

ADAM™

Advanced Data Analysis Monitor

With an ever-increasing emphasis on process accountability, AMADA MIYACHI's Advanced Data Analysis Monitor (ADAM™) offers more of the information you need to support your ISO, GMP and TQM requirements. Not only will it monitor what happens during the weld, but also before weld monitoring is triggered, giving you a true 360-degree view of your process!

KEY FEATURES

- 360° view of your weld including pre- and post- weld trigger data
- Measure current, voltage, force, displacement and cover gas flow/auxiliary input
- Production run screen with run charts, histogram and process results
- High resolution sensors
- Simple user-interface includes large color display
- Monitor ANY Resistance Welder
- TCP/IP Communications Enabled
- Integrated database and Minitab® 15 statistical software*

Feature	Benefit
Current, voltage, power, resistance monitoring	Detects shifts in welding process
High resolution displacement monitor with part detection	Improved process control
Force or pressure monitor	Ensures welding at proper electrode force
Cover gas flow monitor	Confirms displacement of oxygen from weld area
Pretrigger viewing	Captures important pre-weld data
Envelope limits	Catches slight changes in waveform shapes
Numeric limits	Evaluates peak and RMS data
Graphical waveforms with cursors	Interrogates waveforms for better understanding of process
Multi Level security screens	Protects settings from unauthorized changes
Comprehensive I/O for automation	Easily integrated into automated systems
Wide screen color display	Easy to view settings and process results
Multiple schedules with schedule naming	Customized schedules for ease of use
Traceability to NIST standards	Meets regulatory guidelines
Ethernet communications	Remote reading of database
Weld to displacement	Improves process control



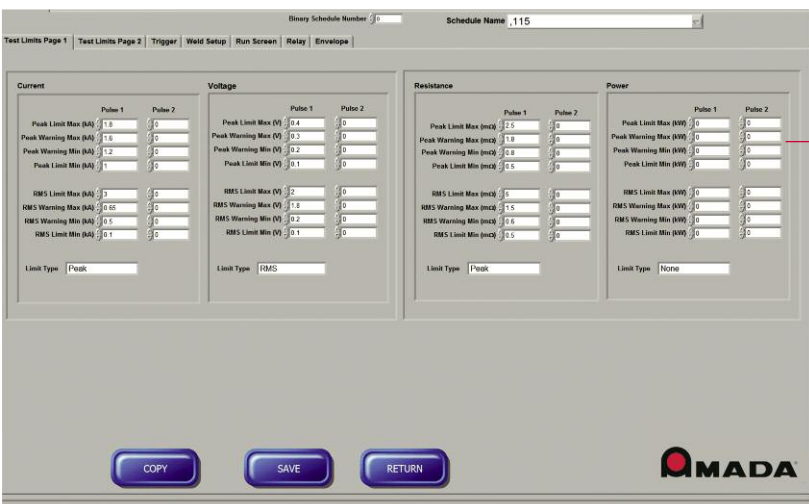
RUN SCREEN:

Comprehensive production screen provides graphical and numeric viewing of the present weld as well as trend data. Two run charts with limits, histogram, event logger and alarm indications. Programmable weld counter with easy to view process monitor shows ratio of In/Out of limits welds.



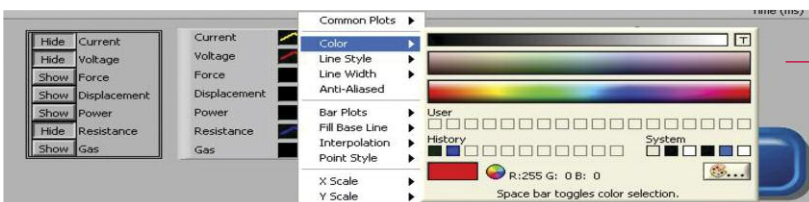
EXPANDED MONITOR SCREEN:

Expandable graphic data windows allow user to overlap multiple graphs to analyze the dynamic relationships between the variables. Waveform cursors with advanced measurement tools allow precise interrogation of the welding sequence.



