



**GARAGE DOOR
OPENER
INSTALLER
TRAINING**



Improving Home Improvement™



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GENERAL INSTALLATION INFORMATION

IMPORTANT INSTALLATION CONCERNES

- 1.) WILL A RESIDENTIAL OPERATOR WORK THIS TYPE DOOR?
- 2.) IS THE GARAGE READY FOR AN ELECTRIC OPERATOR?
- 3.) IS THERE ENOUGH ROOM ABOVE THE GARAGE DOOR TO INSTALL AN OPERATOR?
- 4.) IS THERE ENOUGH CLEARANCE BEHIND THE DOOR FOR AN OPERATOR?
- 5.) IS THE HEADER READY FOR AN OPERATOR?
- 6.) IS THE DOOR READY FOR AN OPERATOR?
- 7.) DO YOU NEED TO BRING ADDITIONAL HARDWARE TO INSTALL AN OPERATOR?
- 8.) WILL AN ELECTRICIAN NEED TO INSTALL A POWER OUTLET FOR AN OPERATOR?

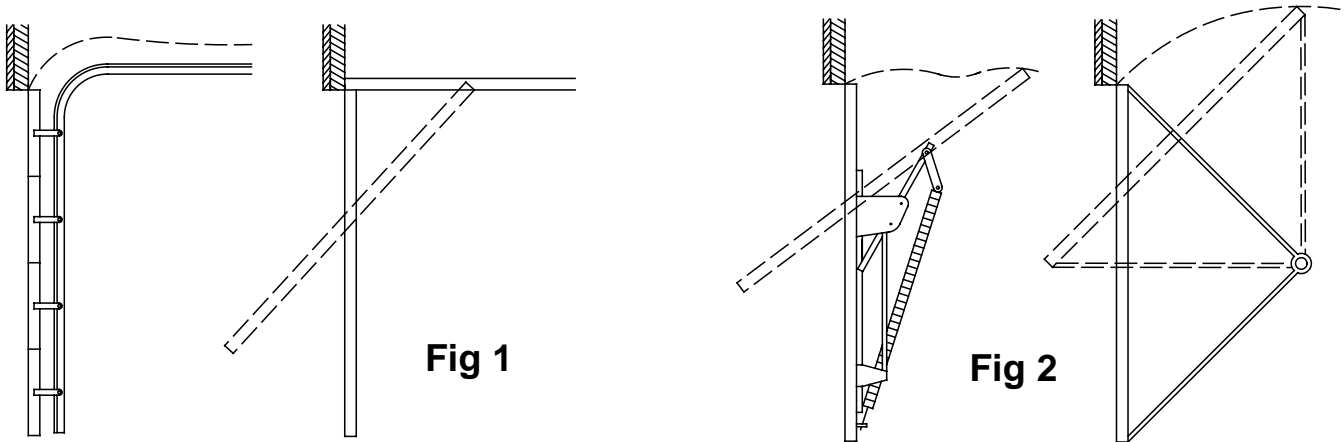
By answering these questions prior to arriving at the installation site, you can save yourself and the customer aggravation and wasted time.

A few points you must consider before you install a garage door operator.

Determine door type

You should first determine what type of garage door you have. All Genie units will operate standard sectional and one-piece track guided (Fig 1) and one-piece (Fig 2) "California" doors. A Genie will not operate swing out (carriage), sliding, or rolling steel type doors.

NOTE: Installation or modification to any Genie residential operator that is not specifically outlined in the owners manual will, not only, void the warranty of the product but could make YOU liable in the case of damage or personal injury!



Determine door condition

To check the condition of the door you must first determine the balance of the door. The door must perform well to assure the proper operation of the electric operator. Installation on a defective door will void the warranty and could damage the operator. If the door fails any of these criteria, the door will require repair by a qualified service professional.

- 1.) Lift the door approximately 3 feet from the floor and let go. The door should lift easily and stay in place or slowly drift back to the closed position. If the door slams to the ground, it will require spring maintenance.
- 2.) Slowly lift the door from the fully closed to the fully open position to check door rollers, hinges, cables, and track for binding, loose and worn hardware. Clean and lubricate the door rollers, hinges and track as necessary.
- 3.) Remove all locking hardware from door. This will prevent damage to the door later.



Door springs and cables can be extremely dangerous. Genie highly recommends that only trained personnel work on doors and door hardware. Contact a local professionally trained garage door installer to facilitate repairs prior to installing the garage door opener. Using a Genie on a damaged door could damage the unit and void the warranty!

How to Measure for the new Genie

Door Height

Most modern garage doors will measure between 7 foot and 8 foot tall.

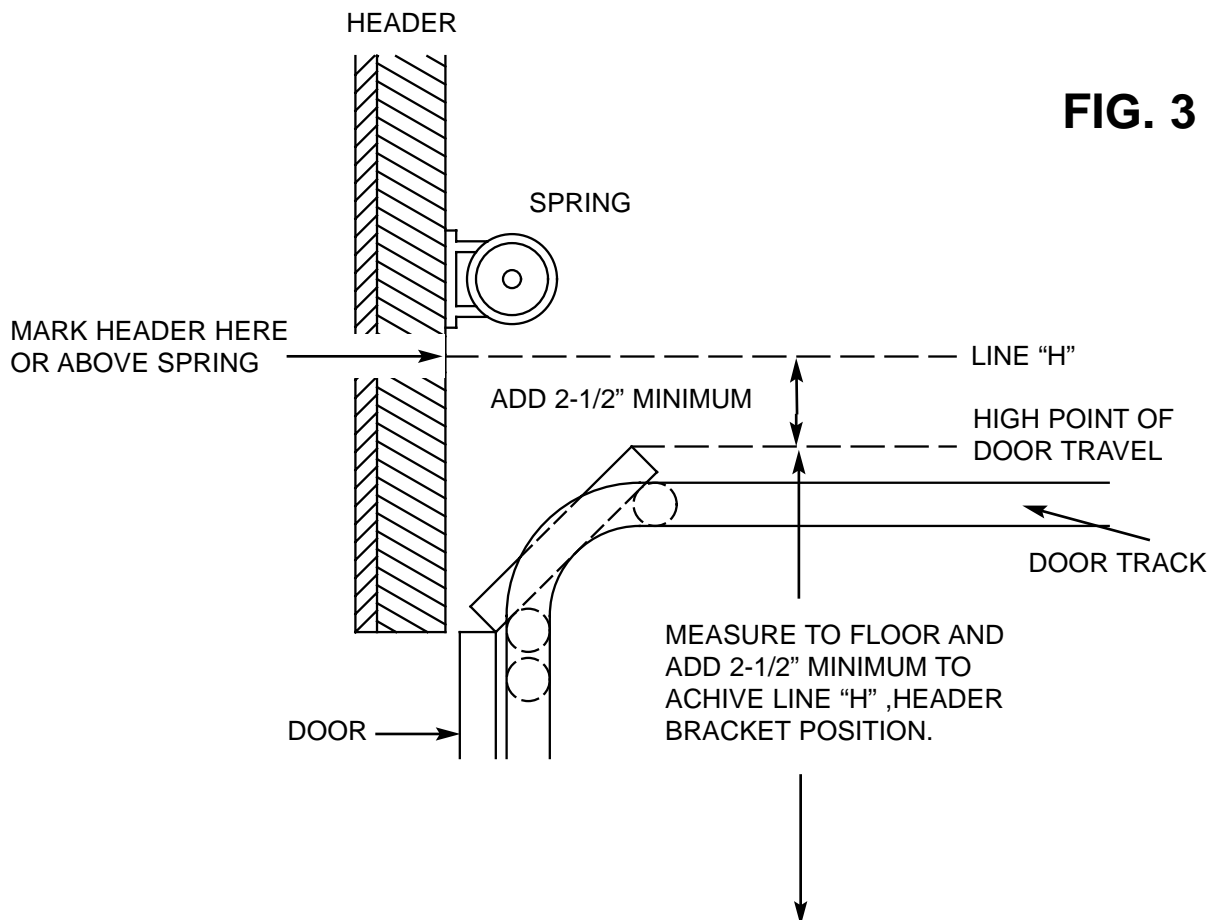
All Genie garage door openers are designed to operate doors up to 7'-6" tall. If the [sectional type] door measures over 7'-6" tall, up to 8' tall, you will need to install the appropriate extension kit for the type unit you are installing. Remember that a screwdrive extension will add 18 inches to the overall length of the unit and a ChainGlide extension will add 12 inches. Only one extension kit can be added to each unit.

