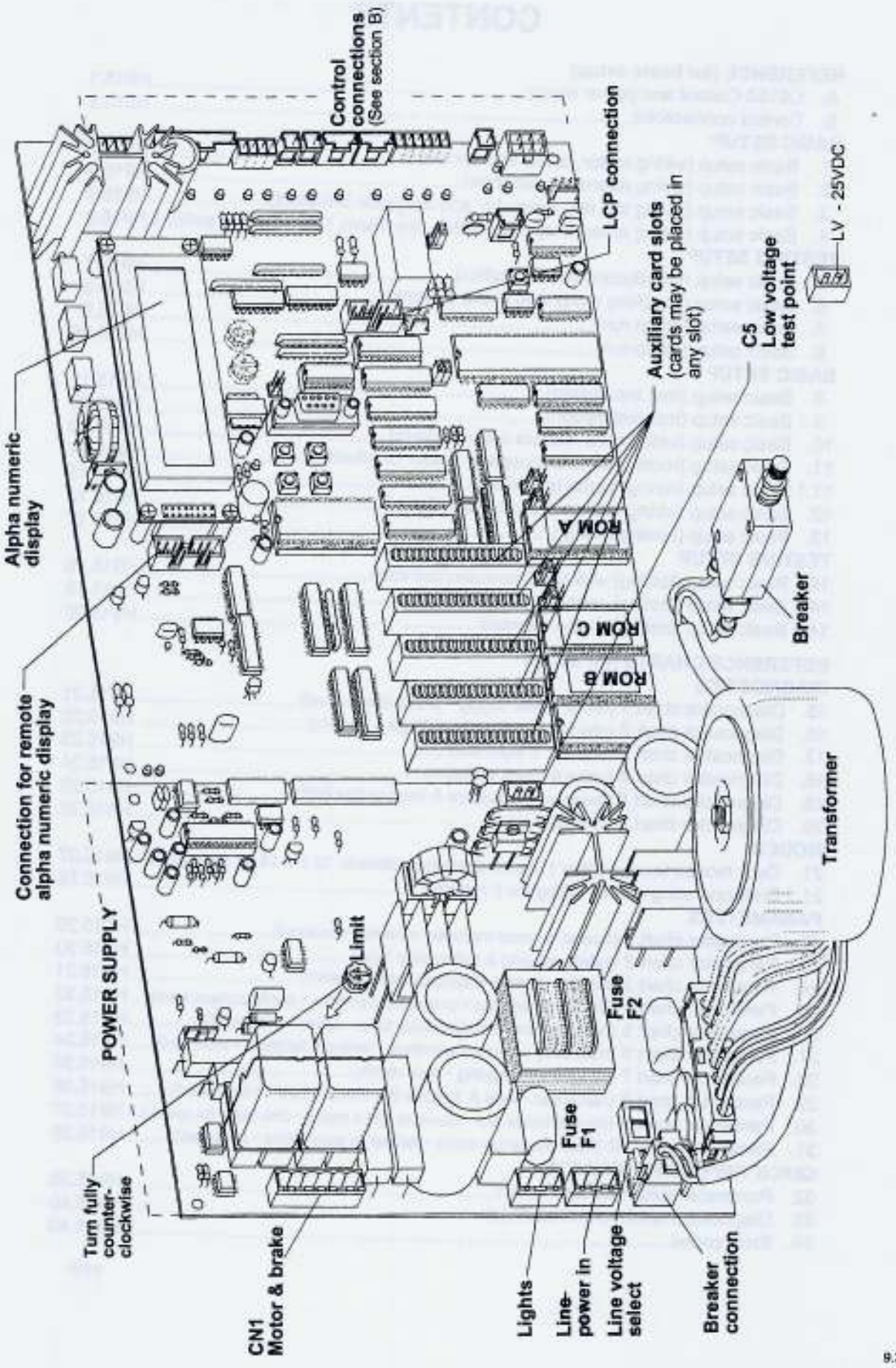
- •After installation, instruct the owner on the safe operation of the door.
- •Present the Owners Manual M910 (security) and explain how to perform the daily safety check.
- •Location of power on / off switch.
- •Necessary warnings not covered in these general instructions.
- •Date equipment shipped from Horton Automatics.
- •Date equipment placed in service.
- •Horton Automatics' work order number for warranty reference.
- •Equipment type.
- •Accessories included.
- •Phone number of local distributor to call regarding problems or request for service.
- •**Give caution** to owner: If a potentially hazardous situation is suspected, the door should be taken out of automatic service until a professional inspection is made and the problem is corrected.

GENERAL REQUIREMENTS

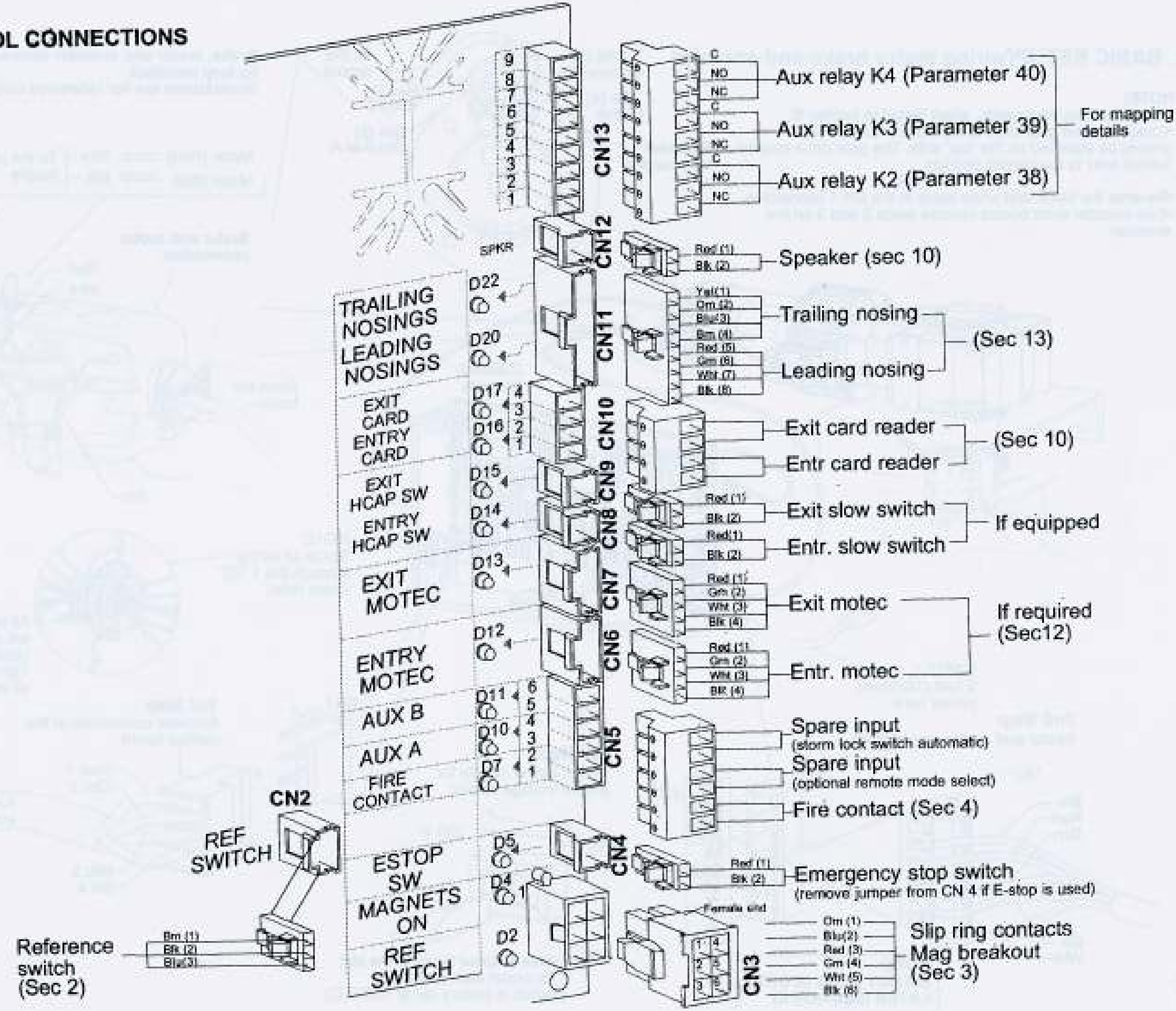
- •Power:(Switchable on the control)120 or 240 service to each unit.
- •For remote switch locations, routing of low voltage class II wiring to the operator controls will be required.
- •Remote switch locations should be predetermined and wired before installation begins.

CONTENTS

A. C9150 CONTROL AND POWER SUPPLY



B. CONTROL CONNECTIONS

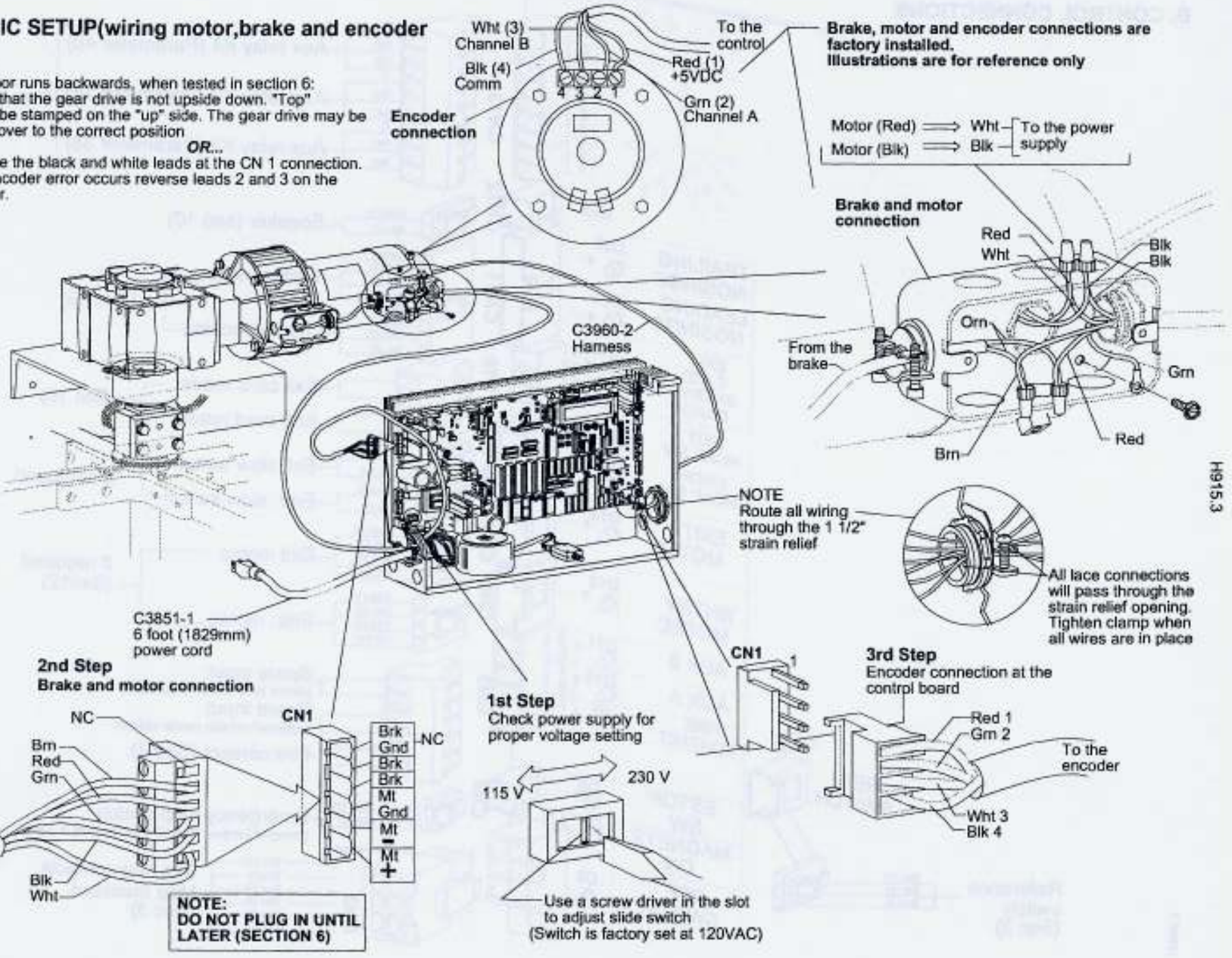


1. BASIC SETUP(wiring motor,brake and encoder

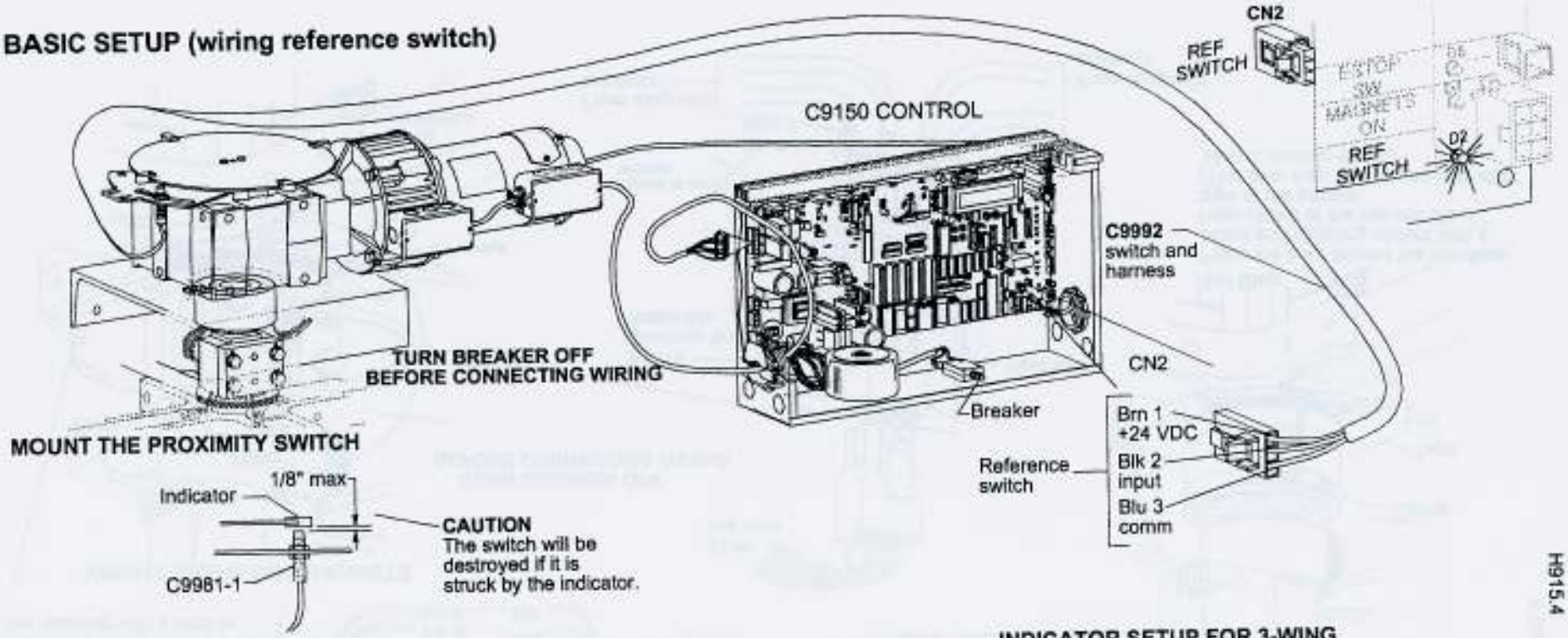
NOTE:
If the door runs backwards, when tested in section 6:
•Check that the gear drive is not upside down. "Top" should be stamped on the "up" side. The gear drive may be turned over to the correct position

OR...

