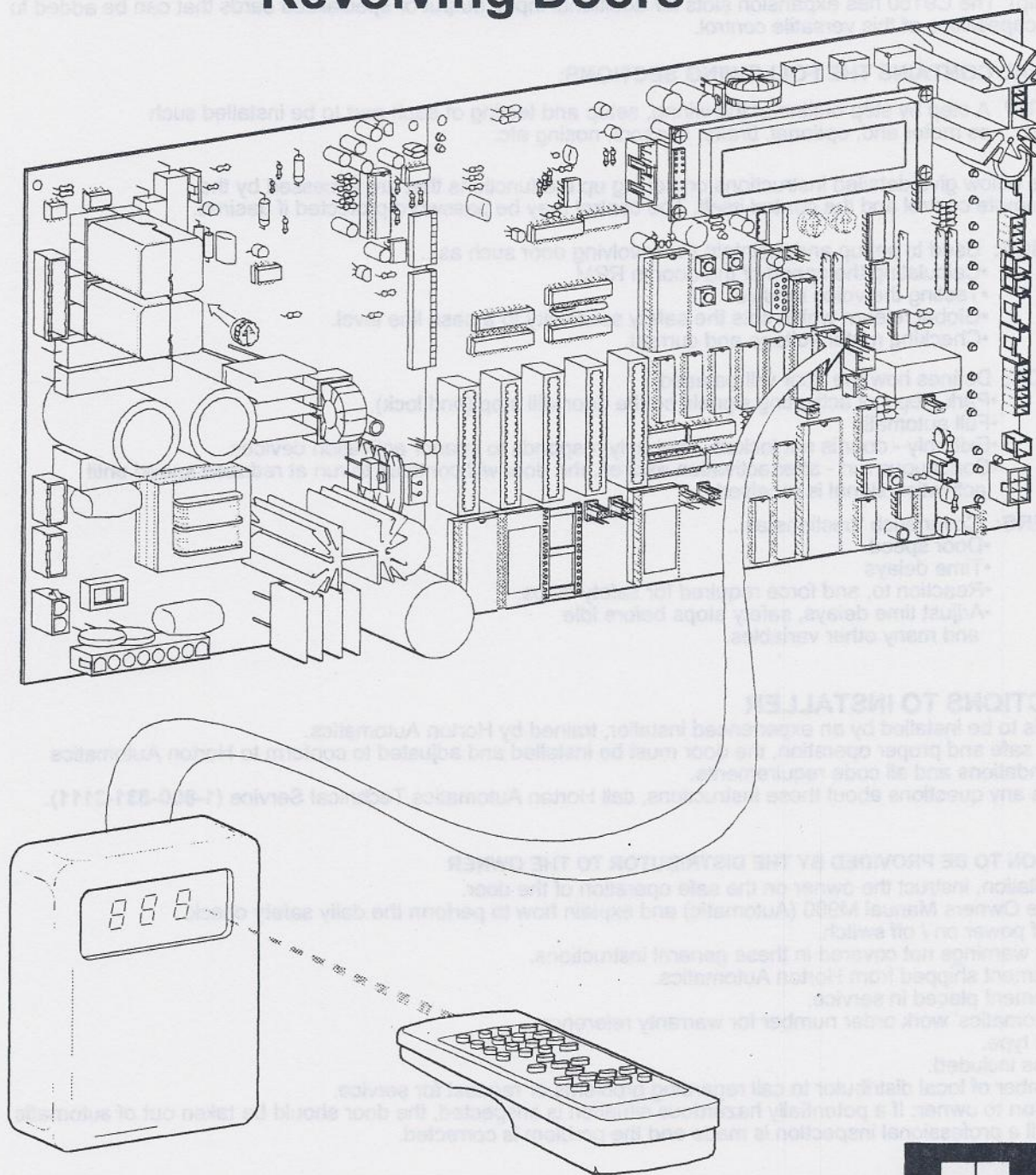


C9150-5

Setup Instructions

for Automatic and Grand Revolving Doors



9.310d1

H916, MARCH 2002

Horton
AUTOMATICS

OVERVIEW OF H916 SETUP INSTRUCTIONS FOR C9150-5 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 12. 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, optional, brake, sensors, 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 control may be password protected if desired.

DIAGNOSTICS: Used to set up and maintain the revolving door such as...

- Calculating the speed of the door in RPM
- Testing the voice module.
- Global relearn which sets the safety sensitivity to a base line level.
- Checking motor voltage and current.

MODE: Defines how the door will be used

- Park stops all activating signals so the door will stop (and lock).
- Full automatic
- Exit only - door is not locked - but only responds to interior activation devices.
- Continuous run - after activation expires, the door will continue to run at reduced speed until activation signal is received.

PARAMETERS: Cover such functions as...

- Door speed
- Time delays
- Reaction to, and force required for safety stops.
- Adjust time delays, safety stops before idle and many other variables.

INSTRUCTIONS TO INSTALLER

- This door is to be installed by an experienced 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 M900 (Automatic) 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)120V or 240V, 50 / 60 Hz 15A 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

REFERENCE (for basic setup)

A. C9150 Control and power supply.....	H916.1
B. Control connections.....	H916.2

BASIC SETUP

1. Basic setup (wiring motor, brake and encoder).....	H916.3
2. Basic setup (wiring reference switch).....	H916.4
3. Basic setup (wiring slip ring assembly and magnetic breakout).....	H916.5
4. Basic setup (wiring emergency stop switch, fire alarm, LCP and key switch).....	H916.6

TESTING SETUP

5. Basic setup (introduction to diagnostics).....	H916.7
6. Basic setup (checking motor and brake current).....	H916.8
7. Basic setup (setup run).....	H916.9
8. Basic setup (setup run).....	H916.10

BASIC SETUP

9. Basic setup (wiring entry guard, speakers and slow speed switches).....	H916.11
10. Basic setup (wiring motion detectors and lights).....	H916.12
11. Basic setup (nosing wiring).....	H916.13

TESTING SETUP

12. Basic setup (testing) motion detectors	H916.14
--	---------

REFERENCE CHARTS (for setup)

DIAGNOSTICS

13. Diagnostics 1 (check power supply).....	H916.15
13. Diagnostics 2 (check door speed).....	H916.15
14. Diagnostics 3 (check motor voltage and current).....	H916.16
14. Diagnostics 4 (check brake voltage and current).....	H916.16
14. Diagnostics 5 (check brake voltage and current).....	H916.16
15. Diagnostics 6 (encoder test).....	H916.17
15. Diagnostics 7 (testing inputs).....	H916.17
16. Diagnostics 8 (voice).....	H916.18
16. Diagnostics 9 (check low voltage DC supply).....	H916.18
16. Diagnostics 10 thru 13 (reserved).....	H916.19
17. Diagnostics 14 (need help).....	H916.19
17. Diagnostics 15 (learn safety limits).....	H916.19
18. Diagnostics 16 (complete setup).....	H916.20

MODES

19. Door modes (modes 0 thru 3)	H916.21
20. Door operating modes (using the infra-red remote).....	H916.22

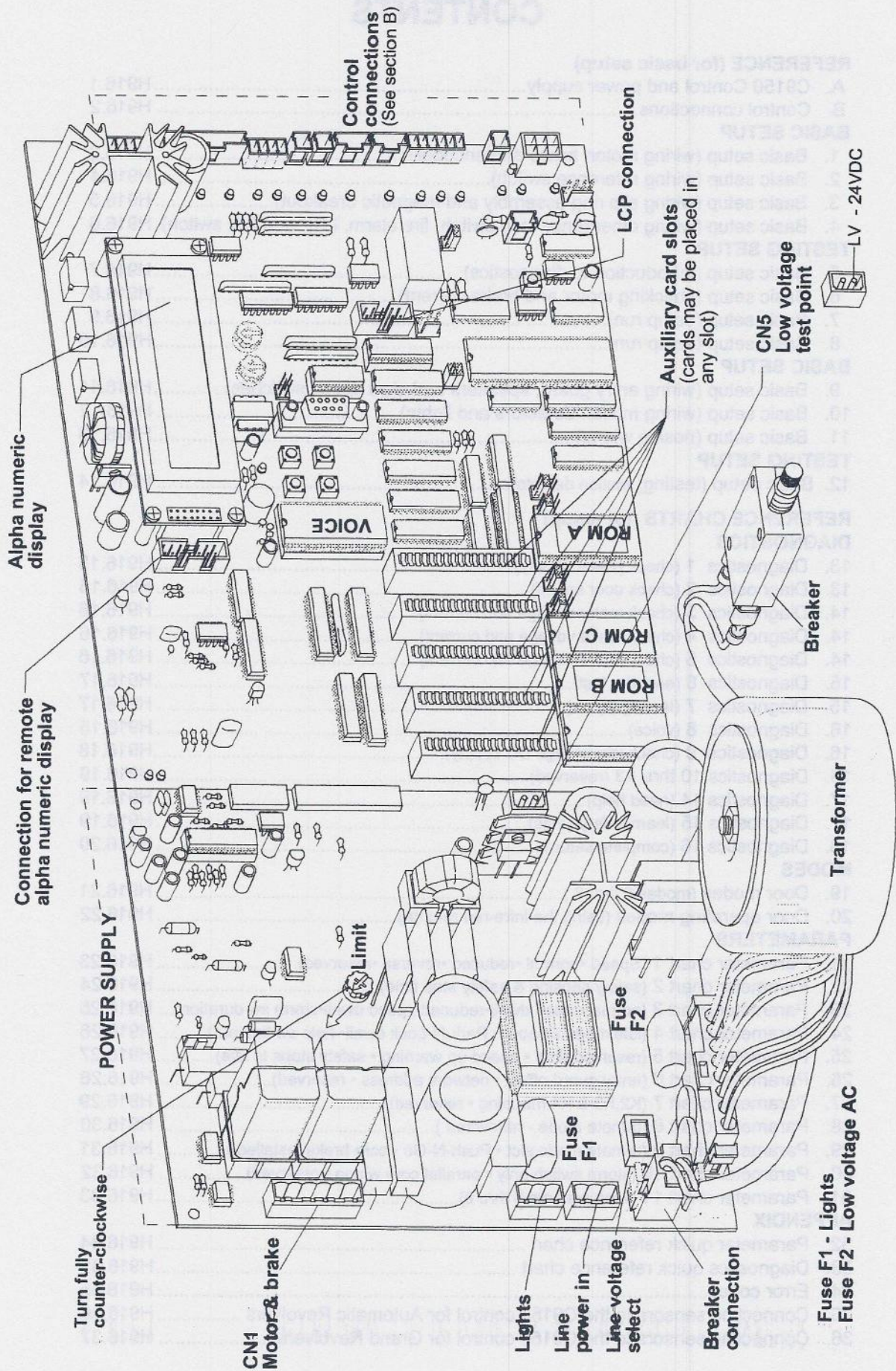
PARAMETERS

21. Parameter chart 1 (Speed •normal •reduced •reverse •reserved).....	H916.23
22. Parameter chart 2 (safety sensing & safety stop time).....	H916.24
23. Parameter chart 3 (normal speed dwell•reduced speed dwell•storm sw duration).....	H916.25
24. Parameter chart 4 (idle mode timeout • Park-N-Lock dwell• help sw timeout).....	H916.26
25. Parameter chart 5 (reserved time • speed up warning • safety stops to idle).....	H916.27
26. Parameter chart 6 (entry guard offset • network address • reserved).....	H916.28
27. Parameter chart 7 (K2,K3 & K4 mapping • reserved).....	H916.29
28. Parameter chart 8 (remote mode - hardwired).....	H916.30
29. Parameter chart 9 (remote mode slct • Push-N-Go • core brake installed).....	H916.31
30. Parameter chart 10 (storm switch only • parallel core wiring • reserved).....	H916.32
31. Parameter chart 11 (wing sensors 3 thru 8).....	H916.33

APPENDIX

32. Parameter quick reference chart	H916.34
33. Diagnostics quick reference chart	H916.35
34. Error codes.....	H916.35
35. Connecting sensors to the C9150 control for Automatic Revolvers	H916.36
36. Connecting sensors to the C9150 control for Grand Revolvers.....	H916.37

A. C9150 CONTROL AND POWER SUPPLY





1. BASIC SETUP(wiring motor,brake and encoder

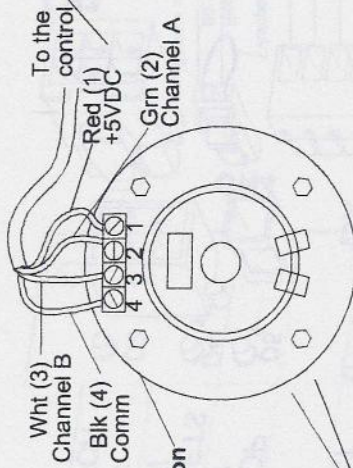
NOTE:

- 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.

