Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and keep for future reference.
Summary of Warning Information

This manual provides help to establish safe conditions for operating the MedWeld Interface software. Specific considerations and precautions are described in this manual as DANGER, WARNING, CAUTION and NOTICE.

It is important users operate the equipment in accordance with this instruction and any additional information provided by YASKAWA. Address any questions regarding safe and proper operation to Customer Support.

Notes for Safe Operation

Read this instruction carefully before installing, operating, maintaining, or inspecting.

In this instruction, Safe Operations are classified as “DANGER”, “WARNING”, “CAUTION” or “NOTICE”.

**DANGER**
Indicates a hazardous situation which, if not avoided, **WILL result in death or serious injury**. Safety Signs identified by the signal word DANGER. This is used sparingly and only for those situations presenting the most serious hazards.

**WARNING**
Indicates a hazardous situation which, if not avoided, **MAY result in death or serious injury**.

**CAUTION**
Indicates a hazardous situation, which if not avoided, **MAY result in minor to moderate injury**. It may also be used without the safety symbol as an alternative to “NOTICE”.

“CAUTION” without the safety symbol is used to indicate a situation which if not avoided **may result in equipment damage**.

**NOTICE**
NOTICE is preferred signal word for practices not related to personal injury. The safety symbol is not used with this signal word. As an alternative to “NOTICE”, the word “CAUTION” without the safety symbol may be used to indicate a message not relating to injury.

A “CAUTION” may result in a serious accident in some situations.
WARNING

• Read and understand this instructions throughly before using software.
  – This manual is intended to explain teaching, playback, editing operations of jobs and files, and operation management of the MedWeld.

Any matter not described in this manual must be regarded as “prohibited” or “improper”.

• Read chapter 1 “Safety” of the controller instructions before using the MedWeld software.

Not reading and understanding chapter 1 of the Controller instruction can result in death or serious injury.

• Observe the following when performing a teaching operation within the operating range:
  – Lockout by putting a lockout device on the safety fence when going into the area enclosed by the safety fence.
  – Display a sign that operations are being performed so no other person closes the safety fence.
  – View from the front whenever possible.
  – Always follow the predetermined operating procedure.
  – Always keep in mind emergency response measures against unexpected movement toward a person.
  – Ensure a safe place to retreat in case of emergency.

Failure to observe these precautions may cause improper or unintended movement, which may result in personal injury.

• Contact Customer Support for repairs.

Not contacting Customer Support can result in electrical shock or injury.

CAUTION

• Do not make unauthorized modification.

Unauthorized modifications can result in injury or equipment damage and will void the products warranty.

• Inspect:
  – For problems with movement
  – Damages to external wires

Repair any problems immediately and perform all necessary processes. If these problems are not repaired or processes not completed can cause unexpected results that can cause injury.
CAUTION

- Always return the Programming Pendant to the hook on the Controller after use. The Programming Pendant can be damaged if it is left in the work area, on the floor, or near fixtures.

NOTICE

- The drawings and photos in this manual are representative examples and differences may exist between them and the delivered product.
- YASKAWA may modify this software without notice when necessary due to product improvements, or changes in specifications. If such modification is made, the manual number will also be revised.
- If your copy of the manual is damaged or lost, contact Customer Support to order a new copy. Be sure to tell the representative the manual number listed on the front cover.
- To ensure safe and efficient operation at all times, be sure to follow all instructions, even if not designated as “DANGER”, “WARNING” or “CAUTION”.

Signal Output for Motor Protection

CAUTION

- Do not operate when a [COOLING FAN2 ERROR] appears on the Programming Pendant. If operation continues with a warning message, equipment damage can occur.
- During high speed continuous operation Manipulator temperature may rise quickly depending on ambient temperature and operation pattern. If a warning message displays stop operations or equipment damage may occur.
- Monitor warning messages on the Programming Pendant. Not monitoring warning messages may cause equipment damage.
- Refer to the Controller Concurrent I/O manual for details on the signal output. Not referring to Controller Concurrent I/O manual can result in equipment damage.
Programming, Operation, and Maintenance Safety

**WARNING**

- Make sure equipment has no potentially hazardous conditions.
  - area is clean and free of water, oil, debris, etc.
  - all safeguards are in place.
  - all safety equipment work correctly. Repair or replace any non-functioning safety equipment immediately.
  - Check the EMERGENCY STOP button(s) for proper operation before programming. The equipment must be in Emergency Stop (E-Stop) mode when not in use.