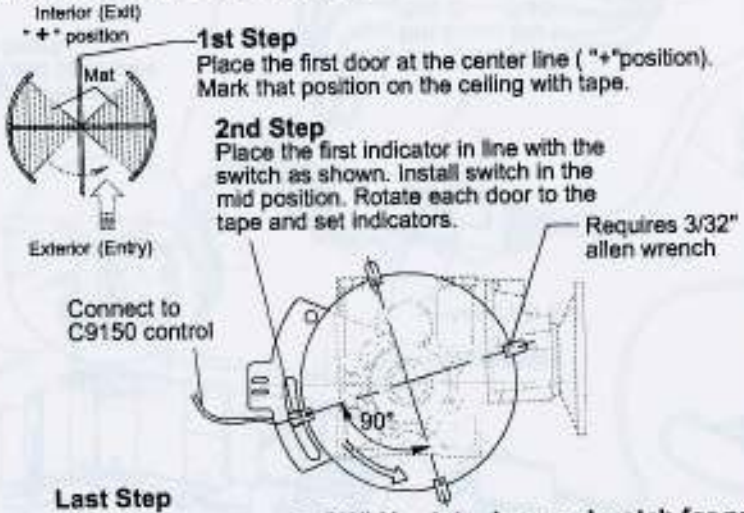
•Reverse the black and white leads at the CN 1 connection.
•If an encoder error occurs reverse leads 2 and 3 on the encoder.



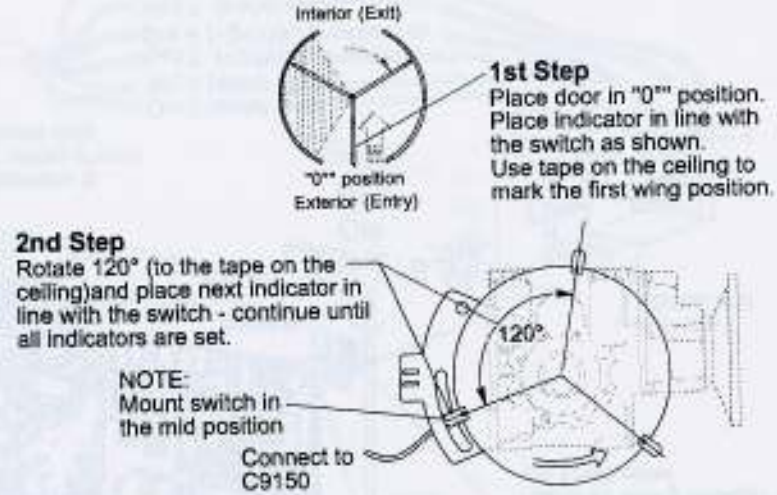
2. BASIC SETUP (wiring reference switch)



INDICATOR SETUP FOR 4-WING



INDICATOR SETUP FOR 3-WING



Last Step

NOTE: After setup,SLOWLY rotate door and watch for proper alignment and no contact at all indicators.
Turn breaker on and watch for the LED, D2, (see above) to light at each quarter position

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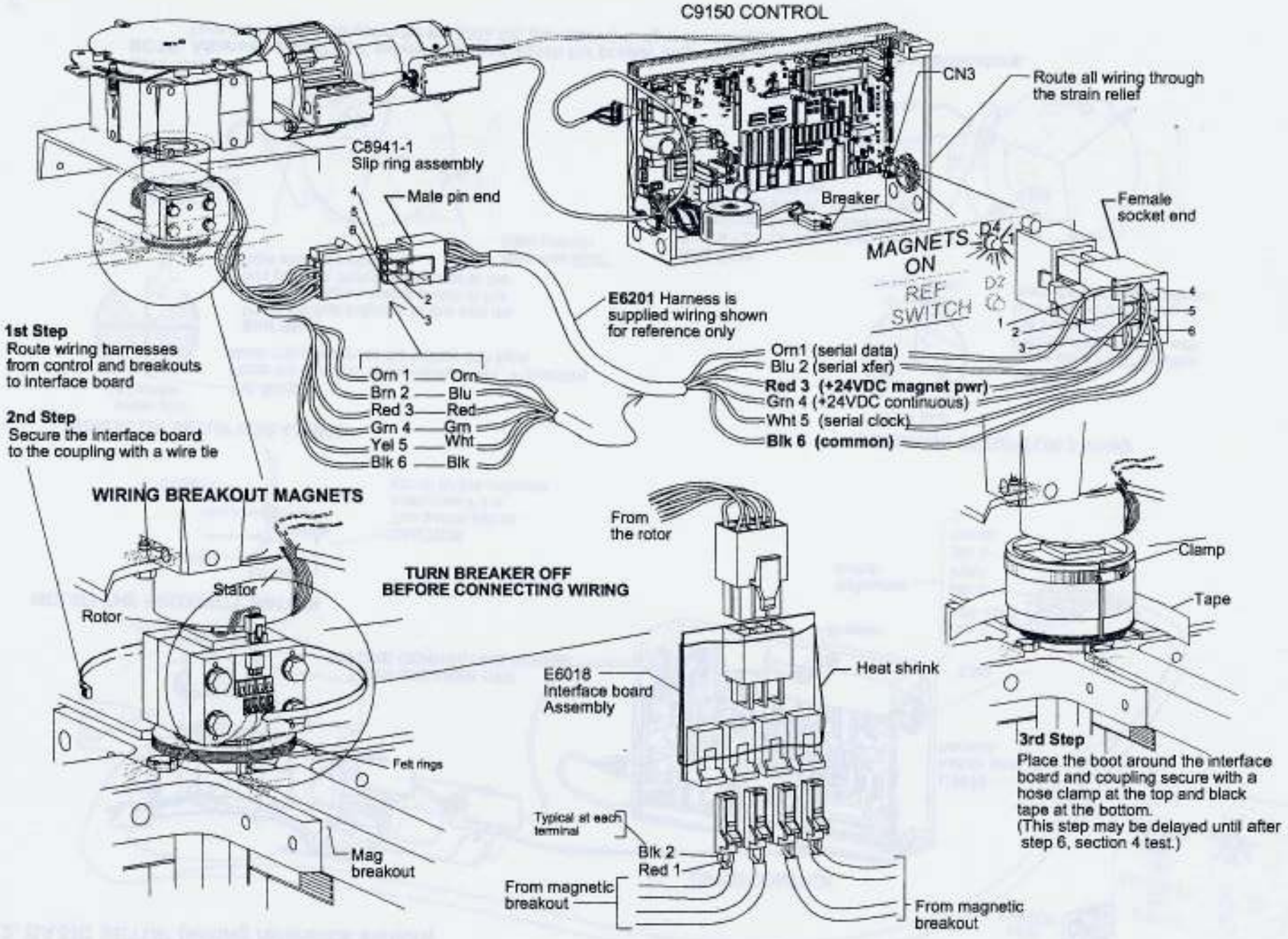
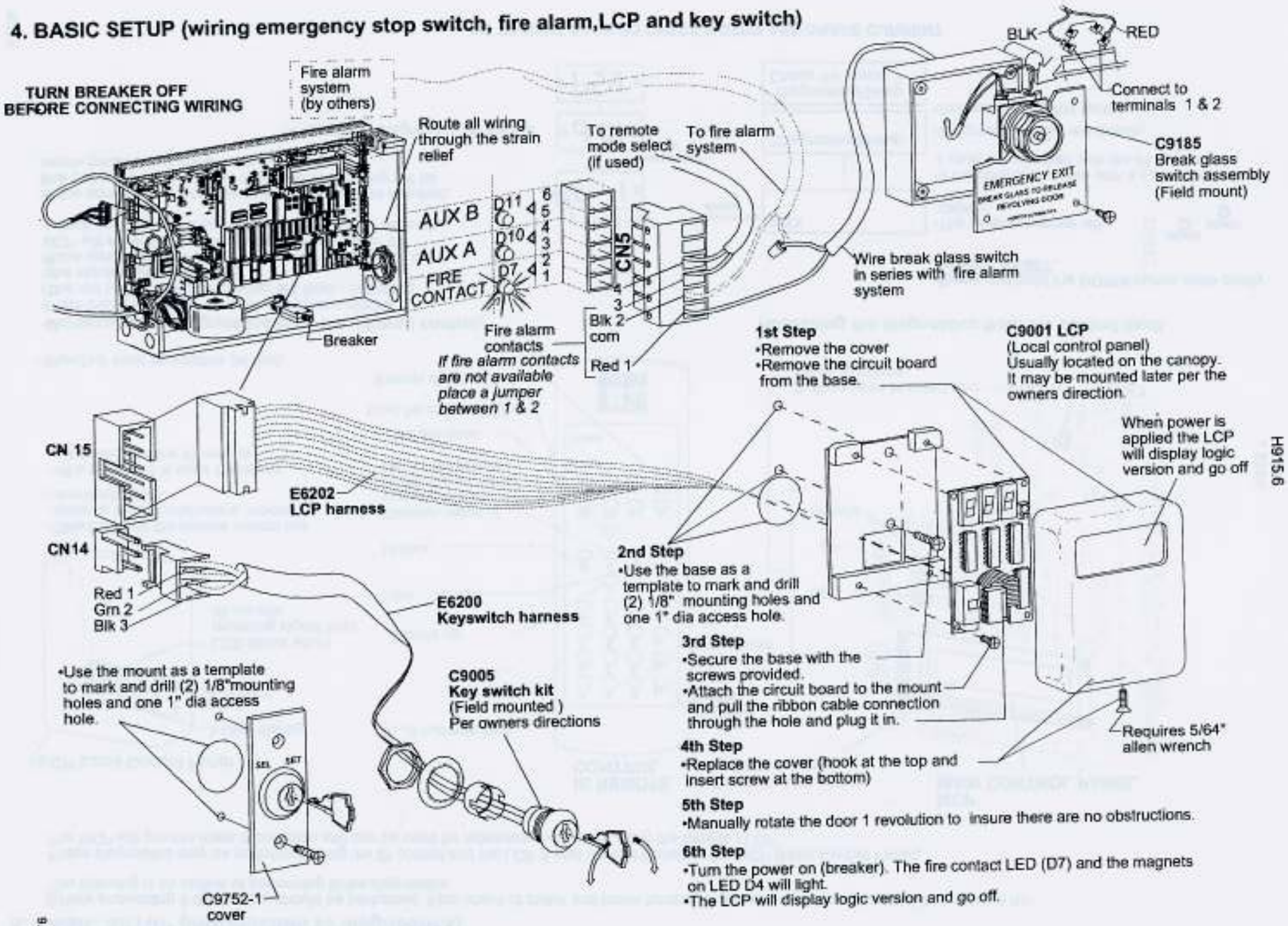
3. BASIC SETUP (wiring the slip ring assembly and magnetic breakout)



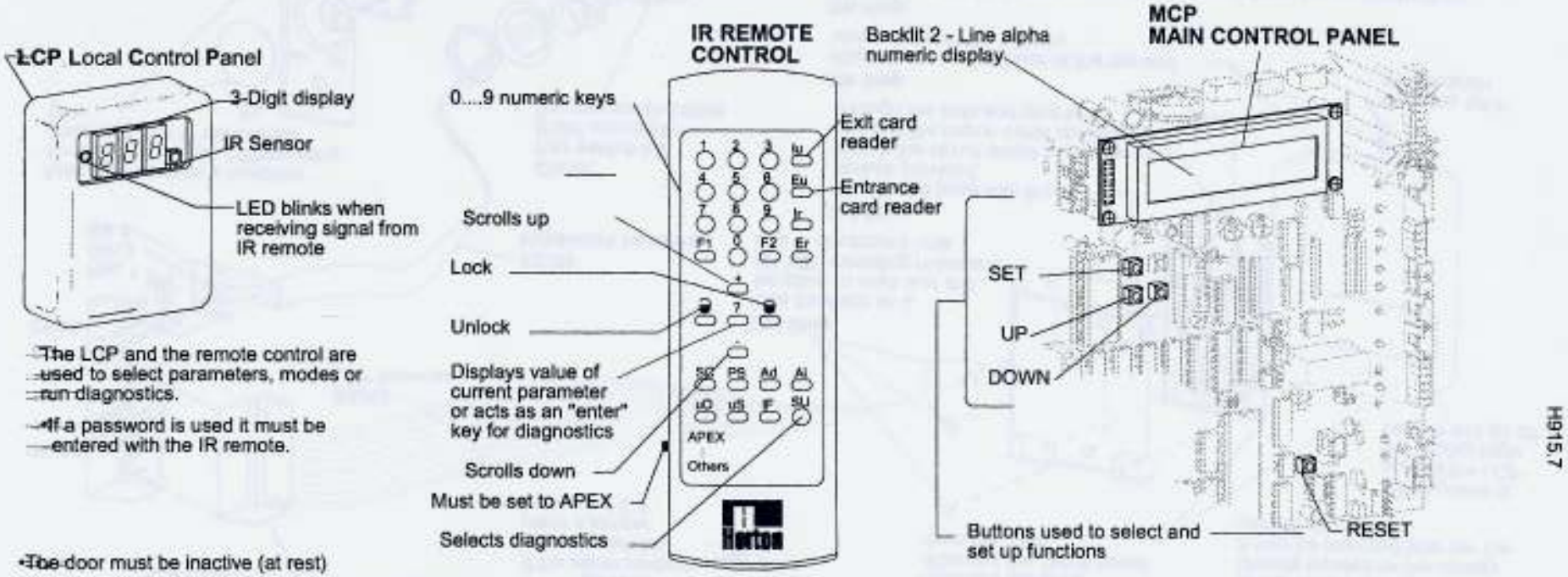
4. BASIC SETUP (wiring emergency stop switch, fire alarm,LCP and key switch)



5. BASIC SETUP (introduction to diagnostics)

Before proceeding 3 diagnostics should be performed. Spot check of motor and brake function to insure proper operation and then a setup run.
The following is an outline of performing those diagnostics.

- These diagnostics may be performed using the IR control and the LCP (Local Control Panel) or the MCP (Main Control Panel).
- The MCP will provide more information and can be used for reference even when using the remote / LCP.



The LCP and the remote control are used to select parameters, modes or run diagnostics.

If a password is used it must be entered with the IR remote.

The door must be inactive (at rest)

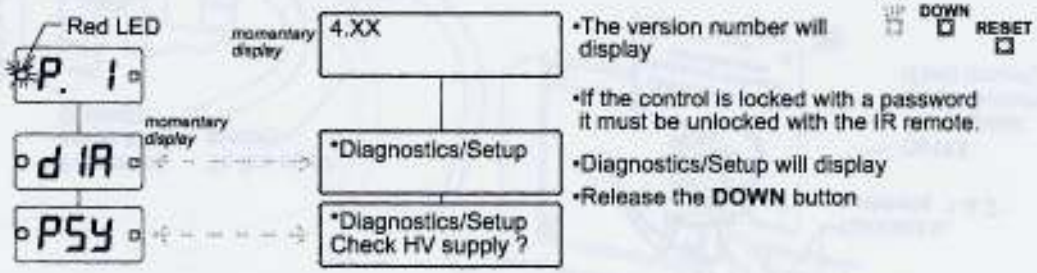
Accessing the diagnostics from the infrared control.

Point the IR remote at the LCP and press unlock
The red LED on the LCP display will flash - indicating the signal is being received.
If the control was previously locked with a password, the LCP will show UnL to indicate that it is waiting for the unlock code. Enter the correct password within 5 seconds.

If the correct password was entered or none was required, the parameter menu will be displayed. The display will be some parameter number such as P. 1

Press **"SU" diagnostics** will appear

Accessing the diagnostics from the control itself.



- **Press** and **hold** the **DOWN** button while briefly pressing **RESET**.
- The version number will display
- If the control is locked with a password it must be unlocked with the IR remote.
- Diagnostics/Setup will display
- Release the **DOWN** button

GO TO NEXT PAGE TO CHECK MOTOR AND BRAKE CURRENT

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6. BASIC SETUP (checking motor and brake current)

PLUG IN CN1(motor and break connection) as shown in basic setup 1.
If the door runs backwards see section 1.

