ProCASE II™

User Manual

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Introduction

ProCASE II™ is an electronic measurement system used to assist in the setup of industrial production equipment. The measurement system can be installed on many types of equipment (such as boring machines, molders, tenoners, lathes, saws) that require repeated setup of multiple axes.

Each axis on the machine that requires monitoring is fitted with an Accurate Technology ProScale™ (or other supported encoder) that continually monitors the location of the axis. The system can be configured to display the current position of a particular axis or can be used to record the current position of all the active axes. These recorded positions can be recalled at a later time and used to quickly reposition the machine in order to reproduce the desired setup.

Systems Concepts

The ProCase II system consists of several components. A description of each is given below:

Master Control Unit/Encoder Module

This unit houses the main system computer core, memory and power supply. It can support up to 8 position encoders and is the basis for the entire automation system. The *Master Control Unit* coordinates all system activity including acquiring data from other parts of the system and interfacing with the machine operator via a hand-held Pendant.

Satellite Unit/Encoder Module

This unit is similar to the Master Control Unit with the exception that its role is limited to gathering data from the position encoders connected to it. This data is then sent to the Master Control Unit where it is processed and stored. Up to 5 Satellite units can be connected to the ProCase II Master Control Unit.

Position Encoders

Each axis on the machine that is to be monitored for motion must have a position encoder installed on it. This device measures the current position of the axis and relays that data to its connected module. This module may be either the Master Control Unit or a Satellite Unit. Encoders are connected to their respective module via a plug-in telephone type modular connector cable. Up to 48 encoders can be used in the ProCase II system.

Hand-Held Pendant (Keypad)

The ProCase II interacts with the machine operator via a hand-held computer terminal called a Pendant. This device consists of a keypad and LCD display housed in a rugged enclosure that is easily held in one hand. All normal system operation is completed via the hand-held Pendant.

Axis Numbering

Each axis in the system is identified by a number from 1 to 48. In addition, each axis can be programmed with a descriptive name up to 20 characters long. This name is displayed by the Pendant to make using the system more user friendly. However, in many of the menus, the system will prompt the user to enter the axis number. The axis number is the main reference the system uses when processing the information about an axis.

Monitored/Non Monitored Axes

The ProCase II system supports two types of axes. The first type is referred to as a *monitored* axis. This type of axis utilizes a position encoder to monitor the current position of the axis at all times. Each monitored axis encoder is connected to the ProCase II control unit and is assigned an axis number. Monitored axes have the ability to continually report their current positions and are monitored to detect if an axis has drifted out of position (while in RUN mode).

The second type of axis is *non-monitored*. These axes do not utilize position encoders and cannot report position errors. These types of axes are typically non-critical and may be positioned using a scale or screw counter readout. When an axis is programmed as non-monitored, the control unit will provide a memory location in each setup file, allowing the user to manually enter the reading being displayed on the scale or counter. When the file is loaded, the system will prompt the user to position the non-monitored axis to the saved position.

Axis Encoder Types

The ProCase II system currently supports four types of axis encoders. The encoder types are as follows:

1. Manual Axis - This axis type does not use an electronic position encoder and relies on the use of a scale or mechanical counter. This type of axis **cannot** report positioning errors while the system is in the RUN mode of operation.

2. ProScale*ABS* Linear Encoders - This type of encoder is the standard encoder used by the ProCase II. It features the ability to maintain its position information when power is removed from the system.

3. ProScale Incremental Linear Encoders - This encoder is similar to the ProScale*ABS* encoder with the exception that it does **not** maintain its position when power is removed. Because of this, any axes utilizing *incremental* encoders **must** be homed after power is restored.

4. Lucas Accustar Angular Displacement Encoders - This encoder is used to measure the angular displacement (degrees of rotation) of a horizontally rotating axis.

