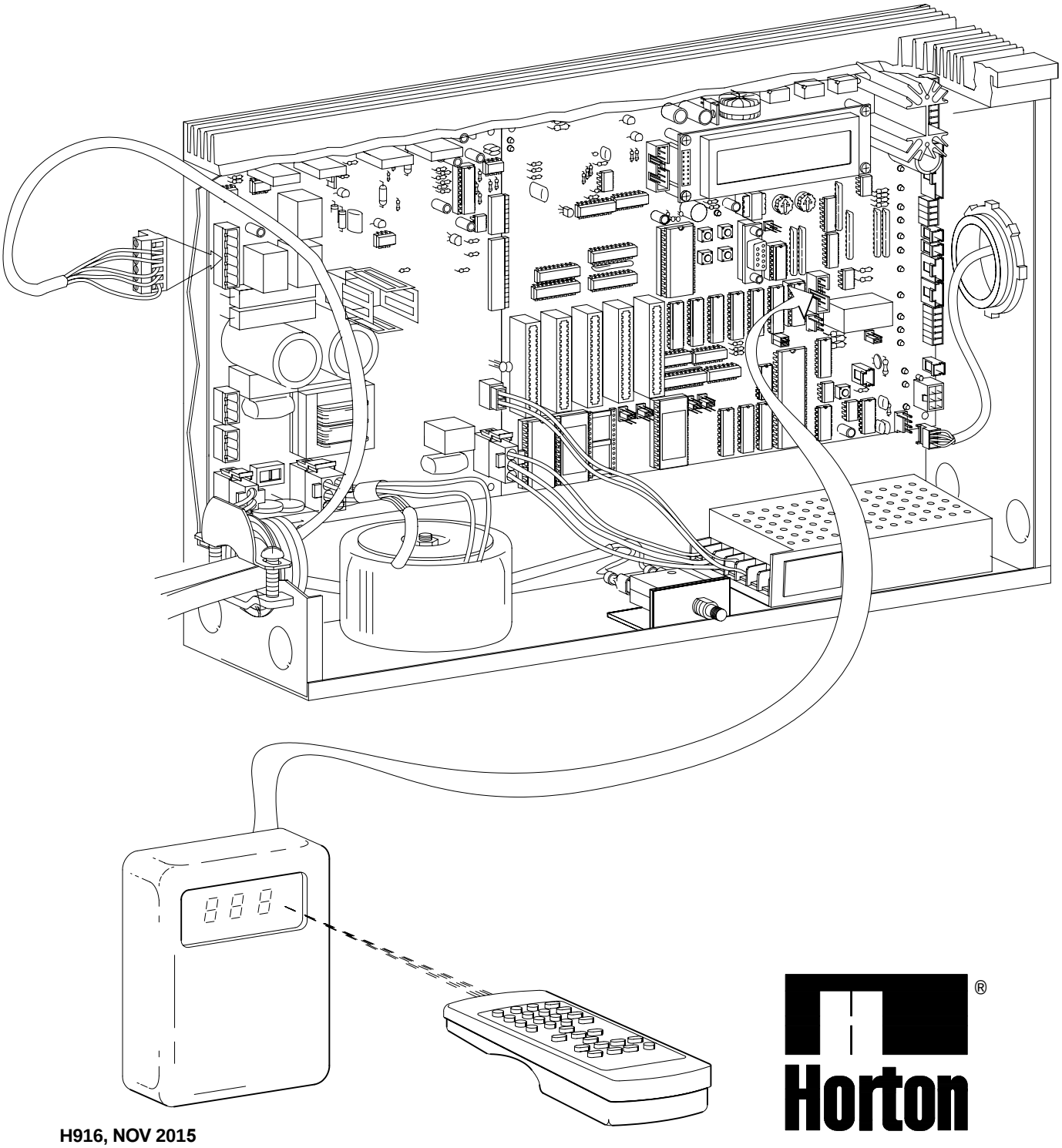
C9150-5
Setup Instructions
for Automatic and Grand Revolving Doors
Version 5.05 Software



H916, NOV 2015

Horton®
AUTOMATICS

OVERVIEW OF THE C9150 AUTOMATIC & GRAND 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 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

AUTOMATIC DOORS ARE NOW COVERED BY ANSI 156.27 AND APPLICABLE BUILDING CODES

- -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

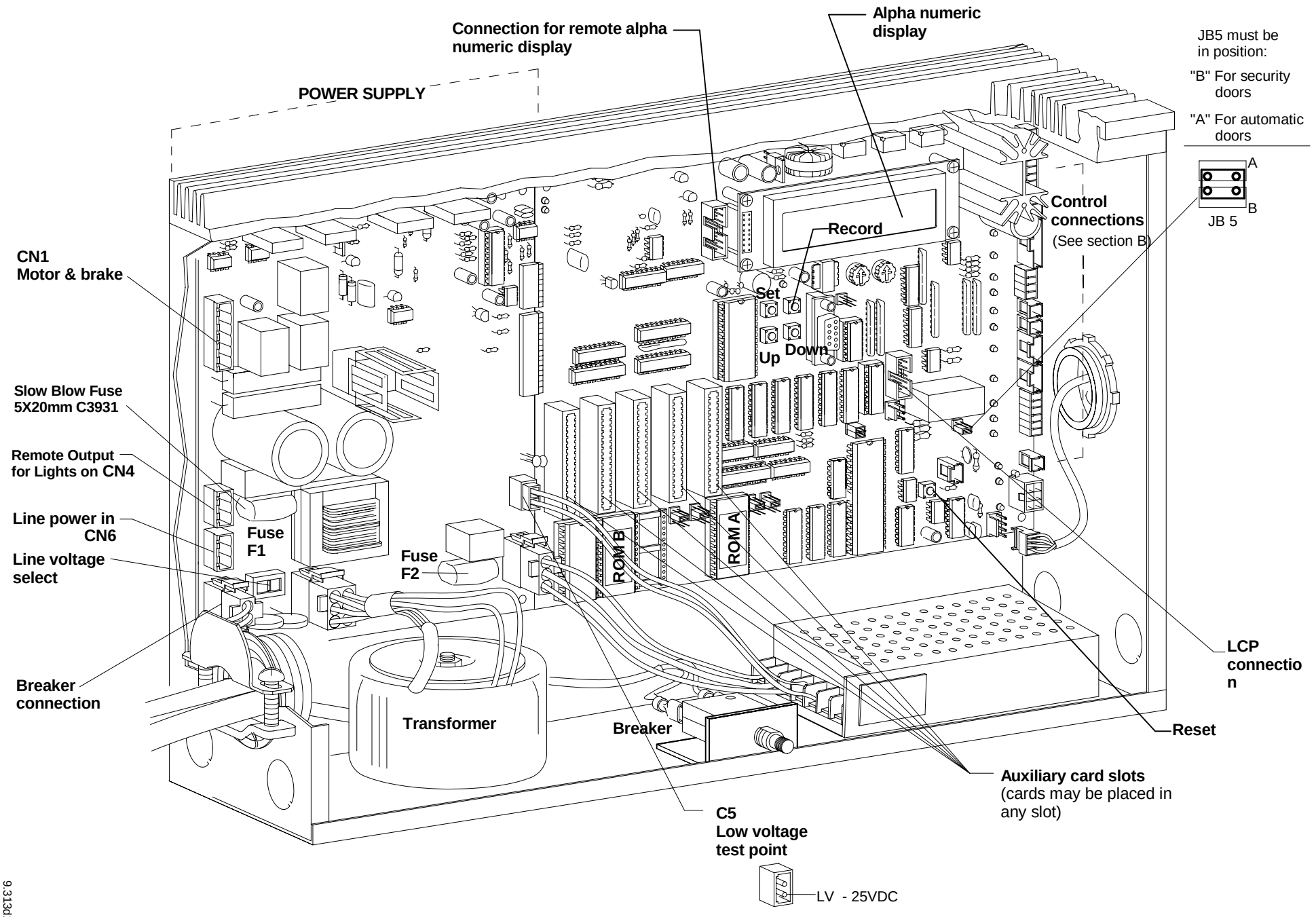
- -After installation, instruct the owner on the safe operation of the door.
- -Present the Owners Manual M900 (Automatic) and explain how to perform the daily safety check.
- -Location of power on / off switch.
- -Necessary warnings not covered in these general instructions.
- -Date equipment shipped 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

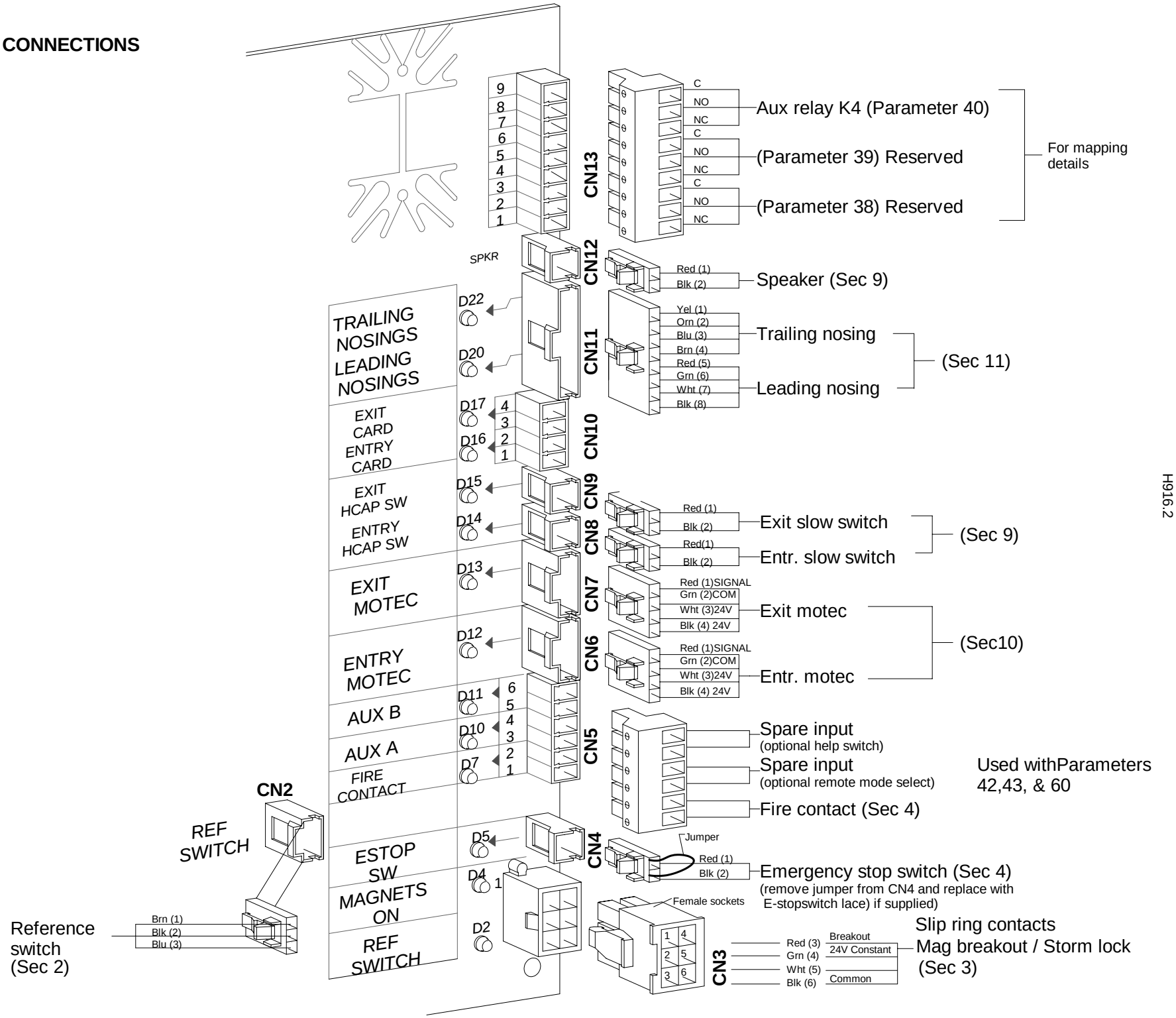
- -Power:(Switchable on the control)120V or 240V, 50 / 60 Hz 15A service to each unit.
- -For remote switch locations, routing of low voltage class II wiring to the operator controls will be required.
- -Remote switch locations should be predetermined and wired before installation begins.

CONTENTS

A. C9150 CONTROL AND POWER SUPPLY



B. CONTROL CONNECTIONS

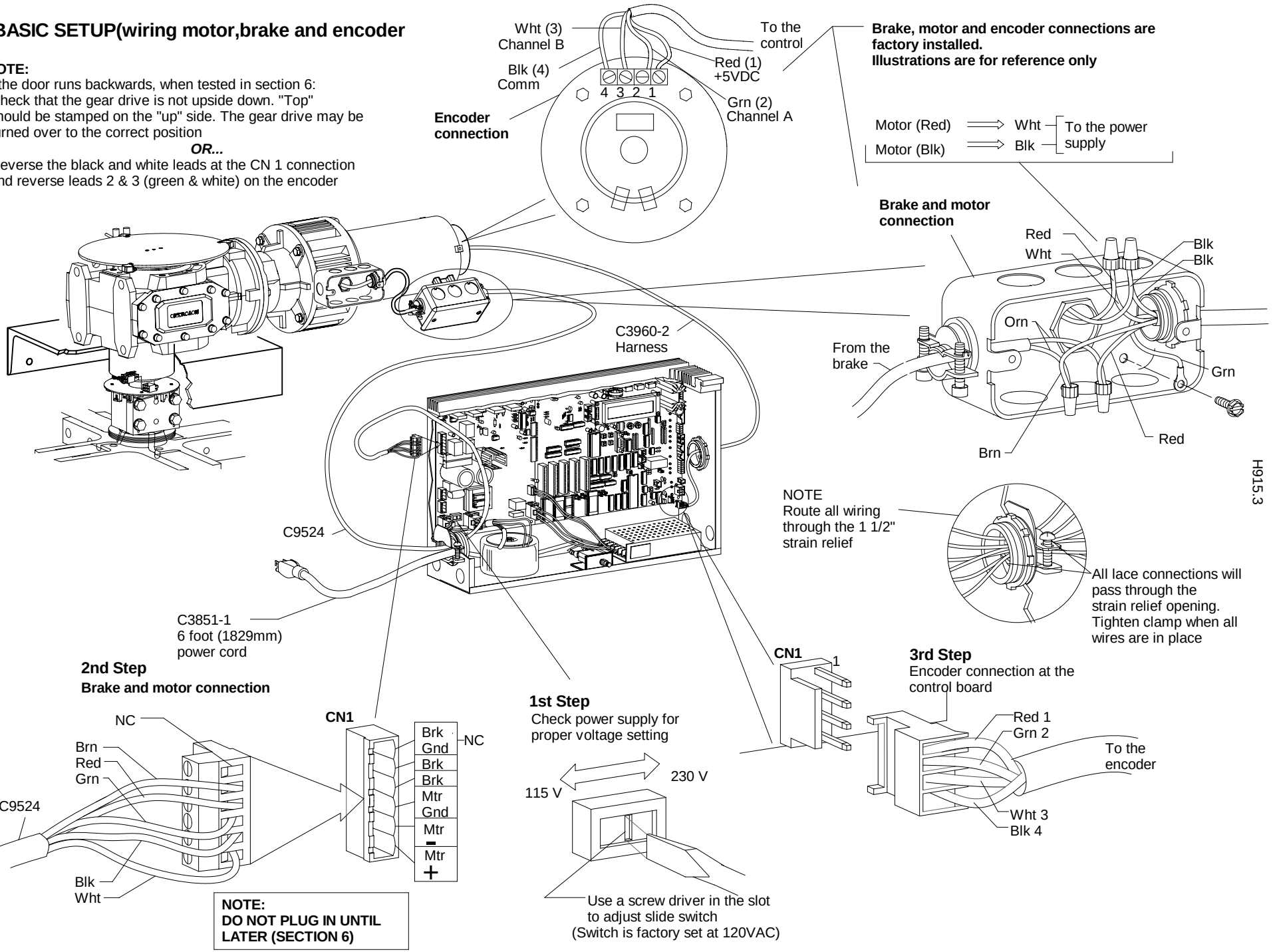


1. BASIC SETUP(wiring motor,brake and encoder

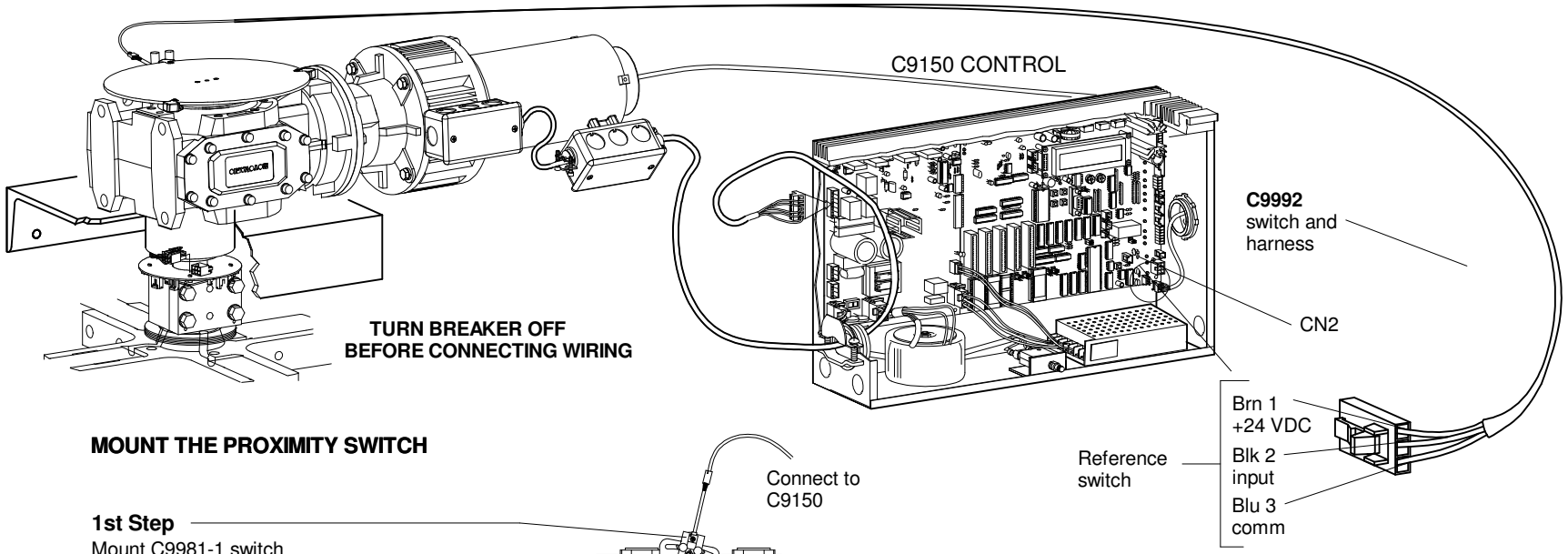
NOTE:
If the door runs backwards, when tested in section 6:
-Check that the gear drive is not upside down. "Top" should be stamped on the "up" side. The gear drive may be turned over to the correct position

OR...