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

CAUTION: DOOR WILL MOVE AT SPEED SET IN PARAMETER 1 (default 60 volts)

The order in which the diagnostics are arranged

1 PSY
2 SPd
3 drU
4 br 1
5 br2
6 EnC
7 inP
8 uo I
9 EoU
10 r 10
thru
14 r 14
15 SSL
16 SEt

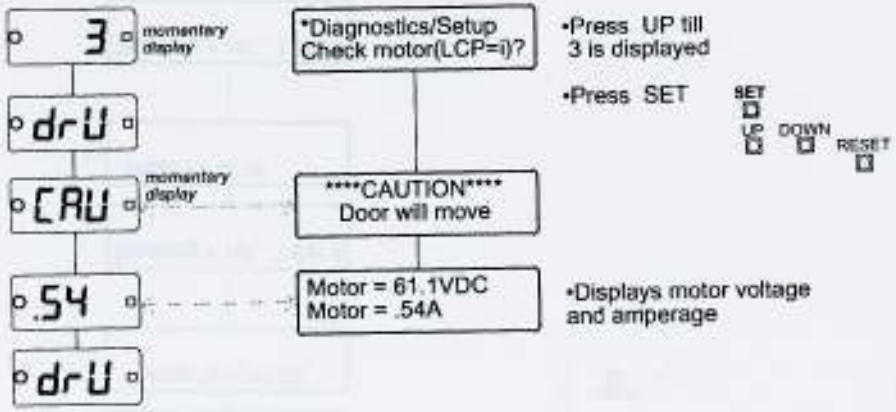
CHECK MOTOR CURRENT

- Press 3 or "+" up "-" down until 3 is displayed
- Press "?"
- Displays motor amperage
- Useful for detecting mechanical binds
- checking overall performance of the doors mechanics.

3

MOTOR CURRENT SHOULD BE .50A TO 1.0A.
Higher than normal current suggests a mechanical bind or "rarely" an electrical problem

- Press **SU** again to exit



CHECK BRAKE CURRENT (This test checks the brake (lock) mechanically and electrically)

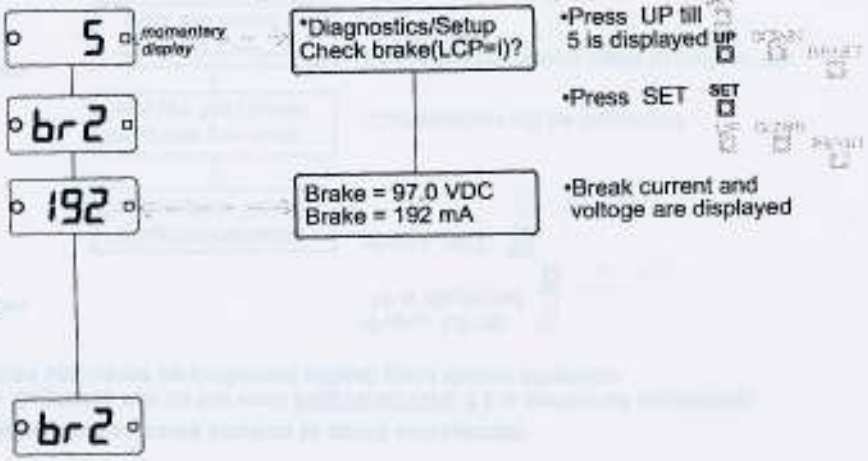
- Press 5 or "+" up "-" down until 5 is displayed
- Press "?"
- Brake current is displayed.

5

BRAKE CURRENT SHOULD BE 180ma TO 200ma.
Low brake current indicates an open connection. Check motor / brake connection at CN1 section 1 basic setup.

Push the door to make sure the brake is physically locked.

- Press **SU** again to exit



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7. BASIC SETUP (setup run)

Before installing any additional devices, a setup run should be performed. The setup run sets factory default settings to all parameters, zeros all counters and sets safety sensitivity settings.

Accessing the diagnostics from the infrared control. **Accessing the diagnostics from the main control panel.**

COMPLETE SETUP

CAUTION: The door will move on its own when this routine is initiated! use extreme coution to avoid entrapment.

This diagnostics allows a complete control setup to be performed. This diagnostic can be the most **DESTRUCTIVE** if it is performed accidentally. This diagnostic should always be performed when initially installing a door and **never** be performed without good reason otherwise.

16

Infrared control	Display	Main control panel display	Main control panel
•Press 16 or "+" up "-" down Untill 16 is displayed	16 (momentary display)		•Press UP till 16 is displayed
•Press "?"	SEt	"Diagnostics/Setup Do Complete Setup?	•Press SET
•ConFirmation will be requested.	CnF	Setup:are you sure Yes:Up/+ No:Down/-	•Confirmation will be requested
•Press the "+" key again to perform the diagnostic. •To **cancel** the setup, press the "-" key.	CAU (momentary display)	****CAUTION**** Door will move-	•Press the **UP** button again to perform the diagnostic.
		Seeking + ref ..1 thu 4	•To **cancel** the setup, press the **DOWN** button.
PULSES PER QUADRANT •The door rotates through four quarterpoints and counts the total encoder pulses to determine how many pulses are present in each quadrant.	155	Pulses/wing=155	
		Seeking + ref ..1 thu 4	
NORMAL SPEED CURRENT •The door rotates through four quarterpoints at normal speed to determine the maximum current	0.48	Peak I = 0.48	
		Seeking + ref ..1 thu 4	
REDUCED SPEED CURRENT •The door rotates through four quarterpoints at reduced speed to determine the maximum current	0.48	Peak I = 0.48	

GO TO THE NEXT PAGE

8. BASIC SETUP (setup run)

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the main control panel.

COMPLETE SETUP (CON'T)

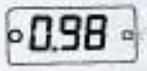
16 CON'T

REVERSE SPEED CURRENT
•The door rotates through four quarterpoints at reverse speed to determine the maximum current

Seeking + ref ..1 thu 4

Peak I = 0.52

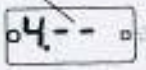
STARTUP CURRENT
•The door rotates through one quadrant



Peak I = 0.98

•Press the **RESET** button.

Version number is displayed

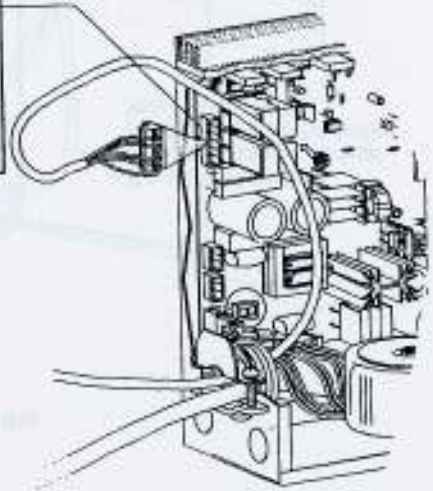


•Press the lock key

Mode 2 ready
Card / Card

THIS CONCLUDES THE BASIC SETUP RUN

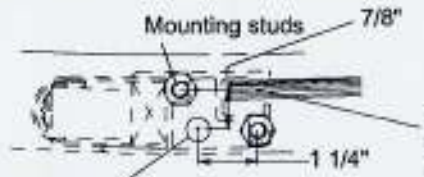
NOTE:
Disconnect CN1 (motor & brake) so that the auxiliary equipment can be connected and tested without the danger of the door rotating and causing injury or someone becoming entrapped by the brake (lock).



GO TO THE NEXT PAGE TO COMPLETE THE WIRING

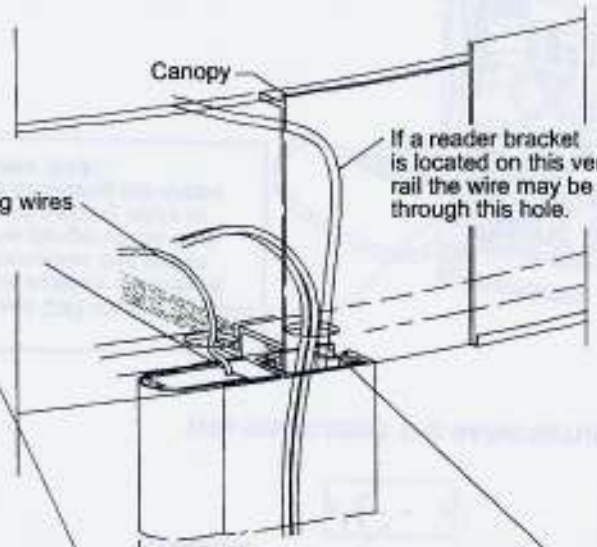
9. BASIC SETUP (mat installation)

TURN BREAKER OFF BEFORE CONNECTING WIRING

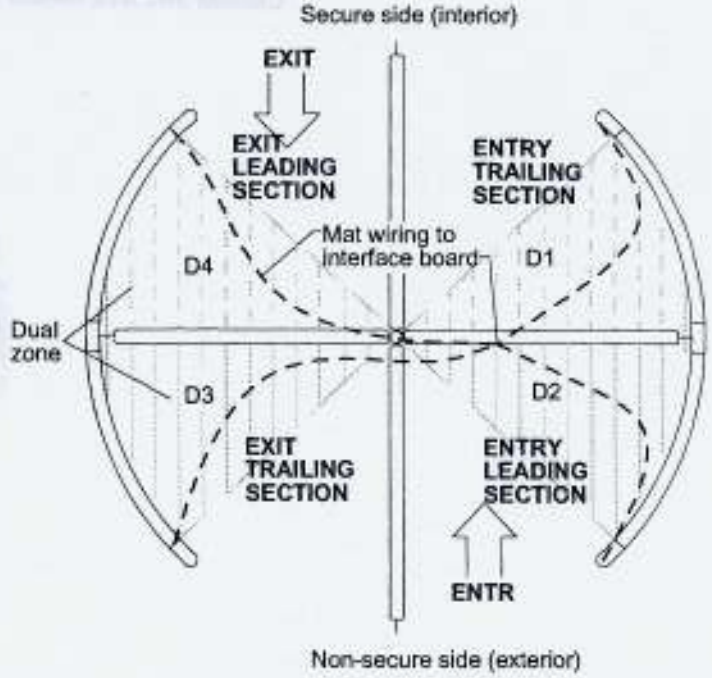


CAUTION
Do not drill into the glass pocket

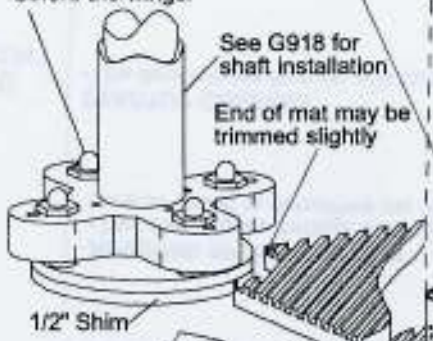
1st Step
If the hole for the mat wire has not been pre-drilled - locate approx as shown. Drill a 3/4" hole.



2nd Step
Lay mat in the door and mark locations of wires. If not already done, cut a 3/8" high x 1" notch for wire access on all 4 entry posts.

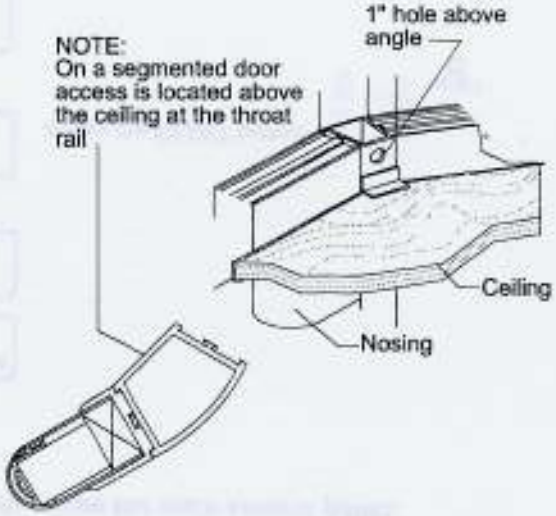


NOTE:
Mats should be installed before the wings.



3rd Step
Drop a small "fish"chain down through the vertical throat rail and out through the slot at the bottom.
Attach the chain to the mat wire.
While feeding the wire in from the bottom pull the wire into the canopy (see plan)

4th Step
Position the active mat under the spider first then against the bottom drum rail.
See floor plan for proper placement.



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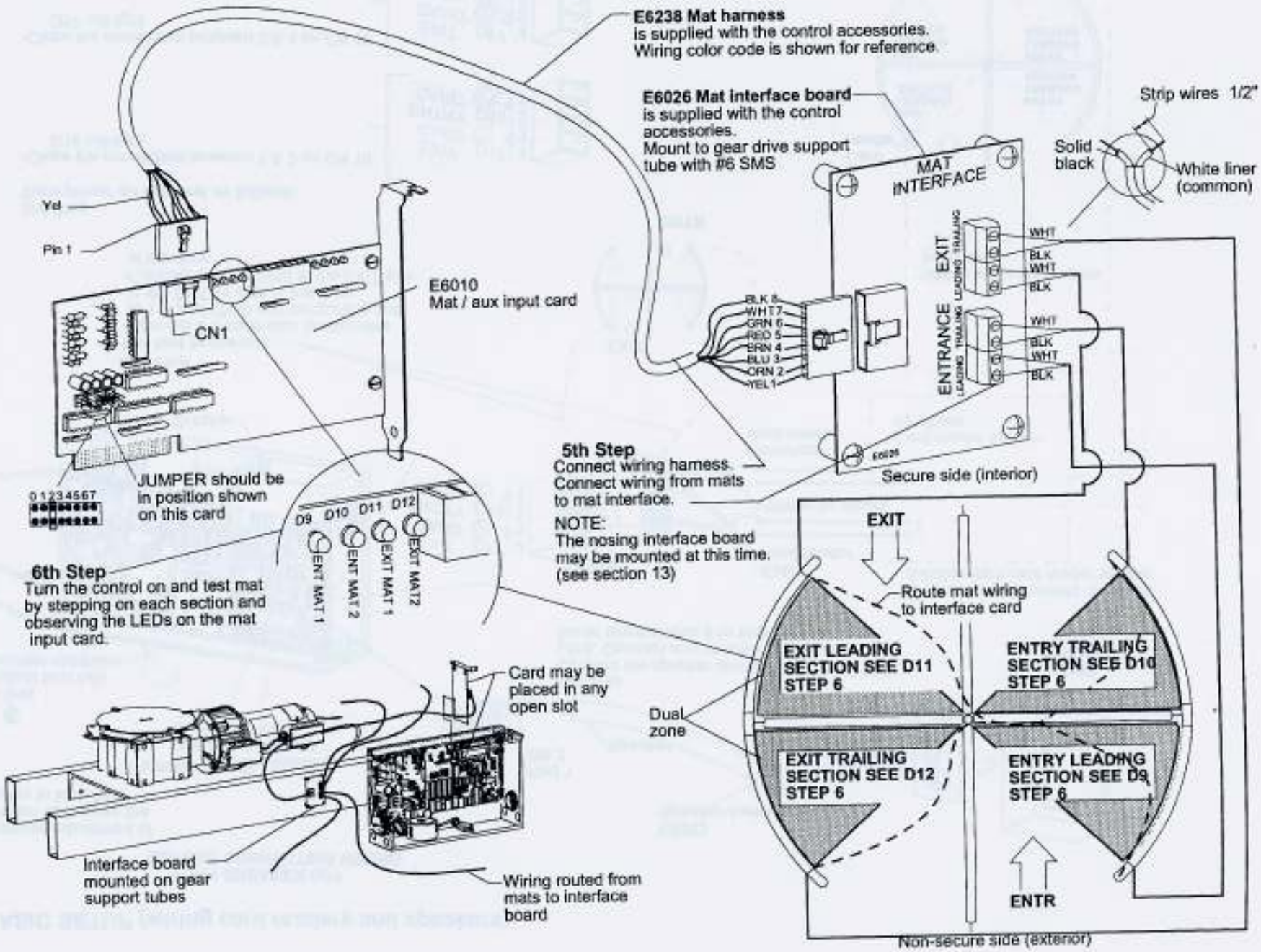
9.1. BASIC SETUP (mat installation) TURN BREAKER OFF BEFORE CONNECTING WIRING