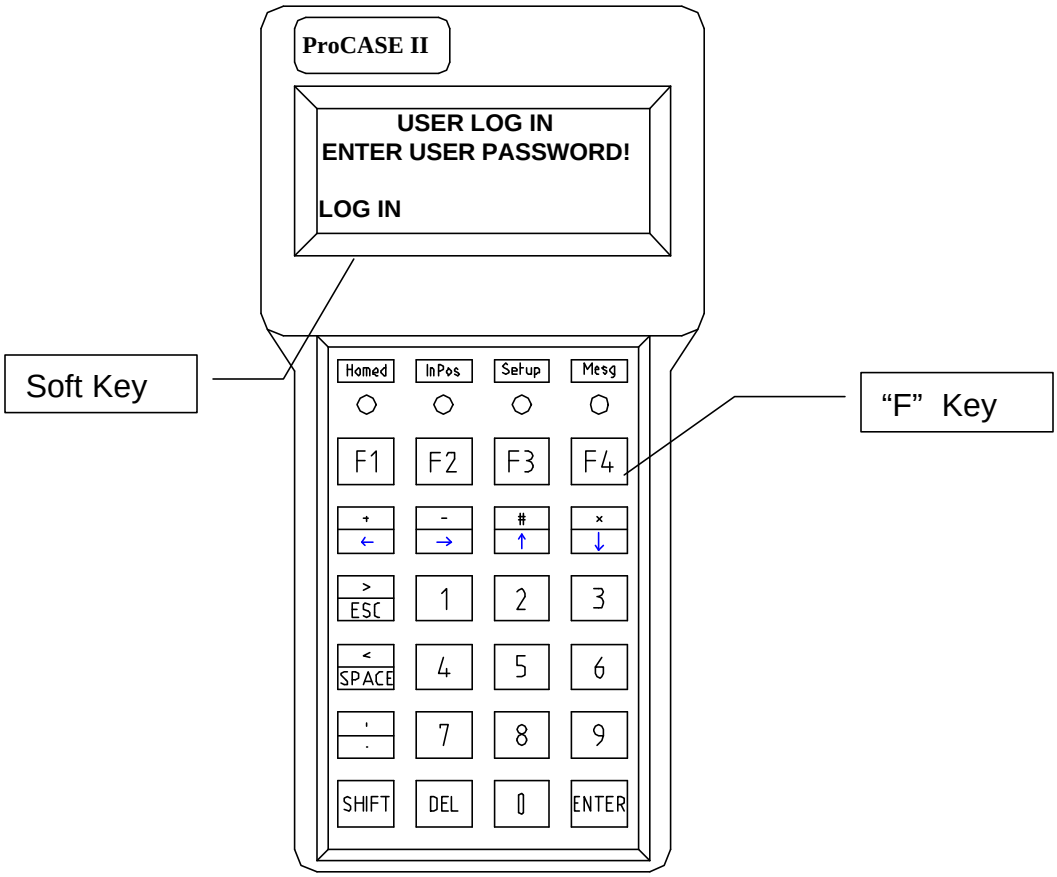
Handheld Pendant

The hand held Pendant interacts with the machine operator using a menu driven interface. Each menu in the system can consist of up to three lines of information or instructions displayed on the LCD. This menu format guides the user to a particular operation.

The bottom line of the LCD display is reserved for “soft key” labels. These labels are located over the “F” keys on the top row of the keypad. Up to four *soft key* labels can be displayed at any time. Only functions available for that particular menu will be displayed over the appropriate “F” keys.

The use of “F” keys in conjunction with the soft key labels help guide the user through the menu system. They allow for many feature selections without the need for a large and bulky keypad.

The figure below illustrates the soft keys and "F" keys on a ProCase II Handheld Pendant.



Alpha/Numeric Keypad Operation

The ProCase II hand-held Pendant utilizes a keypad including digits 0 through 9, function and arrow keys. In several system menus, data can be entered using either numeric data or alpha-numeric data. To facilitate the input of character data, each digit key on the hand-held Pendant represents a group of letters of the alphabet similar to that of a telephone keypad. Key 2 represents ABC, key 3 represents DEF, and so on.

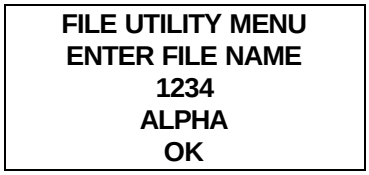
In menus that offer the choice of numeric or alphanumeric data entry, the F1 soft key is provided with the label “ALPHA”. To switch to the alphanumeric mode, press the F1 key. The system is now in alphanumeric mode. Note that the F1 soft key label now shows “NUM” representing numeric mode. Press the F1 key again to return to the numeric-only mode of operation.

When in numeric-only mode (the default), pressing a number key displays the corresponding number. Entering a second digit key displays that key value. Most menus of the system use this operation.

In the alphanumeric mode, pressing the digit key displays the digit key value. Pressing the same key a second time causes the first letter associated with the key to be displayed in place of the digit. Pressing the key again displays the next letter. This continues until the third letter is displayed. An additional key press now redisplays the key digit again. This display cycle continues for each key press. When the desired digit or letter is displayed, press the right arrow key to move the cursor over to the next available empty slot.

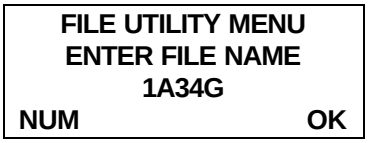
When all of the desired digits and/or letters are entered, press the OK (F4) key to indicate to the system to accept the current line of input. The examples below illustrate both the numeric only and alphanumeric modes of operation.

Numeric Mode



NOTE: When the ALPHA soft key is displayed, the system is in the numeric mode. Pressing the ALPHA (F1) key will change to the alpha mode.

Alphanumeric Mode



Menus

Menu Structure

As described earlier, the ProCase II system uses menus to guide the operator to the desired function. The top level menu structure is a group of menus that can be navigated using the up and down arrow keys. When selecting a menu by pressing the SELECT (F1) key, the display will change to show the next group of menus for that function. The top level group of menus is shown in Figure 2. The escape key (ESC) will return the system to the previous menu.

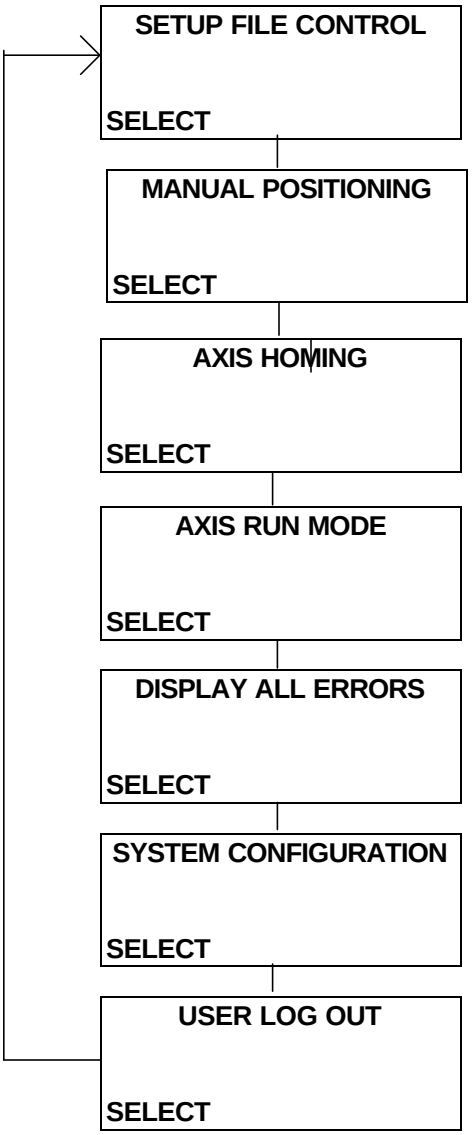
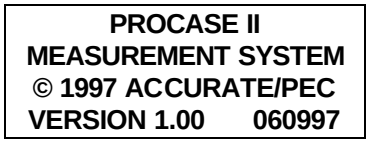


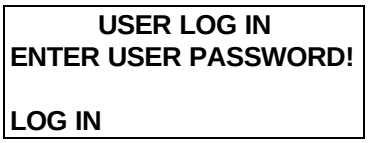
Figure 2

Power Up Menu

This section describes in detail each menu of the ProCase II system. An example of each screen will be given with a brief explanation of the selections available.