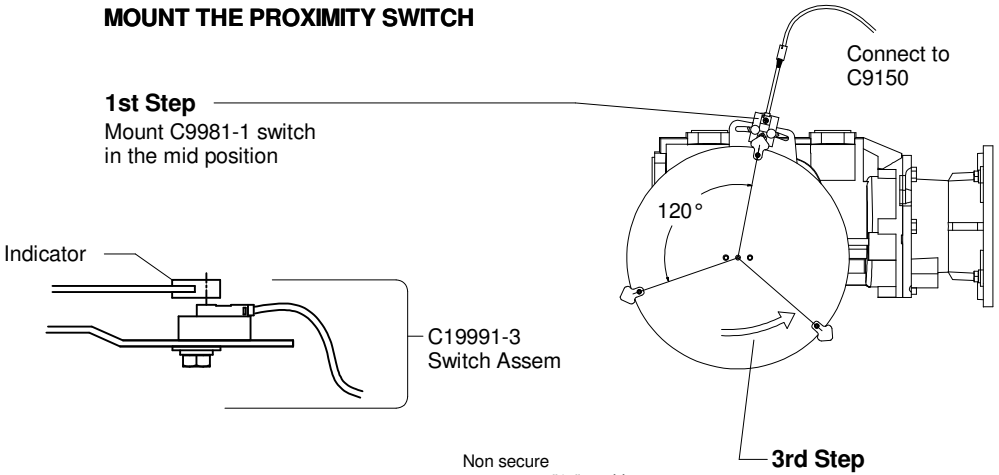
-Reverse the black and white leads at the CN 1 connection and reverse leads 2 & 3 (green & white) on the encoder



2. BASIC SETUP (wiring reference switch)

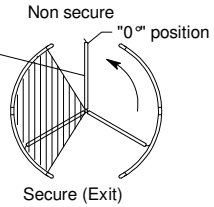


MOUNT THE PROXIMITY SWITCH



1st Step
Mount C9981-1 switch
in the mid position

2nd Step
Place door in "0°" position.
Place indicator in line with
the switch as shown.
Use tape on the ceiling to
mark the first wing position.

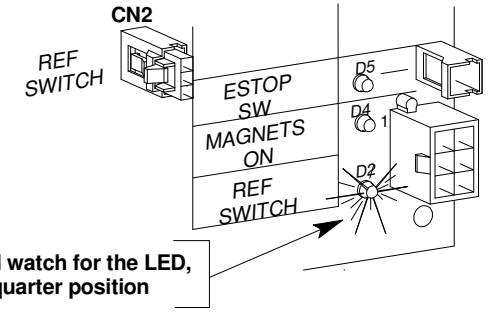


3rd Step

Rotate each door wing 120°
(to the tape on the ceiling) and place
next indicator in line with the switch -
continue untilall indicators are set.

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, to light at each quarter position

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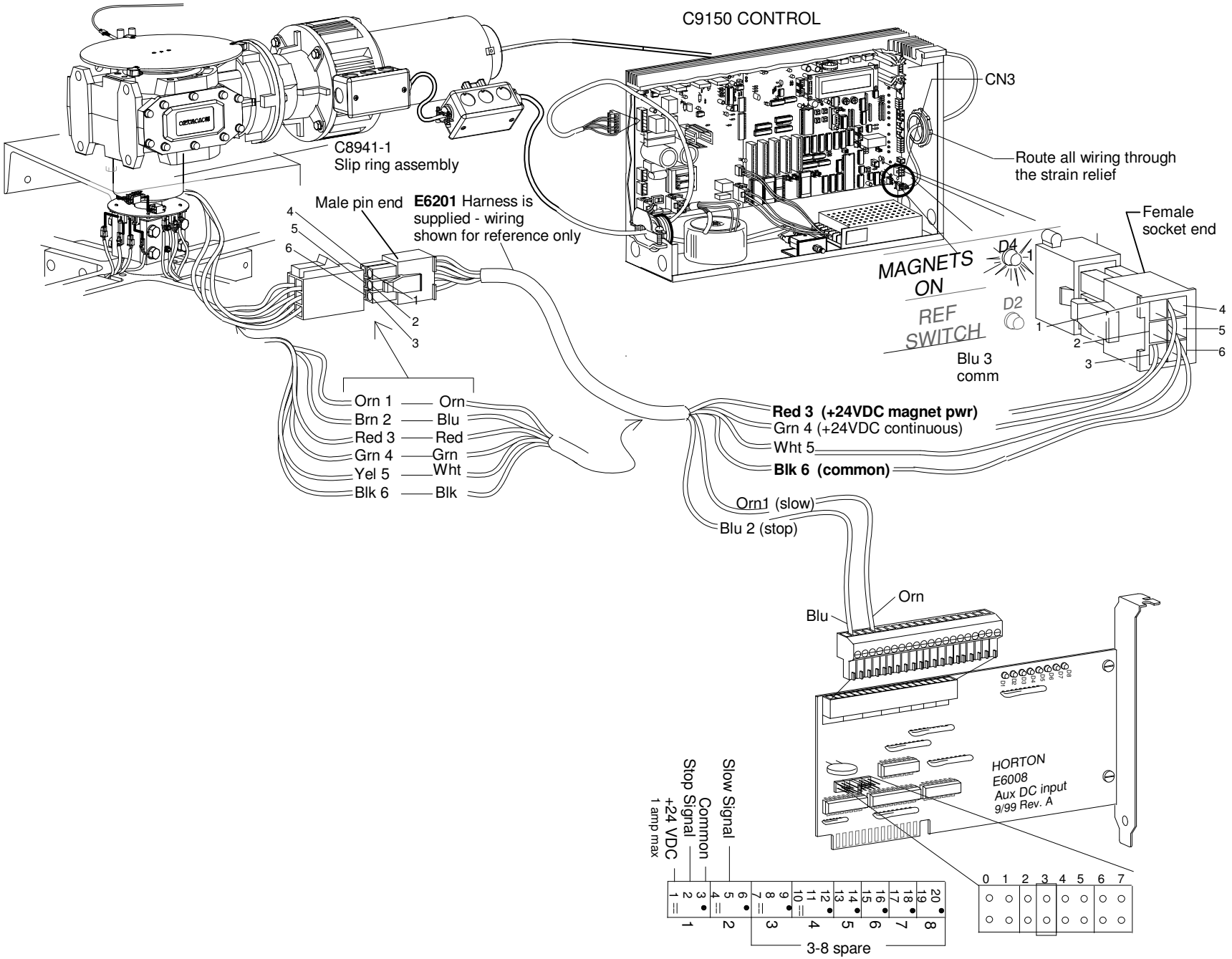
3. BASIC SETUP (wiring the slip ring assembly and magnetic breakout or storm lock to the C9150 control)



3A. Sensor Connections

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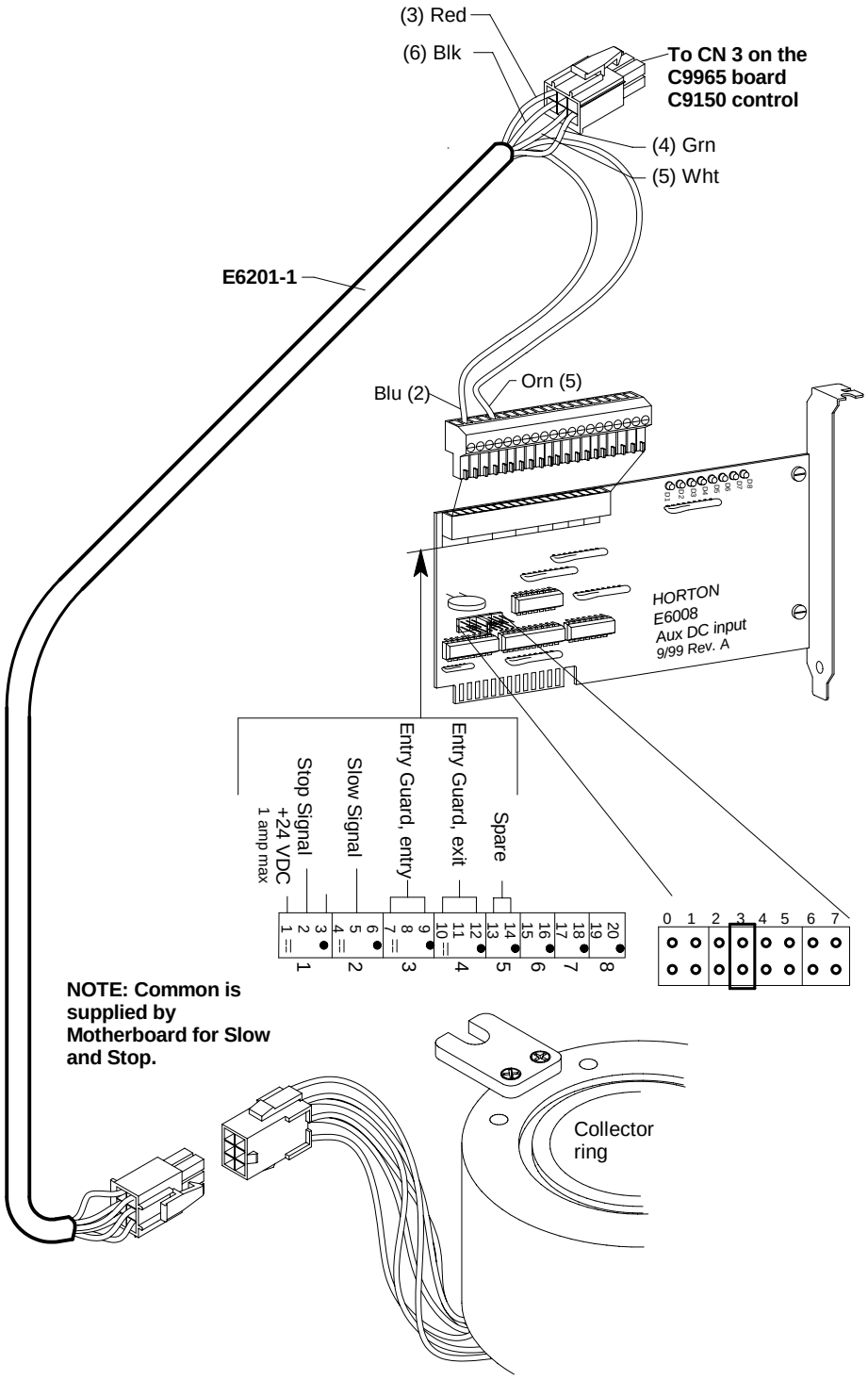
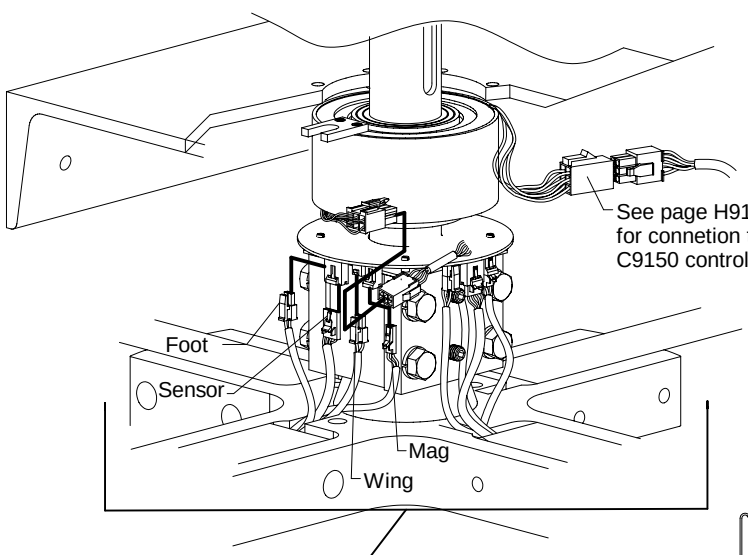
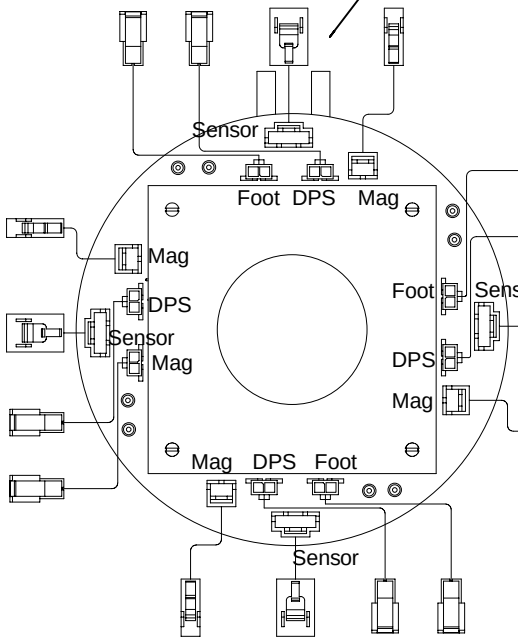
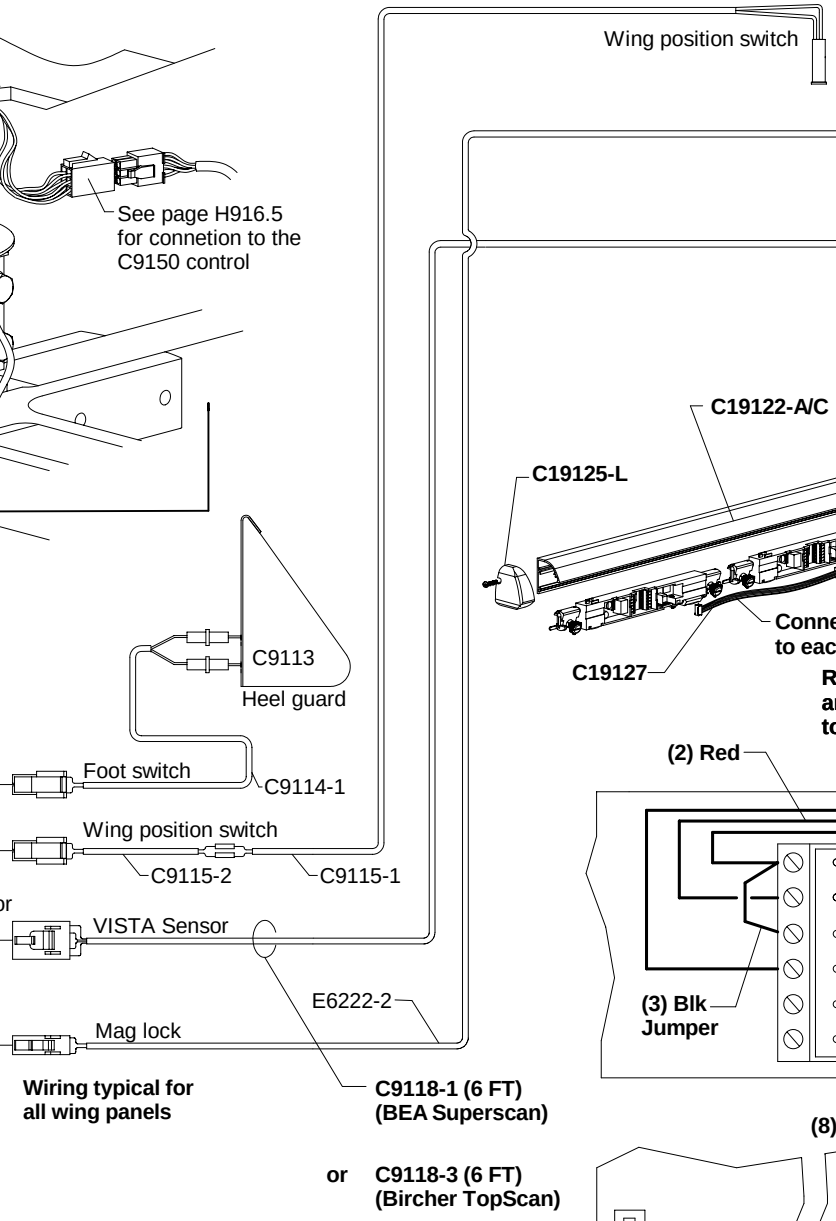


