GYRO TECH
1175
WHISPER SLIDE
OWNER'S MANUAL

NABCO
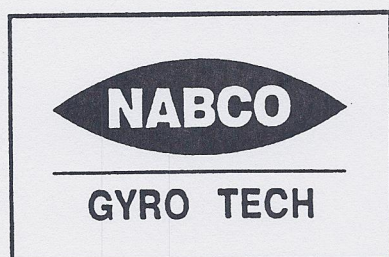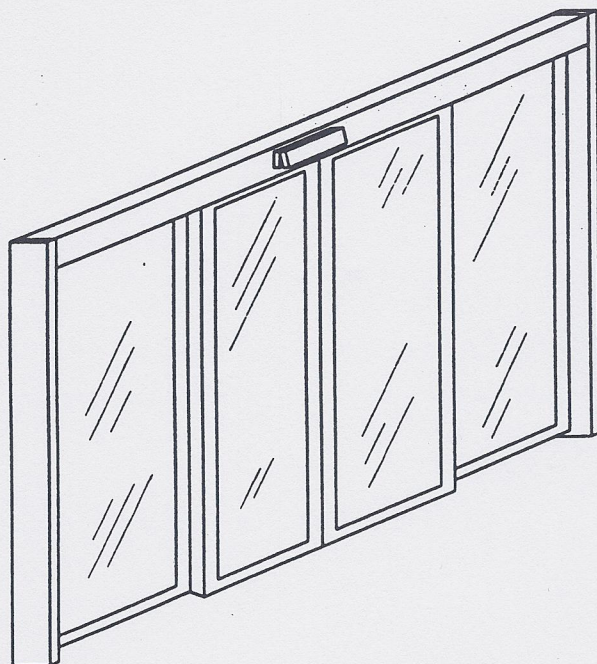
GYRO TECH

Gyro Tech Entrance Systems
Instruction Manual
For
Microprocessor Controller
and Handy Terminal
For Gyro Tech Slider Type Doors

GYRO TECH
ENTRANCES
LANSON INDUSTRIES INC.

Index

Note: Wiring Diagrams -
Various wiring diagrams are available. Contact Customer Service for information.

1.0 Summary

This Microprocessor Controller is on the leading edge of technology for the operation and control of an automatic door. These units allow you to adjust 20 different operational functions with over 150 different options. In addition, several auxiliary output signals are available to further customize the operation of the door. These are all intended to help you achieve the operation of the door most suited to your customers preferences and in accordance with applicable standards.
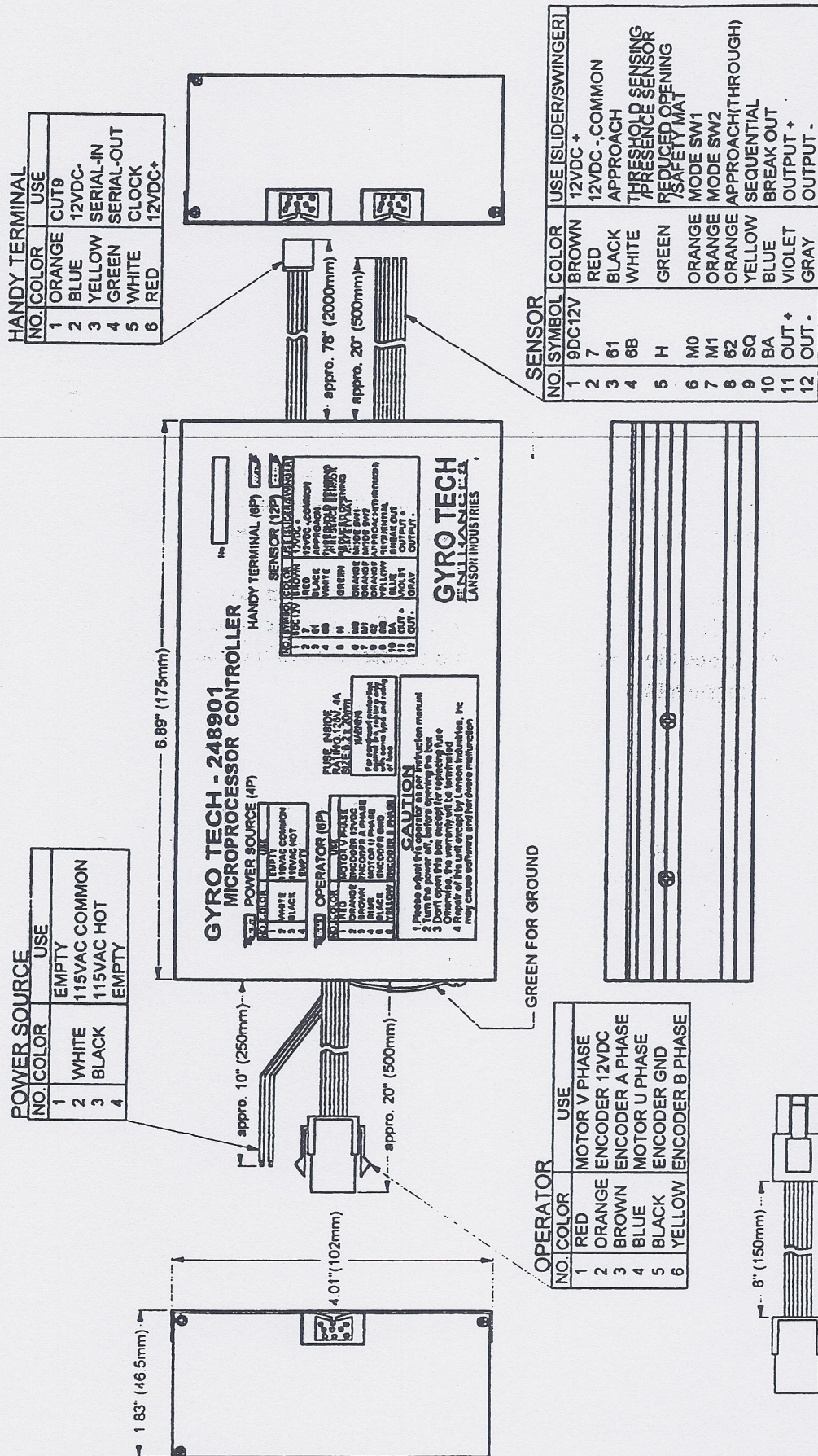
To aid in the management of the door, this controller will also provide a count of the number of service calls by counting the connections with the Handy Terminal. It will also provide a count of the opening and closing operations and the number of times the door has recycled.