"TOP"

Should be stamped on "up" side

Optional brake for Park-N-Lock

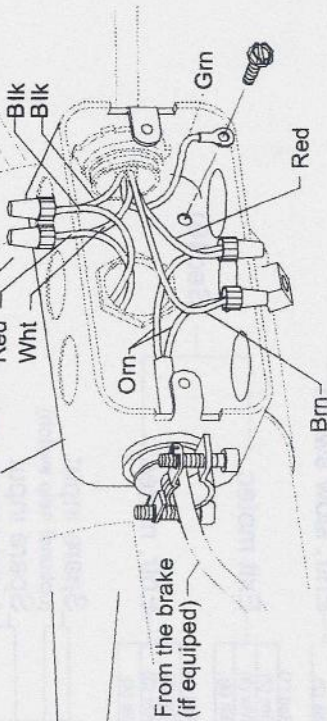


Encoder connection

Brake, motor and encoder connections are factory installed. Illustrations are for reference only

Motor (Red) → Wht → To CN1 on the power supply board.
Motor (Blk) → Blk →

Brake and motor connection

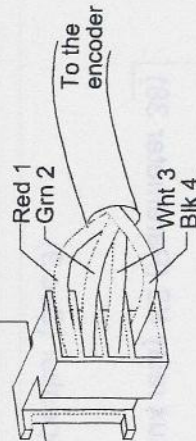


NOTE
Route all wiring through the 1 1/2" strain relief

All lace connections will pass through the strain relief opening. Tighten clamp when all wires are in place

CN1

3rd Step
Encoder connection at the control board



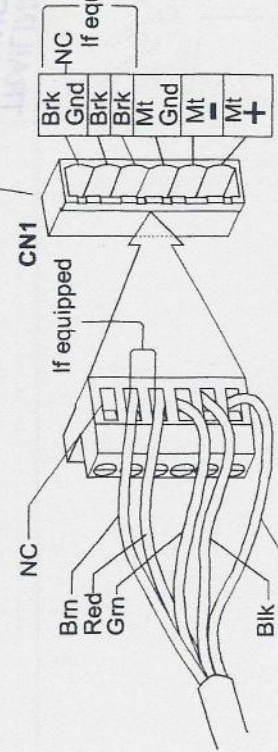
1st Step

Check power supply for proper voltage setting

230 V
115 V

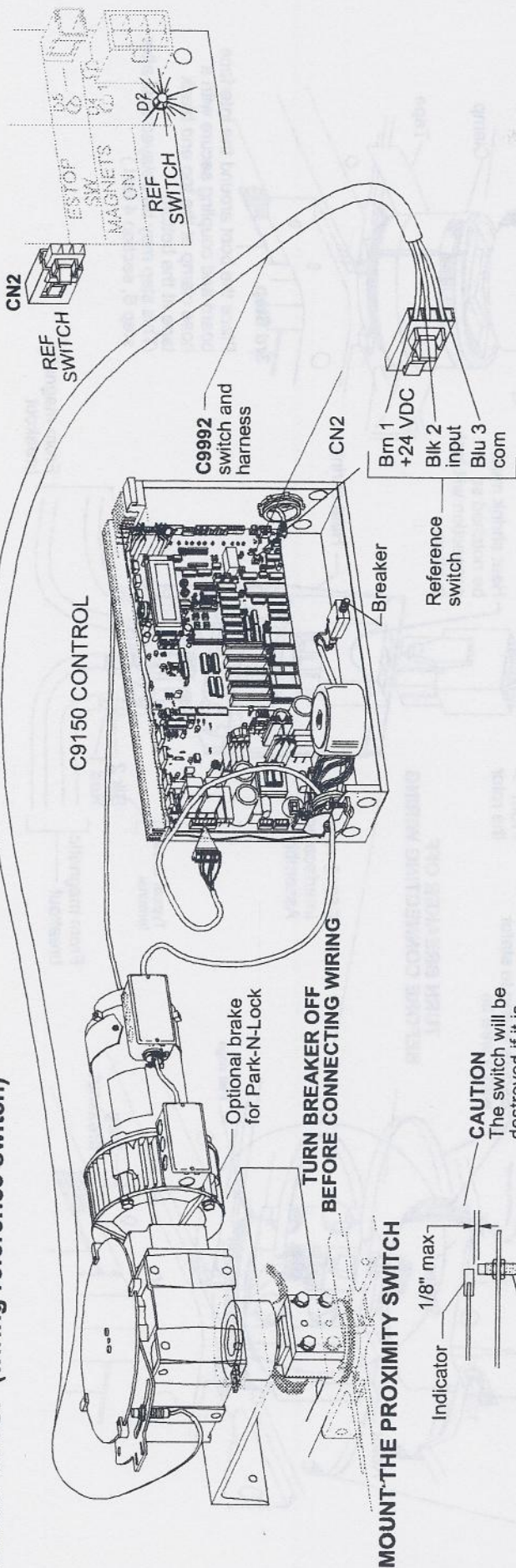
Use a screw driver in the slot to adjust slide switch (Switch is factory set at 120VAC)

2nd Step Brake and motor connection



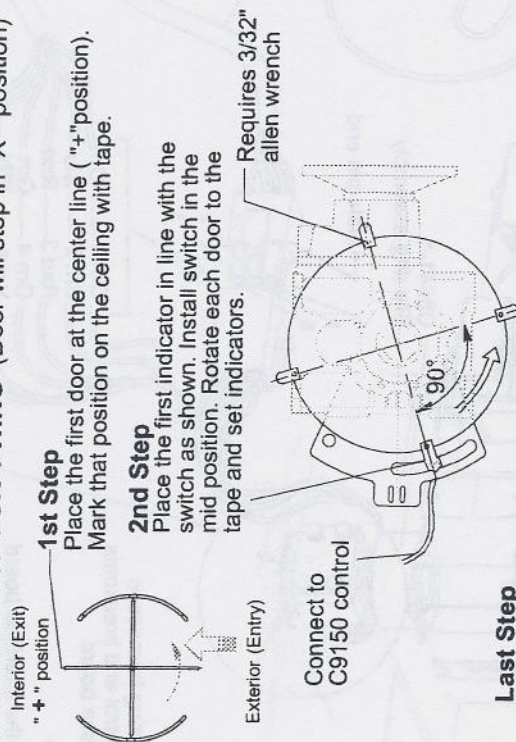
NOTE:
DO NOT PLUG IN UNTIL LATER (SECTION 6)

2. BASIC SETUP (wiring reference switch)

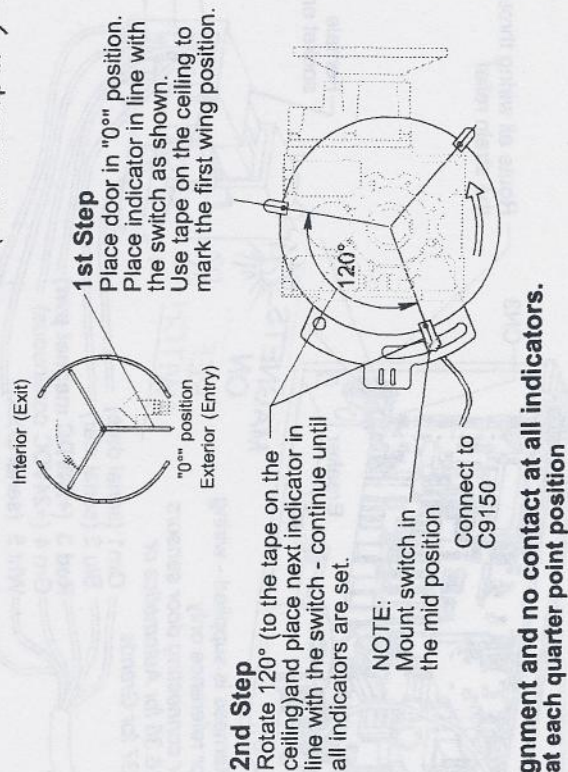


H916.4

INDICATOR SETUP FOR 4-WING (Door will stop in "X" position)

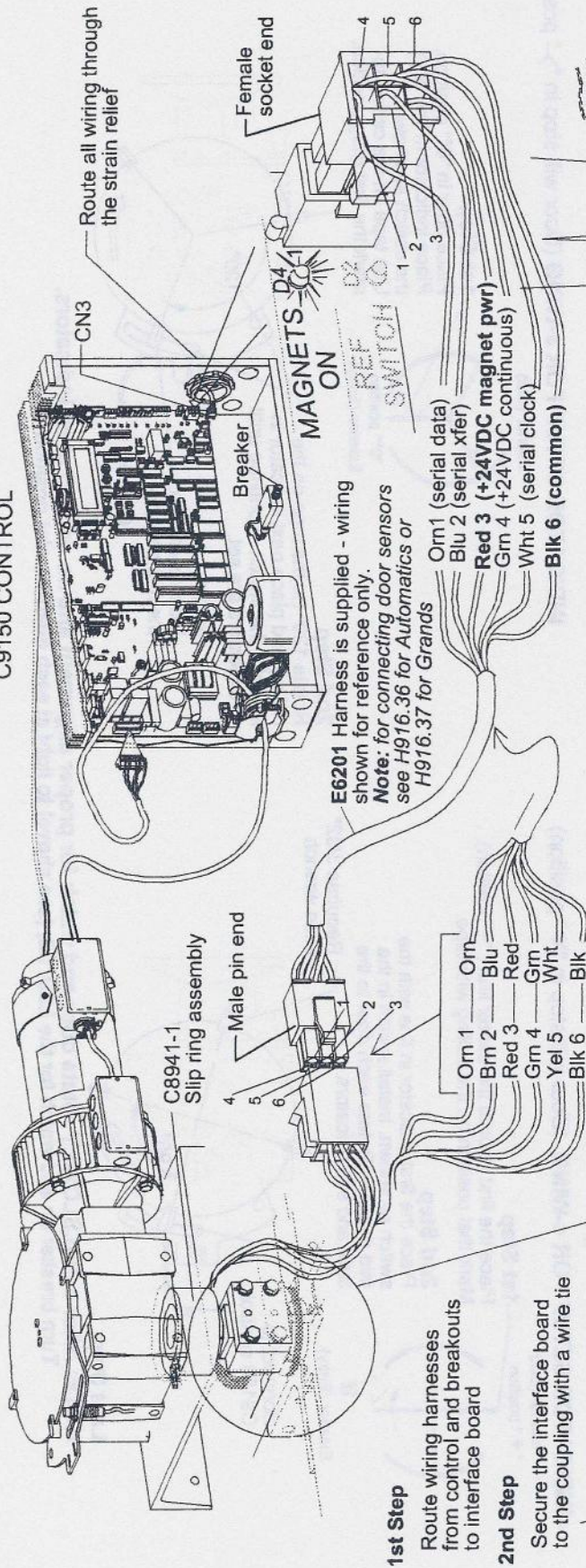


INDICATOR SETUP FOR 3-WING (Door will stop in "Y" position)



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

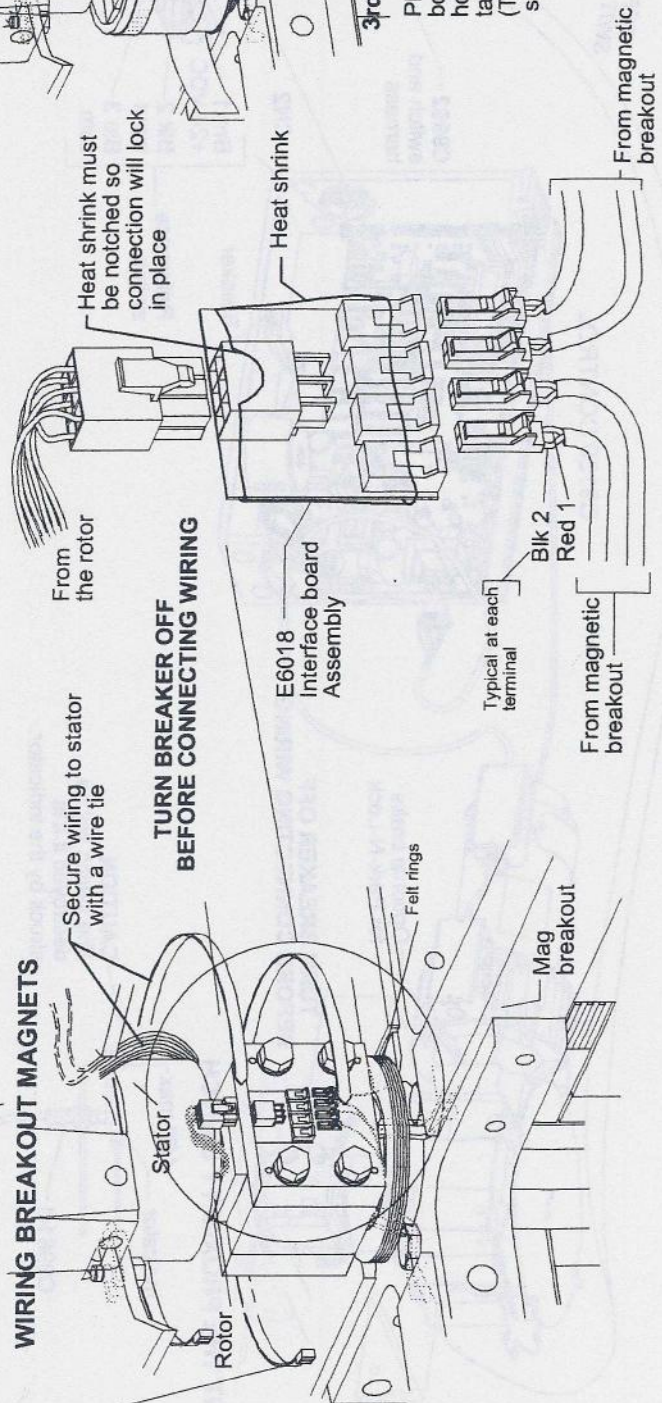
C9150 CONTROL



WIRING BREAKOUT MAGNETS

Secure wiring to stator with a wire tie

TURN BREAKER OFF BEFORE CONNECTING WIRING



3rd Step

Place the boot around the interface board and coupling secure with a hose clamp at the top and black tape at the bottom.
(This step may be delayed until after step 6, section 4 test.)

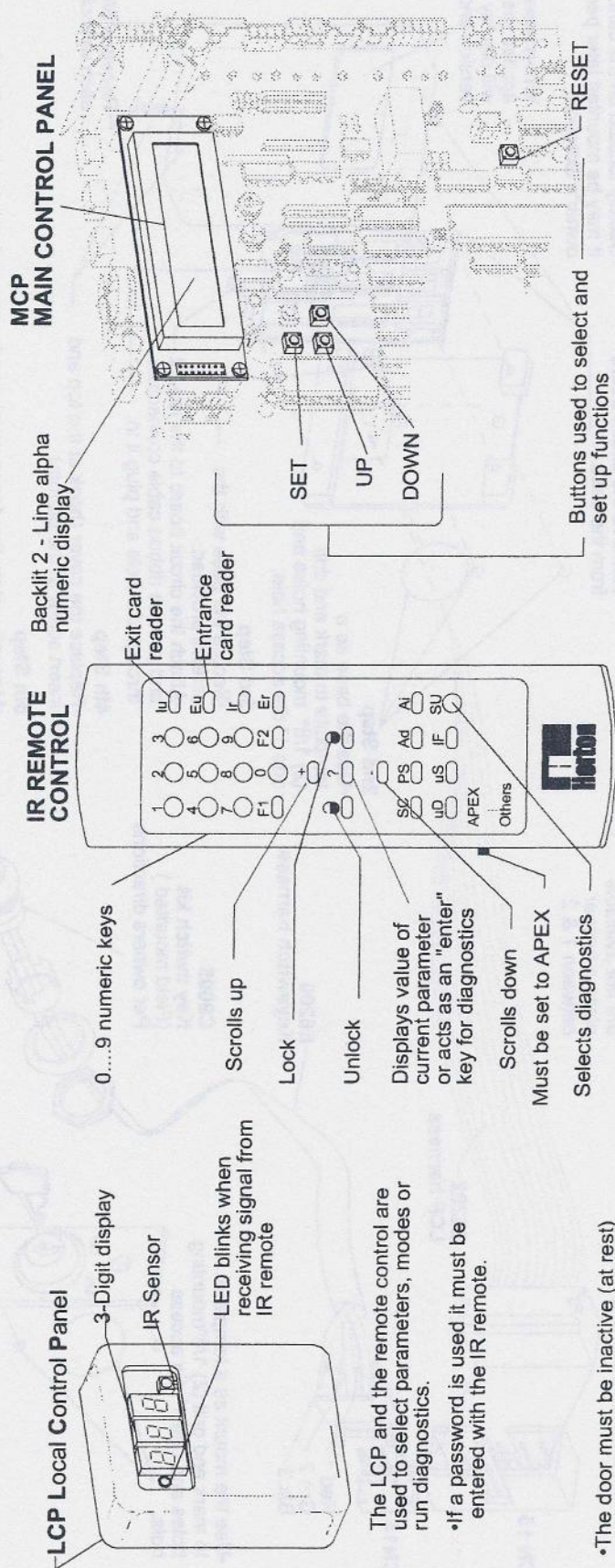
**TURN BREAKER OFF
BEFORE CONNECTING WIRING**



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 for performing these 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**.