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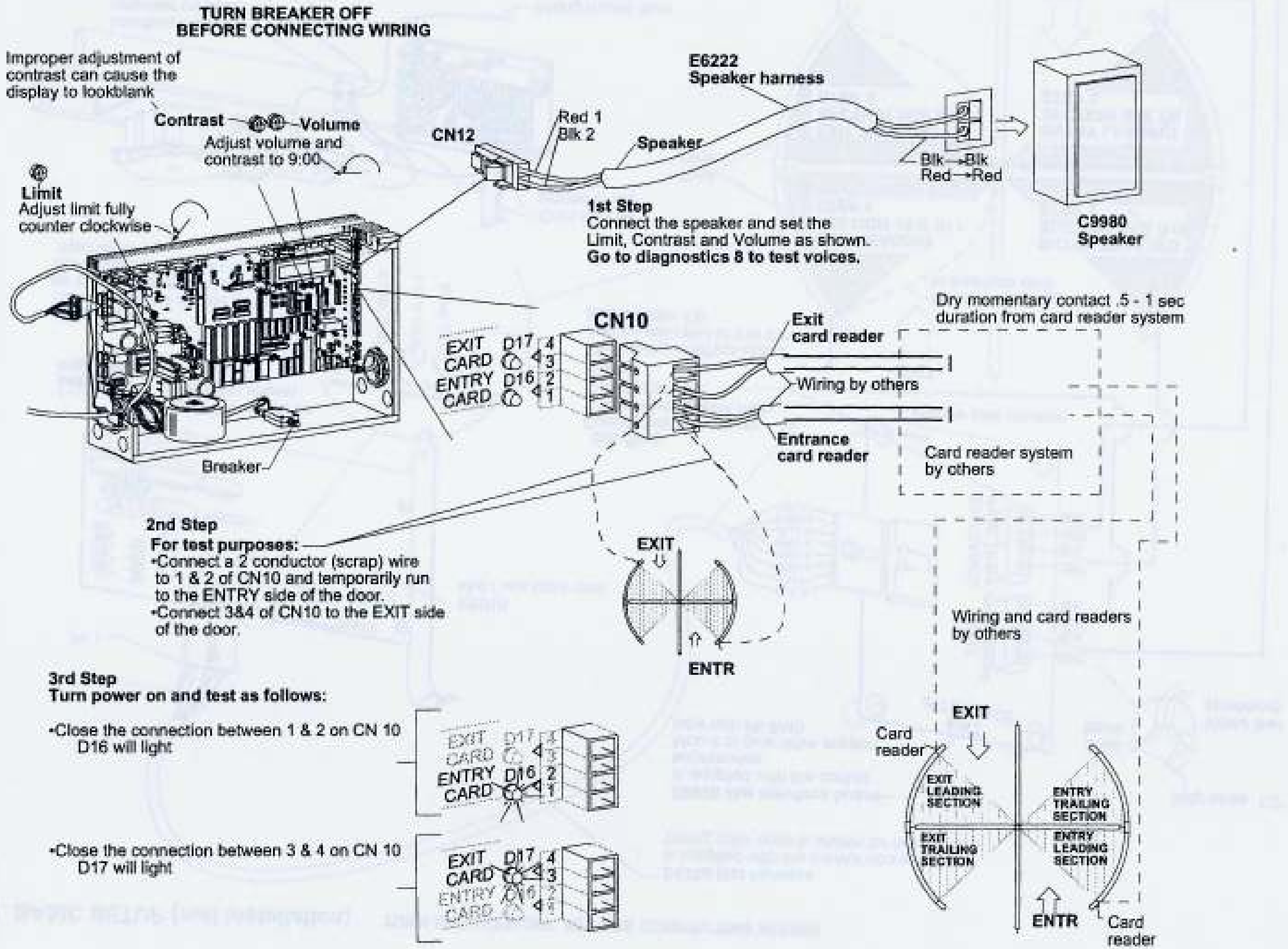
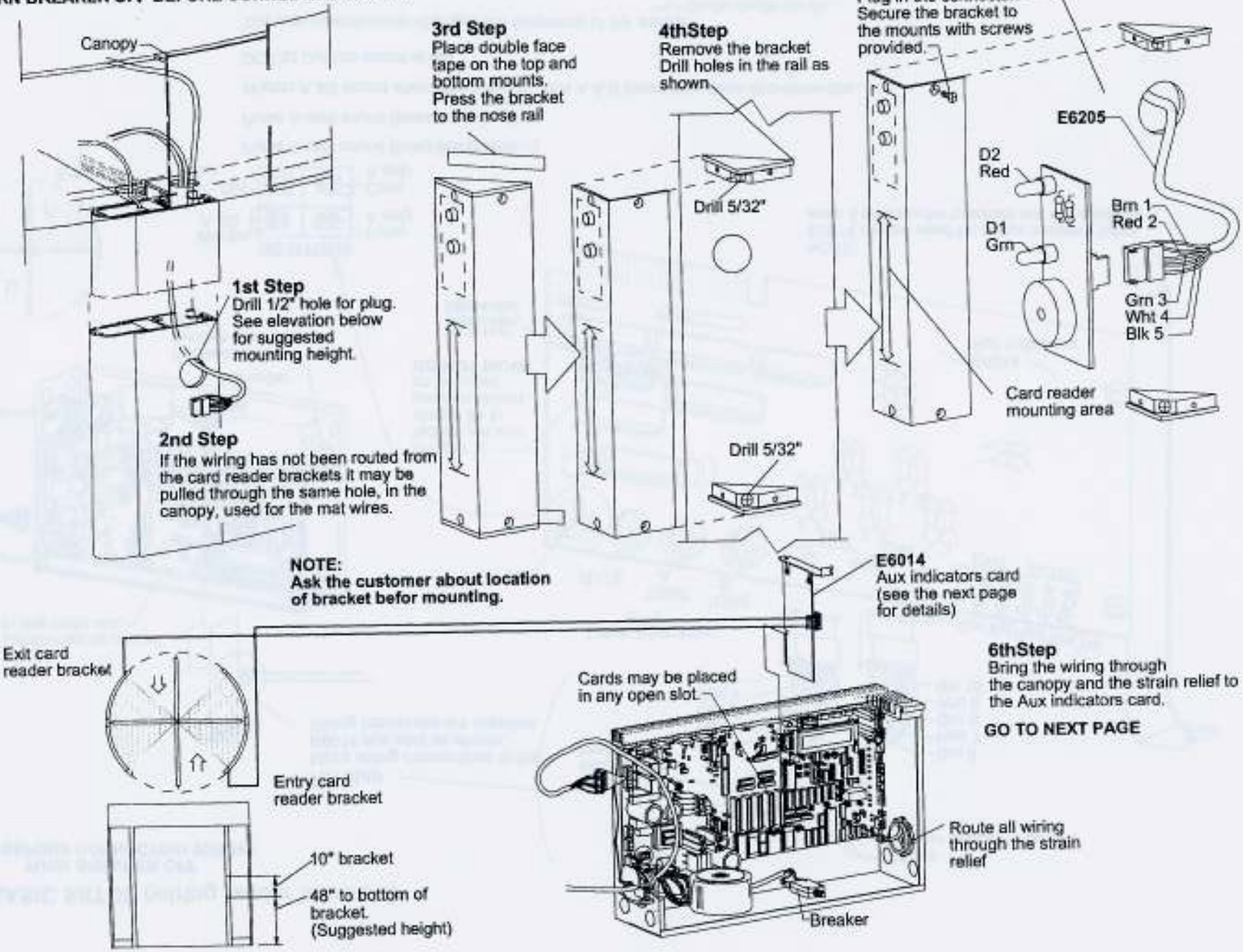
10. BASIC SETUP (wiring card readers and speakers)



11. BASIC SETUP (routing wires &mounting reader brackets)

TURN BREAKER OFF BEFORE CONNECTING WIRING



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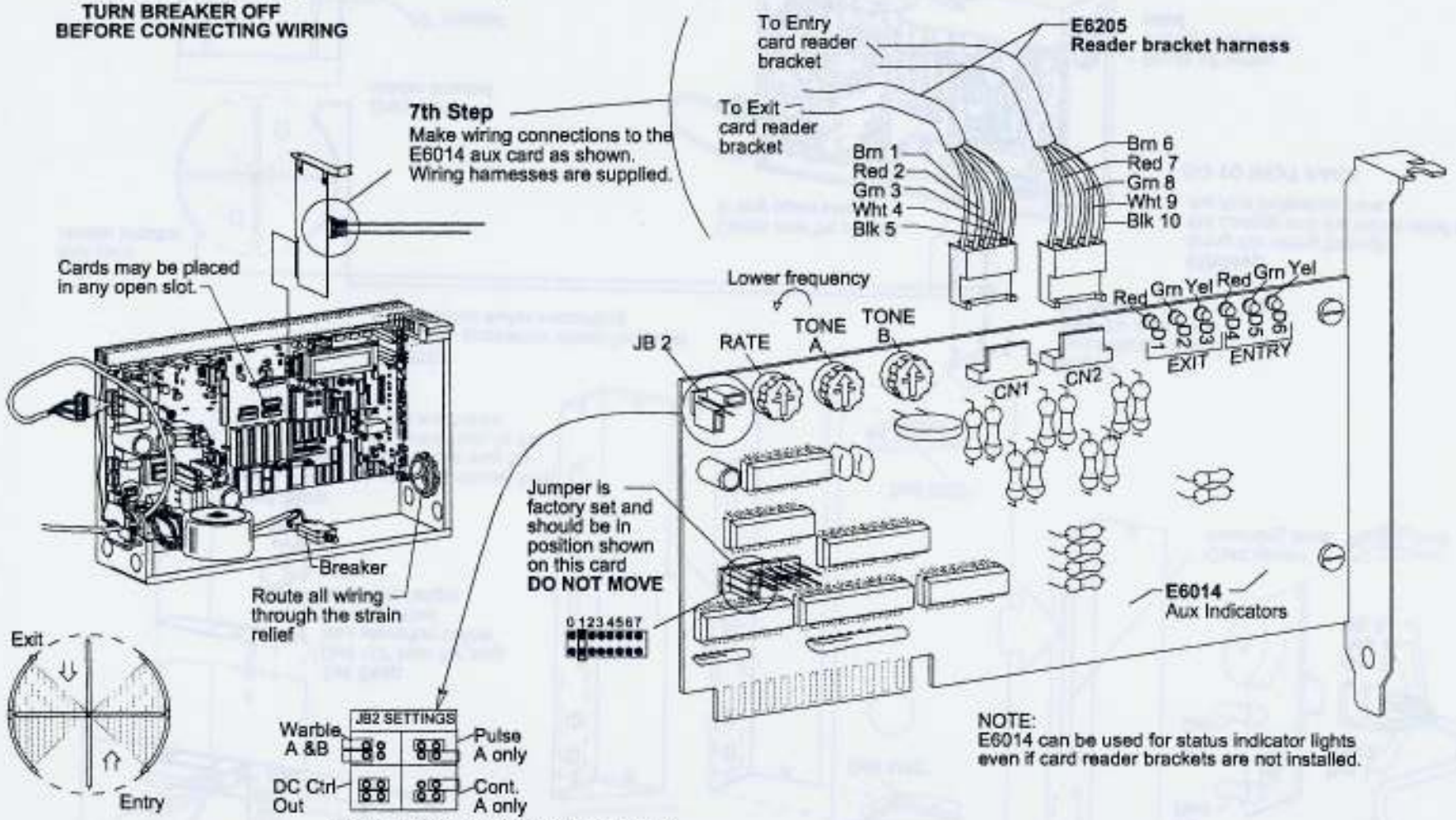
11.1 BASIC SETUP (wiring reader brackets)

TURN BREAKER OFF BEFORE CONNECTING WIRING



NOTE:
E6014 can be used for status indicator lights even if card reader brackets are not installed.

Pulse A only sound (beep-beep-beep...)

Pulse A cont sound (beeeeeeeee...p)

Warble A &B sound alternates between tone A & B (deee-doo-deee-doo-deee-doo...)

DC Ctrl Out (no sound at all)

The rate potentiometer changes the frequency of the warble:

◠ =de-do-de-do-de-do....

◠ =deee-dooo-deee-dooo-deee-dooo....

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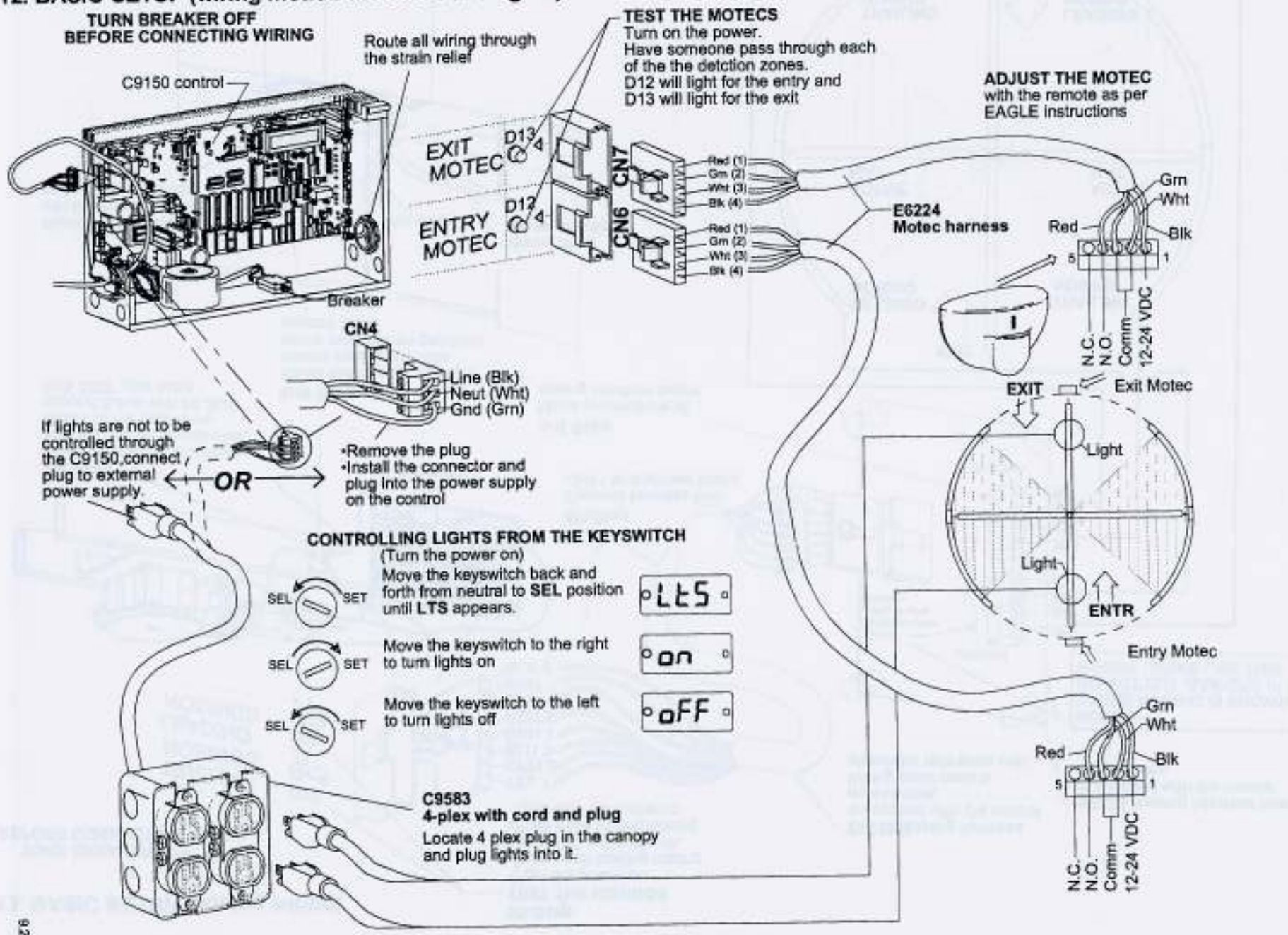
12. BASIC SETUP (wiring motion detectors and lights)



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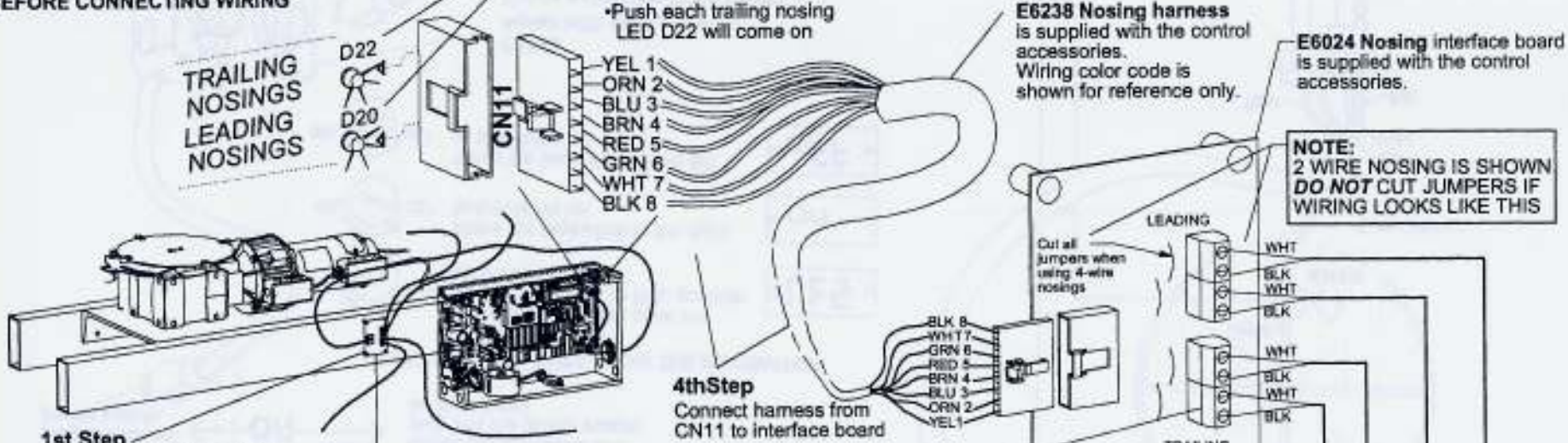
13. BASIC SETUP (nosing wiring)

TURN BREAKER OFF BEFORE CONNECTING WIRING

5thStep
TEST THE NOSINGS
- Turn the power on.
- Push each leading nosing LED D20 will come on.
- Push each trailing nosing LED D22 will come on



E6238 Nosing harness is supplied with the control accessories. Wiring color code is shown for reference only.

