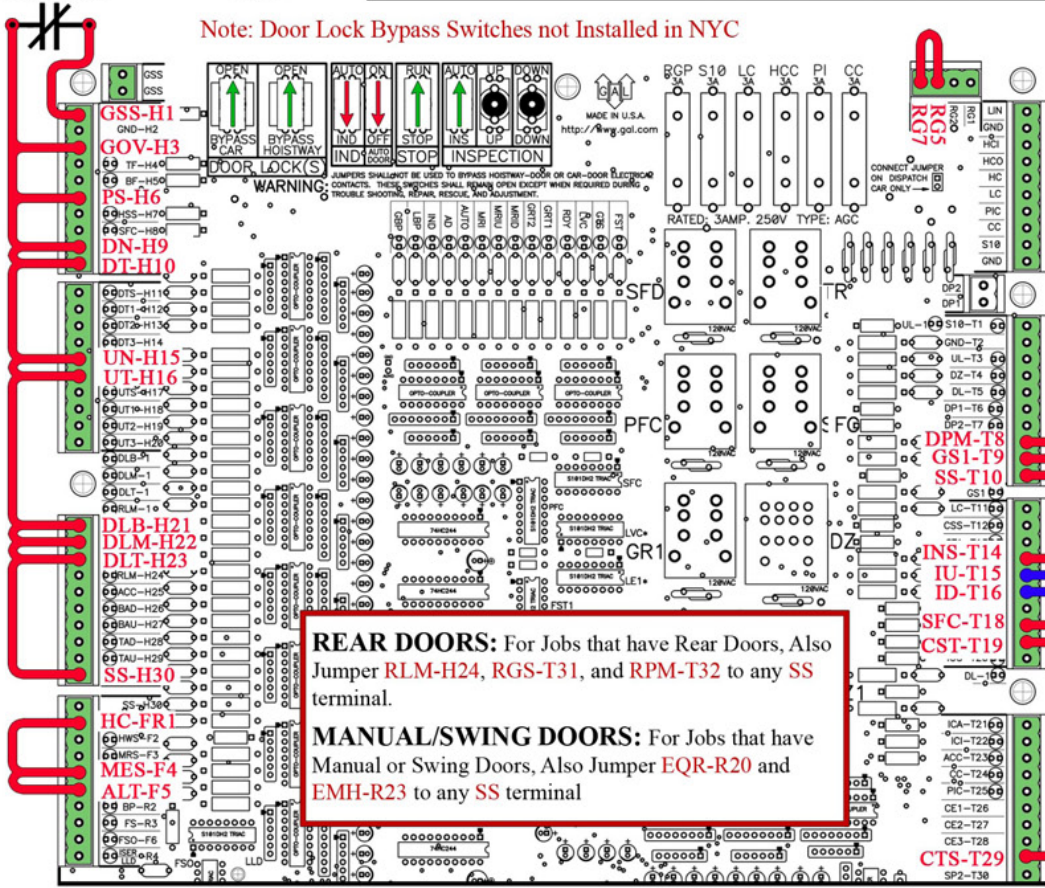




# Quick Start-up Guide for GALaxy Controller HPV-600/900 with Distance Feedback

Note: Door Lock Bypass Switches not Installed in NYC

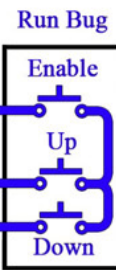
GOVERNOR CONTACT



## To Get a Running Platform:

**WARNING:** Jumping inputs high can be dangerous because important safety circuits will not function. Inputs should only be jumped for the purpose of running the car on inspection during initial start-up.

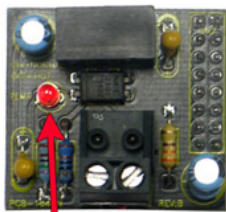
Remove all jumpers before placing a car in service.



