DEP 600 | USER MANUAL

Manual Revision: 1.3
Modified: 10/27/21

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TABLE OF CONTENTS

REGARDING THIS DOCUMENTATION

This documentation is written to provide configuration instructions for WTC hand held terminal- DEP 600. This manual does not give instructions for creating applications that run on the weld controls.

It has been designed for planning, programming, start-up personnel, operators, service technicians, plant operators, line builders and maintenance personnel to assist with procedures related to installing and communicating with the weld control.

Screen shots of the software applications used in this manual are for illustrative purpose only. Because of the many variables and requirements associate with any particular weld control, WTC cannot assume responsibility or liability for actual use based on the examples.

SOFTWARE UPDATES

WTC reserves the right to make substitutions or changes as required to the hardware or software described in this manual.

This manual may be periodically updated to reflect software changes that will affect operation of the equipment described. Request copies of latest updates by contacting your sales representative.

REVISION HISTORY

REVISION	REL. DATE	COMMENTS
V1.0	07/25/19	Initial release of Manual M-035600 to support DEP600.
V1.1	01/14/20	Added functionality explained: Upgrade , Graphs and changing IP address.
V1.2	06/10/20	Changed flag icons for Spanish and Portuguese language selection.
V1.3	09/29/21	Added navigation menus to explain GUI.

LANGUAGES AVAILABLE

This documentation was originally published in English. Translations are available in Chinese, French, German, Japanese, Portuguese and Spanish.

SYMBOLS USED IN THIS DOCUMENTATION

The following symbols are used to identify safety instructions.

THIS SYMBOL WILL BE USED WHEREVER FAILURE TO OBSERVE SAFETY MEASURES MAY RESULT IN DEATH, SEVERE BODILY INJURY OR SERIOUS DAMAGE TO PROPERTY.

THIS SYMBOL WILL BE USED WHEREVER INSUFFICIENT OR LACKING COMPLIANCE WITH INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

THIS SYMBOL DENOTES WHEN INSUFFICIENT OR LACKING COMPLIANCE WITH INSTRUCTIONS MAY DAMAGE EQUIPMENT OR FILES.

NOTE:

THIS SYMBOL INFORMS THE USER ABOUT SPECIAL FEATURES, OR WHERE TO FIND MORE INFORMATION.

THIS SYMBOL DRAWS ATTENTION TO SPECIFIC INSTRUCTIONS OR PRODUCT FEATURES.

THIS SYMBOL WILL BE USED TO NOTIFY THE OPERATOR WHEN AN OPERATION REQUIRES ESD SAFETY PRECAUTIONS TO BE FOLLOWED. FAILURE TO FOLLOW ESD PRECAUTIONS WHEN PERFORMING CERTAIN PROCEDURES MAY DAMAGE THE EQUIPMENT AND VOID THE WARRANTY

THIS SYMBOL INDICATES THAT ONLY WTC SERVICE PERSONNEL OR WTC REPAIR PARTNERS SHOULD SERVICE OR OPEN THIS DEVICE. BREAKING A WARRANTY SEAL WILL VOID THE WARRANTY OF THIS DEVICE

COMMON TECHNIQUES USED IN THIS MANUAL

The following conventions are used throughout this manual:

- Bulleted lists such as this one provide information, not procedural steps.

1. Numbered lists provide sequential steps or hierarchical information.

Italic type is used for emphasis.

WTC SERVICE AND SUPPORT

WTC tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility. If you need assistance please contact Customer Support (see the table below); our trained technical specialists are available to help. When emailing please provide a photograph of the serial tag and Hardware Status Screen on the DEP 600 if possible.

If the product is not functioning and needs to be returned, contact your distributor. You must provide a Customer Support case number to your distributor in order to complete the return process.

Phone	United States/Canada	1.248.477.3900
Internet	Worldwide	www.weldtechcorp.com/service-repairs.html

WORKING WITH STATIC-SENSITIVE DEVICES

ESD COSTS!

Electrostatic discharge (ESD) can ignite flammable materials and damage electronic components. Static electricity can attract contaminants in clean environments or cause products to stick together. Other costs of ESD-damaged electronic devices are in their replacement and production down time. Associated costs of repair and rework, shipping, labor and overhead can be significant. Reducing losses to ESD and static electricity is an ABSOLUTE NECESSITY.

NEVER use the personnel grounding system described below when working with voltages above 220 VAC.

PERSONNEL GROUNDING

BEFORE TOUCHING ANY ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES OR CIRCUIT BOARDS, PUT ON AND WEAR AN ELECTROSTATIC DISCHARGE (ESD) WRIST STRAP. GROUND THIS STRAP THROUGH A ONE MEGOHM (1 MΩ) RESISTOR.

For detailed information about ESD contact: WTC Service and Support
Phone: +1 248-477-3900 | Fax: +1 248-477-8897
Email: service@weldtechcorp.com
Website: www.weldtechcorp.com

HOW TO GET HELP AND SUPPORT

Contact WTC for all technical support issues. Please have the following information available:

YOUR CONTACT INFORMATION:

- Company Name
- Phone Number
- Fax Number
- Email Address

WELD CONTROL PART NUMBER AND SERIAL NUMBER

- Located on the serial tag on the outside of the cabinet

WELD TIMER AND DEP 600 FIRMWARE AND REVISIONS

- The weld timer firmware revision is located in the Hardware Status Screen.
- The DEP 600 firmware revision is located in the DEP 600 Upgrade Screen.

DESCRIPTION OF PROBLEM

- Faults and Alerts
- Mechanical and Electrical Issues
- Weld Quality Issues

Chapter 1: OVERVIEW OF THE DEP 600

The WTC DEP 600 Data Entry Panel is a portable, hand-held, programming device, used to communicate with WTC weld controls through Serial or EtherNet connection. It can communicate with up to 30 WTC weld controls through a network connection.

The DEP 600 allows the user to program weld schedules, set-up parameters and stepper profiles, then download other information to the weld control. It also receives weld data summary uploaded by the weld timer and displays weld results and graphs.

When power is applied to the DEP 600, the Home screen is displayed, which allows the user to connect to an active weld control via:

- Global EtherNet Network
- Serial (RS-485) Network

When connected via the Global EtherNet IP network, the DEP 600 polls the network for active devices. Each active device responds with information about itself, which includes IP address, welder ID and status. At this point, the user can select the weld control to connect to.

THIS MANUAL PROVIDES INSTRUCTION ON THE FOLLOWING TOPICS:

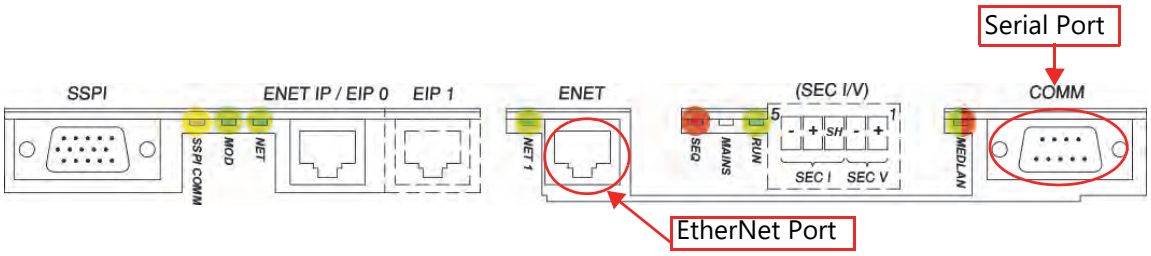
- Menu Navigation
- Network Configuration and Connectivity
- Review and Edit Weld Schedules
- Review and Configure Fault and Setup Parameters
- Review and Configure Linear Current Stepper Profiles
- Fault and Stepper Reset
- I/O Mapping and Status
- Update and Back-up

Each weld control functions independently. The data displayed by the DEP 600 for each weld control varies, depending on the software and control specific features.

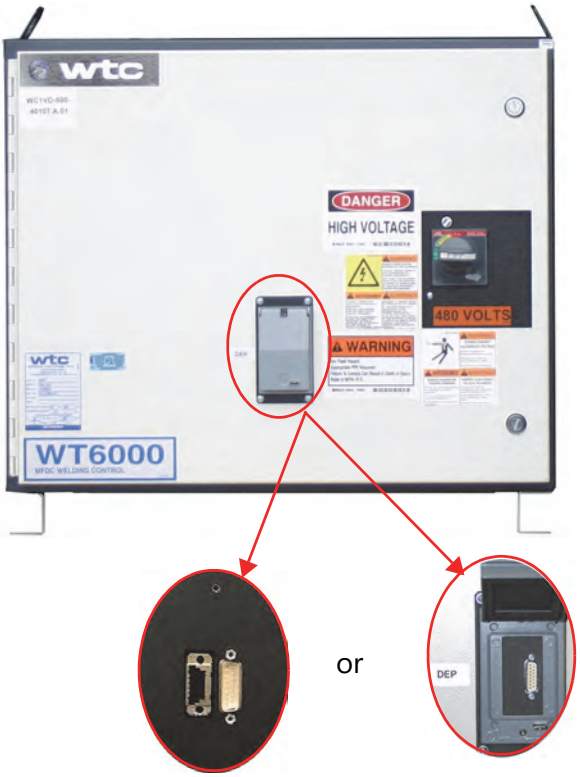
NOTE: LCD DISPLAY IMAGES IN THIS MANUAL ARE USED AS EXAMPLES ONLY TO PROVIDE INSTRUCTION ON THE USE OF THE DEP 600. ACTUAL FEATURES AND PARAMETERS VIEWED ON THE DEP 600 MAY VARY DEPENDING ON THE CUSTOMER'S APPLICATION REQUIREMENTS AND THE SOFTWARE LOADED INTO THE WELD CONTROL. IF ASSISTANCE IS REQUIRED IN THE USE OF THIS PRODUCT, PLEASE CONTACT WTC.

PHYSICAL CONNECTIONS

ON THE WELD TIMER



DEP 600 PORT ON THE CONTROL DOOR



DEP 600 SCREEN AND LAYOUT

TOUCH SCREEN
Tap a button or field to select and edit

FUNCTION KEYS
Used to perform various functions that correspond with the menu items displayed

QUICK ACTION KEYS
Allow one-touch, quick access to the:
- Display Screen
- Main Status Screen
- Main Edit Screen
- Delete an item
- Cancel an item
- Insert a value

NUMERIC KEYS
The numeric keys are used to change the numeric parameters of programmable functions and features.

NAVIGATION KEYS
UP, DOWN: Navigate the item selection when in a List.
UP, DOWN: Set the State of a toggle value when on a toggle field.
LEFT, RIGHT: Move the field selection box.

ENTER KEY
This key is used to execute a command or operation.

Figure 1.1 DEP 600 front view

KEY FUNCTIONS

NAVIGATION KEYS
- USING ARROWS IN A SELECTED FIELD:

	Move to the **next** field. ***Red*** highlight around selected field
	Move to the **previous** field. ***Red*** highlight around selected field

NAVIGATION AND NUMBER KEYS
- MOVE IN A LIST BOX:

	Moves **up** one line
	Moves **down** one line
	Move to **top** of list
	Move to **end** of list
	Page **up** one screen
	Page **down** one screen
	Edit selected line

WHAT TO DO IN A LIST LINE (SELECTED FIELD TURNS GREEN):

	Toggle Field: Select previous toggle
	Toggle Field: Select next toggle
	Text Field: Insert key on right
	Clear field
	***Next*** field, or at end accept Line
	***Previous*** field, or at start accept Line
	Accept change
	Enter "-" if acceptable

WHAT TO DO IN A TEXT FIELD:

	Text Field: Insert key on right
	Clear field
	Enter "-" if acceptable
	Enable editing /Accept change

WHAT TO DO IN AN ALPHA FIELD:

 	Select character to edit.
	Select previous alpha/numeric value.
	Select next alpha/numeric value.
	Enable editing /Accept change.