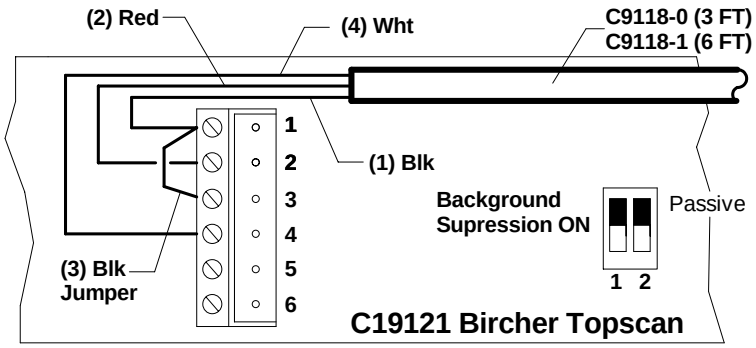
3B. Automatic revolver sensor and mag lock connections to the E6042-1 distribution board

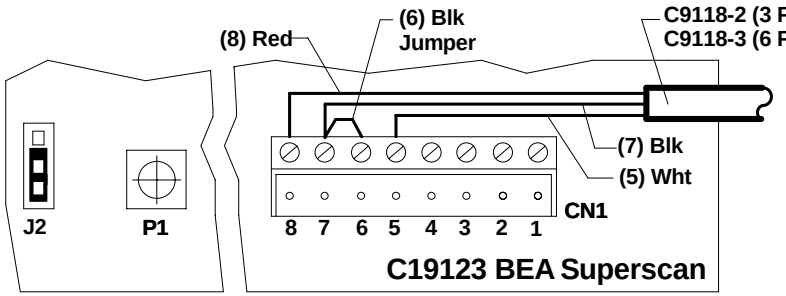




E6042-1 DISTRIBUTION BOARD VIEWED FROM THE BOTTOM







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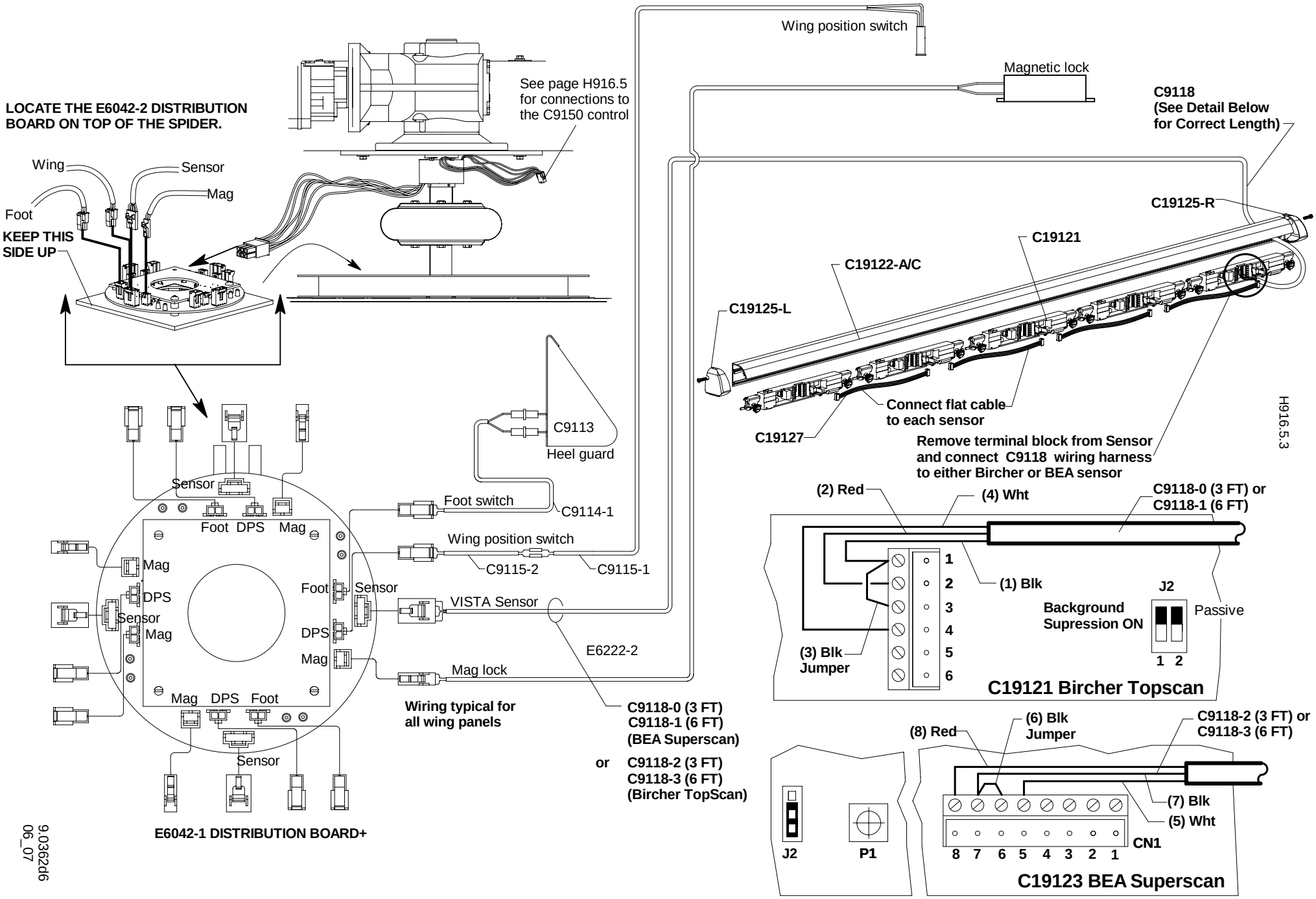
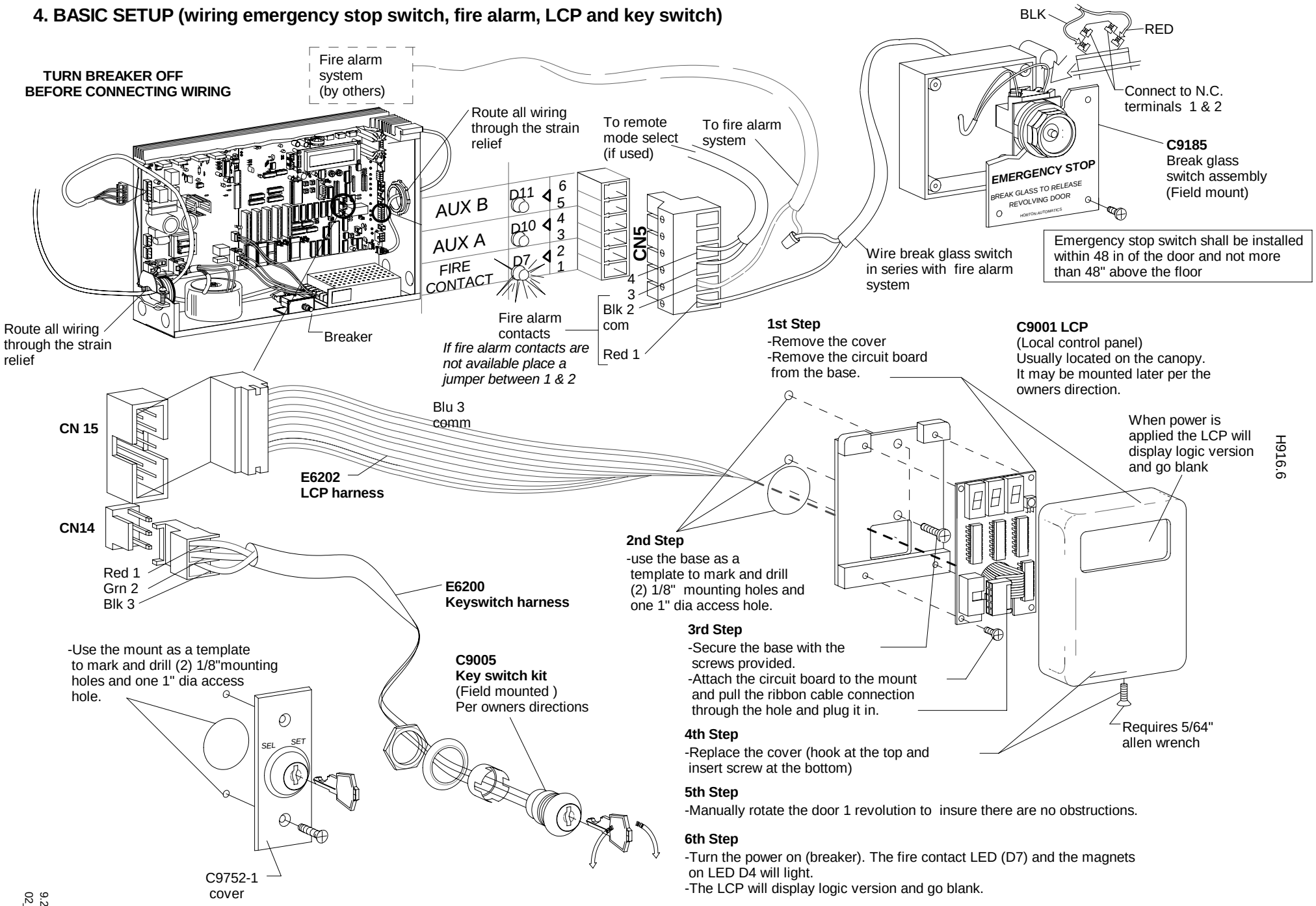
3C. Grand revolver sensors and mag lock connections to the E6042-1 distribution board



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

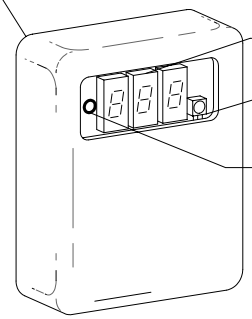


5. BASIC SETUP (introduction to diagnostics)

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 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.

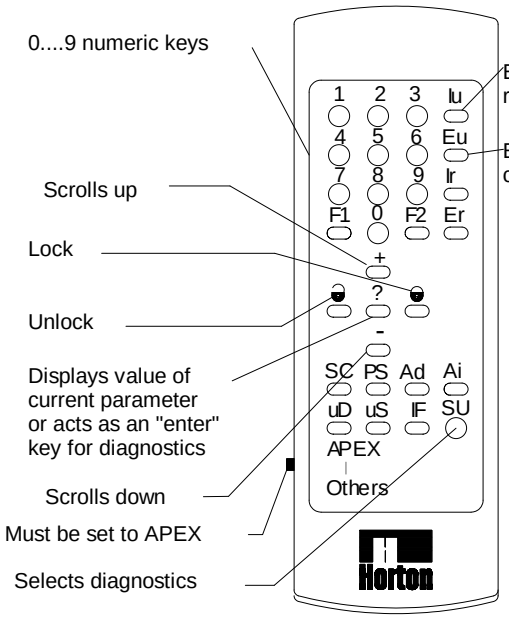
LCP **L**ocal **C**ontrol **P**anel



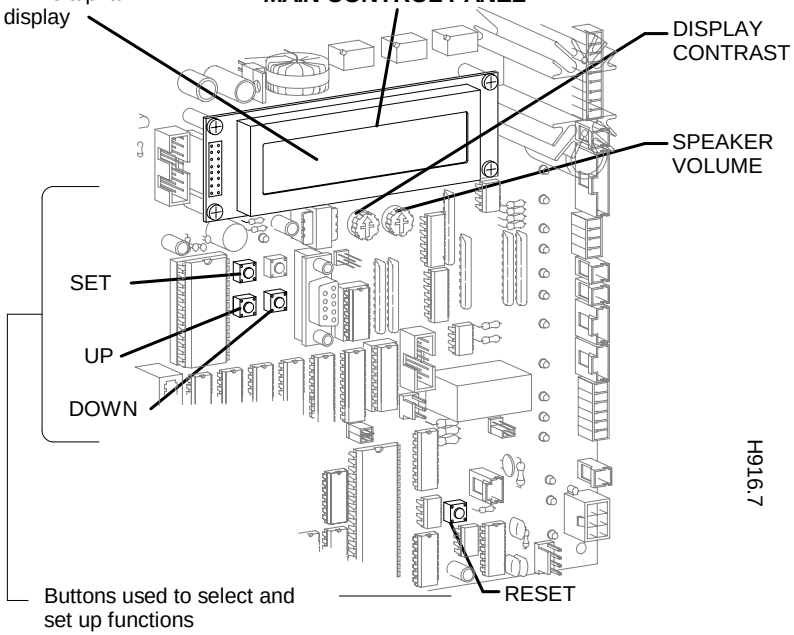
The LCP and the remote control are used to select parameters, modes or run diagnostics.

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

IR REMOTE CONTROL



MCP
MAIN CONTROL PANEL



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-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.

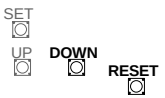
-If the correct password was entered or none was required, the parameter menu will be displayed.The display will be some parameter number such as ***P.1***

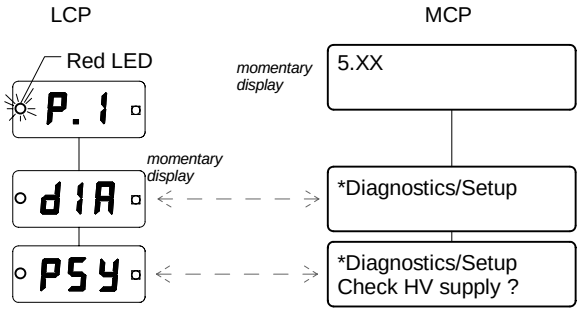
-Press **"SU" dia**gnostics will appear

-Press SU to exit

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

-Press RESET to exit

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)

The order in which the diagnostics are arranged

1 PSY (Power supply)
2 SPd (Door speed)
3 drU (Motor voltage & current)
4 br1 (Brake voltage)
5 br2 (Brake voltage)
6 EnC (Encoder)
7 inP (Inputs)
8 Uol (Voice)
9 24u (Low voltage DC supply)
10 thru 12 --- (Reserved)
13 --- (Nudge)
14 --- (Reserved)
15 SSL (Safety limits)
16 SEt (Complete setup)

CHECK MOTOR CURRENT

3 —

-Press 3 or "+" up "-" down until 3 is displayed

-Press "?"

-Displays motor amperage

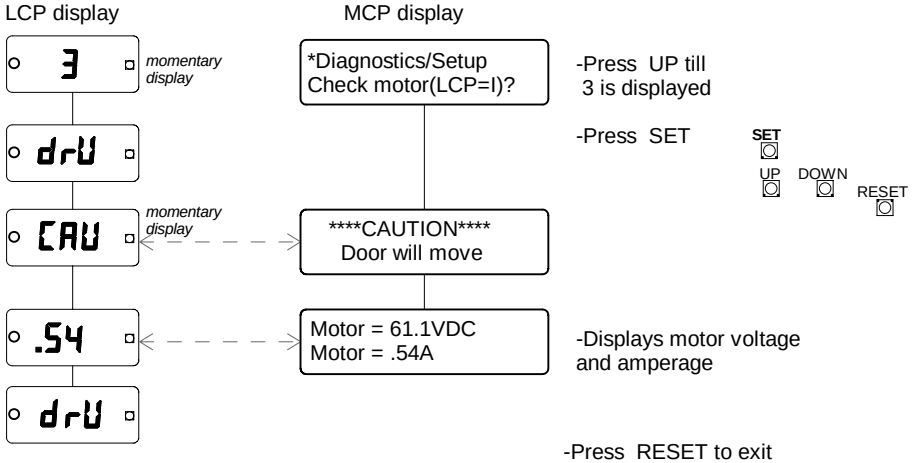
-Useful for detecting mechanical binds

-Checking overall performance of the doors mechanics.

MOTOR CURRENT SHOULD BE .50A TO 2.5A.

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)

5 —

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

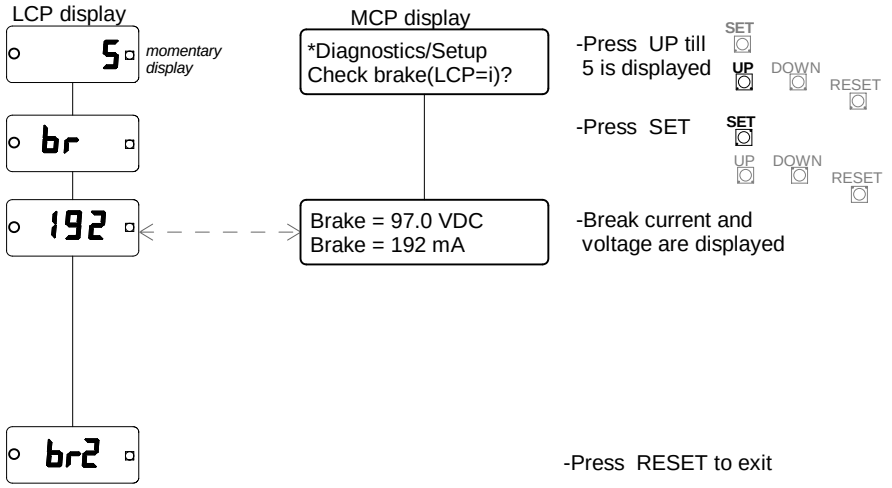
-Press "?"