The companion Handy Terminal is used to make the desired adjustments of the controller. With the Handy Terminal, adjustments to the controller can be made easily and quickly. The Handy Terminal is connected directly to the microprocessor controllers, eliminating the need for batteries. The Handy Terminal is light and compact and easy to use with one hand.

This microprocessor controller can also be used in conjunction with the Handy Terminal for swing and folding door applications. Consult the Instruction Manual for Swingers and Folding doors for the proper set up procedures, since there are some specific differences in the procedures, specifications and operating parameters.

2.0 Controller Specifications

1.	Required Power Source	115VAC +/-10% 50/60 cycle
2.	Power available from the controller for operation of auxiliary equipment.	12 VDC 0.5 Amps
3.	Recommended Operating Temperature range (Without full time power)	-20 - +60 C -4 - +140 F
4.	Maximum recommended Door Weight	300lb
5.	Hold Open Time Delay Range	0 - 67 Seconds
6.	Door Movement Range - Slider	100 - 3500mm 4" - 11'-5"
7.	Back Check Range Slider	50 - 100mm 2" - 4"
8.	Allowable range for the limited door opening feature	100 - 3500mm 4" - 11'-5"

HANDY TERMINAL

NO.	COLOR	USE
1	ORANGE	CUT9
2	BLUE	12VDC-
3	YELLOW	SERIAL-IN
4	GREEN	SERIAL-OUT
5	WHITE	CLOCK
6	RED	12VDC+

SENSOR

NO.	SYMBOL	COLOR	USE (SLIDER/SWINGER)
1	9DC12V	BROWN	12VDC+
2	7	RED	12VDC-,COMMON
3	61	BLACK	APPROACH
4	6B	WHITE	THRESHOLD SENSING/PRESENCE SENSOR
5	H	GREEN	REDUCED OPENING/SAFETY MAT
6	M0	ORANGE	MODE SW1
7	M1	ORANGE	MODE SW2
8	62	ORANGE	APPROACH(THROUGH)
9	SQ	YELLOW	SEQUENTIAL
10	BA	BLUE	BREAK OUT
11	OUT +	VIOLET	OUTPUT +
12	OUT -	GRAY	OUTPUT -

PART No. 248901

POWER SOURCE

NO	COLOR	USE
1		EMPTY
2	WHITE	115VAC COMMON
3	BLACK	115VAC HOT
4		EMPTY

OPERATOR

NO	COLOR	USE
1	RED	MOTOR V PHASE
2	ORANGE	ENCODER 12VDC
3	BROWN	MOTOR U PHASE
4	BLUE	ENCODER A PHASE
5	BLACK	ENCODER GND
6	YELLOW	ENCODER B PHASE

