XPro Series of Weld Controls

XPro • XPro-Mobile • XPro-Portable

The XPro Series of Weld Controls expands upon the same basic architecture as our proven XM® Controller with precision control modules integrating the welding power supply and welding axes for a complete turnkey solution. However, the XPro Series has an increased capacity for tackling even the most demanding welding needs. It utilizes the same Digital Signal Processor (DSP) technology found in the XM®, but adds an enhanced HMI (human machine interface) with a large touch screen and keyboard to make weld program creation and menu navigation even easier. The advanced hardware combined with the user-friendly interface results in a capable yet easy to program welding solution. Once created, weld programs can be initiated directly from the touch screen interface or the handheld remote pendant.

The XPro is the standard configuration.

The XPro-Mobile is designed to be used with multiple welding fixtures.

The XPro-Portable is designed for field use.

Advantages

- **Single controller:** A single controller integrates with the motion axes, wire feeders, and the welding power supply providing a central control point for all welding and motion parameters.
- **Touch Screen Interface:** The human machine interface features a large touch screen display on an operator console with a keyboard providing for easy navigation and weld program creation.
- **Advanced Programming:** The XPro Series offers advanced programming functionality allowing even the most challenging of applications to be completed with ease.
- **Expandable:** The XPro Series features modules that allow increased system capabilities by simply plugging in a new module. When a new module is introduced, it is automatically recognized and integrated.
- **Long-term Support:** The XPro Series utilizes an Embedded Linux operating system ensuring that AMET® will be able to provide long-term support and stability. AMET® writes the XPro software and manufactures the hardware, including the control boards, ensuring no risk of obsolescence due to third-party changes.
- **Retrofit Capable:** The XPro Series can be integrated with existing fixtures such as lathes, seam welders, and manipulators to extend equipment service life. Retrofits can even be performed on equipment that was not produced by AMET®, which helps reduce costs by reusing large positioning equipment.

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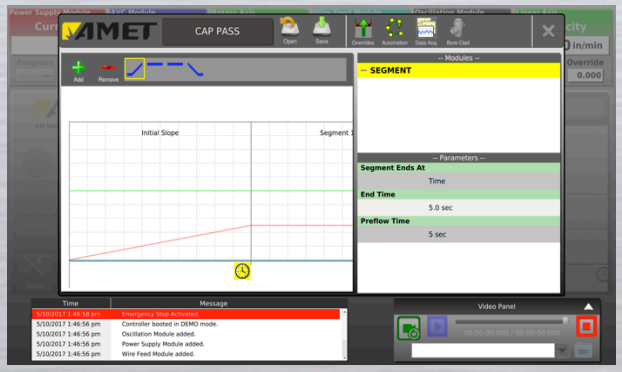
Graphical Welding Software



Edit Mode

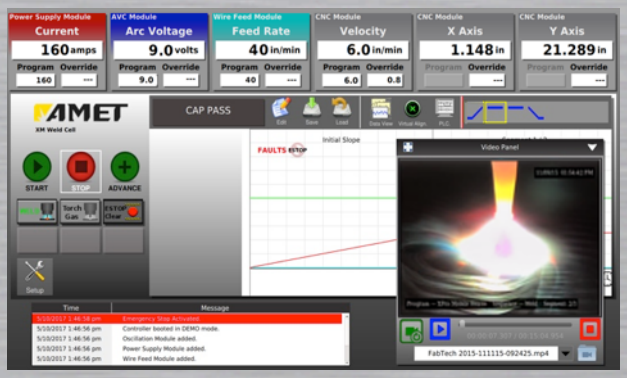
Used to create or edit weld programs. The menu based program editor provides access to any X-Module plugged into the system. Weld programs are created by segment, which allows for complex welds or simple welds. Onboard storage allows 100s of programs to be created and stored on the weld controller.

Weld Mode

Used to execute weld programs. During a weld sequence, the program is graphically displayed with a meter panel showing the actual, programmed, and override values for each module. This allows the user to easily track all parameters of the weld in real-time from the operator console.

Setup Mode

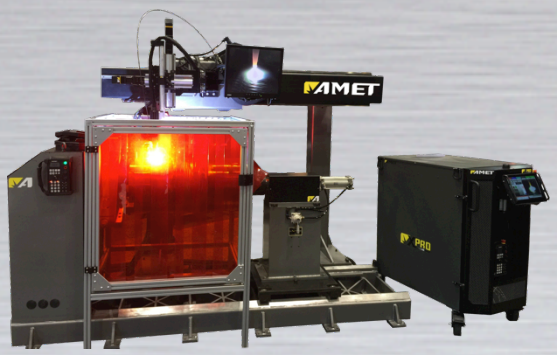
Used to configure the XPro control system's hardware and software. The XPro can store configurations for multiple welding tools. The operator simply connects the fixture and loads the corresponding configuration. This configures the servo settings and the user interface for a given welding fixture.



Video Integration

Arc viewing video display windows can be overlaid on the screen to be viewed in real-time, or played back. The system can be set to automatically record (.mp4 format) and digitally store the arc viewing video for each weld sequence. The video files can be transferred to a PC for archival.