-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



GO TO NEXT PAGE

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7. BASIC SETUP (setup run)

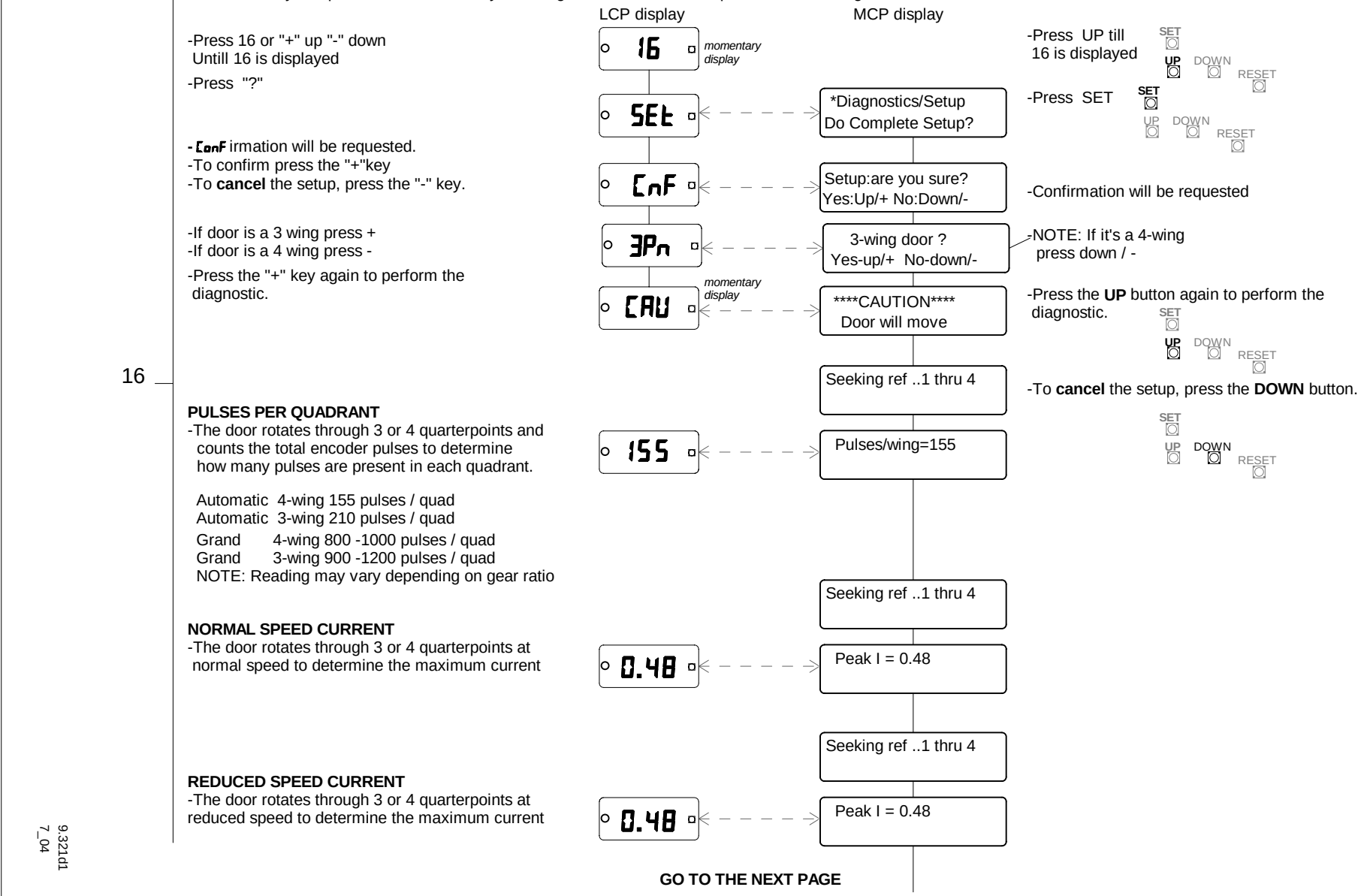
Before installing any additional devices, a setup run should be performed. The setup run sets factory default settings to all parameters, zeros all counters and sets safety sensitivity settings.

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 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.



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8. BASIC SETUP (setup run)

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the main control panel.

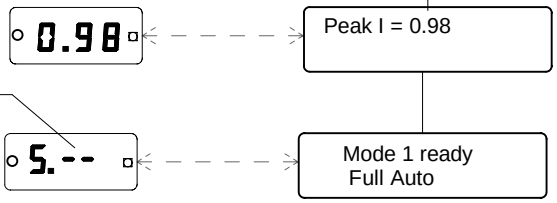
COMPLETE SETUP (CON'T)

16
CON'T

STARTUP CURRENT
-The door rotates through one quadrant

-After the door stops rotating,
press the lock key

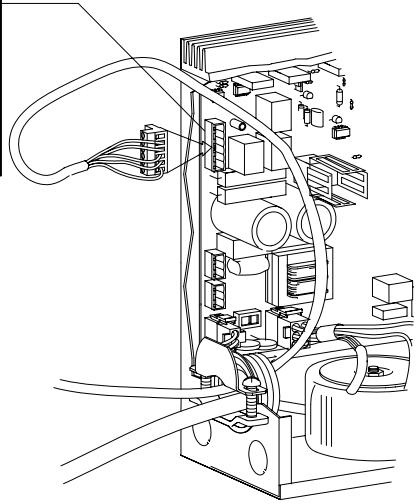
-Press **SU** again to exit



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

THIS CONCLUDES THE BASIC SETUP RUN

NOTE:
Disconnect CN1 (motor & brake)
so that the auxillary 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

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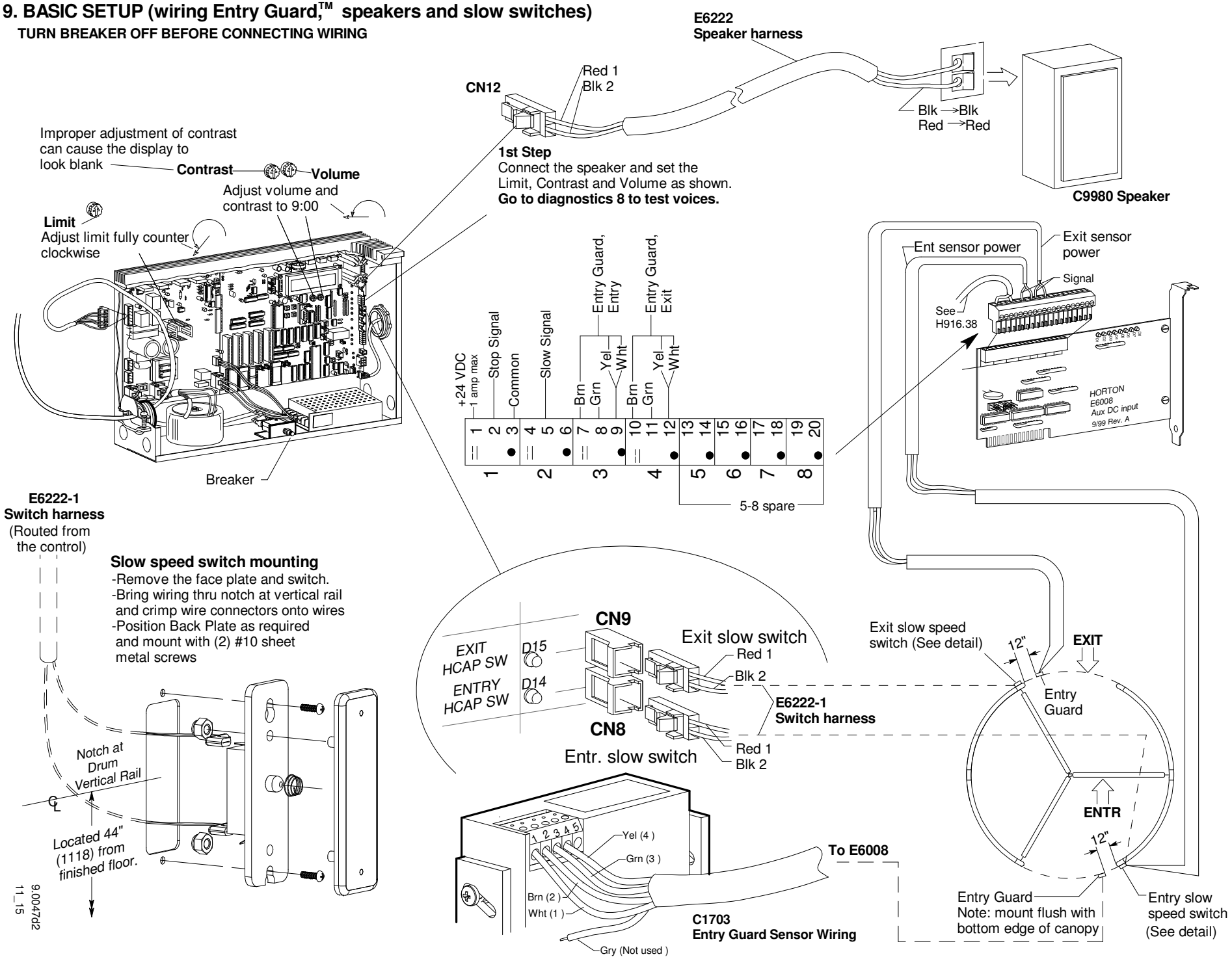
9. BASIC SETUP (wiring Entry Guard,™ speakers and slow switches)

TURN BREAKER OFF BEFORE CONNECTING WIRING



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10. BASIC SETUP (wiring motion detectors and lights)

TURN BREAKER OFF
BEFORE CONNECTING WIRING

Route all wiring through the strain relief

C9150 control

Breaker

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

INSTALL & ADJUST MOTECS
Per mfg. instructions

EXIT MOTEC — D13
ENTRY MOTEC — D12

CN7
Red (1)
Grn (2)
Wht (3)
Blk (4)

CN6
Red (1)
Grn (2)
Wht (3)
Blk (4)

E6224
Motec harness

Grn
Wht
Red
Blk

N.C./
N.O.
Comm
12-24 VDC

Exit Motec
EXIT
Light
Light
ENTR
Entry Motec

Grn
Wht
Red
Blk

N.C./
N.O.
Comm
12-24 VDC

CN4
Line (Blk)
Neut (Wht)
Gnd (Grn)

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)

SEL — R — SET

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

L.on

SEL — R — SET

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

L.oF

C9583
4-plex with cord and plug

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

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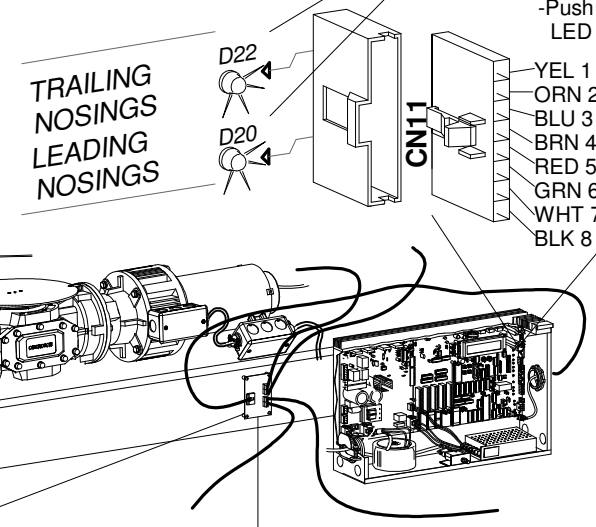
11. BASIC SETUP (nosing wiring)

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

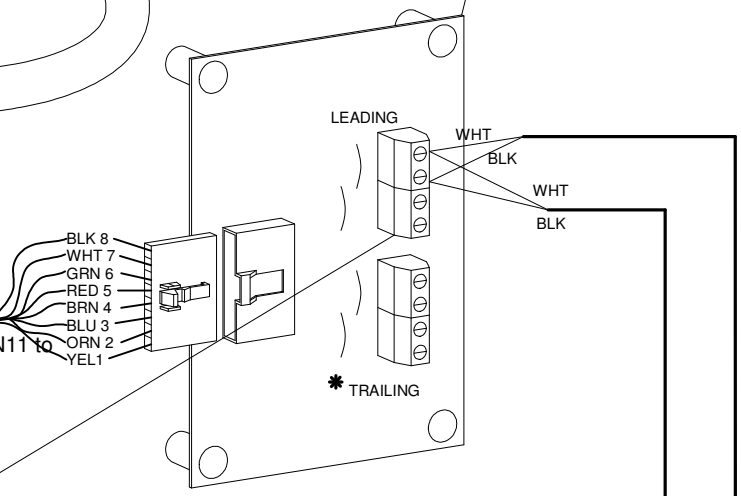


E6238 Nosing harness is supplied with the control accessories.
Wiring color code is shown for reference only.

E6024 Nosing interface board is supplied with the control accessories.

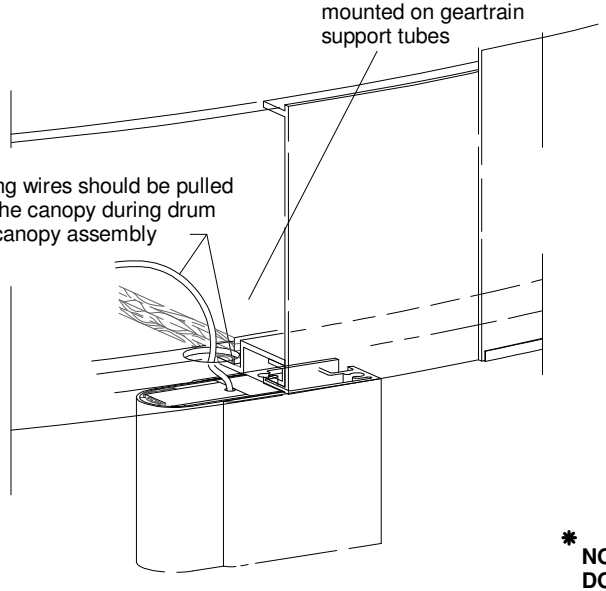
1st Step
Interface board is supplied with the control accessories.
Mount to the gear drive support tubes with #6 SMS
(drill 3/32" pilot hole)

4thStep
Connect harness from CN11 to interface board

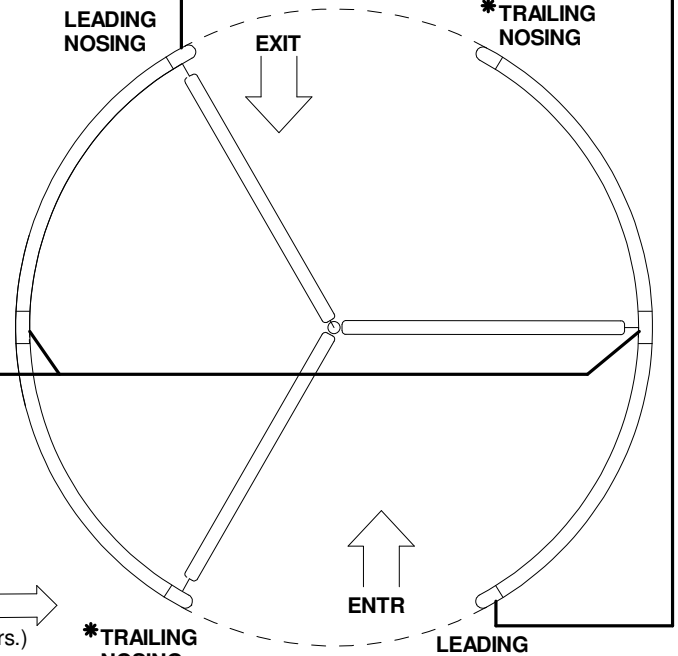


3rd Step
Make connections at nosing interface board.

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



HELP SWITCHES
(optional)
To CN5 see Sect 4

* **NOTE:**
DO NOT CONNECT TRAILING NOSING
(Trailing nosing is only connected on security doors.)

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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**.

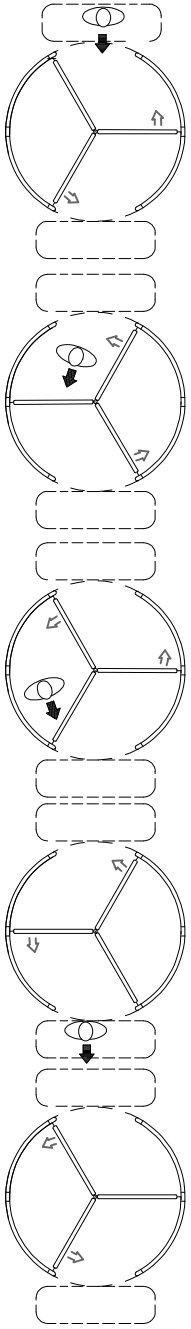
MOTION DETECTOR ACTIVATION (mode 1)

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

Move into the detection zone - the door will start to rotate

MCP

Mode 1 ready...
Full Auto



Run: normal speed
Passed Quarterpoint

Run: normal speed
Passed Reference

This cycle will continue as long as the motec zone is activated.

After activation zone clears, the door will rotate for 5 sec. (default) see parameter 12

Run: Qtr pnt Speed
Parking...

After the zones are clear the unit returns to inactive status

Mode 1 ready...
Full Auto

REPEAT TEST FOR MOTECS ON EACH SIDE OF DOOR

13. DIAGNOSTICS CHART 1

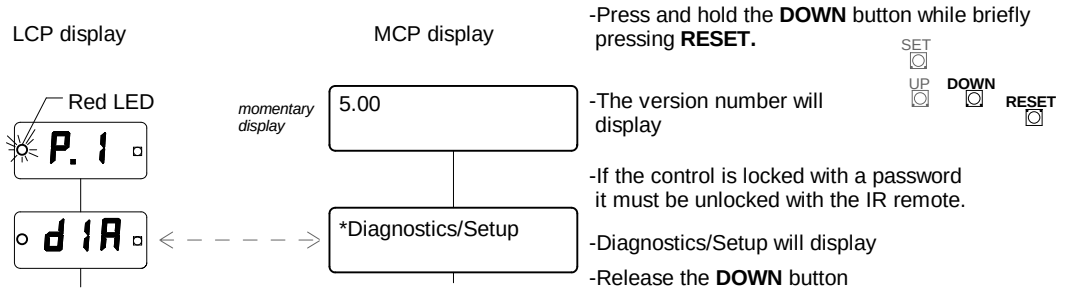
SEE SECTION 5 FOR INTRODUCTION TO CONTROL SETUP

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*

Accessing the diagnostics from the control itself.



