$\mathcal{W}$elcome to Issue 9 of our Technical Newsletter. This publication is designed to help technicians stay up to date on the latest developments in the world of Nabco products.

*<u>Please ensure a copy of this newsletter is
distributed to each technician on staff.</u>*

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NABCO ENTRANCES Inc.

TECHNICAL NEWSLETTER

A Publication of the Nabco Technical Support Department

All About the Opus Control

OPUS = The Magnum Control All Growed Up!

The Opus control, our newest controller for the Nabco GT300/400/500 and GT710 swing operator line-up has been a great hit with our customers. Everyone loves the numerous features and functions that are built in to the controller.

Of course, until you get used to the new controller, those functions CAN become a bit overwhelming. So we have decided to publish some newsletters devoted to helping you sort through it all and really get into the meat of what this controller can do.
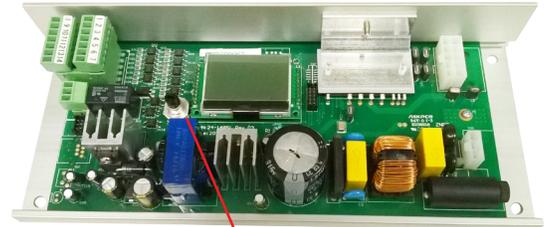
In this issue we will show you:

1.   The four top level screens and we will discuss how to interpret them.

2.   Secondly we will discuss the basic functions of setting the stroke of a swing door and the speed of the door.

Navigating the Menus Options with the Dial Knob

The first thing we need to discuss is the rotating dial knob. The knob is used to navigate the menu options on the screen. To navigate the menu with the knob do the following:

1.   <u>Rotate knob clockwise two clicks</u> to advance through each menu item.

2.   <u>Push in momentarily</u> on the knob to select an item

3.   <u>Long push the knob</u> to go back to previous screens
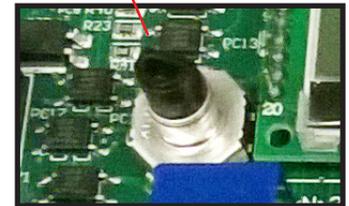
Dial Knob

Level 1 - The "Information" Level

When the control is first powered up you will be at Level 1 "Unit Specifications" Screen on the Opus control. There are four screens on Level 1. These screens are designed to give you real time information on the control, its functions and what it is reacting to.

From this first screen, you can rotate the dial clockwise to reach the other three screens on Level 1. These Level 1 screens are your best source of information when trying to determine what the Opus control is doing.

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Level 1, Screen 1 - "Unit Specifications"

The Unit Specifications screen displays the type of door (swing, slide or folding) and the current status of the unit. It contains quick information on the door position and the status of certain key signals the control reacts to.

One thing to remember: <u>the control will only react to an activation signal from this screen</u>. If you are in the middle of programming and want to test your settings, push and hold the dial in until you come back to this screen. Then activate your door.

Refer to the illustration below. To get to the next screen, rotate the knob clockwise two clicks.
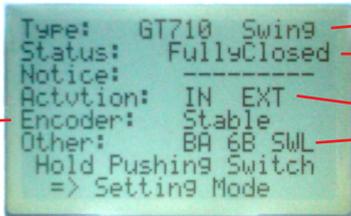
Indicates if encoder option has been selected and status of encoder

Type of Operator Selected

Position of Door

Status of Signals
If any of these are highlighted then that signal is active

```
Type:    GT710  Swing
Status:    FullyClosed
Notice:    ----------
Actvtion:    IN  EXT
Encoder:    Stable
Other:    BA 6B SWL
  Hold Pushing Switch
   => Setting Mode
```

Level 1. Screen 2 - "Error" Screen

The Error screen shows any outstanding errors plus the control's date of manufacture and software version. Generally, **_if the Opus screen is flashing for no apparent reason, this is a signal that an error message is waiting for you on this screen_**. Rotate the knob clockwise two clicks to advance to screen 3.
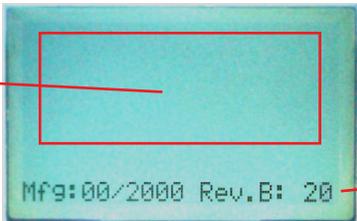
Displays any Current Error Messages

Indicates Mfg. Date & Sofware Version

```
Mfg:00/2000 Rev.B: 20
```

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Level 1. Screen 3 - "ANSI Specifications" Screen

The third screen to appear is the ANSI specifications screen. This screen indicates actual live door movement measurements. Reviewing this screen as the door opens and closes makes it easy to determine if the door meets the ANSI specs at it's current state of adjustment. As you increase the opening speed for instance, the opening time indicator will change on this screen reflecting the change in adjustment. Rotate the knob clockwise two clicks to advance to screen 4.
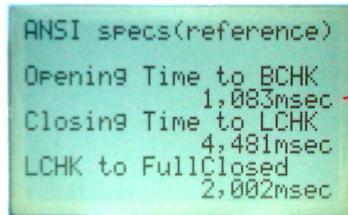
Door Movement in
Real Time

Level 1. Screen 4 - "Terminal Specifications" Screen

The fourth and final screen to appear is the Terminal Specifications screen. This screen is invaluable for seeing the status of all inputs and outputs that are available on the Opus control. This screen is meant to serve as a troubleshooting tool. A highlighted item means that item is active.