If the [sectional] garage door is over 8' tall and up to 12' tall, you will need to use a Genie Pro GPS (belt), PMX (chain) or Pro Excelsator (screw) model unit available only at your local Genie Pro dealers due to the long one piece rails.

Door Clearance

Open the door so that the top section is in the curved radius (See Fig 3). Measure the headroom above the highest point of door travel to the ceiling. If you have 3" or more, you can proceed with the installation of any Genie unit.

If you do not have the required headroom to install a Genie unit you can, in many cases, install quick turn brackets or low headroom door track. You will need to contact a local professional garage door installer for more information on the best system that would work with this particular situation.



How to Measure for the new Genie (cont.)

Backspace concerns

Now you will need to make sure that you have enough backspace to install a Genie. See fig 4 for each models overall length. If you have an obstruction in the path of the unit you can, in most cases, cut the unit down to fit.

The best Genie unit for this type situation is the standard IS series AC screwdrive as they are the shortest units we produce.

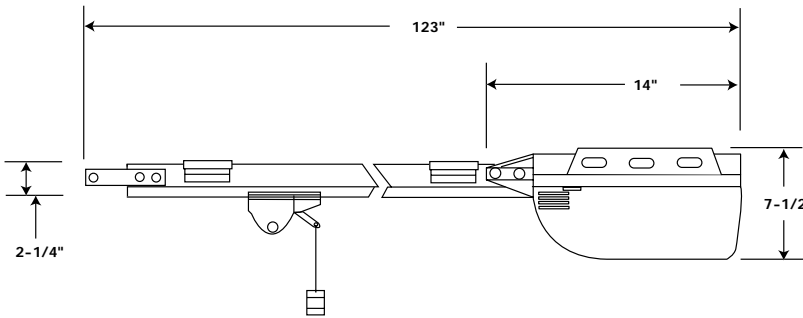
For screwdrive units, you can cut the rail down at the header end and re-drill the rail strap holes to help in a restrictive back spacing situation.

For ChainGlide units, you can cut the rail down at the motor end and insert the rail into the head and re-drill the mounting holes to help in a restrictive back spacing situation.

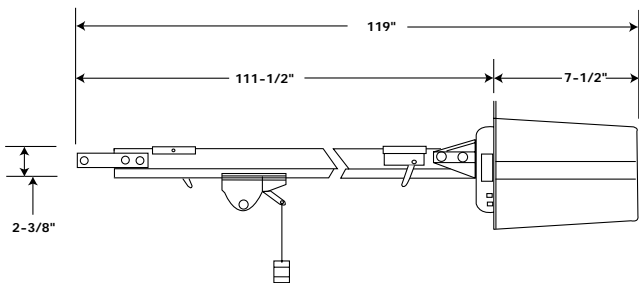
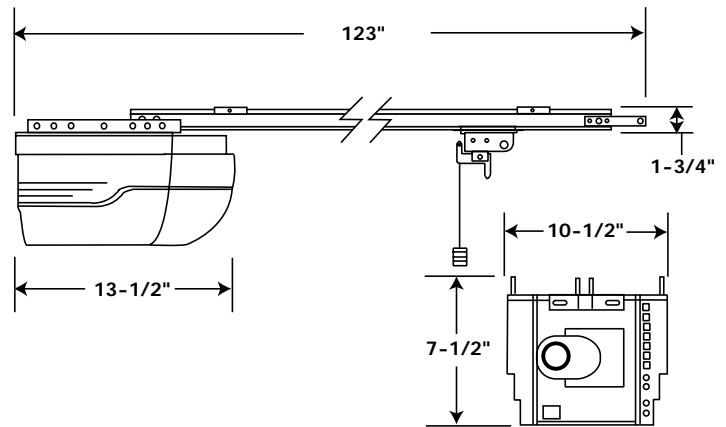
Remember that all Genie retail units are designed to fully open a 7'6" door. If you have a standard 7' tall door you can cut as much as 6" from the rail and not lose any amount of door travel. That is, if the unit is mounted in a standard configuration. High headroom mounting (over 3" above highest point of door travel) will effect up door travel due to the extended length of the door arms.

FIG 4

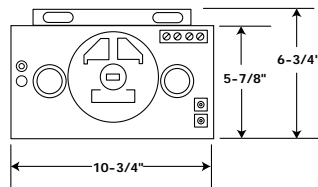
EXCELERATOR (ISD SERIES)



CHAINGLIDE (GCG SERIES)



AC SCREWDRIVE (IS/ISL/IMS SERIES)



Mounting requirements

Header Material (Fig 5)

The header should be built from a 2 x 6 or other sturdy building material and firmly fastened to the door frame and be free of any flex or bow. If the garage walls are covered (dry-walled), you must make sure that a suitable header is fastened behind the wall. You should consult a framing contractor to insure that the header will support the load of the garage door opener and door.

Back Hangs

All Genie units are supplied with powerhead mounting straps for standard installations. (check fig 4 to see where your powerhead will mount).

If you require extra material for the powerhead mounting, you can use 2 x 4 's or perforated angle to brace between rafter joist. (see fig 6 for samples)

FIG 5

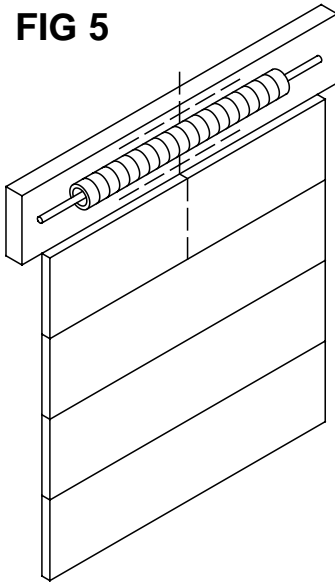
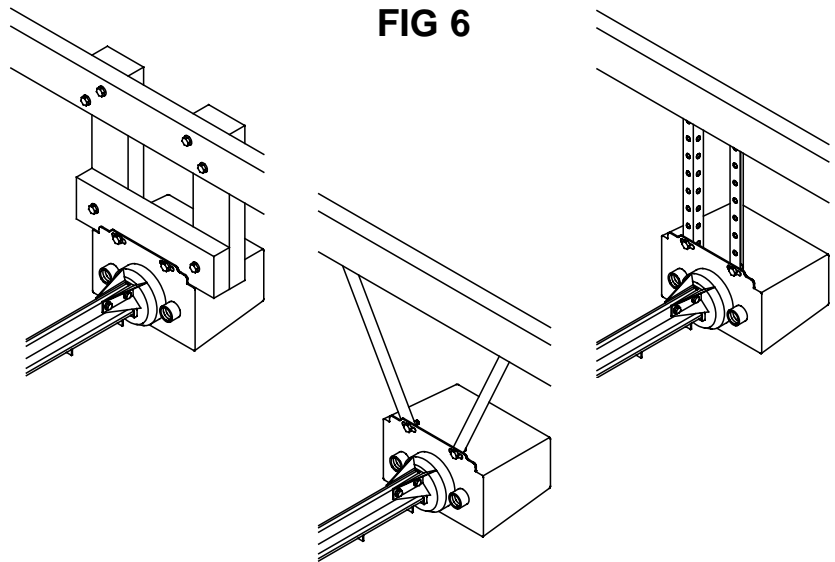


FIG 6



Door Bracing

Most all standard garage doors will require some form of bracing to install the door bracket and to support the top section of the door. If the door is not properly braced, damage could occur. You will need to contact the manufacturer of the door for proper operator bracing parts and instructions. Installation of the door bracket will be made depending on the type and manufacturer of door and material of the door. See operator instructions for details.

