



PATHFINDER™

Operator Manual

Copyright © 2008 – AMS Controls, Inc. All rights reserved.

The information contained in this document is proprietary to AMS Controls, Inc., and is not to be reproduced in any form without the specific written authorization of AMS Controls, Inc.

AMS Controls, Inc. reserves the right to change the contents of this manual without customer notice or permission. Although every effort is made to ensure the correctness of this manual, it should be noted that AMS Controls, Inc. is not responsible for personal or equipment damage caused by the contents of this manual. It is not the intent of this manual to cover every possible revision or version of the controller. For specific controller questions, contact AMS Controls Inc.

AMS Controls, Inc.
12180 Prichard Farm Road
Maryland Heights, MO 63043

314.344.3144 – 1-800-334-5213 (US & Canada) – fax: 314.344.9996 – info@amscontrols.com

www.amscontrols.com

Table of Contents

| | |
|--|-----------|
| CHAPTER 1: INTRODUCTION..... | 3 |
| INTERFACE | 3 |
| LOG IN TO PATHFINDER..... | 3 |
| THE DISPLAY | 4 |
| <i>Parts of the Pathfinder Main Screen.....</i> | <i>4</i> |
| <i>Pathfinder Buttons</i> | <i>5</i> |
| CHAPTER 2: PROGRAM A PART..... | 6 |
| CREATE A NEW PART..... | 6 |
| MODIFY AN EXISTING PART | 7 |
| <i>Select and Load a Part from the Part Library.....</i> | <i>7</i> |
| <i>Modify a Part</i> | <i>7</i> |
| CHAPTER 3: RUN A PART | 10 |
| RUN A PART – AUTOMATIC MODE | 10 |
| RUN A PART – MANUAL MODE | 10 |
| CHAPTER 4: MANAGE JOBS | 12 |
| APPENDIX A: GLOSSARY..... | 13 |
| APPENDIX B: SETUP PARAMETERS..... | 16 |
| MACHINE PARAMETERS..... | 16 |
| <i>Backgauge Parameters</i> | <i>16</i> |
| <i>Bending Beam Parameters.....</i> | <i>19</i> |
| <i>Clamping Beam Parameters</i> | <i>21</i> |
| CONTROLLER SETTINGS | 23 |
| <i>Clock/Calendar</i> | <i>23</i> |
| <i>Operator Preferences.....</i> | <i>24</i> |
| MATERIAL DEFINITIONS..... | 25 |
| <i>Default Overbend Angles</i> | <i>25</i> |
| <i>Additional Material Information.....</i> | <i>26</i> |

Chapter 1: Introduction

The Pathfinder controller is designed for operating a metal folding machine to produce programmed parts. Its functions include:


- Maintaining a library of parts.
- Tracking operation steps.
- Stopping the machine when the correct bend has been achieved.
- Indicating when an operation step is complete.
- Alerting the operator of procedure errors and machine malfunctions.
- Providing built-in help messages and diagnostics.
- Programming in finished part dimensions.

Once designed, part patterns can be stored and recalled for redesign or production as needed.

Interface

For interfacing with users, the Pathfinder™ controller uses

- **LCD (Liquid Crystal Display) touch screen** – Dropdown-lists, menus, and buttons displayed on the LCD touch screen operate the controller.
- **Status Lights** – Status lights illuminate to indicate when appropriate clamp pressure is reached, when a piece in progress must be rotated, and when it must be turned over.
- **Foot pedals** – Optional foot pedals engage and disengage the material clamp and to initiate a part cycle.

 **Note:** A VGA monitor, PS2 keyboard, mouse, or a secondary touch screen can also be used on the controller for data entry and navigation. They can also all function as a remote terminal as well.

Log in to Pathfinder

To log in to the Pathfinder controller,

1. Turn on power to the Pathfinder console.

2. Clear any errors on the Indradrive.
 - After clearing errors, the drive should go through to Phase 4 and read bb or ab.
3. Open the **Pathfinder log in screen**.
4. In the Login field, enter **Administrator**.
5. In the Password field, enter **1950**. The Pathfinder main screen displays.

The Display

Use the dropdown-lists, menus, and buttons displayed on the LCD touchscreen, to select most non-numeric data.

