PARAMETER UNIT NAVIGATION

I. HOW TO CHANGE PARAMETERS:

Press SET. Enter a parameter number

Press READ. Enter a new value. Press WRITE

Wait for the completed signal from the display.

II. HOW TO READ (COPY) FROM THE DRIVE:

NOTE 1 : The parameter unit has stored 4 sets of default parameters and 1 set of working parameters. To copy a default set of parameters into the working set parameters, see item 8th of section VI.

NOTE 2 : To transfer data from one drive to another, users must, first, READ(COPY) from the first drive.

Press SET .Press ▲

Press READ

Wait for the completed signal from the display.

III. HOW TO WRITE (DOWNLOAD) TO THE DRIVE:

Press SET .Press ▲

Press WRITE

Wait for the completed signal from the display.

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IV. DEFAULT SETTINGS FOR THE MOVFR DRIVE:

CLOSING	PARAMETER #		RANGE	DEFAULT VALUE							
				STANDARD				WATERPROOF			
				C/P		S/O		C/P		S/O	
	REG.	HVY.		REG.	HVY.	REG.	HVY.	REG.	HVY.	REG.	HVY.
MAX. CLOSE SPEED	0	0	0–30	30	30	30	30	30	30	30	30
HOLDING TORQUE	1	11	0–30	3	3	3	3	3	3	3	3
HOLDING SPEED	2	12	0–400	2	2	2	2	1.5	1.5	1.5	1.5
CLOSE TORQUE ■	3	13	0–400	225	225	173	173	173	173	135	135
HIGH SPEED HSC	4	14	0–400	23	12	19	10	14	7	12	6
FINAL SPEED FSC	5	15	0–400	4	4	5	5	3	3	4	4
NUDGING SPD	6	16	0–400	8	8	9	9	5	5	6	6
ACCELERATION TIME	7	17	0–320	9	9	6	6	7	7	10	10
DECELERATION TIME	8	18	0–320	6	6	10	10	17	17	25	25
STALL REV. FORCE	9	19	0–2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
OVERLOAD	99	99	0–5	3	3	3	3	3	3	3	3

OPENING	PARAMETER #		RANGE	DEFAULT VALUE							
				STANDARD				WATERPROOF			
				C/P		S/O		C/P		S/O	
	REG.	HVY.		REG.	HVY.	REG.	HVY.	REG.	HVY.	REG.	HVY.
QUICK STOP ON REV.	21	31	0–6	2	2	2	2	2	2	2	2
SLOW START SSO	22	32	0–400	3	3	5	5	2	2	3	3
HIGH SPEED HSO	23	33	0–400	31	16	45	23	24	12	35	18
MEDIUM SPEED MSO	24	34	0–400	14	14	20	20	10	10	15	15
FINAL SPEED FSO	25	35	0–400	3	3	5	5	2	2	3	3
ACCELERATION TIME	26	36	0–320	6	6	4	4	6	6	6	6
DECELERATION TIME	27	37	0–320	6	6	10	10	9	9	10	10
SLOW SPD TORQUE	28	38	0–30	4	4	4	4	4	4	4	4
OPEN TORQUE ■	29	39	0–400	80	80	80	80	60	60	60	60

■ TO LOWER TORQUE, INCREASE TORQUE PARAMETER VALUE

OPENING AND CLOSING	PARAMETER #	RANGE	DEFAULT VALUE			
			STANDARD		WATERPROOF	
			C/P	S/O	C/P	S/O
CARRIER FREQUENCY	51	2–15	10	10	10	10

C/P = CENTER PARTING DOOR
S/O = SIDE OPENING DOOR
REG. = REGULAR DOOR
HVY. = HEAVY DOOR

V. CONVENIENT KEYS:

Press SPEED to check the speed in Hz

Example: Output Frequency HSC 19Hz

Press I/O to check Input & Output Signals.

Inputs:

Z: (Reserved) **C:** Door Close **O:** Door Open
R: Reset **V:** Heavy Door **L:** Control Bit L
M: Control Bit M **H:** Control Bit H

Outputs:

S: Over Speed **T:** Over Torque **F:** Fault

Example: ZCORVLMH STF 010001000000

Press FAULT to check the recent faults.

Press ▲ or ▼ to view all the faults.

Example: Present Fault Under Voltage

Press V to check the Output Voltage.

Example: Output Voltage 132.00V

Press A to check the Output Current.

Example: Output Current 0.78V

Press RESET to reset the drive.

VI. THE VIEW KEY:

Press the VIEW key will allow users to view, change, and reset to GAL default parameters.

Press ▲ or ▼ to navigate through all the items in the VIEW section.

Press READ to view an item. At any time, press ESC to get back to the previous display.

1st. **V/I/H** Displays the Output Voltage, Ouput Current, Command Speed, and Actual Speed.

2nd. **I/O** Displays the Input and Output Signals
ZCORVLMH STF 1= Activate 0= Deactivate
(See the CONVENIENT KEYS in part V)

3rd. **Faults.** (See the CONVENIENT KEYS in part V)
Press ▲ or ▼ to view all the faults.