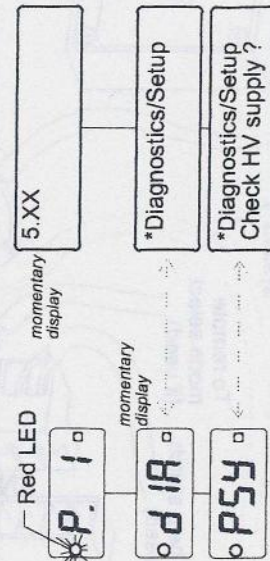


• The version number will display

• 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

6. BASIC SETUP (checking motor and brake current)

PLUG IN CN1 (motor and brake 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)

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.

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) (Used only for Park-N-Lock)

- Press 5 or "+" up "-" down until 5 is displayed

- Press "?"

- Brake current is displayed.

BRAKE CURRENT SHOULD BE 180ma TO 200ma.

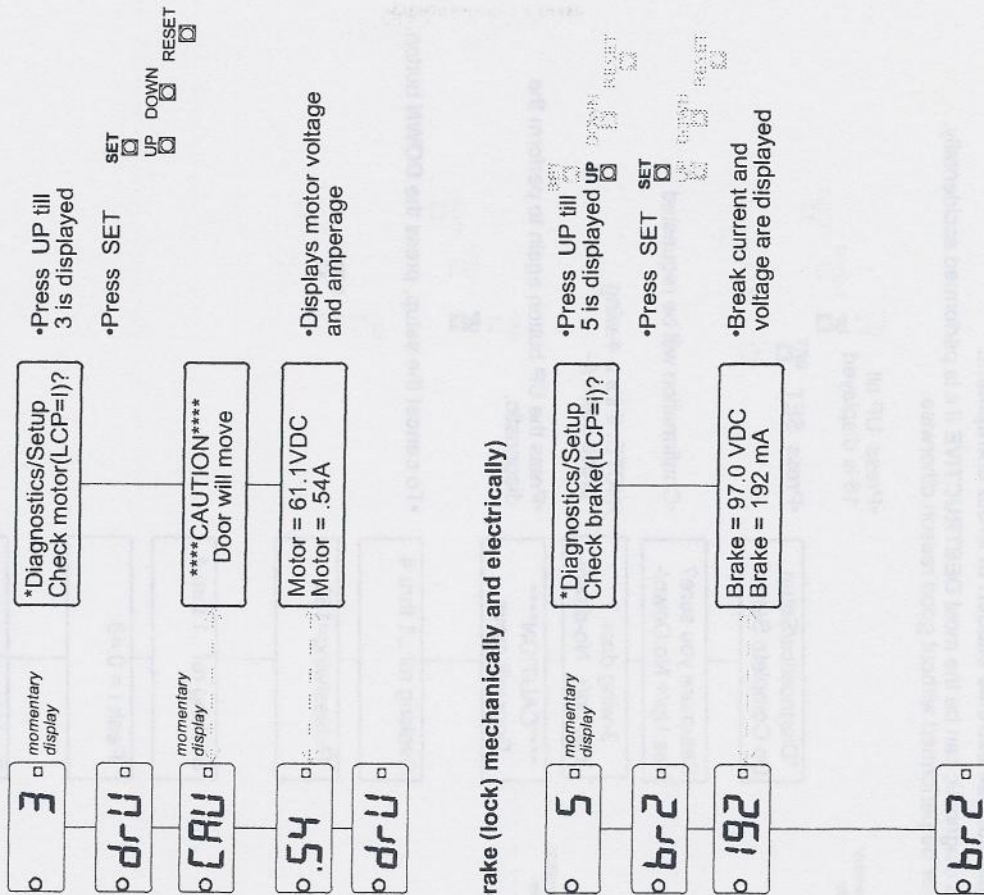
Low brake current indicates an open connection. Check motor / brake connection at CN1 section 1 basic setup.

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

- Press SU again to exit

The order in which the diagnostics are arranged

- 1 **PSY**
- 2 **SPd**
- 3 **drU**
- 4 **br I**
- 5 **br2**
- 6 **EnC**
- 7 **inP**
- 8 **Uo I**
- 9 **24u**
- 10 ---
thru
- 13 ---
- 14 **EE55**
- 15 **55L**
- 16 **55E**



GO TO NEXT PAGE

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.

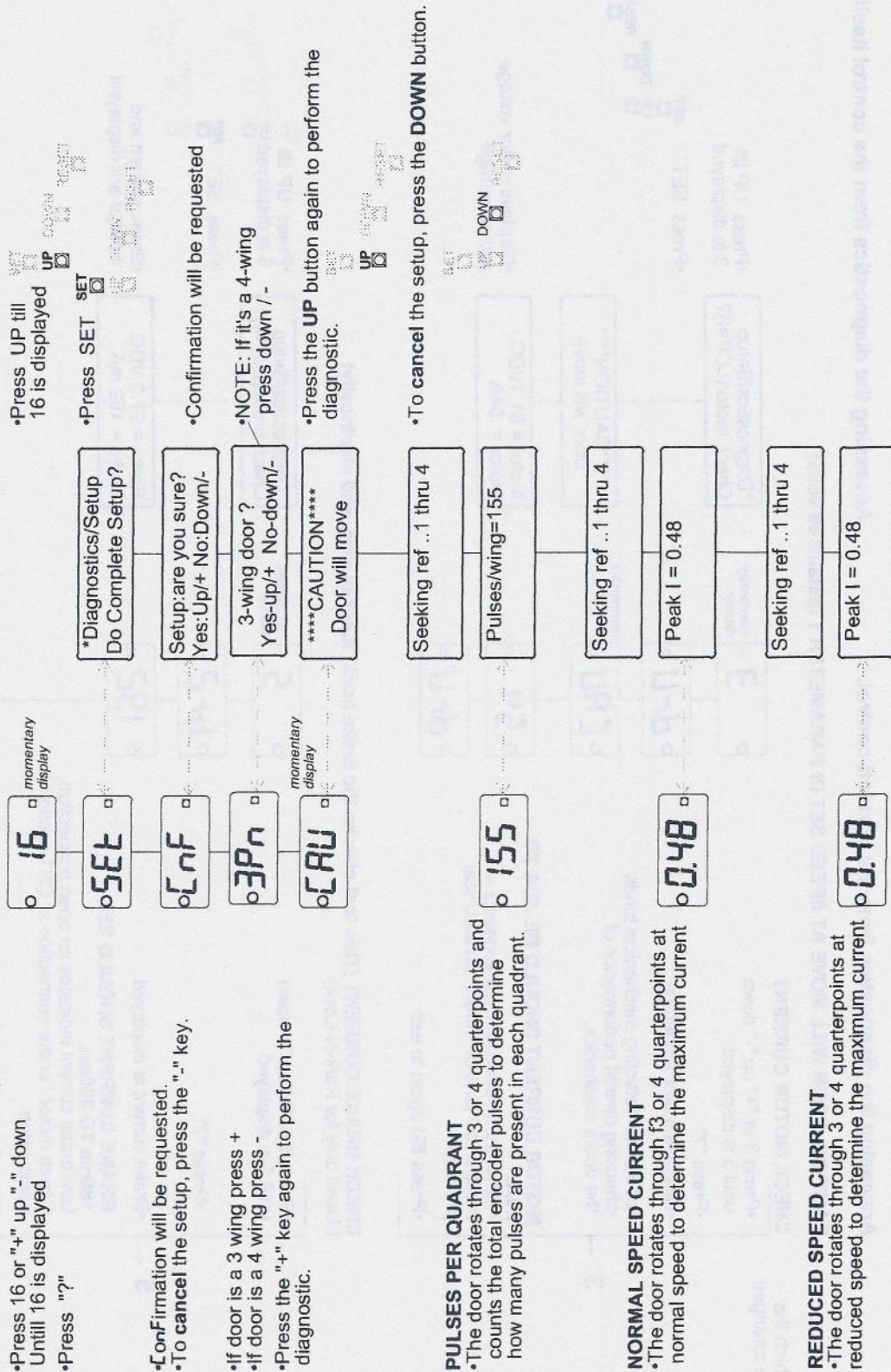
Accessing the diagnostics from the infrared control.

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 caution to avoid entrapment.

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



8. BASIC SETUP (setup run)

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the main control panel.

COMPLETE SETUP (CON'T)

STARTUP CURRENT

•The door rotates through one quadrant

0.98

Version number
is displayed

•After the door stops rotating,
press the lock key

5. --

Peak I = 0.98

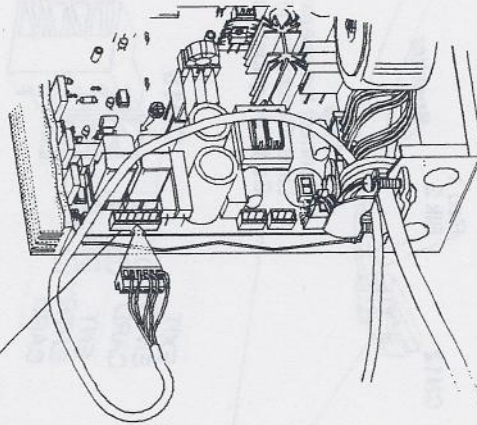
Mode 1 ready
Full Auto

•After the door stops rotating
press the **RESET** button.

DOWN
UP
RESET

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 (wiring Entry Guard™, speakers and slow switches)

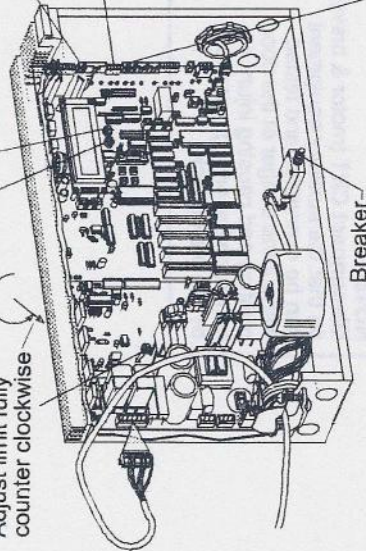
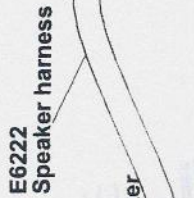
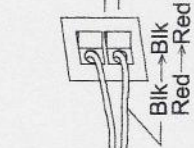
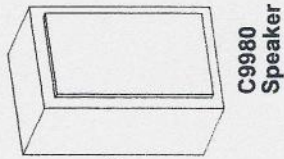
TURN BREAKER OFF BEFORE CONNECTING WIRING

Improper adjustment of contrast can cause the display to look blank

Contrast — Adjust volume and contrast to 9:00

Limit — Adjust limit fully counter clockwise

1st Step
Connect the speaker and set the Limit, Contrast and Volume as shown.
Go to diagnostics 8 to test voices.



CN10

EXIT ENTRY CARD
D17 4
D16 3
ENT ENTRY CARD
D16 2
D15 1

CN9

EXIT HCAP SW
D15
ENT HCAP SW
D14

CN8

Exit slow switch

Red 1
Blk 2

E6222-1 Switch harness

Entr. slow switch

Red 1
Blk 2

Entry Guard

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

EXIT

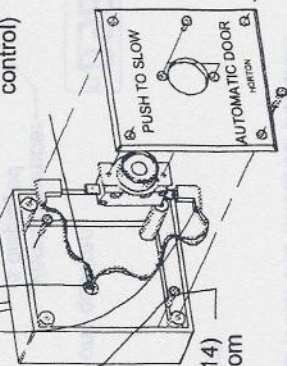
EXIT

EXIT

EXIT

Slow speed switch mounting

- Remove the face plate and switch.
- Drill a 1/4" hole where required for the wires to pass through.
- Crimp wire connectors onto wires.
- Position switch box as required drill and mount with (2) #10 sheet metal screws



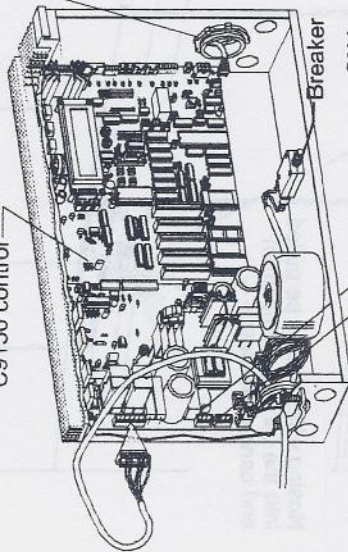
Located 36"(914) to 48"(1219) from finished floor.

10. BASIC SETUP (wiring motion detectors and lights)

TURN BREAKER OFF
BEFORE CONNECTING WIRING

Route all wiring through
the strain relief

C9150 control



Breaker

CN4

Line (Blk)
Neut (Wht)
Gnd (Gm)

If lights are not to be
controlled through
the C9150 connect
plug to external
power supply.

OR

- Remove the plug
- Install the connector and
plug into the power supply
on the control

CONTROLLING LIGHTS FROM THE KEYSWITCH (Turn the power on)



Move the keyswitch to the right
and **HOLD** to turn lights on.
Return to center position.

o L.on



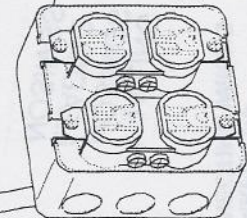
Move the keyswitch to the right
again and **HOLD** to turn lights off.
Return to center position.

o L.off

C9583

4-plex with cord and plug

Locate 4 plex plug in the canopy
and plug lights into it.



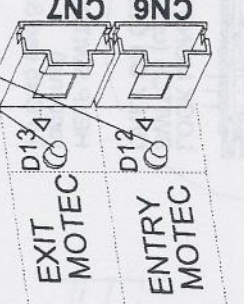
TEST THE MOTECs

Turn on the power.