Note: *Access to the Setup and Edit Screens can be limited by assigning each user a unique ID and password with customizable permissions.*



AMET® Circumferential Welding System with XPro-Mobile weld controller

XPro GTA Welding System

XPro GTA Custom Glovebox Lathe Welding System

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XPro

XPro Standard Features

1. The human machine interface includes an LCD touchscreen. The Weld, Edit, and Setup Modes, and their program screens are intuitively presented on the touchscreen for program creation and execution. Simply tap the corresponding area to open the menu, and then use the keyboard for data input.

2. The digital meters display the programmed, actual, and override values of a weld parameter to allow real-time monitoring of the welding process. Up to six (6) meters are displayable simultaneously on the touchscreen monitor with one (1) displayable at a time on the remote pendant. The operator can easily adjust which meters are displayed and can toggle through several parameters for each meter.

3. The screen graphically displays the current weld segment of the program, including the upslope and downslope. The current segment as well as the total number of segments in the weld program are displayed. This information helps the operator monitor the exact status of the current weld program.

4. Video integration is built into the monitor. A popup window can be opened to display the real-time video feed without the need for an additional monitor. The window can be increased to about twice the size of the window displayed in the picture to the left. Arc Viewing Cameras are available as an option.

5. The Emergency Stop (E-Stop) button immediately aborts the weld program and ceases all motion.

6. The remote handheld pendant includes two joysticks and four sets of soft keys for eight axes of jogging motion control. These are used for positioning the parts and weld head prior to the weld and can be used to make adjustments during the weld. The pendant is also used for monitoring the weld and override capabilities.

7. A keyboard with a built-in touch pad is included to quickly and easily input or change parameters while creating or editing weld programs. A fold down tray is included to house the keyboard and keep it within reach while using the touchscreen.

8. Tapping the Mode icons (Weld, Edit, and Setup) puts the controller into its corresponding mode of operation. Controller and module preferences and settings are addressed in the Setup Mode while weld programs (or schedules) are built in the Edit Mode, then executed in Weld Mode.

9. The Sequence icons (Start, Stop, and Advance) are used during weld program operation. The Start icon activates the currently loaded weld program. The Stop icon terminates any running process or operation and advances to the downslope segment. The Advance icon initiates the next programmed event. Start and Stop buttons are also located on the handheld pendant for remote operation of the weld program.

Optional Features

- Data Acquisition and Tolerance Checking
- Virtual Alignment (Weld Path Teaching Mode)
- Localization Software – Spanish, French, Korean, Russian and partial Chinese available
- Barcode/RFID Scanner
- Intersecting Bore Cladding
- Laser Seam Tracking
- Programmable Gas Control
- AVC (Arc Voltage Control)
- Wireless Remote Handheld Pendant
- Wireless Communication
- Safety Devices – laser curtains, safety mats, door interlocks, etc.
- Multiple Process/ Multiple Arc Weld Heads
- Multiple Wire Weld Head
- Monitoring Sensors – Heat, oxygen, humidity
- Offline Programming

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XPro Control Architecture

The XPro utilizes multiple processors that are dedicated to each welding function and networked together to share all process information. This architecture allows the ability to provide tightly integrated systems in which all motion, power supply, and sensor functions are programmed and controlled from a single controller.

Specifications

- Display – Color LCD touch screen HMI and 4 in. black & white screen on the remote pendant.
- Processor – Intel® Corei5 with 2.70GHz processor speed.
- Graphics - Intel® HD Graphics 6000
- Communication via CAN Bus
- Operating System – Embedded Linux OS running AMET® XPro software
- Peripherals – USB port for transferring data via memory stick, Ethernet port to connect to local network optionally available.
- Storage – 100s of weld programs can be created and stored on operator console
- Controls up to 30 parameters

XPro Specifications		
Specification	Value	
	Imperial	Metric
Width	32 in	81.3 cm
Height	67 in	170.2 cm
Depth	16 in	40.6 cm
Weight	220 lbs	100 kg
Display (Color)	21 in	53.3 cm

XPro-Mobile Specifications		
Specification	Value	
	Imperial	Metric
Width	32 in	81.3 cm
Height	67 in	170.2 cm
Depth	16 in	40.6 cm
Weight	900 lbs	410 kg
Display (Color)	13.3 in	33.7 cm

Remote Pendant Specifications		
Specification	Value	
	Imperial	Metric
Width	7.8 in	19.8 cm
Height	10.4 in	26.4 cm
Depth	3.3 in	8.4 cm
Weight	2.3 lbs	1.1 kg
Display (B&W)	4 in	10.2 cm

XPro-Portable Specifications		
Module Specification	Value	
	Imperial	Metric
Width	20.7 in	52.6 cm
Height	9.8 in	24.0 cm
Depth	17.1 in	43.4 cm
Weight Per Case		
Minimum	30 lbs	13.6 kg
Maximum	75 lbs	34.1 kg
Display (Color)	15.6 in *	39.6 cm

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