E6024 Nosing interface board is supplied with the control accessories.

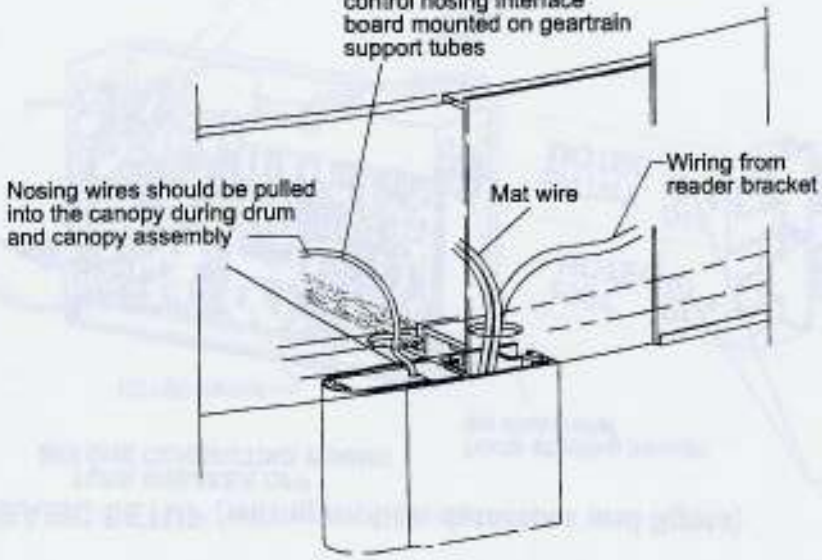
NOTE:
2 WIRE NOSING IS SHOWN
DO NOT CUT JUMPERS IF WIRING LOOKS LIKE THIS

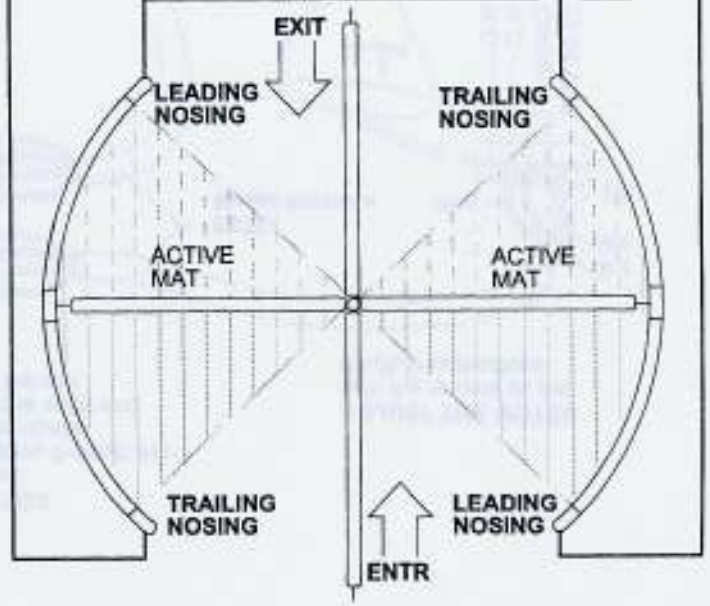
1st Step
Interface board is supplied with the control accessories. Mount to the gear drive support tubes with #6 SMS (drill 3/32" pilot hole)

2nd Step
Route safety edge wiring to control nosing interface board mounted on geartrain support tubes

3rd Step
Make connections at nosing interface board.

4thStep
Connect harness from CN11 to interface board





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14. BASIC SETUP (testing)

The following tests are designed to check all inputs and outputs without regard to mode. The tests are conducted in mode 2 (card/card +) and mode 11 (motec/motec), if motecs are used. ATTENTION "X" logic users, all tests are conducted in the "+" position - return to the "X" position after the test is complete.

Plug in CN1 (motor and brake) and turn the **breaker on**.

WALK TEST (mode 2)

(If MCP does not read mode 2 ready... see SEC.21)

Card in may be simulated by closing the contacts between 3 & 4 on CN10

D17 lights on CN10

System is waiting for contact with the mat

Step on the mat-D11 Exit mat lights up and motor starts to run

Walk through - the door will seek X and then +reference

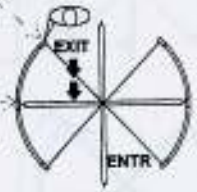
If the mat is not cleared in the time required a count down begans to a security violation

Exit from the revolver and the system returns to inactive status

MCP

Mode 2 ready...
Card / Card +

Waiting for mat
Enter = 0 Ext = 1



Seeking X Ref

Seeking + Ref
Enter = 0 Ext = 0

Tamper count down

Mode 2 ready...
Card / Card +

UN-AUTHORIZED ENTRY (mode 2)

(If MCP does not read mode 2 ready... see SEC.21)

Card in may be simulated by closing the contacts between 3 & 4 on CN10

D17 lights on CN10

System is waiting for contact with the mat

Step on the mat-D11 Exit mat lights up and motor starts to run

If an un- authorized enter is attempted from the other side the door will stop and announce a security violation

The door will then start to backup after the announcement is complete

The mats must be cleared on both sides

The door may be re-entered form the authorized side

The authorized entry may proceed through the door

MCP

Mode 2 ready...
Card / Card +

Waiting for mat
Enter = 0 Ext = 1

Entrance violation

Backing up...

Mats must clear

Waiting for mat
Enter = 0 Ext = 1

Seeking X Ref
Enter = 0 Ext = 1

Seeking + Ref
Enter = 0 Ext = 0

Mode 2 ready...
Card / Card +

GO TO NEXT PAGE TO CONTINUE MODE 2 TESTING

14.1. BASIC SETUP (testing)

The following tests are designed to check all inputs and outputs. The tests are conducted in mode 2 (card/card +) and mode 11 (motec/motec), if motecs are used.

Plug in CN1 (motor and brake) and turn the **breaker on**.

SAFETY STOP (mode 2)

(If MCP does not read mode 2 ready... see SEC.21)

Card in may be simulated by closing the contacts between 3 & 4 on CN10

D17 lights on CN10

System is waiting for contact with the mat

Step on the mat-D11 Exit mat lights up and motor starts to run

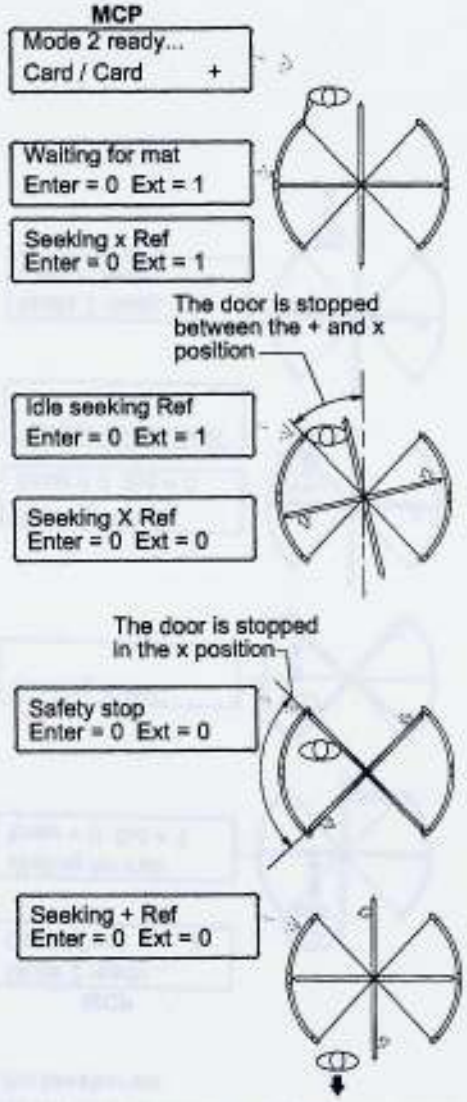
If door is stopped or contact is made with the safety nosing between the + and **X** position the door will go into the idle mode,with the brake off, and may be pushed back or forward to the + position

Contact is cleared

Door makes contact with pedestrian

Contact is cleared

Exit the door



IDLE TEST (mode 2)

(If MCP does not read mode 2 ready... see SEC.21)

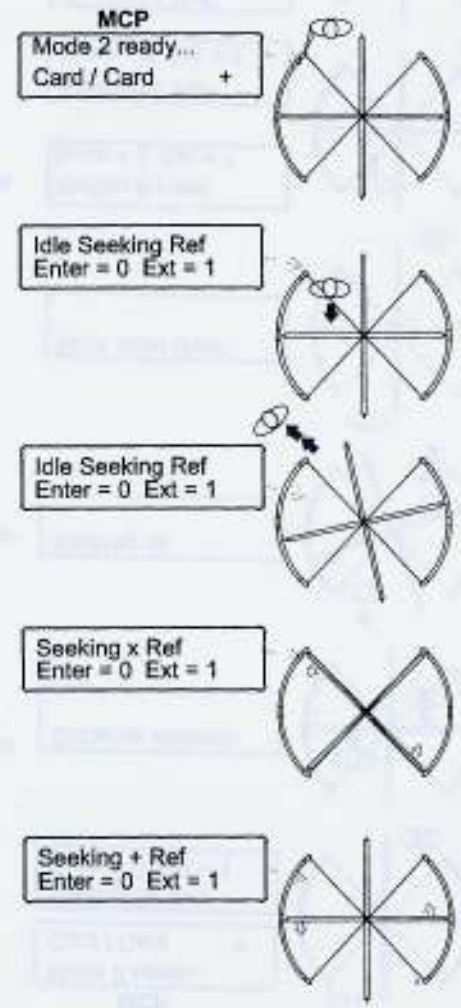
Card in may be simulated by closing the contacts between 3 & 4 on CN10

Mat is activated
Contact with safety nosing

Then...

Abandon

After a 5 sec. delay
The door will rotate through the X then the + position.



THIS CONCLUDES MODE 2 TESTING
GO TO NEXT PAGE FOR MODE 11 TESTING

14.2. BASIC SETUP (testing)

The following tests are designed to check all inputs and outputs. The tests are conducted in mode 2 (card/card +) and mode 11 (motec/motec), if motecs are used.

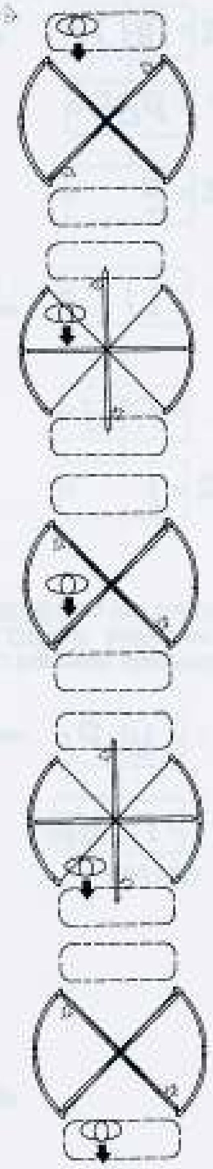
Plug in CN1 (motor and brake) and turn the **breaker on.**

MOTION DETECTOR ACTIVATION (mode 11)

(If MCP does not read mode 11 ready... see SEC.21)

MCP

Description	MCP display
	Mode 11 ready... Mdet / Mdet X
Move into the detection zone - the door will start to rotate. The light on the reader bracket will be green	Seeking x Ref Ent=Free Ext =Free
	Seeking + Ref Ent=Free Ext =Free
	Seeking x Ref Ent=Free Ext =Free
This cycle will continue as long as the motec zone is activated.	Seeking + Ref Ent=Free Ext =Free
After activation, the will door rotate for 5 sec. (default) see parameter 23	Seeking x Ref Ent=Free Ext =Free
After the zones are clear the unit returns to inactive status	Mode 11 ready... Mdet / Mdet X



15. DIAGNOSTICS CHART 1

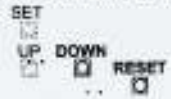
SEE SECTION 5 FOR INTRODUCTION TO CONTROL SETUP

Accessing the diagnostics from the infrared control.

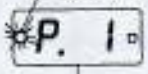
- *The door must be inactive (in standby condition)*
- Point the IR remote at the LCP and press unlock
- The red LED on the LCP display will flash - indicating the signal is being received.
- If the control was previously locked with a password,the LCP will show UnL to indicate that it is waiting for the unlock code.Enter the correct password within 5 seconds.
- If the correct password was entered or none was required, the parameter menu will be displayed.The display will be some parameter number such as P. 1

Accessing the diagnostics from the control itself.

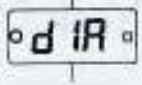
- *The door must be inactive (in standby condition)*
- Press and hold the **DOWN** button while briefly pressing **RESET**.



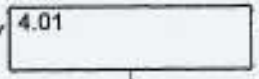
Red LED



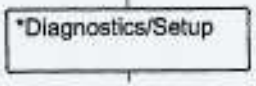
- Press **"SU"** diagnostics will appear



momentary display



- The version number will display
- If the control is locked with a password it must be unlocked with the IR remote.



- Diagnostics/Setup will display
- Release the **DOWN** button

To return to the main diagnostics menu, press the **"SU"** button on the remote . Press the **LOCK** button,on the remote, or hold the **DOWN** button and briefly push the **RESET** on the control to exit all diagnostics and restore normal door operation.

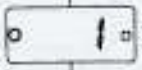
The order in which the diagnostics are arranged

1	PSY
2	SPd
3	drU
4	br 1
5	br2
6	EnC
7	InP
8	uo 1
9	CAU
10 thru 14	r 10 thru r 14
15	SSL
16	SEt

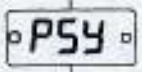
CHECK POWER SUPPLY

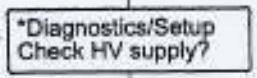
1 —

- After a few seconds diagnostic 1 will display *or...*
- Press 1 or "+" up "-" down
- Press "?"
- Displays DC voltage output of the power supply to operate the motor and the core brake. Voltage will fluctuate with changes in the incoming voltage.A typical value is 111 to 114 VDC

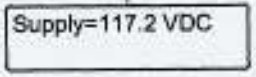


momentary display





- After a few seconds diagnostic 1 will display



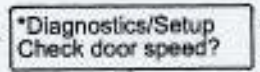
- Press SET .

CHECK DOOR SPEED

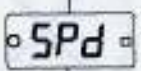
2 —

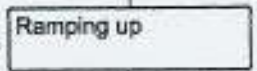
- Press **2** or "+" up "-" down
- Press "?"
- Ramps the motor up to normal speed and displays it in RPM.
- Using the + and - keys on the IR remote the motor voltage may be changed in small steps (temporarily) to determine the motor voltage required for a desired speed. The actual voltage is change in parameters 1 and 2.

momentary display

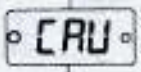


- Press UP till 2 is reached

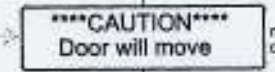




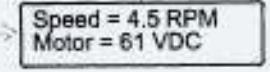
- Press SET. .



momentary display



momentary display



the LCD displays the RPM and the motor voltage.