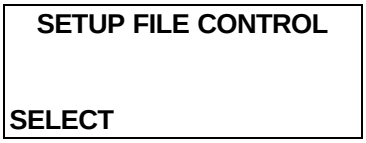
Upon powering the system, the copyright screen is displayed. The software version and date are displayed for reference.



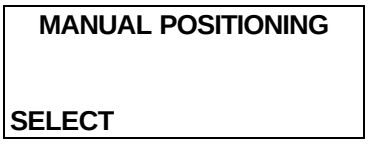
Once the copyright screen has been displayed, the LOG IN screen is displayed. To log in, enter a user password for the current operator and press LOG IN. When a valid user code has been entered, the top level menu is displayed.

Top Level Menu

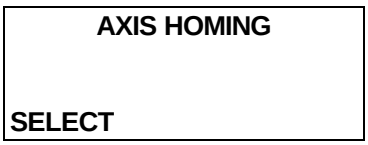
The top level menu guides the operator to the main functions to be performed. The next section outlines the available options in the top level menu.



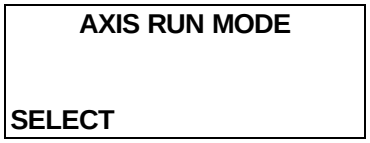
The Setup File Control menu allows the user to save and retrieve program setup files, view the contents of a saved file, view a listing of files in memory, determine the number of setup files currently stored, and delete setup files.



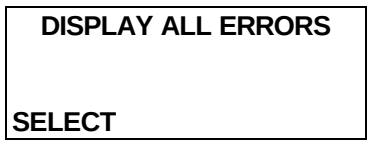
Selecting the MANUAL POSITIONING option allows positioning of a monitored axis without recalling a saved setup file.



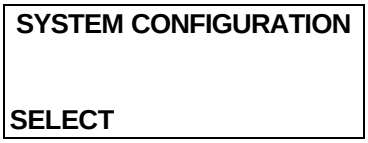
Selecting the AXIS HOMING option allows the user to home (calibrate) a monitored axis to a real world reference.



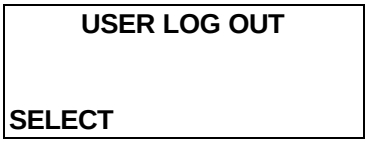
Selecting the AXIS RUN MODE option activates the system monitoring of all the active axes for movement (drift). If an axis drifts out of position, the ProCase II signals the operator to the error condition and requests the axis to be repositioned.



Selecting the DISPLAY ALL ERRORS option allows viewing of current errors in the system, if any.



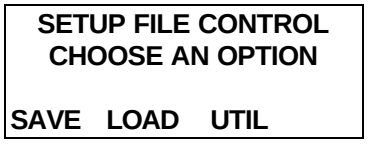
Selecting the SYSTEM CONFIGURATION option allows the user to configure an axis offset. If logged in with the Master Password, additional options can be configured.



Selecting the USER LOG OUT option logs out the user and returns the display to the LOG IN screen.

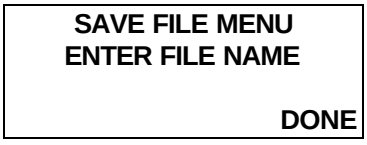
SETUP FILE CONTROL

Select the SETUP FILE CONTROL menu from the top level menu to save, load or edit setup files.

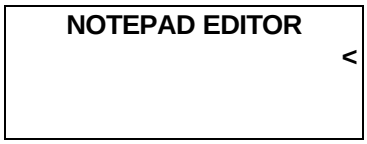


Select the desired option by pressing the appropriate soft key. Press SAVE (F1) to enter the SAVE FILE menu. Press LOAD (F2) to enter the LOAD FILE menu. Press UTIL (F3) to enter the FILE UTILITY menu. Pressing ESC will return to the top level menu.

SAVE FILE MENU

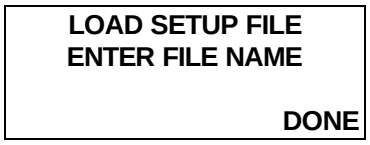


SAVE (F1): Selecting the SAVE option prompts the user to enter a file name to save the current machine positions to. Upon completion of entering the filename and pressing DONE, the NOTEPAD EDITOR screen is displayed (if enabled).

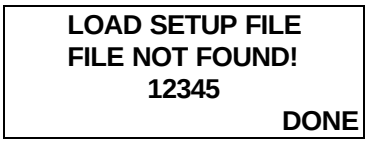


The NOTEPAD EDITOR allows the user to make notes on the current setup. When all notes have been entered and ESC has been pressed, the system saves the setup file and returns to the SETUP FILE CONTROL menu. Use the up and down arrow keys to move between lines in the notepad. Up to 4 lines of notes can be saved for each setup.

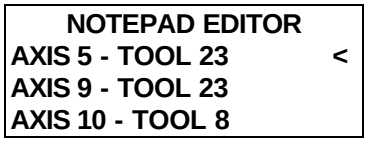
LOAD SETUP FILE Menu



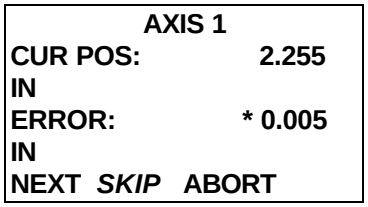
LOAD (F2): Selecting the LOAD option in the SETUP FILE CONTROL menu prompts the user to enter a file name of the setup file to be loaded. Press DONE after entering filename to load file or ESC to exit the menu.