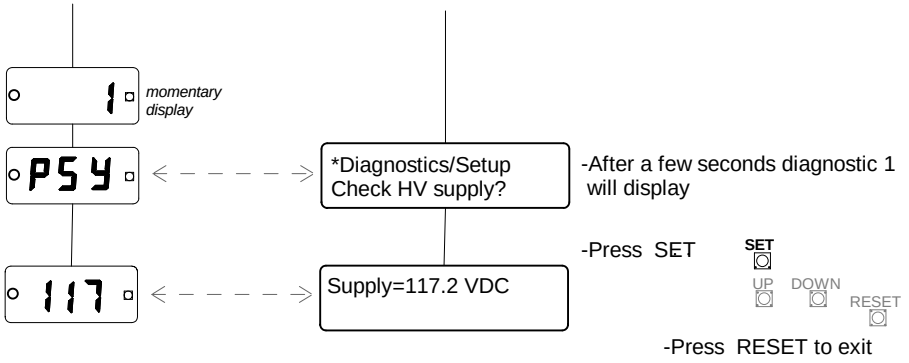
To return to the main diagnostics menu, press the **"SU"** button on the remote .
Press the **LOCK** button,on the remote, or hold the **DOWN** button and briefly push the **RESET** on the control to exit all diagnostics and restore normal door operation.

The order in which the diagnostics are arranged

1	PSY	(Power supply)
2	SPd	(Door speed)
3	drU	(Motor voltage & current)
4	brI	(Brake voltage)
5	br2	(Brake voltage)
6	EnC	(Encoder)
7	inP	(Inputs)
8	Uol	(Voice)
9	24u	(Low voltage DC supply)
10 thru 14	---	(Reserved)
15	SSL	(Safety limits)
16	SEt	(Complete setup)

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
-Press **SU** again to exit



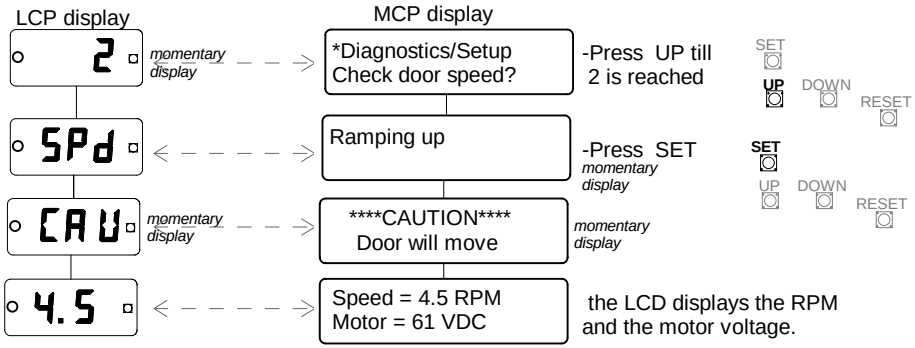
CHECK DOOR SPEED (2)

-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 (temporarliy) 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)

-Press **SU** again to exit



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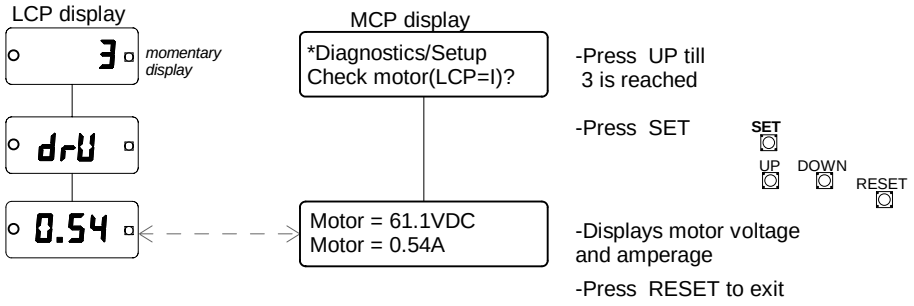
14. DIAGNOSTICS CHART 2

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

3 CHECK MOTOR VOLTAGE AND CURRENT

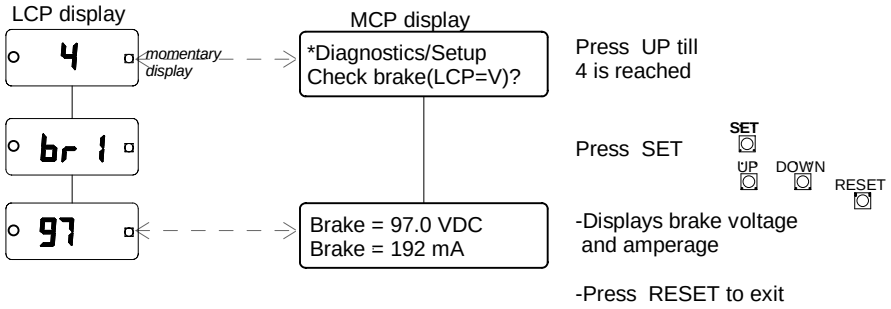
- -Press 3 or "+" up "-" down
- -Press "?"
- -Displays motor amperage
- -Useful for hunting mechanical binds
- -checking overall performance of the doors mechanics.
- -Press **SU** again to exit



4 CHECK BRAKE VOLTAGE (If present)

(LCP displays voltage)

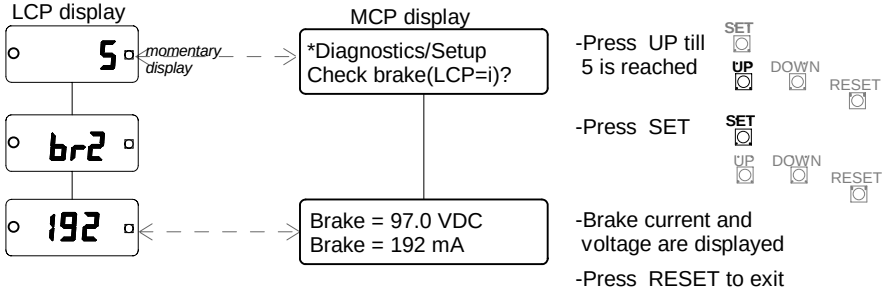
- -Press 4 or "+" up "-" down
- -Press "?"
- -Engages the core brake and displays the voltage.
- -Voltage will fluctuate with line voltage changes.
- -A value of 90 to 105VDC is typical.
- -Verify that the brake engages mechanically and properly locks the door.
- -Checks the brake control subsections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



5 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
- -Press **SU** again to exit



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15. DIAGNOSTICS CHART 3

Accessing the diagnostics from the infrared control.

Accessing the diagnostics from the control itself.

ENCODER TEST

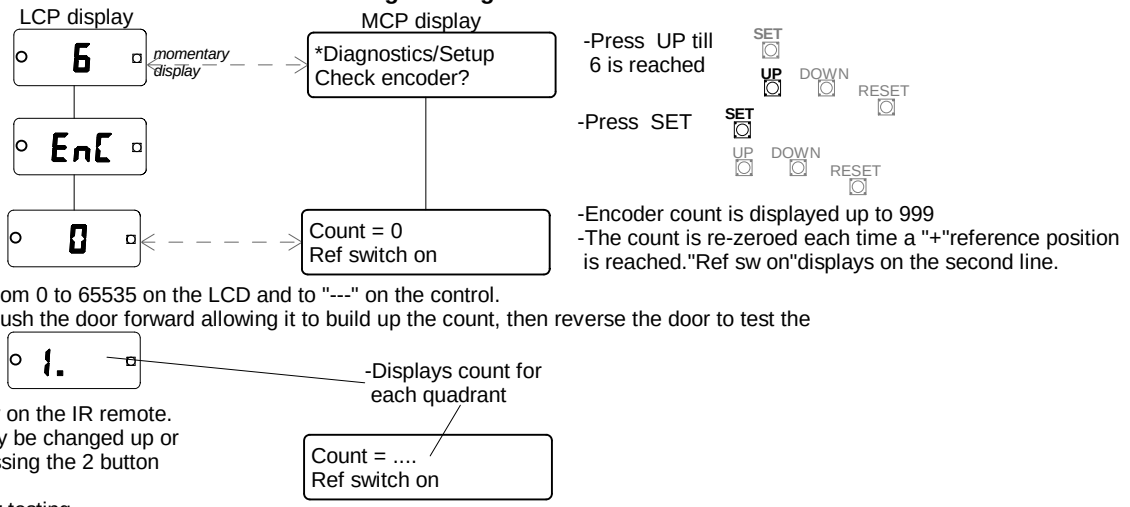
-Press 6 or "+" up "-" down

-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.**

-Press **SU** again to exit



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.

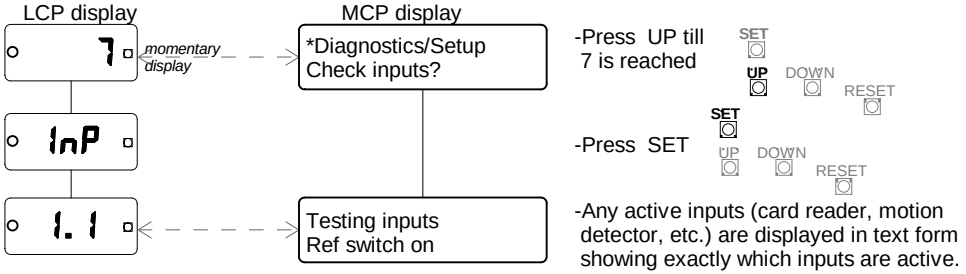
TESTING INPUTS

-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	MCP
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	Keyswitch SET on
i.11	Keyswitch SEL on
i.12	PY-3 reserve on
i.13	AUX B/ Help switch on
i.14	AUX A/ mode sel on
i.15	Fire contact on
i.16	Emergency stop contact on
i.17	PZ-7 reserved on
i.18	DIP1 on
i.19	DIP2 on
i.20	DIP3 on
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

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.

Accessing the diagnostics from the control itself.

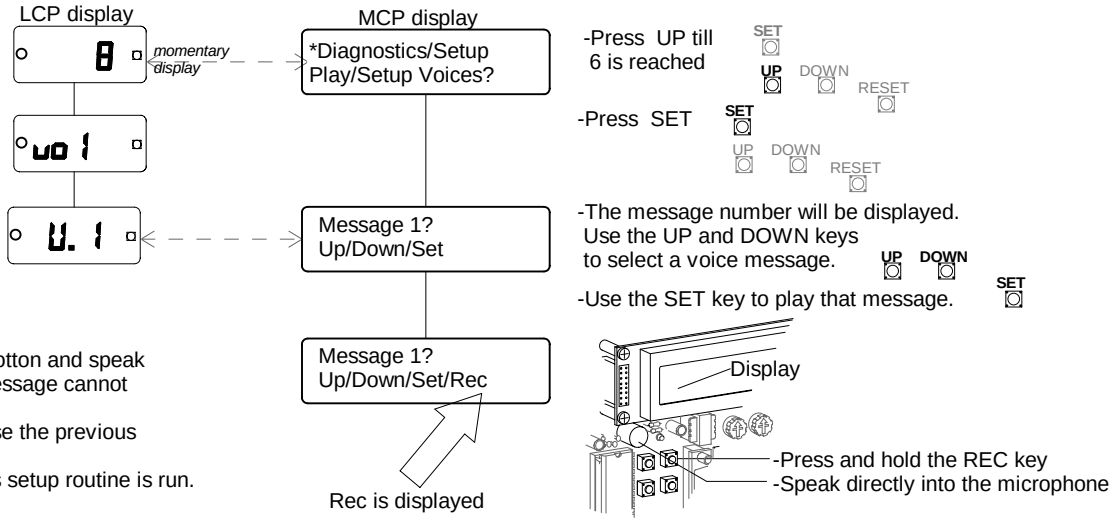
8 — VOICE

-Press 8 or "+" up "-" down

-Press "?"

-Displays V.1, V.2, V.3 & V.4
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 the microphone. 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 "Caution door speed will increase"
-Voice 2 "Please step forward"
-Voice 3 "Please exit - door will lock" (For Park-N-Lock)
-Voice 4 Door in slow speed - Do not push
-Press **SU** again to exit



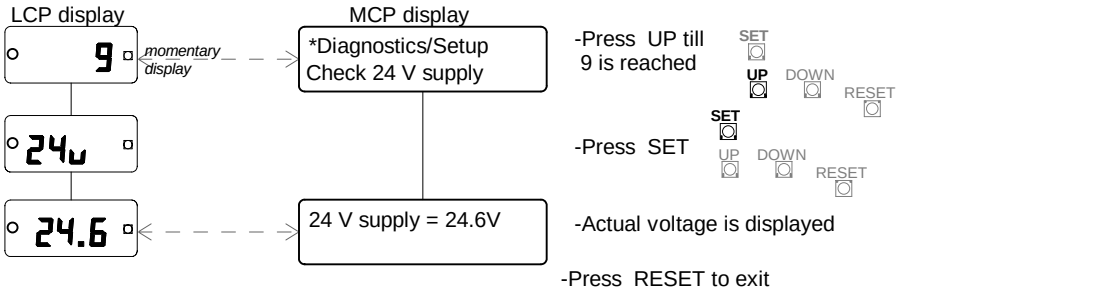
9 — CHECK LOW VOLTAGE DC SUPPLY

-Press 9 or "+" up "-" down

-Press "?"

-Low voltage power supply value is displayed.
A typical value is 24 to 25 volts.

-Press **SU** again to exit



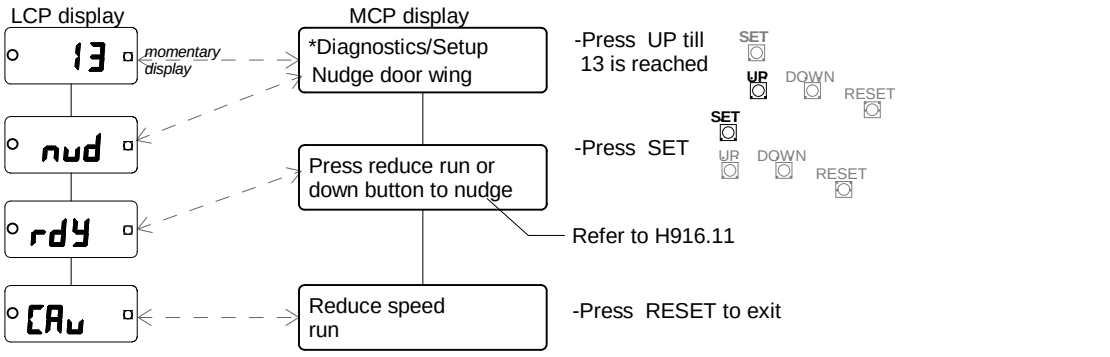
10, 11 & 12 are reserved diagnostics

13 — NUDGE

-Press 9 or "+" up "-" down

-Press "?"

-Press **SU** again to exit



17. DIAGNOSTICS CHART 5

Accessing the diagnostics from the infrared control. **Accessing the diagnostics from the control itself.**

14 — RESERVED

LEARN SAFETY LIMITS

15 —

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

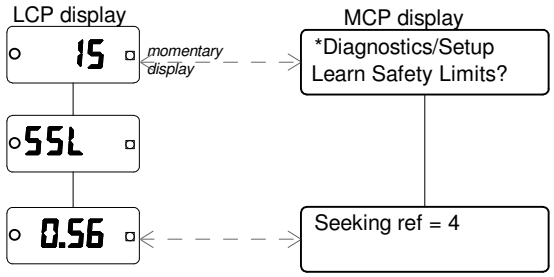
The C9150 control can measure the current draw of the door's motor and automatically set the "safety sensitivity" settings to the suggested values for the installation. These parameters are automatically set when a complete control setup is performed. An adjustment in motor speed will require changing these settings. Instead of hand adjusting them,this routine will force the control to update the settings. Adjust the parameters to application requirements as low as possible without causing nuisance stops.

-Press 15 or "+" up "-" down

-Press "?"

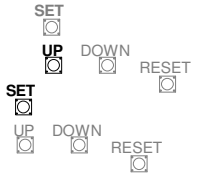
-This diagnostic will run 4 routines and store the highest current draw of each one.

-The highest current value for each routine is displayed on the LCP



-Press UP till 15 is reached

-Press SET



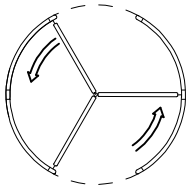
-The name of the routine and the highest current draw will be displayed on the LCD

-The door will proceed through 4 quarterpoints at:

Normal speed forward
then
Reduced speed forward

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

Parameter 8, **S**afety **S**ens - QtPt



Forward at normal speed then reduced speed

-The door will proceed forward to the:

Next quarterpoint

Parameter 10 **S**afety **S**ens - 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

-Press **SU** again to exit

-Press RESET to exit

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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 initially set to factory default.
This diagnostic should always be performed when initially installing a door and **never** be performed without good reason otherwise.

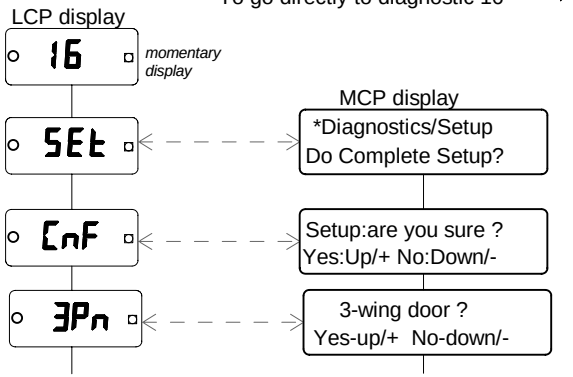
To go directly to diagnostic 16 ⇒ -Press and hold SET
AND...
-Press and release RESET while holding SET
Release SET after 5 sec

-Press 16 or "+" up "-" down

-Press "?"

