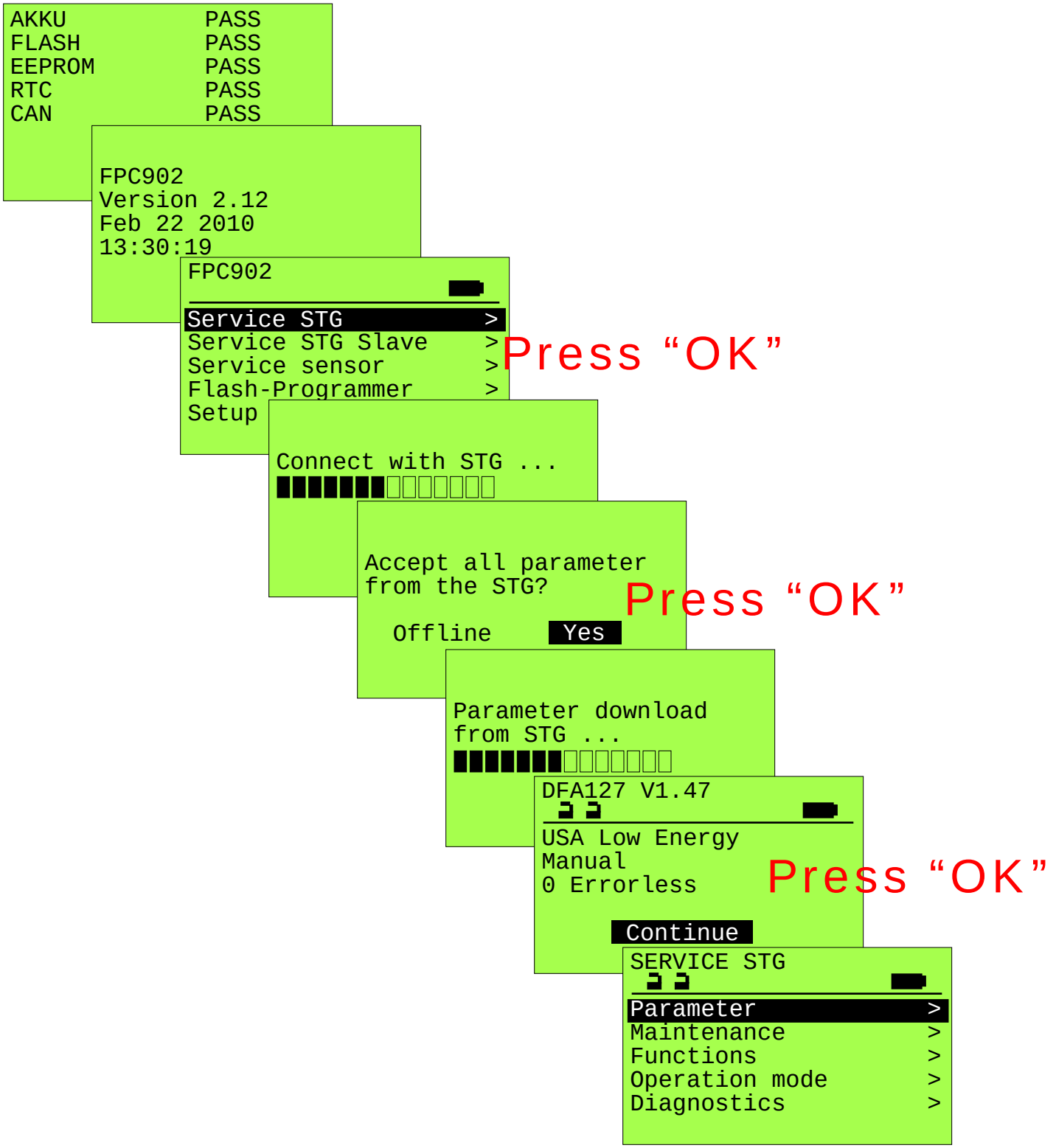
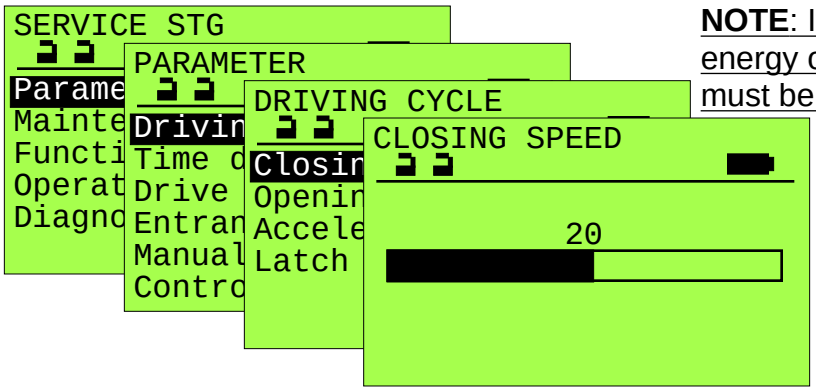
Servicing the Series 6100 & 8000 with the FPC-902 Hand Terminal

Sep11

After the operator has been mechanically installed, the arms attached to the door, and 120VAC connected to the power supply, connect the FPC902 Hand Terminal to the operator control. The following sequence of screens will occur. The final screen shown below is the base point from which various settings for the operator are accessed and modified.

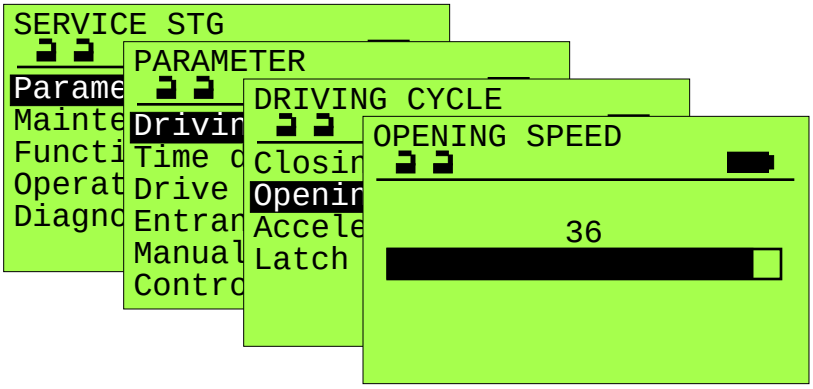


The screen sequences on the following pages start from this point and document the various adjustable parameters in the control. When at any of the screens shown below, the above screen can be accessed by pressing the "ESC" key one or more times.

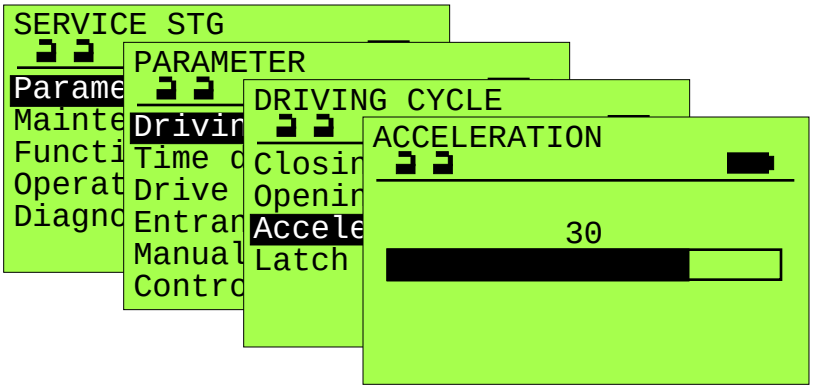


NOTE: If this operator is to be set up for low energy operation, opening and closing speeds must be adjusted to conform to the requirements of ANSI A156.19; full power installations must be adjusted per ANSI A156.10.

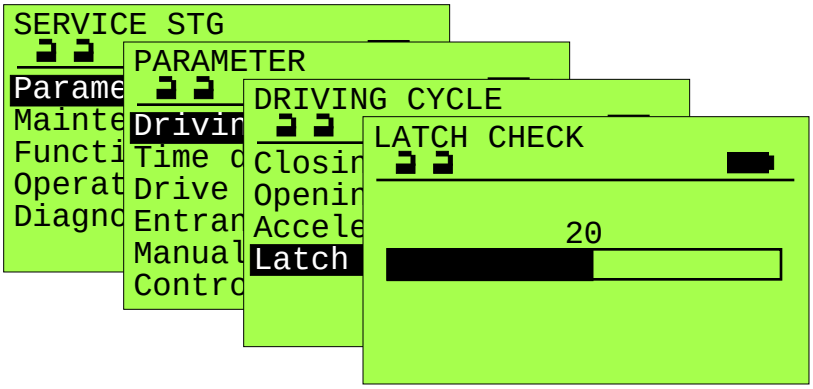
Increasing the value will increase the closing speed. If "Manual Control" has been enabled (see page 6), this adjustment will be superceded by the Closing Speed adjustment in Manual Control (see page 8).



Increasing the Opening Speed value will increase the door open speed.

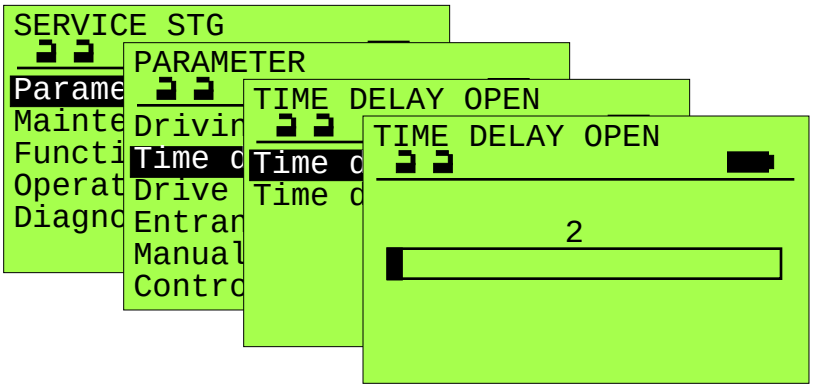


Increasing the setting increases the rate of acceleration.

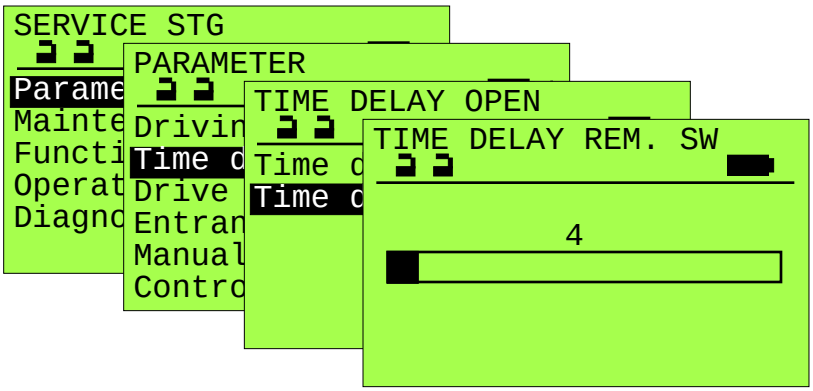


Increasing the setting increases the latch check time (slower latch check speed). The latch check position is not changed.

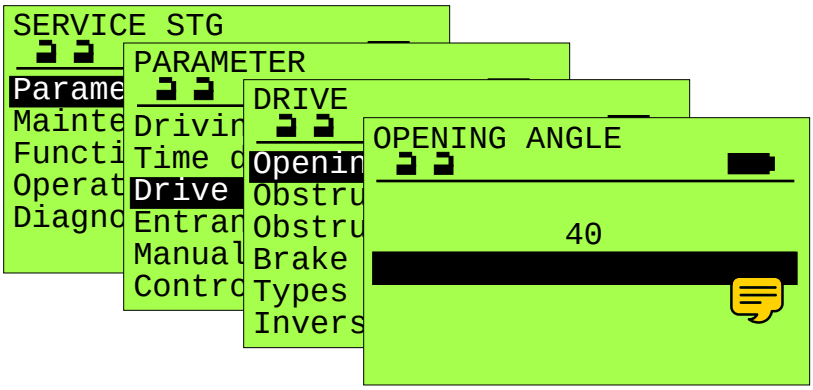
NOTE: If any of the Driving Cycle parameters are changed, a calibration cycle should be initiated.