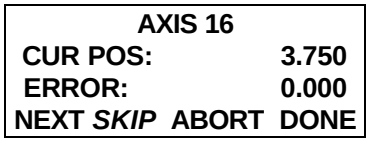
If the filename that was entered is not a currently in memory, the system will indicate that the filename entered is not a valid setup.



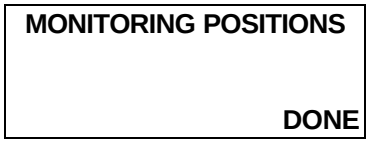
Upon successfully locating the entered filename, the notepad editor is displayed (if enabled). The up and down arrow keys may be used to scroll through the editor buffer. Pressing ESC will continue to the next screen.



Each axis is displayed in order beginning with AXIS 1. Move each axis to the position where the error is near 0. When the positioning tolerance has been met, the asterisk will disappear. Press NEXT (F1) to continue to the next axis or ABORT (F3) to abort the setup. Optionally, an axis may be skipped during setup if that axis is not used for the particular setup. Press SKIP (F2) to skip the axis. NOTE: The SKIP feature is programmable and may not be enabled.



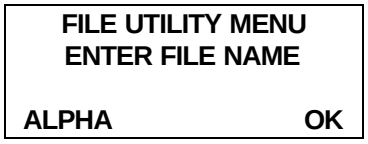
Upon completing the setup, the DONE soft key will appear in the screen. Pressing DONE (F4) will move the system to the RUN MODE.



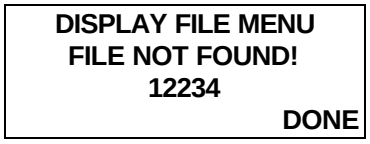
Pressing the DONE or ESC key will return the system to the top level menu.

FILE UTILITY Menu

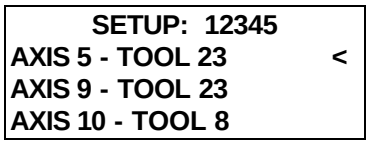
UTIL (F3): Selecting the UTIL option in the SETUP FILE CONTROL menu prompts the user to select a file utility option. Pressing ESC will return to the top level menu. Pressing the appropriate "soft key" will move the system to the desired function.



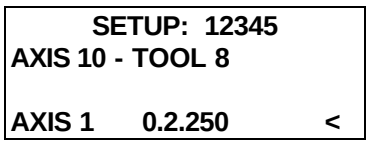
LIST (F1): Selecting the LIST option prompts the user to enter the file name to display. After entering the filename and pressing OK, the system will display the requested setup file. Pressing (F1) will change the keypad to alpha mode (see page 9).



Pressing DONE (F4), the user acknowledges that the file was not a valid filename.

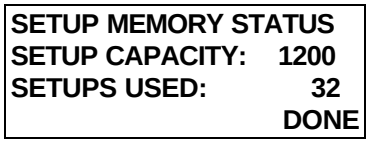


Upon successfully locating the entered filename, the notepad information is displayed at the top of the buffer. The setup information is stored in the program buffer after the notepad information. Pressing ESC will return to the UTIL menu.

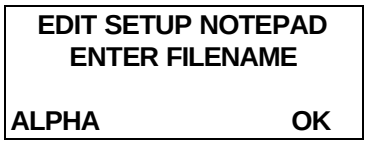


The remainder of the setup information may be viewed using the up and down arrow keys to scroll through the program buffer. Pressing ESC will return to the UTIL menu.

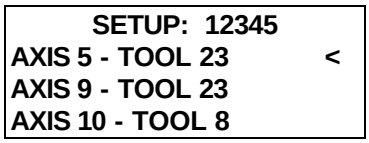
DIR (F2): Selecting the DIR option will display all of the stored setup filenames. The entire buffer may be viewed using the up and down arrow keys to scroll. Pressing ESC will return to the UTIL menu.



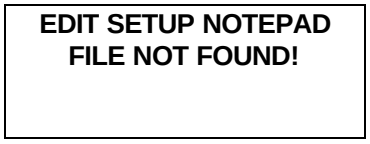
FREE (F3): Selecting the FREE option will display the maximum setup capacity and the number of setups stored. Pressing DONE (F4) will return to the UTIL menu.



NOTE (F4): The user is prompted to enter the filename to be edited. Pressing ALPHA (F1) will change the keypad to alpha mode (see page 9). Pressing OK (F4) loads the notepad of the filename entered. Pressing ESC will return to the FILE SETUP menu.

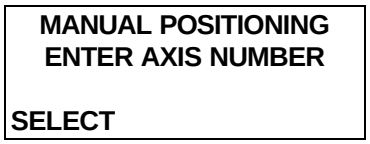


The notepad for the desired file can now be edited. The up and down arrow keys are used to scroll through the files. Pressing ESC will return to the previous menu and save the new note modifications.

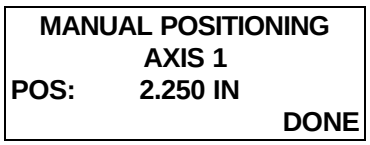


Entering a filename that has not been saved will result in a FILE NOT FOUND error message.

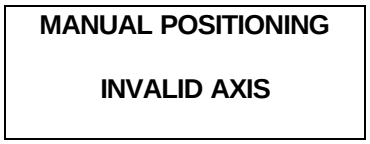
Manual Positioning



Press SELECT (F1) to enter the MANUAL POSITIONING menu. Enter the axis number to be positioned and press SELECT (F1). Pressing ESC will return to the top level menu.

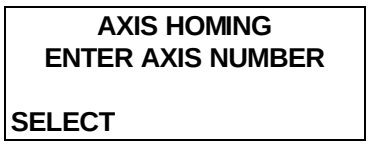


Move the current axis to the desired position and press DONE (F4). Pressing ESC or DONE will return to the previous menu.

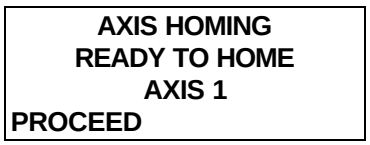


If an invalid axis is entered the system will display an error message.