Power supply

You will need to insure that a safe, grounded source of 110 VAC is supplied within 3 feet of the powerhead (see fig 4 for powerhead location)

Photocells mounts

The photocell brackets require a mounting surface such as the door frame or wall. Top of lens must be mounted 5" to 6" above the floor, just inside the door opening. Adapter brackets are available for non-typical installations.

NOTE: Modifications to the photocells or photocell mounting points will, not only, void the warranty of the product but could make YOU liable in the case of damage or personal injury!

INSTALLATION ASSEMBLY PROCEDURES

You should fully read and understand all installation instructions prior to assembly of the unit.

- First, do an inventory to insure that all parts are in the carton.
- Pay particular attention to all cautions and warnings outlined in the owners manual.
- Mark top of door center and draw this line straight up the door and header. (line C)
- Establish highest point of door travel, add 2-1/2 and mark across line C to find header bracket mounting point (line H). If torsion spring is in the way, place line H just above spring.
- Install header bracket.
- Assemble rail (fasteners finger tight)

NOTE: Remember that the correct installation of the clips & collars on the screwdrive units are critical to the performance of the unit.

- Assemble rail to powerhead.
- Install limit switches making sure that they are mounted on the correct side of rail in proper direction.
- Mount operator to header bracket and support powerhead on ladder.
- Determine position and method of back hangs. Insuring that rail and powerhead stay centered with line C marked on door.
- Mount powerhead.
- Tighten all fasteners.
- Install all wiring, photocells & wall control. *Note: only one series II or lighted wall control can be installed on these units. Additional wall controls MUST be dry contract non lighted buttons.*

Proper installation of the wiring is critical to the operation of the unit. Care must be taken to insure that the wire is not damaged durring installation of the staples.

- Install all warning & caution tags & decals
- Check over installation making sure you have installed all fasteners required and insure they are firmly attached.



OPERATIONAL CHECKLIST

- CHECK HARDWARE
- MANUALLY TEST DOOR
- POWER THE UNIT
- CHECK FOR STB LIGHTS
- ENGAGE CARRIAGE
- PROGRAM A REMOTE CONTROL
- SET MINIMUM FORCE
- FINE ADJUST LIMITS
- TEST CONTACT REVERSING SYSTEM
- TEST STB OPERATION
- SET & PROGRAM ALL REMAINING ACCESSORIES
- TEST WALL CONTROL
- PLACE DECALS
- REVIEW MANUAL WITH HOMEOWNER

COMPLETING AND TESTING THE INSTALLATION

Check to be sure that the operator is secure. Look to see that all the bolts, nuts, screws, clips / collars, and cotter pins are installed properly. Rail clamps, rail straps, rail to powerhead, door arms, header bracket, support brackets, and door “bracing kit” if used.

Check the door by moving it manually. Before engaging the carriage manually move the door open and close. The bottom section of the door should be fairly level while in motion, (no wobble). The door section joints should not bind. Hinges should be secure to the door. The track should be secure to walls and ceiling joists, and the rollers should roll not slide in the track. Make sure the door does not hit the rail of the operator or the limit arms. The rail should be level, and perpendicular to the door.

Check the “Safe-T-Beam” non-contact reverse. The Safe-T-Beam system must be installed to the garage door operator in order to close the door. Safe-T-Beam sensor (Receiver/Green LED) (LED: Light Emitting Diode) should always be on the shady side whenever possible. The source (Transmitter/Red LED) and the sensor under normal operation should be constantly on. When the infrared beam is obstructed the Red LED should flash twice then pause then repeat. The garage door will stop and reverse to the full open position. Refer to the owner’s manual for LED Diagnostic Code. The only way to override the STB’s is to hold constant pressure on the wall control. Insure that top of STB lenses are between 5 and 6 inches above the floor.

Programming the receiver. The receiver antenna should be uncoiled and hanging out of the powerhead. Press and release the receiver learn code button on the motorhead. The receiver indicator will flash approximately two times per second. Press the remote button once. The remote’s code is sent to the receiver. The receiver indicator goes solid. The receiver has recognized the code. Press the remote button once again to confirm the code. The receiver indicator goes out. The remote’s code is stored and the receiver is ready to operate the system.

Check the contact reverse. Locate the force adjustment knobs. Turning the open and close force control knobs clockwise will increase the amount of force the motor will put on the door. Turning them counterclockwise will decrease the amount of force. The adjustment should be set so the door will operate complete open and close cycles under it’s own power while still being able to reverse itself from a 2x4 placed flat on the floor in the middle of the door. The contact reverse automatically opens a closing door within 2 seconds of contact with an object.

Check limit switches. The open limit switch when activated by the carriage should stop the door in the fully open position. The close limit switch when activated by the carriage should stop the door in the fully closed position. The limit wires should be clear of moving parts and should not be pinched when

placed on top of the rail. Make sure carriage isn't passing open limit switch and crashing into the powerhead. Make sure close limit is being activated so the door does not reverse off of the floor.

Check wall control. Push-button or deluxe wall console should be out of reach of children (at least 5 feet from the floor) and away from all moving parts. Check to see that you can clearly see the moving garage door from the wall control mounting location. If you have a lighted wall control, all your additional controls must be un-lighted and do not have to be Series II (operators 1996 to present). More than one lighted wall control per operator will cause a malfunction. Any Series II operator that has a lighted wall control must be a Series II wall control. The wall control will say Series II on its circuit board.

Check wall control functions. Wall control should be lit. Wall control should control door operator. Independent light control should allow manual control of the lighting system. The vacation lock switch should disable all controls once the close limit switch is closed.

Check lighting system. The operator's incandescent light(s) should turn on when the operator is activated and automatically turns off 5 minutes later. Check for the correct wattage for the operator stated in the owner's manual.

Check the "entrapment" warning label location. The label must be on wall near wall control.

Check the carriage for attachment of emergency release tag, cord, and knob. Make sure emergency release knob is 6 feet above floor.

Check to see if the garage has a separate entry door. If the garage does not have a separate entry door then installing an emergency release kit should be considered.

Remember to leave the operator manual with the homeowner.

Refer to the Frequently Asked Questions if you encounter irregular situations with your operator.