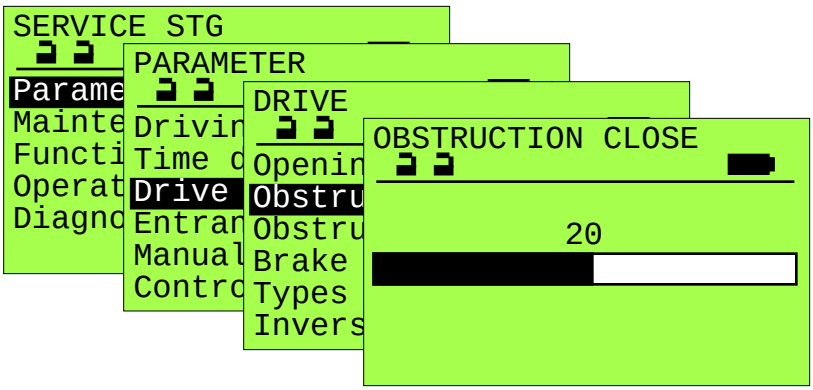
0 thru 20 are in 1 sec. intervals; 21 thru 40 are in 2 sec. intervals providing 60 sec. maximum delay.
If this operator is to be set up for low energy operation, the time delay must be set to 5 seconds, minimum, to conform to ANSi A156.19.



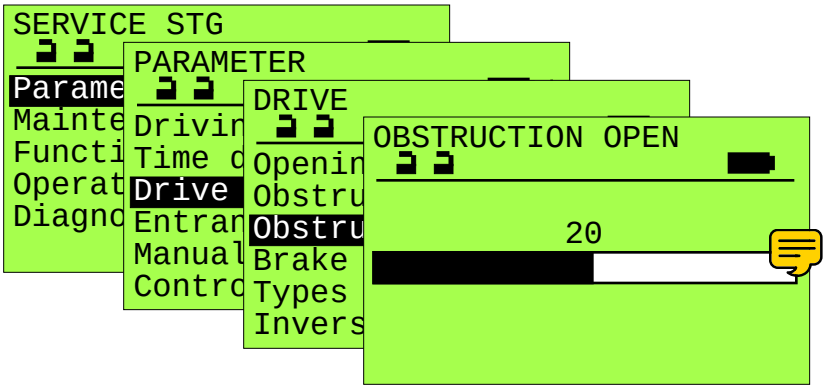
0 thru 20 are in 1 sec. intervals;
21 thru 40 are in 2 sec. intervals
providing 60 sec. maximum delay.



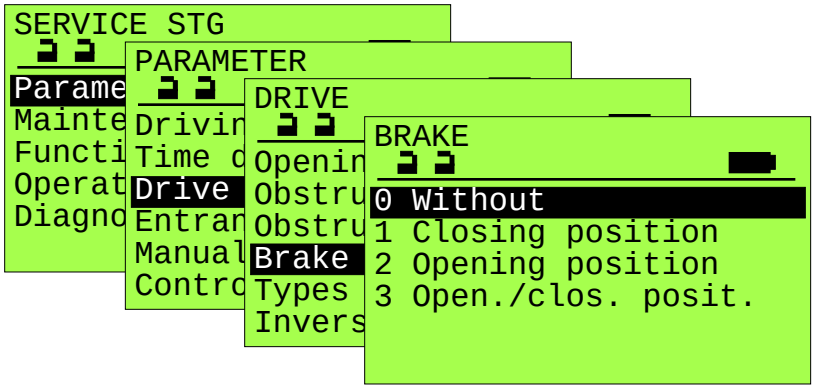
In abusive environments, it is suggested the mechanical open stop be adjusted to greater than 90° and the Open Angle adjusted to less than 40, setting a soft stop at 90°.



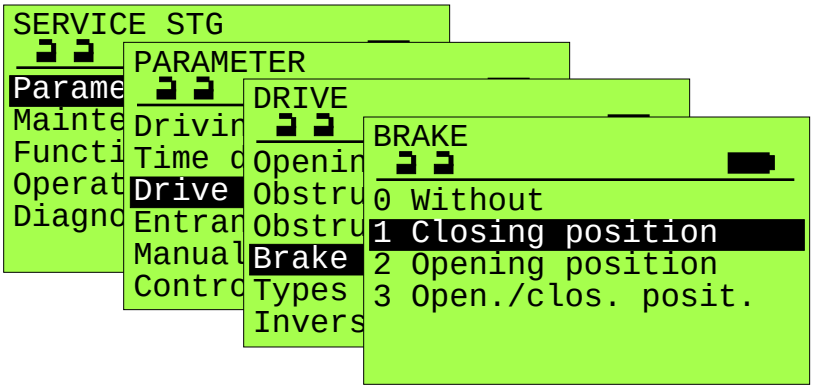
This sets the sensitivity of the unit to obstructions during the closing cycle. It is normally set automatically during the learn cycle, but can be modified as desired. (20) Decreasing the setting increases the sensitivity during closing.



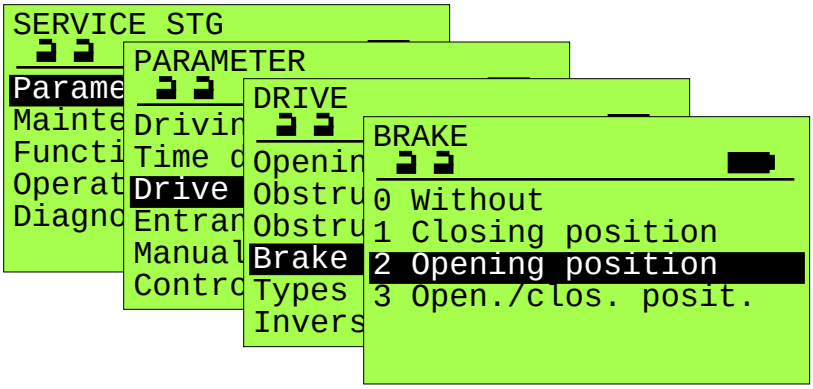
This sets the sensitivity of the unit to obstructions during the opening cycle. It is normally set automatically during the calibration cycle with a nominal value of (20), but can be modified as desired.
Increasing the setting increases the force required to stop the door.



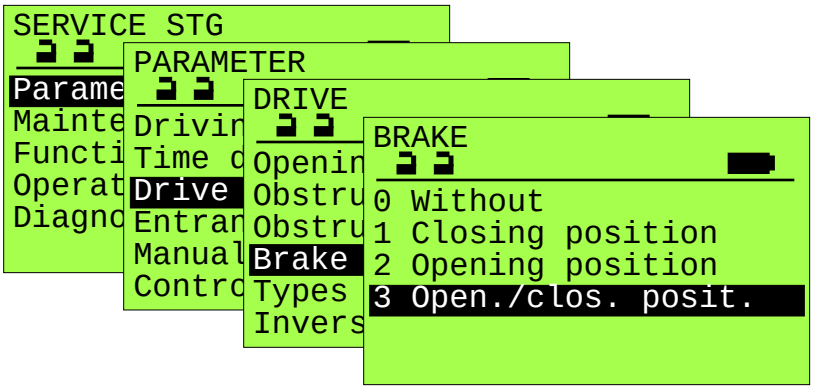
Not applicable unless the operator has been configured with the optional electric brake. If unit does not have the brake, use of any setting other than “0 Without” may cause improper door operation.



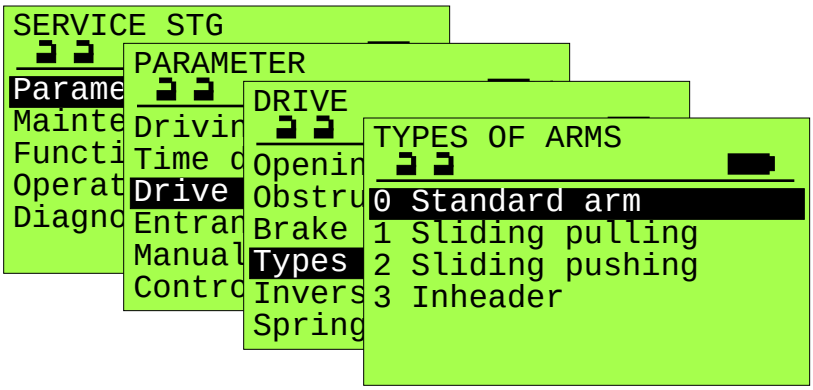
If the operator has the optional electric brake this setting will cause the brake to engage when the door is fully closed. Note the brake is not considered as an equal alternative to a security lock.



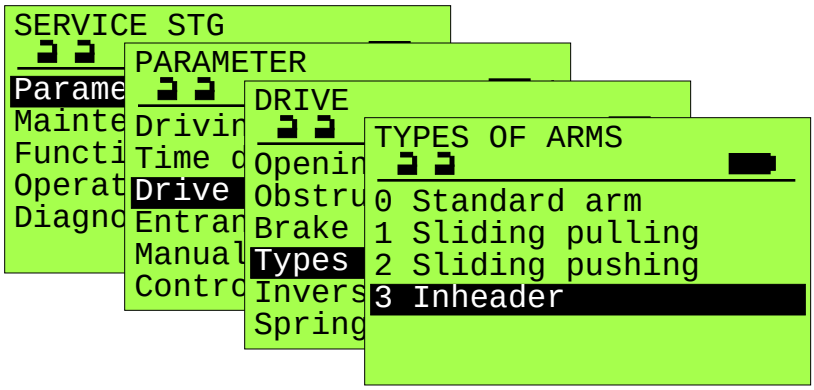
If the operator has the optional electric brake this setting will cause the brake to engage when the door is in the full open position. This will hold the door in the open position during excessive wind surges.



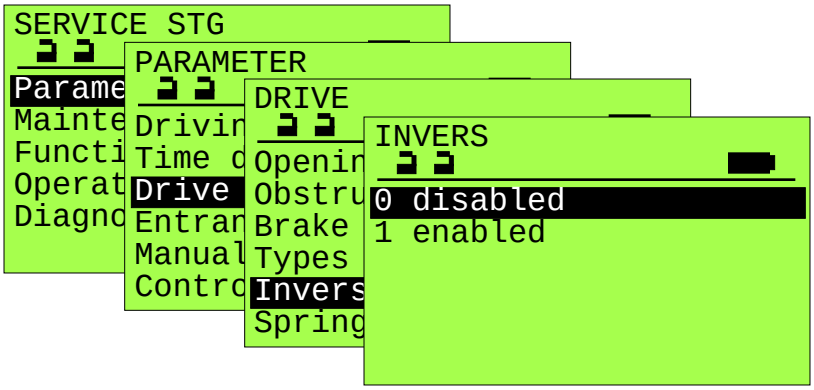
If the operator has the optional electric brake this setting will cause the brake to engage when the door is in both the full open and full closed positions.



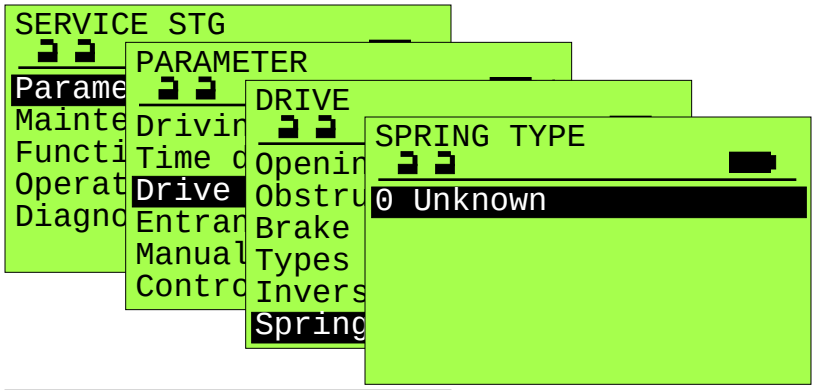
Setting the Arm Type will adjust the open and close check points based upon the arm selected.