LIMITS SETUP SCREEN:

Programmable limits screen for setting upper and lower numeric limits on peak and RMS data. Envelope limits can be placed around waveforms to detect slight changes in process stability. Part thickness and displacement limits measure the mechanical aspects of the welding process.

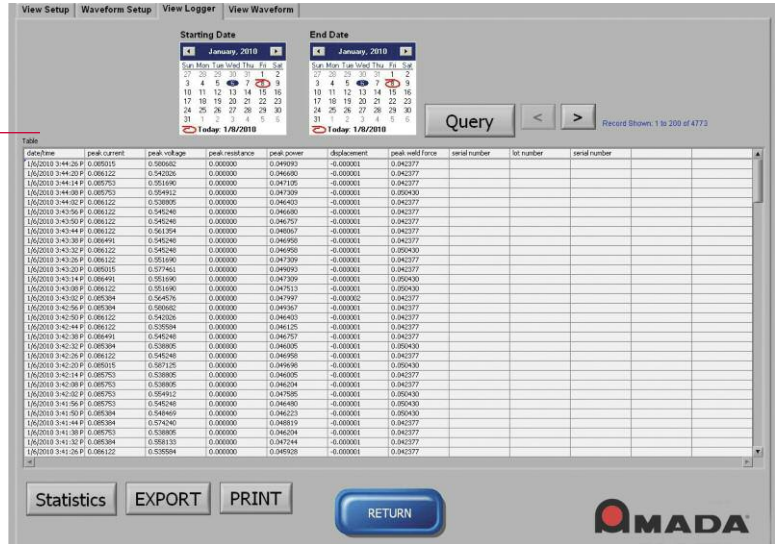


SCREEN FORMATS:

Very flexible formatting capabilities allows user to customize data, colors, and styles on graph displays for easy viewing and emphasis of key parameters.

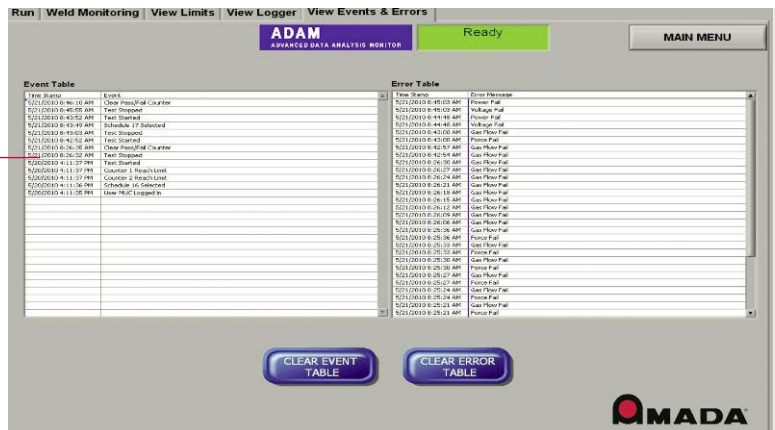
LOGGER SCREEN:

Monitored results with time and date stamps are updated in real time. Data is stored on large internal hard disk and is integrated to Minitab Statistical Software package for process analysis and quality improvement.



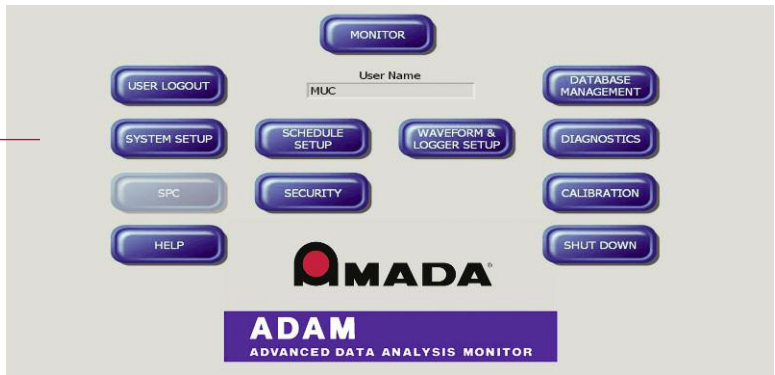
EVENT AND ERROR TABLE SCREEN:

Errors and Events are captured with time and date stamps for record keeping and process analysis. User can also log events such as a change of electrodes so these actions are readily available when analyzing data.