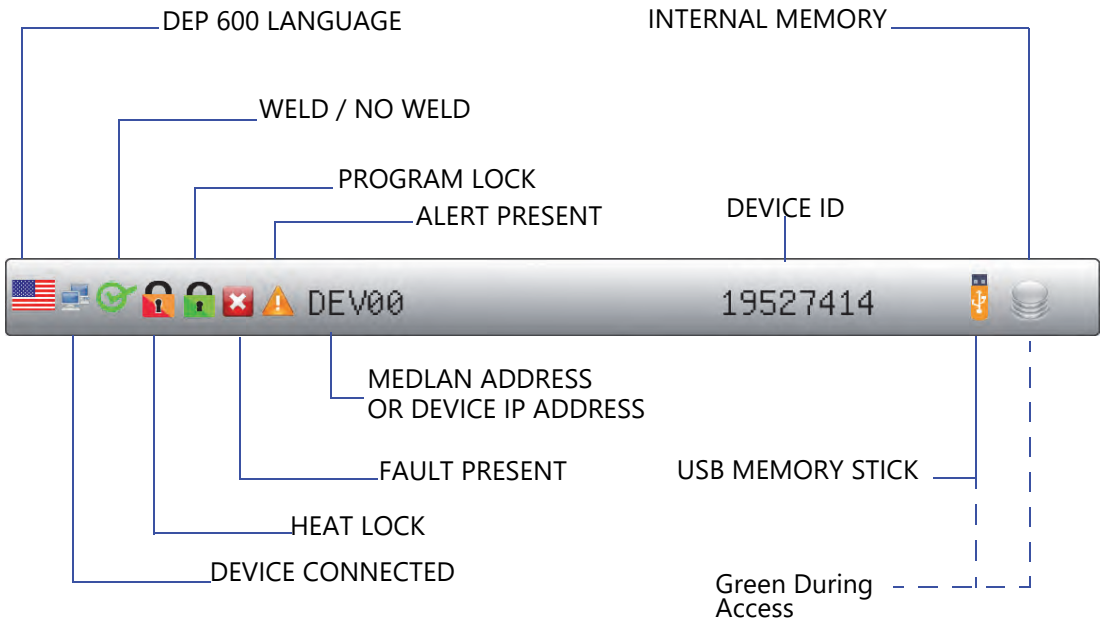
HOW TO OPERATE A SWITCH FIELD:

	Switch ON.	
	Switch OFF.	
	Toggle switch.	

TAKING A SCREEN SHOT (WHEN USB MEMORY STICK IS INSERTED):

	Press both keys at same time to take a screen shot of current screen on a USB Stick. File name will show as 'scrn###.ppm' on the USB Stick.

DEP 600 STATUS LINE



Chapter 2: MENUS AND NAVIGATION

The DEP 600 touch screen can be operated by a finger and the 30 keys on the keypad can be used for moving around fields, accessing functions menu and programming the weld control.

The following pages describe programming menus and navigating the various screens.

CONNECTING TO WELD CONTROLS

HOME MENU

F1 F3 F5

DEP 600 CONFIGURATION

(See page 15)

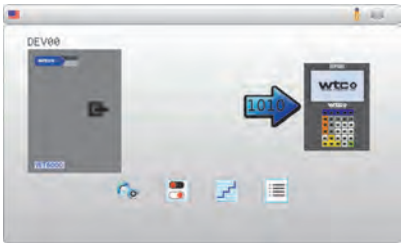
SERIAL DEVICE SELECTION

(See page 19)

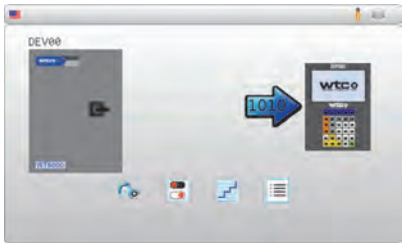
GLOBAL ETHERNET SELECTION

(See page 18)

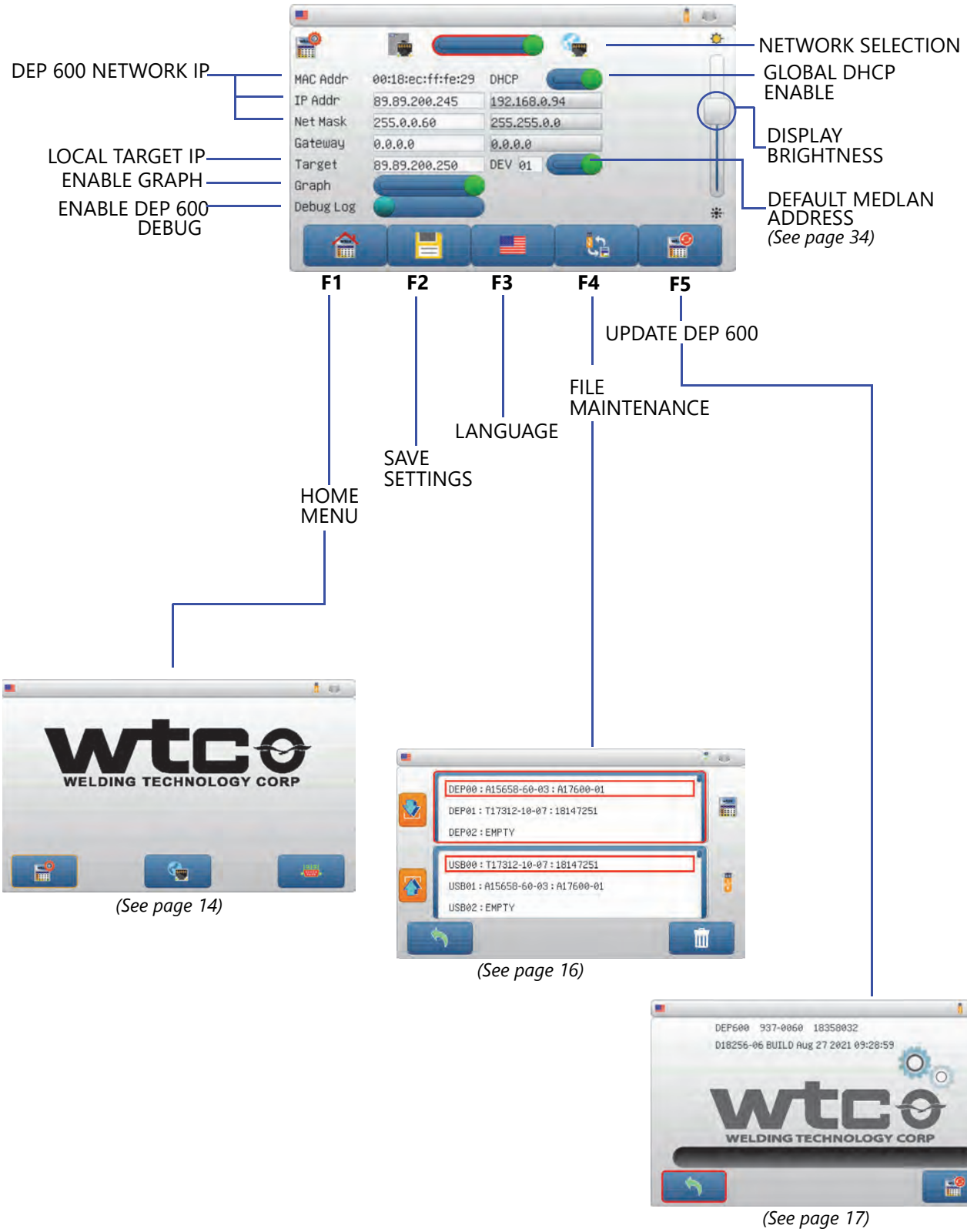
SERIAL DIRECT CONNECTION



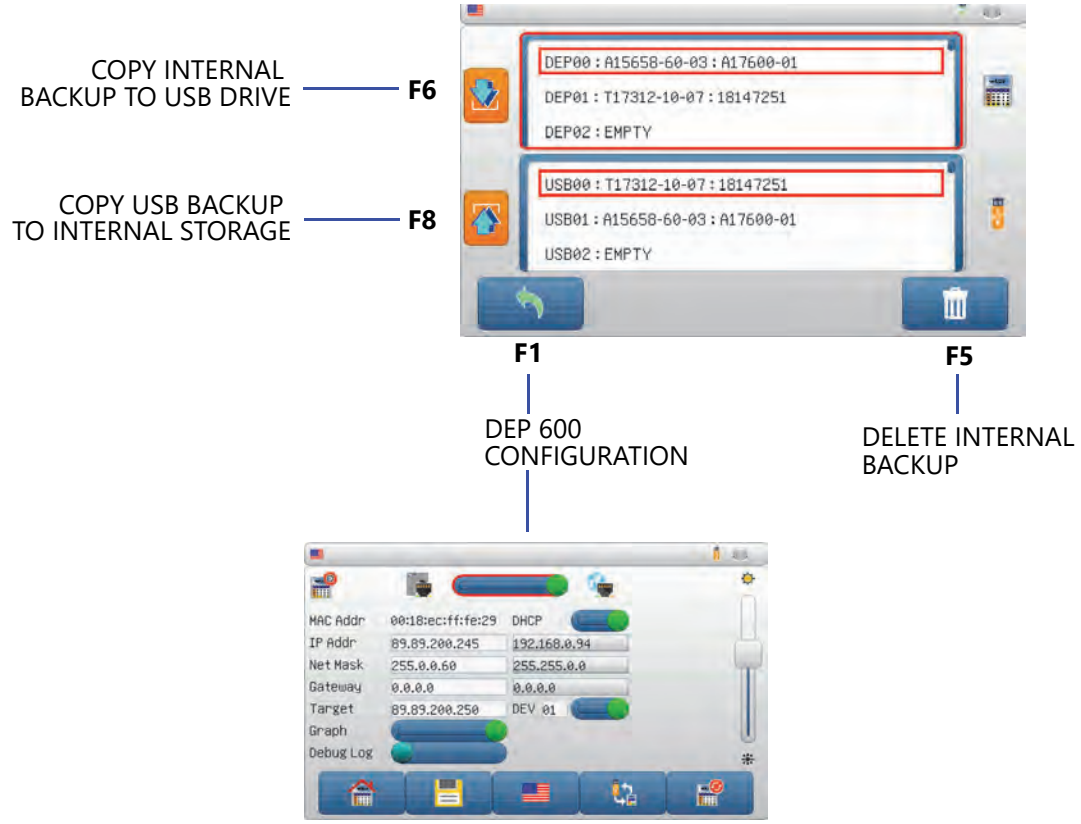
LOCAL ETHERNET CONNECTION



DEP 600 CONFIGURATION



FILE MAINTENANCE



(See page 15)