GYRO TECH - 248901
MICROPROCESSOR CONTROLLER

GYRO TECH
A DIVISION OF
LANSON INDUSTRIES

GREEN FOR GROUND

appro. 78" (2000mm)
appro. 20" (500mm)
6.88" (175mm)
appro. 10" (250mm)
appro. 20" (500mm)
4.01" (102mm)
1 83" (46.5mm)
8" (150mm)

HANDING HARNESS (PART No.119208)

1.8" (45mm)

7.5" (190mm)

6.7" (170mm)

CABLE

PART No. 148903

9.1" (230mm)

LANSON
NAME

ENTRY

SHIFT

BACK

TEST

CASE

HANDY TERMINAL

HANDY TERMINAL

2.4" (62mm)

3.8" (97mm)

HANDY TERMINAL

TEST

BACK

SHIF

ENTRY

LANSON
NAME

2.7" (68mm)

6 3" (160mm)
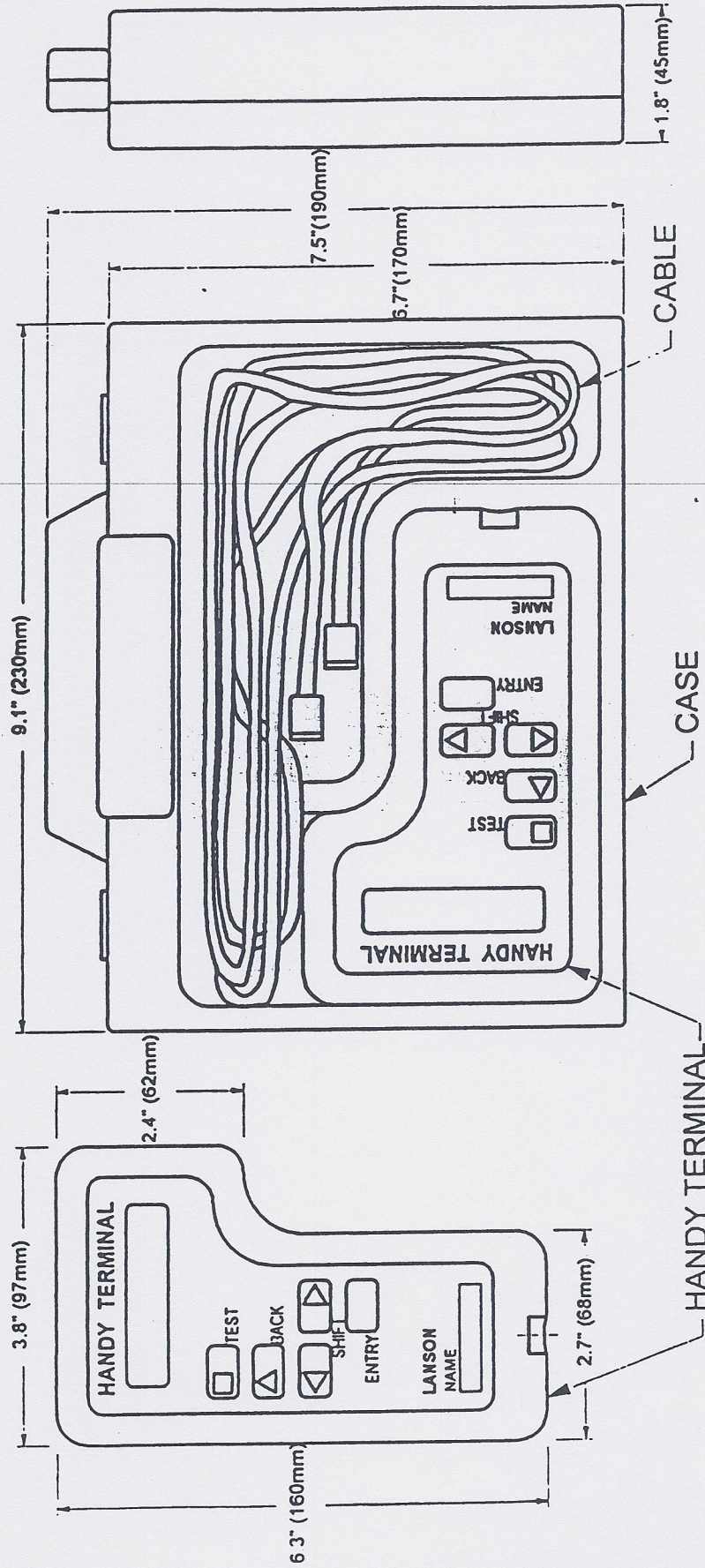
Handy Terminal appearance and parts
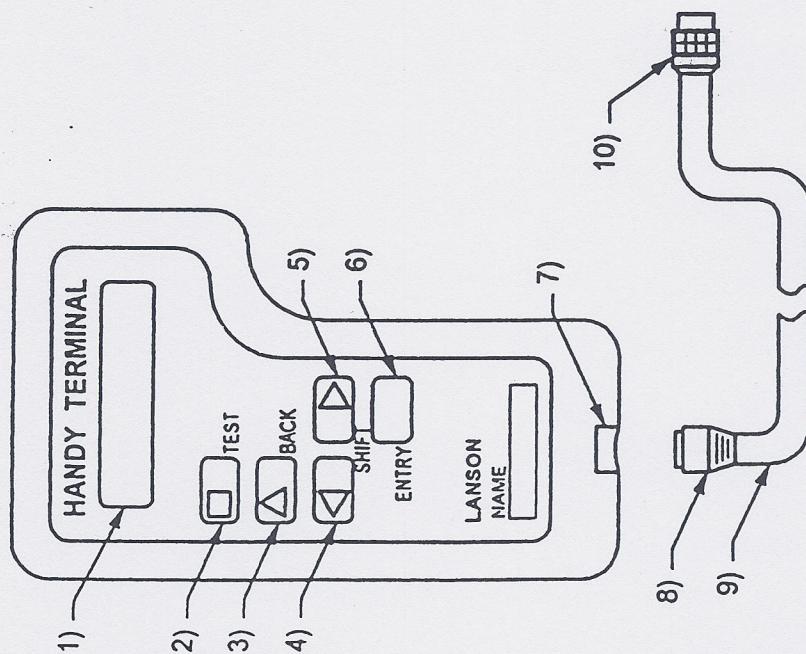
1) Liquid crystal display (LCD)
   It shows those that follow.
   *Setting modes
   *Setting items
   *Present settings
   *Change of the settings
   *Data for maintenance
   *Messages