If a hazardous condition is present death or serious injury may occur.

- Use care when modifying software.
  - The equipment allows modifications to the software for maximum performance.

All modifications made to the software will change the way the equipment operates and may cause death or serious injury, as well as damage parts of the system.

- Make sure all modifications did not make create a hazardous or dangerous condition in all modes.

All modifications made to the software will change the way the equipment operates and may cause death or serious injury, as well as damage parts of the system.

**CAUTION**

- All operators, programmers, maintenance personnel, supervisors, and anyone working near the system must become familiar with the operation of the equipment.

Improper operation can result in personal injury and/or damage to the equipment.

- Only trained personnel familiar with the operation, manuals, electrical design, and equipment interconnections of this equipment should program, or maintain the system.

Any personnel involved with the operation of the equipment must understand potential dangers of operation.
## CAUTION

- Back up all programs and jobs onto suitable media before program changes are made.

To avoid loss of information, programs, or jobs, a backup must always be made before any service procedures are done and before any changes are made to options, accessories, or equipment.

- All connections must be made within the standard voltage and current ratings of the equipment.

Improper connections can damage the equipment.

### Safeguarding Tips

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All operators, programmers, maintenance personnel, supervisors, and anyone working near the system must be familiar with the operation of this equipment.</td>
</tr>
<tr>
<td>- All personnel involved with the operation of the equipment must understand potential dangers of operation.</td>
</tr>
<tr>
<td>• General safeguarding tips:</td>
</tr>
<tr>
<td>- Place system in Emergency Stop (E-Stop) mode whenever it is not in use.</td>
</tr>
<tr>
<td>- Use lockout/tagout procedures during equipment maintenance in accordance with ANSI/RIA R15.06-2012, section 4.2.5, Sources of Energy. Refer also to Section 1910.147 (29CFR, Part 1910), Occupational Safety and Health Standards for General Industry (OSHA).</td>
</tr>
<tr>
<td>- Only trained personnel familiar with the operation of this equipment, the operator's manuals, the system equipment, and options and accessories can operate equipment.</td>
</tr>
</tbody>
</table>

Improper operation can result in personal injury and/or damage to the equipment.
National Safety Standard

We suggest that you obtain and review a copy of the ANSI/RIA National Safety Standard for Industrial Robots and Robot Systems (ANSI/RIA R15.06-2012). You can obtain this document from the Robotic Industries Association (RIA) at the following address:

Robotic Industries Association
900 Victors Way
P.O. Box 3724
Ann Arbor, Michigan 48106
TEL: (734) 994-6088
FAX: (734) 994-3338
www.roboticsonline.com

Ultimately, well-trained personnel are the best safeguard against accidents and damage that can result from improper operation of the equipment. The customer is responsible for providing adequately trained personnel to operate, program, and maintain the equipment.

We recommend approved YASKAWA training courses for all personnel involved with the operation, programming, or repair of the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Definition of Terms Used Often in This Manual

The Motoman is the YASKAWA industrial robot product.

The Motoman usually consists of a Manipulator, Controller, Programming Pendant, and Manipulator cables.