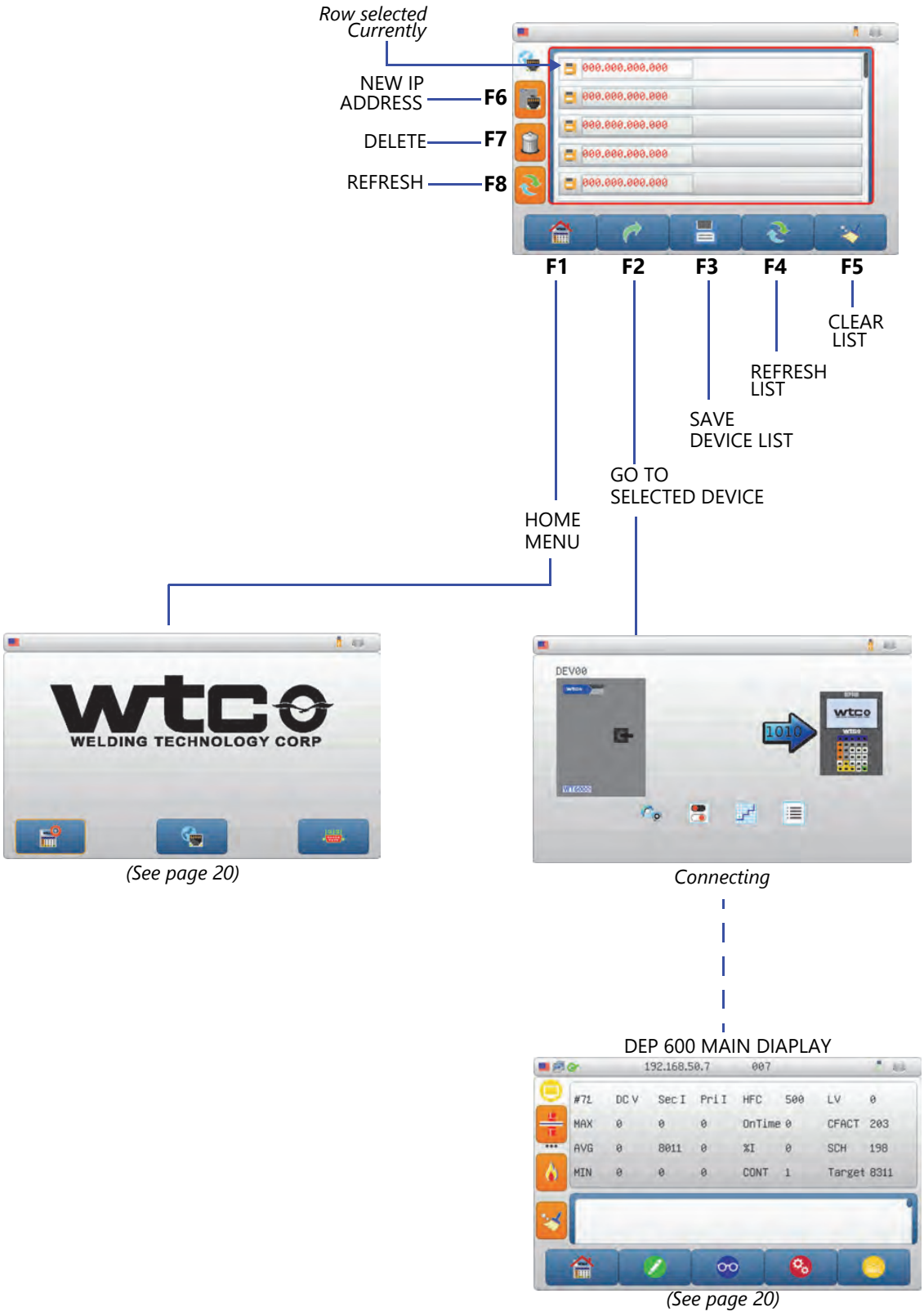
For instructions see "Chapter 5: File maintenance and Software Upgrade" on

UPDATE DEP 600

(See page 15)

For instructions see "Chapter 5: File maintenance and Software Upgrade" on

GLOBAL ETHERNET SELECTION



SERIAL DEVICE SELECTION

F1 **F2**

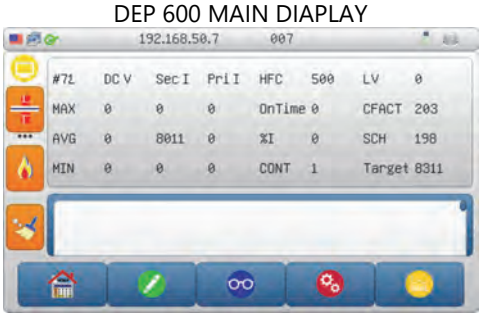
GO TO
SELECTED DEVICE

HOME
MENU

(See page 14)

Connecting

DEP 600 MAIN DIAPLAY



(See page 20)

MAIN DISPLAY PAGES

WELD RECORD DISPLAY

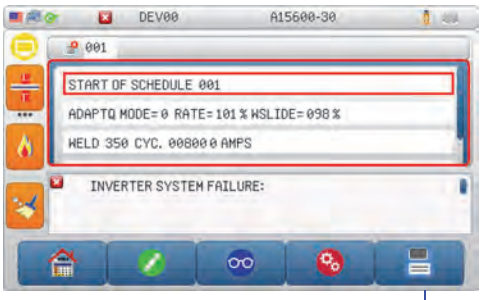
WELD RECORD — **F6**

HEAT DISPLAY — **F7**

FAULT RESET — **F8**

F1 **F2** **F3** **F4** **F5**

HEAT DISPLAY (F7)



SAVE

GRAPHING

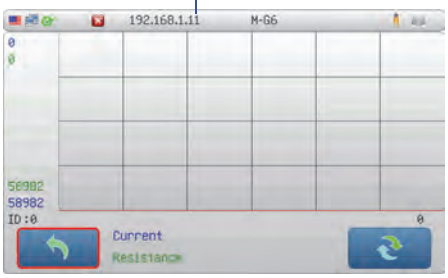
CONFIGURATION

STATUS

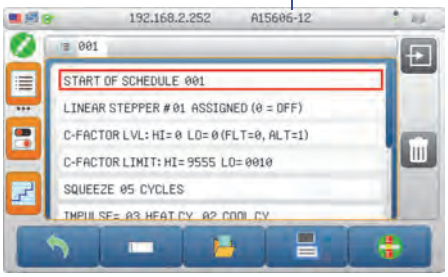
EDITING

HOME

(See page 14)

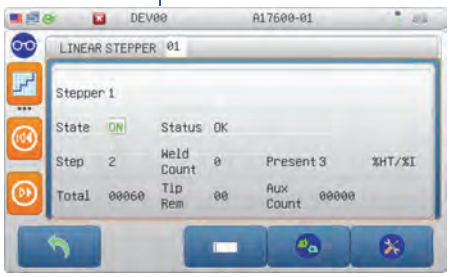


(See page 54)



(See page 21)

(See page 28)

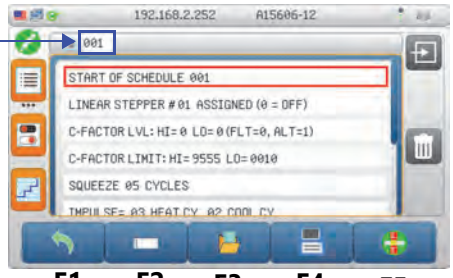


(See page 23)

When USB memory stick is inserted, './-' toggles recording of weld and fault data to USB

EDITING PAGES

EDIT SCHEDULE PAGE



SCHEDULE NUMBER

SCHEDULE PAGE — **F6**

SETUP PAGE — **F7**

STEPPER PAGE — **F8**

INSERT

DELETE

F1 **F2** **F3** **F4** **F5**

MAIN DISPLAY/
WELD RECORD PAGE

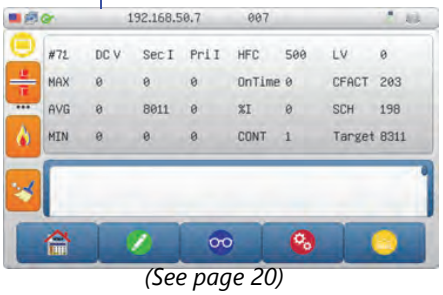
SCHEDULE
NUMBER

LOAD

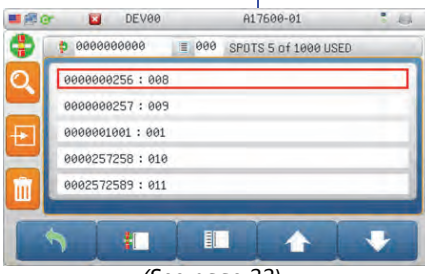
SAVE

DUPLICATE

SPOT
EDITING

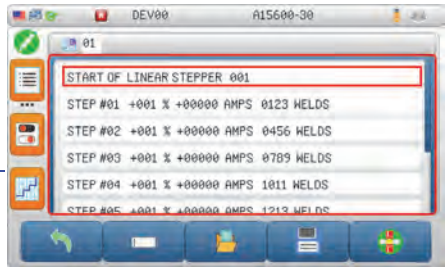


(See page 20)



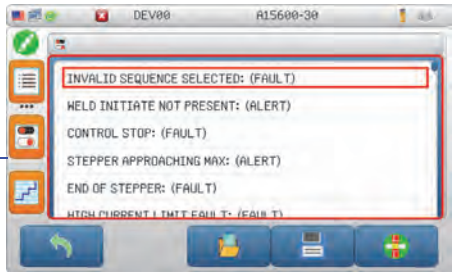
(See page 22)

EDITING STEPPERS PAGE



(See "Review and Editing Stepper Menu" on page 50)

EDITING SETUPS PAGE

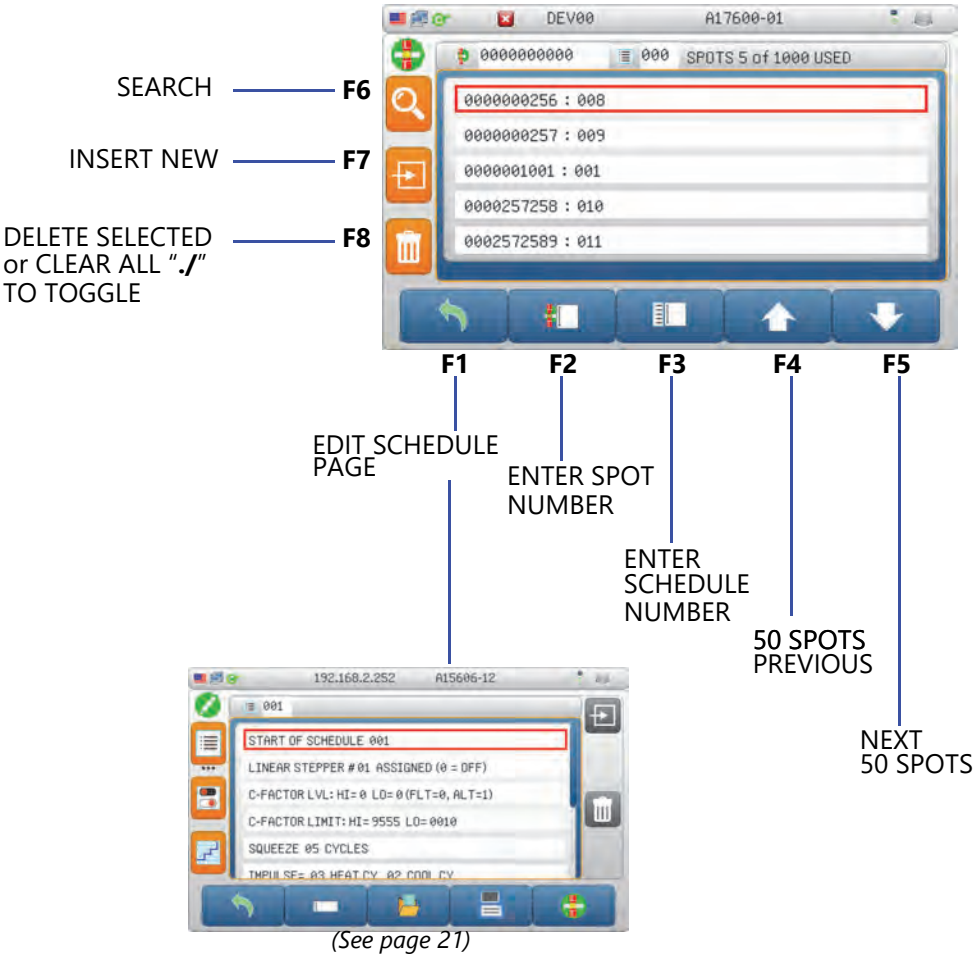


(See "Editing Setups" on page 49)

NOTE: IF SCHEDULE NUMBER AND THE LOADED NUMBER DO NOT MATCH, OPTION TO DUPLICATE LOADED DATA TO ITEM NUMBER IS PRESENTED.