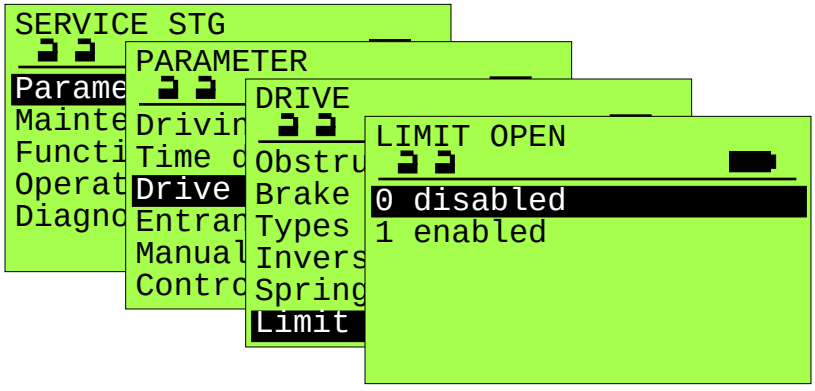
Used for Overhead Concealed, Direct Drive installations. During first run and normal operation, the operator will not push against the close stop (which may not be present on some inswing units).



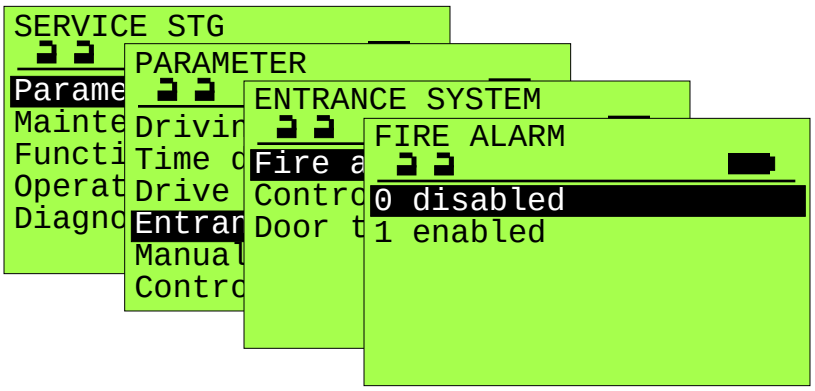
INVERS operation is when the operator is to be installed as a Power Close, Spring Open configuration - typically used in certain smoke evacuation installations. The installation must either have the optional internal electric brake or an external electric lock to hold the unit in the closed position.



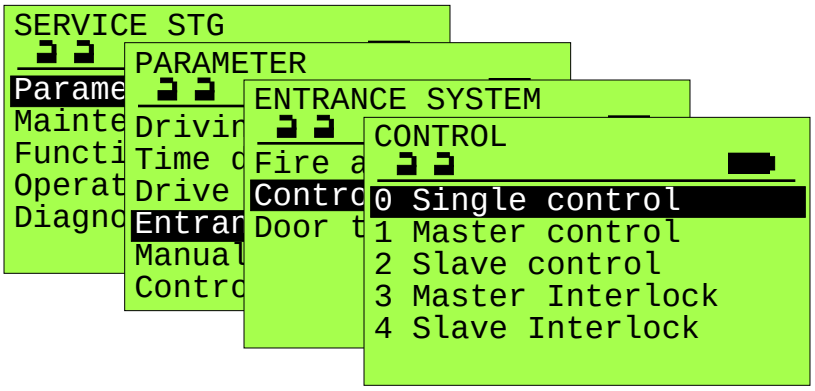
Not used in USA configurations.



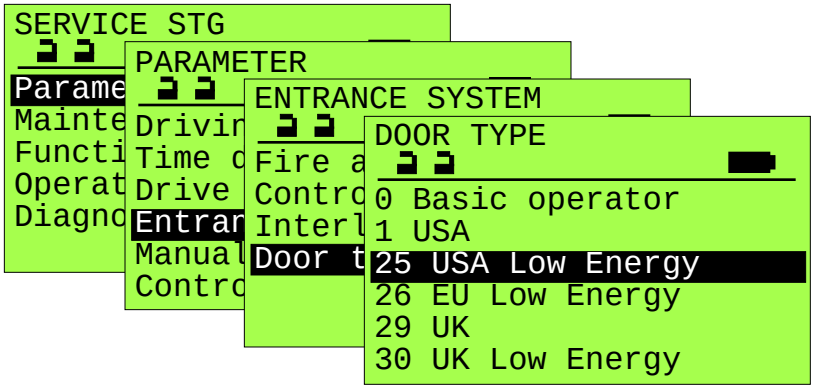
When enabled, the force required to move the door from the full open position is increased significantly. Useful when crosswinds affect the door in the full open position.



In both **USA** and **USA Low Energy** modes, the Fire Alarm input (wiring terminals 14 and 15) is always enabled (this parameter is ignored).
A dry contact, rated 100 mA or higher, can replace the factory installed jumper. When this connection is opened the operator will immediately interrupt all electrical functions. If open, the unit will immediately close by spring force.

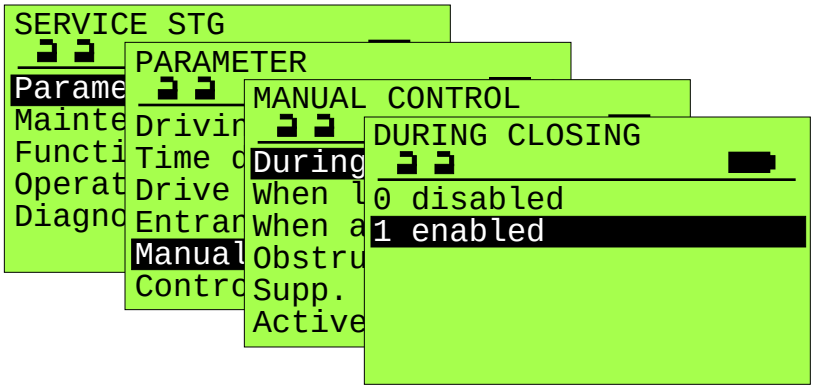


Typically this parameter is automatically set during initialization. With paired operators (synchronous operation), it is necessary to change jumper J14 on the slave control from M1 to S1. When changing this jumper, it is necessary to reset the controls. Consult factory for applicable interlocked configurations.

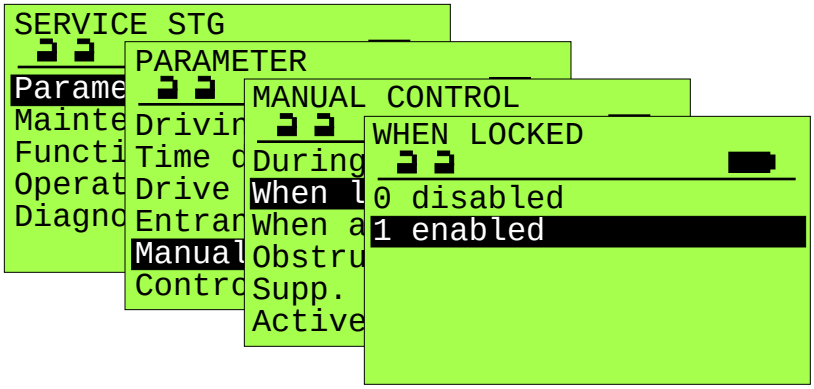


Typically set to either -
USA - for full power automatic operation
or
USA Low Energy - for units that will be expected to be opened manually.

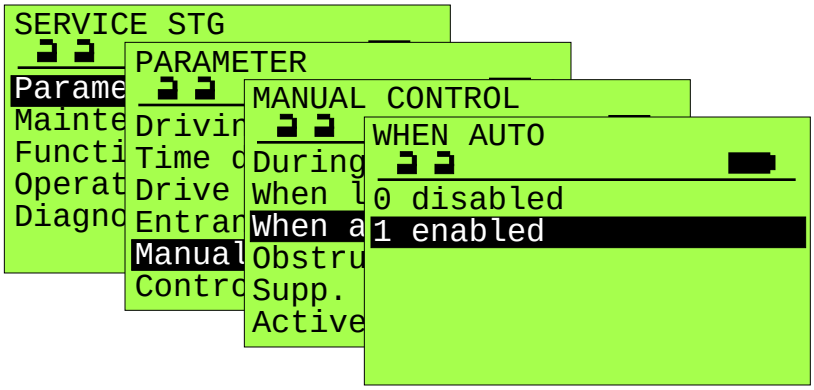
Note: In **USA** mode the unit will attempt full control of the door position at all times. Manually pushing the door, even when fully closed, will be resisted with force to maintain door position.



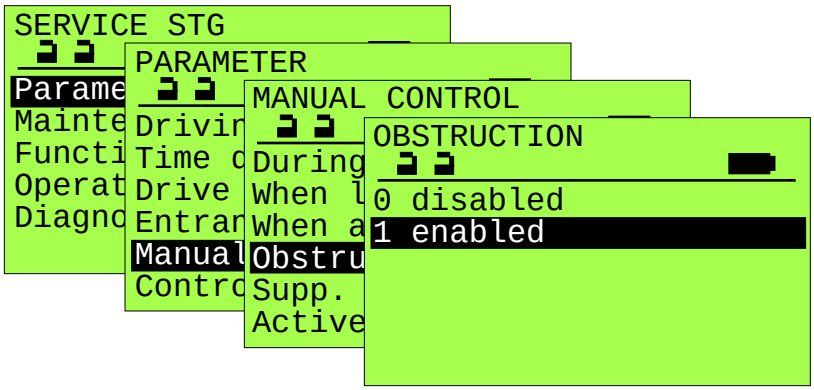
If the Mechanical Panel has been set to either “8 3 Pos. (OFF-M)” or “10 3 Pos. (LOCK-M)”, the closing cycle will utilize spring force only and the motor is used to control the closing speed. This parameter will allow the door to be pushed open manually, typical of low-energy applications.



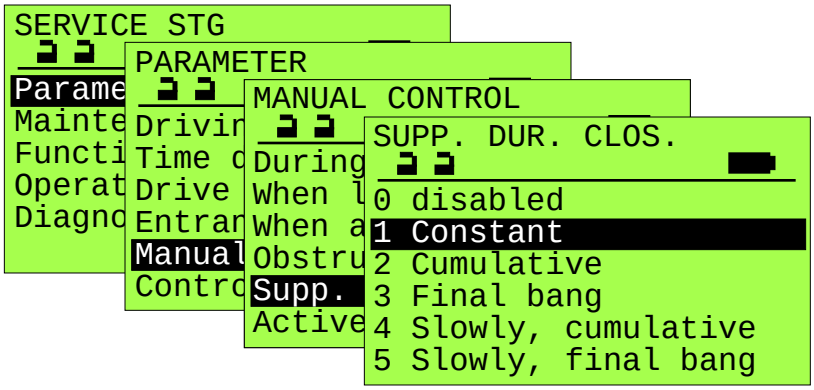
If the On/Off/Open rocker switch &/or Display Control Panel has been set for Locked mode in place of Off mode (see Control Panel parameter below), the operator will resist manual operation if this parameter is disabled. If manual operation is required, set to enabled.



Enables manual opening of the door from fully closed when the operating mode is “AUTO” (typically the unit will resist manual operation in “AUTO”). If the parameter “Door Type”(see previous page) is set “USA”, the default operating mode is “AUTO”; if it is set “USA Low Energy”, the default operating mode is “Manual”.

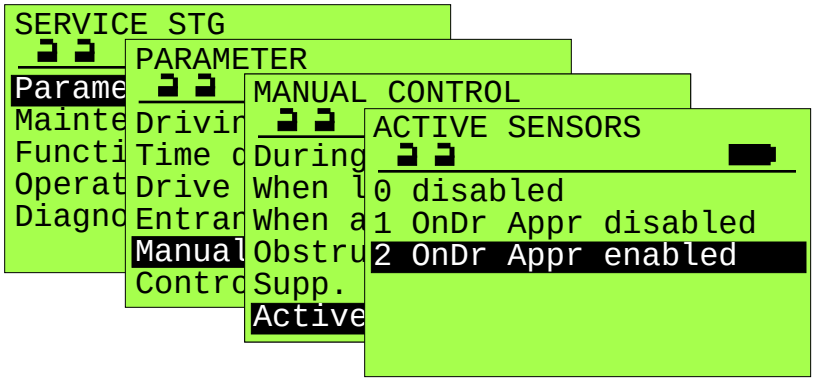


Enabling the Obstruction parameter will cause the unit to re-open if stopped during the closing cycle. The standard open time delay will be initiated before closing.