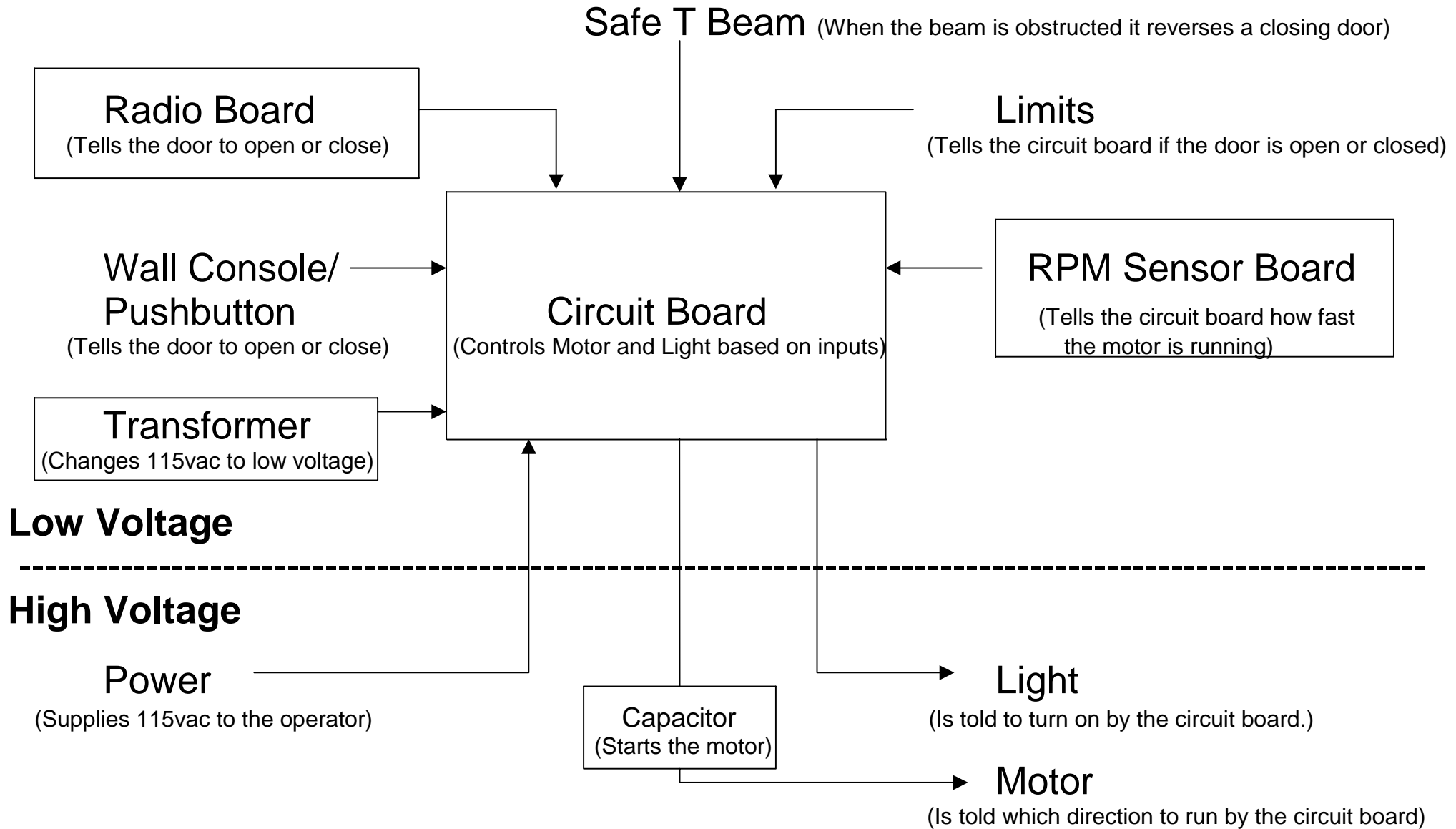
Troubleshooting Practices

The following is a procedure to follow every time you perform a service call.

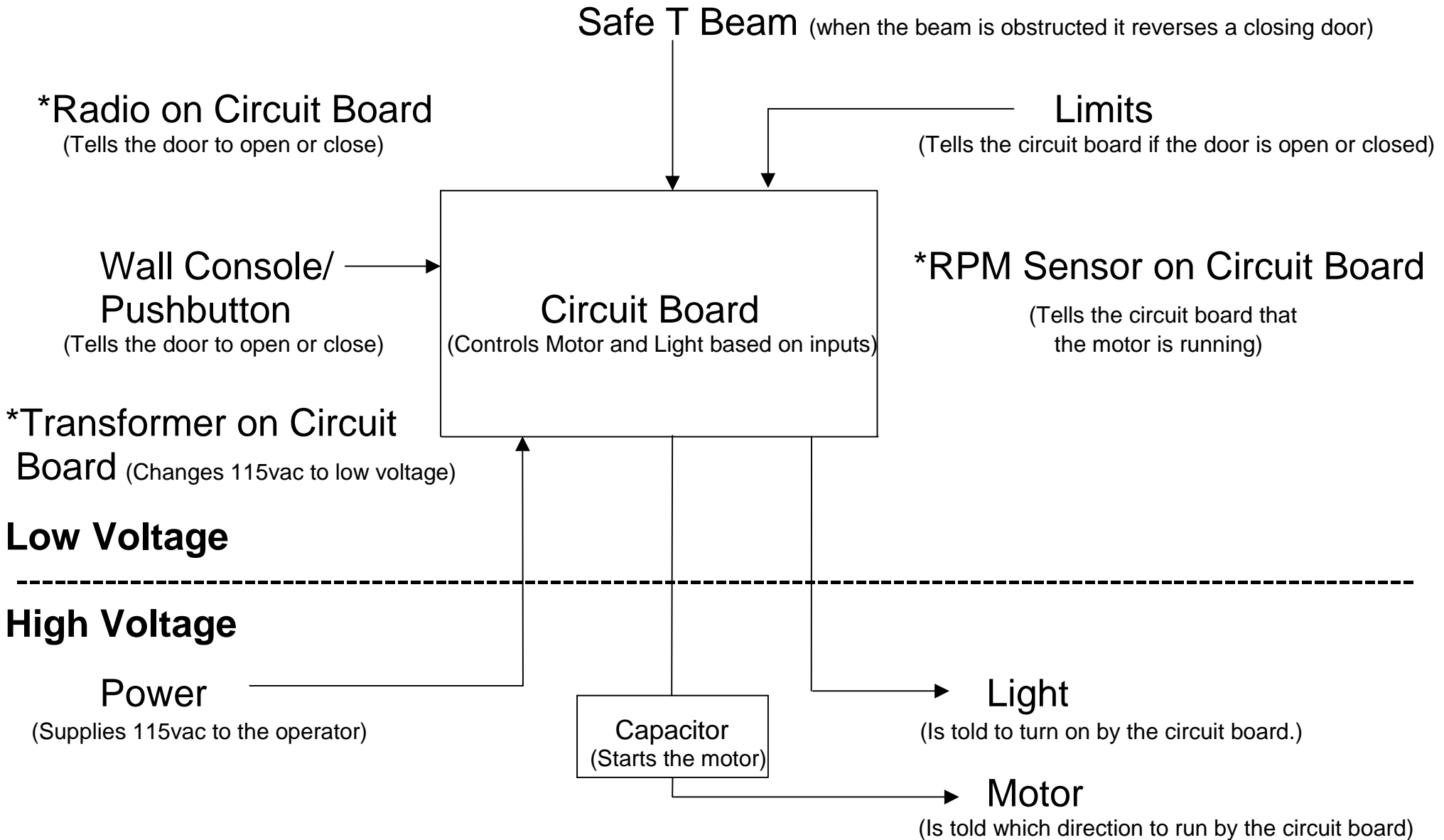
- Visually inspect the door prior to attempting to run the operator.
 - Look at all cables, springs and rollers.
 - Pull the release and manually operate the door.
- Visually inspect the operator/photocells for damage/broken wires.
- Look for lights on the photocells/wall console to be on.
- Press the wall console/pushbutton and remote (if available)
- If the operator will run open verify it will stop on the limit.
- If the operator will run close verify it will stop on the limit.
- If the operator will run close verify it will reverse if the photocell beam is obstructed.
- If the operator will run close verify it will reverse off a 1-1/2 " obstruction (2X4 laid flat).

*** This is a general troubleshooting guideline for residential operators. By completing the above list of checks in order and verifying what does work, you will establish a baseline of information that will eliminate unnecessary component changes.