In this manual, the equipment is designated as follows:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manual Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MedWeld Interface Software</td>
<td>MedWeld Application</td>
</tr>
<tr>
<td>YRC1000 controller</td>
<td>Controller</td>
</tr>
<tr>
<td>YRC1000 programming pendant</td>
<td>Programming Pendant</td>
</tr>
<tr>
<td>Robot</td>
<td>Manipulator</td>
</tr>
<tr>
<td>Cable between the Manipulator and the Controller</td>
<td>Manipulator cable</td>
</tr>
<tr>
<td>Positioner</td>
<td>Positioner</td>
</tr>
</tbody>
</table>
Descriptions of the Programming Pendant keys, buttons, and displays are as follows:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manual Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Pendant</td>
<td></td>
</tr>
<tr>
<td>Character Keys</td>
<td>The keys which have characters printed on them are denoted with [ ]. ex. [ENTER]</td>
</tr>
<tr>
<td>Symbol Keys</td>
<td>The keys which have a symbol printed on them are not denoted with [ ] but depicted</td>
</tr>
<tr>
<td></td>
<td>with a small picture. ex. PAGE key</td>
</tr>
<tr>
<td>Axis Keys</td>
<td>The Cursor is an exception, and a picture is not shown.</td>
</tr>
<tr>
<td>Numeric Keys</td>
<td>&quot;Axis Keys&quot; and &quot;Numeric Keys&quot; are generic names for the keys for axis operation</td>
</tr>
<tr>
<td></td>
<td>and number input.</td>
</tr>
<tr>
<td>Keys pressed</td>
<td>When two keys are to be pressed simultaneously, the keys are shown with a &quot;+&quot;</td>
</tr>
<tr>
<td>simultaneously</td>
<td>sign between them. ex. SHIFT key +COORD key</td>
</tr>
<tr>
<td>Mode Key</td>
<td>Three kinds of modes that can be selected by the mode key are denoted as follows:</td>
</tr>
<tr>
<td></td>
<td>REMOTE, PLAY, or TEACH</td>
</tr>
<tr>
<td>Button</td>
<td>Three buttons on the upper side of the Programming Pendant are denoted as</td>
</tr>
<tr>
<td></td>
<td>follows:</td>
</tr>
<tr>
<td></td>
<td>HOLD button</td>
</tr>
<tr>
<td></td>
<td>START button</td>
</tr>
<tr>
<td></td>
<td>EMERGENCY STOP button</td>
</tr>
<tr>
<td>Displays</td>
<td>The menu displayed in the Programming Pendant is denoted with { }. ex. {JOB}</td>
</tr>
<tr>
<td>PC Keyboard</td>
<td>The name of the key is denoted ex. Ctrl key on the keyboard</td>
</tr>
</tbody>
</table>

In the explanation of the operation procedure, the expression “Select • • •” means that the cursor is moved to the item and the SELECT key is pressed, or the item is directly selected by touching the screen.

**Registered Trademark**

In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or bland names for each company or corporation. The indications of © and ™ are omitted.
Customer Support Information

If assistance is needed with any aspect of the system, please contact Customer Support at the following 24-hour telephone number:

(937) 847-3200

Customer Support also has an e-mail address for routine technical inquiries, to contact Customer Support through e-mail use the following address:

techsupport@motoman.com

When using e-mail to contact Customer Support, please provide a detailed description of the issue, along with complete contact information. Please allow approximately 24 to 36 hours for a response to the inquiry.

WARNING

• Maintenance and inspection must be performed by specified personnel. Failure to observe this caution may result in electric shock or injury.
• For disassembly or repair, contact Customer Support.
• Do not remove the motor, and do not release the brake. Failure to observe these safety warnings may result in death or serious injury from unexpected turning of the manipulator’s arm.

NOTICE

Use e-mail for routine inquiries only. If there is an urgent or emergency need for service, replacement parts, or information, contact Customer Support at the telephone number shown above.
Safety
Customer Support Information

Have the following information ready before calling Customer Support:

- **System**
  MedWeld Programming Pendant Application

- **Primary Application**

- **Controller**
  YRC1000

- **Software Version**

  Access this information on the Programming Pendant's LCD display screen by selecting {MAIN MENU} - {SYSTEM INFO} - {VERSION}

- **Manipulator Serial Number**

  Located on the Manipulator data plate

- **Manipulator Sales Order Number**

  Located on the Controller data plate

- **Positioner**

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1 Introduction

1.1 Overview

The YASKAWA MedWeld Application is part of the YASKAWA family of standardized solutions. It fully integrates the interface for the MedWeld weld timer and YASKAWA America, Inc. supplies support. The MedWeld kit includes the MedWeld Programming Pendant application. This Programming Pendant application allows programming and monitoring of the MEDAR weld timer directly from the Programming Pendant.

Fig. 1-1: MedWeld

The MedWeld communicates directly with the Medar weld processor boards. While the Medar spot timer controls the actual welding process, the Programming Pendant application allows changing parameters or programs, as well as monitor faults and alarms directly from the programming pendant.

**NOTICE**

The weld sequence does not require the MedWeld application.

During the welding process, the weld timer communicates critical sequencing instructions with the Manipulator using Ethernet/IP (EIP). The controller determines schedule selection, and weld initiation using native Inform instructions and Ethernet/IP commands.