1. Wire Motor and Main Line Power as shown in Diagrams.
2. Install and Wire Governor.

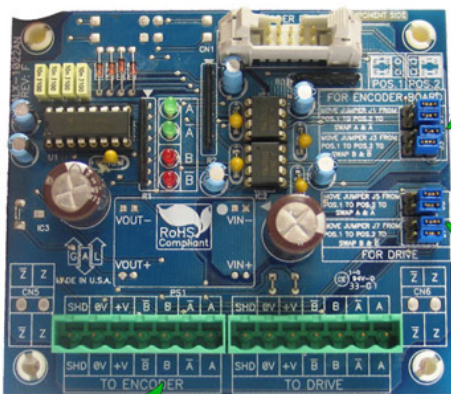
3. Add Jumpers and Set Switches on main I/O board GALX-1038 as shown in Figure 1.
4. Wire the DBR Temperature Sensor to the Temperature Sensor Board (Figure 2) located on the CPU.

Figure 1



On to Run

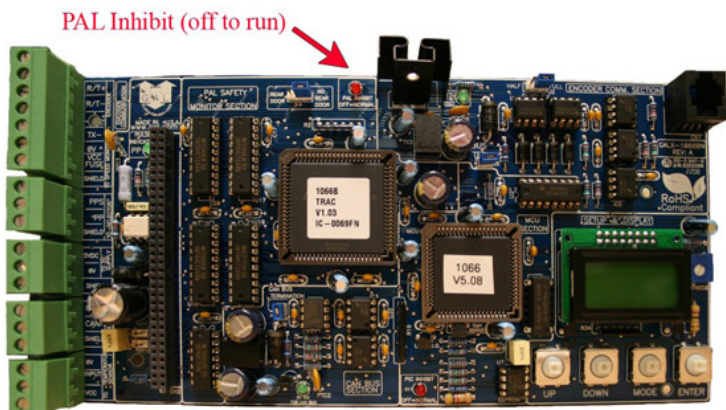
Figure 2



Jumpers for encoder quadrature from Motor to Controller CPU

Jumpers for encoder quadrature from Motor to Drive

Figure 3



PAL Inhibit (off to run)

Figure 4

PIC Inhibit (off to run)

5. Check/Set Parameters in Drive. -see Drive Settings page of this guide
6. Wire Encoder to Encoder Isolation Board (Figure 3) and Check Encoder PPR. -Double Check PPR and RPM settings on Drive from step 5. -Set PPR and RPM on Controller (Large LCD) under: Adjustable Variables >> Car Motion >> Encoder PPR Adjustable Variables >> Car Motion >> Encoder RPM
7. Check PIC and PAL inhibit LEDs (Figure 4). -If either the "PIC Inhibit" LED or the "PAL Inhibit" LED is lit on the Safety Processor Board check the "ELEV SERV" Menu (when "ELEV SERV" is on the screen, press the "ENTER" button to view the status) -If LCD displays "open" - check door lock/gate switch jumpers -If LCD displays "INS ERR" - make sure that the "INS" input is high and that the "ACC", "MRI", "ICI", and "AUTO" inputs are off.
8. Check Speed and Direction of Motor Rotation. -If Platform Runs Slow or OverCurrent Fault on Drive, Change Encoder Quadrature on Encoder Isolation Board (Figure 3) to the Drive. Change the J5 Jumpers to switch A and /A, or change the J7 Jumpers to switch B and /B. -If Motor Rotation is backwards, Change "Motor Rotation" Parameter on Drive. (see Drive Settings page of this guide)





# Test Procedures

If there is any uncertainty about performing these tests with a GALaxy controller, please call G.A.L. toll free at 1 (877) 425-3538 for free technical assistance.

**WARNING:** When performing any of the following tests, the mechanic should follow the required precautions and procedures set forth in the local and national elevator codes.

## **Buffer Test**

The following test procedure explains how to override the car's position system so that it will run into the terminal landing at contract speed but is not intended to circumvent any procedure mandated by the elevator code.