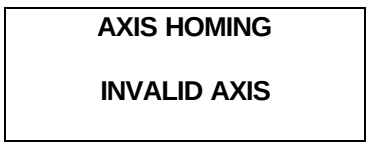
Axis Homing



Press the SELECT (F1) key to enter the AXIS HOMING menu. Enter the axis number to be homed and press SELECT (F1). Pressing ESC will return to the top level menu.

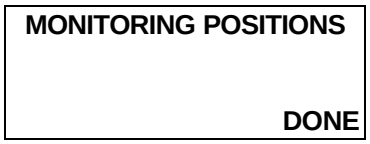


Press PROCEED (F1) to home the current axis. Pressing ESC will return to the previous menu and does **not** home the axis.

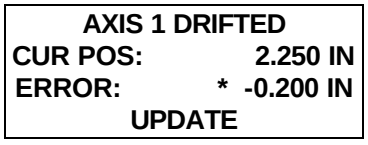


If an invalid axis is entered, the system will display an error message.

Axis Run Mode



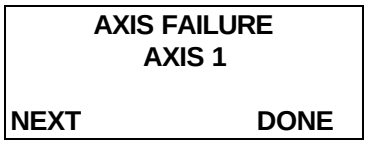
Press the SELECT (F1) key to enter the RUN mode. In this mode, all axes are monitored for movement. If an axis moves out of a programmed tolerance, a reposition menu appears. Pressing DONE (F4) will return to the top level menu.



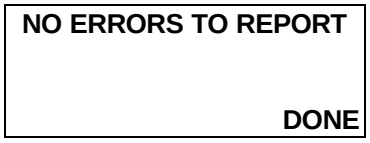
Reposition the axis until the error measurement reads 0. When the asterisk disappears the position is within the preprogrammed tolerance. Press UPDATE (F1) to update the position and return to the monitoring menu. Pressing ESC will return to the top level menu.

Display All Errors

Allows the user to view any currently active errors in the system.



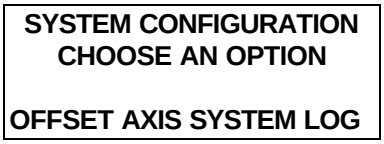
Press the SELECT (F1) key to enter the DISPLAY ALL ERRORS menu. If an error condition exists, the error will be displayed. If more than one error exists, the NEXT (F1) key allows viewing of multiple errors. Pressing DONE (F4) will return to the top level menu.



If there are no errors to report, the system informs displays them. Pressing DONE (F4) will return to the top level menu.

System Programming Menu

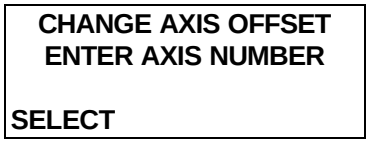
This menu allows the user to program or change the system configuration.
(If a standard user code was used to log in, only the offset value for an axis can be modified. If a master code was entered, other system parameters can be modified. See the ProCase II programming manual for additional information concerning system programming.)



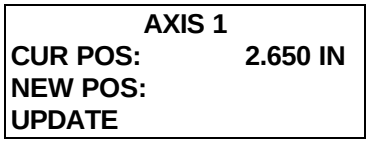
Selecting the SYSTEM CONFIGURATION option moves the system into that function menu. The programming of the system is divided into four areas. They are OFFSET (F1), AXIS (F2), SYSTEM (F3), and LOG (F4). Pressing ESC will return to the top level menu. AXIS, SYSTEM and LOG require the master password for entry.

OFFSET

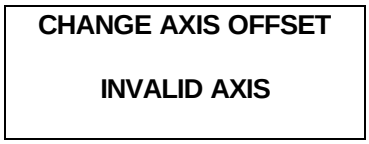
Allows the user to program or change any axis offset (current displayed position).



OFFSET (F1): Enter the axis number of the axis to be changed and press SELECT (F1). Pressing ESC will return to the top level menu.



The current position is displayed. Enter the new position and press UPDATE (F1). Pressing ESC will return to the configuration menu.



If an invalid axis is entered, the system will display an error message.

AXIS CONFIGURATION

Allows the user to program the axis functions.

EDIT AXIS CFG FILE **ENTER AXIS NUMBER** **SELECT**

AXIS (F2): Enter the axis number of the axis to be configured and press SELECT (F1). This option moves the system to the axis configuration menus (for the selected axis). Pressing ESC will return to the previous menu. The up and down arrow keys are used to navigate through the circular menu.

AXIS 1 **AXIS NAME** **AXIS 1**

AXIS 1 on the third line of the display is the default axis name. This menu uses the telephone-type keypad alphabet to program the axis name. (Refer to Alpha/Numeric Keypad Operation in the beginning of this manual for more information.)

AXIS 1 **AXIS ENABLED 1=YES** **1**

The system requires an axis to be enabled to be recognized. The default for all axes, except axis 1 is 0 (0=NO). Changing the value on the third line to a 1 enables the axis.

AXIS 1 **AXIS TYPES (SEE DOC)** **2**

The default axis type for all axes is the ProScale encoder. The axis types are as follows: 1 = Manual axis, 2= ProScale, 3 = Accustar™.

AXIS 1 **MODULE PORT 1-8** **1**

This is the port of the module where the axis encoder is plugged in. The default for all axes is port 1. The range of this value is 1-8.

AXIS 1 **MODULE NUMBER 1-6** **1**

This is the Satellite module into which the axis encoder is plugged. The Master Module is always 1. The default for all axes is module 1. The range of this value is 1-6.

AXIS 1 **AXIS SCALE FACTOR** **1.000**

This value is the scale factor of the axis encoder. The default for all axes is 1.000.