2) "TEST" key
   It is provided to test the operation of the door.
   If you push "TEST" key, the door will open and then close.

3) "BACK" key
   It is provided to back the indication on display one at time.

4) "L-SHIFT" key
   It will move the cursor on display to the left.

5) "R-SHIFT" key
   It will move the cursor on display to the right.

6) "ENTRY" key
   It is provided to select the setting mode, and to enter
   a new setting.

7) Receptacle
   It is provided to connect with "8)" plug.

8) Plug to the Handy Terminal

9) Cord

10) Plug to the controller

3.0 Appearance, Dimensions and Explanation of Sensor Signal Options

3.01 For the appearance and dimensions of the microprocessor see page 5.

3.02 For the appearance and parts of the Handy Terminal see pages 6 and 7.

3.03 Explanation of Sensor Signal Options (See page 5 and the label on the cover of the controller)

Wire	Comment
1.	Power source for other devices to be used with the door such as the Acusensor. The output is 12VDC and with a maximum capacity of 0.5Amps.
2.	Ground for the power source (wire #1-12V DC). Also the common ground for other signal requirements.
3.	Activation signal input. Will open the door based upon a signal from the Acusensor, mat, motion detectors or other signal source.
4.	Holding beam input. (When Holding Beams are used.) Note: Under normal conditions a closed door will open when the holding beam signal is activated. With the use of the Handy Terminal, this can be changed to have the doors remain in the closed position. See section 7.02.
5.	Reduced opening input. Wiring this to a switch enables a reduced door opening simply by activating the switch. This feature is set up with the Handy Terminal. See section 7.05
6.	Mode Input M0 for SW.1 These two switches are to achieve the special functions
7.	Mode Input M1 for SW2. outlined. If an electric lock is used also, the status of the lock is shown. (See section 7.09 Auxiliary Output also)

SW1	SW2	
Off	Off	Auto mode. Approach and approach through signals are available. Electric lock is always unlocked.
Off	On	Night mode. None of the activation signals will be accepted. Electric lock is always locked.
On	On	Full open mode. The door keeps full open point, not affected by sensors. Electric lock is always unlocked.
On	Off	One way traffic mode. The approach and/or the holding beam signal is available. The electric lock is unlocked and after a delay the door starts to open. The door will be locked after the same delay after arriving to the full closed point. The time delay is set per special function adjustments per 7.09(Auxiliary Output).

8.	Allows the approach through actuating signal to hold open/re-open the door from any position until the door is fully closed. This feature should be used in combination with the one way traffic mode.
9.	This allows a sequence of signals to open and then close the door. The first signal will open then the second will close the door.

10.   If the door is broken away the controller will stop operating. After a return to normal, the door will respond to sensor signals. Normally this feature should always be included in the operation of the door.

