

# Jetline<sup>®</sup> engineering

An Illinois Tool Works Company

## LATEST TECHNOLOGY GRAPHICAL INTERFACE INTUITIVE SOFTWARE

Automated welding is a cornerstone in the manufacturing industry's ability to meet productivity goals, deal with welder shortages, and stay competitive.

Jetline's goal is to deliver integrated solutions that allow our customers to automate their welding operations and consistently produce high quality parts.

The 9900 controller brings the latest computer technology and comprises a standard 15" touch screen industrial computer running Jetline's intuitive welding software.

Designed with the operator in mind, we used innovative solutions to simplify the welding process and empower our customers to deliver results that improve the bottom line.

The controller is based on industrial hardware running a Windows<sup>®</sup>-based operating system. This means that the user can take advantage of the standard Windows<sup>®</sup> data file management and backup utilities. There are several USB ports on the computer that can be used to connect peripherals like printers, keyboards or a mouse. For easy welding data backup, a USB storage device can be used. The controller can be configured for LAN networking and Wi-Fi capability. These features allow remote monitoring and management of the controller from the convenience of the office via LAN or via internet.

The controller can be ordered with two distinct software versions—Standard and Advanced—and several options to match the requirements of the part to be welded.

Both software versions utilize user names and allow for password protection of the two main menu categories: program editing mode and production mode. This provides security for the weld program data during production operation.

15 Goodyear St, Irvine, CA 92618 USA  
Tel: (949) 951-1515  
[www.jetline.com](http://www.jetline.com)

## 9900 Controller



## simplifying WELDING

### KEY FEATURES OF THE 9900 CONTROLLER:

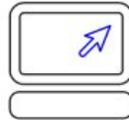
- CONTROLS UP TO 15 CHANNELS
- DUAL PROCESS INTEGRATION IN ONE PROGRAM
- MULTIPASS SOFTWARE
- UNLIMITED NUMBER OF WELD SEGMENTS AVAILABLE
- 15" INDUSTRIAL TOUCH SCREEN COMPUTER
- SMART CHANNEL MODULES
- ETHERNET COMMUNICATION PROTOCOL
- FIBER OPTIC CONNECTIONS TO ELIMINATE VULNERABILITY TO HIGH FREQUENCY NOISE
- VIRTUALLY UNLIMITED STORAGE\*
- MODULAR DESIGN TO ALLOW EXPANDABILITY

WELDING  
AUTOMATION  
SOLUTIONS  
FROM JETLINE

# Technology that welds!



## welding automation for your business



### RUGGED INDUSTRIAL COMPUTER

The resistive touch screen is designed to offer many years of trouble free service in the demanding welding shop environment. As an option, a keyboard and mouse can be ordered with the unit.

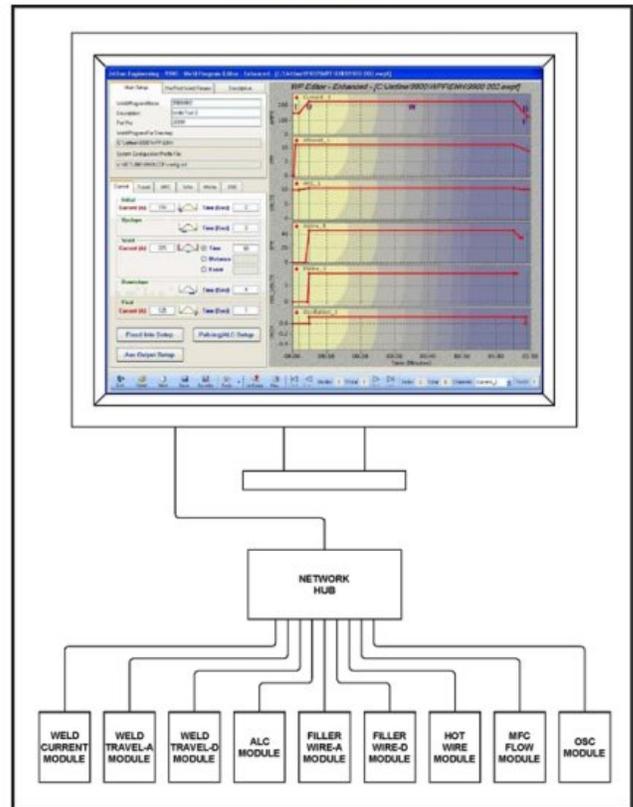
The industrial PC is connected to the dedicated embedded channel modules. The channel modules are special-purpose computers designed to perform channel specific functions. Since the channel modules are dedicated to specific tasks, they are characterized by increased reliability and performance. Jetline's engineers designed the 9900 system to be immune to high frequency or inverter noise present in the welding environment. Each channel input and output is electrically isolated and all external inter-module connections are made via fiber optic cables to assure signal integrity over long distances and to shield the welding system from the environment.