Have someone pass through each
of the detection zones.

D12 will light for the entry and

D13 will light for the exit



EXIT
MOTEC

ENTRY
MOTEC

CN7

CN6

Red (1)
Gm (2)
Wht (3)
Blk (4)

Red (1)
Gm (2)
Wht (3)
Blk (4)

E6224
Motec harness

Red

Gm

Wht

Blk

1

12-24 VDC

Comm

N.C.

N.C.

5

EXIT

Exit Motec

Light

ENTR

Light

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ADJUST THE MOTEC

with the remote as per EAGLE instructions.

NOTE: Place remote in "others" position to
adjust the motec (see Sect. 5).

Move the switch back for control adjustments.

Gm

Wht

Blk

1

12-24 VDC

Comm

N.C.

N.C.

5

EXIT

Exit Motec

Light

ENTR

Light

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

ENTR

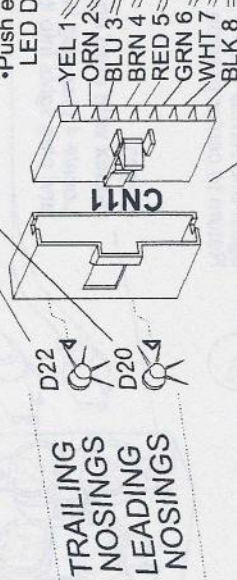
11. BASIC SETUP (nosing wiring)

**TURN BREAKER OFF
BEFORE CONNECTING WIRING**

5th Step

TEST THE NOSINGS

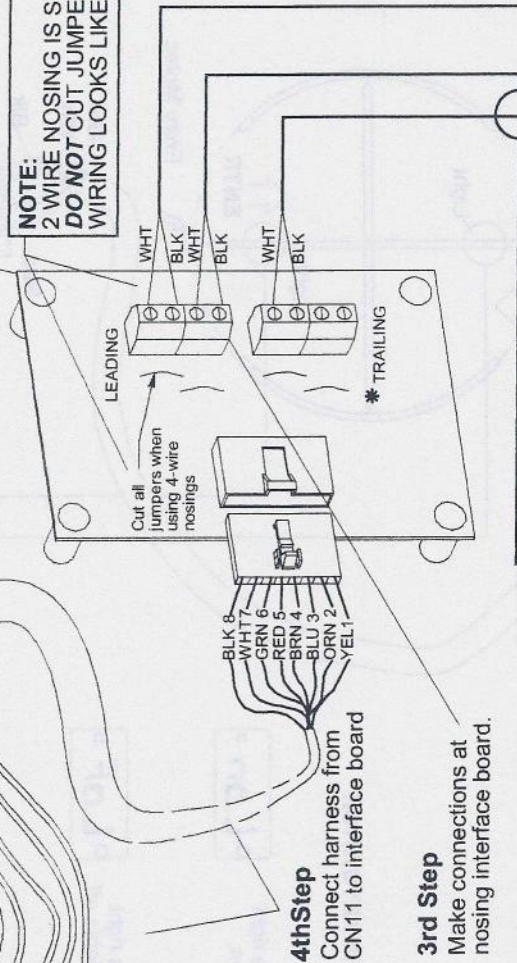
- Turn the power on.
- Push each leading nosing LED D20 will come on.
- Push each trailing nosing LED D22 will come on



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

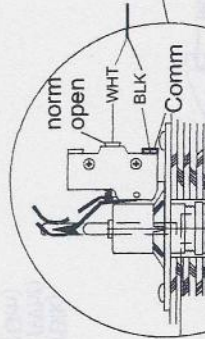


1st Step

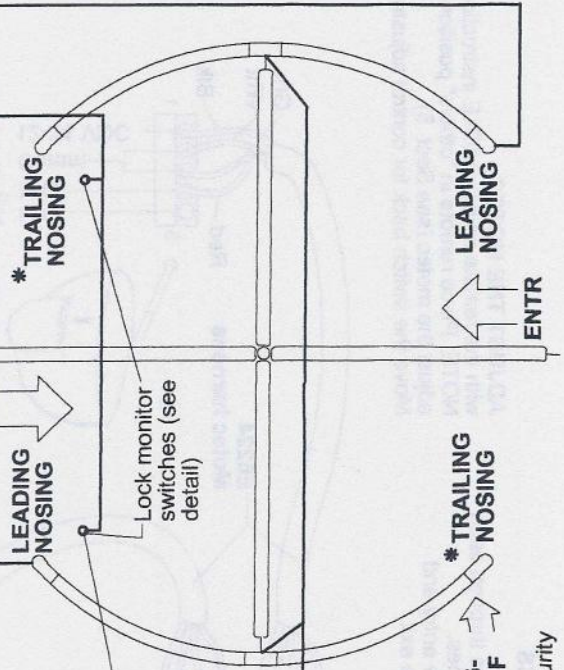
Interface board is supplied with the control accessories. Mount to the gear drive support tubes with #6 SMS (drill 3/32" pilot hole)

2nd Step

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



Nosing wires should be pulled into the canopy during drum and canopy assembly



***NOTE:**
DO NOT CONNECT TRAILING NOSING-
ONLY THE LOCK MONITOR SWITCH, IF
EQUIPPED.
(Trailing nosing is only connected on security doors.)

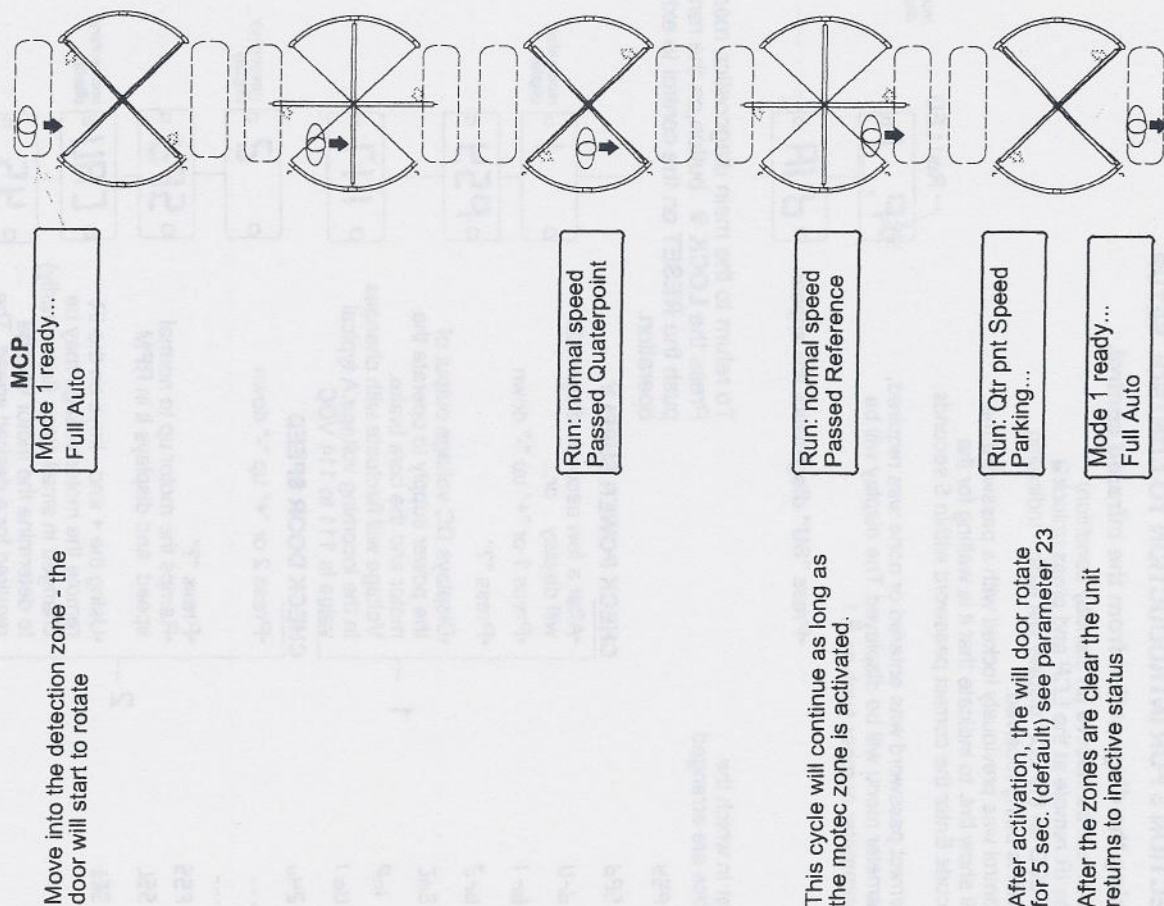
HELP SWITCHES
(optional)
To CN5 see Sect 4

12. BASIC SETUP (testing)

The following tests are designed to check all inputs and outputs. The tests are conducted in mode 1. Plug in CN1 (motor and brake) and turn the breaker on.

MOTION DETECTOR ACTIVATION (mode 1)

(If MCP does not read mode 1 ready... see SEC.19)



13. 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**

•Press "SU" diagnostics will appear

The order in which the diagnostics are arranged

1 **P5Y**

2 **SPd**

3 **d-r-U**

4 **br I**

5 **br 2**

6 **EnL**

7 **InP**

8 **Lo I**

9 **24u**

10 **---**

11 **---**

12 **---**

13 **---**

14 **F55**

15 **55L**

16 **5Ee**

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

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.

CHECK POWER SUPPLY

- 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

CHECK DOOR SPEED

- 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 changed in parameters 1 and 2.

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

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

14. DIAGNOSTICS CHART 2

H916.16

Accessing the diagnostics from the infrared control.

CHECK MOTOR VOLTAGE AND CURRENT

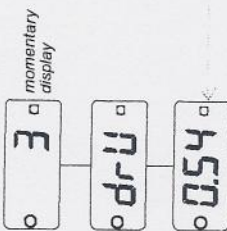
- Press 3 or "+" up "-" down

- Press "?"

- Displays motor amperage

- Useful for hunting mechanical binds
- checking overall performance of the doors mechanics.

3



- Press UP till 3 is reached

- Press SET



Motor = 61.1VDC
Motor = 0.54A

- Displays motor voltage and amperage

CHECK BRAKE VOLTAGE (If present) (LCP displays voltage)

- 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 brake control subsections of the control.

4



- Press UP till 4 is reached

- Press SET



Brake = 97.0 VDC
Brake = 192 mA

- Displays brake voltage and amperage

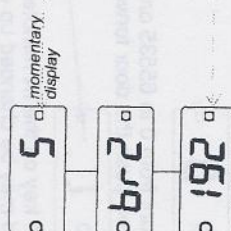
CHECK BRAKE VOLTAGE (If present) (LCP displays current)

- Press 5 or "+" up "-" down

- Press "?"

- Brake current is displayed.
Current is typically in the 200ma range

5



- Press UP till 5 is reached

- Press SET



Brake = 97.0 VDC
Brake = 192 mA

- Brake current and voltage are displayed

15. DIAGNOSTICS CHART 3

Accessing the diagnostics from the infrared control.

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**.

MANUAL ENCODER TEST

- If the door is pushed backwards the encoder will count from 0 to 65535 on the LCD and to "..." on the control.
- 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:

LCP

- i.1 Reference switch on
- i.2 Lock monitor switch on
- i.3 Leading safety nosings on
- i.4 Card contact on (Reserved)
- i.5 Card contact on (Reserved)
- i.6 Exit slow switch on
- i.7 Entrance slow switch on
- i.8 Exit motion detector on
- i.9 Entrance motion detector on
- i.10 Keypress SET on
- i.11 PY-3 reserve on
- i.12 AUX B/ Help switch on
- i.13 AUX A/ mode sel on
- i.14 Fire contact on
- i.15 Emergency stop contact on
- i.16 PZ-7 reserved on
- i.17 DIP1 on
- i.18 DIP2 on
- i.19 DIP3 on
- i.20

LCP

- i.21 DIP4 on
- i.22 UP pressed
- i.23 DOWN pressed
- i.24 SET pressed
- i.25 E6010 AUX 4 on
- i.26 E6010 AUX 3 on
- i.27 E6010 AUX 2 on
- i.28 E6010 AUX 1 on
- i.29 Trailing exit mat on
- i.30 Leading exit mat on
- i.31 Trailing ent mat on
- i.32 Leading ent mat on
- i.33 E6008 Input 8 on
- i.34 E6008 Input 7 on
- i.35 E6008 Input 6 on
- i.36 E6008 Input 5 on
- i.37 Exit late entry on
- i.38 Entry late entry on
- i.39 Single wire slow on
- i.40 Single wire stop on

Accessing the diagnostics from the control itself.

- Press UP till 6 is reached

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

- Press SET

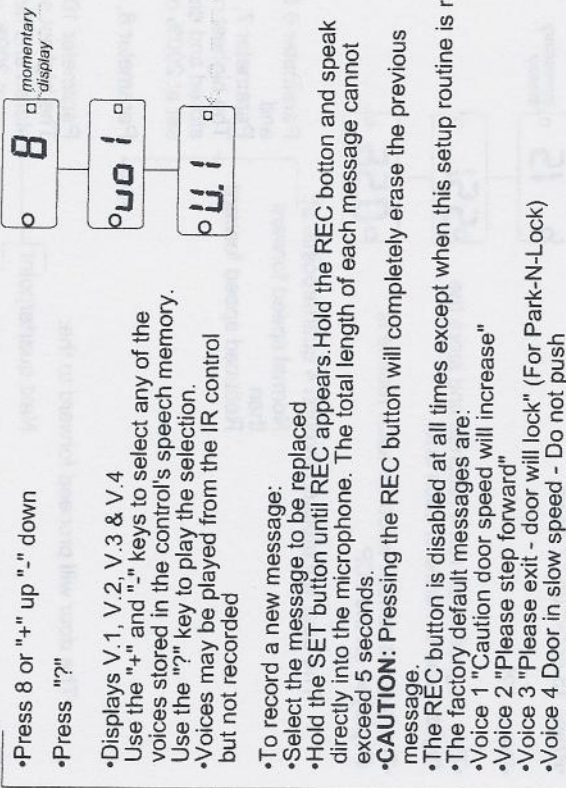
- Press SET

- Press SET

NOTE: These codes may appear if card is NOT installed in the system. In this case the codes are meaningless.