IS Series Operators Components and Functions



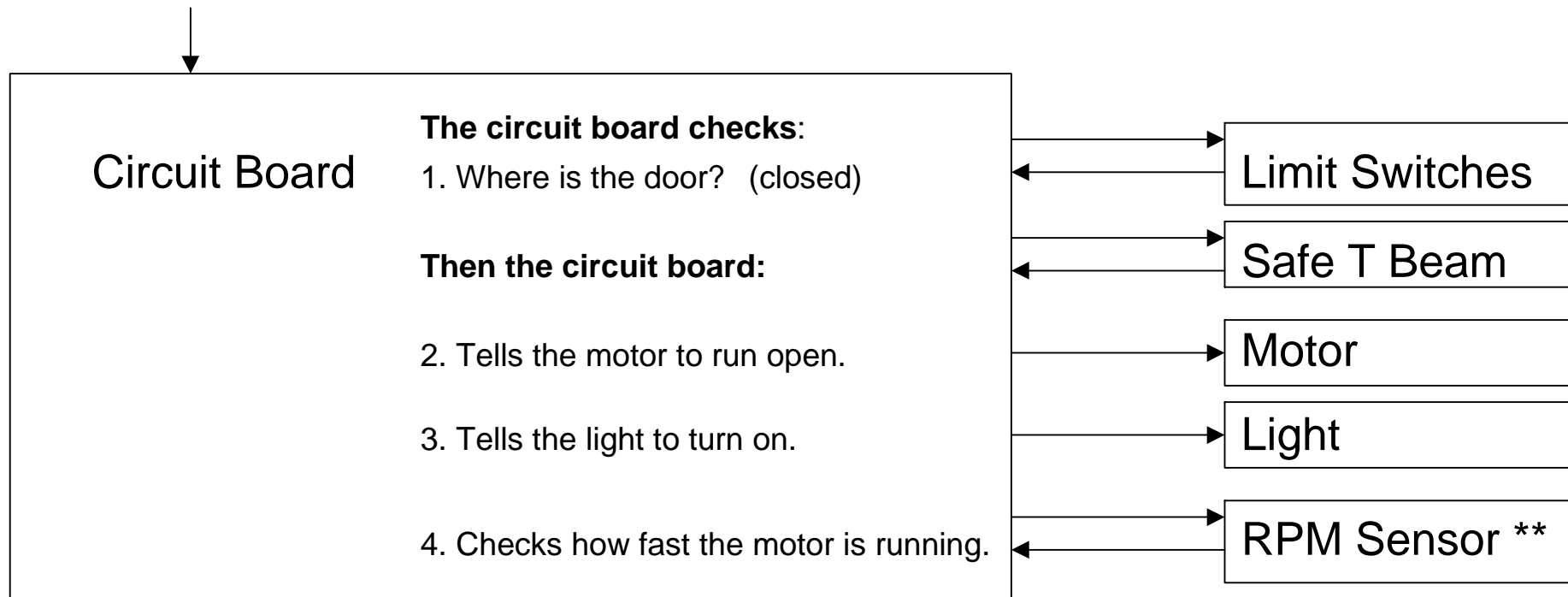
Chain Glide Series Operators



IS Series / ChainGlide Operator Theory of Operation

Sequence for Opening the Door (Door closed)

Wall Console or Pushbutton/Radio (sends a command to the circuit board)



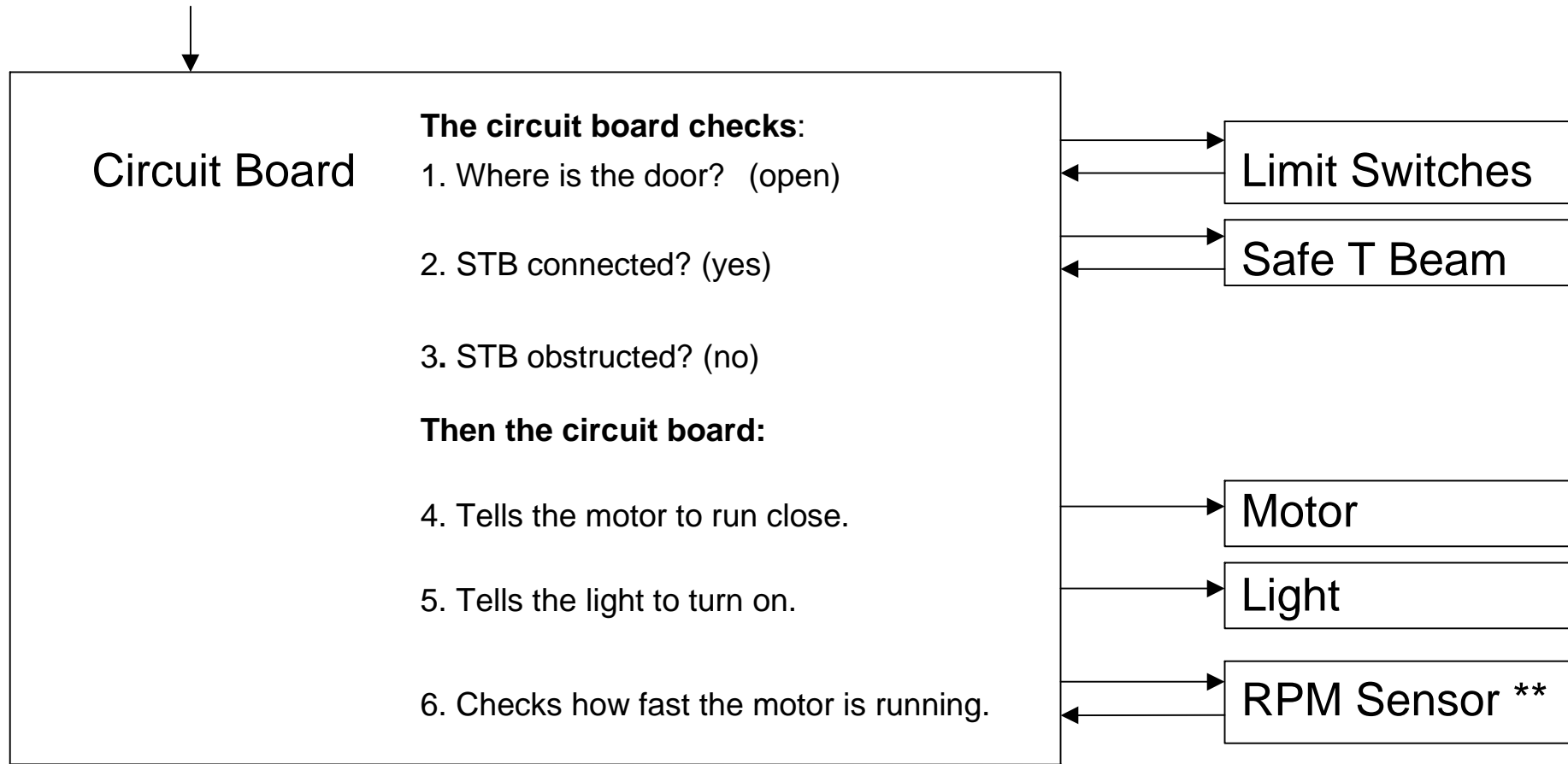
** RPM Sensor located on the circuit board for ChainGlide Models.

The motor will run until the open limit switch is activated or another input is received.

IS Series / ChainGlide Operator Theory of Operation

Sequence for Closing the Door (Door open)

Wall Console or Pushbutton/Radio (sends a command to the circuit board)