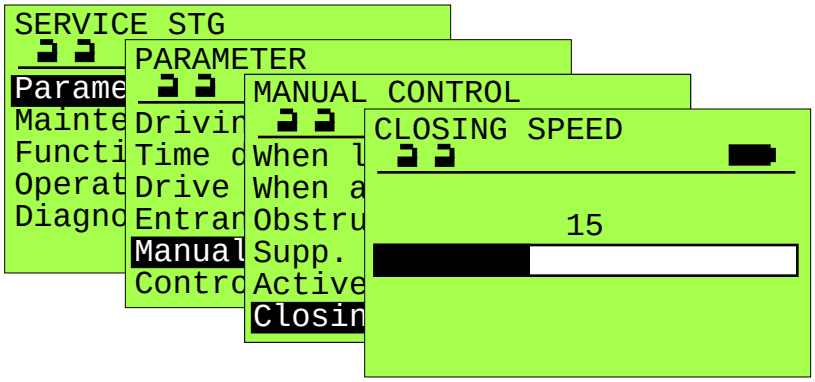


With Manual Control / During Closing enabled (above) -

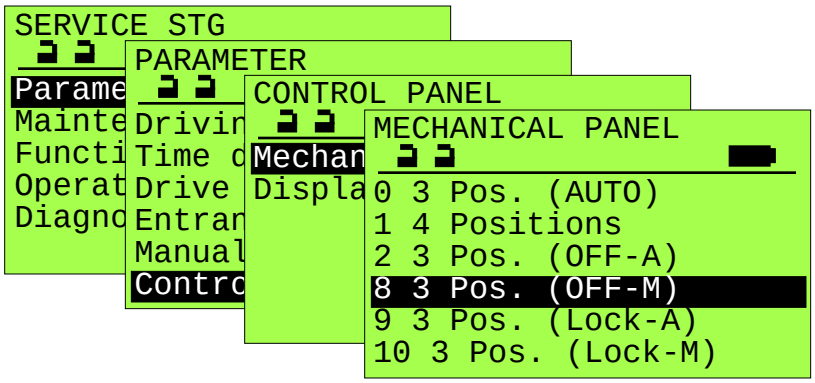
0 disabled - provides no latch check
1 Constant - provides latch check & assist
2 Cumulative - no latch chk & ramped assist
3 Final bang - no latch chk & power hold
4 Slowly, cumulative - latch chk & ramped
5 Slowly, final bang - latch chk, no assist, and power hold



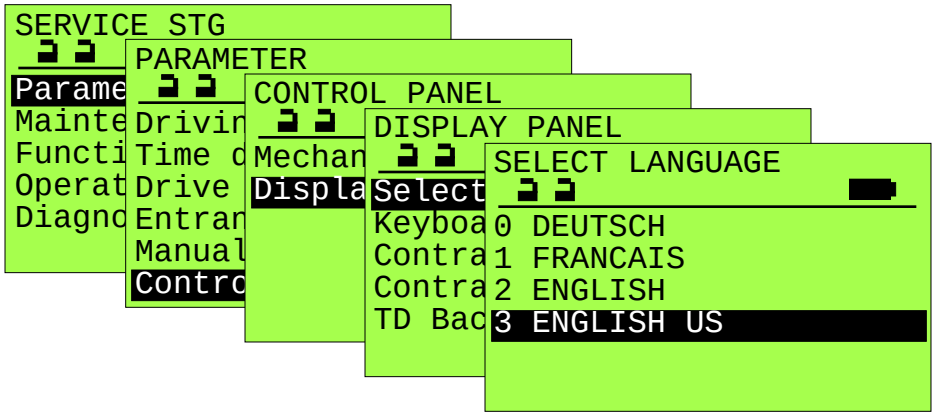
Determines the functionality of sensors and actuating devices during the close cycle when the parameter MANUAL CONTROL / DURING CLOSING is enabled.



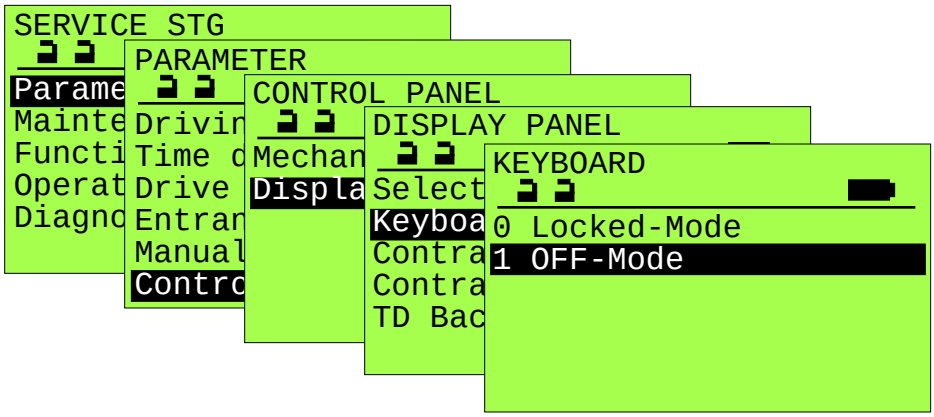
This adjustment is functional only when the Manual Control / During Closing parameter has been enabled. Otherwise, refer to the Closing Speed adjustment on page 2.



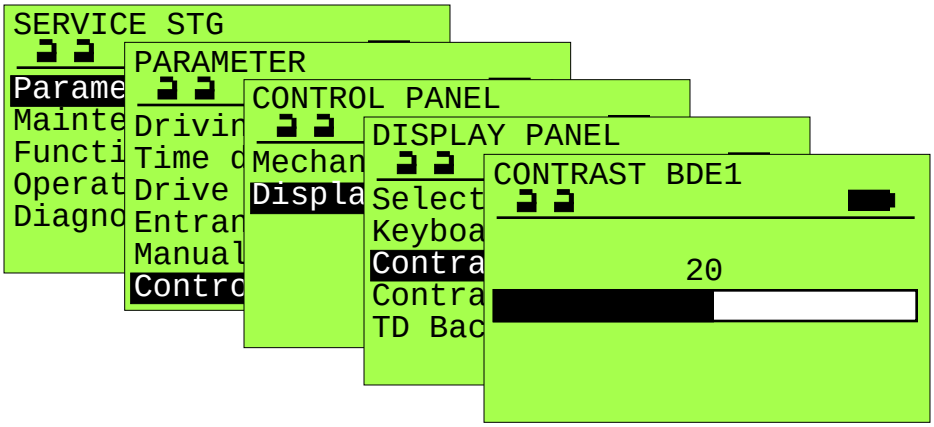
3 Pos.(AUTO) is used on units when no rocker switch is connected.
3 Pos.(OFF-M) is the normal setting.
3 Pos.(Lock-M) is used when a lock is present and the door is to be locked when turned OFF.
3 Pos. (OFF-A) and (Lock-A) are used when power hold closed is desired.



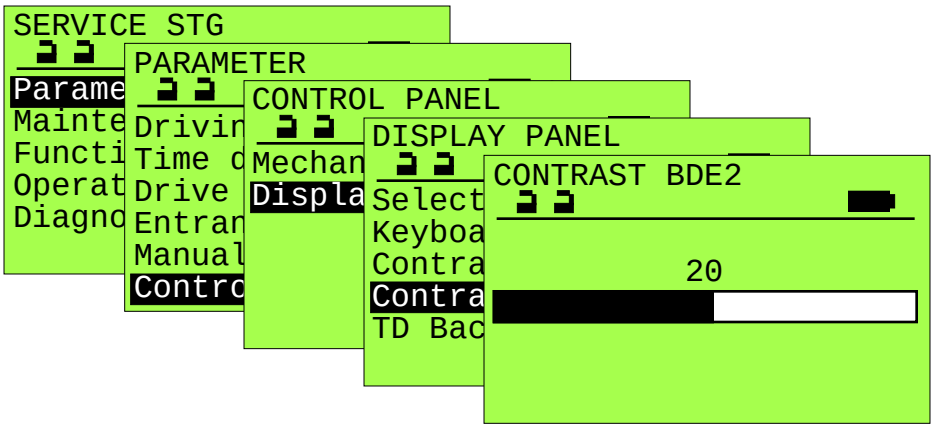
Selects the language displayed on the optional Display Control Panel.



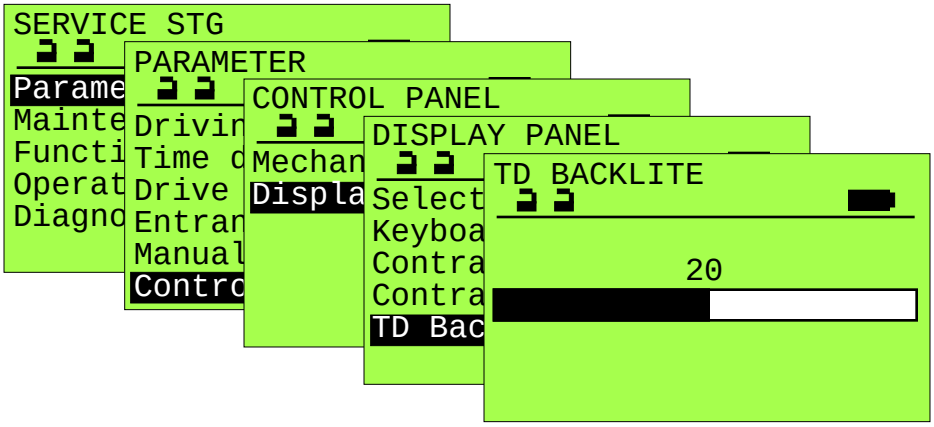
If the electric locking is to be active when the unit is turned “OFF”, this should be set to “0 Locked-Mode”. When the “OFF” button on the Display Control Panel is pressed, a padlock will appear on the display. If the unit is turned off with the On/Off/Open rocker switch, “OFF” will appear on the display.



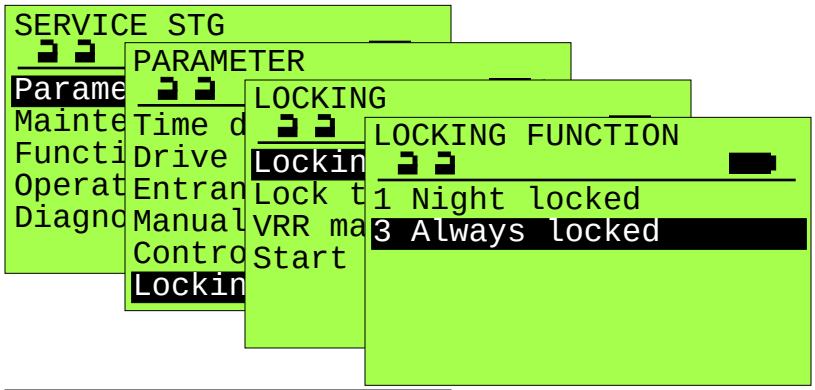
If a Display Control Panel has been connected, this will set the contrast of the LCD display.



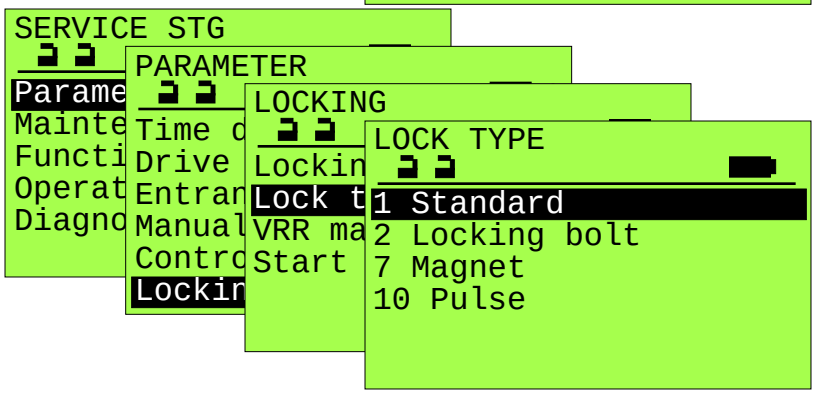
If a second Display Control Panel has been connected, this will set the contrast of the second LCD display. Note: The dip switch on the back of the second display must be set to “BDE2”.