11.   Auxiliary Output(+). Used as a switch with a maximum rating of 24V DC and 50mA for an outside power source. When used with wires #1, #12, and #2 can supply 12V DC and a maximum 50mA of power

12.   Auxiliary Output(-). Rated to a maximum of 24V DC and maximum 50mA. This is the ground (-) for output wire #11. **Caution.** This wire must be used with #11. Mis-wiring will cause failure of the auxiliary signal output.

4.0 Activation Procedures

4.01 Cautions

Before turning on the power be sure:
-all parts are wired properly (Motion sensors, Acusensor, Holding Beams etc. The exception is the mode switches which must be set at AUTO mode then reset after the Handy Terminal set-up.)
-is wire #10 required?
-the power source is 115VAC +/-10%
-check again

The controller will be damaged if the power supply is switched ON and OFF too quickly. It is required to wait one (1) minute to switch the power ON after having switched it OFF.

In the event of a power surge which may cause a fuse failure, the fuse can be replaced. The power should be disconnected and the cover can then be removed to replace the fuse. Do not attempt the repair of this microprocessor unit.

4.02 Normal Set-up

Normal set-up of the microprocessor involves only the correct wiring of the unit followed by set up of the operation of the door. If none of the special features available through the sensor wiring options are used, the pre-programmed operating parameters will operate the door. The factory settings are reasonable but not mandatory for the operation of a specific door. Each of these operations should be reviewed carefully. Be sure the door is operating in accordance with the applicable ANSI or other controlling standards and/or contract specifications before releasing the entrance to the owner.

Place the door in the center of its range of movement. Plug the Handy Terminal into the mating plug for the controller. After the power is turned on the Handy Terminal will guide you through the set up procedures in addition to programming the controller. It will guide you with a series of printed messages and a listing of the acceptable options. The option desired can be achieved by placing the cursor over the option and pressing the ENTRY button.

The initial set up of the door can be achieved in the following four (4) simple steps as prompted by the Handy Terminal messages.

Turn on the power. Note the direction of movement. The door should close slowly.

If the door opens slowly it has been set-up with the wrong hand. Turn off the power and insert the handing harness between the controller and the operator. After a one (1) minute wait, turn on the power. Note the direction of movement. The door should now close slowly.

Handy Terminal Message: Slide/Swing/Strk
1. Move the curser to the Y position and press ENTRY

Handy Terminal Message: Swing Door? N
2. Move the curser to the N and press ENTRY

Handy Terminal Message: Full Open Point - Push Test
3. Move the door to the full open point then press TEST
Handy Terminal Message: Adjusting Now .. Just a moment.

The door should be slowly moving from the full open position to the closed position. As it moves it is measuring the stroke of the door. Be sure no obstacle is encountered which would cause it to incorrectly measure the stroke.

Handy Terminal Message: Std Function Y N
4. With the curser at N and after the door has fully closed - press TEST
Handy Terminal Message: During a test. Just a moment.

If the test of the door was satisfactory the Handy Terminal can be disconnected.

4.03 Disconnect Procedures

The Handy Terminal can be disconnected after the last test is completed and the display has stabilized. This process normally takes about 10 seconds after the display indicates it is ready to accept new input with the key . After that time lapse the Handy Terminal can be disconnected.

If you need to cut the power to the controller, wait an additional 10 seconds to be sure all settings are established in the controller.

Caution: Failure to follow the above procedures may result in the total lose of communication between the controller and Handy Terminal.

Note: The Handy Terminal is a sophisticated piece of electronic apparatus. Care should be exercised when handling this unit. When all adjustments are completed, it should be stored in the

protective box/cover and not exposed to rain or dust. Care should be taken not to drop the unit or press the LCD surface.

The door could now be operational based upon the functions as they have been preset at the factory. **The factory settings are reasonable but not mandatory for the operation of a specific door. Each of these operations should be reviewed carefully.   Be sure the door is operating in accordance with the applicable ANSI or other controlling standards or contract specifications before releasing the entrance to the owner.**

The factory setting for each of the functions are shown for your information.

Table 1
Factory Settings of the Adjustable Functions

Adjustable Function	Factory Setting	Options
1. Standard Function Adjustments		
Opening Speed	5	(Range 0 - 7)
Closing Speed	3	"
Time Delay	2	"
2. Feeling Adjustments		
Start Power	3	"
Check Power	6	"
Reaction Power	4	"
Back Check Speed	1	(Range 0- 3)
Latch Check Speed	1	"
3. Special Function Adjustments		
Hold Close	Y	(Yes or No)
Holding Beam	Y	"
Power On	0	(Range 0 - 3)
Manual Opening	0	"
Reduced Opening	N	(Yes or No)
Recycle	Y	"
Recycle Sensitivity	1	(Range 0 - 3)
After Recycle	Y	(Yes or No)
Auxiliary Output	0	(Range 0 - 3)
Output Timer*	0	"
Extended Time Delay	7	"

     *Output timer selection required only when selecting 0&2 on the
     Auxiliary output.