The MedWeld Interface provides full Medar functionality as supported in Weld Technology Corporation’s (WTC) Weld Gateway personal computer programming application. The interface allows the operator to quickly see what weld controls have Faults, and/or Alerts. The application is capable of monitoring and collecting data on the weld control, updating the status of the welder as it changes and alerting the operator to fault conditions.
1 Introduction
1.1 Overview

1.1.1 Features

• Network capability for multiple weld times
• Full Medar programming capability from the Programming Pendant
• Optimized interface with minimal amount of network traffic overhead
• Data Collection
  – On-line monitoring of weld operations
  – Weld control faults
  – Weld process faults
  – Last weld data
  – Stepper status
  – Current I/O status
• Off-line Weld Schedule Programming
  – Weld schedule programming
  – Stepper schedule programming
  – Fault level programming
  – Setup programming
  – Stepper and fault reset
  – Stepper reset or advance
  – Fault reset
2 Manage Timer - Startup

The MedWeld Programming Pendant application can talk to any number of weld timers that are on the same subnet.

2.1 Initial MedWeld Application Startup

Before starting up the MedWeld Programming Pendant application make sure all needed weld timers:

• have power.
• have an IP address on the same subnet as Lan3 connection of the Controller.
• are physically connect to the network.

1. On first startup observe the "Manage Timer" list box a appears.
2. Press {Scan for Timers} on the list box.

- The list box populates with the IP addresses of all the timers discovered on the subnet.

3. Place a check-mark next to each timer wanting access to this Programming Pendant.
2. Manage Timer - Startup

2.1 Initial MedWeld Application Startup

4. Press {Save Timer List} button.

- Observe a list displays of timer IP addresses linked to the Programming Pendant application.

5. Press {Exit} to close the “Manage Timers” list box.

NOTICE

- MedWeld can monitor more timers than the Controller can control.
- Normally timers link to a robot cell but in some requirements require monitoring a large group of timers on a single Programming Pendant.
2.2 Manage Timers

The “Manage Timers” form allows for scanning for adding timers, removing timers from the timer list, and returning to the main screen of the application.

2.2.1 Removing a Timer

1. From the Main Menu select “Setup”, “Manage Timers” menu item.
   • The “Manage Timers form appears
2. Select the check box next to the timer(s).
3. Press {Remove Timer}.
4. Press {Yes} to confirm the timer(s) to remove.
2.2.2 Adding New Timer(s) by Scanning

1. From the Main Menu select “Setup”, “Manage Timers” menu item.
   - The “Manage Timers” form appears

2. Press [Scan for Timers] on the list box.
   - The list box populates with the IP addresses of all the timers discovered on the subnet.

3. Place a check-mark next to each timer wanting access to this Programming Pendant.
4. Press {Save Timer List} button.
   • Observe a list displays of timer IP addresses linked to the Programming Pendant application.

   ![Image of Manage Timers interface]

   **NOTICE**
   • MedWeld can monitor more timers than the Controller can control.
   • Normally timers link to a robot cell but in some installations it requires monitoring a large group of timers on a single Programming Pendant.

5. Press {Exit} to close the “Manage Timers” list box.
2.2.3 Adding New Timer(s) Manually

**NOTICE**

YASKAWA recommends following section 2.2.2 “Adding New Timer(s) by Scanning” though timers can be added manually if required.

1. From the Main Menu select “Setup”, “Manage Timers” menu item.
   - The “Manage Timers form appears

2. Click the {Add Timer} button.
   - Observe the “Manually Add Timer” pop up appears.
3. Enter the IP Address of the timer and press the (Add) button.

4. Observe the timer shows up on the timer list with the name of "Manual".

5. Place a check-mark by each timers that needs to appear for communication and press {Save Timer List} button.
3 MedWeld Quick Tour

This chapter describes the basic features of the MedWeld. Read this chapter thoroughly to quickly understand the various tabs and functions of the MedWeld.

3.1 Status Tab

The “Status” tab allows the user to view results.

Fig. 3-1: Monitor Tab

3.1.1 Weld Status Tab

The “Weld Status” tab displays the results of the last weld completed.