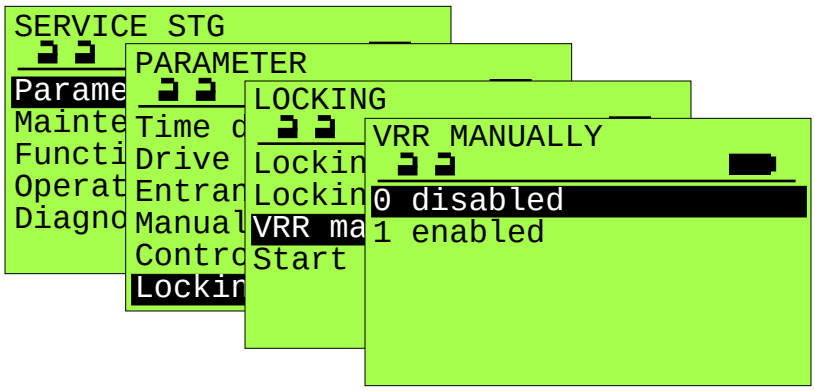
Measured in seconds;
Additionally,
0 = Backlite never on
40 = Backlit continuously



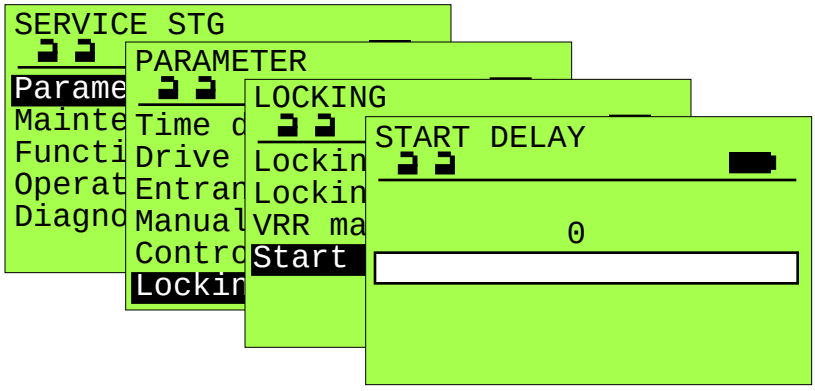
The default setting is “Always locked” and an electric locked controlled by terminals 20,21, & 22, will engage the lock when the door is fully closed. “Night locked” will engage the lock only when the unit is turned off and the Mechanical Control Panel is set to either 9 Lock-A or 10 Lock-M; or the “Display Panel / Keyboard” is set to 0 - Locked mode. If no electric lock is present, set to “1 Night locked” for quicker opening.



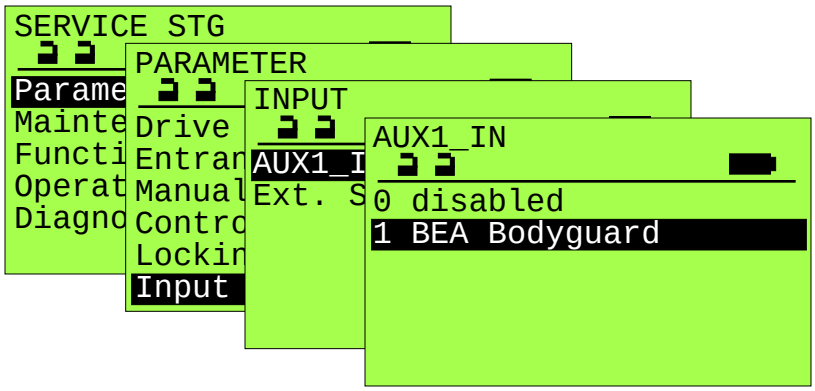
With each of the Lock Types, the lock relay (terminals 20,21,22) will switch after operator actuation (terminals 2, 5, & 7), but before the operator starts opening. Additionally, all except “Magnet” will cause the unit to drive closed slightly before opening.
Standard - relay opens @ full open;
Locking bolt & Magnet - relay opens @ full closed;
Pulse - relay opens @ 10° open.



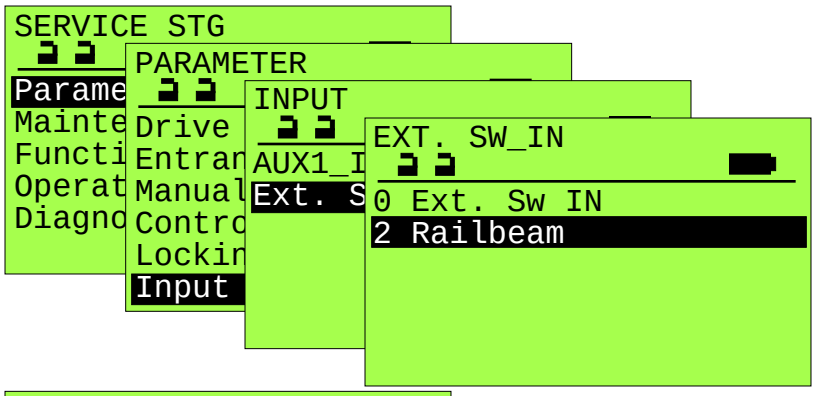
When enabled, a short between terminals 23 and 24 will prevent automatic operation. A lock monitor switch can be used to inhibit operation until the lock has unlocked. “Manual Lock” will be shown on the display control panel and the FPC-902 Terminal.



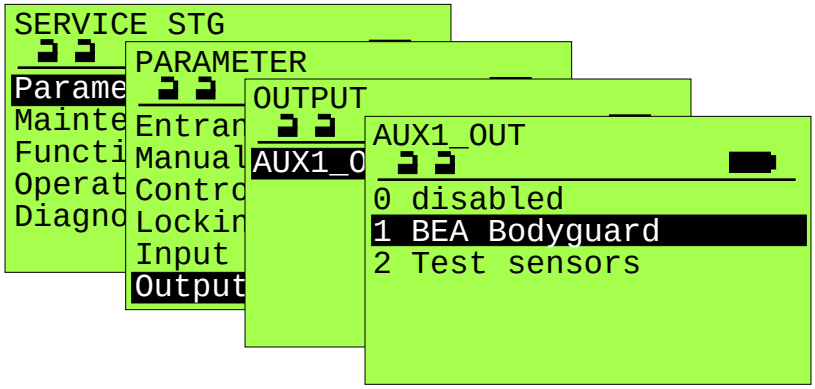
When electric locking is enabled, actuation of the control will cause the lock relay to immediately close, followed by the Start Delay, then the operator begins to open the door.
0 = 1/2 second delay
1 - 40 increases delay in 0.2 second increments (20 = 4.5 second delay)



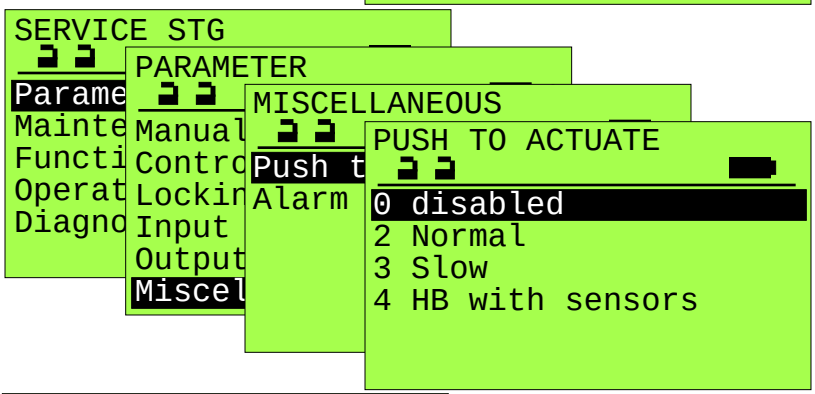
If a transom/header mounted swing-side safety sensor is used, AUX1_IN (terminal 8) should not be disabled. This input is ignored during the door closing cycle.



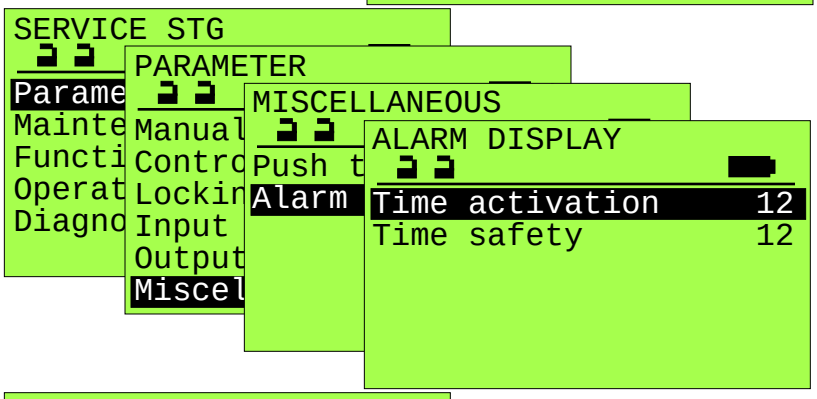
If a safety beam has been installed in the outer end of a guide rail, its N.C. output should be connected between terminals 4 and 5, and this parameter should be set to “2 Railbeam”.



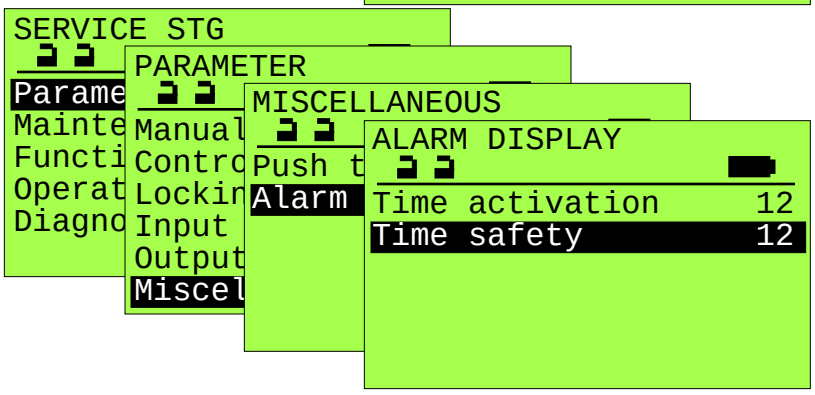
If a BEA BodyGuard is installed, this parameter should be set to “1 BEA Bodyguard”, and terminal 9 should be connected to the DATA + input of the BEA BodyGuard. See the Series 6100 &/or 8000 wiring diagram.



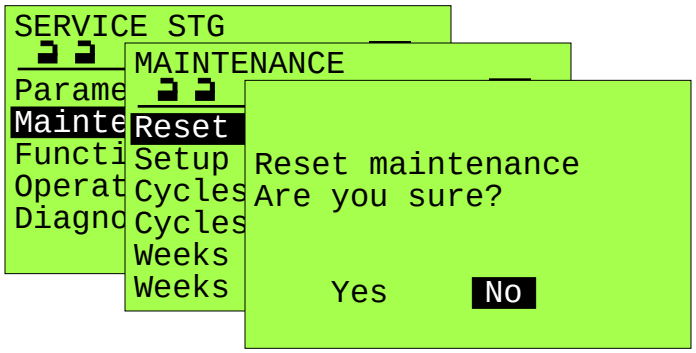
“2 Normal” will cause the operator to open at the adjusted “Open Speed” parameter. “3 Slow” will cause the operator to open in approximately 7.5 seconds. NOTE: When Push to Actuate is enabled, the operator will resist manually opening the door at a speed greater than the Open Speed the unit is adjusted to.