1. Inspect and prepare the car according to the "Elevator Industry Inspection Handbook". Make sure that the car is loaded properly for the test and that the appropriate car or counterweight safety is tied.
2. For the car buffer test, jump DT, DT1, DT2, DT3 and DTS terminal limits to SFC (110VAC). For the counterweight buffer test, jump UT, UT1, UT2, UT3 and UTS terminal limits also to SFC. Refer to the job schematics specific terminal wiring locations.
3. From the Controller's LCD display, select the "Elevator Setup" menu and then select "Car Buffer Test" or "Counterweight Buffer Test".
4. Turn off the automatic door switch. To execute the test, the car must be level at the floor and on automatic operation.
5. The test also cannot be started from a terminal landing. If the car is at a terminal landing, the LCD display will show "To position the car press Enter". Pressing "Enter" will place a car call in the middle of the hoistway. If the car is already positioned properly for the run, the display will give the option to position the car or the skip to the next step.
6. Once the car is located in the correct starting position, select "Run Buffer Test". When the "Enter" button is pressed, the car's position will be modified internally to the top of the hoistway for a car buffer test or to the bottom of the hoistway for a counterweight buffer test. The car will then run once high speed to the appropriate buffer.
7. While the car is in motion, the LCD display will change to "Press Enter Button to Cancel Buffer Test". Pressing the "Enter" button will cause the car to execute an emergency slowdown.
8. After the test is complete, place the car on inspection and inspect the car and buffer.
9. **Remove all jumpers, remove load weights and untie the car or counterweight safeties if previously tied.**
10. Return the car to automatic operation.

## **Normal Terminal Slowdown Test**

The following test procedure explains how to override the car's position system so that it will run into the terminal landing at contract speed but is not intended to circumvent any procedure mandated by the elevator code.

1. Inspect and prepare the car according to the "Elevator Industry Inspection Handbook". Make sure that the car is loaded properly for the test.
2. For the bottom normal terminal slowdown test, jump DTS terminal limit to SFC (110VAC). For the top normal terminal slowdown limit test jump UTS terminal limit also to SFC. Refer to the job schematics for specific terminal wiring locations.
3. From the Controller's LCD display, select the "Elevator Setup" menu and then select "Car Buffer Test" to perform a bottom normal terminal slowdown test or "Counterweight Buffer Test" to perform a top terminal slowdown limit test.
4. Turn off the automatic door switch. To execute the test, the car must be level at the floor and on automatic operation.
5. For this test only adjust parameters UT Vel and DT Vel on the Safety Processor Board to contract speed.
6. The test also cannot be started from a terminal landing. If the car is at a terminal landing, the LCD display will show "To position the car press Enter". Pressing "Enter" will place a car call in the middle of the hoistway. If the car is already positioned properly for the run, the display will give the option to position the car or the skip to the next step.
7. Once the car is located in the correct starting position, select "Run Buffer Test". When the "Enter" button is pressed, the car's position will be modified internally to the top of the hoistway for a car buffer test or to the bottom of the hoistway for a counterweight buffer test. The car will then run once high speed to the appropriate limit.
8. While the car is in motion, the LCD display will change to "Press Enter Button to Cancel Buffer Test". Pressing the "Enter" button will cause the car to execute an emergency slowdown.
9. **After the test is complete remove all jumpers and adjust the UT Vel and DT Vel parameters on the Safety Processor Board back to their original values.**
10. Return the car to automatic operation.





# Test Procedures

If there is any uncertainty about performing these tests with a GALaxy controller, please call G.A.L. toll free at 1 (877) 425-3538 for free technical assistance.

**WARNING:** When performing any of the following tests, the mechanic should follow the required precautions and procedures set forth in the local and national elevator codes.

## **Emergency Terminal Limit Test**

The following test procedure explains how to override the car's position system so that it will run into the terminal landing at contract speed but is not intended to circumvent any procedure mandated by the elevator code.

1. Inspect and prepare the car according to the "Elevator Industry Inspection Handbook". Make sure that the car is loaded properly for the test.

2. For the bottom emergency terminal limit test, jump the bottom normal terminal slowdown limit switches DT, DT1, DT2, DT3 depending on how many normal slowdown switches the job has to SFC (110VAC). For the top emergency terminal limit test jump the top normal terminal slowdown limit switches UT, UT1, UT2, UT3 also to SFC. Refer to the job schematics specific terminal wiring locations.