NOTE: WHEN USB MEMORY STICK INSERTED, './-' TOGGLES BETWEEN SAVE TO TIMER AND SAVE TO USB. (CLEARS BACK TO SAVE TO TIMER AFTER USE.)

SPOT EDITING

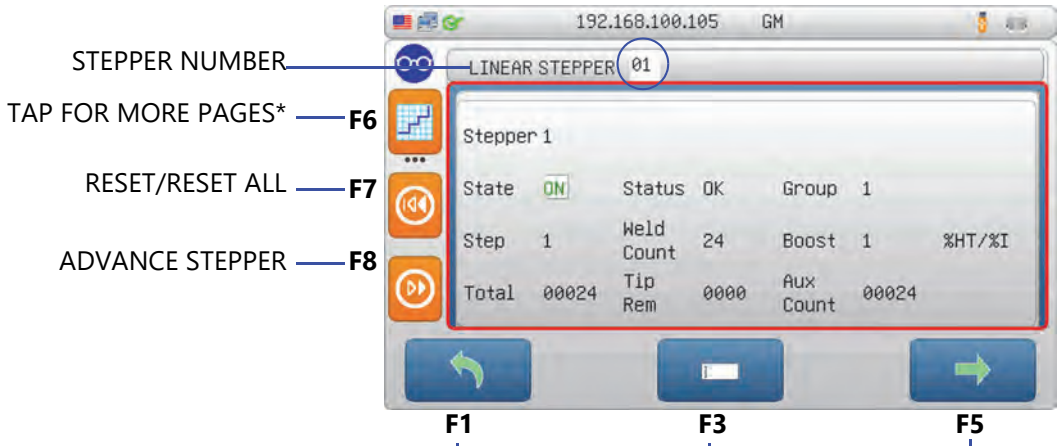


(See page 21)

☞	**SEARCH FOR SPOT BY SPOT ID**	F2 to enter spot number to find F3 to "0" for schedule F6 to search
☞	**SEARCH FOR SPOT NUMBER BY SHEDULE NUMBER**	F2 to "0" for spot id F3 to enter schedule number to find F6 to search
☞	**ADD A SPOT**	F2 to enter spot number F3 to enter schedule F7 to add to system
☞	Spot to schedule assignment parameters (One to one or Many to One) are determined in the RELOAD DEFAULTS menu -page 29	
☞	When USB Memory Stick inserted, './-' toggles F8 between Delete Spot, Clear All and Save to USB. (Clears back to normal after use.)	

STATUS PAGES -1

STEPPER STATUS MAIN DISPLAY

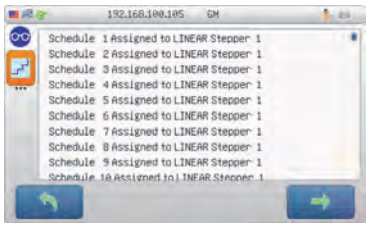


(See page 20)

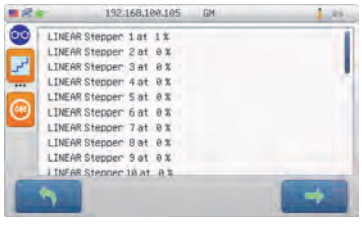
(See page 24)

ADDITIONAL STEPPER STATUS PAGES (F6)

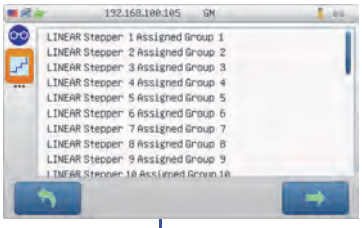
ASSIGNMENT PAGE



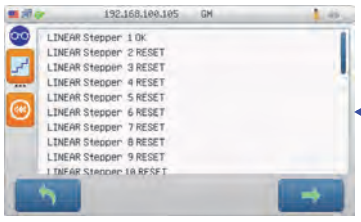
PERCENTAGE PAGE



GROUP ASSIGNMENT PAGE



ALL STEPPER STATUS



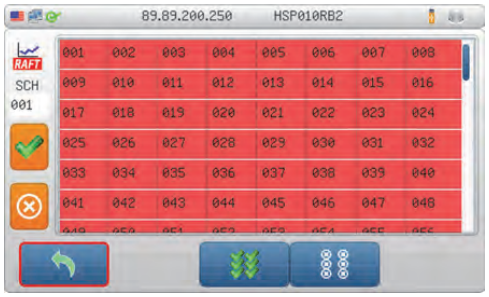
MAIN STATUS PAGE

F1 F2 F3 F4

STEPPER STATUS MAIN DISPLAY

RAFT STATUS

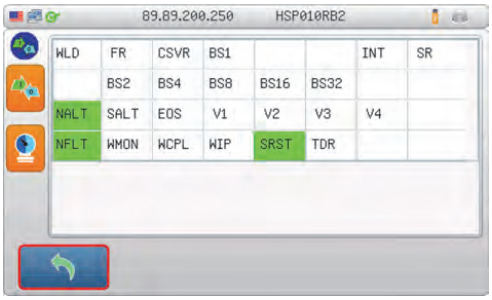
(See page 23)



(See page 27)

IO STATUS

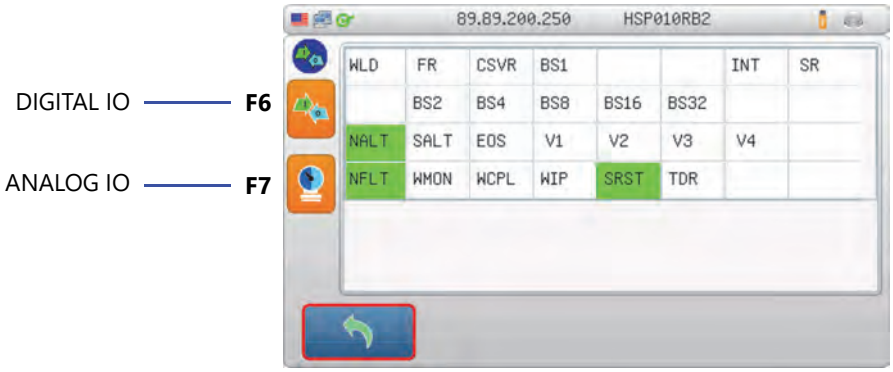
HARDWARE STATUS



(See page 25)

(See page 26)

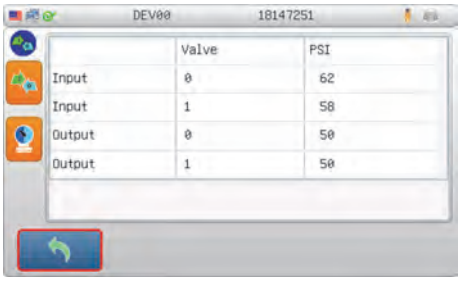
IO STATUS



MAIN STATUS PAGE

(See page 24

ANALOG IO PAGE



☞	When USB Memory Stick inserted, './-' toggles recording of IO data to USB. IO Icon will change to Record Icon, when recording data.

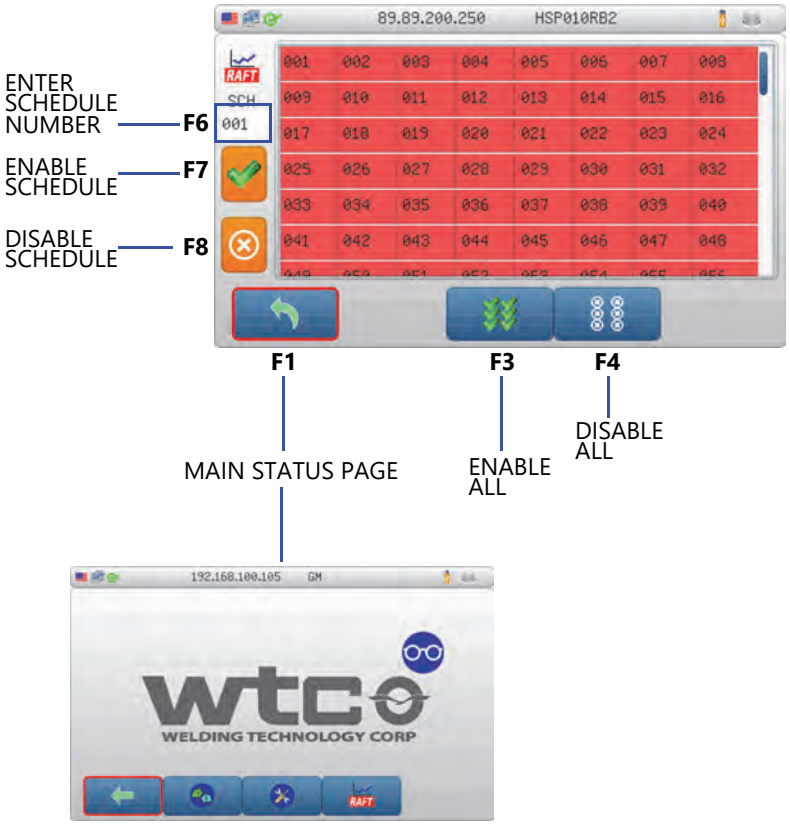
HARDWARE STATUS

(See page 24

[1] Down arrow only shows when USB is inserted.

**** Use only on advice of WTC***

RAFT STATUS



(See page 24

WELD CONTROL CONFIGURATION PAGES

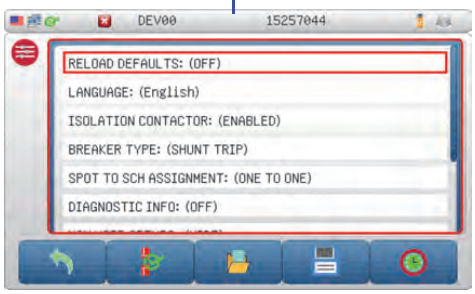
MAIN CONFIGURATION PAGE 1

F1 **F2** **F3** **F4** **F5**

MAIN DISPLAY/
WELD RECORD PAGE

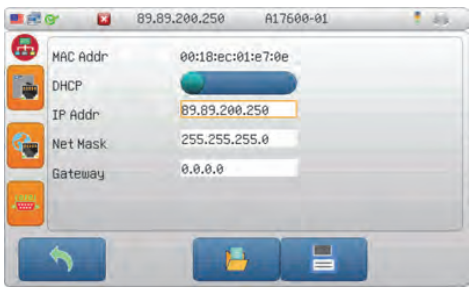
(See page 20)

RELOAD
DEFAULTS



(See page 29)

NETWORK
CONFIGURATION



(See page 34)

MAIN CONFIGURATION
PAGE 2

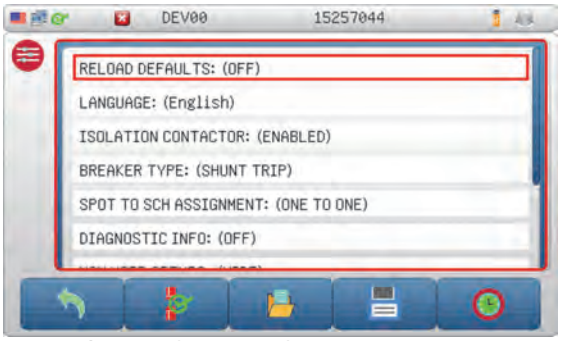
(See page 35)

IO CONFIGURATION

(See page 31)