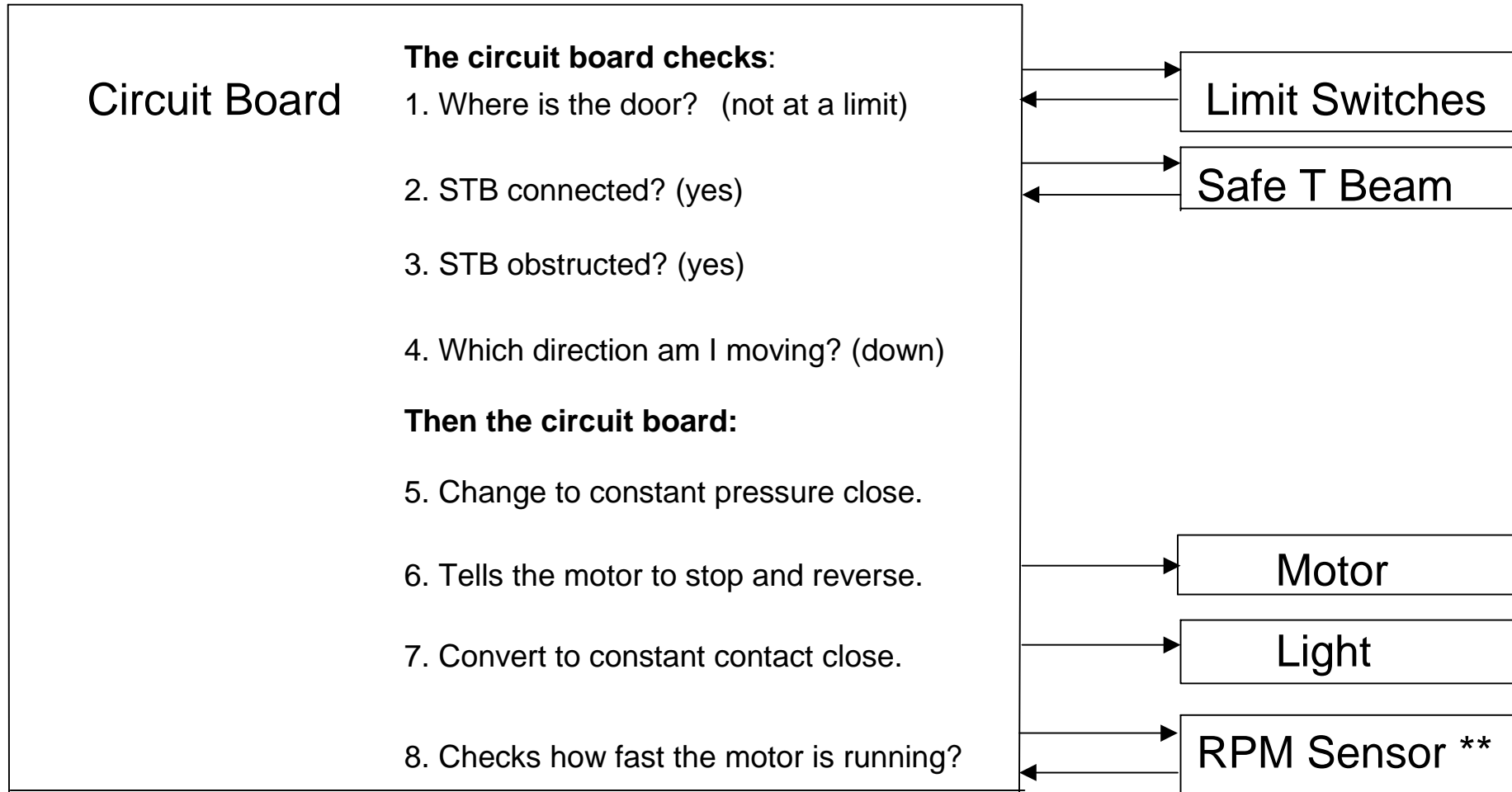


** RPM Sensor located on the circuit board for ChainGlide Models.

The motor will run until the close limit switch is activated or another input is received.

IS Series / ChainGlide Operator Theory of Operation

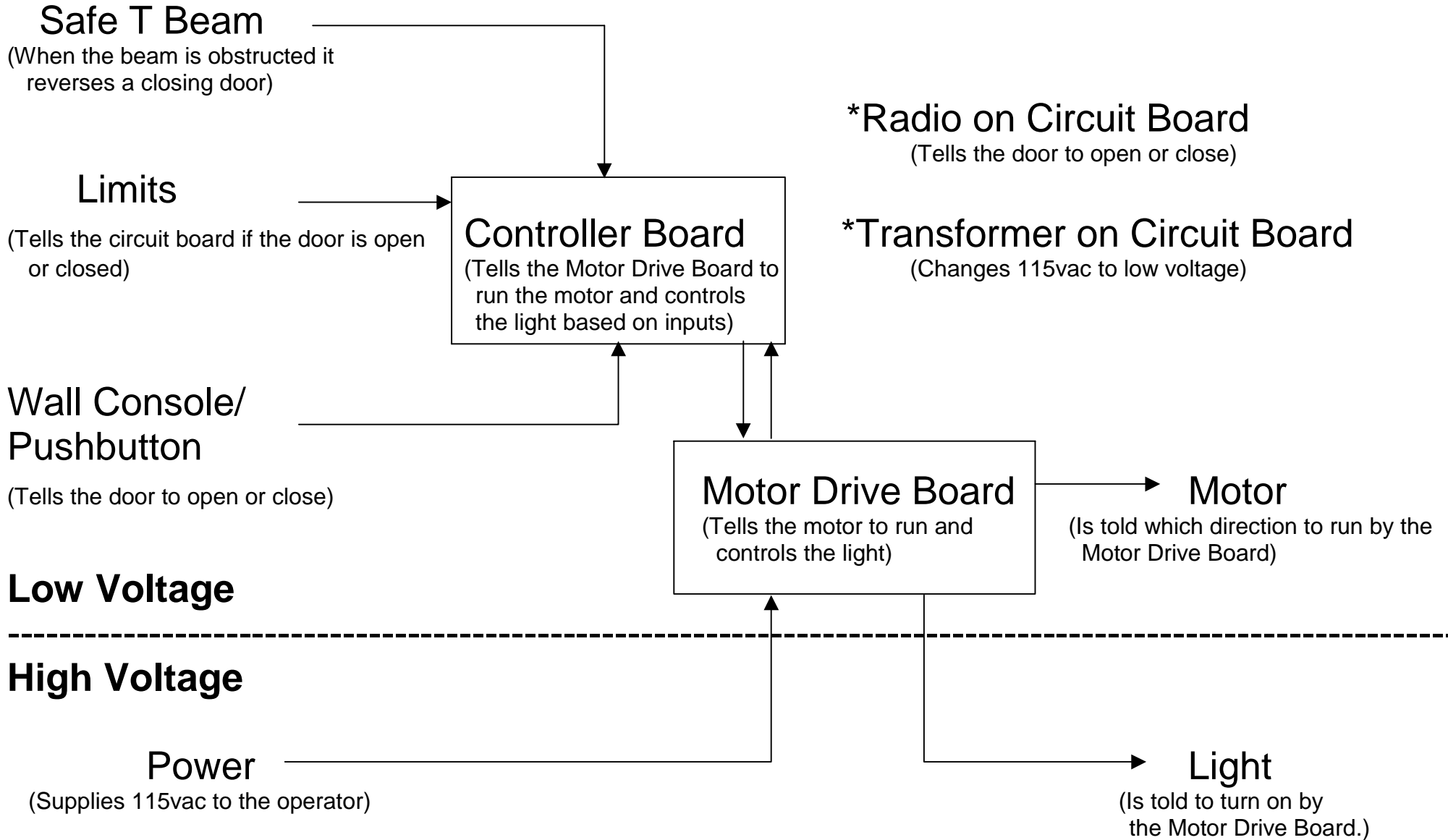
Sequence for Reversing the Door (Door in between limits moving down)



** RPM Sensor located on the circuit board for ChainGlide Models.

The motor will run until the open limit switch is activated or another input is received.