AXIS CONFIGURATION (continued)

AXIS 1 **AXIS HOME OFFSET** **0.000**	This is the distance from the from the current encoder position to the axis home position. This value sets the displayed value to a reference position of the axis.
AXIS 1 **AXIS DRIFT TOLERANCE** **0.010**	This is the distance the axis is allowed to move before the system alerts the user that the axis is out of position.
AXIS 1 **POSITION TOLERANCE** **0.005**	This is the allowable distance from the original setup position.
AXIS 1 **ENCODER DIR 0/1** **0**	This sets the positive direction of the encoder measurement. The default value is 0, which is positive movement of the encoder slide bar from left to right.
AXIS 1 **ENCODER UNITS 0/1** **0**	This is the unit of measurement the system uses. 0 equals inches and 1 equals millimeters.

SYSTEM CONFIGURATION

SYSTEM (F3): This option moves to the SYSTEM CONFIGURATION circular menu. The up and down arrow keys are used to navigate through this circular menu.

EDIT SYSTEM PARAM **SELECT**	Pressing SELECT (F1) will move to the EDIT SYSTEM PARAMETERS menu. Pressing ESC will return to the previous menu.
EDIT PASSWORDS **SELECT**	Pressing SELECT (F1) will move to the EDIT PASSWORDS menu. Pressing ESC will return to the previous menu.
CHANGE TIME AND DATE **SELECT**	Pressing SELECT (F1) will move to the CHANGE TIME AND DATE menu. Pressing ESC will return to the previous menu.
EDIT INPUTS/OUTPUTS **SELECT**	Pressing SELECT (F1) will move to the EDIT INPUT AND OUTPUTS menu. Pressing ESC will return to the previous menu.
EDIT MODULE ADDRESS **SELECT**	Pressing SELECT (F1) will move to the EDIT MODULE ADDRESS menu. Pressing ESC will return to the previous menu.
SET SYSTEM DEFAULTS **SELECT**	Pressing SELECT (F1) will move to the SET SYSTEM DEFAULTS menu. Pressing ESC will return to the previous menu.

EDIT SYSTEM PARAMETERS

SYSTEM CONFIGURATION **MAX AXES 1-48** **1**

Defines the number of axes that are active in the system. The default number of active axis is 1. The maximum number of axes is 48.

SYSTEM CONFIGURATION **SYS UNITS 0 = IN 1 = MM** **0**

Defines the type of measurement used by the system. 0 equals inches and 1 equals millimeters. Inches are the default measurement type.

SYSTEM CONFIGURATION **USE NOTEPAD 1=YES** **1**

Allows use of the NOTEPAD feature when saving setups. 1 equals YES and 0 equals NO. The default value is YES.

SYSTEM CONFIGURATION **USE AXIS SKIP 1=YES** **0**

Defines use of AXIS SKIP feature. The AXIS SKIP feature allows the user to skip axis.

SYSTEM CONFIGURATION **DATE FMT 0=MM/DD/YY** **0**

Defines the format of the date. 0 equals Month/Day/Year. 1 equals. Day/Month/Year

SYSTEM CONFIGURATION **PART CNT MATCH 1 = YES** **1**

Defines that the system will monitor the PART COUNT input. The PART COUNT input must be defined in the EDIT INPUTS section of the PROGRAMMING menu.

SYSTEM CONFIGURATION **ENABLE LOGIN 1=YES** **1**

Enables the LOGIN feature, which allows for multiple users. If the LOGIN feature is disabled the system is configured for a single user. The default value is 1, LOGIN enabled. 0 equals LOGIN disabled.

SYSTEM CONFIGURATION **ENABLE FILES 1=YES** **1**

Enables the SELECT FILES menu in the top level menu. The default value is 1, SELECT FILES menu enabled. 0 equals SELECT FILES menu disabled.

SYSTEM CONFIGURATION ENABLE MANUAL 1=YES 1	Enables the MANUAL POSITION menu in the top level menu. The default value is 1, MANUAL POSITION menu enabled. 0 equals MANUAL POSITION menu disabled.

SYSTEM CONFIGURATION ENABLE HOMING 1=YES 1	Enables the HOMING menu in the top level menu. The default value is 1, HOMING menu enabled. 0 equals HOMING menu disabled.

SYSTEM CONFIGURATION ENABLE RUN 1=YES 1	Enables the RUN menu in the top level menu. The default value is 1, RUN menu enabled. 0 equals RUN menu disabled.

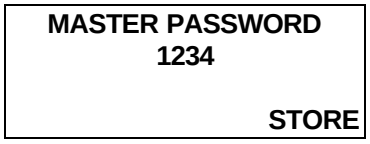
SYSTEM CONFIGURATION ENABLE ERRORS 1=YES 1	Enables the DISPLAY ALL ERRORS menu in the top level menu. The default value is 1, DISPLAY ALL ERRORS menu enabled. 0 equals DISPLAY ALL ERRORS menu disabled.

SYSTEM CONFIGURATION ENABLE CONFIG 1=YES 1	Enables the SYSTEM CONFIGURATION menu in the top level menu. The default value is 1, SYSTEM CONFIGURATION menu enabled. 0 equals SYSTEM CONFIGURATION menu disabled.

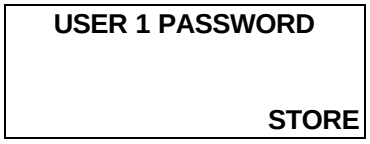
Warning: The system will not allow this menu to be disabled. Once this menu is disabled, programming of the system is not possible, because there is no re-entry to this menu.

EDIT PASSWORD MENU

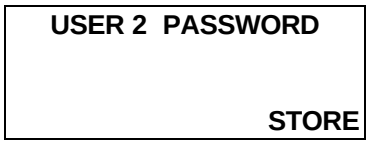
This option moves to the EDIT PASSWORD circular menu. The up and down arrow keys are used to navigate through this circular menu. This circular menu allows programming of the master password and the 7 user passwords.



Enter a new MASTER PASSWORD and press STORE (F4). Pressing STORE (F4) will store the new master password. Pressing ESC will return to the previous menu and will **not** change the password.



