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stanley solutions

AUTOWATERMANAGER INSTRUCTION MANUAL

AutoWaterManager

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AutoWaterManager

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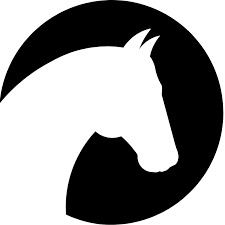
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# Solid Solutions for a Fluid Problem; The AutoWaterManager

“If you want a stable friendship, get a horse.”

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he AutoWaterManager by Stanley Solutions is a comprehensive management interface for livestock water trough heaters. Incorporating real-time measurement and modeling algorithms with wireless network communications and control, the AutoWaterManager delivers significant energy savings while maintaining dependable system performance.

Combining simple interfaces with robust system models and modern programming application interfaces, the AutoWaterManager supports the needs of the home livestock owner.

# Getting Started with the AutoWaterManager

The AutoWaterManager itself is a fully self-contained unit that interfaces wirelessly with intelligent outlets to manage the heating of water troughs in a distributed manner. The “Manager” interfaces with these intelligent outlets over a standard 2.4GHz Wi-Fi network that it hosts and manages itself. The Manager maintains two network interfaces, one for its local management functionality, and the other to provide additional networking capabilities including, but not limited to, providing convenient access to the web interface.

The AutoWaterManager aims to reduce active electrical load to a minimum, while maintaining maximum performance, heating water just over the threshold of freezing. It attempts to distribute electrical load evenly across the system, prioritizing troughs that are considered coldest. Priorities are ordered from lowest temperature to highest, leaving the colder troughs to be heated first.

Three user interfaces are provided with the AutoWaterManager to provide reliable and versatile control. Access to settings and configuration is granted through two of the three interfaces, the web interface and the RESTful API. It is through both interfaces that users can change the system parameters, download historic data logs, and monitor system performance. The additional front-panel interface also provides a simple means of system monitoring, and a convenient location for error diagnostics.

## Installation Considerations

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The AutoWaterManager is designed for installation on a ten-amp (or better) 120VAC circuit. Internally, the Manager maintains its own low-voltage power supply and uninterruptable-power-supply, documented further in a later section.

The AutoWaterManager is to be mounted by means of direct wall mount by two screw points. Additionally, ½-inch female conduit connectors are provided to support cabling. The Manager provides the latching mechanism to support a lock, and it is recommended that the Manager remain locked to prevent personal harm from high voltages that may be present during operation.

# Front Panel

###### Using the Break command, you can insert a page, column, or section break.

In this manual, section breaks are the secret to success. Double-click the section break above to activate the **Page Setup** menu. Click the **Margins** tab. As you can see, this section (page) has margins of 1.25 inches top and bottom, 2.33 left, and .83 right—with headers and footers of .67 inches. Special section margins make it possible for this manual to use framed Styles—such as the Icon 1 style—which will move with the text.

1. Breaks in a Word document appear as “labeled,” dotted double-lines.
2. To insert a section break, click **Break** on the **Insert** menu. Select one option, and then click **OK**.

# Web Interface

Assuming that you see your paragraph marks, you’ll notice a paragraph mark attached to the lower-right corner of the picture. Click the picture, and notice too, the name of the style—not surprisingly, the Picture style. Pictures attached to paragraph styles make it possible for pictures to act like paragraphs.



Figure 21.1 uses this caption text. In Word, the Caption style can be automatically numbered and labeled. Click **Caption** on the **Insert** menu to access and control the caption settings, Press the F1 key to search for additional information and Help on captions.

##### This is Heading 5. Like all styles in this margin, it can flow with the text.

To change the picture, first click it to select it. Point to **Picture** on the **Insert** menu, and then click **From File**. Clear the **Float over Text** check box. Select a new picture, and then click **Insert**. To change the color of the picture, double-click the graphic to activate the drawing layer—where you can group or ungroup picture objects, and re-color or delete objects. Click an object, and then click **Drawing Object** on the **Format** menu. Select a new shade, and then click **Close**. To delete an object, select it, and then press DELETE. Click **Close Picture**.

To crop the picture, click the picture. Hold the SHIFT key down and re-size the picture by moving the picture “handles” with your mouse.

Try this: Click in the framed text below, and choose **Body Text** from the **Style** list on the **Formatting** toolbar. The headline should now appear as the paragraph below this paragraph. To change the paragraph back to Heading 5, click the **Undo** toolbar button, or click **Heading 5** from the **Style** list.

##### Framed text, like this heading, can be cut, copied and pasted like regular paragraph text.

To cut and paste framed text, click on the bounding border of the frame to reveal the frame handles. Press CTRL+X to cut the frame from the page. Place your cursor before the first letter of the paragraph that you want the frame to appear next to. Press CTRL+V to paste the frame next to the paragraph.

## How to Generate a Table of Contents

To create a Table of Contents, click where you want to insert the Table of Contents. On the **Insert** menu, click **Reference**, and then click **Index and Tables**. Click the **Table of Contents** tab. Select any formatting preferences, and then click **OK**. The Table of Contents will be automatically created with words contained in Headings 1 through 3.

Note

The TOC is generated from text formatted with Heading styles used throughout the document.

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## How to Create an Index

To create index entries for the Word automatic indexing feature, select the text to be indexed, point to **Reference** on the **Insert** menu, and then click **Index and Tables**. Click the **Index** tab. (For more information, click **Microsoft Word Help** on the **Help** menu, type **index** into the question space, and then click the **Search** button. Finally, select the “Create an Index” Help topic.)

# API (Application Programming Interface)

###### Written exercise pages 121 - 123 in your workbook.

In print layout view, double-click the header or footer to activate it, or click **Header and Footer** on the **View** menu. You can change or delete the text just as you would regular document text. To specify placement and whether the header or footer should be different on odd and even pages, or different for the first page only, click **Page Setup** on the **File** menu, and then click the **Layout** tab.

# Settings and Model Considerations

To create a numbered paragraph:

1. In the **Font** list on the **Formatting** toolbar, click the **List Number** style; or
2. Click the **Numbering** button on the **Formatting** toolbar.

If you choose to format more than one paragraph, Word will automatically number the paragraphs.

# Electrical Specifications and Requirements

When you save the manual template with your changes, it will be easier to create documents in the future. To customize this manual:

###### To link a picture to your template, link the picture when you insert it by clicking on the Link to File box.

1. Insert your company information in place of the sample text on the cover page, as well as the inside-cover page. If you plan to use styles such as the “Icon Key” or Icon 1 style, set them now (see instructions, page 1).
2. Click **Save As** on the **File** menu. In the dialog box, click **Document Template** in the **Save File as Type** box. (The file name extension should change from .doc to .dot.)

## How to Create a Document

To create a manual from your newly saved template, click **New** on the **File** menu to re-open your template as a document. If you followed the steps above, your company information should appear in place. Now, you are ready to type your manual.

# Troubleshooting Tips

There are three ways to view the various style names of the template sample text:

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1. In normal view, click **Options** on the **Tools** menu. Click the **View** tab. In the **Style Area Width** box, dial a number, and then click **OK**;
2. In any view, click a paragraph and view the style name on the **Formatting** toolbar; or
3. On the **Format** menu, click **Styles and Formatting** to display the **Styles and Formatting** pane.

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