RELOAD DEFAULTS

RELOAD DEFAULTS



F1 **F2** **F3** **F4** **F5**

WELD/ NO WELD

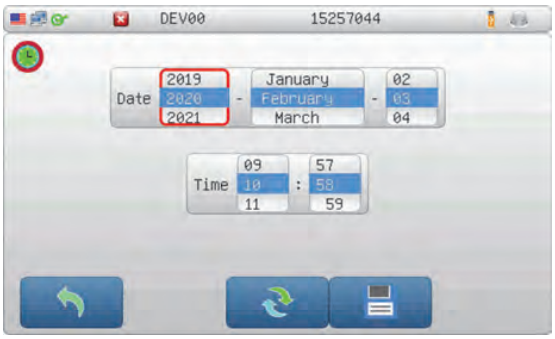
LOAD

SAVE

MAIN CONFIGURATION PAGE 1

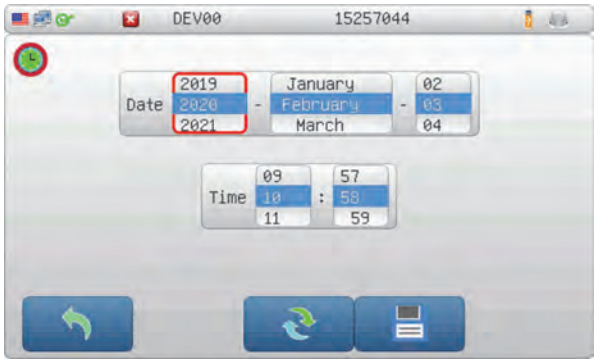
CLOCK SETTING

(See page 28)



(See page 30)

CLOCK SETTING



F1

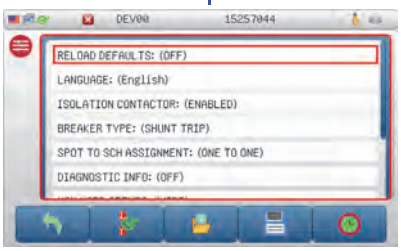
RELOAD DEFAULTS

F3

REFRESH

F4

SAVE



(See page 29)

I/O CONFIGURATION

MAIN CONFIGURATION PAGE 1

(See page 28)

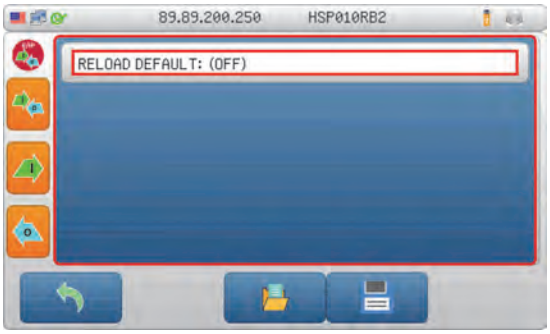
EIP CONFIGURATION

(See page 32)

LOCAL I/O CONFIGURATION (DIO)

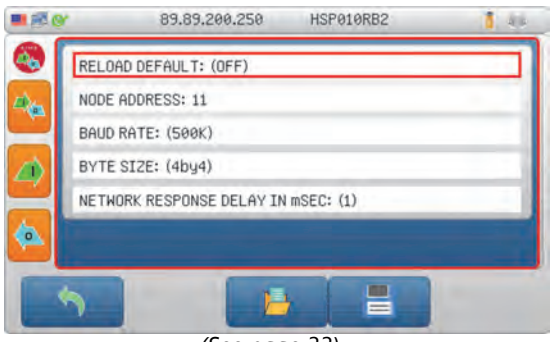
(See page 33)

EIP IO CONFIGURATION



(See page 33)

FIELDBUS I/O CONFIGURATION



(See page 33)

EIP CONFIGURATION

F1 — IO CONFIGURATION

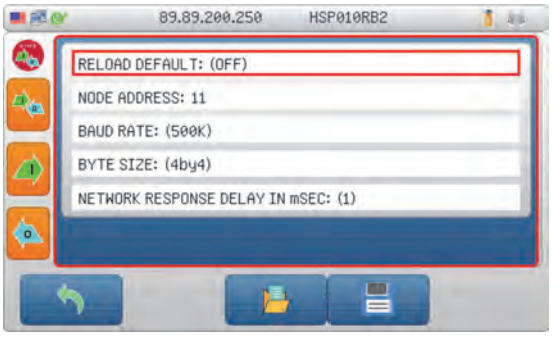
F3 — LOAD

F4 — SAVE

(See page 31)

I/O CONFIGURATION BASICS

I/O TYPE CONFIGURATION MAIN PAGE



DEFAULTS — **F6**

INPUT MAPPING — **F7**

OUTPUT MAPPING — **F8**

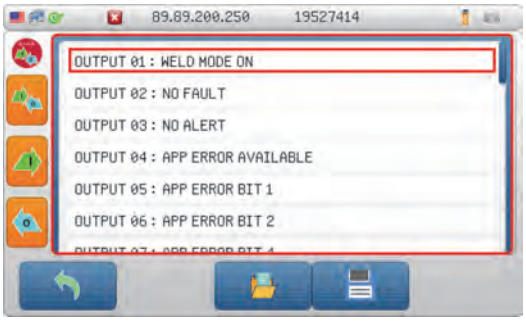
F1 — I/O CONFIGURATION MAIN PAGE 1

F3 — LOAD

F4 — SAVE

(See page 31)

OUTPUT MAPPING

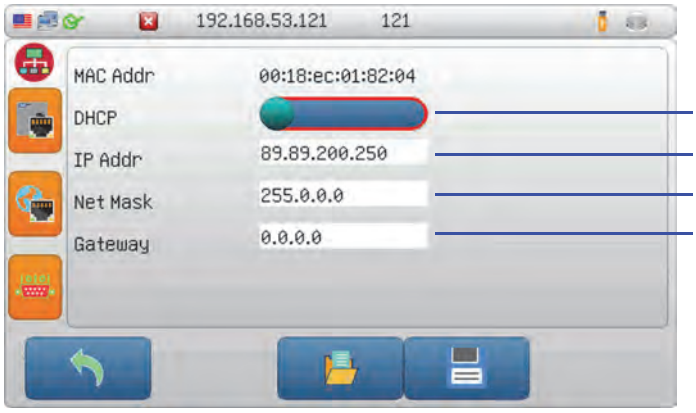


INPUT MAPPING

NOTE: WHEN USB MEMORY STICK INSERTED, './-' TOGGLES BETWEEN SAVE TO TIMER AND SAVE TO USB. (CLEARS BACK TO SAVE TO TIMER AFTER USE.)

NETWORK CONFIGURATION

LOCAL ENET CONFIGURATION



LOCAL ENET — F6

GLOBAL ENET — F7

MEDLAN ADDRESS — F8

DHCP ENABLE

IP ADDRESS LOCAL

NET MASK LOCAL

GATEWAY ADDRESS

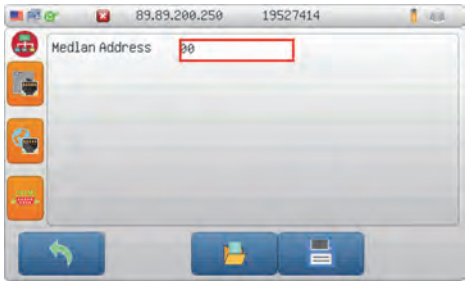
F1 — I/O CONFIGURATION MAIN PAGE 1

F3 — LOAD

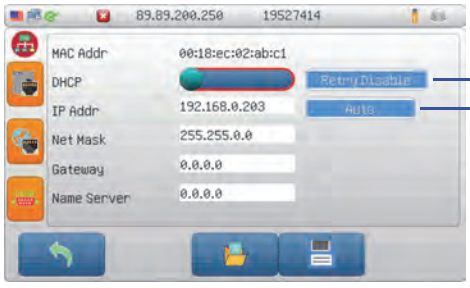
F4 — SAVE

(See page 31)

MEDLAN ADDRESS



GLOBAL ENET CONFIGURATION



DHCP RETRY ENABLE/DISABLE

PORT SPEED/DUPLEX

MAIN CONFIGURATION PAGE 2

F1 F2 F3 F4 F5

MAIN CONFIGURATION PAGE 3

BACKUP/ RESTORE

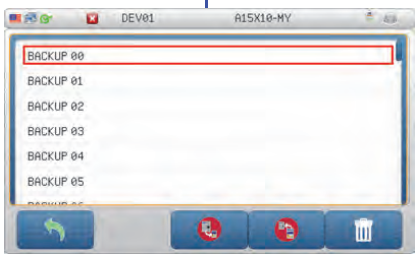
SERVO CONFIGURATION PAGE

WELDER ID

I/O CONFIGURATION MAIN PAGE 1

(See page 40)

(See page 31)

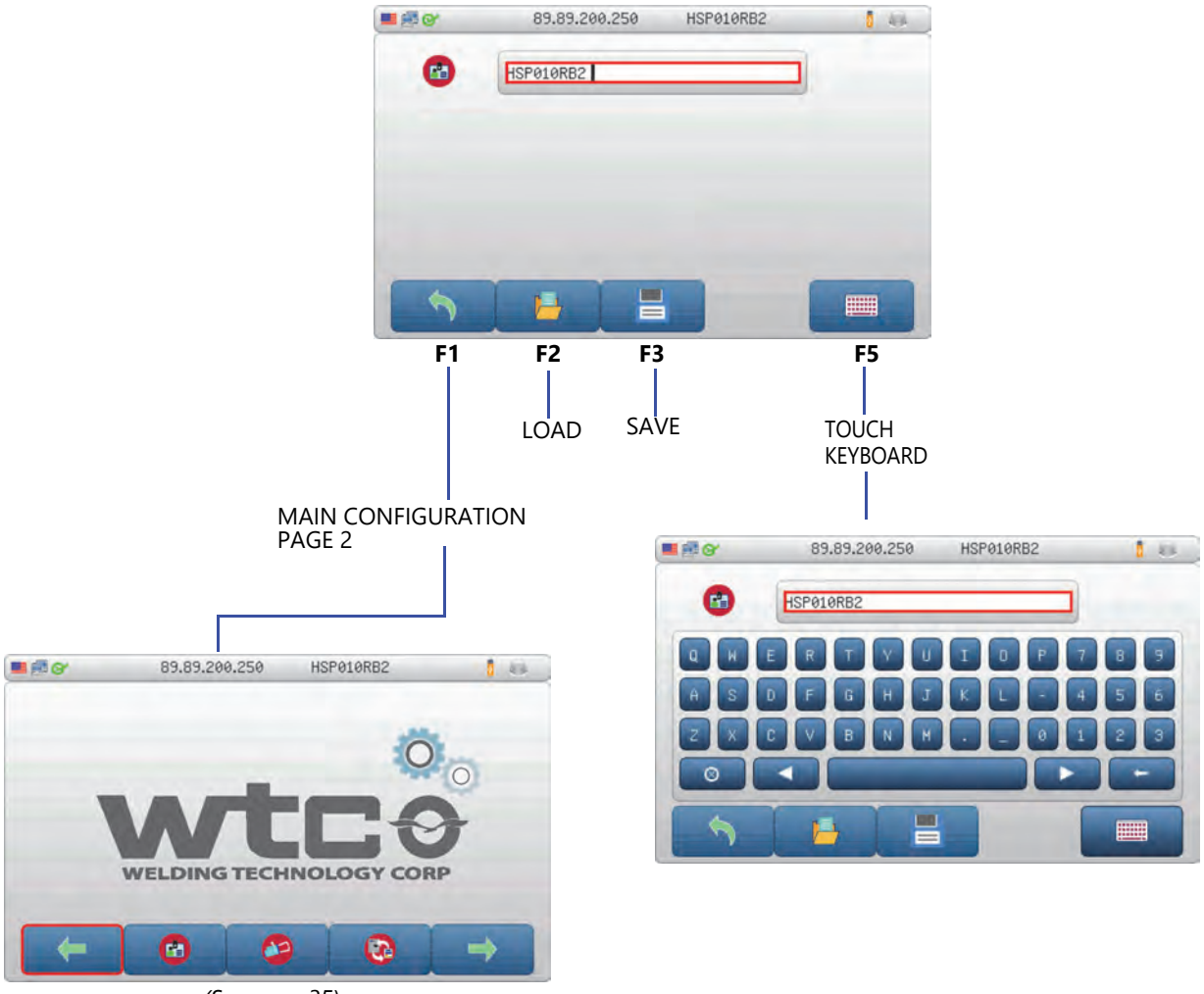


(See page 39)