- Voltage and Current Window
  - DC Bus Voltage (V), Secondary Current (A), Primary Current (A)
    - Max (Maximum)
    - Avg (Average)
    - Min (Minimum)

CAUTION

- The customer is responsible for providing training operators to run the equipment.
- The customer is responsible for making sure the equipment operates in accordance with the ANSI/RIA R15.06-2012 Robot Safety standard, as well as any other local or state standards.
3 MedWeld Quick Tour
3.1 Status Tab

- **Resistance Welding Controls Window**
  - Sequence number
  - C-Factor
  - Turns Ratio
  - Desired Current (A)
  - %Heat/%I (Last Weld) (Percentage heat to percentage current ratio)

- **Stepper Data Window**
  - Stepper Number
  - Step Number
  - Total Weld Count
  - Step Weld Count
  - Average On-Time (us)
  - High Freq Cycle Cnt (ms)

*Fig. 3-2: Weld Status Tab*
3.1.2 I/O Status Tab

The "I/O Status" tabs monitor the input and output signals as recorded by the weld timer. Refer to the WTC’s Integrated Weld Control manual for a complete list of monitored I/O’s.

*Fig. 3-3: Timer Inputs Tab*

*Fig. 3-4: Timer Outputs Tab*
3.1.3 Stepper Status Tab

The “Stepper Status” tab allows for monitoring the status of each of the available steppers. The used weld timers determine the number of steppers. The Programming Pendant stepper data is fed directly from the weld timer.

Fig. 3-5: Stepper Status Tab

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Stepper Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stepper Status</td>
<td>ON</td>
<td>Stepper 1</td>
</tr>
<tr>
<td>Step Number</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Step Weld Count</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Present % Boost</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total Weld Count</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Remaining Tip Dressed</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Stepper Aux Count</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Stepper Select Drop-down**
  The “Stepper Select” drop-down window selects the stepper program to monitor (Stepper 1-10).

- **Advance Stepper Button**
  The (Advance Stepper) button manually steps through the stepper program. This button displays added energy to each weld step (% current boost).

- **Reset Stepper Button**
  The (Reset Stepper) button resets the current stepper back to the first step.

- **Refresh Button**
  The (Refresh) button resets any values edited to the last saved value.

- **Reset All Steppers Button**
  The (Reset All Steppers) button resets all steppers back to the first step.
3.1.4 Fault Status Tab

The “Fault Status” tab monitors active faults as well as recent fault history.

*Fig. 3-6: Fault Status Tab*

<table>
<thead>
<tr>
<th>Active Errors Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Active Error Window displays the date, time, and a brief description of the Active Error.</td>
</tr>
</tbody>
</table>

*Fig. 3-7: Active Errors*

<table>
<thead>
<tr>
<th>Reset Active Fault(s) Button</th>
</tr>
</thead>
<tbody>
<tr>
<td>The [Reset Active Fault(s)] button clears the Active Faults window and moves the faults to the Fault History. Refer to the WTC's Integrated Weld Control manual for a complete list of faults and their remedy.</td>
</tr>
</tbody>
</table>

**NOTICE**

The [Reset Active Fault(s)] button does not clear the faults from the weld timer. Not properly resolving a fault condition, it will continue to re-appear in the Active Fault window.

<table>
<thead>
<tr>
<th>Error Log Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Error Log window displays the errors like the Active Error window until closing the MedWeld application.</td>
</tr>
</tbody>
</table>

*Fig. 3-8: Error Log*
3 MedWeld Quick Tour
3.2 Edit Tab

The “Edit” tab allows the user to create and edit weld schedules, steppers, EIP settings as well as system configurations and error message settings.

Fig. 3-9: Edit Tab

3.2.1 Schedule Edit Tab

The “Schedule Edit” tab allows the user to program weld sequences or schedules directly from the programming pendant. By selecting from a standard list of commands or weld functions, the user is able to create new weld sequences or modify existing schedules. For a complete list of MedWeld functions, refer to the WTC’s Integrated Weld Control manual.

Fig. 3-10: Schedule Edit Tab
3 MedWeld Quick Tour
3.2 Edit Tab

- **Insert Button**
  The {Insert} button displays a list of available functions to create or modify the weld schedule. The function appears in the Edit frame for programming the variables before recording in the schedule when pressing the {Apply} button. Changes do not take effect until saving the schedule to the weld timer.

  Fig. 3-11: Function List from Insert Button

- **Delete Button**
  The {Delete} button removes the highlighted function from the current weld schedule. Changes do not take effect until saving the schedule to the weld timer.

- **Duplicate Button**
  The {Duplicate} button copies an entire weld schedule.