Any of the above functions can be adjusted to the requirements of your specific door. To comply with ANSI Standards and UL requirements for pedestrian doors the following settings are required for the Closing Speed and Recycle Sensitivity:

Closing Speed - Settings 0,1,2 or 3 only
Recycle Sensitivity - Settings 0 or 1 only

The factory/existing setting of a function will automatically be highlighted on the Handy Terminal when the adjustment range for the function is shown.

5.0 Adjustment Procedures - Standard Functions

Adjustments to the operation of the door must be made if the door is not operating in accordance with the applicable ANSI or other standards and/or the contract specifications. Adjustments of the various door functions are easily made with the use of the Handy Terminal. Adjustment options fall into three categories. To make any of these adjustments it is necessary to be in this program of the Handy Terminal.

The Standard Functions program is immediately after the normal set-up.

Handy Terminal Message: Std Function Y N
Enter Y

Entering Y will make available the Standard Functions program. Entering N would bypass this program and proceed to the next program (Feeling Adjustments). The first adjustment range offered in the Standard Functions program is the Opening Speed.

5.01 Opening Speed Adjustment.

Handy Terminal Message - Open Speed - 5
Eight options are offered from 0 to 7. The approximate speeds will range from 2.0
        in/sec (0.05m/sec) to 28 in/sec (0.70m/sec)
Factory Setting is per Table 1
Make the adjustment by placing the Curser at the selection and pressing ENTRY

5.02 Closing Speed Adjustment

Handy Terminal Message - Close Speed - 3
Eight options are offered from 0 to 7. The approximate speeds will range from 2.0 in/sec
        (0.05m/sec) to 28 in/sec (0.70m/sec)
Factory Setting is per Table 1
Make the adjustment by placing the Curser at the selection and pressing ENTRY

Note - To comply with ANSI and UL requirements for the closing force the closing speed setting of 0,1,2 or 3 must be used.

5.03 Time Delay

Time Delay adjustment determines the amount of time the door will stay open after any presence or activating signal stops.

> Handy Terminal Message - Time Delay - 2
> Eight options are offered from 0 to 7 with time delays of 0 to 7 seconds
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY
>
> Note: Additional time delay is possible through the Special Functions adjustments. See
>   section 7.10 External Time Delay.

This will complete the Standard Function Adjustments.

6.0 Adjustment Procedures - Feeling Adjustments

The next program will be the Feeling Adjustment options. The Handy Terminal will read:
Feeling Adjust ? Y N By entering N this program will be skipped. By entering Y these options will be made available. The first option will be the start power.

6.01 Start Power

This is the power available which will cause the door to accelerate at the start of the opening and closing cycles. For a smaller and lighter door a slower acceleration would typically be selected. For a larger and heavier door you would typically select a faster acceleration.

> Handy Terminal Message- Start Power - 3
> Eight options are offered from 0 to 7. The slowest acceleration, 0, would typically be
>   used with very narrow or light doors. The fastest acceleration, 7, would typically
>   be used with very heavy doors or where high speed operation is required.
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

6.02 Check Power

Adjustment of the braking power to reduce the speed of the door to the check or latch speed. See the note for 6.01 on selection guidelines.

> Handy Terminal Message - Check Power - 6
> Eight options are offered from 0 to 7. Zero (0) will provide a gradual braking to the
>   check or latch speed while seven (7) will provide the fastest braking.
> Factory setting is per Table 1
>
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

6.03 Reaction Power

This is the amount of time between check power and start power when the door is reacting to an activating signal while the door is closing.

> Handy Terminal Message - Reaction Power
> Eight options are offered with settings from 0 to 7. 0 will provide the slowest and
> 7 the fastest reaction.
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

6.04 Back Check Speed

This adjusts the back check speed.

> Handy Terminal Message   - Back C Speed - 1
> Four options are offered from 0 to 3. The slowest setting is 0 with an approximate speed
> of 1.6 in/sec (4cm/sec) to the fastest at 4.0 in/sec (10 cm/sec.)
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

6.05 Latch Check Speed

This adjusts the latch check speed.

> Handy Terminal Message   - Latch C Speed - 1
> Four options are offered (see 6.04 above for explanation of options)
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

This will complete the Feeling Adjustment options.

7.0 Adjustment Procedures - Special Function Options

The next program available is the Special Function options. The Handy Terminal will read Special Function Y N. By entering the N this program will be skipped. By entering Y the Special Function options can be adjusted. The first option will be the Hold Close feature.