### CONTROLS UP TO 15 PARAMETERS

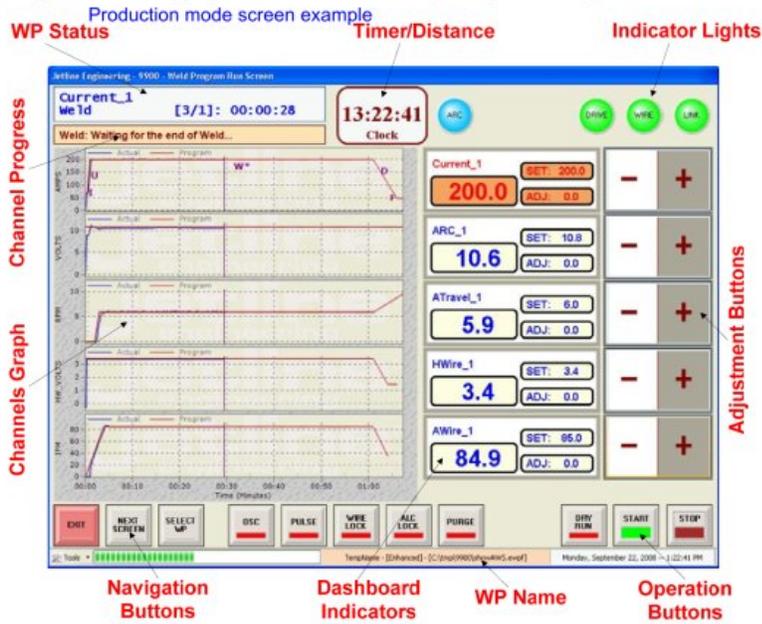
The 9900 controller is designed to control up to **15** parameters or channels in a closed loop format. All system parameters and variables are incorporated in the welding program and are closely monitored to assure the accuracy of the welding procedure. This means that oscillation (mechanical or magnetic), hot wire voltage or any other parameters are integrated and controlled from a single easy to access weld program. The controller is also capable of controlling multiple welding arcs and or processes from the same program. The modular design of the system eases expandability or change from the original configuration.



Here are types of modules that can be configured to make up your custom solution.



# Improving productivity, quality and consistency of your parts



## INDUSTRIAL TOUCH SCREEN

The 15" standard touch screen HMI (human machine interface) provides access to all the parameters controlled during welding. A graphical representation of the weld program aids the operator during the welding process. On the graph, in real time, the actual process parameters are displayed in parallel with the set values. This feature provides an instant feedback to the operator about the state of the process. A progress bar, along with a multi-function timer, is also present to allow easy monitoring of the program's progress.

The graph can be zoomed or viewed in a full screen format to allow the operator to analyze and monitor the program parameters in relation to each other.

We designed the 9900's software with large buttons for convenient parameter adjustment. The actual and program parameter displays are large enough to be easily seen from several feet away. Indicator lights on the screen show the current state of each channel.

## custom solutions to meet your needs



### INTUITIVE SOFTWARE

There are two software versions available to satisfy the simple or the mission critical application.

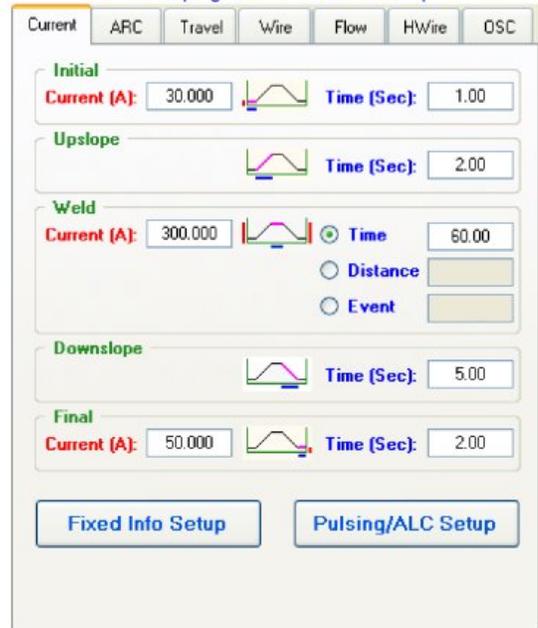
**Standard:** designed with simplicity and efficiency in mind. The screens are intuitive and the operator's learning curve is minimal. The program provides a familiar framework for the operator by using standard welding terms whenever possible. It is ideal for seam welding applications and simplifies process control by programming a minimal number of parameters per channel. The Standard version includes an option to run all weld programs in the Enhanced mode which allows sloping (upslope and downslope) of all channels. This gives the operator more flexibility in more challenging circumferential, hot wire or dual arc applications.

**Advanced:** gives full control to the operator in designing the weld program. The standard weld program can be expanded with unlimited number of segments which satisfies even the most demanding applications. It is recommended for complex weld joints and applications where programming flexibility is key.