(See page 36)

(See page 37)

WELDER ID



(See page 35)

SERVO CONFIGURATION

F1 F2 F3 F4

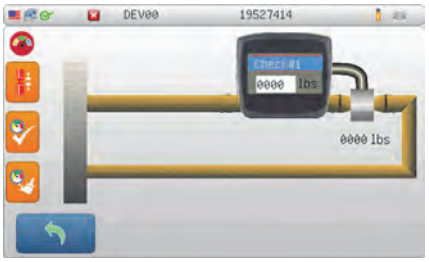
MAIN CONFIGURATION PAGE 2

SERVO CALIBRATION

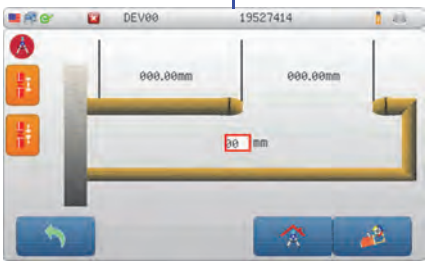
SERVO MEASURE

SERVO FORCE

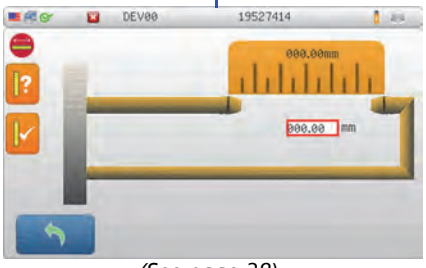
(See page 35)



(See page 38)

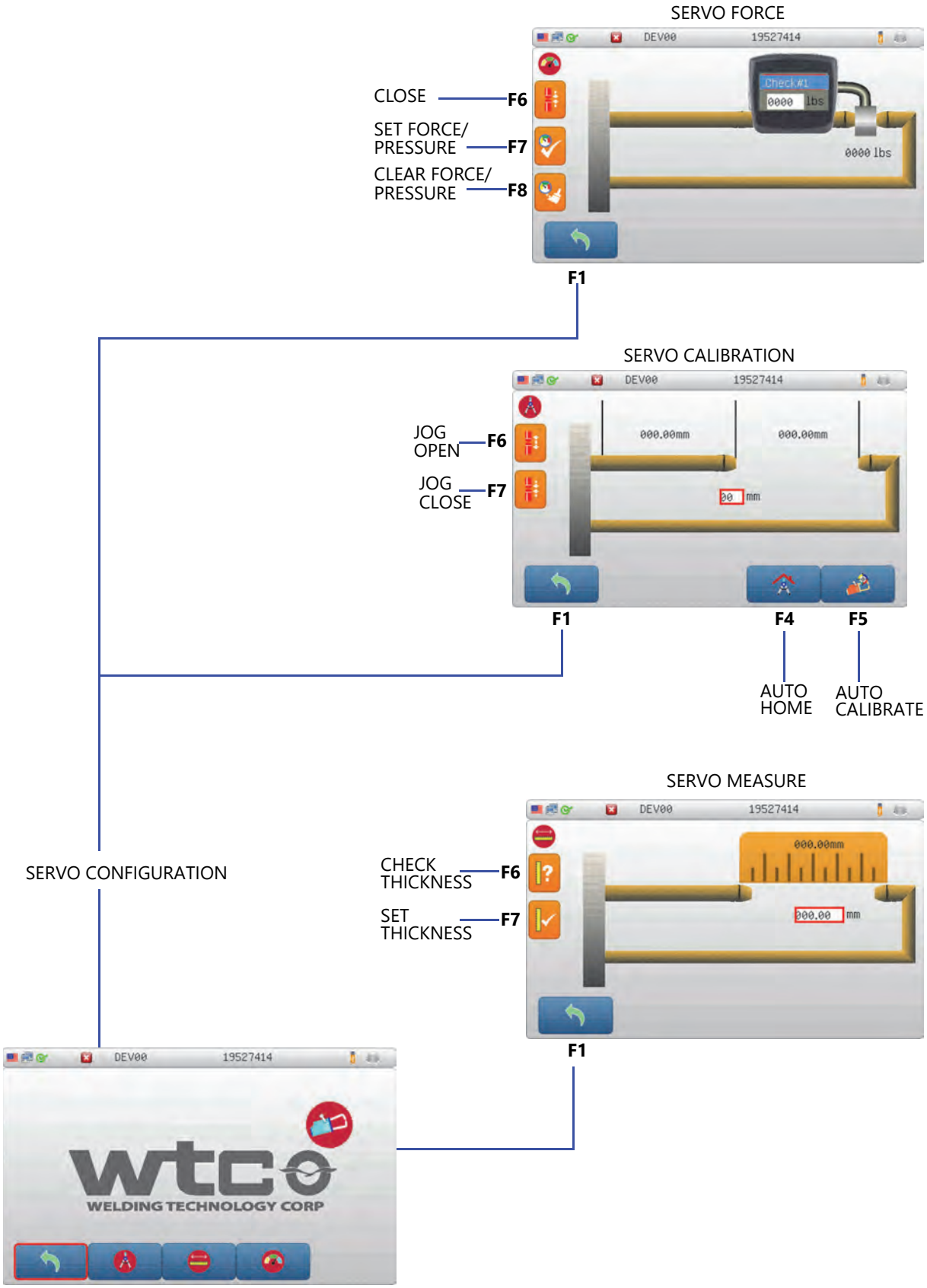


(See page 38)

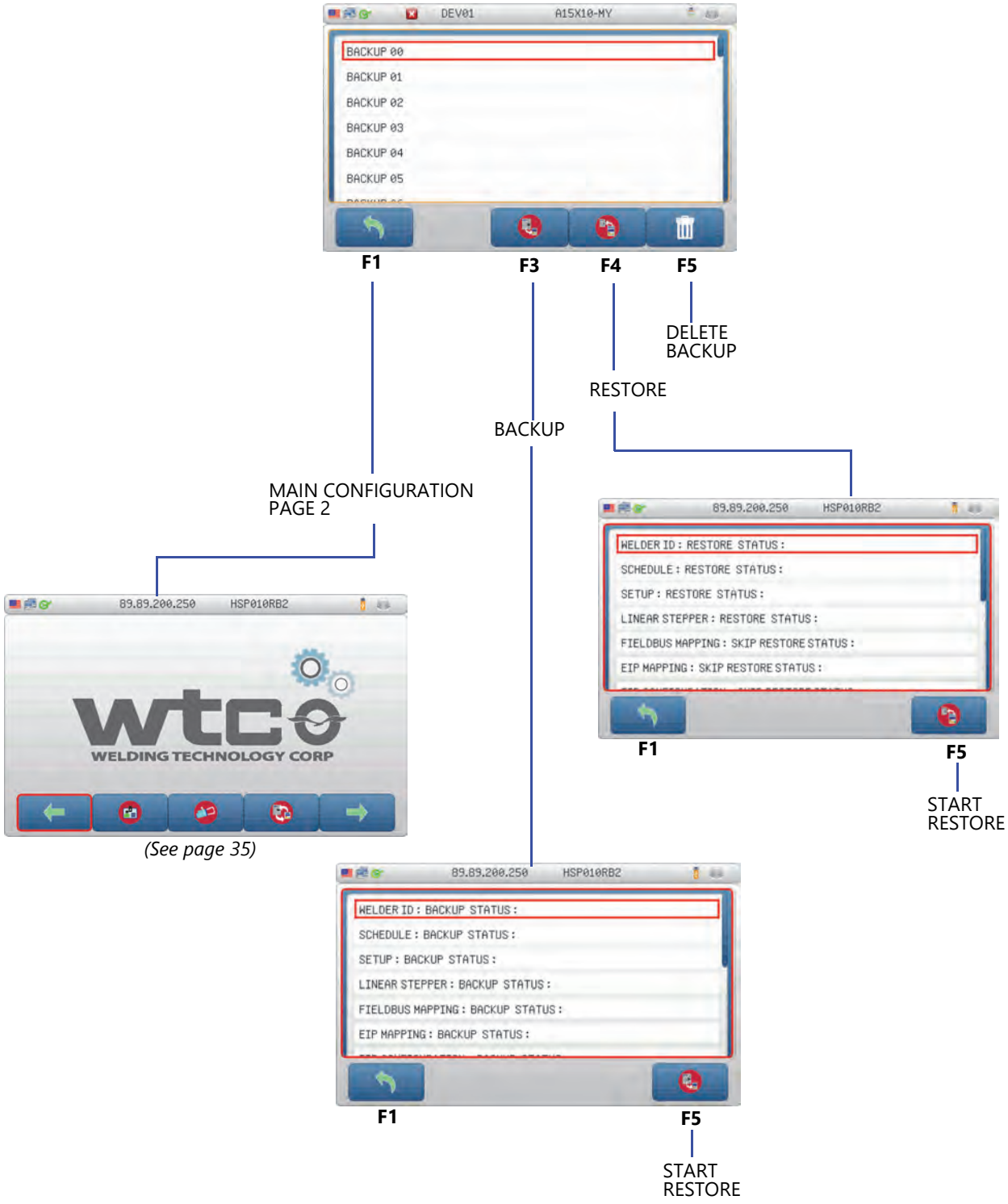


(See page 38)

SERVO SCREENS



BACKUP / RESTORE



☞ **BACKUP**: Select a Backup location that is currently empty, then F3 to enter BACKUP.
RESTORE: Select a Backup location that has a backup for the Timer to restore, then F4 to enter RESTORE.

NOTE: *SOFTWARE NUMBER AND REVISION MUST MATCH CURRENT CONTROL TO ALLOW RESTORE.