  Fig. 3-12: Duplicate Screen from Duplicate Button
3 MedWeld Quick Tour

3.2 Edit Tab

- **Schedule Drop-down**
  The (Schedule) drop-down window selects the schedule to view.

- **Refresh Button**
  The (Refresh) button reloads the last schedule values recorded in the weld timer. Not saving changes before pressing the [Refresh] are no longer available.

- **Save Button**
  The (Save) button writes the new or modified schedule to the weld timer.

- **Edit Frame**
  The Edit Frame displays the selected command line with editable variables.

- **Apply Button**
  The (Apply) button moves the modified command from the Edit Frame to the schedule. Changes do not record to the weld timer until pressing the (Save) button.

### 3.2.2 Stepper Edit Tab

The "Stepper Edit" tab programs the stepper values directly from the Programming Pendant.

*Fig. 3-13: Stepper Edit Tab*
### Duplicate Button
The {Duplicate} button copies an entire stepper profile.

*Fig. 3-14: Stepper Edit Duplicate Button*

### Stepper Drop-down
The Stepper drop-down window selects the stepper profile to view.

### Refresh Button
The {Refresh} button reloads the last stepper values recorded in the weld timer. Not saving changes before pressing the {Refresh} are no longer available.

### Save Button
The {Save} button writes the new or modified stepper profile to the weld timer.

### Edit Frame
The Edit Frame displays the selected stepper command line with editable variables.

### Apply Button
The {Apply} button moves the modified command from the Edit Frame to the stepper profile. Changes do not record to the weld timer until pressing the {Save} button.
3.2.3 EIP Settings Tab

The “EIP Settings” tab allows viewing and modifying the system network configuration.

Fig. 3-15: EIP Settings Tab

- **Refresh Button**
  The (Refresh) button reloads the last network configuration settings in the weld timer. Not saving changes before pressing the (Refresh) are no longer available.

- **Save Button**
  The (Save) button writes the new or modified network configuration profile to the weld timer.

3.2.4 Setup Tab

The Setup tab allows modifying alarm messages. These messages trigger a specific response in the weld timer. Fault conditions typically prevent welding or initiation of a new schedule until clearing the fault. Alert conditions serve as warnings of potential problems and maintenance alerts.

Fig. 3-16: Setup Tab

- **Refresh Button**
  The (Refresh) button reloads the last alarm mapping profile recorded in the weld timer. Not saving changes before pressing the (Refresh) are no longer available.

- **Save Button**
  The (Save) button writes the new or modified alarm mapping profile to the weld timer.
3 MedWeld Quick Tour
3.2 Edit Tab

- **Edit Frame**
The Edit Frame displays the selected alarm message from the drop-down menu of the Fault/Error/None variables.

- **Apply Button**
The (Apply) button moves the modified alarm setting from the Edit Frame to the alarm mapping profile. Changes do not record to the weld timer until pressing the (Save) button.

### 3.2.5 System Configuration Tab

The “System Config” tab allows configuration of the system date as well as enabling or disabling various functions including:

- Reload Defaults
- Function Timing (cycle or millisecond)
- Isolation Contactor
- Date (Year, Month, Day, Hour, Minute) (24 hour format only)

---

**NOTICE**
The default settings are testing solutions for WTC. The Reload Defaults setting loads the WTC standard control test defaults for firing loads. YASKAWA does not recommend using these defaults in actual welding applications.

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**Fig. 3-17: System Configuration Tab**

![System Configuration Tab]

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- **Refresh**
The (Refresh) button reloads the last system configuration profile recorded in the weld timer. Not saving changes before pressing the (Refresh) are no longer available.

- **Save**
The (Save) button writes the new or modified system configuration profile to the weld timer.

- **Edit Frame**
The Edit Frame displays the selected configuration setting with the editable variables.

- **Apply**
The (Apply) button moves the modified configuration setting from the Edit Frame to the system configuration profile. Changes are not recorded to the weld timer until pressing the (Save) button.
4 Operation

## 4.1 Starting MedWeld Application

1. Select the “PP Application” from the Main Menu.
   - A sub-menu of the installed application displays.
2. Select “MedWeld” from the list of applications.