To choose this speed for Normal --- Press 1
Reduced - Press 2
Reverse -- Press 3

If the door speed is changed re-do diagnostic 15 (Reset safety sensitivity levels)

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16. DIAGNOSTICS CHART 2

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

CHECK MOTOR VOLTAGE AND CURRENT

3

- •Press 3 or "+" up "-" down
- •Press "?"
- •Displays motor amperage
- •Useful for hunting mechanicalbinds
- •checking overall performance of the doors mechanics.

*Diagnostics/Setup
Check motor(LCP=i)?

Motor = 61.1VDC
Motor = .54A

- •Press UP till 3 is reached
- •Press SET
- •Displays motor voltage and amperage

CHECK BRAKE VOLTAGE AND CURRENT
(LCP displays voltage)

4

- •Press 4 or "+" up "-" down
- •Press "?"
- •Engages the core brake and displays the voltage.
- •Voltage will fluctuate with line voltage changes.
- •A value of 90 to 105VDC is typical.
- •Verify that the brake engages mechanically and properly locks the door.
- •Checks the break control subsections of the control.

*Diagnostics/Setup
Check brake(LCP=V)?

Brake = 97.0 VDC
Brake = 192 mA

Press UP till 4 is reached

Press SET

•Displays brake voltage and amperage

CHECK BRAKE VOLTAGE AND CURRENT
(LCP displays current)

5

- •Press 5 or "+" up "-" down
- •Press "?"
- •Brake current is displayed. Current is typically in the 200ma range

*Diagnostics/Setup
Check brake(LCP=i)?

Brake = 97.0 VDC
Brake = 192 mA

- •Press UP till 5 is reached
- •Press SET
- •Break current and voltoge are displayed

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17. DIAGNOSTICS CHART 3

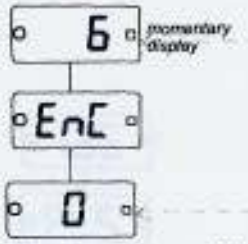
Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

ENCODER TEST

- Press 6 or "+" up "-" down
- Press "?"
- Encoder count is displayed up to 999. If the count exceeds 999 the LCP displays ---
- The encoder count should increase smoothly as the door is **pushed.**

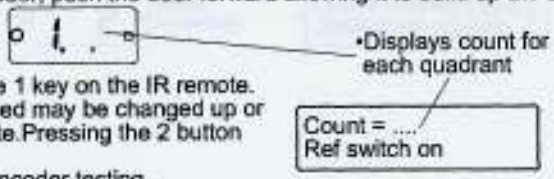
6



- Press UP till 6 is reached
- Press SET
- Encoder count is displayed up to 999
- The count is re-zeroed each time a "+"reference position is reached."Ref sw on"displays on the second line.

MANUAL ENCODER TEST

- Negative readings will not display - Both displays will be frozen at zero if the door is pushed backwards form a reference indicator.
- To manually test the reverse operation of the encoder, push the door forward allowing it to build up the count, then reverse the door to test the reverse operation of the encoder.

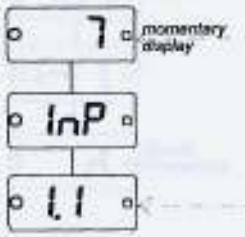


POWER ENCODER TEST

- The encoder may also be checked by pressing the 1 key on the IR remote. The door will run forward at a slow speed -the speed may be changed up or down by using the + and - buttons on the IR remote.Pressing the 2 button will run the door in reverse.
  Press zero on the IR remote to return to manual encoder testing.

TESTING INPUTS

- Press 7 or "+" up "-" down
- Press "?"
- All the codes of all active inputs are displayed as they are polled.
- The input codes presented are as follows:



- Press UP till 7 is reached
- Press SET
- Any active inputs (card reader, motion detector, etc.) are displayed in text form showing exactly which inputs are active.

7

LCP	LCD
i.1	Reference switch
i.2	Trailing safety nosings
i.3	Leading safety nosings
i.4	Exit card reader
i.5	Entrance card reader
i.6	Exit handicap (slow) switch
i.7	Entrance handicap (slow) switch
i.8	Exit motion detector
i.9	Entrancet motion detector
i.10	LCP key switch, SET (right) position
i.11	LCP key switch, SEIECT (left) position
i.12	Reserve input
i.13	AUX B switch
i.14	AUX A switch
i.15	Fire alarm contact
i.16	Emergency stop switch
i.17	Reserve input
i.18	Reserve input
i.19	Reserve input
i.20	Reserve input

LCP	LCD
i.21	Reserve input
i.22	Up button on control
i.23	Down button on control
i.24	Set button on control
i.25	AUX 4 input on E6010 mat interface card
i.26	AUX 3 input on E6010 mat interface card
i.27	AUX 2 input on E6010 mat interface card
i.28	AUX 1 input on E6010 mat interface card
i.29	Exit mat, trailing
i.30	Exit mat, leading
i.31	Entrance mat, trailing
i.32	Entrance mat, leading
i.33	Input 8 on E6008 aux. DC input card
i.34	Input 7 on E6008 aux. DC input card
i.35	Input 6 on E6008 aux. DC input card
i.36	Input 5 on E6008 aux. DC input card
i.37	Input 4 on E6008 aux. DC input card
i.38	Input 3 on E6008 aux. DC input card
i.39	Input 2 on E6008 aux. DC input card
i.40	Input 1 on E6008 aux. DC input card

NOTE: codes 33 thru 40 may appear if an E6004 card is NOT installed in the system. In this case the codes are meaningless.

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18. DIAGNOSTICS CHART 4

Accessing the diagnostics from the infrared control.

VOICE

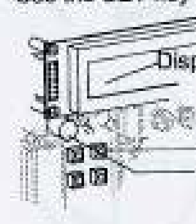
8

- Press 8 or "+" up "-" down — display: 8 (momentary display)
- Press "?" — display: uo 1
- Displays V.1, V.2, V.3 & V.4 — display: U.1
  Use the "+" and "-" keys to select any of the voices stored in the control's speech memory.
  Use the "?" key to play the selection.
- Voices may be played from the IR control but not recorded
- To record a new message:
- Select the message to be replaced
- Hold the SET button until REC appears.Hold the REC botton and speak directly into themicrophone. The total length of each message cannot exceed 5 seconds.
- **CAUTION:** Pressing the REC button will completely erase the previous message.
- The REC button is disabled at all times except when this setup routine is run.
- The factory default messages are:
- Voice 1 "Security violation"
- Voice 2 "Door will reverse"
- Voice 3 "Please exit door, then re-enter"
- Voice 4 (Not recorded)

Accessing the diagnostics from the control itself.

Display	Action
"Diagnostics/Setup Play/Setup Voices?	•Press UP till 6 is reached (SET, UP, DOWN, RESET)
	•Press SET (SET, UP, DOWN, RESET)
Message 1? Up/Down/Set	•The voice message will be displayed in text form. Use the UP and DOWN keys to select a voice message. (UP, DOWN)
	•Use the SET key to play that message. (SET)
Message 1? Up/Down/Set/Rec	

Rec is displayed



CHECK STATISTICS

9

- Press 9 or "+" up "-" down — display: 9 (momentary display)
- Press "?" — display: CoU
- The code for the first statistic is diplayed. — display: C.0

Display	Action
"Diagnostics/Setup Check Statistics?	•Press UP till 9 is reached (SET, UP, DOWN, RESET)
	•Press SET (SET, UP, DOWN, RESET)
Entry card accepted (F1 Clears) : 2	•Each statistic is displayed along with its corresponding value.

During normal operation a number of significant statistics are stored in the counter's internal memory. These counters hold the following information:

LCP	LCD
C.0	Entrance - number of cards accepted
C.1	Entrance - number of successful entrances
C.2	Entrance - number of attempted violations
C.3	Entrance - number of cancellations
C.4	Entrance - reserved counter
C.5	Entrance - reserved counter
C.6	Entrance - reserved counter
C.7	Entrance - reserved counter
C.8	Entrance - reserved counter
C.9	Exit - number of cards accepted
C.10	Exit - number of successful exits
C.11	Exit - number of attempted violations
C.12	Exit - number of cancellations
C.13	Exit - reserve counter
C.14	Exit - reserve counter
C.15	Exit - reserve counter

LCP	LCD
C.16	Exit - reserve counter
C.17	Exit - reserve counter
C.18	Control reboots
C.19	Door lockdowns
C.20	Safety stops
C.21	Security pass requests
C.22	Idel requests
C.23	Tamper alarms
C.24	Inactive timeouts
C.25	Reserve counter
C.26	Reserve counter
C.27	Reserve counter
C.28	Reserve counter
C.29	Reserve counter

- To view a statistic:
  Use the "+" and "-" buttons on the remote.
  The Up and DOWN buttons on the control itself.
  The number keys 0 thru 9 on the IR remote.
- When the desired statistic is found, press the "?" on the remote or the SET button on the control to view the count on the LCP.(The LCD will already be showing the name and its count)
- If the count is above 999 the LCP will display ---.
- To clear a particular displayed count, press The F1 key on the IR remote. The control will ask for confirmation (CnF will display for **ConFirm**).
- To clear all counters press the "+" key on the IR remote or the **UP** button on the control.
- To not clear all counters press the "-" key on the IR remote or the **DOWN** button on the control.
- All counters will be retained, even with the power off.

19. DIAGNOSTICS CHART 5

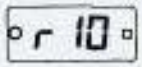
Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

10 11 12 13 14

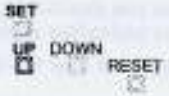
RESERVED

- 10 thru 14 are reserved diagnostics
- Press 10 thru 14 or "+" up "-" down
  The number of each will display on the LCP



*Diagnostics/Setup
Reserve diagnostic 10

- Press UP till 10 is reached



15

LEARN SAFETY LIMITS

CAUTION: The door will move on its own when these routines (diagnostic 15 &16) is initiated! Use extreme caution to avoid entrapment.

The C9150 control can measure the current draw of the door's motor and automatically set the "safety sensitivity" settings to the suggested values for the installation. These parameters are automatically set when a complete control setup is performed. A large adjustment in motor speed may require changing these settings. Insted of hand adjusting them,this routine will force the control to update the settings. Adjust the safety limits to individual requirements.

- Press 15 or "+" up "-" down
- Press "?"
- This diagnostic will run 4 routines and store the highest current draw of each one.
- The highest current value for each routine is displayed on the LCP

*Diagnostics/Setup
Learn Safety Limits?

Seeking + ref = 4

- Press UP till 15 is reached

- Press SET

- The name of the routine and the highest current draw will be displayed on the LCD

- The door will proceed through 4 quarterpoints at:
  Normal speed forward
  then
  Reduced speed forward

Parameter 6 Safety Sens - Fwd
and
Parameter 7, Safety Sens - Reduced
The highest running current will be stored and display and the parameter set at 200% of this value.

Forward at normal speed then reduced speed

- The door will back up through 4 quarterpoints at:
  Reverse speed

Parameter 8 Safety Sens - Reverse
The highest running current will be stored and display and the parameter set at 200% of this value.

Reverse speed

- The door will proceed forward to the:
  Next quarterpoint

Parameter 10 Safety Sens - Startup
The highest startup current will be stored and displayed and the parameter set at 200% of this value.

- The display will return to the main diagnostic menu.

If the door speed is changed re-do diagnostic 15 (reset safety sensitivity levels)

NOTE:
Factory defaults are set for testing and may not be suitable for individual conditions. See parameters 6 thru 10 for manual setup of safety sensitivity

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20. DIAGNOSTICS CHART 6

Accessing the diagnostics from the infrared control. **Accessing the diagnostics from the main control panel.**

COMPLETE SETUP

CAUTION: The door will move on its own when this routine is initiated! use extreme coution to avoid entrapment.

This diagnostics allows a complete control setup to be performed. This diagnostic can be the most **DESTRUCTIVE** if it is performed accidentally.
All parameters will be set to factory default and all counters are set to zero.
This diagnostic should always be performed when initially installing a door and **never** be performed without good reason otherwise.

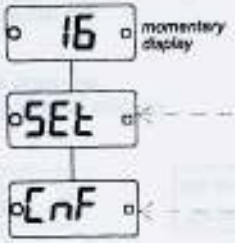
•Press 16 or "+" up "-" down

•Press "?"

•Confirmation will be requested.

•Press the "+" key again to perform the diagnostic.

•To **CANCEL** the setup, press the "-" key.



•Press UP till 16 is reached

•Press SET

•Confirmation will be requested

•Press the **UP** button again to perform the diagnostic.

•To **NOT** do the setup, press the **DOWN** button.

The setup restores factory default settings to all parameters, and zeros all counters.

- It rotates the door through four quarterpoints and counts the total encoder pulses to determine how many pulses are present in each door quadrant.
- Finally, the door is rotated through additional quadrants to automatically set safety limits (see diagnostic 15).

NOTE:
Factory defaults are set for testing and may not be suitable for individual conditions. Some parameters may require manual adjustment.

Once all the above is complete, the display is returned tothe main diagnostic menu.

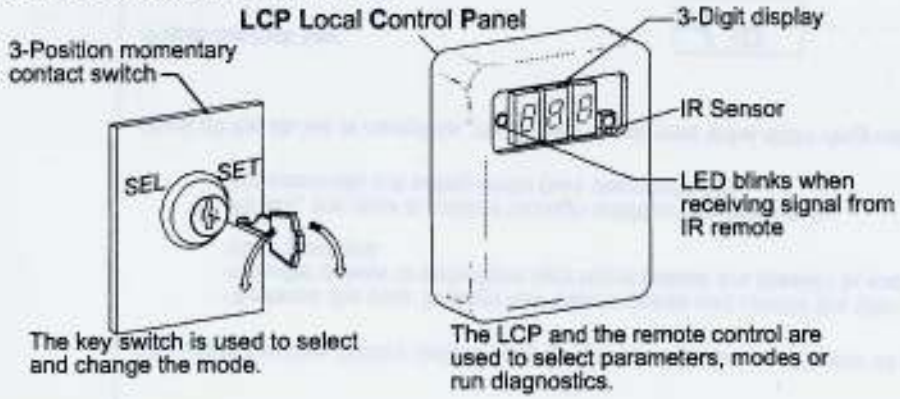
•Press the lock key

•Press the **RESET** button.

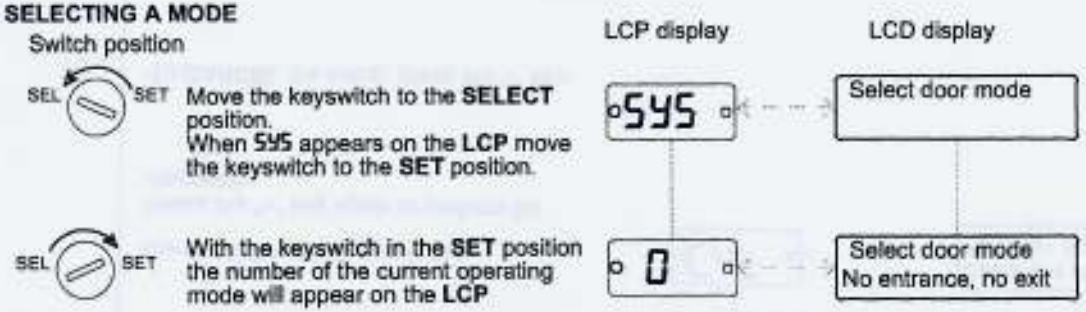
21. DOOR OPERATING MODES

The door must be inactive (standby condition) to change the mode.

KEY SWITCH MODE SELECTION



SELECTING A MODE



NOTE

The number of available codes can be restricted to those required by the building management .
Using parameters 44-59, certain modes can be restricted so they can not be accessed by the kewswitch.

MODE CHART

The following chart shows the 12 modes that are always available regardless of the software version available.