### FLEXIBILITY

Both software versions come with many standard features including current pulsing, offline programming, printing, and program management. In addition to these standard features there are several options available for all versions. The software allows not only the changing of the main parameters during welding, but also the changing of the pulsing and oscillation parameters. The production mode screens can display up to five channels on one screen. If more than five channels are being controlled, the operator can select the order of channels per screen and which channel to be displayed on each screen.

Standard program editor screen example



A convenient grouping of parameters based on channels, along with the graphical representation of the programmed parameters and their relationship with each other, aids the operator in the weld program editor screens. Each program can be run based on time, distance, or event. Multi-pass and dual arc are available as options in the Standard software version; Multipass is included in the Advanced Version.

# Proven experience and reliability

## EXCITING FEATURES

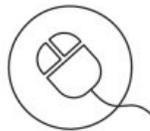
There are many new features available on the 9900 controller. Some of the most exciting ones are related to synchronized pulsing and variable polarity AC welding. In many instances in multipass welding, the synchronization of the current pulsing with the oscillator can improve sidewall penetration and reduce the overall heat input. In the synchronized pulsing mode when the oscillator reaches the side wall of the joint, the current is switched to high pulse to provide better side wall melting. In the Pulsation mode, the controller synchronizes three channels, the current, oscillator, and travel.

Variable polarity AC welding can improve the quality of aluminum welding.

As an option, the 9900 can control two processes simultaneously (Dual Arc). Data acquisition is available as an option.

Pendants, based on configuration, are available.

turn-key solutions  
welding know-how  
legendary **Jetline support**

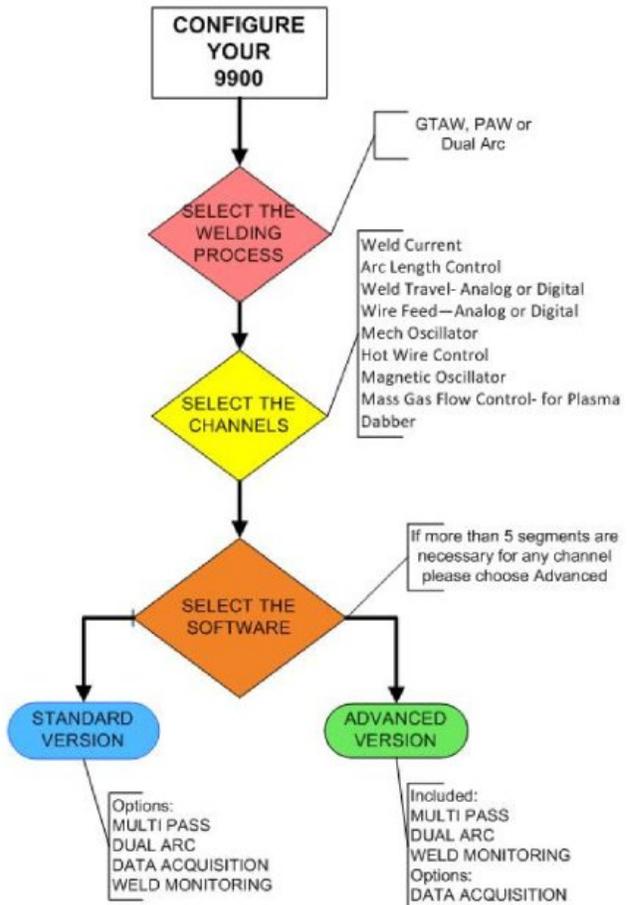


## HARDWARE AND SOFTWARE INFORMATION

| Software Function Availability   | Standard | Advanced |
|----------------------------------|----------|----------|
| Pulsing of Power Source          | Y        | Y        |
| Slope of all channels            | Y        | Y        |
| Upload/Download                  | Y        | Y        |
| Off line programming             | Y        | Y        |
| AC enhancement for VP            | Y        | Y        |
| More than 5 segments per channel | N        | Y        |
| Dual Arc (Multi torch)           | OPT      | Y        |
| Multi-Pass Program               | OPT      | Y        |
| Data Acquisition                 | OPT      | Y        |
| Weld Monitoring                  | OPT      | Y        |

| Available Hardware Modules        | Standard | Advanced |
|-----------------------------------|----------|----------|
| Weld Current                      | Y        | Y        |
| Weld Travel- A                    | Y        | Y        |
| Weld Travel-D                     | Y        | Y        |
| ALC- Arc Length Control           | Y        | Y        |
| Wire Feed-A                       | Y        | Y        |
| Wire Feed-D                       | Y        | Y        |
| Magnetic Oscillator               | Y        | Y        |
| Mechanical Oscillator             | Y        | Y        |
| Hot Wire Control                  | Y        | Y        |
| Mass Flow Control- GAS for Plasma | Y        | Y        |
| Dabber                            | Y        | Y        |

**Legend:** Y= Yes ; N=No  
OPT= option, order separate  
A-Analog control; D- Digital control



FOR MORE INFORMATION PLEASE VISIT [www.jetline.com](http://www.jetline.com)

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