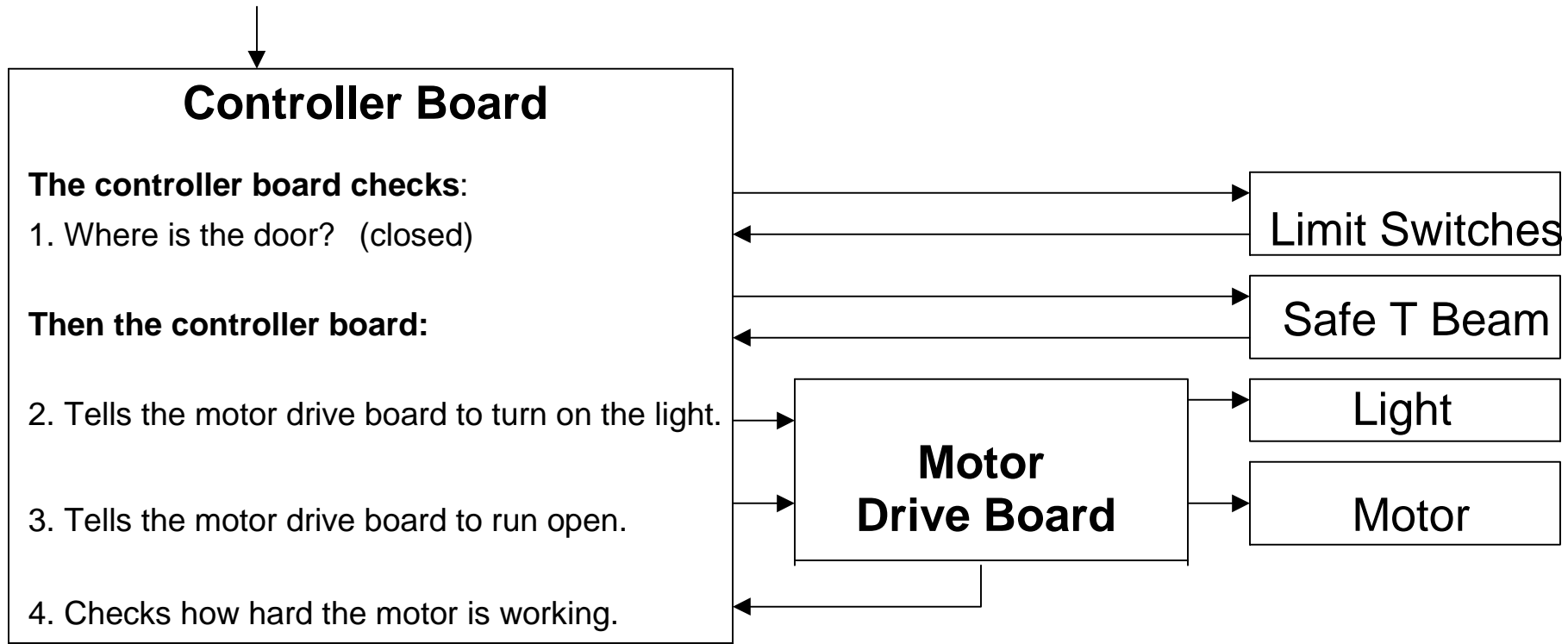
Excelerator Operator



Excelerator Operator Theory of Operation

Sequence for Opening the Door (Door closed)

Wall Console or Pushbutton/Radio (sends a command to the controller board)

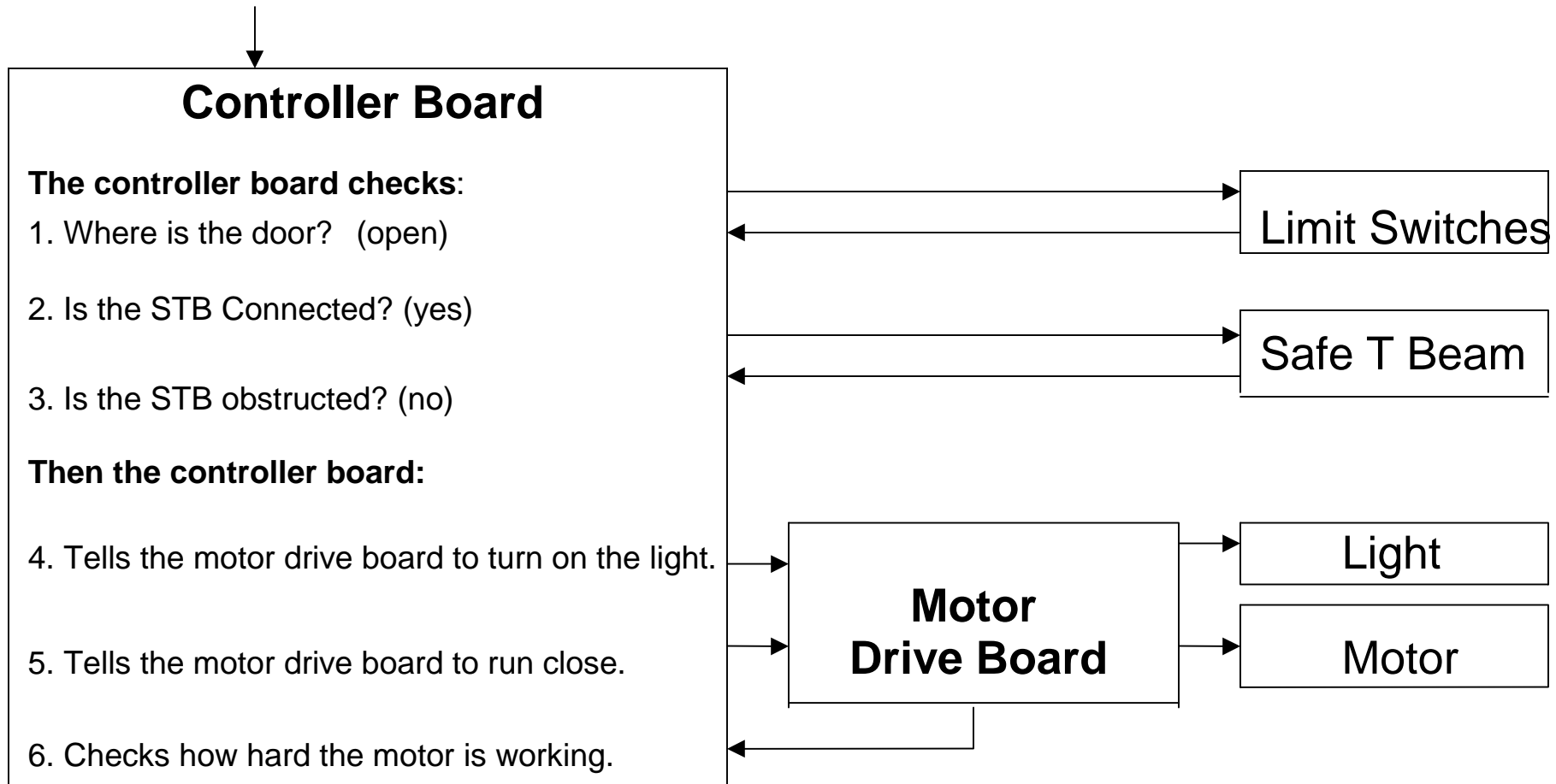


The motor will run until the open limit switch is activated or another input is received.

Excelerator Operator Theory of Operation

Sequence for Closing the Door (Door open)