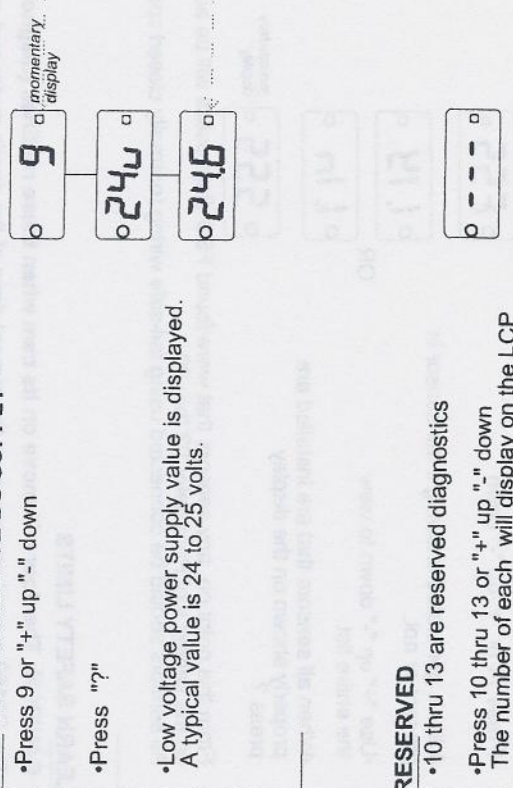
16. DIAGNOSTICS CHART 4

Accessing the diagnostics from the infrared control.



8

CHECK LOW VOLTAGE DC SUPPLY



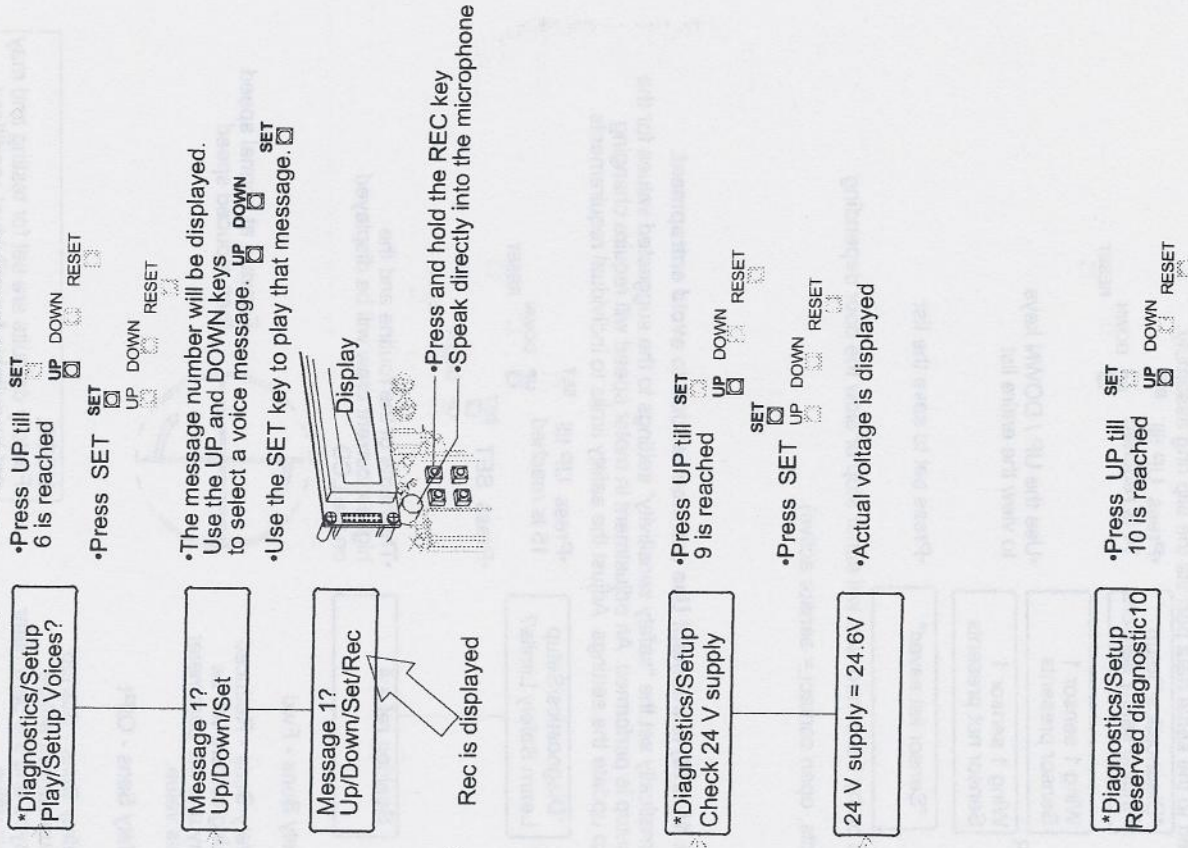
9

RESERVED

- 10 thru 13 are reserved diagnostics
- Press 10 thru 13 or "+" up "-" down
The number of each will display on the LCP

10
11
12
13

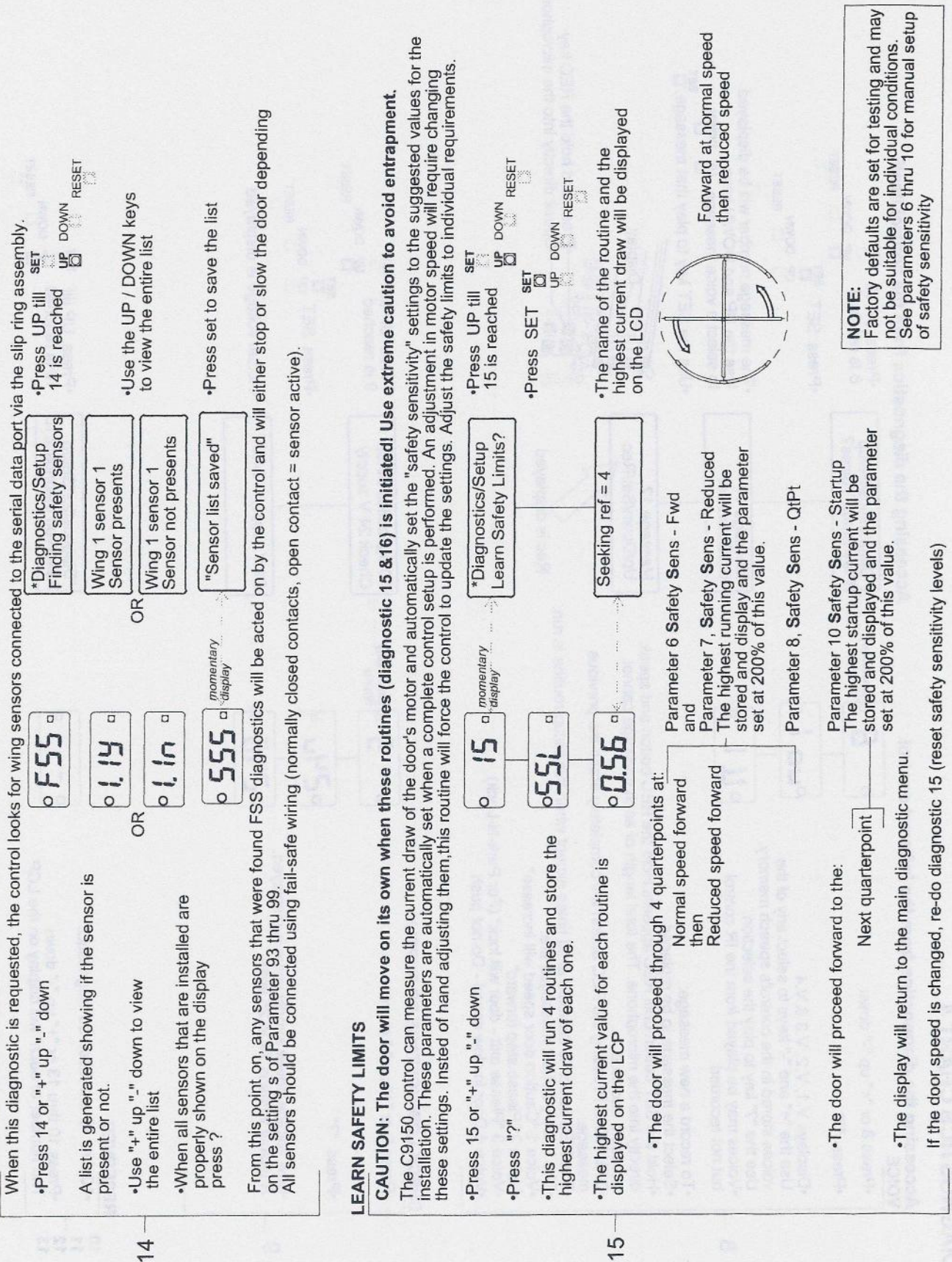
Accessing the diagnostics from the control itself.



17. DIAGNOSTICS CHART 5

Accessing the diagnostics from the infrared control. FINDING SAFETY SENSORS

Accessing the diagnostics from the control itself.



18. DIAGNOSTICS CHART 6

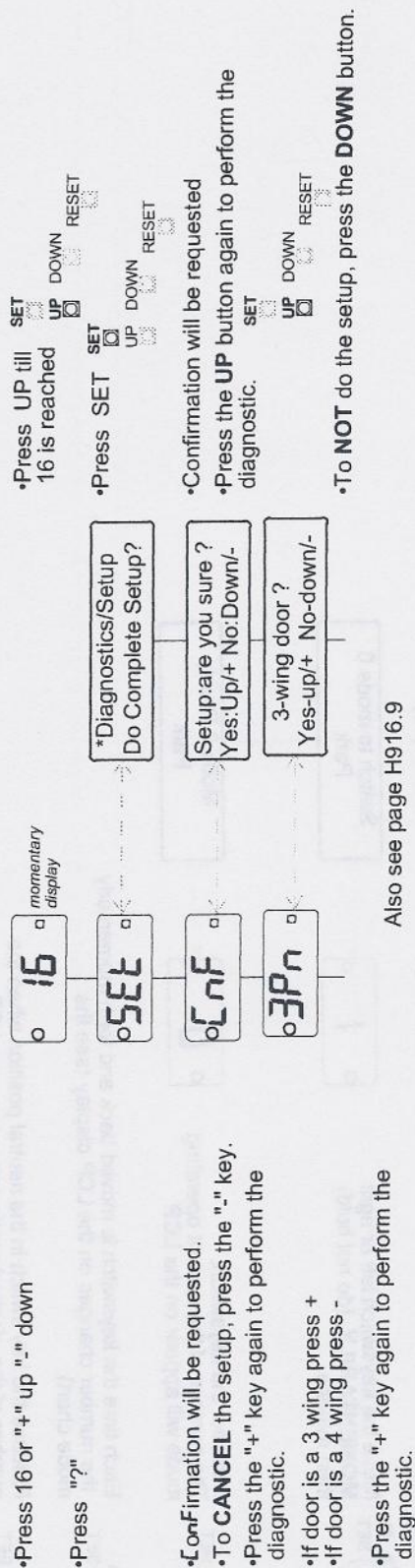
Accessing the diagnostics from the infrared control.

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 caution 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. This diagnostic should always be performed when initially installing a door and **never** be performed without good reason otherwise.



Also see page H916.9

The setup restores factory default settings to all parameters.

•It rotates the door through 3 or 4 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).

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

•Press the lock key

od 1A

*Diagonistics/Setup

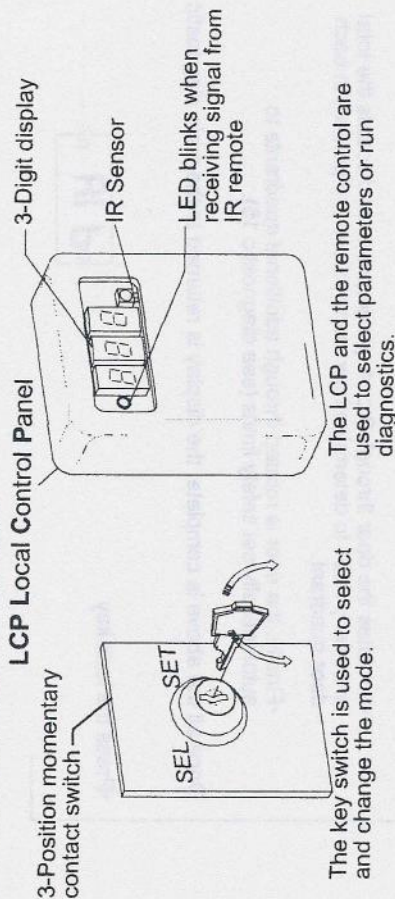
•Press the **RESET** button.

SET UP DOWN RESET

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

19. DOOR OPERATING MODES

KEY SWITCH MODE SELECTION

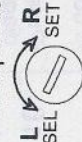


The key switch is used to select and change the mode.

SELECTING A MODE

Note: Modes on Automatic and Grand doors can only be changed by the key switch, not with the IR remote.

Switch position

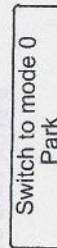


Move the keyswitch left or right **MOMENTARILY**, (do not hold) then release

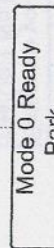
LCP display



LCD display



Release the keyswitch. The number of the current operating mode will appear on the LCP



Each time the keyswitch is moved back and forth momentarily the number changes on the LCP display (see the mode chart).



Release the key switch in the neutral position when the number of the desired mode appears on the LCP. After a few seconds the door will begin operation in the chosen mode. Door may move after mode change.