Parts of the Pathfinder Main Screen

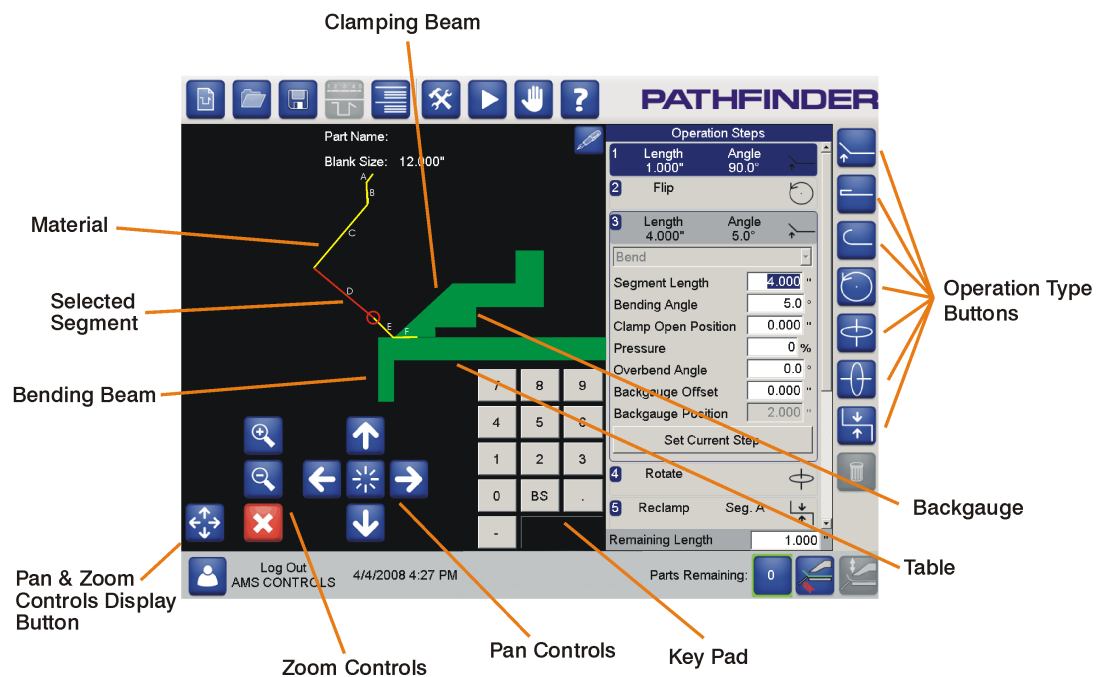


Figure 1: The Display

Note: The display varies depending on which mode (Status, Setup, Program, Prod. Data, Inc. Qty., Diagnostics, or Help) the controller is in.

Pathfinder Buttons

Use the buttons displayed at the top of the Pathfinder Main screen to open the various Pathfinder windows and control Pathfinder operation.



New Part - Select this button to open the Part Editor window to create a new part.



Part Library - Select this button to open the Part Library window to select a part.



Save Part - Select this button to save a part after making modifications to it.



(This button represents a future enhancement to Pathfinder and is not currently available.)



(This button represents a future enhancement to Pathfinder and is not currently available.)

Tools - Select this button to open the Tools Menu to:



- Adjust Controller settings
- Perform system diagnostics
- Create material definitions
- View lists of machine parameters
- Reference the machine
- Calibrate the machine
- View System Information
- Use Administrator tools



Run a Part - Select this button to run a part in Automatic Mode.



Manual Run - Select this button to run a part manually.




Help - Select this button to open Pathfinder Online Help.


Chapter 2: Program a Part

Once the controller is calibrated and set up, it can be used to program parts. Parts can be programmed either by creating completely new parts “from scratch: or by selecting an existing part and modifying it.

Create a New Part

 **Note:** You can program any part your machine is capable of creating. Once programmed, the steps and sequence can be stored in the Part Library

To create a new part,

1. On the Pathfinder™ main screen, select . The New Part Editor screen displays.
2. In the **Part Name** field, enter a name for the part you’re creating.
3. In the **Description** field, enter a description of the part.
4. In the remaining fields, enter any additional information, including:
 - Category
 - Sub-Category
 - Material Type
 - Material Thickness
 - Blank Size
 - Painted Side Up / Painted Side Down
 - Graphical Part / Non-Graphical Part
5. Select [**Define Machine Operations**]. The screen re-displays, showing a part blank.
 - Use the arrow and zoom buttons to adjust the view as needed.
6. Select the **operations step button** for the type of step you’re defining. The step is added to the operation step list.
7. Edit the operation step characteristics as needed.
8. Repeat steps 6-7 for each step in the sequence to create the part.

Index

A

Additional Material Information, 27
Air-gap Adjustment
 definition, 12
Automatic Mode, 10

B

Backgauge
 definition, 12
Backgauge Parameters, 16
Bend Allowance
 definition, 12
Bending Beam
 definition, 12
Bending Beam Parameters, 19
Bending Cheek
 definition, 12

C

Clamping Beam
 definition, 12
Clamping Beam Parameters, 21
Clock/Calendar
 settings, 24
Coining
 definition, 12
Controller Parameters, 24
Controller Settings, 24
Create a New Part, 6

D

Default Overbend Angles, 26
Display, 4

E

Existing Part
 modify, 7

F

Fold
 definition, 13

G

Glossary, 12

H

Hem
 definition, 13

I

Interface, 3
Introduction, 3

M

Machine Parameters, 16
MainScreen
 parts, 4
Make a Part, 10
Manual Mode, 10
Material Definitions, 26
 additional information, 27
 default overbend, 26
Modify a Part, 8
Modify an Existing Part, 7

N

New Part
 create, 6

O

Operator Preferences
 settings, 25
Overbend
 default, 26
 definition, 13

P

Parameters
 backgauge, 16
 clamping beam, 21
 clock.calendar, 24
 controller, 24
 machine, 16
 material definitions, 26
 operator preferences, 25
 overbend, 26
Part
 create new, 6
 modify, 7
Part Library
 definition, 13
 modify a part, 8