4th **Counters.** There are 2 counters.
Counter 1 will count up to 9,999 times.
Counter 2 will count up to 60,000 times.
When Counter 1 reaches 9999, Counter 2 will increase 1
The total count will be 600,000,000 times.
Press ▲ or ▼ to view Counter 1 or Counter 2.

5th **User List.** The user list includes all the DEFAULT SETTINGS FOR THE MOVFR DRIVE in part IV.
Press ▲ or ▼ to view all the parameters in the user list.
Press WRITE to get in a parameter in the list.
NOTE: Users can also change the value of parameters in this stage by entering a new value and press WRITE
Press ESC to get back to the previous display.

6th. **Max. cl. Speed**
Press READ to view the Maximum Closing Speed.
Press ESC to get back to the previous display.

7th. **Max. cl. Force**
Press ESC to view the Maximum Closing Force.
Press READ to get back to the previous display.

8th. **GAL Defaults**
Press READ, Press or ▲ to ▼ pick one of the four sets of parameters:
Standard C/P
Standard S/O
Waterproof C/P
Waterproof S/O
Press WRITE to copy the chosen set of parameters to the working set of parameters.

VII. LED INDICATORS:

There are 7 LEDs on the Parameter Unit.
DO, DC, NUD, HLD, PRG, FLT, OVT.
DO= Door Open DC= Door Close NUD=Nudging
HLD= Holding PRG= Programming Mode FLT= Fault
OVT= Over Torque
These LEDs indicate the present status of the MOVFR

MOVFR QUICK SETUP

1st. CONNECTIONS:

Connect all the wires properly to the controller. Connections that users should pay attention are:

- **EARTH GROUND**
- **230VAC** (Power Supply)
- **DOL** (Door Open Limit)
- **DCL** (Door Close Limit)

Generally, N.C. contacts should be used for DOL and DCL.

- **DC** (Door Close)
- **DO** (Door Open)
- **NUDG.** (Nudging)

NUDG. & DC have to activate together for Nudging Speed).
*Note: * If the Input Voltage for DO, DC, HEAVY, or NUDG. is less than 60VAC or DC, users have to remove the resistors on the top of the Input cards.*
** RE-OPEN, DPM (Door Protection Monitor), HEAVY (Heavy Door Input), and AUX. contacts are optional.*

2nd. CAM SETUP:

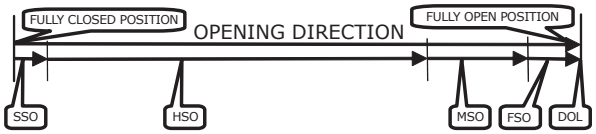
GAL presets MOVFR cams in the correct positions. In general, users only need to tweak these settings. If any adjustment is needed, please follow the procedure below.

Turn the 1st toggle switch to CAM SETUP. Pay attention to the OPENING SEQUENCE and CLOSING SEQUENCE.
RED LEDs are for the CLOSING SEQUENCE.
GREEN LEDs are for the OPENING SEQUENCE.
OPENING SEQUENCE: SSO ➡ HSO ➡ MSO ➡ FSO ➡ DOL.
CLOSING SEQUENCE: HSC ➡ FSC ➡ DCL
Be aware that these sequences must always be followed. the only deviation is in nudging; when nudging replaces HSC.
Manually wheel the door to the fully CLOSED direction, There will be some RED and GREEN LEDs that are ON simultaneously. However, at this point in time, users will ignore the RED LEDs.

2.1 OPENING SEQUENCE:

Manually wheel the door to the OPEN direction. The following table will guide users to set the cams for the OPENING SEQUENCE.
NOTE: *CAM #3* ***should not*** *be blocked at this time*

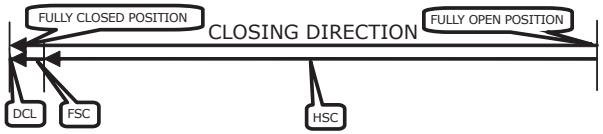
SPEED	CAM#1 (SSO/FSO)	CAM#2 (MSO)	APPROXIMATE DISTANCE
SSO	BLOCKED	UNBLOCKED	Until the clutch makes up(Approx. First ½ in.)
HSO	UNBLOCKED	UNBLOCKED	From clutch made up (approx. ½ in.) to ¾ of the Total Door Width
MSO	UNBLOCKED	BLOCKED	Last ¼ of the Total Door Width
FSO	BLOCKED	BLOCKED	Last 4 in.
LIMIT	**CAM #3 (DOL)**		**DISTANCE**
DOL	BLOCKED		Last ¼ in.