3. From the Controller's LCD display, select the "Elevator Setup" menu and then select "Car Buffer Test" to perform a bottom emergency terminal limit test or "Counterweight Buffer Test" to perform a top emergency terminal limit test.

4. Turn off the automatic door switch. To execute the test, the car must be level at the floor and on automatic operation.

5. The test also cannot be started from a terminal landing. If the car is at a terminal landing, the LCD display will show "To position the car press Enter". Pressing "Enter" will place a car call in the middle of the hoistway. If the car is already positioned properly for the run, the display will give the option to position the car or the skip to the next step.

6. Once the car is located in the correct starting position, select "Run Buffer Test". When the "Enter" button is pressed, the car's position will be modified internally to the top of the hoistway for a car buffer test or to the bottom of the hoistway for a counterweight buffer test. The car will then run once high speed to the appropriate limit.

7. While the car is in motion, the LCD display will change to "Press Enter Button to Cancel Buffer Test". Pressing the "Enter" button will cause the car to execute an emergency slowdown.

**8. After the test is complete remove all jumpers.**

9. Return the car to automatic operation.

## **Overspeed Test**

1. With the car on automatic, run the car to the top or bottom (away from the desired test run direction).

2. Access the Overspeed Mult parameter (sub menu A1) in the drive and set the % overspeed.

3. Set the Overspeed Test flag (sub menu U4) in the drive. This will cause the drive to run over speed for one run.

4. On the controller main LCD interface, select "Run Overspeed Test" under the Elevator Setup menu. Follow the directions on the LCD display to make sure the automatic door switch is off and the car is level at the floor on automatic operation. Enabling the overspeed test will prevent the CPU from detecting an overspeed condition for one run.

5. Place a car call to run the car in the desired direction to perform the overspeed test.

6. Place the car on inspection and inspect the car.

7. Return the car to automatic operation.

## **Resetting the Rope Gripper**

1. Go to the "Elevator Setup" Menu on the CPU (GALX-1021N).

2. Scroll down to "Reset Gripper Fault"

3. Press the Enter Button.

4. Press and hold the Enter button for 10 seconds until the screen displays "Rope Gripper is Reset."



# HPV-600/900 with Distance Feedback

## Drive Settings

Drive A1 Submenu					
PARAMETER	DESCRIPTION	UNIT	RANGE	DEFAULT	SETTING
CONTRACT CAR SPEED	ELEVATOR CONTRACT SPEED	FPM	0 - 3000FPM	100FPM	CONTRACT SPEED OF CAR (FPM)
CONTRACT MTR SPEED	MOTOR SPEED AT ELEVATOR CONTRACT SPEED	RPM	50 - 3000	1130	MOTOR RPM NEEDED TO ACHIEVE CONTRACT CAR SPEED
ENCODER PULSES	ENCODER COUNTS PER REVOLUTION	NONE	600 - 10000	1024	RATED PULSES PER REVOLUTION (PPR) ON ENCODER

S-Curves A2 Submenu					
PARAMETER	DESCRIPTION	UNIT	RANGE	DEFAULT	SETTING
ACCEL RATE 0	ACCELERATION RATE LIMIT	FT/s <sup>2</sup>	0.00 - 7.99	1.00	7.99
DECEL RATE 0	DECELERATION RATE LIMIT	FT/s <sup>2</sup>	0.00 - 7.99	1.00	7.99
ACCEL JERK IN 0	RATE OF INCREASE OF ACCELERATION UP TO ACCEL RATE	FT/s <sup>3</sup>	0.00 - 29.9	0.5	0.00
ACCEL JERK OUT 0	RATE OF DECREASE OF ACCELERATION TO ZERO	FT/s <sup>3</sup>	0.00 - 29.9	0.5	0.00
DECEL JERK IN 0	RATE OF INCREASE OF DECELERATION UP TO ACCEL RATE	FT/s <sup>3</sup>	0.00 - 29.9	0.5	0.00
DECEL JERK OUT 0	RATE OF DECREASE OF DECELERATION TO ZERO	FT/s <sup>3</sup>	0.00 - 29.9	0.5	0.00