7.01 Hold Close

This adjustment offers the ability to hold the door closed with the motor or leave the door free.
> Handy Terminal Message - Hold Close - Y

Two options: Y = Push to the close direction with the motor (Suggested when the electric lock is used)

N = The door is free at the closed position

Factory setting is per Table 1

Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.02 Holding Beam

When sensor signal wire #4 is used in combination with holding beams, this adjustment will cause the door to open or not open from the closed position.

Handy Terminal Message - Holding Beam - Y

Two options: Y = The holding beam will cause the door to open

N = The door does not open by the holding beam.

Factory setting is per Table 1

Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.03 Power On

After the unit has been completely set up and normally operational, this setting will determine what will happen when the power is turned ON after having been turned OFF or otherwise interrupted. A typical circumstance would be if the owner unlocks the door and opens it manually before turning on the power. When the power is first turned ON the door must first reach a fully open or a fully closed position to enable the microprocessor to start normal operations since the microprocessor no longer knows the location of the door.

Handy Terminal Message - Power On - 0

Four options are available.

0 - The door slowly reaches fully closed. The door is then ready for normal operations.

1 - Door closes slowly. If activated while closing, the door will fully open, then close normally.

2 - The door slowly reaches fully open then closes normally

3 - The door stays in the manually opened position until activated. It will then open slowly and then closes normally.

Factory setting is per Table 1

Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.04 Manual Open

After the unit has been completely set up and is normally operational these settings offer the choice of how the door will act if it is manually opened. This might occur because the activating device for some reason was not used or did not operate properly.

Handy Terminal Message - Manual Open - 0
Four Options are available:
> 0 - The door will stay in the position it was opened to manually
> 1 - Starting to open the door manually will activate the door to power open
> 2 - After the door has been manually opened it will slowly close.
> 3 - The door will power close while trying to manually open.

Factory setting is per Table 1
Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.05 Reduced Opening

This adjustment will enable any reduced opening of the door.

> Handy Terminal Message - Reduced Opening - Y N
> Adjustment: Set the cursor to "Y" and push the ENTRY button. Manually move the door to the desired reduced open width and push the TEST button. The door will close slowly memorizing the point of reduced width.

7.06 Recycle

Adjustment for operation when the door encounters an obstacle during the closing cycle.

> Handy Terminal Message - Recycle ? N
> Two options are available.
> > Y = The door opens
> > N = The door stops. The door will open by the activating signal
>
> Factory setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.07 Recycle Sensitivity

Adjustment for the sensitivity of the force which will cause the door to recycle.

> Handy Terminal Message - Recycle Sens - 1.
> Four Options available from 0 to 3 with 0 being the softest and 3 the hardest.
> Factory Setting is per Table 1
> Make the adjustment by placing the Cursor at the selection and pressing ENTRY

Note: The recycle sensitivity must be at 0 or 1 and the closing speed at 0, 1, 2 or 3 to meet the ANSI and UL code requirements for the closing force.

7.08 After Recycle

Adjustment for the operation after the door reaches the full open position caused by the recycle.

>Handy Terminal Message - After Recycle - Y
>Two option are available:
>>Y - The door will close after the time delay expires.
>>N - Stop and stay in the open position. It will take another activating signal for it
>>to time out and close.
>
>Factory Setting is per Table 1
>Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.09 Auxiliary Output
This setting will determine when a signal (from wires 11 & 12) is sent for the operation of the electric lock, another controller, relay or other device.

>Handy terminal Message - Aux. Output - 0
>Four options are available
>>0 - Electric Lock. This will enable the operation of the Lanson electric lock. You
>>will also need to select the time delay between the release of the lock and
>>the movement of the door.
>>Handy Terminal Message - Output Timer - 0
>>Four options are available
>>>0 - 0.25 second
>>>1 - 0.50 second
>>>2 - 0.75 second
>>>3 - 1.00 second
>>
>>The time delay selected for the lock release will also be used as the
>>time delay to set the lock after arriving at the closed position.
>>1 - Air lock. In a passageway situation, both door are not allowed to be open at
>>the same time. Selection of this option will instruct the controller to
>>prevent the second door from opening until the first door is closed.
>>2 - Sequential Door Operation. You will also need to select the time delay
>>between the activation of the first door and the activation of the second
>>door.
>>Handy Terminal Message - Output Timer - 0
>>Four options are available
>>>0 - 2.0 second
>>>1 - 4.0 second
>>>2 - 6.0 second
>>>3 - 8.0 second
>>3 - Active at brake-away and recycle. Selection of this option will have a signal
>>active during a break-away and recycle condition. A common use
>>would be to notify another location of this condition of the door.