## 4.2 Programming/Editing Weld Schedules

1. Open the “Schedule Edit” tab from the “Edit” tab.

   ![Edit Schedule Tab](image)

   Fig. 4-1: Edit Schedule Tab

2. Select the schedule to create or modify using the “Schedule” drop-down menu.

CAUTION

- The customer is responsible for providing trained operators to run the equipment.
- The customer is responsible for making sure the equipment operates in accordance with the ANSI/RIA R15.06-1999 Robot Safety standard, as well as any other local or state standards.
4.2 Programming/Editing Weld Schedules

3. To copy an existing schedule:
   a) Press the (Duplicate) button.
      • The Duplicate dialog appears.
      
      ![Duplicate Dialog](image)

      **Fig. 4-2: Duplicate Dialog**

   b) Enter the timer number to save to as well as the schedule number and press {OK}.
      • Copies the schedule to the selected timer location.

4. To insert new command lines:
   a) Press the {Insert} button.
      • The Function List appears.
      
      ![Function List](image)

      **Fig. 4-3: Function List**

   b) Select the desired function and press {OK}.
      • The new function appears in the Edit Frame.
   c) Edit function variables and press {Apply}.
      • The new function appears in the schedule.
4.2 Programming/Editing Weld Schedules

*Fig. 4-4: Schedule Edit Frame*

<table>
<thead>
<tr>
<th>Schedule Edit</th>
<th>Stepper Edit</th>
<th>EIP Settings</th>
<th>Setup</th>
<th>System Config</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert</td>
<td>Delete</td>
<td>Duplicate</td>
<td></td>
<td>Schedule</td>
</tr>
</tbody>
</table>

| << Start of Schedule 1 >> |
| 02: LINEAR STEP #0 ASSIGNED (0 = OFF) |
| 05: INITIAL SQUEEZE 5 CYCLES |
| 76: SEC. CURR LIMITS: HD=00.00 LOW=99990 |
| 81: TRANSFORMER TURNS RATIO 75:1 |
| 88: TURN ON ISOLATION contactor |
| 58: TURN ON WELD IN PROGRESS |
| 01: SQUEEZE 30 CYCLES |
| 30: WELD 10 <CY/TIP> 10000 AMPS |

**NOTICE**

*To cancel a change and return to the original schedule press {Refresh}.*

d) Press {Save} to load the new schedule into the weld timer.
4.3 Programming/Editing Stepper Profiles

1. Open the “Stepper Edit” tab from the “Edit” tab.

Fig. 4-5: Stepper Edit Tab

2. Use the “Stepper” drop-down menu to select the stepper profile to create or modify.

3. To copy an existing stepper profile:
   a) Press the (Duplicate) button.
      • The Duplicate dialog appears.
   b) Enter the timer number to save to as well as the stepper number and press (OK).
      • Copies the stepper profile to the selected timer location.
4. To modify an existing stepper:
   a) Select the stepper to modify.
      • The step appears in the Edit Frame.

**Fig. 4-7: Stepper Edit Frame**

b) Edit step variables and press {Apply}.
   • The modified step appears in the stepper profile.

c) Press [Save] to load the new stepper profile to the weld timer.

**NOTICE**

To cancel a change and return to the original stepper profile press {Refresh}.
4.4 Modifying EIP Settings

1. Open the “EIP Settings” tab from the “Edit” tab.

Fig. 4-8: Edit EIP Settings Tab

2. Select the network variable to modify.
3. Enter the new data using the keypad.
4. Press {Save} to load the new network settings to the weld timer.

NOTICE

To cancel a change and return to the original network settings press {Refresh}.
4.5 Modifying Alarm Message Mapping

1. Open the {Setup} tab from the {Edit} tab.

*Fig. 4-9: Edit Setup Tab*

2. Select alarm message to modify.
   - The alarm appears in the Edit frame.
3. In the drop down menu select “(FAULT)”, “(ALERT)”, or “(NONE)”. 
4. Press the {Apply} button.
   - The modified alarm appears in the profile.
5. Press {Save} to load the new alarm mapping to the weld timer.

**NOTICE**

To cancel a change and return to the original setting press {Refresh}. 
4.6 Modifying System Configuration

1. Open the “System Config” tab from the “Edit” tab.

Fig. 4-10: Edit System Configuration Tab

2. Select the configuration variable to edit and change in the drop-down menu and press {Apply}.
   - The modified variable appears in the system configuration profile.

3. Repeat step 2 for each configuration variable needing changed.

4. Press [Save] to load the new system configuration to the weld timer.

NOTICE

To cancel a change and return to the original setting press {Refresh}. 

YASKAWA MedWeld