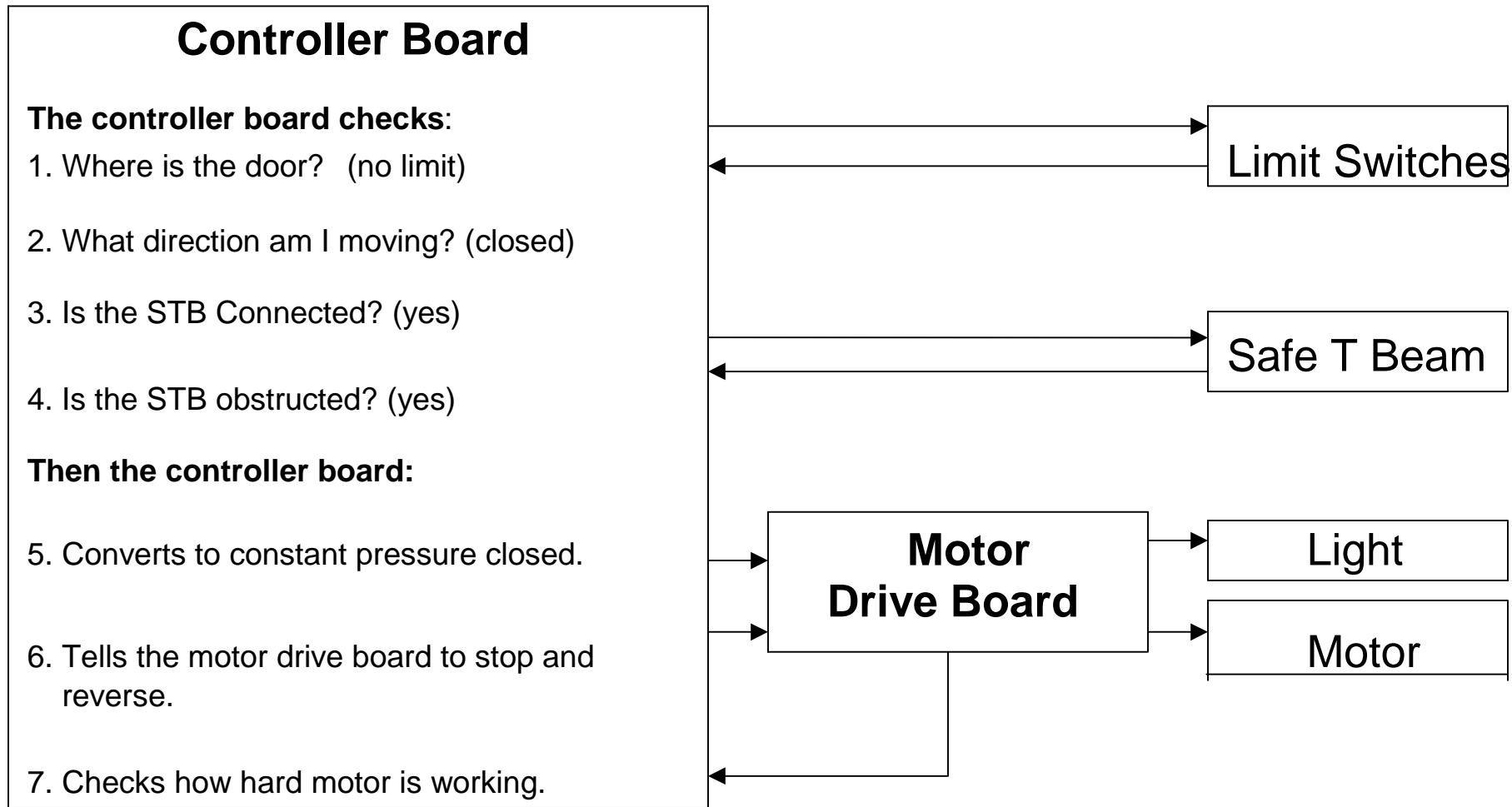
Wall Console or Pushbutton/Radio (sends a command to the controller board)



The motor will run until the close limit switch is activated or another input is received.

Excelsator Operator Theory of Operation

Sequence for Reversing the Door (Door in between limits moving closed)



The motor will run until the open limit switch is activated or another input is received.

EXCELERATOR TROUBLESHOOTING

WHAT IF THE OPENER CLOSES WITH CONSTANT PRESSURE ON THE CONSOLE OR PUSHBUTTON

CHECK STB- BOTH THE RED AND GREEN MUST BE SOLID FOR THE DOOR TO CLOSE

2 BLINKS AND A PAUSE—CHECK ALIGNMENT, CLEAN LENS, REPLACE GREEN STB OR WIRE TO GREEN STB

3 BLINKS AND A PAUSE-CHECK FOR INTERFERENCE. USUALLY CAUSED BY AN OPENER ON THE OPPOSITE DOOR. RED OR GREEN STB SHOULD BE BACK TO BACK WHEN THERE'S 2 DOORS

4 BLINKS AND A PAUSE- REPLACE RED STB

THE GREEN STB SHOULD ALWAYS BE PLACED ON THE SIDE OF THE DOOR WITH THE LEAST AMOUNT OF SUNLIGHT

WHAT IF THE OPENER WILL NOT OPERATE BY WALL BUTTON OR REMOTE- (STB IS LIT)

CHECK POSITION OF VACATION LOCK ON WALL CONSOLE

REMOVE LENS COVER AND CHECK STATUS LIGHT-LED SHOULD BE BLINKING 1 TO 8 TIMES TO DIAGNOS PROBLEM AREA

IF STATUS LIGHT IS NOT BLINKING UNPLUG OPENER, REMOVE COVER, CHECK WIRING HARNESS AND RIBBON CABLE CONNECTION CHECK FUSE ON MOTOR DRIVE BOARD. IF PROBLEM REMAINS REPLACE THE CONTROLLER AND DRIVE BOARD.

WHAT IF THE OPENER IS RUNNING THROUGH BOTH LIMITS

CHECK LIMIT WIRING. THE BROWN WIRE FROM THE DOWN LIMIT CONNECTS TO SCREWS 5&6. THE WHITE WIRE FROM THE UP LIMIT CONNECTS TO SCREWS 4&5.

BOTH LIMITS HANG FROM RIGHT SIDE OF THE RAIL VIEWING IN FROM THE OUTSIDE. CHECK CARRIAGE FOR MAGNET. THE ARROW ON THE CARRIAGE MUST BE POINTING TOWARDS THE DOOR. IF PROBLEM REMAINS SEND CONTROLLER BOARD.

WHAT IF THE OPENER SPEED (FAST/SLOW)

ANYTIME THE OPENER IS UNPLUGGED IT WILL NEED TO RE-LEARN THE DISTANCE BETWEEN THE UP AND DOWN LIMIT AND DURING THIS TIME IT WILL RUN SLOW. (2 CYCLES)

LIMITS THAT ARE LESS THAN 6 FEET APART (USUALLY 1 PC DOORS) WILL NOT ALLOW THE OPENER TO RUN IN THE FAST MODE.

WHAT IF THERE'S NO DISTANCE FROM REMOTE(S)

THE AVERAGE OPERATING DISTANCE SHOULD BE 25 FEET. THE ANTENNA SHOULD BE HANGING OUT THE BACK OF THE OPERATOR.

OLDER OPENERS, RV'S , CABLE BOOSTERS, ALARMS, APPLIANCES ON THE SAME CIRCUIT CAN CREATE INTERFERENCE. TRY TO ELIMINATE THESE ITEMS IF POSSIBLE.

THERE IS A COAX ANTENNA AVAILABLE . THE CONTROLLER BOARD MUST BE CHANGED AND THEN THE CO-AX ANTENNA ADDED. THIS SHOULD HELP WITH MOST DISTANCE ISSUES. THE PART NUMBER 34019T.S/ THE COAX IS 108035.0007.S

EXCELERATOR TROUBLESHOOTING

CONT'D

CIRCUIT BOARD STATUS LIGHT SELF DIAGNOSTICS

1 BLINK RESET OPERATOR-UNPLUG AND WAIT 5 SECONDS. PLUG OPERATOR BACK IN AND OPERATE FROM WALL CONTROL

CHECK RIBBION HARNESS ON CONTROLER BOARD

REPLACE OLD WALL BUTTON WIRES AND/OR REPLACE WALL BUTTON WITH NEW SERIES II WALL BUTTON

IF NORMAL OPERATION IS RESTORED, CHECK DOOR CONDITION AND BALANCE (THIS CAN CAUSE A 1 BLINK)

REPLACE CONTROLLER BOARD

IF NORMAL OPERATION IS NOT RESTORED, CHANGE CONTROLLER BOARD

2 BLINK CONTROLLER BOARD FAILURE

3 BLINK OVERCYCLED (WAIT 10 MINUTES) MUST LEAVE UNIT PLUGED IN! CYCLES ARE RESTORED AT A RATE OF 5 CYCLES PER 10 MINUTES

4 BLINK FORCE SETTING
FORCE SETTINGS ARE NOT PRESET AT FACTORY
CHECK DOOR AND RAIL CONDITION

5 BLINK STB/PHOTOCELL PROBLEM
CHECK PHOTOCELL SELF DIAGNOSTIC CHART

6 BLINK SHORTED CONSOLE OR PUSHBUTTON
CHECK WIRING TO WALL CONSOLE/PUSHBUTTON
BAD CONSOLE

7 BLINK LIMIT SWITCHES (ONE OR BOTH) GROUNDED
CHECK FOR SHORTED OR PINCHED WIRES
UNDER LIMIT BRACKET

8 BLINK VACATION LOCK SWITCH ON WALL CONTROL IS IN THE LOCK POSTION.