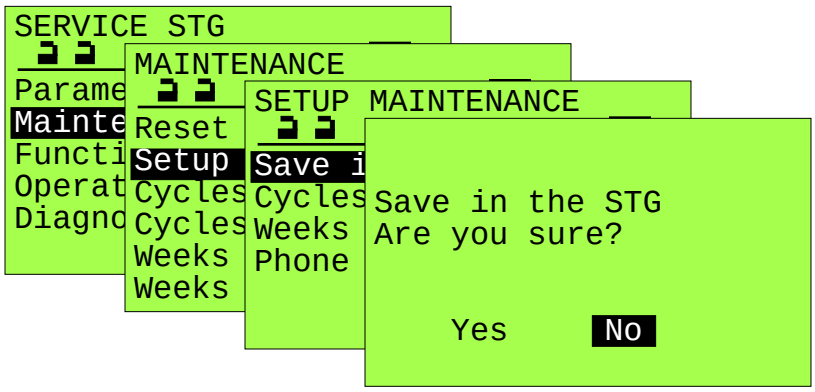
Sets the length of time a continuous actuate signal (terminal 2) will initiate an alarm status (red LED blinking on control panel or message on Display Control Panel). Adjusts in 5 second increments -
0 = Disables alarm
1 = 5 seconds before alarm
12 = 60 seconds before alarm
40 = 200 seconds before alarm



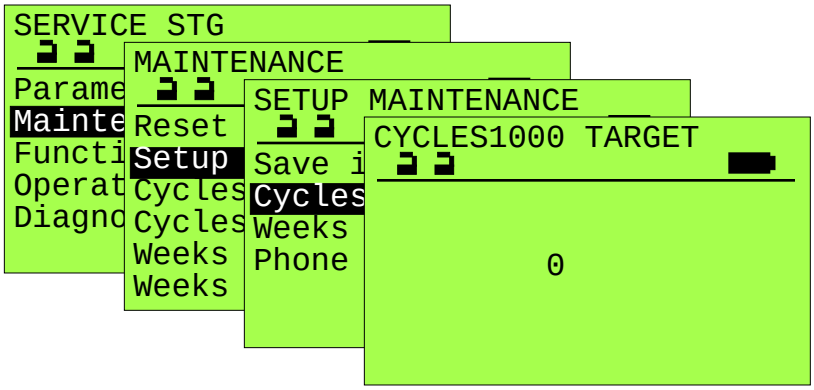
Sets the length of time a continuous safety signal (terminals 5, 8, 10 & 12) will initiate an alarm status (red LED blinking on control panel or message on Display Control Panel). Adjusts in 5 second increments -
0 = Disables alarm
1 = 5 seconds before alarm
12 = 60 seconds before alarm
40 = 200 seconds before alarm



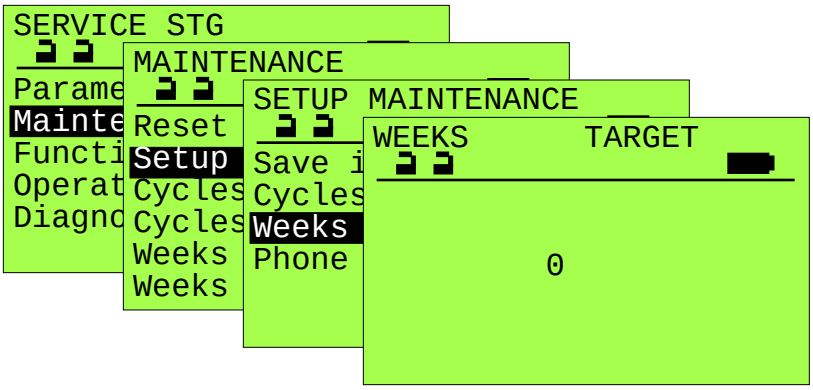
Useful in setting up a maintenance schedule.



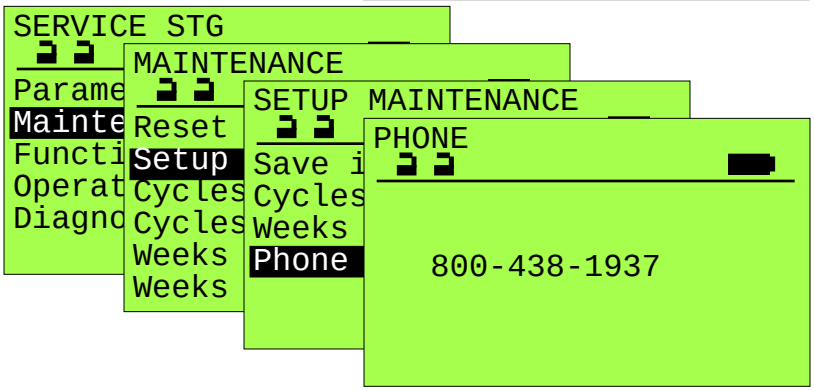
Useful in setting up a maintenance schedule.



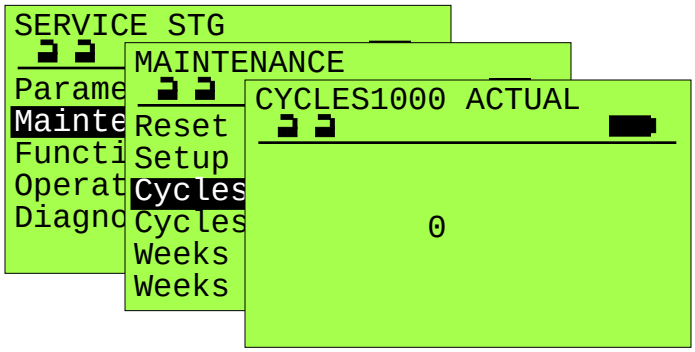
Useful in setting up a maintenance schedule.



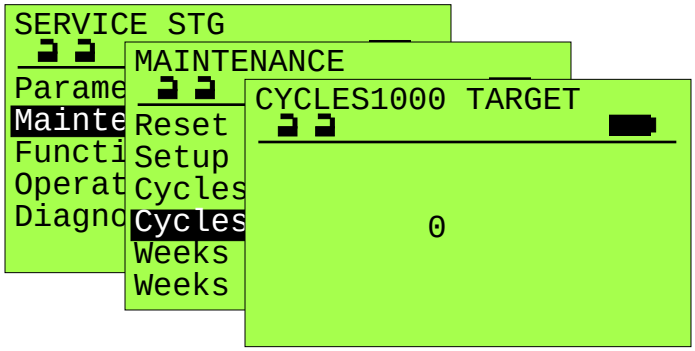
Useful in setting up a maintenance schedule.



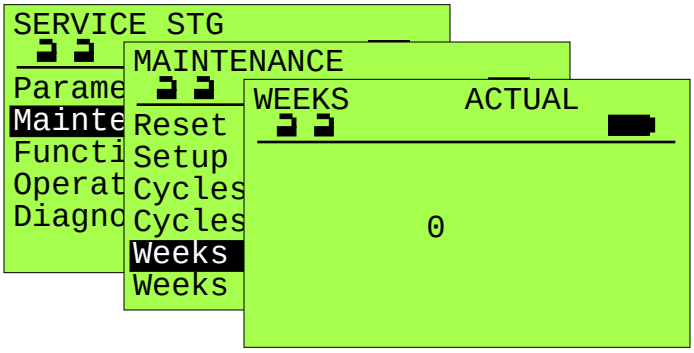
If a Display Control Panel is connected to the operator, this telephone number will momentarily display when the unit it turned on, and if an error display occurs, will alternately display with the Error Screen. If no number is entered, the unit defaults to the factory's 800 number. To store the number in the control, use"Save in the STG" at the bottom of the previous page.



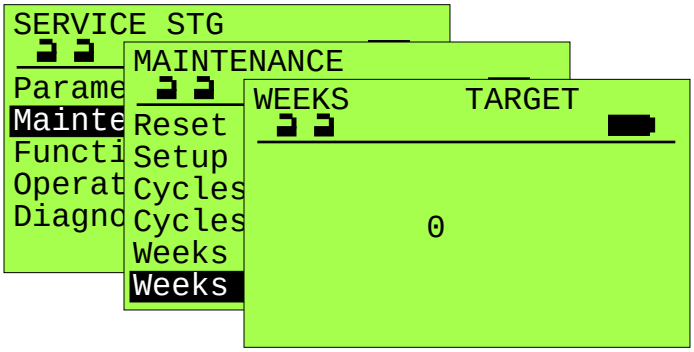
Useful in setting up a maintenance schedule.



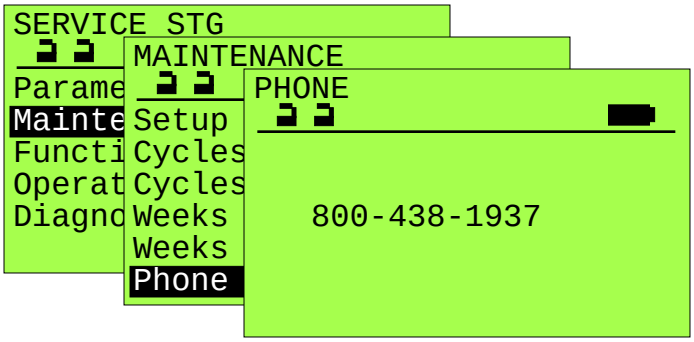
Useful in setting up a maintenance schedule.



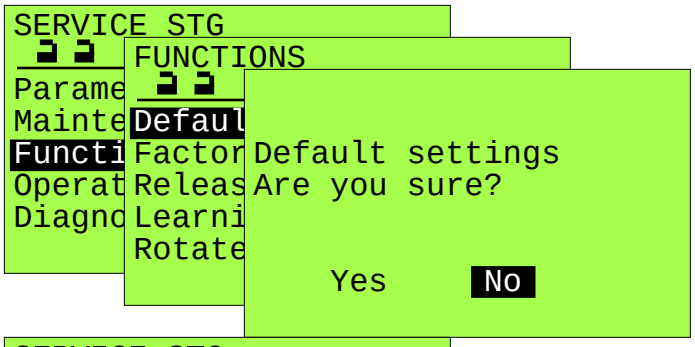
Useful in setting up a maintenance schedule.



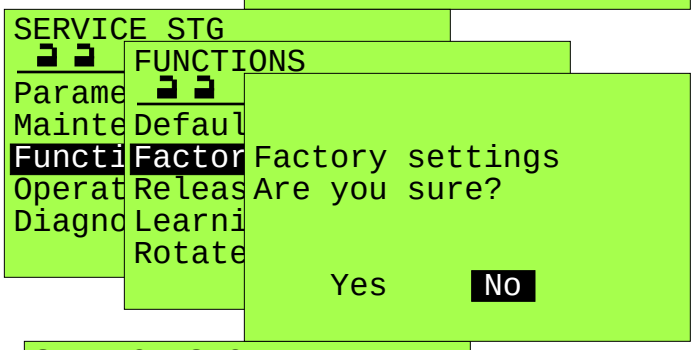
Useful in setting up a maintenance schedule.



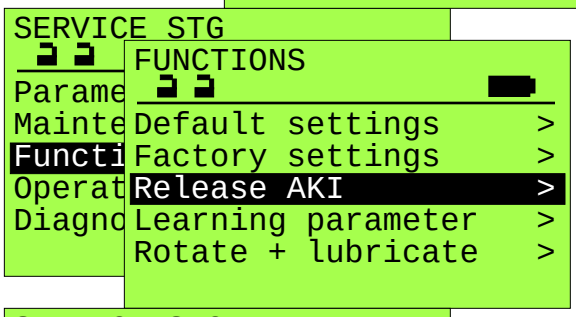
An alternate location for setting a custom telephone number. If a Display Control Panel is connected to the operator, this telephone number will momentarily display when the unit it turned on, and if an error display occurs, will alternately display with the Error Screen. If no number is entered, the unit defaults to the factory's 800 number. (It is not necessary to use "Save in the STG" from this screen.)



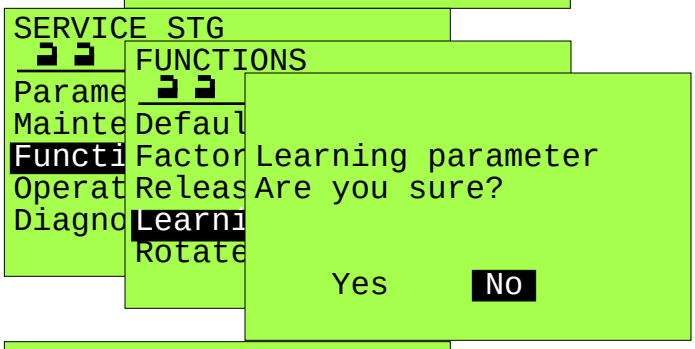
Performing this function will reset most of the adjustable parameters to their default settings. It will not reset the Entrance / Door Type.



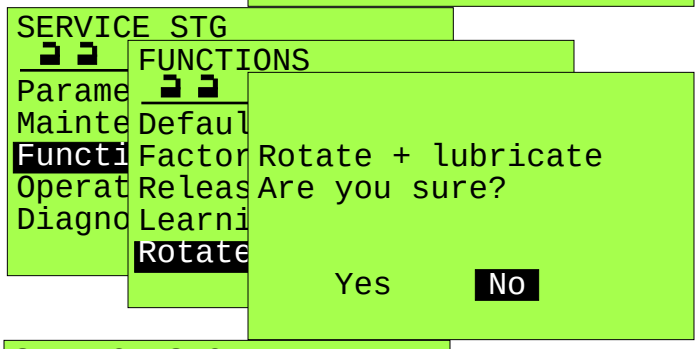
Not applicable on USA configurations.