HARD WIRED MODE SELECTION

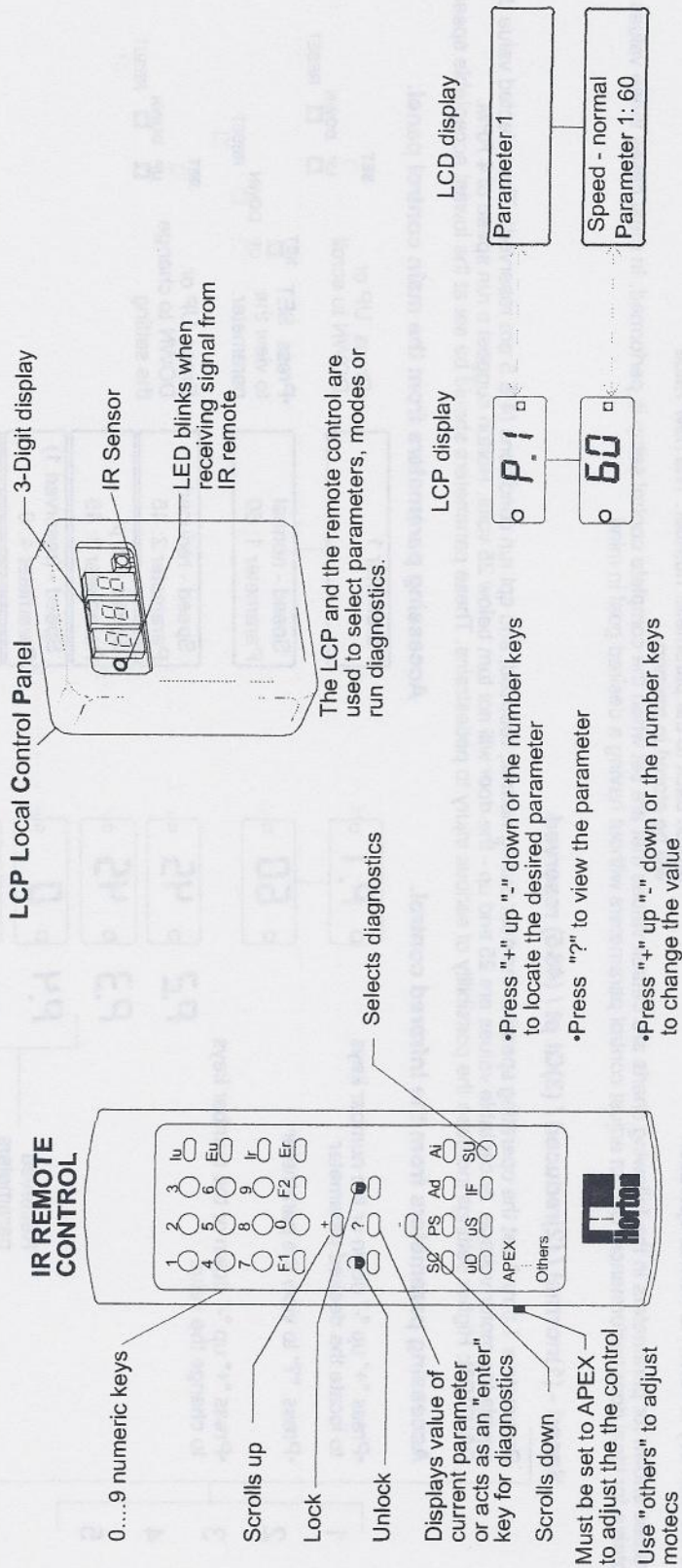
When parameter 60, remote mode select, is turned on, mode selection can NOT be made with the key switch or remote. When remote select is in use, remote mode A selects the door mode to use when terminals 4 and 5 of CN5 are open. Remote (hard wired) mode B selects the mode to be used when terminals 4 and 5 are closed. See parameters 60, 42 & 43.

MODE CHART

The following chart shows the 4 modes that are always available regardless of the software version in use.

MODE	OPERATION	DESCRIPTION
0	Park	Door ignores all activation signals and looks for a quaterpoint. If a brake is supplied (para 62), the door will talk (para 16) for a set time and lock.
1	Full auto	Door operates normally with all activating devices.
2	Exit only	Door ignores entrance side activation. Door can be pushed.
3	Continuous run	Door rotates in slow speed until a motec is activated. After the normal speed cycle times out, the door goes to slow and continues to run.

20. USING THE IR REMOTE



Accessing from the infrared control.

- Point the IR remote at the LCP and press unlock

21. PARAMETER CHART 1

- The door must be inactive (in standby condition)

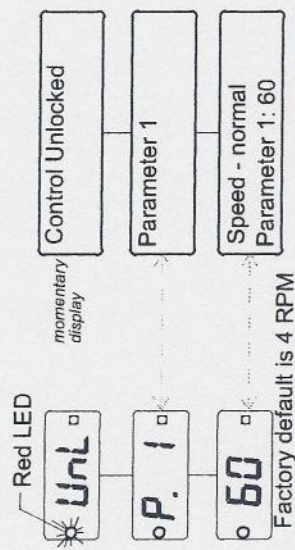
Accessing the parameters from the infrared control.

- 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**.
- To view or adjust the setting of a parameter, briefly press the "2".
- Parameter will appear
- 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

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.

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 entries the display will switch back to the parameter number. The new value will be stored in memory

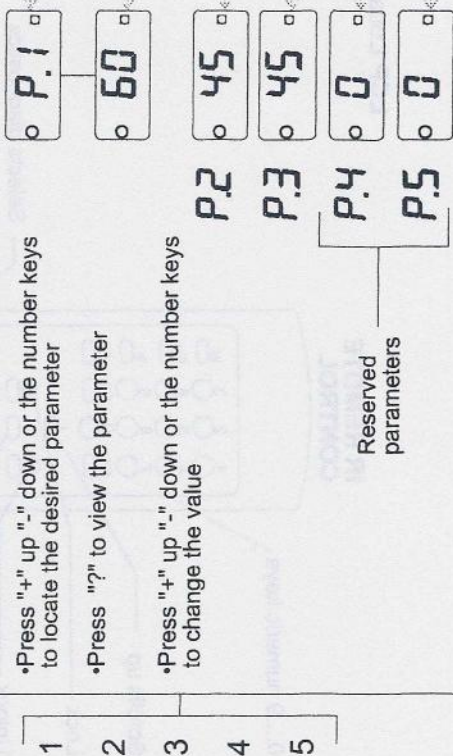
Speed - (1)normal / (2)reduced / (3)Qt pt / (4&5) reserved

Parameters 1 thru 3 set the operating speed of the door during normal, reduced, and qpt 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.

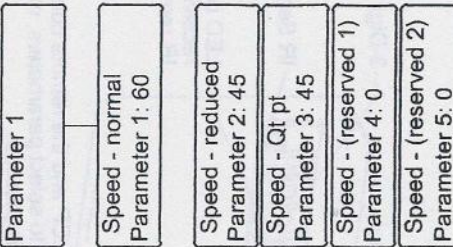
Accessing parameters from the infrared control.

- Press "+" up "-" down or the number keys to locate the desired parameter
- Press "2" 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



22. PARAMETER CHART 2

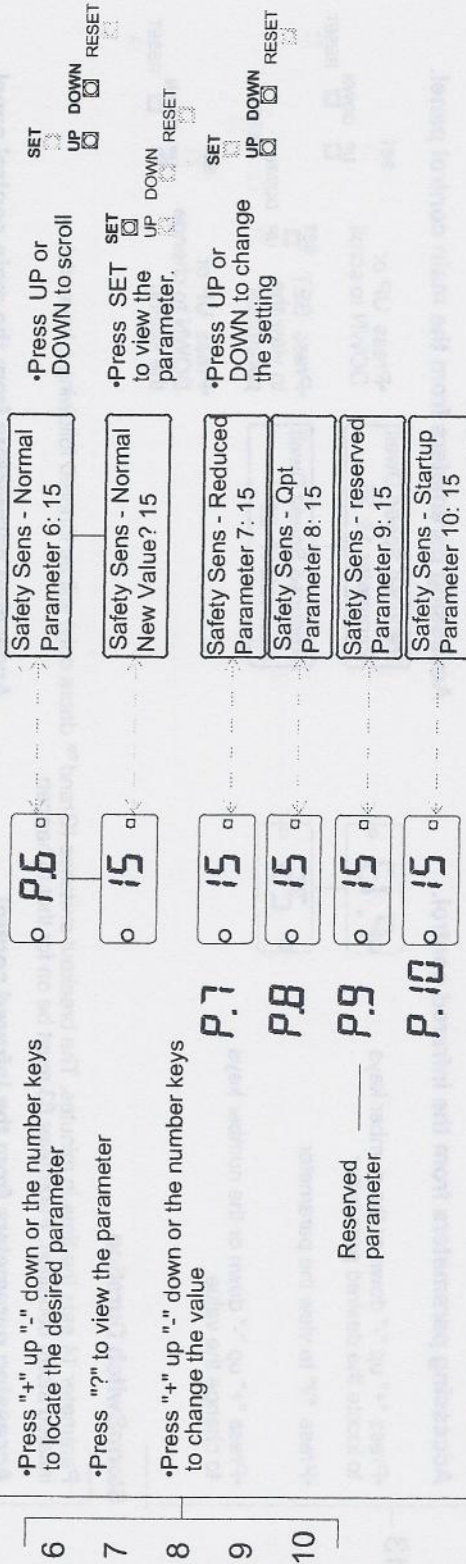
Safety sens - forward / Qt pt / startup

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 "weaked" 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 at the risk of additional nuisance stops.

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.



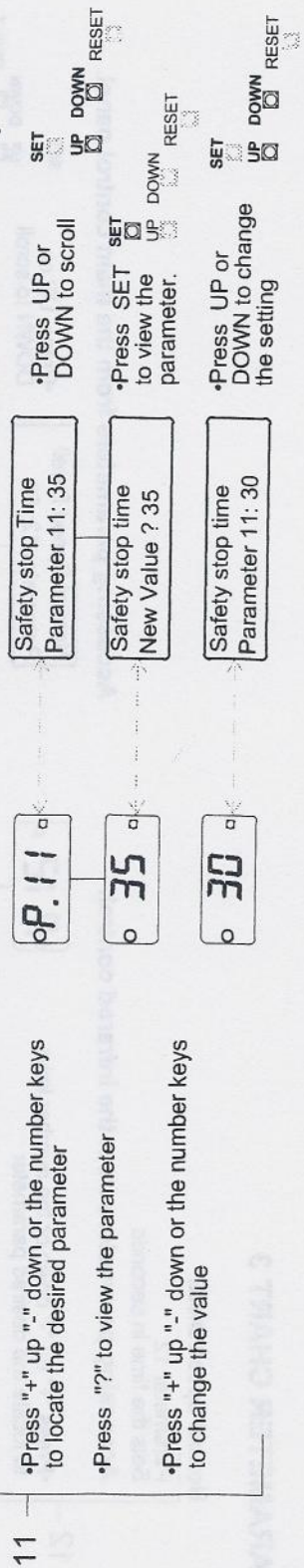
NOTE: If parameter 6, 7 or 8 is automatically set to 20 or more by the setup routine, or parameter 10 was set at 45 or more, excessive motor current is being drawn which may indicate a mechanical problem or a bind in the door.

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

Safety stop time

Accessing parameters from the infrared control.

Accessing parameters from the main control panel:



23. PARAMETER CHART 3

Normal Speed Dwell

Parameter 12

Sets the time in seconds

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

P. 12

50

Normal Speed Dwell
Parameter 12: 50

Normal Speed Dwell
New 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

Reduced Speed Dwell

Parameter 13

Sets the time in seconds

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

P. 13

25

Reduced Speed Dwell
Parameter 13: 25

Reduced Speed Dwell
New value? 25

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

StormSwitch Duration

Parameter 14 sets the time in minutes. The breakout switches (Grand™ doors only) will be ignored following a keyswitch initiated storm condition. Parameter 63 must be on for that to happen.

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

P. 14

60

Storm Switch Duration
Parameter 14: 60

Storm Switch Duration
New value? 60

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

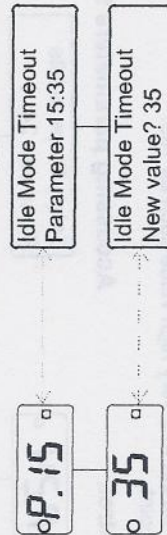
24. PARAMETER CHART 4

Idle Mode Timeout

Parameter 15 sets the amount of time the door remains at rest after the number of consecutive safety stops has been exceeded in parameter 24. This parameter is in 1/10 sec intervals (35 = 3.5 sec)

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 = 10.0 seconds. A setting of 20 = 2.0 seconds.

Park-N-Lock Dwell

Parameter 16 sets the amount of time (in seconds) the door will run in slow speed and annunciate before locking when mode 0 is activated. This parameter is used only if a brake is installed.

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



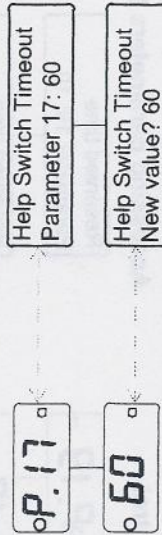
• All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0 seconds. A setting of 20 = 2.0 seconds.

Help Switch Timeout

Parameter 17 sets the length of time (in seconds) that the Help switches, mounted inside the drum, will re-activate the Park-N-Lock sequence. Once this timer expires, the door ignores the switch.

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 = 10.0 seconds. 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

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

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 5

Reserved time

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

Accessing parameters from the infrared control.

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

18
Thru
22

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

Reserved time
Parameter 19: 10

Reserved time
New Value? 10

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

Speed Up Warning

Sets the number of times that the door warns of a speed increase. This is in addition to the reduced speed switch cycle which always issues a warning.

Accessing parameters from the infrared control.

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

23

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

Speedup Warnings
Parameter 23: 0

Speedup Warnings
New value ? 0

Safety Stops to Idle

Parameter 24 sets the number of safety stops that must be encountered before 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 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.
- If idle operation is never desired, parameter 24 may be set to a very high value such as 100.
- The safety stop counter is reset at every reference point.

Accessing parameters from the infrared control.

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

24

Safety Stops to Idle
Parameter 24: 1

Safety Stops to Idle
New value? 1

26. PARAMETER CHART 6

Entry Guard Offset

Parameter 25 sets the number of degrees from the throat post that a late entry signal is accepted. The larger the number the larger the protected area will be.

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

NOTE: Setting the value to 0 disables the Entry Guard sensor.

Reserved

Parameter 26 and 27 are reserved for use in future software

Accessing parameters from the infrared control.

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

Accessing parameters from the infrared control.

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

Reserved

Parameters 29 through 37 are reserved for use in future software

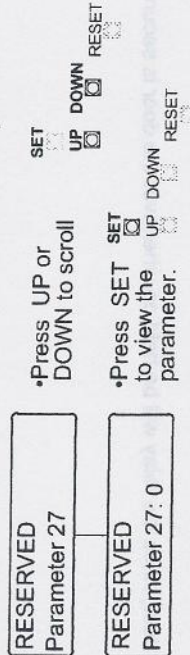
Accessing parameters from the infrared control.

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

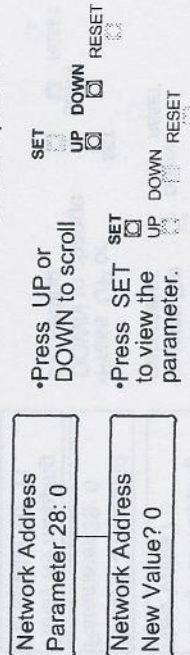
Accessing parameters from the main control panel.



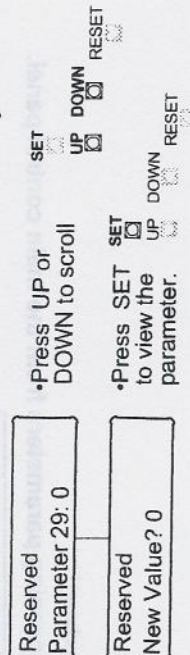
Accessing parameters from the main control panel.