Enter a new USER 1 PASSWORD and press STORE (F4). Pressing STORE (F4) will store the new user 1 password. Pressing ESC will return to the previous menu and will **not** change the user 1 password.

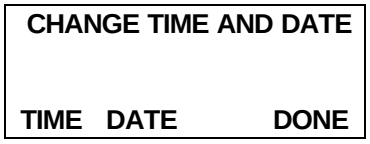


Enter a new USER 2 PASSWORD and press STORE (F4). Pressing STORE (F4) will store the new user 2 password. Pressing ESC will return to the previous menu and will **not** change the user 2 password.

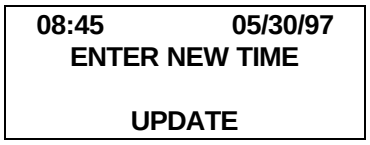
Etc….

Change Time and Date

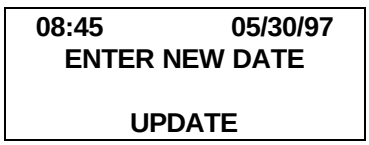
This menu allows for programming of the Time and Date.



Press TIME (F1) to change the system time. Press DATE (F2) to set the system date. Press DONE (F4) to return to the previous menu.



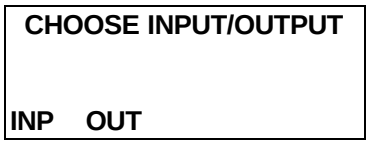
Enter a new time and press UPDATE (F1) to update the system time. Press ESC to return to the previous menu and abort changing the system time.



Enter a new date and press UPDATE (F1) to update the system date. Press ESC to return to the previous menu and abort changing the system date.

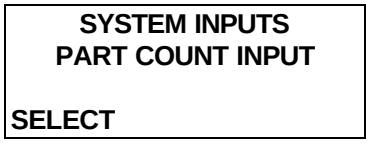
EDIT INPUTS AND OUTPUTS

Allows programming of the system inputs and outputs.

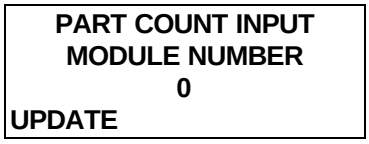


Press INP (F1) to move to the EDIT INPUTS circular menu. Select OUT (F2) to move to the EDIT OUTPUTS circular menu. Press ESC to return to the previous menu.

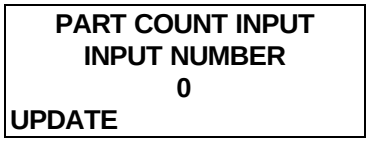
IN:



Allows programming of the system inputs. The INPUT circular menu only has one entry at this time, but will expand and the system expands. Press Select (F1) to program PART COUNT INPUT. Press ESC to return to the previous menu.



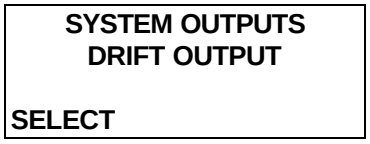
Set the PART COUNT INPUT module number. This is the Satellite module that the I/O module is attached to.



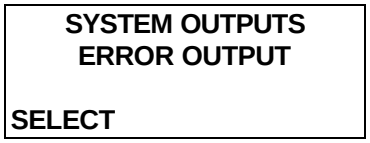
This is the input number on the I/O Module. This value is either 0 or 1.

OUT:

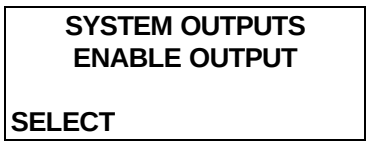
The EDIT OUTPUTS circular menu allows programming of the system outputs. The up and down arrow keys are used to navigate through the circular menus.



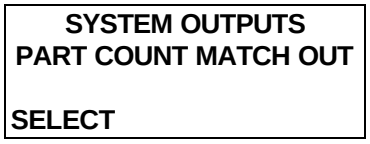
The DRIFT OUTPUT is activated when a monitored axis moves out of position. Select (F1) to program the DRIFT OUTPUT. Press ESC to return to the previous menu.



The ERROR OUTPUT is activated when an error condition exists. Press SELECT (F1) to program the ERROR OUTPUT. Press ESC to return to the previous menu.

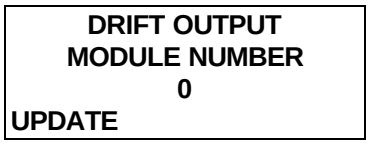


The ENABLE OUTPUT is activated when all axes are in position. Press SELECT (F1) to program the ENABLE OUTPUT. Press ESC to return to the previous menu.



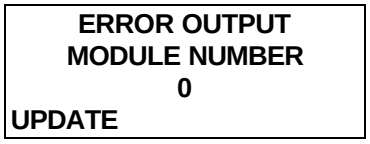
The PART COUNT MATCH OUTPUT is activated when the PART COUNT INPUT counter equals the (preprogrammed) part count value. Press SELECT (F1) to program PART COUNT MATCH OUTPUT. Press ESC to return to the previous menu.

EDIT DRIFT OUTPUT



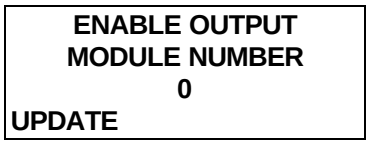
Program the Satellite module number that the DRIFT OUTPUT is assigned to. Enter the number on line three and press UPDATE (F1) to update the system. Press ESC to return to the previous menu.

EDIT ERROR OUTPUT



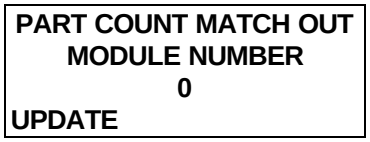
Program the Satellite module number that the ERROR OUTPUT is assigned to. Enter the number on line three and press UPDATE (F1) to update the system. Press ESC to return to the previous menu.