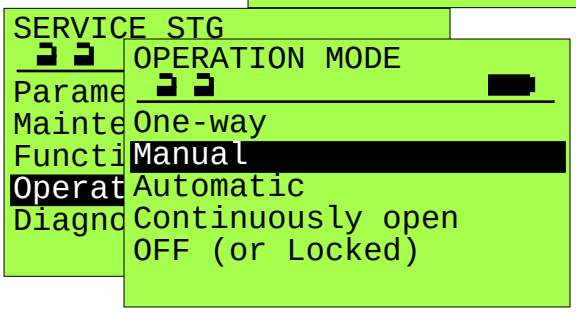
Selecting “Release AKI” will send an actate signal to the operator, similar to a contact closure between terminals 1 and 2.



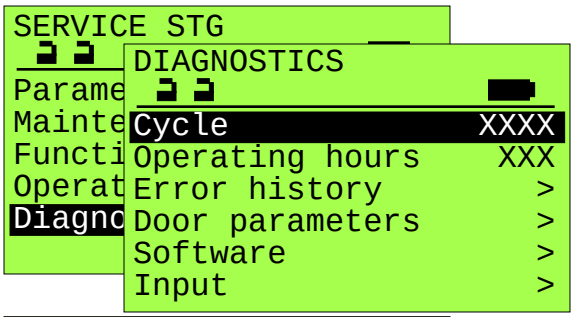
Initiates a calibration run, similar to pressing and holding the Control Button for 3 flashes of the Control LED.

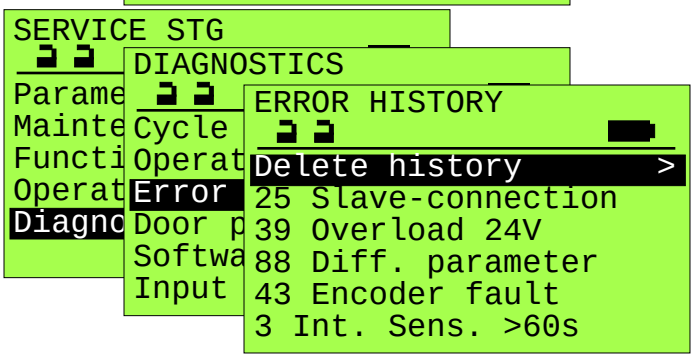


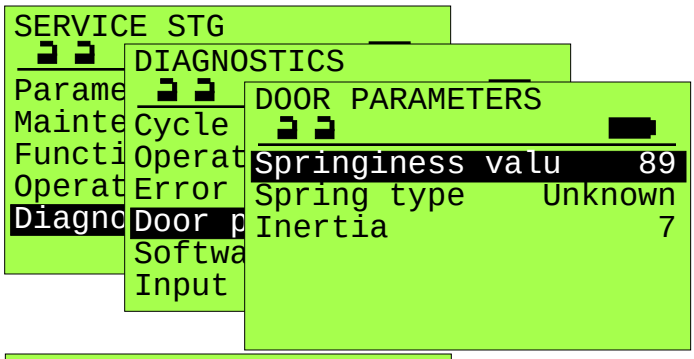
Before initiating this cycle, the drive arm must be removed from the operator output shaft and the open stop must be removed from the top of the operator. The operator output shaft will rotate 360°.

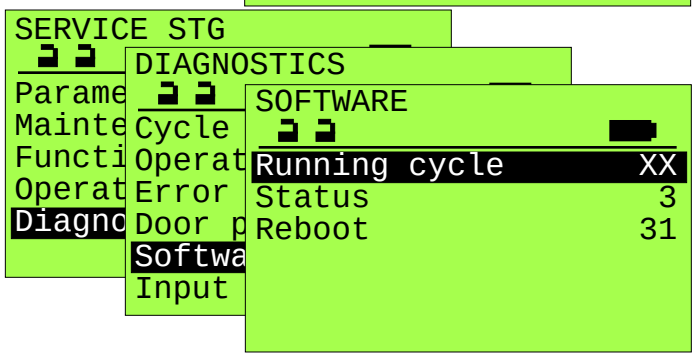


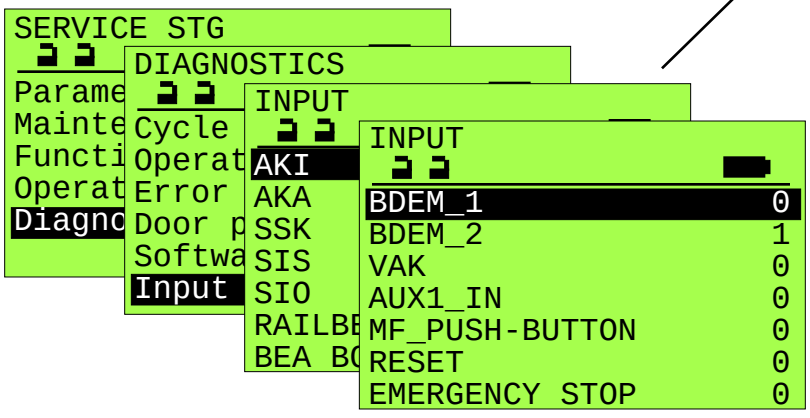
Indicates the current operational mode of the door. Note this screen does not dynamically update in response to changes to the control panel.
The Status screen, accessible anytime the terminal is servicing the unit (STG), will dynamically update in response to changes to the control panel(s).

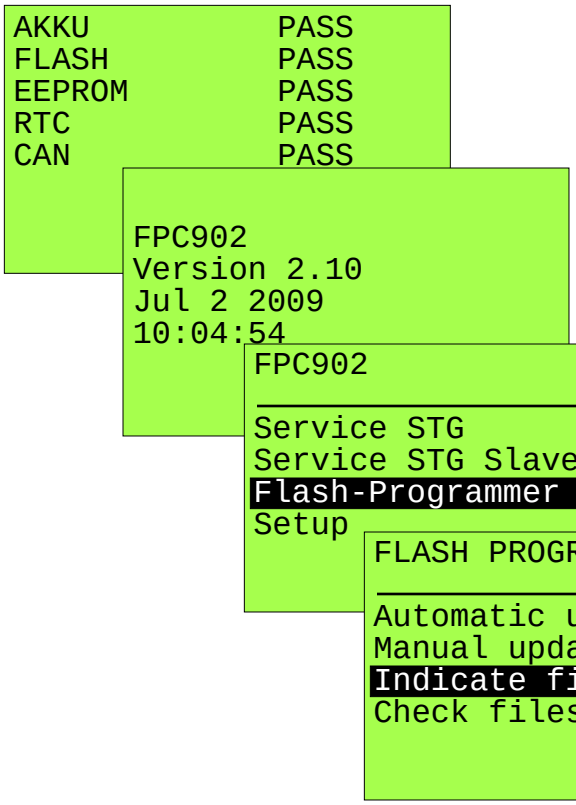

SERVICE STG
DIAGNOSTICS
Cycle XXXX
Operating hours XXX
Error history >
Door parameters >
Software >
Input >
Cycle indicates the total number of cycles the operator has performed.
Operating hours indicates the total number of hours the operator has been functional.


SERVICE STG
DIAGNOSTICS
ERROR HISTORY
Delete history >
25 Slave-connection
39 Overload 24V
88 Diff. parameter
43 Encoder fault
3 Int. Sens. >60s
Displays the last 10 errors that have occurred.
Useful in determining what has been occurring with the operator prior to servicing.
Delete history will clear the memory of all previous error codes.


SERVICE STG
DIAGNOSTICS
DOOR PARAMETERS
Springiness valu 89
Spring type Unknown
Inertia 7
For Factory reference.

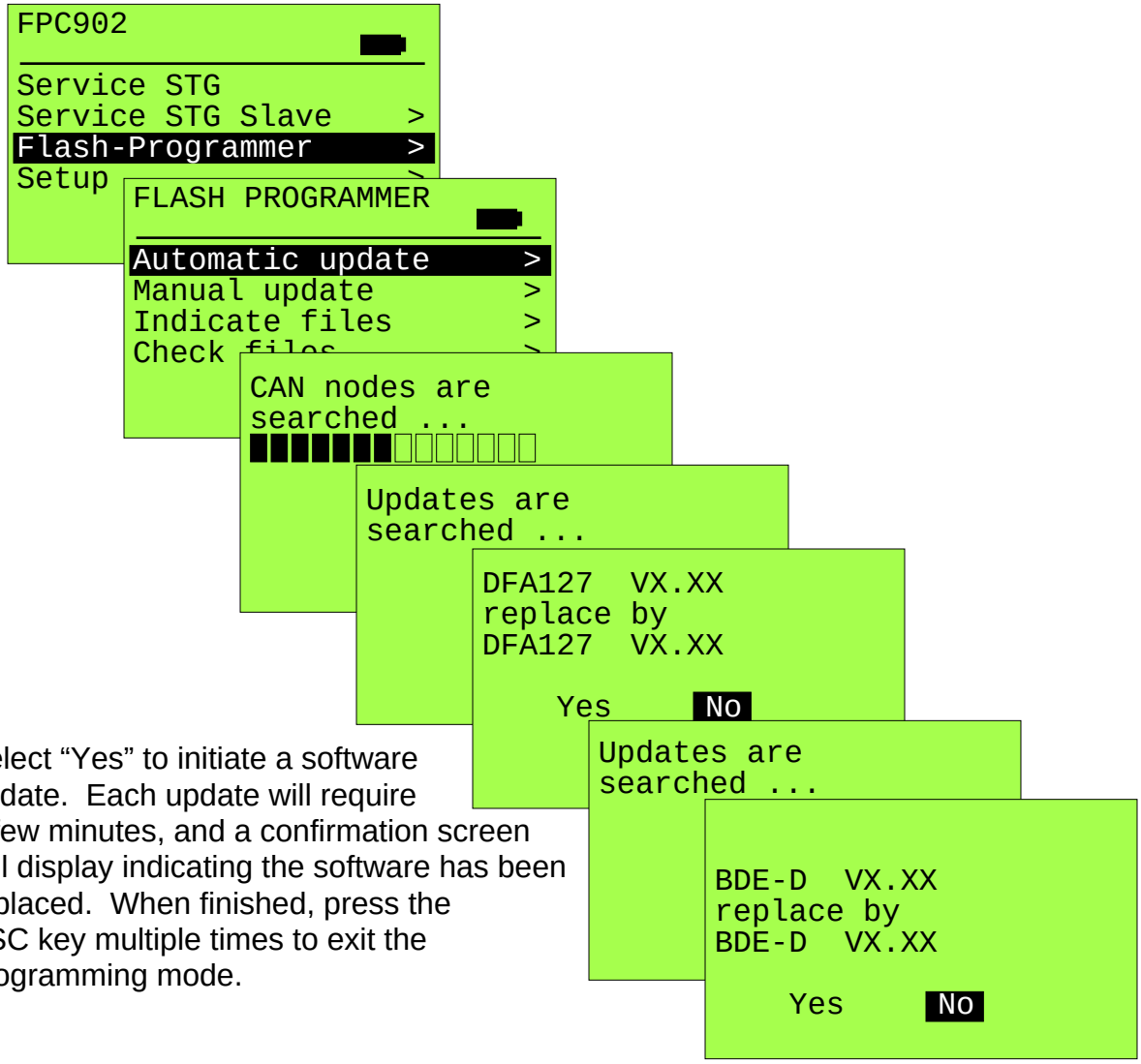

SERVICE STG
DIAGNOSTICS
SOFTWARE
Running cycle XX
Status 3
Reboot 31
For Factory reference.