Accessing parameters from the main control panel.



Accessing parameters from the main control panel.



27. PARAMETER CHART 7

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

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

Accessing parameters from the infrared control.

38
39
40

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

P.38

•Press "?" to view the parameter

0

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

P.39

P.40

11

Relay K2 mapping
Parameter 38: 0

Relay K2 mapping
New Value? 0

Relay K3 mapping
Parameter 39: 0

Relay K4 mapping
Parameter 40: 11

•Press UP or DOWN to scroll

SET
UP
DOWN
RESET

•Press SET to view the parameter.

SET
UP
DOWN
RESET

•Press UP or DOWN to change the setting

SET
UP
DOWN
RESET

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

- 0 Relay disabled - no function
- 11 Power fail (line, internal DC)

When mapped to function 11, the relay doubles as a power failure detection contact, since the relay will be held on whenever the door is secured.

Reserved

Parameter 41 is reserved for use in future software

Accessing parameters from the infrared control.

41

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

P.41

•Press "?" to view the parameter

0

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

Reserved
Parameter 41

Reserved
New Value? 0

•Press UP or DOWN to scroll

SET
UP
DOWN
RESET

•Press SET to view the parameter.

SET
UP
DOWN
RESET

•Press UP or DOWN to change the setting

SET
UP
DOWN
RESET

Accessing parameters from the main control panel.

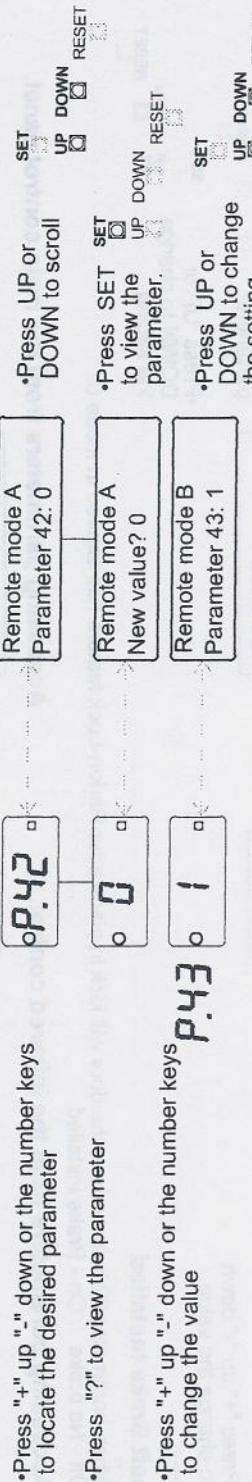
28. PARAMETER CHART 8

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

Parameters 42 and 43 are only active if parameter 60, Remote Mode (hard wired) 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 used 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.
 - The keyswitch can not change the mode when remote mode select is in use.

Accessing parameters from the infrared control.

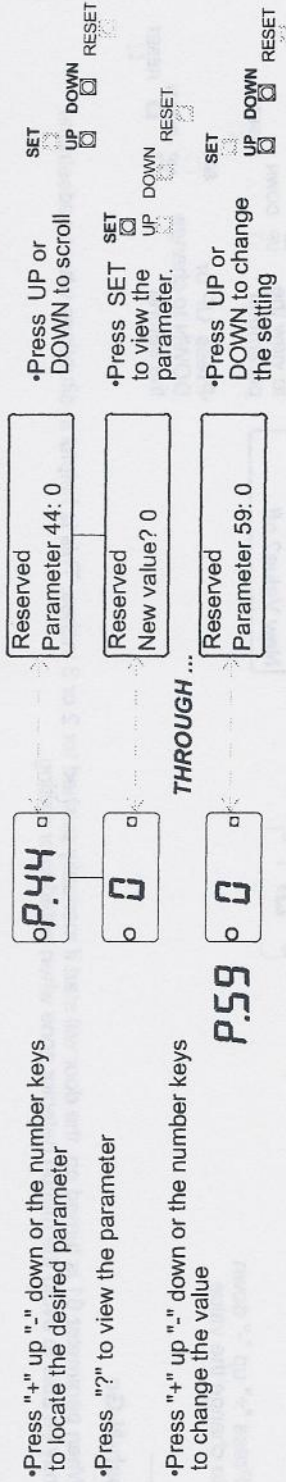


Accessing parameters from the main control panel.

Reserved

Parameters 44 through 59 are reserved for use in future software

Accessing parameters from the infrared control.



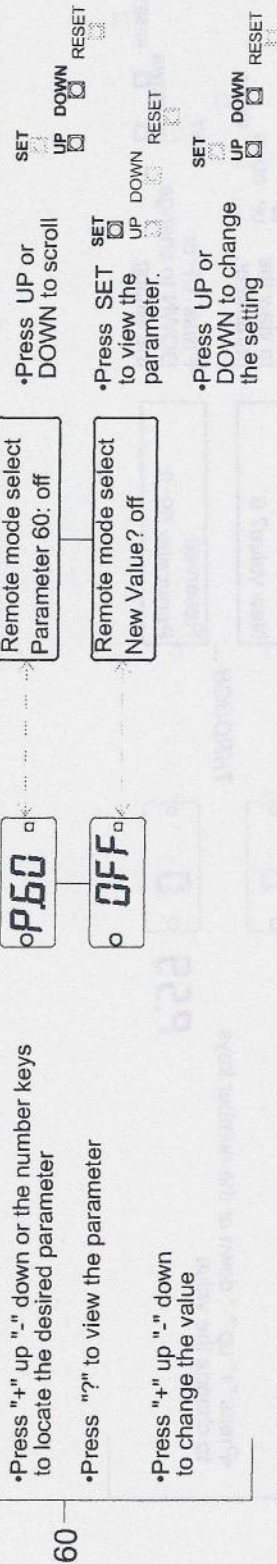
Accessing parameters from the main control panel.

29. PARAMETER CHART 9

Remote Mode Select

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).

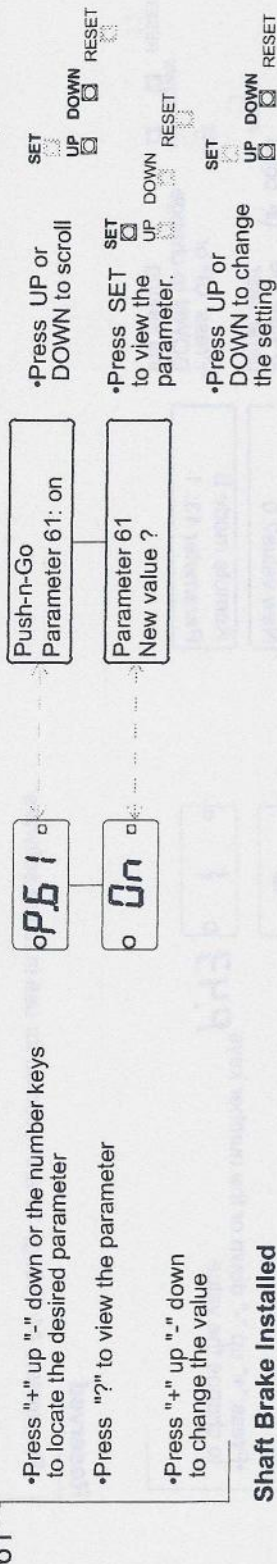
Accessing parameters from the infrared control.



Push-N-Go

When parameter 61 is turned on, the door will start if manually pushed for 2 or 3 inches. This is helpful in situations where pedestrians may be able to avoid the motion detector zone when entering or exiting.

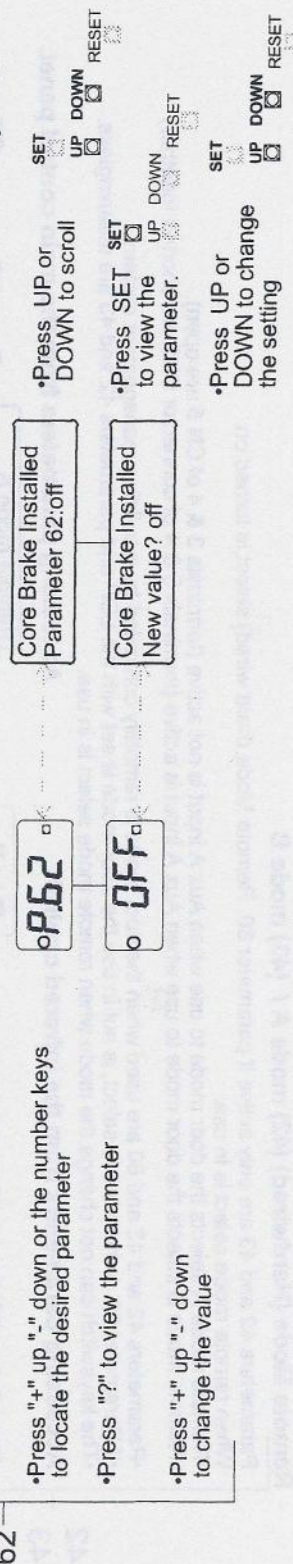
Accessing parameters from the infrared control.



Shaft Brake Installed

When parameter 62 is turned on, the door will lock in place after Park-n-Lock feature has expired in mode 0.
Off - No brake On - Brake installed

Accessing parameters from the infrared control.



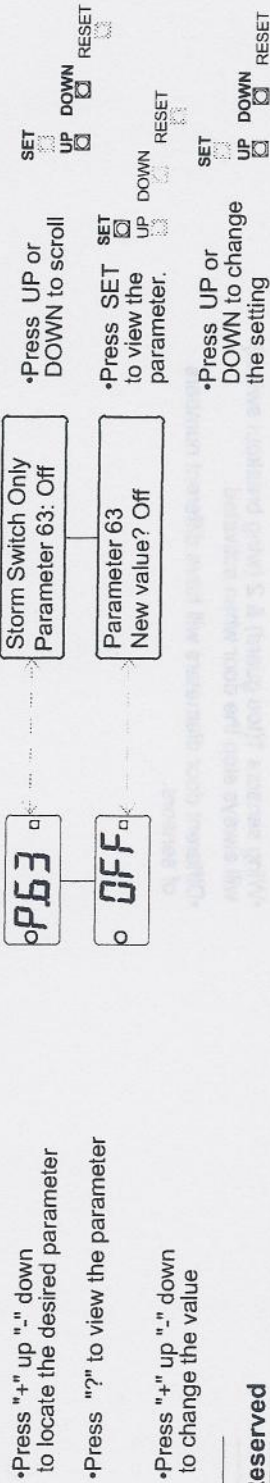
30. PARAMETER CHART 10

Storm Switch Only

If parameters 63 is off, Storm Lock will activate by turning the key switch to the left and holding. Applies to Grand™ doors where storm lock magnets are installed. If parameter 63 is on, Storm Switch feature is in effect (parameter 14 sets the time in minutes).

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.

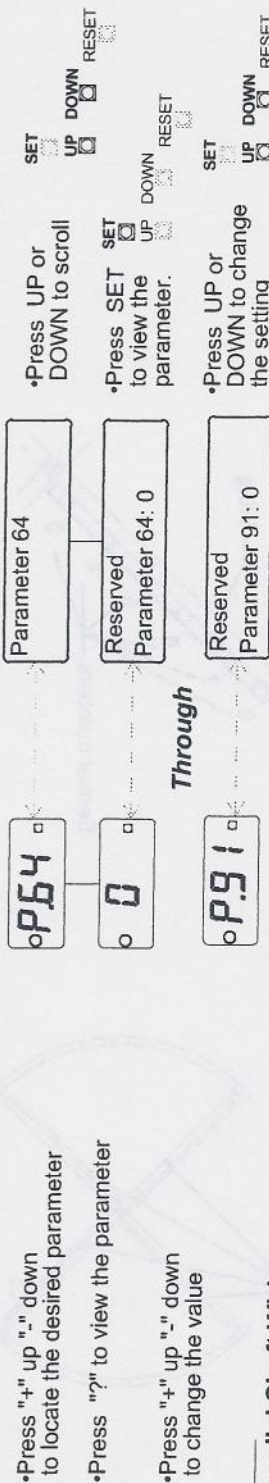


Reserved

Parameters 64 through 91 are reserved for use in future software

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.



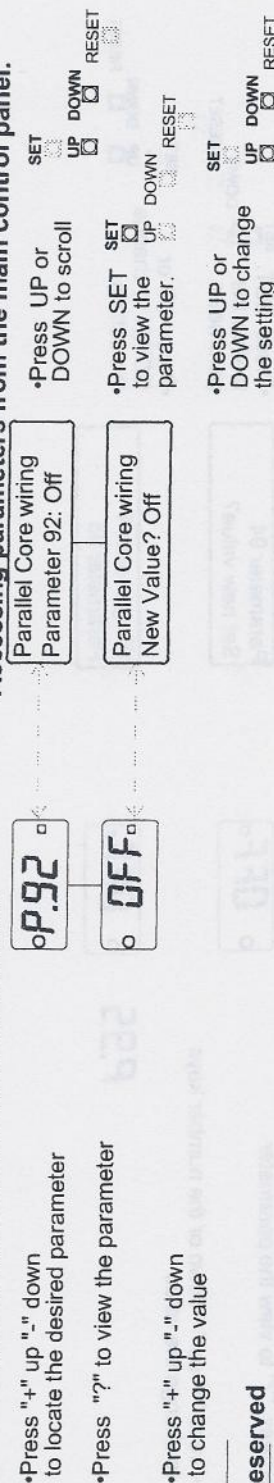
Through

Parallel Shaft Wiring

Parameters 92 is used if the door panels have safety sensors. Sensor inputs are wired to the E6008 card. Stop and slow inputs are available. If this parameter is on the control will look for safety sensors on the E6008 card.

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.

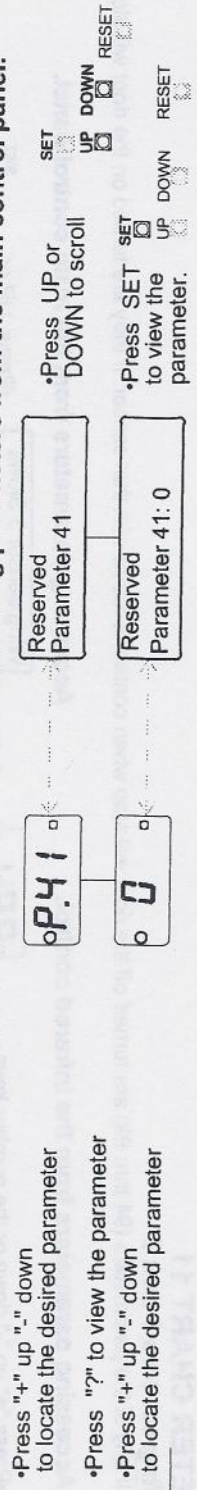


Reserved

Parameter 93 is reserved for use in future software

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.