MODE	STANDBY POSITION	ENTRANCE	EXIT
0	+	No entrance	No exit
1	+	Motec arms mat	Motec arms mat
2	+	Card	Card
3	+	Card	Motec arms mat
4	+	No entrance	Card
5	+	No entrance	Motec arms mat
6	+	No entrance	Mat actuates
7	+	Card	Mat actuates
8	+	Mat actuates	Mat actuates
9	n/a	Freewheels	Freewheels
10	X	No entrance	No exit
11	X	Motec	Motec

Standard operating software for the C9150 control does NOT allow "X" operation, except for a totally secure or free access door. All of these software versions end in even numbers (4.00, 4.02...)

Software to permit "X" position operation is available for an additional charge due to a licensing agreement. These software versions end in odd numbers (4.01, 4.03...)

These versions add 4 unique "X" position modes as shown below, for a total of 16.

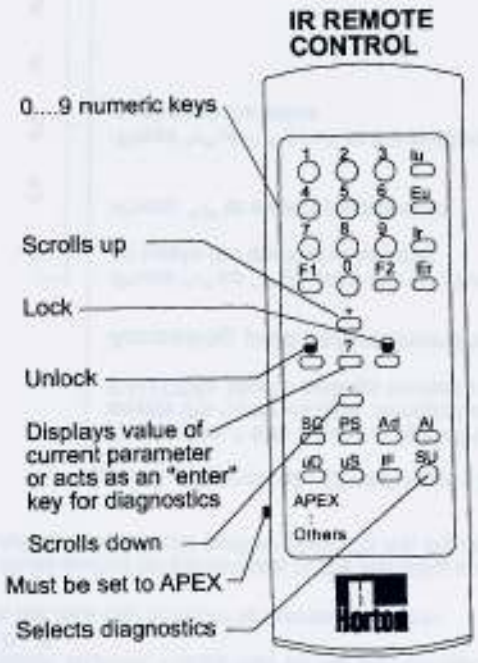
MODE	STANDBY POSITION	ENTRANCE	EXIT
12	X	Card	Card
13	X	Card	Motec
14	X	No entrance	Card
15	X	No entrance	Motec

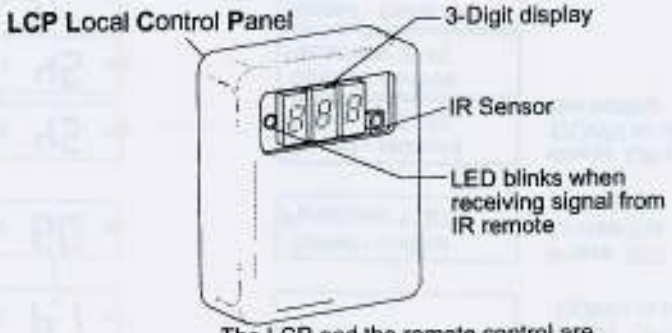
HARD WIRED MODE SELECTION

When parameter 60,remote mode select, is turned on, mode selection can NOT be made with the key switch or remote.
When remote select is in use,remote mode A selects the door mode to use when terminals 3 and 4 of CN5 are open. Hard wired remote mode B selects the mode to be used when terminals 3 and 4 are closed.
See parameter 60, 42 & 43.

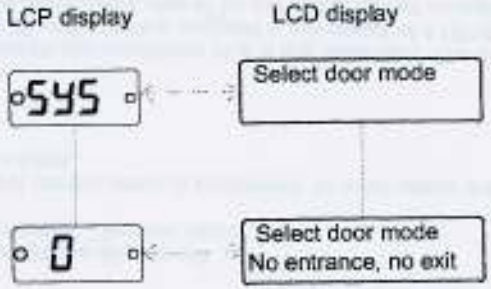
21.1. DOOR OPERATING MODES (using the ir remote)

The door must be inactive (standby condition) to change the mode.





The LCP and the remote control are used to select parameters, modes or run diagnostics.



Accessing the modes from the infrared control.

To change the mode setting:

- Point the IR remote at the LCP and press "SU"
- System "SYS" will display
- While on SYS push "?" current mode will display
- Press + or - to change the current setting

To control the lights:

- Point the IR remote at the LCP and press "SU"
- System "SYS" will display
- Press + or - to toggle to the lights

22. PARAMETER CHART 1

•The door must be inactive (in standby condition)

Accessing the parameters from the infrared control.

•Point the IR remote at the LCP and press unlock
•The red LED on the LCP display will flash - indicating the signal is being received.
•If the control was previously locked with a password,the LCP will show UnL to indicate that it is waiting for the unlock code.Enter the correct password within 5 seconds.

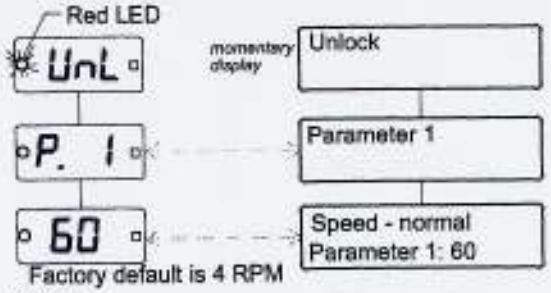
•If the correct password was entered or none was required, the parameter menu will be displayed.The display will be some parameter number such as P. 1

•Parameter will appear

•To view or adjust the setting of a parameter, briefly press the "?"

•Parameter value will appear

•Press the "+" or "-" key to change a yes or no or numeric parameter. Numeric values may be set with the number keys 0....9.
•Press the lock key to return to normal operation



Accessing the parameters from the control itself.

•Press and hold the **SET** button while briefly pressing **UP**.
•Unlock will display
•Release the set button

•The parameter name, number and current setting will appear.

•The parameter value is changed with the **UP** and **DOWN** buttons.

•Press reset to return to normal operation

NOTE:
After a few seconds with no entrys the display will switch back to the parameter number. The new value will be stored in memory

The values shown for parameters in the following charts are default values that are set when the complete control setup is performed. In most cases these values will be acceptable for ideal door performance. Do not adjust control parameters without having a desired goal in mind.

H915.29

Speed - (1)normal / (2)reduced / (3)reverse / (4&5) reserved

Parameters 1 thru 3 set the operating speed of the door during normal, reduced, and reverse run conditions (4 & 5 are reserved). The selected value directly equals the motor voltage. Acceptable values are 25 and up - the door will not turn below 25 volts. Horton suggest a run speed of 4 RPM.
CAUTION: Higher settings increase the possibility of serious injury to pedestrains. These parameters should be set at the lowest acceptable speed.

Accessing parameters from the infrared control.

1 •Press "+" up "-" down or the number keys to locate the desired parameter

2 •Press "?" to view the parameter

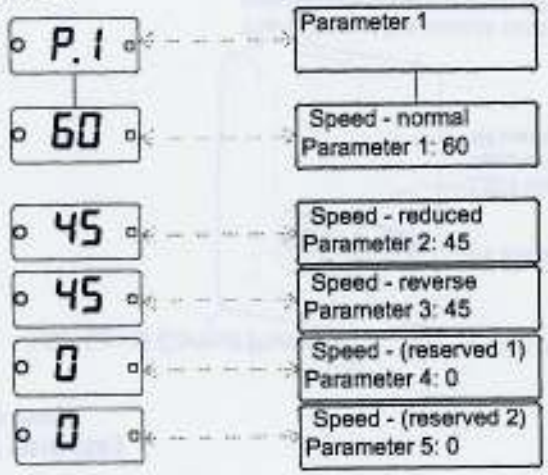
3 •Press "+" up "-" down or the number keys to change the value

4

5

Reserved parameters

Accessing parameters from the main control panel.



•Press UP or DOWN to scroll

•Press SET to view the parameter.

•Press UP or DOWN to change the setting

9.275d

23. PARAMETER CHART 2

Safety sens - forward / reduced / reverse / startup

Parameters 6 thru 8 and 10 (parameter 9 is reserved) set the sensitivity to increased motor current caused by obstructions to the doors.
The default values are set at 15 - this means that a safety stop will occur if the motor current exceeds 1.5amps
During the control setup routine these values will be "tweaked" to 200% of the highest current found. For example: if during the forward run the maximum motor current detected was 1.2 amps, parameter 6 will be set at a value of 24 (2.4 amps).

Decreasing these values will provide greater safety and additional nuisance stops.

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.

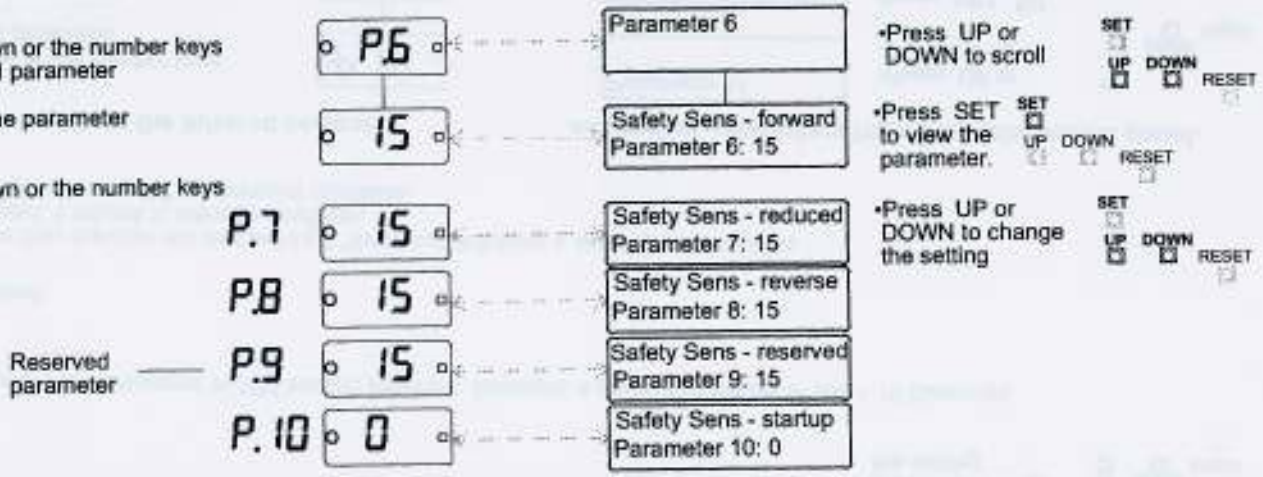
6 •Press "+" up "-" down or the number keys to locate the desired parameter

7 •Press "?" to view the parameter

8 •Press "+" up "-" down or the number keys to change the value

9

10



•Press UP or DOWN to scroll

•Press SET to view the parameter.

•Press UP or DOWN to change the setting

NOTE: If parameter 6, 7 or 8 is automatically set to 20 or more by the setup routine, or parameter 10 was set at 45 or more, execssive motor current is being drawn which may indicate a mechnical problem or a bind in the door.

•All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds.
A setting of 20 = 2.0 seconds.

Safety stop time fwd / rev

Parameters 11 &12 determine how long the door will remain locked after a safety stop before it continues.
Values below 20 (2.0 seconds) are NOT recommended.

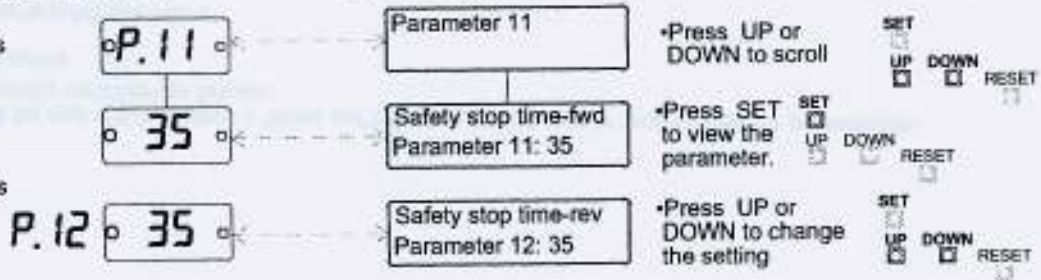
Accessing parameters from the infrared control.

Accessing parameters from the main control panel.

11 •Press "+" up "-" down or the number keys to locate the desired parameter

12 •Press "?" to view the parameter

•Press "+" up "-" down or the number keys to change the value



•Press UP or DOWN to scroll

•Press SET to view the parameter.

•Press UP or DOWN to change the setting

H915.30

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24. PARAMETER CHART 3

Inactive timeout

Parameter 13 sets the time the door will wait for mat activity before it "times out"following a valid card or motion detector presentation.
When the door times out, it returns to the standby condition as follows:

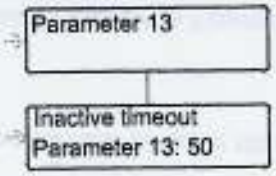
- All card requests are cancelled, if any were active.
- All motec timers are reset to zero.
- Parameter 13 is meaningless during "X" quarterpoint operation.

13

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.



- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

- All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds. A setting of 20 = 2.0 seconds.

Security pass timeout

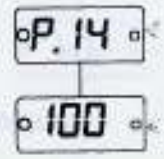
Parameter 14 sets the time the door will wait before it "times out" following a security pass request.

- When the door timesout, it returns to standby condition.
- Parameter is meaningless during "X" quarterpoint operation.

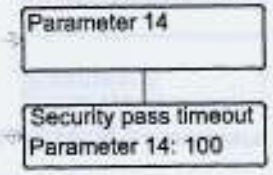
14

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value



Accessing parameters from the main control panel.



- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

25. PARAMETER CHART 4

Idle mode timeout

Parameter 14 sets the time the door will wait for mat activity before it "times out"and proceeds to the next quarterpoint after it has beed forced into the idle mode by a safety stop. The door must be totally idle before this timer begans running. Any activity whatsoever resets this delay. If parameter 15 is set to 100 and no cards, mats or motion detectors are encountered for 10 seconds following a safety stop to idle, the door resets itself by proceeding forward at reduced speed to the next quarterpoint position (either "+" or "x")

15

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter — P.15
- Press "?" to view the parameter — 100
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

- Parameter 15 — Press UP or DOWN to scroll (SET, UP, DOWN, RESET)
- Inactive timeout / Parameter 15: 100 — Press SET to view the parameter. (SET, UP, DOWN, RESET)
- Press UP or DOWN to change the setting (SET, UP, DOWN, RESET)

•All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds. A setting of 20 = 2.0 seconds.

Entry / exit alert time

Parameter 16 & 17 set the amount of time the entry and exit alert devices sound when a valid card is presented.

•Longer times may result in each user not receiving a seperate alert.
Example: if these parameters are set for a 5 second alert and 2 cards are presented within 3 seconds.
•Very short times are not recommended, since the user will have difficulity hearing the alart.

16
17

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter — P.16
- Press "?" to view the parameter — 15
- Press "+" up "-" down or the number keys to change the value — P.17 15

Accessing peremeters from the main control panel.

- Parameter 16 — Press UP or DOWN to scroll (SET, UP, DOWN, RESET)
- Entry alert time / Parameter 16: 15 — Press SET to view the parameter. (SET, UP, DOWN, RESET)
- Exit alert time / Parameter 17: 15 — Press UP or DOWN to change the setting (SET, UP, DOWN, RESET)

•All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds. A setting of 20 = 2.0 seconds.

Verify contact time

Parameter 18 sets the length of time that the "entry / exit" verification relay contacts are active following a validated entry or exit.

18

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter — P.18
- Press "?" to view the parameter — 10
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

- Parameter 18 — Press UP or DOWN to scroll (SET, UP, DOWN, RESET)
- Entry alert time / Parameter 18: 10 — Press SET to view the parameter. (SET, UP, DOWN, RESET)
- Press UP or DOWN to change the setting (SET, UP, DOWN, RESET)

•All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds. A setting of 20 = 2.0 seconds.

26. PARAMETER CHART 5

Reserved time

Parameter 19 thru 22 are reserved time delays for future use. There values are currently ignored by the software.

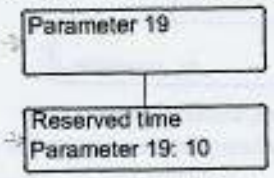
19 Thru 22

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

- All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0seconds. A setting of 20 = 2.0 seconds.

Accessing parameters from the main control panel.



- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

Motec delay time (X)

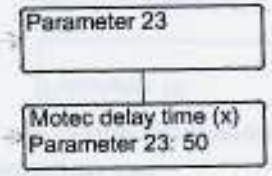
Sets the length of time that the door runs when an active motion detector is triggered in any "X" mode of operation. This parameter allows adjustment of the total time that the door remains active without having to set the delay in the motion detectors themselves.