Power Convert A4 Submenu					
PARAMETER	DESCRIPTION	UNIT	RANGE	DEFAULT	SETTING
INPUT L-L VOLTS	RMS LINE-LINE AC INPUT VOLTAGE	VOLTS	110 - 480	460 or 230	RMS LINE-LINE VOLTAGE APPLIED TO DRIVE
UV ALARM LEVEL	VOLTAGE LEVEL FOR UNDERVOLTAGE ALARM	%	80 - 99	90	80

Motor A5 Submenu					
PARAMETER	DESCRIPTION	UNIT	RANGE	DEFAULT	SETTING
MOTOR ID	MOTOR IDENTIFICATION	NONE			# OF MOTOR POLES*
RATED MTR POWER	RATED MOTOR OUTPUT POWER	HP	1.0 - 500.0	PER ID	ON MOTOR NAMEPLATE (HP)
RATED MTR VOLTS	RATED MOTOR TERMINAL RMS VOLTAGE	VOLTS	190.0 - 575.0	PER ID	ON MOTOR NAMEPLATE (V)
RATED EXCIT FREQ	RATED EXCITATION FREQUENCY	Hz	5.0 - 400.0	PER ID	ON MOTOR NAMEPLATE (Hz)
RATED MTR CURRENT	RATE OF INCREASE OF DECELERATION UP TO ACCEL RATE	AMPS	1.0 - 800.0	PER ID	ON MOTOR NAMEPLATE (A)
MOTOR POLES	MOTOR POLES	NONE	2 - 32	PER ID	# OF MOTOR POLES*
RATED MTR SPEED	RATED MOTOR SPEED AT FULL LOAD	RPM	50.0 - 3000.0	PER ID	ON MOTOR NAMEPLATE (RPM)

User Switces C1 Submenu		
PARAMETER	DEFAULT	SETTING
SPD COMMAND SRC	MULTI-STEP	SERIAL
RUN COMMAND SRC	EXTERNAL TB	SERIAL + EXTRN
MOTOR ROTATION	FORWARD	FORWARD
PRE TORQUE SOURCE	NONE	SERIAL
SERIAL MODE	NONE	MODE 1
FAULT RESET SRC	EXTERNAL TB	SERIAL
CONT CONFIRM SRC	NONE	EXTERNAL TB

Logic Inputs C2 Submenu		
PARAMETER	DEFAULT	SETTING
LOGIC INPUT 1	DRIVE ENABLE	DRIVE ENABLE
LOGIC INPUT 2	RUN	RUN
LOGIC INPUT 3	FAULT RESET	FAULT RESET
LOGIC INPUT 4	UP/DWN	NO FUNCTION
LOGIC INPUT 5	S-CURVE SEL 0	CONTACT CFIRM
LOGIC INPUT 6	STEP REF B0	NO FUNCTION
LOGIC INPUT 7	STEP REF B1	NO FUNCTION
LOGIC INPUT 8	STEP REF B2	NO FUNCTION
LOGIC INPUT 9	EXTRN FAULT 1	EXTRN FAULT 1

Logic Outputs C3 Submenu		
PARAMETER	DEFAULT	SETTING
LOGIC OUTPUT 1	READY TO RUN	OVER CURR FLT
LOGIC OUTPUT 2	RUN COMMAND	NO FUNCTION
LOGIC OUTPUT 3	MTR OVERLOAD	NO FUNCTION
LOGIC OUTPUT 4	READY TO RUN	NO FUNCTION
RELAY COIL 1	FAULT	FAULT
RELAY COIL 2	SPEED REG RLS	SPEED REG RLS

\*The number of motor poles can typically be determined from the approximate RPM of the Motor as follows:

- 8 Poles ~ 900RPM
- 6 Poles ~ 1200RPM
- 4 Poles ~ 1800RPM

\* Need to be entered on job site as per Motor and Encoder specifications.