-*ConF*irmation will be requested.
-To confirm press the "+" key.
-To **CANCEL** the setup, press the "-" key.
-Press the "+" key again to perform the diagnostic.
-If door is a 3 wing press +
-If door is a 4 wing press -

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



-Confirmation will be requested
-Press the **UP** button again to perform the diagnostic.
-To **NOT** do the setup, press the **DOWN** button.

Also see page H916.9

16

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.

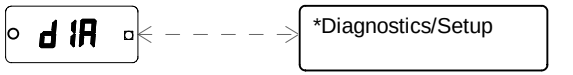
-Finally, the door is rotated through additional quadrants to automatically set safety limits (see diagnostic 15).

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 to the main diagnostic menu.

-Press the lock key

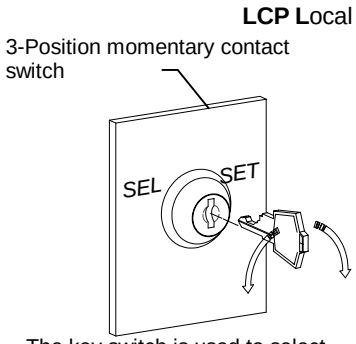
-Press **SU** again to exit



-Press the **RESET** button.

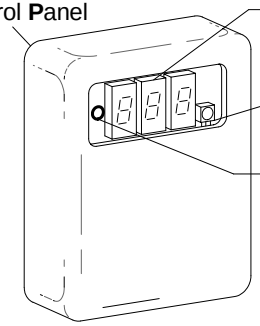
19. DOOR OPERATING MODES & STORM LOCK

KEY SWITCH MODE SELECTION



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

LCP **L**ocal **C**ontrol **P**anel



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

MODE CHART

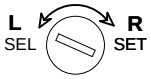
The following chart shows the 4 modes that are always available regardless of the software version in use.

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.

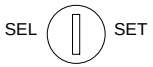
SELECTING A MODE

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

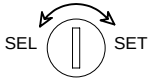
Switch position



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

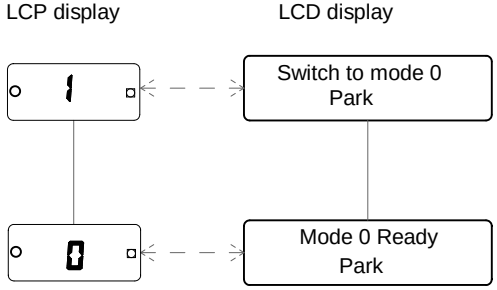


Release the keyswitch.
The number of the current operating mode will appear on the **LCP**

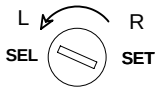


Each time the keyswitch is moved back and forth momentarly the number changes on the LCP display (see the mode chart).

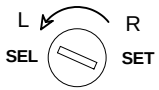
Release the key switch in the neutral position when the number of the desired mode appears on the LCP.
After a few seconds the door will begin operation in the chosen mode. Door may move after mode change.



STORM LOCK OPERATION - GRANDS

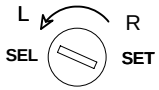


Turn key left to **SEL** and hold for 3-sec. Display will show
- stormlock on



Turn key left to **SEL** again and hold for 3-sec. Display will show
SoF - stormlock off

LIGHTS IF WIRED THROUGH C9150 CONTROL (REFER TO H916.1)

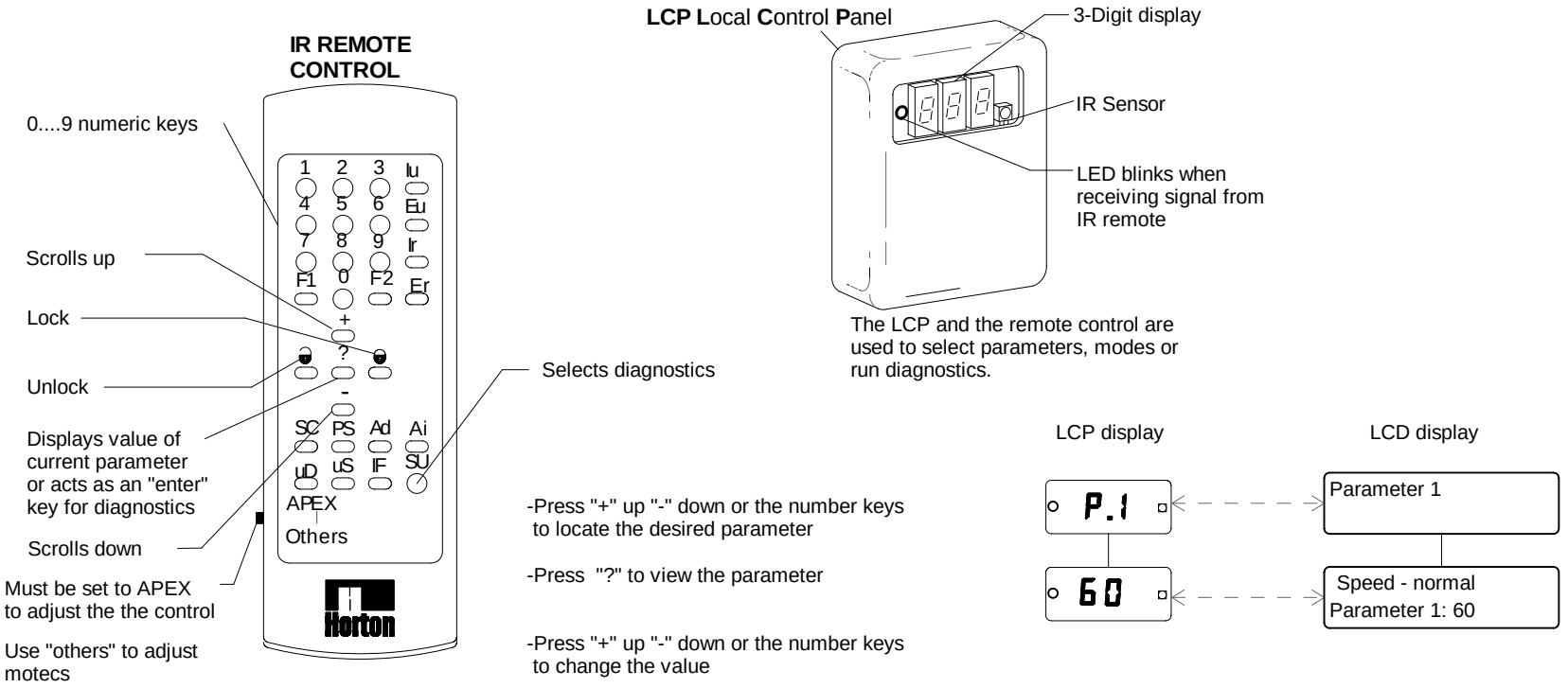


Turn key right to **SET** and hold for 3-sec. Display will show
Lon - lights on

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.

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***

-Parameter will appear

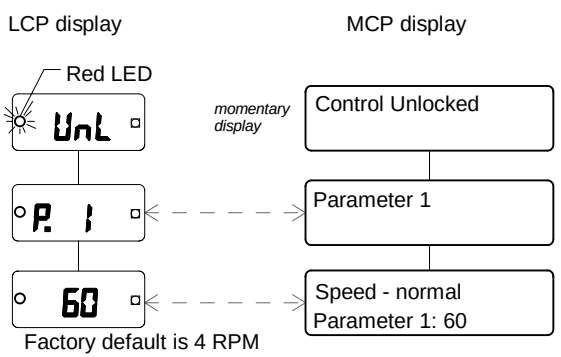
-To view or adjust the setting of a parameter, briefly press the "?"

-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.

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.

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

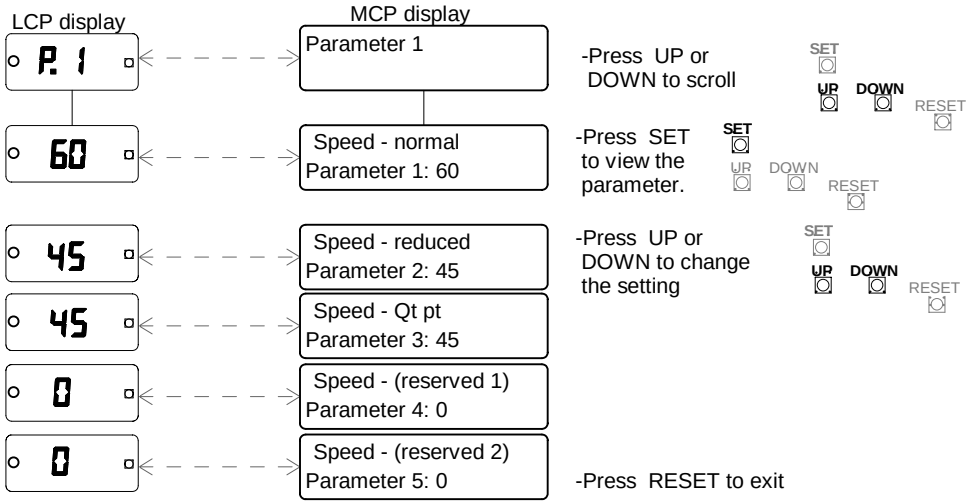
4

5

Reserved parameters

-Press **SU** again to exit

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

-Press RESET to exit

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22. PARAMETER CHART 2

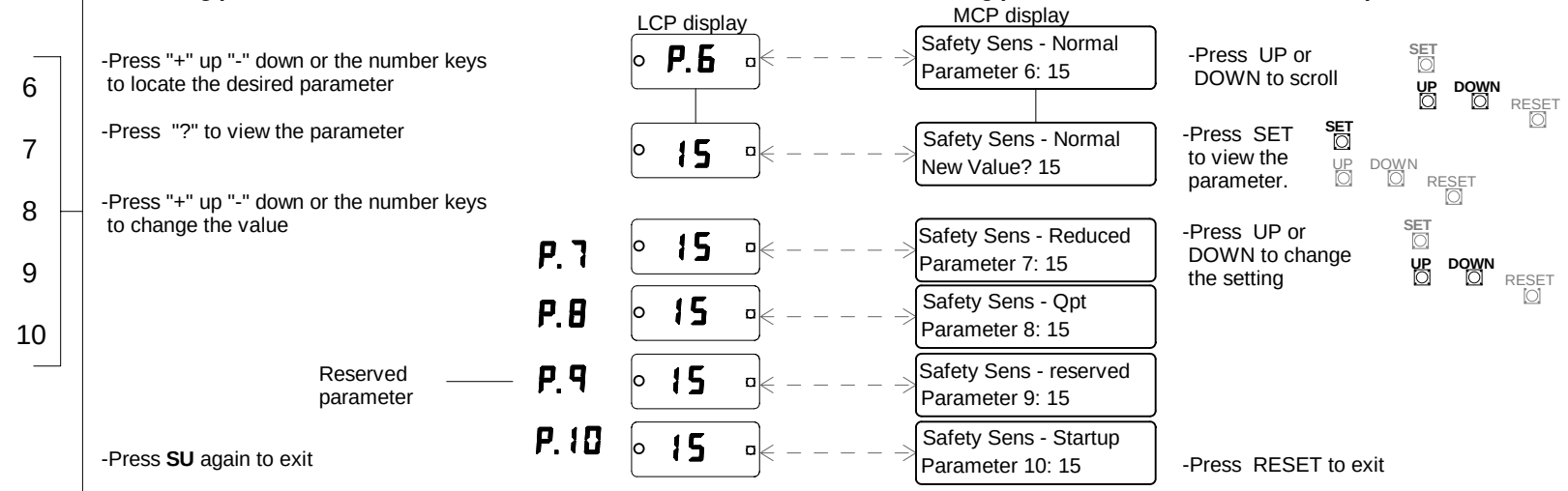
Safety sens - forward / reduced / Qt pt / startup

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 "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 at the risk of additional nusiance stops.

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.



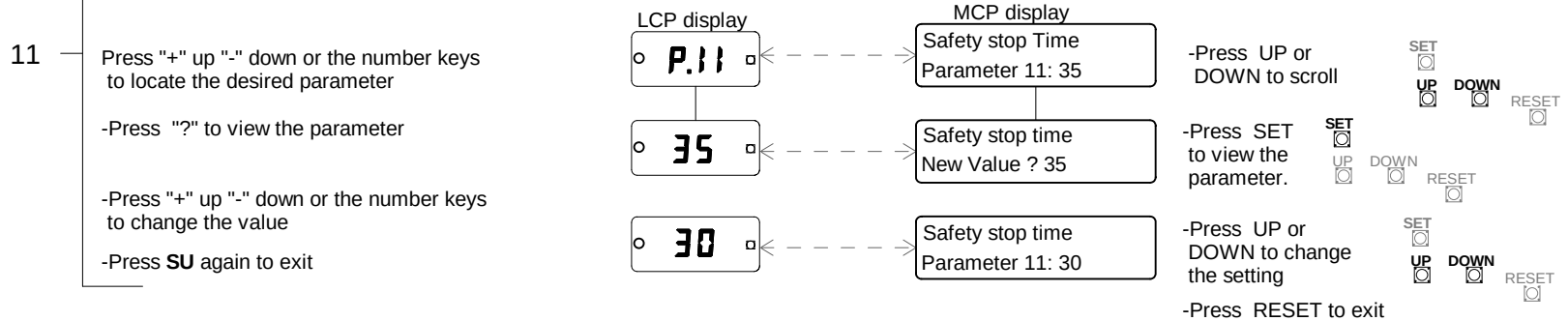
-All time delay parameters are measured in 1/10 second intervals. Example: a parameter setting of 100 = 10.0 seconds.
A setting of 20 = 2.0 seconds.

Safety stop time

-Parameter 11 determines how long the door will remain stoped 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.



23. PARAMETER CHART 3

Normal Speed Delay (Dwell)

12

Parameter 12
Sets the time in 10ths of seconds. The time the door will continue to run at normal speed after the activation has cleared.

Accessing parameters from the infrared control.

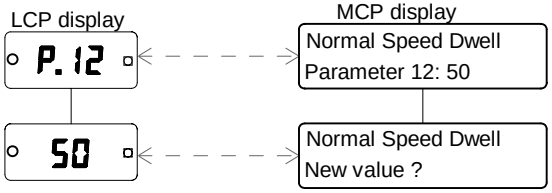
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing parameters from the main control panel.

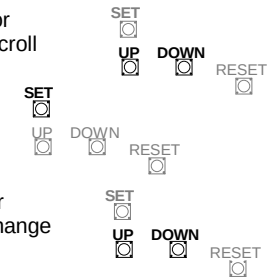


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



Reduced Speed Delay (Dwell)

13

Parameter 13
Sets the time in seconds The time the door will continue to run at normal speed after the activation has cleared..

Accessing parameters from the infrared control.

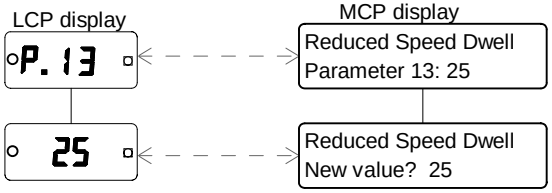
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing parameters from the main control panel.

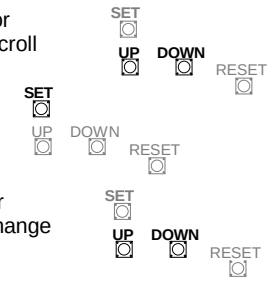


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



14 Parameter 14 is reserved for future use

H916.25

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)

15

Accessing parameters from the infrared control.

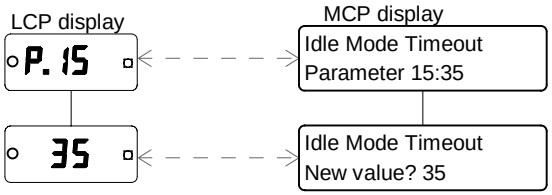
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing parameters from the main control panel.

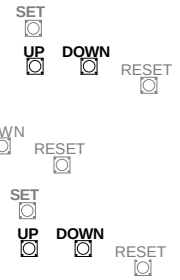


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



¥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 Delay (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 paremeter is used only if a brake is installed.

16

Accessing parameters from the infrared control.

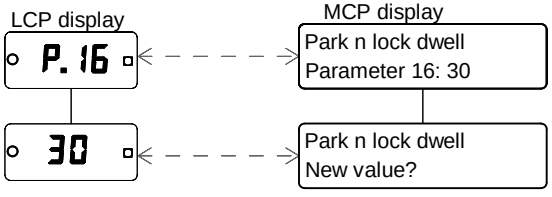
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing peremeters from the main control panel.

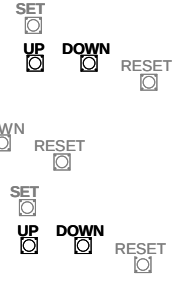


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



¥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.

17

Accessing parameters from the infrared control.

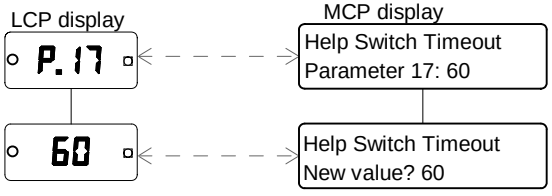
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing parameters from the main control panel.

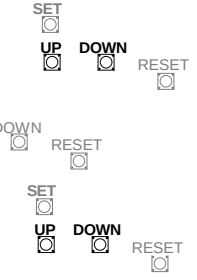


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



¥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.