31.PARAMETER CHART 11

Wing sensors 3 thru 8

If any of the parameters (94 thru 99) are turned off the door will stop when contact is made with that sensor. If they are turned on the door will slow.

Parameter
94 = 3
95 = 4
96 = 5
97 = 6
98 = 7
99 = 8

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

P.94

OFF

P.95

OFF

Accessing parameters from the main control panel.

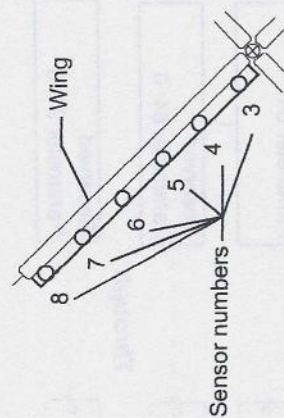
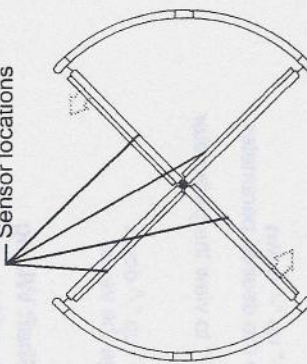
- Press UP or DOWN to scroll
- Press SET UP or DOWN to view the parameter.
- Press SET UP or DOWN to change the setting

Wing sensor 3 Slows
Parameter 94: Off

Parameter 94
Set new value?

Wing sensor 4
Parameter 95

Sensor locations



NOTE:

- Sensor 3 will be the innermost sensor on each wing
- Wing sensors 1(toe guard) & 2 (wing breakout switch) will always stop the door when activated.
- Different door diameters will have different numbers of sensors.

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)	21
2	Speed - Reduced	40		
3	Speed Qpt.	40		
4	Reserved	0	Sensitivity of the door's safety circuit to obstructions	21
5	Reserved	0		
6	Safety sens - Normal	15		
7	Safety sens - Reduced	15	Measured in 1/10 seconds	22
8	Safety sens - Qpt	15		
9	Safety sens - Reserved	15		
10	Safety sens - Startup	4	Measured in seconds	22
11	Safety stop time	35		
12	Normal speed dwell	50		
13	Reduced speed dwell	25	Measured in minutes	23
14	Storm switch duration	60		
15	Idle mode time out	35		
16	Park-n-lock dwell	30	Measured in 1/10 seconds	24
17	Help sw time out	60		
18	Reserved	10		
19	Reserved	10	The time the door turns in slow speed and announces before locking in mode 0 (in sec)	24
Thru				
22	Reserved	10		
23	Speed up warning	0	The amount of time after lockup when the door can be re-started by the help switch (in sec)	25
24	Safety stops to idle	1		
25	Entry Guard Offset	15		
26	Reserved	1	Number of warnings door will when changing from reduced speed to normal speed The number of stops allowed before Idle Mode is active Determines the entry guard zone size	25
27	Reserved	1		
28	Network Address	0		
29	Reserved	0	Address of door in building mgmt. network	26
Thru				
37	Reserved	0		
38	Relay K2 mapping	0	Sets individual relay output signals (Limited selection in this control)	26
39	Relay K3 mapping	0		
40	Relay K4 mapping	11		
41	Reserved	0	Parameter 60 must be turned on - Sets mode with Remote switch open Parameter 60 must be turned on - Sets mode with Remote switch closed	27
42	Remote mode A	0		
43	Remote mode B	1		
44	Reserved	No	When turned on, the door is controlled by the Aux A CN5 input - See parameter 42 & 43 Determines whether the door can be manually pushed to start Turn On if brake is installed Off - Storm Lock On - Storm Switch	28
Thru				
59	Reserved	0		
60	Remote mode select	Off	When turned on, the door is controlled by the Aux A CN5 input - See parameter 42 & 43 Determines whether the door can be manually pushed to start Turn On if brake is installed Off - Storm Lock On - Storm Switch	29
61	Push-N-Go	On		
62	Core brake installed	Off		
63	Storm switch only	Off	When turned on, the door is controlled by the Aux A CN5 input - See parameter 42 & 43 Determines whether the door can be manually pushed to start Turn On if brake is installed Off - Storm Lock On - Storm Switch	30
64	Reserved	Off		
65	Reserved	Off		
Thru			When turned on, the door is controlled by the Aux A CN5 input - See parameter 42 & 43 Determines whether the door can be manually pushed to start Turn On if brake is installed Off - Storm Lock On - Storm Switch	31
91	Reserved	Off		
92	Parallel core wiring	Off		
93	Reserved	Off	Off - Ignores 6008 card On - looks for sensor signals - 1 stop - 1 slow	30
94	Wing sensor 3 slows	Off		
95	4 slows	Off		
96	5 slows	Off	Off - Stops door On - Slows door	31
97	6 slows	Off		
98	7 slows	Off		
99	8 slows	Off		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	13
2	Check door speed	LCP displays door speed, MCP displays motor voltage & RPM	13
3	Check motor current	LCP displays motor current, MCP displays motor current & voltage	14
4	Check brake voltage	LCP displays brake voltage, MCP displays brake current & voltage	14
5	Check brake current	LCP displays brake current, MCP displays brake current & voltage	14
6	Encoder test	LCP and MCP display encoder count in each quadrant	15
7	Check inputs	LCP displays codes of active inputs, MCP displays text of active inputs	15
8	Play / set up voices		16
9	Check 24 V supply	Displays low voltage DC value	16
10	Reserved	Reserved for future use	17
11	↑		17
12	↓		17
13	Reserved	Reserved for future use	17
14	Find safety sensors	Finds the door wing sensors and programs the software to respond to them	17
15	Learn safety limits	Sets the safety limits by current sensing	17
16	Complete setup	Restores factory default settings to all parameters	18

34. ERROR CODES

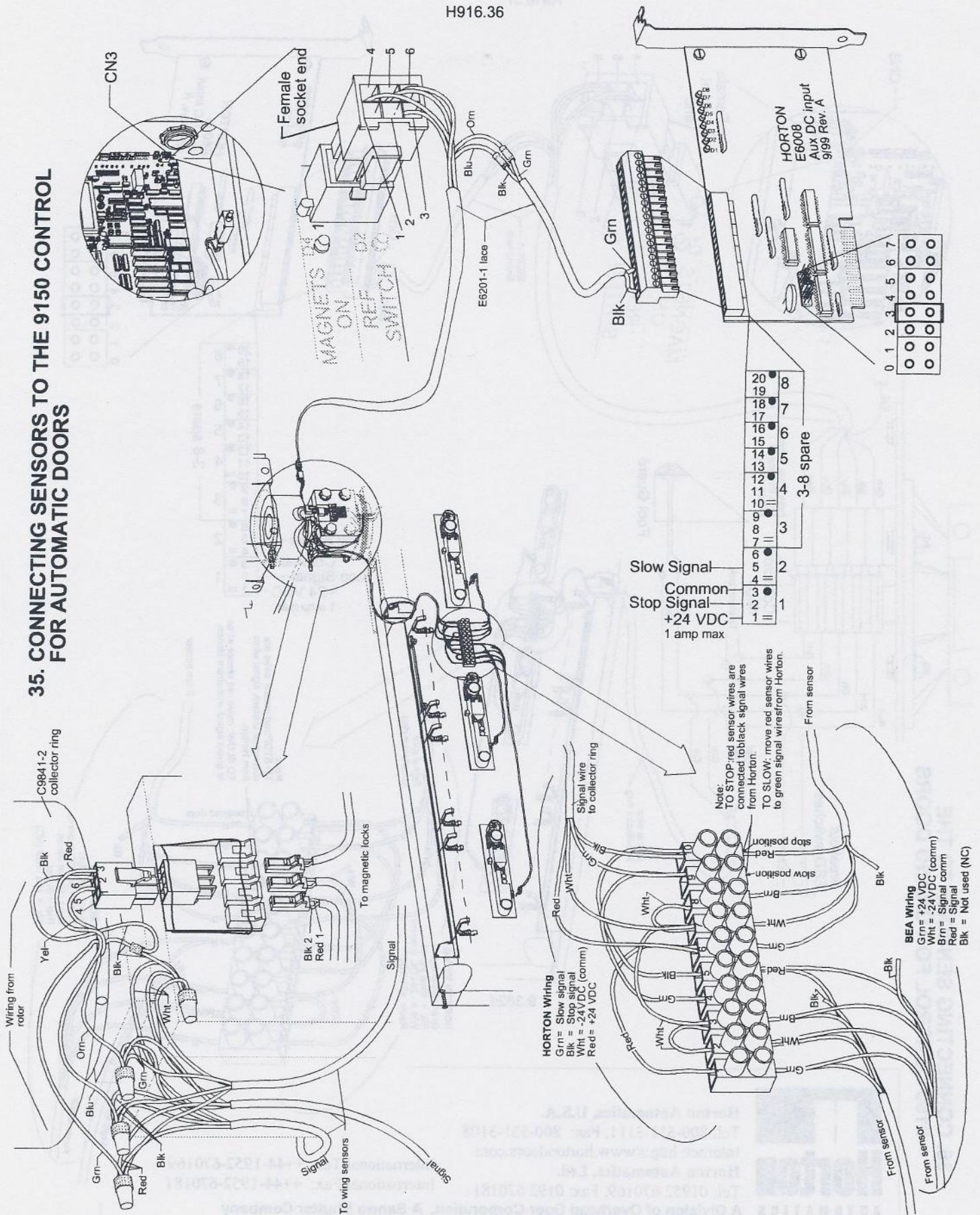
All errors except 7 are considered major and require a keyswitch reset to clear them and restart the door.

LCP
display

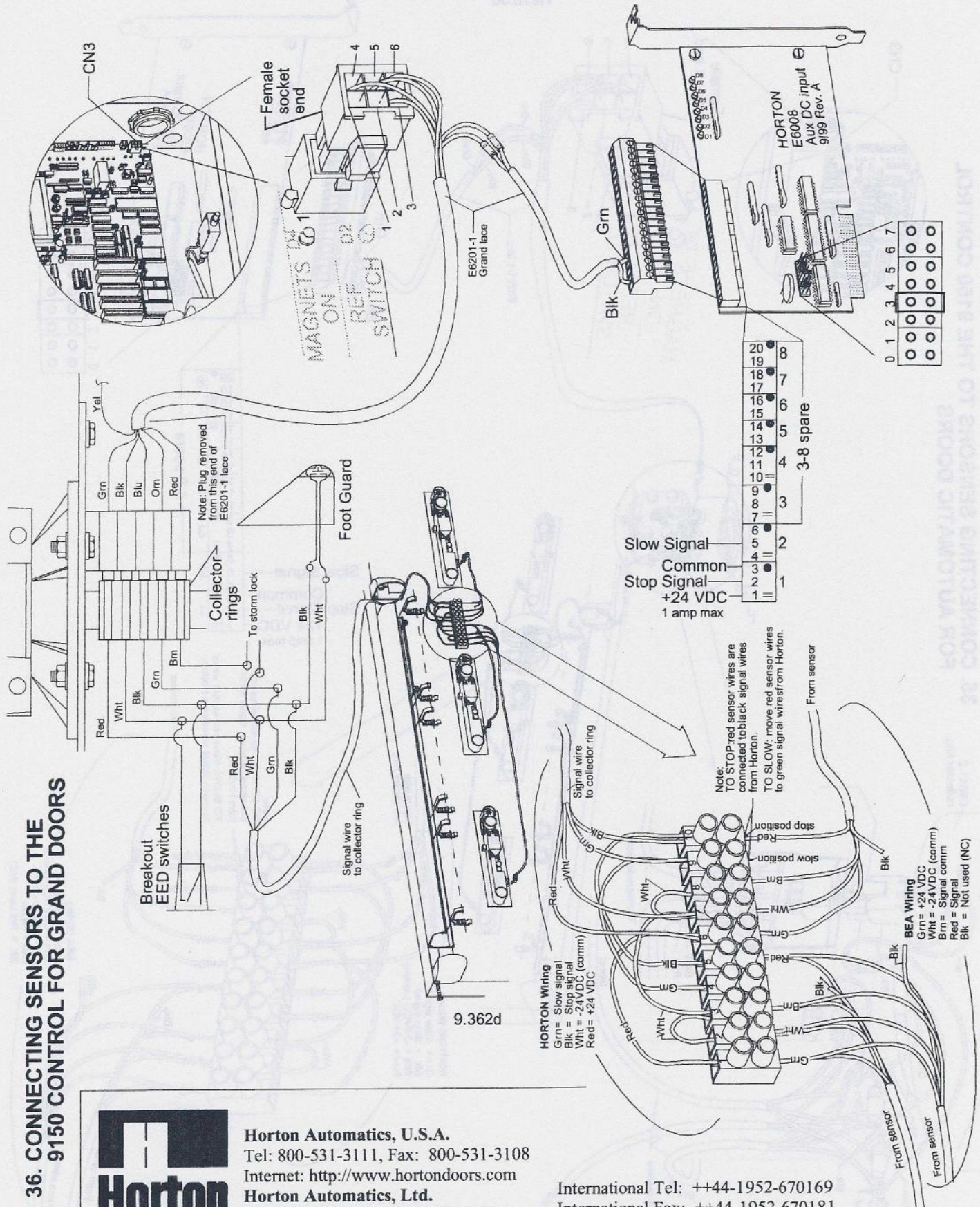
- Er 3 Motor current excessive - only occurs during setup phase
- Er 4 No reference switch - only occurs during setup phase
- Er 5 Encoder phasing incorrect - only occurs during setup phase
- Er 6 No encoder pulses received - only occurs during setup phase
- Er 7 Brake failure - A run time error that 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.
- Er 8 High voltage DC failure
- Er 9 Drive system failure

35. CONNECTING SENSORS TO THE 9150 CONTROL FOR AUTOMATIC DOORS

H916.36



36. CONNECTING SENSORS TO THE 9150 CONTROL FOR GRAND DOORS



Horton Automatics, U.S.A.
Tel: 800-531-3111, Fax: 800-531-3108
Internet: <http://www.hortondoors.com>
Horton Automatics, Ltd.
Tel: 01952 670169, Fax: 0192 670181

International Tel: ++44-1952-670169
International Fax: ++44-1952-670181

AUTOMATICS A Division of Overhead Door Corporation, A Sanwa Shutter Company

Form H916, MARCH 2002, Horton Automatics reserves the right to improve the product & change its specifications without notice.