Highlighted means
Output2 is active
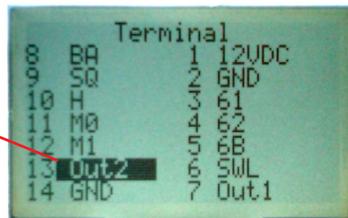
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Setting the Stroke on a Swing Door

Upon power-up, you'll be at the Level 1 "Unit Specifications" screen as shown below. In the illustration below, you see that we have a GT710 with an encoder motor. One thing to remember, the Opus is backward compatible, so it will work on an operator with microswitches or an operator with an encoder. Now press and hold the dial for more than 2 seconds.
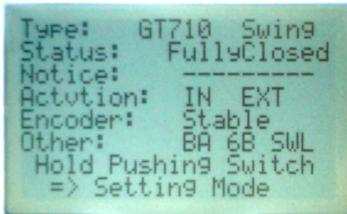
This will get you to the Access Screen (Level 2) shown below. By rotating the knob you can chose to do one of three things:

1.   Set/reset the control Passcode (disabled from the factory, can be skipped)
2.   Go to Setting Menu (highlighted as shown)
3.   Set the stroke of the door
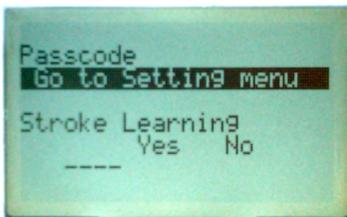
Let's rotate the knob and go to Stroke Learning and choose "Yes". After about a 7 second delay (during which time the control is finding the door closed position) the door will then start to open. Once the door goes through a full cycle the screen will stabilize and if nothing else is pressed after ten seconds it will revert back to the Unit Specifications" screen shown above. Or, once the stroke is set, we can move on to setting the speed of the door.....

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Setting the Speed on a Swing Door

From the Access screen shown on the previous page, once the stroke is set, you can choose "Go to Setting Menu". Do this by selecting the option then pressing in on the dial.

This will take you to Level 3 "Setting Category" screen. Level 3 is where you can program all the speeds, timers, inputs and outputs and view history data. To Adjust the speed of the door you will need to select "Movement Setting"'

```
Setting Category
 Base Setting
 Movement Setting
 Optional Setting
 Output Setting
 Input Setting
 History Data
     <= TEST OPEN =>
```
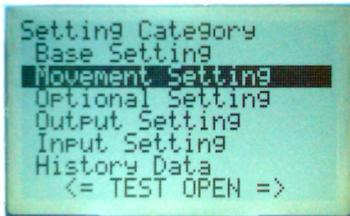
Once you are in Movement Settings, you can scroll through the various settings to find the adjustment you are looking for. Let's assume it is "Close Speed" you are changing. Once Close Speed is found, press the dial briefly to select it.

```
Close Speed

   0 1 2 3 4 5 6 7

0,1 = Slow, 7 = Fast
 Speed adjustment
```
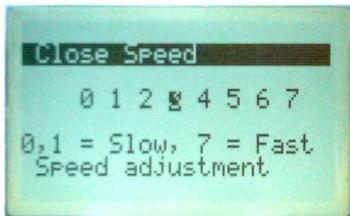
After pressing, "Close Speed" will no longer by highlighted, and the current value of the setting will be highlighted as shown above. Select a new value by rotating the dial. Once the value is set, briefly press the dial, "Close Speed" will be highlighted again. Remember, to test your setting you must go back to the main Unit Specifications screen.

You can then adjust other settings, or exit by pressing the dial for more that 2 seconds. This will take you back to the "Setting Category" screen. Press and hold the dial for more than 2 seconds again to get back to the top Level 1 Unit Specifications screen. So there you have it, how to set the stroke and speed of the door.

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Sensor Wire Color Matching Chart

Our industry is going through a transition with the new ANSI standard coming out soon that includes sensor monitoring. This technology involves additional signals being transmitted to and from the sensor and hence more more wires to deal with.

The following chart is designed as a quick reference to assist you when connecting or troubleshooting sensors with or without sensor monitoring on the GT1175 Slider.

	Common	Activation	12VDC	Monitoring
U SERIES CONTROLLER				
Control Main harness	Red	Black (or black w/red stripe)	Brown	Yellow
Old sensor Extension Harness	Red	Yellow	Grey	N/A
New sensor extension harness	Red	Black (or black w/red stripe)	Brown	Yellow
NON-MONITORED SENSORS				
Orig. Acusensor	Grey + Yellow	Yellow	Grey	N/A
All other Acusensors	Red + White	Green	Black	N/A
Acuwave	Grey + Yellow	Yellow	Grey	N/A
Acumotion	Red + White	Green	Black	N/A
Acumotion A / Acuvision	Red + Green	Black	Brown	N/A
IXIO	Red + White + Brown	Green + Blue	Black	N/A
Wizard	Red + White + Brown	Green + Blue	Black	N/A
i-One	Grey + White	Yellow	Grey	N/A
X-Zone / Acuzone	Grey + White + White w/stripe	Yellow + Yellow w/stripe	Grey	N/A
OA-Axis	Grey + White	Yellow	Grey	N/A
MONITORED SENSORS				
Acusensor M	Red + Green + Blue	Black + White	Brown + Grey	Yellow
IXIO	Black + White + Brown	Green + Blue	Red + Purple	Purple
i-OneX T	Grey + White + White w/stripe	Yellow + Yellow w/stripe	Grey + Red	Black
X-Zone T / Acuzone T	Grey + White + White w/stripe	Yellow + Yellow w/stripe	Grey + Red	Black

What's Next

Next issue we will go deeper into the Opus control programming and discuss the various Setting Categories and how to program them.

As usual, please feel free to call us if you have any questions. We are excited about our new products and what they can do to help you get your job done easier and quicker.

Stay tuned...