EDIT ENABLE OUTPUT



Program the Satellite module number that the ENABLE OUTPUT is assigned to. Enter the number on line three and press UPDATE (F1) to update the system. Press ESC to return to the previous menu.

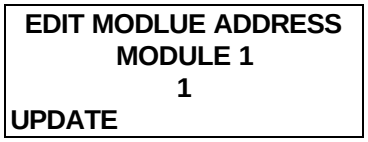
EDIT PART COUNT MATCH OUTPUT



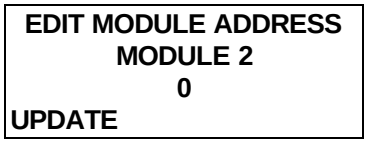
Program the Satellite module number that THE DRIFT OUTPUT is assigned to. Enter the number on line three and press UPDATE (F1). Press ESC to return to the previous menu.

EDIT MODULE ADDRESS

The EDIT MODULE ADDRESS circular menu allows for programming of each module's network address. The system can handle a maximum of six network modules. As each module is added to the system, the module's dip switch is usually set in the order the modules are added. In the EDIT MODULE ADDRESS circular menu, each module's address is programmed to match the module's dip switch setting. Each module's address is programmed to 0 by default and is reprogrammed when a module is added to the system. The only exception is module 1, its address is programmed to 1 by default. The up and down arrow keys are used to navigate through the circular menu.



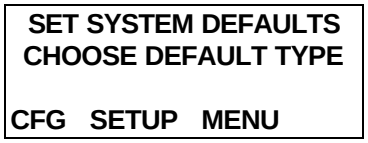
Module 1 is usually the Master module. The network address of each module is programmed to match the dip switch of the module. Enter the new value and press UPDATE (F1) to update module one's address. Pressing ESC returns to the EDIT MODULE ADDRESS menu.



To add module two to the system, program module two's address to match the dip switch of the module being added. Enter the new value and press UPDATE (F1) to update modules two's address. Pressing ESC returns to the EDIT MODULE ADDRESS menu.

SET SYSTEM DEFAULTS

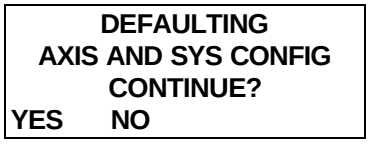
The SET SYSTEM DEFAULT menu allows for defaulting the system to the factory configuration.



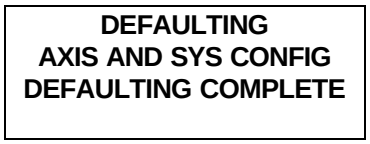
The three areas of the system that can be defaulted are the axis and system configuration, setup files, and user menu configuration. To default the axis and system configuration, press CFG (F1). To default the setup files, press SETUP (F2). To default the user menu configuration, press MENU (F3). Pressing ESC will return to the previous menu.

DEFAULT AXIS AND SYSTEM CONFIGURATION:

Defaults the axis and system configuration to the factory values.



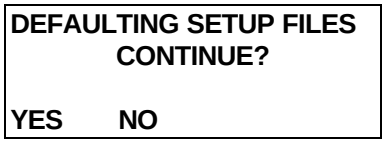
Pressing YES (F1) will default the axis and system configuration to the factory values. Pressing NO (F2) will return to the SET SYSTEM DEFAULTS menu.



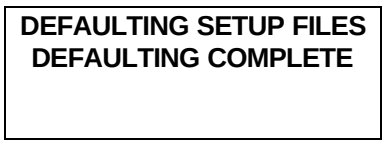
After the system defaults the axis and system configuration, the system displays this screen for three seconds.

DEFAULT SETUP FILES:

Defaults the number of stored setup files to 0.



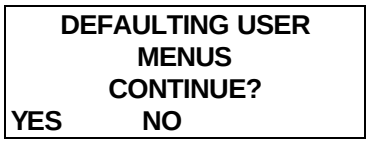
Pressing YES (F1) will delete all the Setup Files and reset the number of stored files to 0. Pressing NO (F2) will return to the SET SYSTEM DEFAULTS menu.



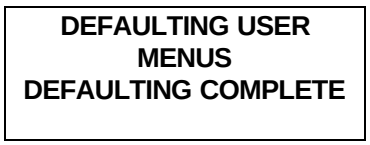
After the system deletes the setup files, the system displays this screen for three seconds.

DEFAULT USER MENUS:

Restores the user menu configuration to the factory values.



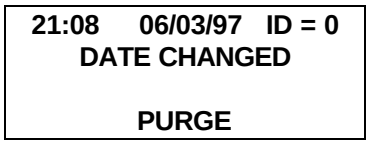
Pressing YES (F1) will default the user menu configuration to the factory values. Pressing NO (F2) will return to the SET SYSTEM DEFAULTS menu.



After the system defaults the user menus configuration, the system displays this screen for three seconds.

EDIT SYSTEM LOG

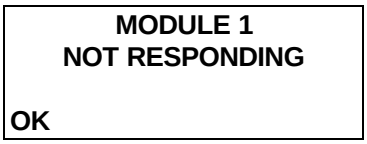
The log provides a way of tracking user and system events. The event log can be viewed and entry can be purged from the buffer. The events can be viewed using the up and down arrow keys.



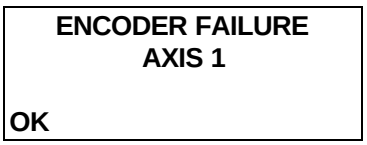
Pressing PURGE (F1) will delete the viewed event from the log buffer. Pressing ESC returns to the SYSTEM CONFIGURATION OPTION menu.

System Error Messages

The following is a description of error messages that can occur while operating the system.



This error is generated when one or more modules are not responding to polling requests from the Master module. Press OK to acknowledge the error or press ESC to return to the previous menu. This error is typically caused by a cabling problem between two modules.



This error is generated when one or more axes do not respond when polled by the module. Press OK to acknowledge the error or press ESC to return to the previous menu. This error can be caused by a faulty encoder or damaged connection cable.