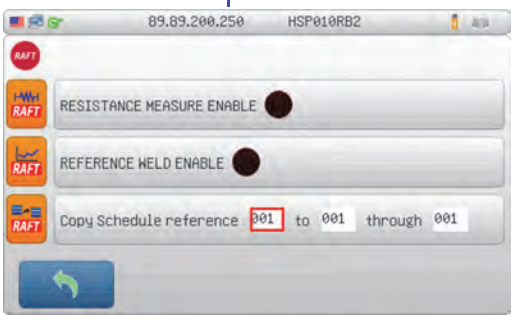
MAIN CONFIGURATION PAGE 3

F1 **F2**

RAFT CONFIGURATION

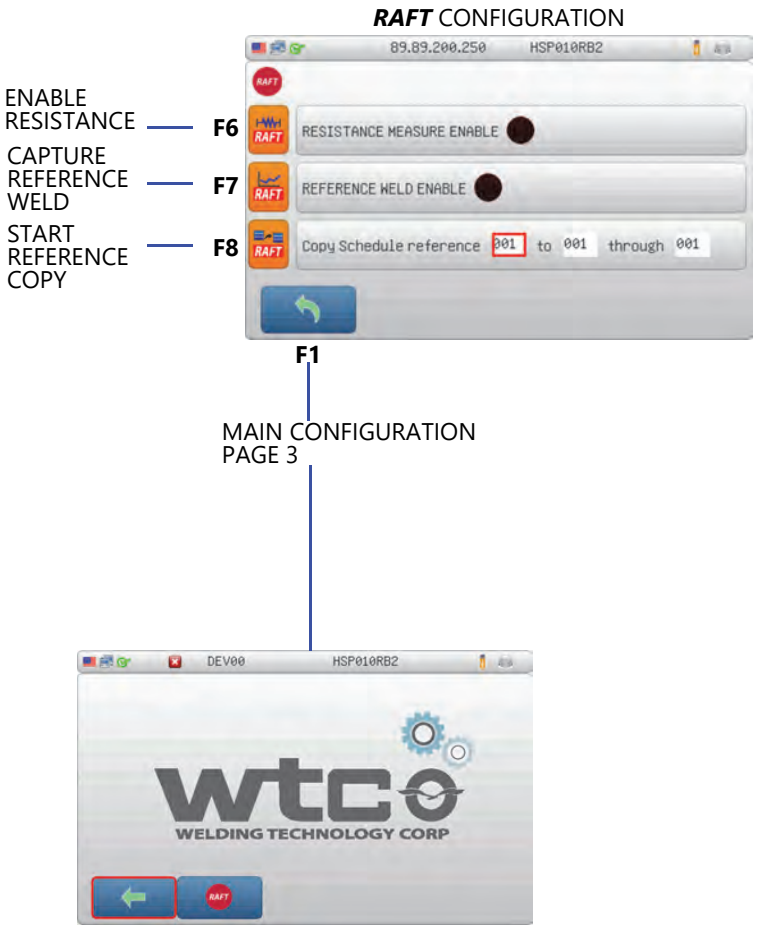
MAIN CONFIGURATION PAGE 2

(See page 35)



(See page 41)

RAFT CONFIGURATION



(See page 40)

Chapter 3: START-UP AND CONNECTIONS

The DEP 600 can communicate to a weld control via: EtherNet or Serial connection.

Figure 3.1 DEP 600 Configuration Screen

- EtherNet connection can be ***local***  or ***global***  . The toggle switch "1" in the image above, is used to make the selection.
- Serial connection can be ***fixed***  as shown above "2" or ***scanned***  .
- Use the touch screen or press  key to toggle between the two options.
- Press  Save to confirm the change. The DEP 600 will reboot for the selection to take effect.

LOCAL ETHERNET

In the ***Local*** EtherNet mode, the DEP 600 is programmed to communicate directly with the "local" weld control with a default IP Address of 89.89.200.250

NOTE: LOCAL ETHERNET  IS DISPLAYED ON THE HOME SCREEN WHEN CONNECTED VIA LOCAL ETHERNET.

For instructions on how to physically connect the DEP 600 to a weld control, see "Physical Connections" on page 7.

GLOBAL ETHERNET

To connect via Global EtherNet, slide the selector switch to Global EtherNet, press save and restart.

NOTE: GLOBAL ETHERNET  IS DISPLAYED ON THE HOME SCREEN WHEN CONNECTED VIA GLOBAL ETHERNET.

In the ***global*** EtherNet mode, the DEP 600 is capable of communicating with multiple weld controls (Method 1 below) or a fixed weld control (Method 2 below) on an EtherNet IP network.

In order to communicate in Global EtherNet mode, the IP Address and Subnet Mask of the weld timers must be set correctly. This is determined by the plant network administrator.

For instructions on how to physically connect the DEP 600 to a weld timer for Global EtherNet IP communications, see "Physical Connections" on page 7.

IP ADDRESS SET ON THE GLOBAL NETWORK WILL CHANGE BACK TO THE DEFAULT 89.89.200.250 WHEN THE LOCAL ETHERNET KEY IS PRESSED TO COMMUNICATE WITH THE TIMER.

METHOD 1:

The DEP 600 sends out a special command to all the devices within the Subnet Mask, which effectively is a request for all WTC weld timers to report to the DEP 600 and confirm they are active and identify their IP Address. When the active timers respond, their IP Address and Welder ID will populate the fields in the weld control selection list

Figure 3.2 Screen showing list of weld controls available on a Global EtherNet Network.

Use the touch screen or arrows on keypad to select from the list of all the active weld controls identified by their IP Address and Welder ID. Press or F2 to connect the desired weld control.

METHOD 2:

The weld control IP Address is manually added by the user. The DEP 600 will then send a communication message to that IP Address on the network. If the gateway and routers on the network allow the DEP 600 to communicate with that IP Address, then communication will be established. This method is recommended when trying to find a weld timer that is on the network, but located within a different Subnet Mask than the DEP 600.

NOTE: THIS FEATURE IS ONLY AVAILABLE WHEN THE DEP 600 IS CONNECTED TO THE GLOBAL ETHERNET. IF THE DEP 600 IS CONNECTED VIA THE LOCAL ETHERNET OR THE SERIAL NETWORK, THIS FEATURE IS INACCESSIBLE.

NOTE: PRESSING SAVE AFTER THE WELD CONTROLS ARE ADDED TO THE LIST EITHER MANUALLY OR BY SCANNING THE GLOBAL ETHERNET, ALLOWS THE USER TO QUICKLY CONNECT TO OR VIEW THE LIST OF WELD CONTROLS AVAILABLE ON THE NETWORK WHEN THE DEP 600 IS RECONNECTED.

SERIAL NETWORK

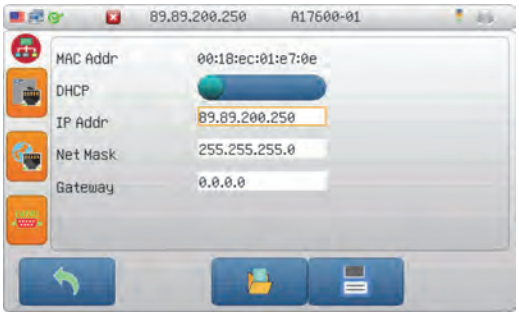
To connect to a weld control via a serial connection, press F5 or select the icon on screen.

FOR INSTRUCTIONS ON HOW TO PHYSICALLY CONNECT THE DEP 600 TO A WELD TIMER FOR SERIAL NETWORK COMMUNICATIONS, SEE “PHYSICAL CONNECTIONS” ON PAGE 7.

NOTE: LANGUAGE OPTIONS OTHER THAN ENGLISH ARE APPLICATION SPECIFIC AND MAY NOT BE AVAILABLE IN YOUR WELD TIMER. FURTHERMORE, DATA UPLOADED FROM A WELD CONTROL TO THE DEP 600 IS DEPENDENT ON THE LANGUAGE PREFERENCE SETTINGS FOR THAT WELD CONTROL.

CHANGING THE IP ADDRESS OF A WELD CONTROL

① From the home menu press F4 or tap  to enter the Configuration page. Then press F4 or tap  Network Configuration.



② Press F6 or tap  to change the IP address, Net Mask and Gateway for ***local*** EtherNet configuration.

Press F7 or tap  to change the IP address, Net Mask and Gateway of the global EtherNet configuration.

③ Select the IP address field by tapping once or press the → arrow on keypad and enter the new address using the keypad.

Chapter 4: PROGRAMMING

WARNING!

CAREFULLY READ THE INSTRUCTIONS BELOW PRIOR TO EDITING PARAMETERS IN THE WELD TIMER. WHEN EDITING PARAMETERS THAT REQUIRE A POWER RE-CYCLE ON THE WELD CONTROL CABINET FOR THE CHANGES TO TAKE EFFECT, IT IS RECOMMENDED MAKING ALL THE CHANGES FIRST PRIOR TO RE-CYCLING POWER. THUS, ONLY ONE RE-CYCLE IS REQUIRED.

REFER TO THE "ICON GLOSSARY" ON PAGE 34 FOR EXPLANATION OF ICONS AND THEIR FUNCTIONS.

EDITING A WELD SCHEDULE

INSERT OR DELETE A WELD FUNCTION:

① Press 1 to activate the schedule number field and enter the number using the keypad.

② Press  to open the schedule.

③ Using the arrow keys or touch screen select the line in the schedule to delete  or insert  a function (new function will be added below this line).

④ Press  Save to apply the change.

EDIT THE PARAMETERS/VALUES IN A WELD FUNCTION:

① Press  . The value will be highlighted green. Using the number pad enter the new value. For functions with two or more parameters, press the RIGHT arrow key to move the cursor to the next parameter field, If an off-limit value is entered the highlighted field turns red.

②  Save icon turns yellow to indicate changes have been made. Press to save.

NOTE: SCHEDULE CHANGES CAN ONLY BE MADE TO THE WELD CONTROL THAT THE DEP 600 IS PRESENTLY CONNECTED TO ON THE NETWORK. MAKE CERTAIN THE CORRECT WELD CONTROL IP ADDRESS AND WELDER ID IS DISPLAYED AT THE TOP OF THE MENU, IN ADDITION TO THE CORRECT WELD SCHEDULE FOR THAT WELD TIMER, PRIOR TO MAKING ANY PROGRAMMING CHANGES.

COPY A SCHEDULE:

① Press  to activate the schedule number field and enter the number using the keypad.

② Press  . The Save icon turns to  Copy entire weld schedule. Confirm to make sure that the correct schedule # is displayed at "Start of Schedule" as the location where you want the schedule duplicated/pasted and press copy.

③ The icon turns blue  to indicate the schedule has been copied.

NOTE: WHEN COPYING A WELD SCHEDULE FROM ONE LOCATION TO ANOTHER, ANY EXISTING DATA IN THE PASTE LOCATION WILL BE COMPLETELY OVERWRITTEN AND PERMANENTLY LOST.

TIP: To find the desired weld function quicker, press  [F6] to scroll the functions list grouped by type. Key #7 takes you to the end of the list and key #1 to the beginning of the list.

EDITING SETUPS

WTC weld controls use a number of programmable settings, called Set-up Parameters, to enable you to customize a weld control to meet your application requirements.

The set-up parameters inform the control of its operating environment: how to react to certain conditions (as FAULT or ALERT conditions) and how to react when certain inputs become active.

Every weld program has its unique set of parameters. Refer to the Operator's Manual provided with the weld control for more information.

① Press  Setups to view the list.

② Using arrow keys or touch screen select the line in setups that will be edited.

③ Press  Enter to highlight the options field and using  keys scroll through levels available - Fault/Alert/ None.

④ Press  Save to apply the change.

THE WELD CONTROL WILL IGNORE CHANGES TO CERTAIN SET-UP PARAMETERS (SUCH AS THOSE CONTROLLING RETRACT OPERATION) UNTIL POWER TO THE DEVICE IS CYCLED (TURNED OFF AND THEN BACK ON).

BECAUSE THESE SETTINGS CONTROL OPERATION OF THE WELD DEVICE, EXTREME CARE SHOULD BE EXERCISED BEFORE MAKING CHANGES TO SET-UP PARAMETERS!

REVIEW AND EDITING STEPPER MENU

WTC weld control software is designed with stepper programs that keep track of the weld count and gradually increase heat after a programmed number of welds. The number of steppers available varies with different programs. (Refer to your software specific manual for more details on the stepper program). The Review Stepper menu provides information on the stepper profile, number of stepper programs available and allows editing of the stepper parameters.

Some weld controls provide multiple independent steppers. Each weld schedule can be assigned to a stepper and you can define a different profile for each stepper. The profile tells the control when and how compensation is provided.

① Press  or F8 to open Stepper Menu.

② To edit a Stepper profile, other than the one displayed, press  to activate the stepper number field and enter the number using the keypad.

③ Using arrow keys or touch screen select the line in stepper profile that will be edited.

④ Press  Enter to highlight the heat and/or number of welds values to edit. Using  keys scroll through the steps in the profile displayed.