2.2 CLOSING SEQUENCE:

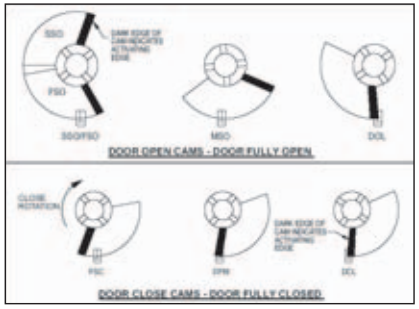
Manually wheel the door to the CLOSE direction.
NOTE: *CAM #6* ***should not*** *be blocked at this time.*
The following table will guide users to set the cams in the CLOSING SEQUENCE

SPEED	CAM#4 (FSC)	APPROXIMATE DISTANCE
HSC	UNBLOCKED	Until the Door reaches about4 inches from fully CLOSE position
FSC	BLOCKED	Last 4 in.
FUNC.	**CAM#5 (DPM)**	**APPROXIMATE DISTANCE**
DPM	BLOCKED	½ in. before Gate Switch is activated
LIMIT	**CAM #6 (DCL)**	**DISTANCE**
DCL	BLOCKED	Last ¼ in.
MISC.	**CAM#7 (AUX.)**	**DISTANCE**
AUX.	BLOCKED	Optional

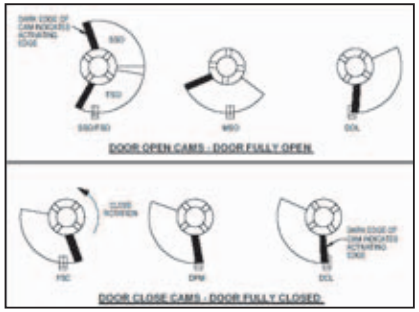


The following illustrations will be helpful for cam setup, if needed.

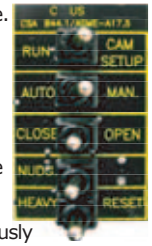
RIGHT HAND



LEFT HAND AND CENTER PARTING DOORS



3rd. MANUAL MODE (TEST MODE):

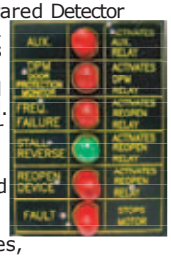


Bring the car to the door zone to run manual mode.
Flip the 1st toggle switch to *RUN.*
Flip the 2nd toggle switch to *MAN.*
Flip and hold the 3rd toggle switch to *CLOSE* for CLOSING the door.
Flip and Hold the 3rd toggle switch to *OPEN* for OPENING the Door.
Flip and Hold the 3rd to CLOSE and the 4th toggle switch to *NUDG.* simultaneously for CLOSING the door in NUDGING speed.
Flip and Hold the 5th toggle to HEAVY simultaneously with OPEN, CLOSE or CLOSE and NUDG. to test heavy doors.
Use the hand held parameter unit to adjust speeds and torques, if needed.

4th. AUTOMATIC MODE:

After running successfully in manual mode, the next step is to run the MOVFR in automatic mode.
Flip the 1st toggle switch to *RUN.*
Flip the 2nd switch to *AUTO.*
In automatic mode, users have to pay attention to the LEDs on the input cards.
When the controller sends DO (Door Open) signal to the MOVFR, make sure that the RED LED on the OPEN input card turns ON.
When the controller sends DC (Door Close) signal to the MOVFR, make sure that the RED LED on the CLOSE input card turns ON.
When the controller sends the NUDG. (Nudging) signal to the MOVFR, make sure that the RED LED on the NUDG. input card turns ON.
Note! Nudging will only work when both DC and NUDG. turn on simultaneously.

5th. INFRARED DETECTOR EDGES CONNECTION:



To simplify the connection between the Infrared Detector Edges and the controller, GAL offers the *GAL Certified Infrared Detector Edges.* These edges can be connected directly to the MOVFR.
5.1 Make sure the ENABLE CHIP is inserted into the socket U5 on the MOVFR main board.
5.2 Connect the *GAL Certified Infrared Detector Edges* to the connectors CN4 and/or CN5.
5.3 Remove jumper JP1
5.4 Make sure the reopen circuit is connected to the RE-OPEN contacts
5.5 Testing the Edges:
-Break the infrared beams of the edges,
-RE-OPEN red led should turn **ON**
-RE-OPEN relay should **activate** to send RE-OPEN signal to the controller
-The controller will send the DO (Door Open) signal back to MOVFR to OPEN the door. The red led on the OPEN input card should be ON.
5.6 If it does not work.
-Check the manual for the correct connection between the edges and MOVFR. check the voltage between 0V and +V on either CN4 and CN5. This voltage varies from 22VDC to 32VDC. Repeat step 5.5. If it still does not work. Then,
-Jump 0V to LCSE on either CN4 or CN5 connector.
-RE-OPEN red led should turn **OFF.**
-RE-OPEN relay should **deactivate .**
Else, the problem is in the main MOVFR board.
5.7 If the main MOVFR board is working as described in 5.6. then, the problem is in the edges.
5.8 If the edges have intermittent problems.
check the cables of the edges.
If the cables are good, but the problem still exists, then gradually lower the carrier frequency (Par. 51) until the problem goes away. Note: A lower carrier frequency will produce more audible noise on the motor.