Factory setting is per Table 1
Make the adjustment by placing the Cursor at the selection and pressing ENTRY

7.10 Extended Time Delay

This adjustment enables an extended time delays beyond the standard 0 - 7 seconds permitted in the standard functions.

Handy Terminal Message - Ext Time Delay - 7
Eight Options are available
Factory Setting is per Table 1

Optional Setting	Comment
0	The standard 0 - 7 second delay
1	10 seconds longer than the value adjusted in the standard time delay in section 5.03. (10 - 17 seconds)
2	20 seconds longer (20 - 27 seconds)
3	30 seconds longer (30 - 37 seconds)
4	40 seconds longer (40 - 47 seconds)
5	50 seconds longer (50 - 57 seconds)
6	60 seconds longer (60 - 67 seconds)
7	the door opens to the full open point before closing even if the time delay has expired during the opening cycle.

Note: Time delay is measured after the loss of the activation signal.

This completes the adjustments available for the Special function options.

8.0 History Data

The controller maintains data useful in the management of the door. This information is available through the History Data program. The Handy Terminal will read History Data ? Y N

8.01 Maintenance Count

Provides a cumulative exact count on the number of times the Handy Terminal has been connected to the controller. Press ENTRY to advance to the next data.

8.02 Operations Count

This provides a cumulative approximate count on the number of times the door has opened. The counts are registered in increments of 100 per power on period. Press ENTRY to advance to the next data.

8.03 Recycle Count

This provides a cumulative exact count on the number of times the door has recycled. The controller will count the recycles which occur during the opening or closing cycle. Press ENTRY to advance to the next data.

8.04 Run Away Count

This provides a cumulative exact count of the number of times the software in the controller operated outside of the normal programmed routine. This might have been caused by a significant power surge or other unusual event. The operation of the door should be thoroughly checked if there is a run away count. Precautions should be implemented to prevent the recurrence of the problem event.

9.0 Trouble Shooting

9.01 Recycling

If the door recycles during normal operation it is commonly due to an obstacle being encountered or some other significant resistance to normal operation. The typical properly set-up door will require about 5# of pressure to move it. Forces significantly larger will cause it to recycle.
  - A. During the opening cycle
    The door will stop, then close after the loss of the activating signal and the time delay. The door will remain open in the stopped position if the activation signal continues.
  - B. During the closing cycle
    The door will operate in accordance with the set-up by the installer per 7.06
  - C. The controller will count every recycle. The count will be available through the use of the Handy Terminal. After the recycle the door will continue normal operations.

9.02 Power failure

  - A. In the case of a power failure which does not exceed 0.9 seconds the operation will not be affected.
  - B. In the case of a power failure exceeding 0.9 seconds, the controller brakes the door to a stop. When the power is turned on the controller will operate the initial action as set up in adjustment procedure 7.03. The door will then continue normal operations.

9.03 Trouble detected by the controller
For the following problems the controller will stop the door and memorize the nature of the trouble. Until the problem is cleared by the Handy Terminal the controller will not

operate the door. There will be a message in the Handy Terminal when it is connected.

    A. Message - Stroke Error The controller has sensed movement longer than the adjusted stroke. Check the timing belt. Readjust the stroke of the door.

    B. Message - RAM Error. Replace the controller

    C. Message - EEPROM Error. The unit cannot read or write data correctly. Replace the controller.

Clearing the Problem

    1. Turn off the power if not previously turned off. Connect the Handy Terminal. Turn on the power. The Handy Terminal message will be shown in the display. Set curser to the Y. Push Entry.

    2. If a second message occurs, note the second message and clear also. After all problem messages are cleared, disconnect the Handy Terminal then wait another 10 seconds then cut off the power source.

    3. Conduct repair activities required.

    4. Re-connect Handy Terminal and check for error messages. Repeat as required.

9.04 Controller does not operate at all
1. Check wiring and connections
2. Check the activation devices
3. Connect Handy Terminal for error message - clear and repair.
4. Check power supply
5. Check Fuse
6. Check the motor wiring/encoder or change out the motor
7. Change the controller

9.05 Door does not open
1. Check sensor wiring.
2. Check actuating sensor for proper operation.
3. Connect the Handy Terminal and try "Test Open"

9.06 Door operation is abnormal
1. Is motor wiring (Red and Black) normal? Exchange if appropriate.
2. Is encoder wiring (Yellow and Brown) normal? Exchange if appropriate.
3. Is stroke normal? Check or reset.
4. Possible wrong handing. Install the handing harness.
5. Check the Handy Terminal settings. (perhaps setting were not received by the controller or perhaps the door was set up as a swinger instead of as a slider)