⑤ Press  Save to apply the change.

⑥ To copy a Stepper profile from one stepper over to another, enter stepper number  and press  to open the stepper profile that will be duplicated.

⑦ The save icon changes to  Copy. The stepper profile number entered will be copied over to the present stepper displayed. The icon will turn blue  color to indicate the change.

The Spots menu allows the user to make Spot to Schedule assignments, search or delete Spots.

By default the lowest spot number is visible in the Spot number field. To view all available Spots, scroll the list by line use the  keys on the keypad or to scroll up or down by page use the  F4/F5.

BACKUP / RESTORE

The Backup / Restore feature allows the user to transfer data files between weld timers. The DE600 is capable of uploading and storing up to 50 weld timer programs in flash memory and then restoring (downloading) them into other weld timers.

BEFORE INITIATING A BACKUP REFRESH THE WELD CONTROL TO ENSURE THE BACKUP RECORDS ALL CURRENT SETUP AND CONFIGURATION.

NOTE: IN ORDER TO TRANSFER DATA FROM ONE WELD TIMER TO ANOTHER, BOTH WELD TIMERS MUST HAVE THE SAME FIRMWARE PROGRAM AND REVISION NUMBERS.

NOTE: ALWAYS CONFIGURE THE WELD TIMER TO THE DESIRED TIMING (CYCLE/MS) PRIOR TO PERFORMING A RESTORE. FOR EXAMPLE, MSEC DATA FROM A WELD TIMER THAT IS BEING RESTORED TO ONE THAT WAS PREVIOUSLY CONFIGURED FOR CYCLE TIMING WILL NOT CONVERT TO MSEC. AND THE VALUES DISPLAYED MAY BE ERRONEOUS.

WELD TIMER PARAMETERS THAT ARE BACKED-UP AND RESTORED:

PARAMETER	BACKUP	RESTORE
Welder ID	●	●
Schedule	●	●
Setup	●	●
Linear Steppers	●	●
FieldBus Mapping	●	●
EIP Mapping	●	●
EIP Config	●	●
MEDLAN Address	●	●
Local Ethernet	●	●
Spot Assignments	●	●
Program ID	●	●

NOTE: SOFTQ, FORCEQ AND ***RAFT*** DATA ARE OPTIONAL BACKUP ITEMS.

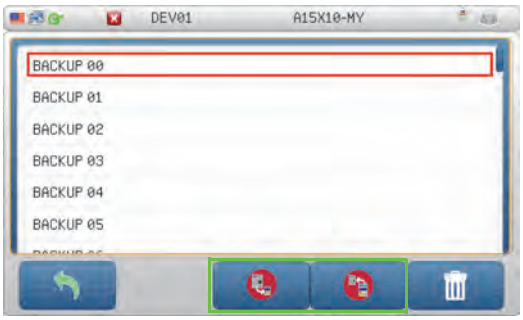
CREATING A BACKUP:

To backup data from a weld timer, follow the procedure below.

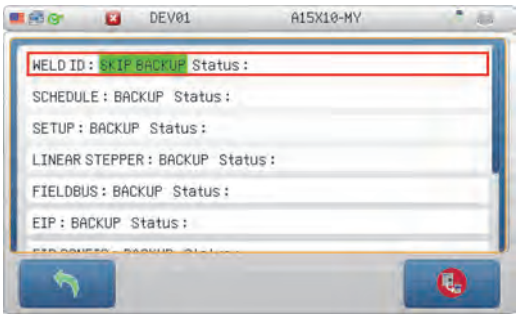
① Connect the DEP 600 into the weld timer's RS-485/RJ-45 Serial/EtherNet communications port. For instructions on how to connect the DEP 600 to a weld timer for Serial network communications, see “Physical Connections” on page 7.

② Press F3 /  to select EtherNet or F5 /  to select Serial Communication from the Home Menu and connect the DEP 600 to weld control.

③ From the Main Menu press F4/  to select Configuration and press  to navigate to Backup / Restore Menu 



④ Select from options Backup to DEP 600 or Restore from DEP 600

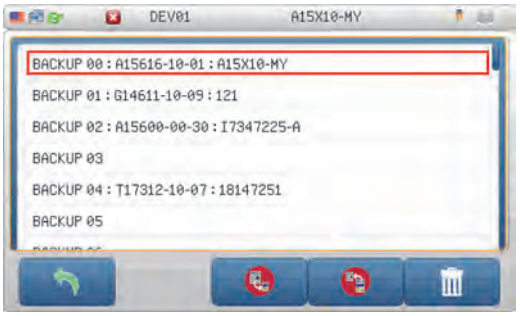


⑤ The user has the option to back-up/restore the complete list of items displayed or “Skip Backup” of items not required.

By default, all 10 parameters are selected for backup. To deselect a field, use the touch screen or arrow keys ↓ ↑ to navigate to the parameter not required for backup and press

enter key  . The field is highlighted green.

Use the ↓ arrow to scroll through the options: Backup/Skip Backup and press enter to make the change.



NOTE: IF A MEMORY LOCATION IS SELECTED, WHICH ALREADY HAS A DATA FILE STORED IN IT, THE OLD DATA FILE WILL BE PERMANENTLY DELETED WHEN THE BACKUP PROCESS BEGINS. THEREFORE, CONFIRM IF THE OLD DATA FILE IS TO BE OVERWRITTEN PRIOR TO PRESSING BACKUP.

NOTE: PRIOR TO RESTORING A BACKED-UP DATA FILE TO ANOTHER WELD TIMER, THE DEP 600 CABLE MUST BE PLUGGED DIRECTLY INTO THE SERIAL PORT OF THE WELD TIMER THAT IS TO BE RESTORED.

DEFAULT RESTORE SKIPS FIELDBUS MAPPING, EIP MAPPING, EIP CONFIGURATION, MEDLAN ADDRESS AND LOCAL ETHERNET. TO RESTORE THESE ITEMS, MANUALLY SELECT FROM THE LIST.

CLEAR A DATA FILE FROM A MEMORY LOCATION:

From the Backup / Restore Menu, navigate to the memory location to be cleared press the  icon.

NOTE: THE DEP 600 DOES NOT BACKUP/RESTORE ***RAFT***™ DATA.

GRAPHS

The Graphs feature can be enabled with software that supports graphing and available on weld controls over EtherNet.

TO ENABLE GRAPHING:

① From the DEP 600 Configuration page use the toggle switch to enable Graphs.

② Connect to a weld control over EtherNet with graphing available.

③ The graph icon will be displayed on the Home screen. Press F5 to open the graph.

Chapter 5: FILE MAINTENANCE AND SOFTWARE UPGRADE

WTC releases frequent updates to the DEP 600 firmware. To obtain the most recent update contact your WTC Sales representative.

TO INSTALL ADEP 600 UPDATE FOLLOW THIS PROCEDURE:

① Transfer the Upgrade file onto a supported* USB flash drive.

② Navigate the DEP 600 to the HOME screen F1 or tap  .

③ Connect the USB flash drive containing the upgrade to the USB port on the DEP 600 you will see* the USB icon on the top right of the screen  .

④ Press F5 or  to enter the update page and then F5 or  again to start the update.

⑤ The update bar on screen will display the progress.

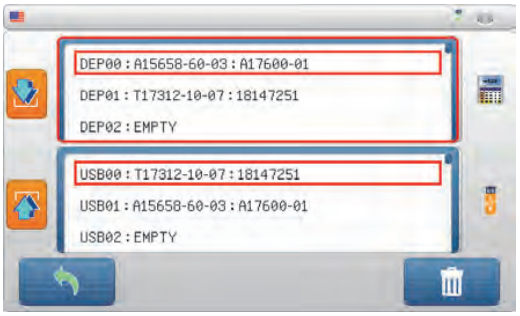
**FAT32 Supported. Unsupported format USB will not be detected by the DEP 600.*

FILE MAINTENANCE USING A USB FLASH DRIVE:

① From the HOME menu press FI/  to select DEP 600 settings menu.

② Connect the USB flash drive (*FAT32 format*) to the USB port on the DEP 600. The USB icon is displayed on the top right of the screen  .

③ Press F4/  to select Backup/Restore to USB.



④ Press F6/  to select transfer from DEP 600 to the USB flash drive.

- To navigate within the field (DEP 600) items and select files, use the  and  arrows.
- There are 50 slots available for file transfer.

⑤ Press F7/  to select transfer files from the USB the DEP 600.

- To navigate within the field (USB) items and select files, use the  and  arrows.
-  Spinning icon indicates that the transfer is in process.
- To delete an item press F5/  .

ICON GLOSSARY

ICON	FUNCTION / DESCRIPTION
	DEP 600 Configuration.
	DEP 600- Home (Screen)
	DEP 600 Update
	WTC Weld control
	Serial connection
	EtherNet Connection (Port ENET 0)
	Global EtherNet (Port ENET 1)
	Go or connect
	Go back
	Down
	Up

ICON	FUNCTION / DESCRIPTION
	Go to next page
	Go back a page
	Reload/Refresh Data
	More pages available
	Save to Timer: Data modified. Yellow indicates a change has been made and prompts user to save.
	Save to Timer: Data not modified.
	Cannot save changes.
	Language selection- Chinese
	Language selection- English
	Language selection- French
	Language selection- German
	Language selection- Japanese
	Language selection- Korean
	Language selection- Portuguese

ICON	FUNCTION / DESCRIPTION
	Language selection- Spanish
	Language selection- Turkish
	File Transfer: Save/Upload to/from USB
	Clean USB
	USB busy
	Recording data to USB in progress
	Save data to USB stick
	Upload to control from USB
	Processing
	Increase/ Reduce screen brightness
	Delete selected item
	Clear
	Weld Mode
	No Weld Mode

ICON	FUNCTION / DESCRIPTION
	Cannot change Weld State
	Insert
	Display Mode
	Weld Info/Data for the control the DEP 600 is connected to.
	Weld Functions
	Edit
	Weld Schedule
	Edit Setups -change Fault/Alert status.
	Edit Stepper
	Enter Schedule number
	Open File/Schedule/Setup
	Duplicate to Timer: Data modified
	Duplicate to Timer: Data not modified

ICON	FUNCTION / DESCRIPTION
	Spot
	Enter Schedule Number
	Enter Spot Number
	Page Down: Scroll down the Spots list
	Page Up:
	Status
	Stepper Advance
	Stepper Reset
	Stepper Reset All
	I/O Status
	I/O Configure
	Pressure Edit/Configure
	Weld Control details/Status: Software and Hardware status

ICON	FUNCTION / DESCRIPTION
	Configuration: Reload Defaults, make language selection, Spot assignments etc.
	Reload Defaults
	I/O Options -Configure
	DIO- Discrete I/O
	E/IP - EtherNet IP I/O
	FieldBus I/O
	Configure E/IP
	Inputs
	Outputs
	Network Configure
	Welder ID: Set custom name for the weld control.
	Launch keyboard
	Backup + Restore

ICON	FUNCTION / DESCRIPTION
	Backup weld control to DEP 600
	Restore from DEP 600
	***RAFT*** features launcher
	***RAFT*** Resistance Measure Enable
	***RAFT*** Reference Weld Enable
	RAFT Copy Reference Schedule
	Graphs
	Enter Heat/Current value
	Enter Schedule Number
	Servo Configuration
	Servo Calibration
	Auto (Calibrate) Home
	Auto Calibrate

ICON	FUNCTION / DESCRIPTION
	Jog Open
	Jog Close
	Servo: Set material Thickness
	Check Thickness
	Set Thickness
	Jog Closed
	Jog Open
	Servo: Measure Force
	Set Force/Pressure
	Clear Force
	PSEC: Lock Program
	HSEC: Lock Heat

ICON	FUNCTION / DESCRIPTION
	Search

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