H916.26

9.338d1
7_04

25. PARAMETER CHART 5

18 Thru 22

Parameter 18 thru 22 are reserved for future use. These values are currently ignored by the software.

Speed Up Warning

23

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.

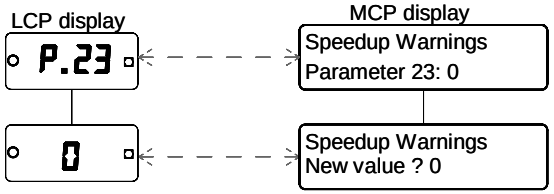
Accessing parameters from the infrared control.

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

-Press "?" to view the parameter

-Press **SU** again to exit

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

-Press RESET to exit

Safety Stops to Idle

24

NOTE: P24 = 0 for auto time restart
P24 = 1 door must be pushed to restart

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.

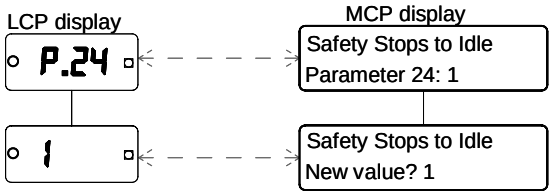
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

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

-Press RESET to exit

H916.27

26. PARAMETER CHART 6

Entry Guard Offset

Parameter 25 sets the zone (number of degrees) from the throat post to the advancing door that a entry signal will stop the door. The larger the number the larger the zone area will be.

Accessing parameters from the infrared control.

25

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

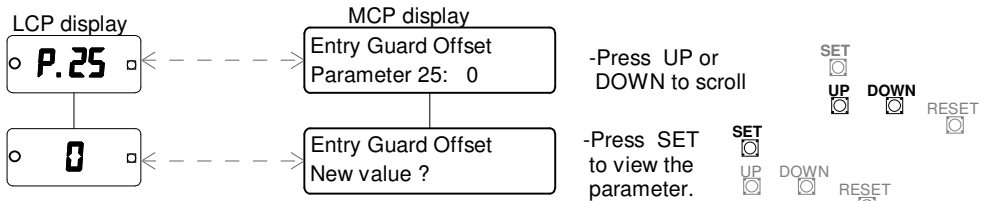
-Press "?" to view the parameter

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

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

-Press **SU** again to exit

Accessing parameters from the main control panel.

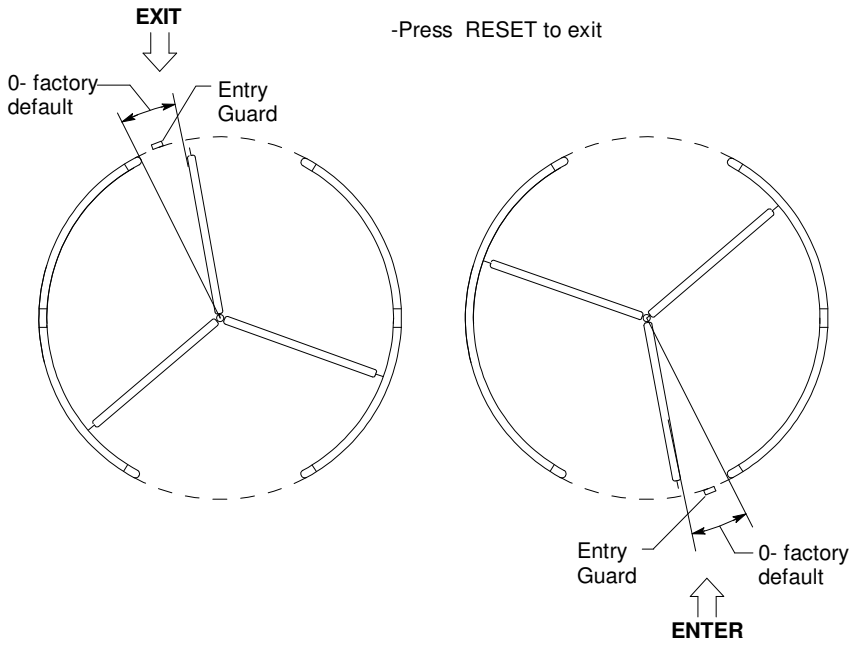


-Press UP or DOWN to scroll

-Press SET to view the parameter.

-Press UP or DOWN to change the setting

-Press RESET to exit



26
37

Parameter 26 and 27 are reserved for use in future software

H916.28

27. PARAMETER CHART 7

38
39

Parameters 38 & 39 are reserved for future use.

40

Relay K4 (40) mapping

Parameter 40 setst the function of relay K4 on the motherboard.

Accessing parameters from the infrared control.

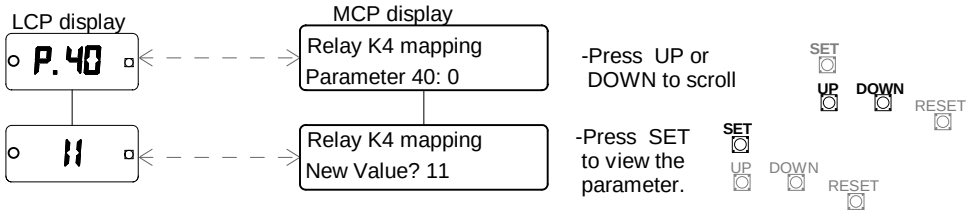
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

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

-Press **SU** again to exit

Accessing parameters from the main control panel.



When set to the following values, the 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.

41

Parameter 41 is reserved for use in future software

28. PARAMETER CHART 8

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

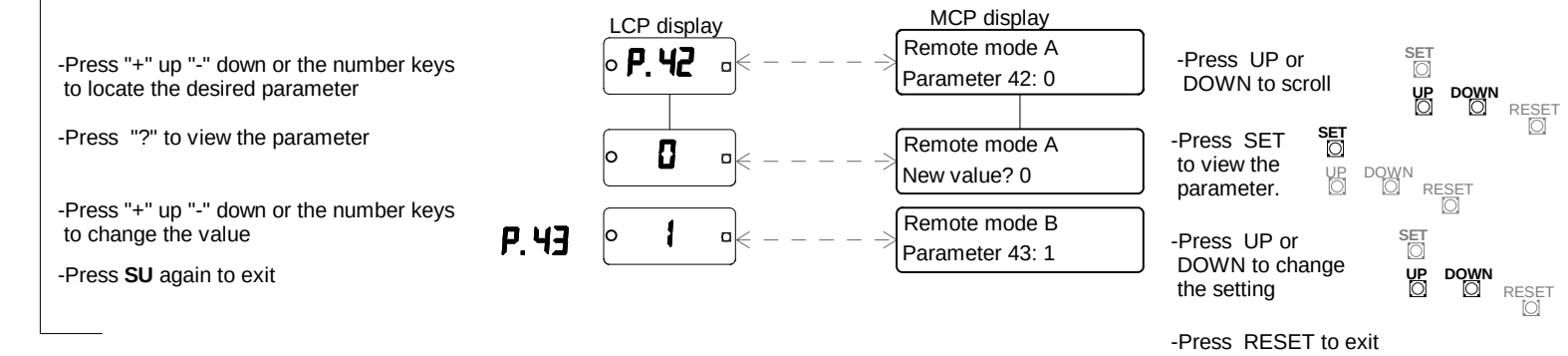
Parameters 42 and 43 are only active if parameter 60, Remote Mode (hard wired) select,is turned on.
When remote mode select is in use:
-Remote mode A selects the door mode to use when Aux A input is not active (terminals 3 & 4 of CN 5 are open).
-Remote mode B selects the door mode to use when Aux A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

42
43

Accessing parameters from the infrared control.

Accessing parameters from the main control panel.



44
thru
59

Parameters 44 through 59 are reserved for use in future software

H916.30

29. 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.

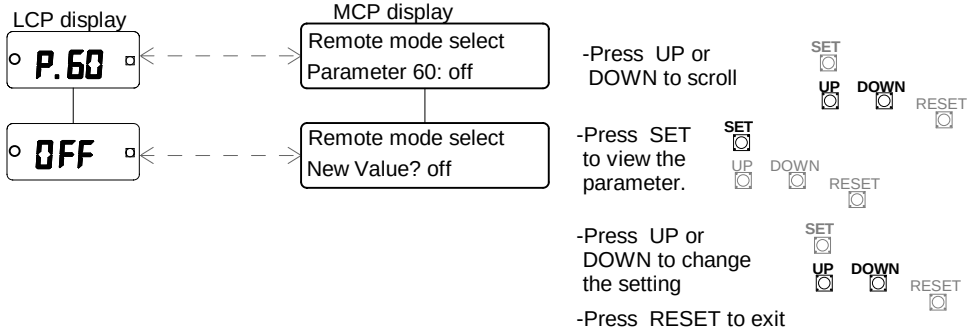
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

-Press "+" up "-" down to change the value

-Press **SU** again to exit

Accessing parameters from the main control panel.



Push-N-Go

61

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

Accessing parameters from the infrared control.

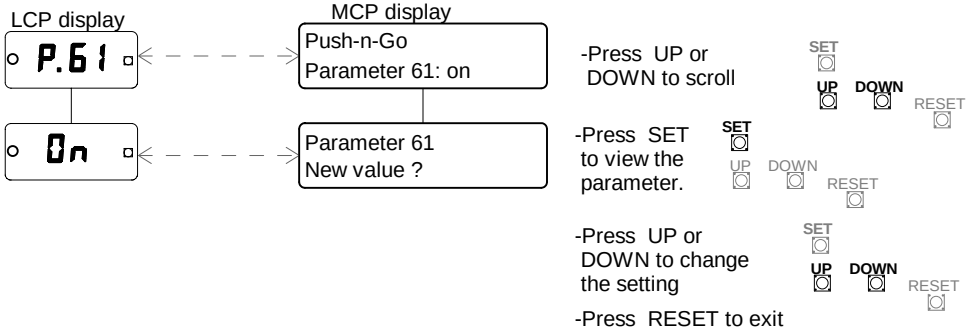
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

-Press "+" up "-" down to change the value

-Press **SU** again to exit

Accessing parameters from the main control panel.



Shaft Brake Installed (Park-N-Lock) FEATURE

62

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.

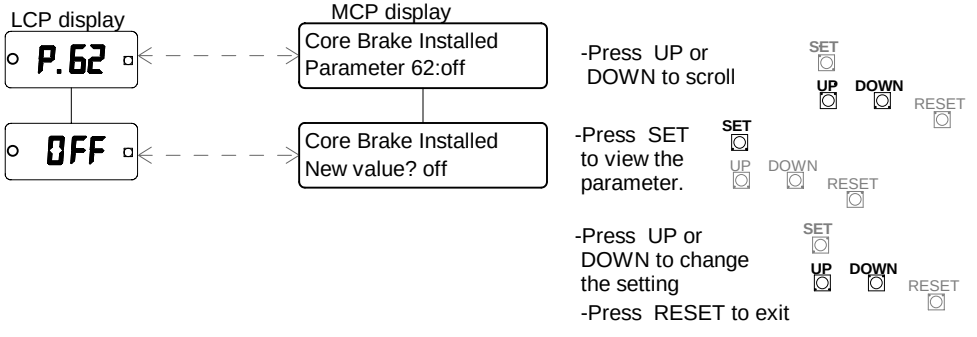
-Press "+" up "-" down or the number keys to locate the desired parameter

-Press "?" to view the parameter

-Press "+" up "-" down to change the value

-Press **SU** again to exit

Accessing parameters from the main control panel.



30. PARAMETER CHART 10

63 is a reserved parameter

Voice warning for core slow

Turns off " please step forward" message

64

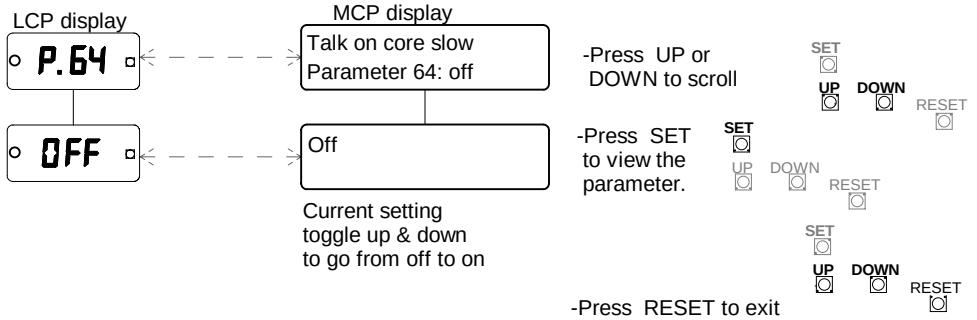
Accessing parameters from the infrared control.

-Press "+" up "-" down
to locate the desired parameter

-Press "?" to view the parameter

-Press **SU** again to exit

Accessing parameters from the main control panel.



Voice warning for reduced speed

Turns off "door in slow speed - do not push" message

65

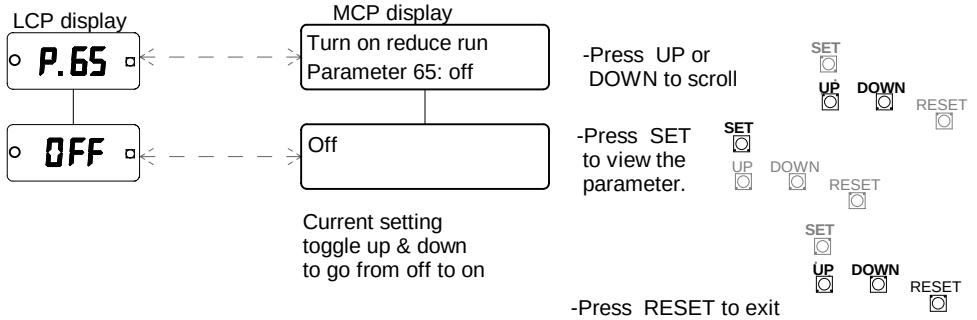
Accessing parameters from the infrared control.

-Press "+" up "-" down
to locate the desired parameter

-Press "?" to view the parameter

-Press **SU** again to exit

Accessing parameters from the main control panel.



H916.32

31. PARAMETER CHART 11

Diagnostics on LCP

Displays activation and diagnostic information on LCP

66

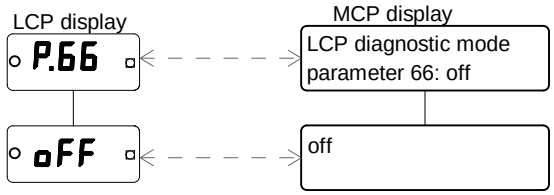
Accessing parameters from the infrared control.

-Press "+" up "-" down
to locate the desired parameter

-Press "?" to view the parameter

-Press **SU** again to exit

Accessing parameters from the main control panel.



-Press UP or
DOWN to scroll

SET
UP DOWN RESET

-Press SET
to view the
parameter.

SET
UP DOWN RESET

SET
UP DOWN RESET

-Press RESET to exit

When parameter 66 is on the LCP shows the door status in real time as a servicing aid.

nSr	Normal speed run
rSr	Reduced speed run
qPr	Quarterpointing
cnt	Continuous run
LnS	Leading nosing stop
LSS	Lock monitor switch stop
CSt	Core stop
CAU	Caution, speed increase pending
CSL	Core slowdown
OUC	Motor OVercurrent stop
Enc	Encoder pulse timeout stop
EGE	Entry Guard, Exterior, slowdown or stop
EGI	Entry Guard, Interior, slowdown or stop
IdL	Door idled out
PnL	Park-n-lock
PnG	Push-n-Go detected
rCP	reCycled by Pushing

32. PARAMETER CHART 12

67 thru 91 are reserved parameters

Parallel Core Wiring

Safety Sensor Enable - THIS PARAMETER *MUST STAY ON*.

92

ANSI 156.27 now requires all automatic doors to have wing sensors (overhead wing sensors can slow or stop).Bottom rail FootGuards must stop the door if activated. 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.

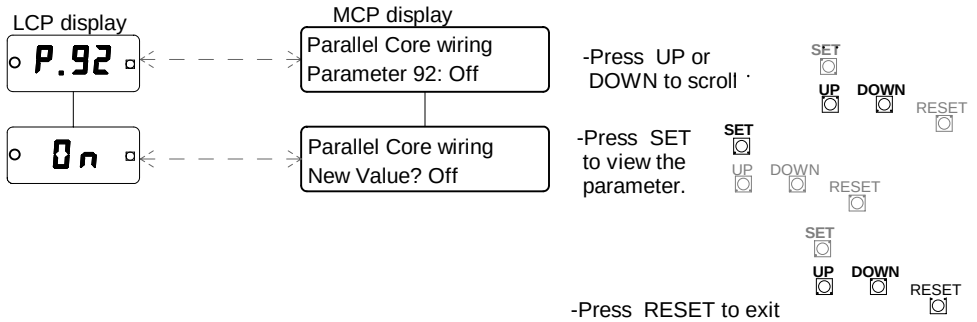
Accessing parameters from the infrared control.

-Press "+" up "-" down
to locate the desired parameter

-Press "?" to view the parameter

-Press **SU** again to exit

Accessing parameters from the main control panel.