SERVICE STG
DIAGNOSTICS
INPUT
INPUT
BDEM_1 0
BDEM_2 1
VAK 0
AUX1_IN 0
MF_PUSH-BUTTON 0
RESET 0
EMERGENCY STOP 0
This screen provides a real time status for each of the control's inputs. A "0" indicates the input is not actuated, a "1" indicates it is actuated.
AKI = Approach Sensor
AKA = Two-Way traffic 2nd Approach Sensor
SSK = Remote Switch (active when unit is off)
SIS = Door Mounted Approach Sensor
SIO = Door Mounted Swing-side Safety Sensor
RAILBEAM = Guide Rail Safety Beam
BEA Bodyguard = Transom mounted Safety
BDEM_1 = Rocker Switch "Hold Open"
BDEM_2 = Rocker Switch "Automatic"
VAK = Locking Monitor Switch
AUX1 = Input when Bodyguard is disabled
MF_PUSH-BUTTON = Pushbutton on control
RESET = Pushbutton with Rocker switch
EMERGENCY Stop = Fire Alarm Input (14 & 15)

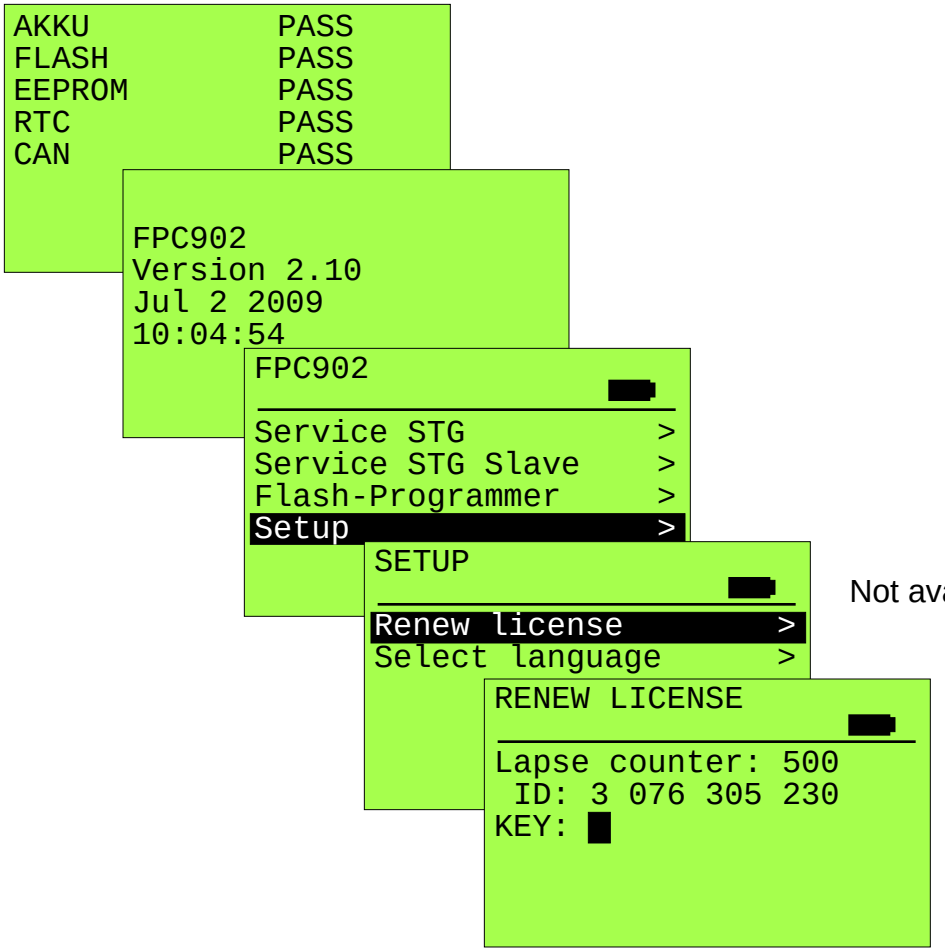


This sequence of screens will access and display the files currently stored on the removable MMC card located in the top of the FPC-902 Terminal. The next page will document the transfer of the appropriate files into the operator control.

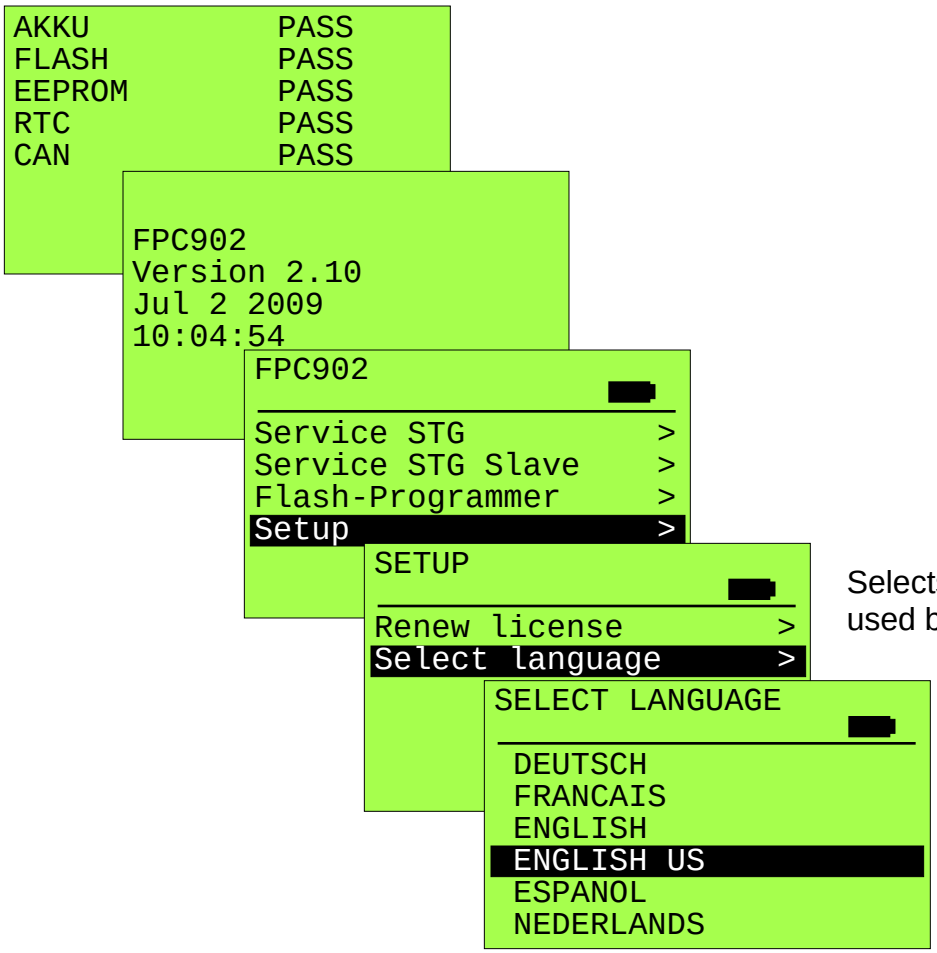
The following sequence of screens are to be followed when updating door and display software.



Select “Yes” to initiate a software update. Each update will require a few minutes, and a confirmation screen will display indicating the software has been replaced. When finished, press the ESC key multiple times to exit the programming mode.

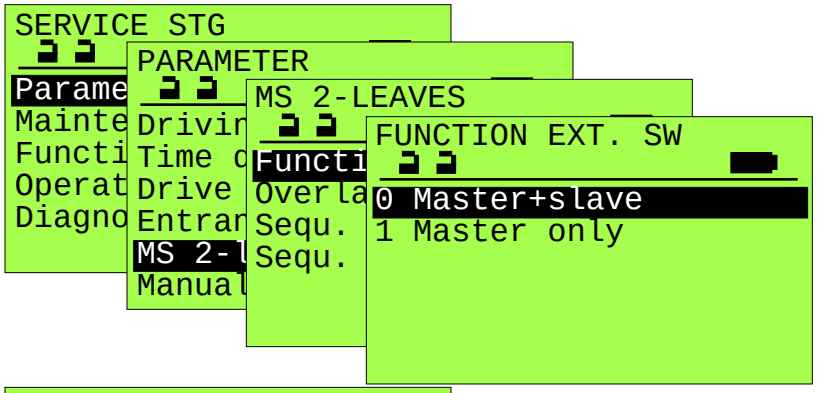


Not available in US versions

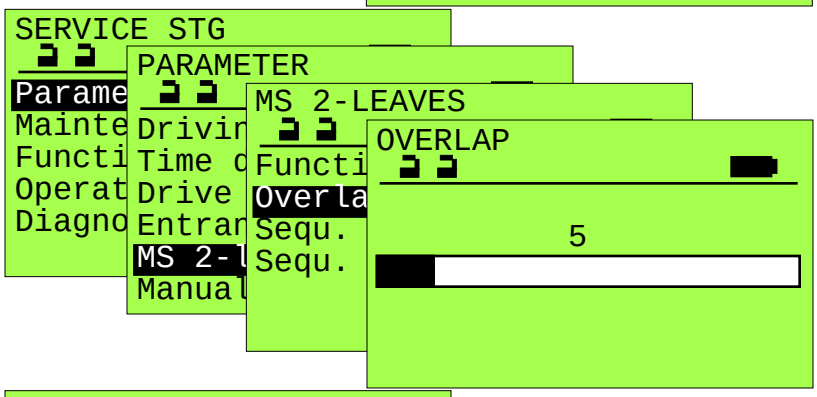


Selects the desired language used by the FPC-902

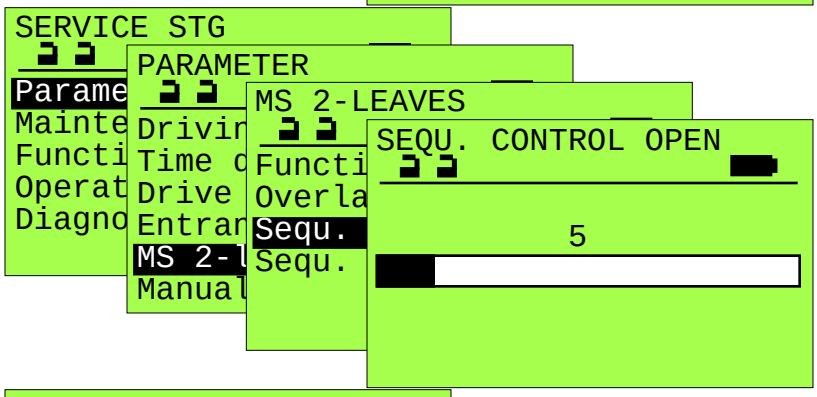
Screens Available when synchronizing two operators
Both Simultaneous Pairs and Double Egress



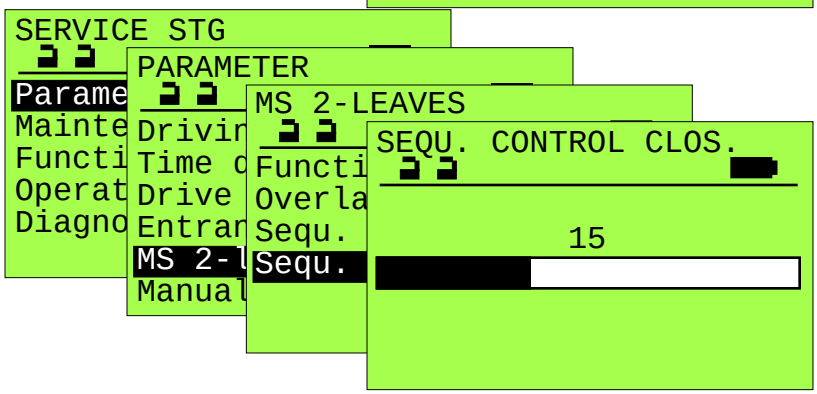
This is automatically set by the controls upon reading the Master / Slave jumper block (J13) on the controls.



This sets the lead time and lag time between operation of the master and slave operators, useful with an over-lapping astragal. When set above 0, the Master begins opening before the slave and will stop 10° before fully closed, allowing the slave to close first. When set to 0, operation is simultaneous.



This adjusts a delay time between when the master operator begins opening and when the slave begins. Closing will not be affected. When set to 0, operation is simultaneous.



This adjusts a delay time between when the slave operator begins closing and when the master begins closing. Opening will not be affected. When set to 0, operation is simultaneous.

When ordered as a dual synchronized pair or a double egress, the operators are factory wired and parameters preset. If any changes are made, the following setup sequence is suggested - Insure Jumper J14 is set to M1 on the master unit and set to S1 on the slave unit. Apply power to both units, then press and hold the blue Control button on the master control for 8 flashes of the red LED (reset to factory defaults). Next press and hold the Control button for 8 flashes on the slave control. Return to the master unit and press & hold the Control button for 3 flashes of its red LED (initiate a calibration run). Finally, press & hold the button for 3 flashes on the slave control. The units should now be configured for synchronous operation, and with the above parameters set to 0 providing simultaneous operation. Note: If only one rocker switch is used, it is to be connected to the master control, and the slave control parameter CONTROL PANEL / MECHANICAL PANEL should be set to 0 3 Pos. (AUTO).