23

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter

Accessing parameters from the main control panel.



- Press UP or DOWN to scroll
- Press SET to view the parameter.

Safety stops to idle

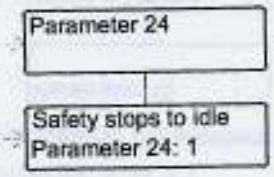
Parameter 24 sets the number of safety stops that must be encounered befor the door switches to "idle" mode.
- With the default value of 1 in use, the first motor overcurrent or nosing encountered places the door in the idle mode.
- If a value of 2 is used, the first safety stop will stop the door and lock the brake for the duration of the time set in parameter 11. After this timer expires, the door will attempt to move forward again. A second motor overcurrent or nosing will place door in idle mode.
- Values higher than 2 will result in additional "lock the brake" sequences before an idle is permitted.
- If idle operation is never desired, parameter 24 may be set to avery high value such as a 100.
- The safety stop counter is reset at every "+" quarterpoint. "Idle" operation is not permitted during the 45° of door revolution for each "x" position to the following "+" position. If motor overcurrent or a safety nosing is encountered in this door quadrant, the door *always* locks the brake (if required) and times the safety stop.

24

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.



- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

27. PARAMETER CHART 6

(25) Max entry / (26) exit cards

Parameters 25 and 26 set the maximum number of entry and exit cards that are permitted in the card stacks at any time. Additional card requests are ignored.

25
26

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 25

- Press UP or DOWN to scroll

Max entry cards
Parameter 25: 25

- Press SET to view the parameter.

Max exit cards
Parameter 26: 25

- Press UP or DOWN to change the setting

Backup warnings

Parameter 27 sets the number of complete voice annunciations that will be performed following an attempted security breach before the door backs up.

27

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter

Accessing parameters from the main control panel.

Parameter 27

- Press UP or DOWN to scroll

Backup warnings
Parameter 27: 1

- Press SET to view the parameter.

Network address

Parameter 28 sets the"address" of this particular door control. This parameter is used only when the door is part of a network of interconnected doors for building management, central control, etc. Setting the address to 0 disables all networked operations.

28

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter

Accessing parameters from the main control panel.

Parameter 28

- Press UP or DOWN to scroll

Backup warnings
Parameter 28: 0

- Press SET to view the parameter.

Reserved

Parameters 29 through 37 are reserved for use in future software

29
Thru
37

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter

Accessing pareameters from the main control panel.

Parameter 29

- Press UP or DOWN to scroll

Reserved
Parameter 29: 0

- Press SET to view the parameter.

28. PARAMETER CHART 7

Relay (38)K2, (39)K3 & (40) K4 mapping

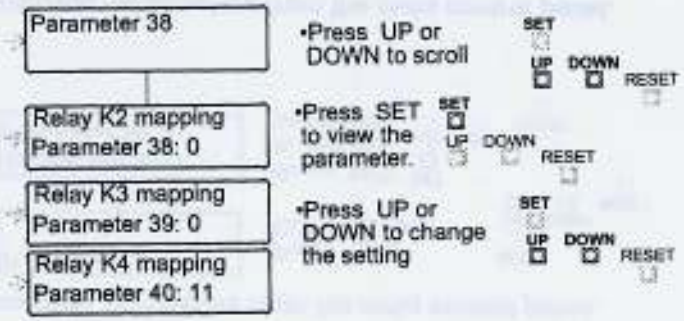
38
39
40

Parameters 38, 39 and 40 set the function of relays K2, K3 and K4 on the motherboard.

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.



When set to the following values, each relay may be used to perform any of the following functions.

0 Relay disabled - no function
1 Door in idle mode
2 Door is busy
3 Entrance violation attempt in progress
4 Entrance verification (parameter 18 sets duration)
5 Entrance alert (parameter 16 sets duration)
6 Entrance is permitted ("green light")
7 Exit violation attempt in progress
8 Exit verification (parameter 18 sets duration)
9 Exit alert (parameter 17 sets duration)
10 Exit is permitted ("green light")
11 Door is secured
12 Violation lockdown signal
13 Leading nosing shorted after (X) position.
14 Door jams without tripping safety nosing (torque stop).
15 Combination of functions 12, 13 & 14.

More than one relay may be used for the same function, if additional contacts are needed.
When mapped to function 11, the relay doubles as a power failure detection contact, since the relay will be held on whwnever the door is secured.

Default door mode

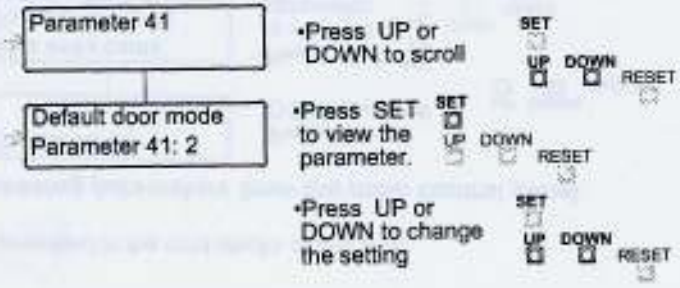
41

Parameters 41 works in conjunction with parameter 63, fixed power-up mode, to determine how the door operates when power returns after a power failure.
- If parameter 63 is turned on, parameter 41 determines what made the door uses after power returns.
- The default is mode 2 ("+" operation, card in / card out.)
- If parameter 63 is turned off, the door always returns to whatever mode was in use prior to the power failure.

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.



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29. PARAMETER CHART 8

Hardwired (42) mode A / (43) mode B

Parameters 42 and 43 are only active if parameter 60, hard wired mode select,is turned on.
When remote mode select is in use:
•Remote mode A selects the door mode to use when Aux A input is not active (terminals 3 & 4 of CN 5 are open).
•Remote mode B selects the door mode to use when Aux A input is active (terminals 3 & 4 of connector CN5 are shorted together)

•Parameters 42 and 43 and 60 are use when the door mode is remotely controlled by a building management system.
•If Parameter 60, remote mode select, is not in use the door mode is set with the LCP and parameters 42 and 43 are meaningless.

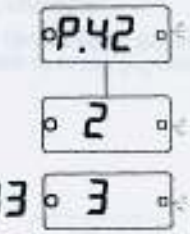
42
43

Accessing parameters from the infrared control.

•Press "+" up "-" down or the number keys to locate the desired parameter

•Press "?" to view the parameter

•Press "+" up "-" down or the number keys to change the value



Accessing parameters from the main control panel.

Parameter 42

•Press UP or DOWN to scroll

Remote mode A
Parameter 42: 2

•Press SET to view the parameter.

Remote mode B
Parameter 43: 3

•Press UP or DOWN to change the setting

Mode 0 thru 15 permitted

Parameters 44 through 59 determine which modes are available at the keyswitch (LCP). Any mode that is set to NO will be skipped when the keyswitch is use to select a new door mode.

EXAMPLE: Setting parameter 53, mode 9 permitted, to "no" (door freewheel) mode cannot be selected by the keyswitch.

•If the software does not enable the "x" operation, the default setting for mode 12 permitted thru mode 15 permitted is "no". In these restricted versions, these parameters can be changed to "yes" by the technician, but the keyswitch will continue to skip over the unpermitted modes.

44 = 0
45 = 1
46 = 2
47 = 3
48 = 4
49 = 5
50 = 6
51 = 7
52 = 8
53 = 9
54 = 10
55 = 11
56 = 12
57 = 13
58 = 14
59 = 15

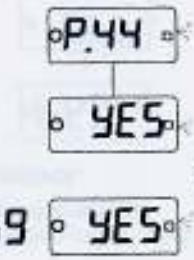
•If an attempt is made to use the restricted modes by enabling parameter 60, remote mode select, and setting either parameter 42, remote mode A, or parameter 42, remote mode B, to a restricted mode, the door will default to mode 2, "+" operation card in / card out instead "X" operation requires an upgrade in software.

Accessing parameters from the infrared control.

•Press "+" up "-" down or the number keys to locate the desired parameter

•Press "?" to view the parameter

•Press "+" up "-" down or the number keys to change the value



Accessing parameters from the main control panel.

Parameter 44

•Press UP or DOWN to scroll

Mode 0 permitted
Parameter 44: yes

•Press SET to view the parameter.

THROUGH ...

Mode 15 permitted
Parameter 59: yes

•Press UP or DOWN to change the setting

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30. PARAMETER CHART 9

Remote mode select

60

Parameters 60 determines whether the door's operating mode is set locally by the keyswitch (LCP) or remotely by a building management system. (See remote mode A, parameter 42, for additional information).

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 60

Remote mode select
Parameter 60: off

- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

Slows to qpt x modes

61

When parameter 61 is turned on, the door will slow from normal speed to reduced speed at the final "+" position just prior to quarterpointing in any "x" mode of operation.

Parameter 61 is only used in conjection with "x" operation.

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 61

Slows to qpt modes
Parameter 61: off

- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

Clears mats every cycle

62

When parameter 62 is turned on, the door will stop at every "+" position regardless of whether another entrance or exit is permitted or not, and will insist that all mats be cleared after each cycle before the next cycle is permitted.

Parameter 62 is only used in connection with "+" operation.

Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "?" to view the parameter
- Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 62

Clr mats every cycle
Parameter 62: off

- Press UP or DOWN to scroll
- Press SET to view the parameter.
- Press UP or DOWN to change the setting

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31. PARAMETER CHART 10

Fixed power-up mode

If parameters 63 is off, after a power failure or other system reset the door will always return to the mode of operation last in use.
If parameter 63 is on, the door will use the mode selected in parameter 41 - default door mode.

Accessing parameters from the infrared control.

63

- •Press "+" up "-" down or the number keys to locate the desired parameter
- •Press "?" to view the parameter
- •Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 63

Fixed power-up mode
Parameter 63: off

- •Press UP or DOWN to scroll
- •Press SET to view the parameter.
- •Press UP or DOWN to change the setting

Locked in auto mode

Parameter 64 chooses whether the brake will be locked in modes that do not require it.

- •Mode 8 (mat in/out), mode 9 (freewheel), mode 10 (motec in/out) do not require the core brake. All other modes are completely or partially secured, and the brake will always be use.

Accessing parameters from the infrared control.

64

- •Press "+" up "-" down or the number keys to locate the desired parameter
- •Press "?" to view the parameter
- •Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 64

Locked in auto mode
Parameter 64: off

- •Press UP or DOWN to scroll
- •Press SET to view the parameter.
- •Press UP or DOWN to change the setting

MAT ACTIVATION / CARD ACCESS

If this parameter is turned off,card access is allowed wheather mat is activated or not. If parameter is turned on and mat is activated card access is denided.

Accessing parameters from the infrared control.

65

- •Press "+" up "-" down or the number keys to locate the desired parameter
- •Press "?" to view the parameter
- •Press "+" up "-" down or the number keys to change the value

Accessing parameters from the main control panel.

Parameter 65

Reserved
Parameter 65: off

- •Press UP or DOWN to scroll
- •Press SET to view the parameter.
- •Press UP or DOWN to change the setting

66 Thru 98

Reserved

Parameters 66 through 99 are reserved on/off. They are not used by the current software.

Violation lockdown

99

If parameters 99 is off, (DEFAULT) the door will lockdown if a forced entry is attempted and the door is pushed approx. 4° opposite its direction of rotation. A signal will be sent to the security system if available. (K2, K3 or K4 must be mapped to value 12)
If parameter 99 is on,the door will not lockdown, but a signal will be sent to the security system if available. (K2, K3 or K4 must be mapped to value 12)
Access and set the paramete as described above

32. PARAMETER QUICK REFERENCE CHART

PARAMETER	FUNCTION	DEFAULT	Comments	SECTION
1	Speed - Normal	60	The selected value = the motor voltage (see diagnostics 2 for run speed)	22
2	Speed - Reduced	45		
3	Speed - Reverse	45		
4	Reserved	0		
5	Reserved	0		22
6	Safety sens - Forward	15	Sensitivity of the door's safety circuit to obstructions	23
7	Safety sens - Reduced	15		
8	Safety sens - Reverse	15		
9	Safety sens - Reserved	15		
10	Safety sens - Startup	0		
11	Safety stop time fwd	35	Time delays are measured in 1/10 sec (35 = 3.5 sec)	
12	Safety stop time rev	35		23
13	Inactive time out	50	Not used in "x" quarterpoint operation	24
14	Security pass time out	100	Not used in "x" quarterpoint operation	24
15	Idle mode time out	100		25
16	Entry alert time	15		
17	Exit alert time	15		
18	Verify contact time	10		25
19	Reserved time delay	10		26
Thru	↕	↕		
22	Reserved time delay	10		
23	Motec delay time (X)	50		
24	Safety stops to idle	1	Time duration is set with parameter 11	26
25	Max entry cards	25		27
26	Max exit cards	25		
27	Backup warnings	1		
28	Network address	0	Only used when the door is part of a network	
29	Reserved	0		
Thru	↕	↕		
37	Reserved	0		27
38	Relay K2 mapping	0		28
39	Relay K3 mapping	0		
40	Relay K4 mapping	11		
41	Default door mode	2	Used in conjunction with parameter 63	28
42	Remote mode A	2	Parameter 60 must be turned on	29
43	Remote mode B	3	Parameter 60 must be turned on	
44	Mode 0 permitted	Yes	Mode that is turned off is skipped by the keyswitch (See modes chart)	
Thru	↕	↕	↕	
59	Mode 15 permitted	Yes	Mode that is turned off is skipped by the keyswitch (See modes chart)	29
60	Hard wired mode select	Off	When this parameter is turned on, the door mode is controlled remotely by hard wired device	30
61	Slows to qpt x modes	Off	Only used with "x" quaterpoint operation	30
62	Clr mats every cycle	Off	Only used with "+" quaterpoint operation	30
63	Fixed power-up mode	Off	If this parameter is on, the door will use the mode selected in parameter 41	31
64	Locked in auto modes	Off	Eliminates the use of the brake in modes 8,9 and 10	
65	Mat actv / card access	Off	Off card access allowed any time - On while mat sensor is active card access is denided	
66	Reserved	Off		
Thru	↕	↕		
98	Reserved	Off		
99	Violation lockdown	On	Locks the door if it is forced in the direction opposite to its rotation.Entrapment can occur	31

33. DIAGNOSTICS QUICK REFERENCE CHART

DIAG	FUNCTION	Comments	SECTION
1	Check power supply	Displays DCV output of the power supply to operate the motor & brake	15
2	Check door speed	LCP displays door revolutions MCP displays motor voltage & RPM	15
3	Check motor voltage & current	LCP displays motor current, MCP displays motor current & voltage	16
4	Check brake voltage & current	LCP displays brake voltage, MCP displays brake current & voltage	16
5	Check brake voltage & current	LCP displays brake current, MCP displays brake current & voltage	16
6	Encoder test	LCP and MCP display encoder count in each quadrant	17
7	Testing inputs	LCP displays codes of active inputs, MCP displays text of active inputs	17
8	Voice	Play back or record a message	18
9	Check statistics	LCP displays code, MCP displays statistic and its value	18
10	Reserved	Reserved for future use	19
11	↕	↕	19
12			19
13			19
14	Reserved	Reserved for future use	19
15	Learn safety limits	Sets the safety limits by current sensing	19
16	Complete setup	Restores factory default settings to all parameters, and zeros all counters	20

34. ERROR CODES

All errors except 7 are considered major and require a keyswitch reset to clear them and restart the door.

LCP display

Er 1 **Direction error** (the door was pushed in the wrong direction when not in idle).
If the door is properly set up this run time error will never be seen because the safety stop will kick in before the door can be stopped manually and pushed in the wrong direction.

Er2 **Drive system failure** - This is either a run time or setup error and indicates that the motor could not be ramped to the proper voltage.

Er3 **Motor current excessive** - only occurs during setup phase

Er4 **No reference switch** - only occurs during setup phase

Er5 **Encoder phasing incorrect** - only occurs during setup phase

Er6 **No encoder pulses received** - only occurs during setup phase

Er7 **Brake failure** - A run time error that is displayed if insufficient brake voltage and / or current are detected when the door is supposed to be secure. It is self-clearing when proper voltage is restored.

Er8 **High voltage DC failure**

Er9 **System failure**