Entry Guard slows

93

Default for Entry Guard is stop, on - slow only
Also see P25 Entry Guard offset value

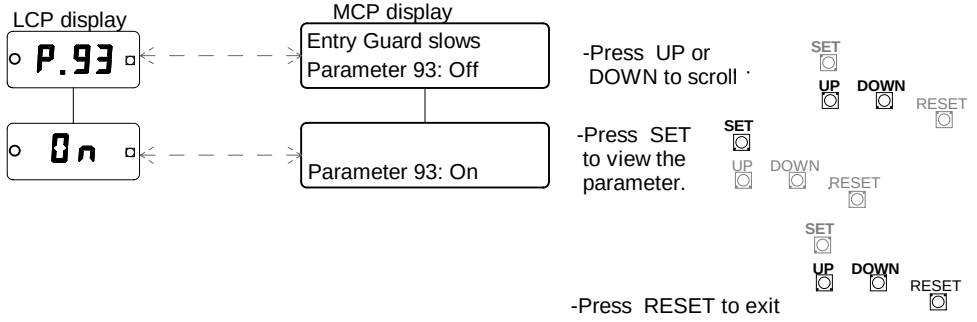
Accessing parameters from the infrared control.

-Press "+" up "-" dow n
to locate the desired parameter

-Press "?" to view the parameter

-Press **SU** again to exit

Accessing parameters from the main control panel.



94 thru 99 are reserved parameters

33. TROUBLE SHOOTING AND ADJUSTMENTS

For Security & automatic revolver MOTOR, BRAKE AND ENCODER

If trouble is found in the C9007-1 use this supplement to locate the specific part and replace only the defective part.
HORTON AUTOMATICS WILL **NO LONGER** SERVICE THE 9007-1 AS A COMPLETE UNIT.

The following tests are conducted using publication H915 (C9150-2/3 setup instructions)

MOTOR TEST for VOLTAGE and CURRENT

Note: See H915.7 to access the diagnostic setup.

Refer to diagnostic 3 of H915.22. The test may be ran using the IR control or the control itself.

When diagnostic 3 is selected the motor should run.
-The voltage should read 60vdc ±10% if parameter 1 is at factory default
-The current should read .50 to1.5

If the current is high- (over 1.5) check the resistance in the motor (500 rpm motor should read 13 to 18 ohms)

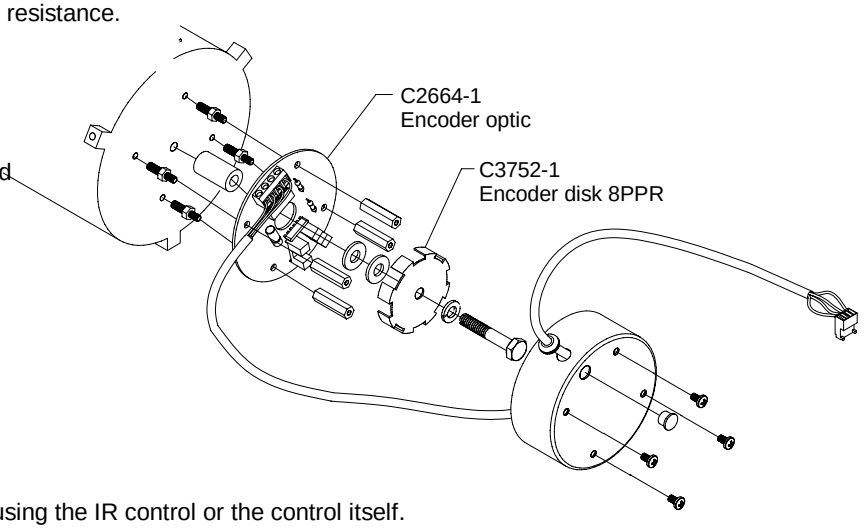
If the current is absent or low- check wiring, connections and resistance.

ENCODER TEST

Refer to diagnostic 6 of H915.23. The test may be ran using the IR control or the control itself.

When diagnostic 6 is selected the encoder count is displayed

If a defective part is found it can be individually replaced.



BRAKE TEST

Refer to diagnostic 4 & 5 of H915.22. The test may be ran using the IR control or the control itself.

If the brake is mechanically engaging there will be an audible click and the door can't be pushed.

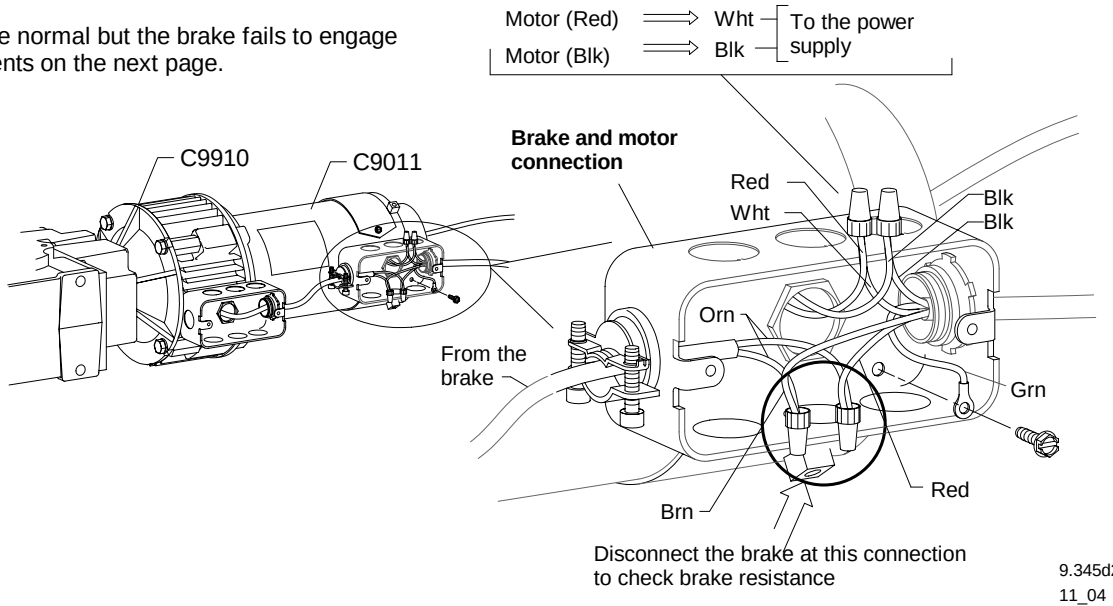
-The voltage should read 100vdc ±10%
-The current should read approx 200ma

If the current is zero or close toit, check the wiring and connections.

If no wiring problems are found - disconnect the brake at the location shown below. **DISCONNECT POWER FOR THIS TEST**

-The resistance range should be 450 ohms ±10%
-If the resistance is zero the coil is shorted and C9910 should be replaced
-If the resistance is infinite the coil is open and C9910 should be replaced

-If the voltage and resistance are normal but the brake fails to engage check the mechanical adjustments on the next page.



34. 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		
5	Reserved	0		21
6	Safety sens - Normal	15	Sensitivity of the door's safety circuit to obstructions	22
7	Safety sens - Reduced	15	Learned during a diagnostic 16 - complete setup	
8	Safety sens - Qpt	15		
9	Safety sens - Reserved	15		
10	Safety sens - Startup	4		
11	Safety stop time delay	35	Measured in 1/10 seconds	22
12	Normal speed delay	50	Measured in 1/10 seconds	23
13	Reduced speed delay	25	Measured in seconds	23
14	Storm switch duration	60	Measured in minutes	23
15	Idle mode time out	35	Measured in 1/10 seconds	24
16	Park-n-lock delay	30	The time the door turns in slow speed and announces before locking in mode 0 (in sec)	
17	Help Switch time out	60	The amount of time after lockup when the door can be re-started by the help switch (in sec) Park-N-	24
18	Reserved	10	Lock	25
19	Reserved	10		25
Thru				
22	Reserved	10		
23	Speed up warning	0	Number of warnings door will when changing from reduced speed to normal speed	
24	Safety stops to idle	1	The number of stops allowed before Idle Mode is active	25
25	Entry Guard Offset 0-30	0	Determines the number of degrees before the wall post where EntryGuard is active	26
26	Reserved	1		
27	Reserved	1		
28	Reserved	0		
29	Reserved	0		
Thru				
37	Reserved	0		26
38	Reserved	0		27
39	Reserved	0		
40	Relay K4 mapping	11	Sets individual relay output signals (Limited selection in this control)	
41	Reserved	0		27
42	Remote mode A	0	Parameter 60 must be turned on - Sets mode with Remote switch open	28
43	Remote mode B	1	Parameter 60 must be turned on - Sets mode with Remote switch closed	
44	Reserved	No		
Thru				
59	Reserved	No		28
60	Remote mode select	Off	When turned on, the door is controlled by the Aux A CN5 input - See parameter 42 & 43	29
61	Push-N-Go	On	Determines whether the door can be manually pushed to start	29
62	Core brake installed	Off	Turn On if brake is installed - Park-N-Lock	29
63	Reserved	Off		30
64	Voice warning-safety stop	On	Resumes talking when an activation signal occurs	
65	Voice warning-reduced speed	On	Turns off "door in slow speed - do not push"	
66	Diagnostic LCP	Off	ON - displays activation and disgnostic information on LCP	
67 Thru	Reserved			
91	Reserved	Off		
92	Safety sensor enable	On	Off - Ignores 6008 card On - looks for sensor signals - 1 stop - 1 slow	30
93	Entry Guard actuation	On	Default for Entry Guard is stop, on - slow only	31
94	Reserved	Off		
95				
96				
97				
98				
99		Off		31

35. 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 VDC supply	Displays low voltage DC value	16
10	Reserved	Reserved for future use	17
11	↕	↕	17
12	↕	↕	17
13	Nudge - move door automatically	To move door, use "down" button on control or reduced speed switch	17
14	Reserved	Reserved for future use	17
15	Learn safety limits	Sets the safety limits by current sensing	17
16	Complete setup	Restores factory default settings to all parameters	18

ERROR CODES

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

LCP display

- 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 **Drive system failure**

DIAGNOSTIC HELP

-JB5 jumper should be in "A" or upper position. "B" for security

-Push "UP" & "DOWN" together at the control to cancel the "IDLE STOP" mode from control

-Toggle between parameters & diagnostics by pressing the "SU" button

-Motor voltage and current is displayed on control LCP for diagnostics

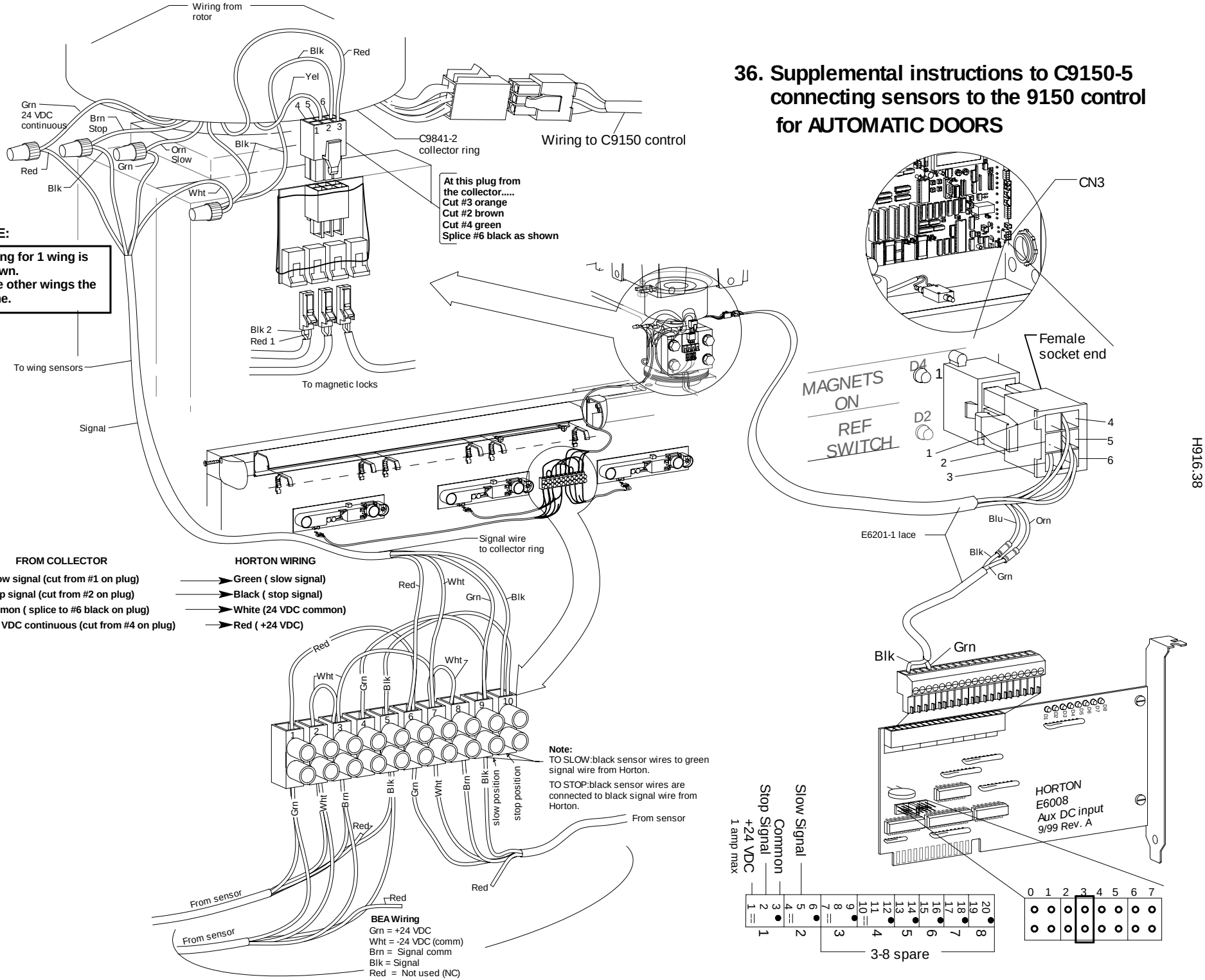
-Device causing a stop is displayed on LCP - nosing, breakout switch, core stop, etc.

-LCP shows "L" when door is in Park mode - mode 0

-Forced into diagnostics - hold "set" & press & release reset

-Forced into parameters - hold "up" & "set" & press & release reset

36. Supplemental instructions to C9150-5 connecting sensors to the 9150 control for AUTOMATIC DOORS



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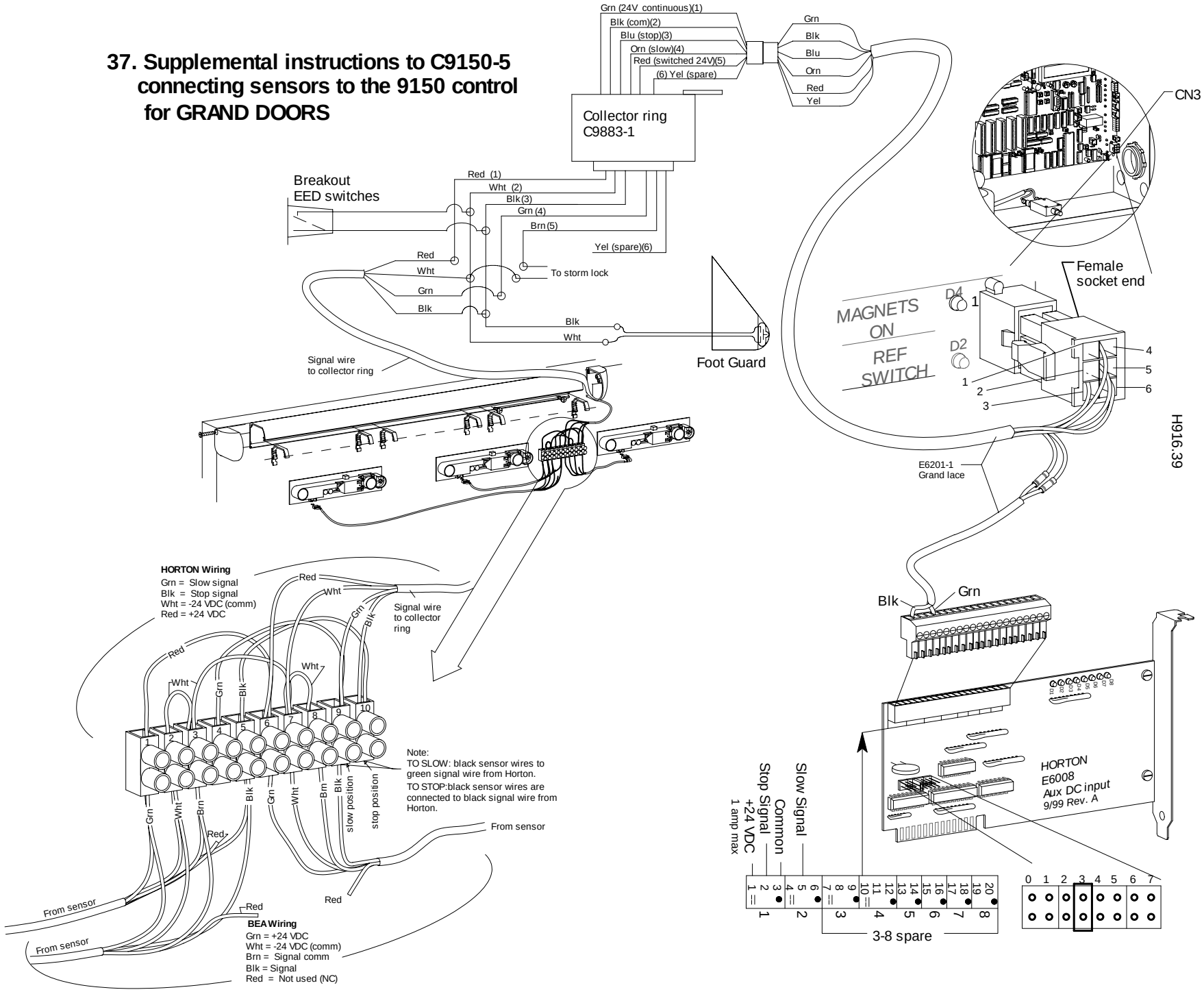
37. Supplemental instructions to C9150-5 connecting sensors to the 9150 control for GRAND DOORS



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