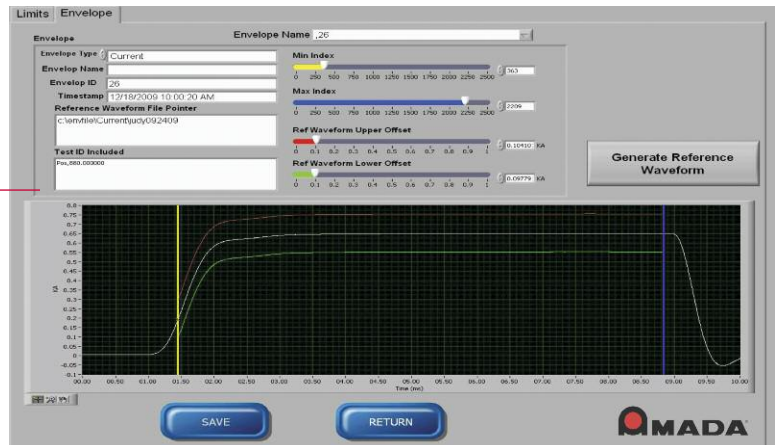
MAIN MENU SCREEN:

Simple menu access to setup and view screens with multiple levels of security to protect against unauthorized program changes.



ENVELOPE SETUP SCREEN:

An easy to use graphic interface provides quick setup of envelope limits and allows user to target a specific section of the waveform to evaluate process results.



TECHNICAL SPECIFICATIONS

Measurement capability	Single channel current, voltage, and gas flow/auxiliary 0-10 volt input. two channels each of force and displacement. (displacement, force, and cover gas flow sensors are optional)	
Parameter	Ranges	Displayed resolution
Current	2, 6, 20, 60, 200 kA	3 significant digits
Voltage	0-15 V	3 significant digits
Displacement	12, 25, 30 mm	0.0001 in or 0.01 mm
Force	0-10 V	3 significant digits
Gas flow/auxiliary 0-10 volt	0-10 V	3 significant digits
Derived parameters	Power and resistance	
Measurement time	2 seconds maximum	
Sampling rates	125 K samples per second	
Repetition rate	1 per second for 100 milli second measurement period	
Limits	Numeric peak and RMS; min/max; graphical envelope, weld time, counter	
Displayed resolution	Approximately 1000 data points per waveform	
Triggering	Current, voltage, force with adjustable threshold or external signal	
Digital inputs	External Trigger, Reset, Tare Displacement, Reset Counter, Inhibit Measurement, Start Part Measurement, Initial Thickness Measurement	
Digital outputs	Ready to Measure, In Progress, In Limits, Out of Limits, In Warning, Out of Warning, Counter Limit, Force Fire, Thickness Pass, Thickness Fail	
Relay outputs	4 user configurable relays rated: 30 VDC and up to 1 A	
Weld counter	User programmable counter limit	
Power supply cutoff	Weld to displacement based on electrode position	
Number of schedules	Unlimited	
Communications	RS-232 (output of weld data after each weld only) Ethernet TCP/IP (remote reading of database)	
Memory	1 TB hard disc	
Electrical requirements	115 V/230 V 50/60 Hz (Note: processing module, sensor interface module and display will require power.)	

WEIGHT & DIMENSIONS

	Data Processing Module	Sensor Interface Module	Monitor
Dimensions (L x W x H)	14.8 in x 11.3 in x 9 in (375 mm x 286 mm x 230 mm)	13 in x 4.9 in x 10.75 in (330 mm x 125 mm x 273 mm)	9 in x 21 in x 17 in (229 mm x 533 mm x 432 mm)*
Weight	17.5 lbs (8 kg)	11.5 lbs (5.3 kg)	10 lbs (4.5 kg)

*Size of the monitor may vary



AMADA 1820 S. Myrtle Ave. • Monrovia, CA 91016 US
T: (626) 303-5676 • F: (626) 358-8048
info@amadamiyachi.com • www.amadamiyachi.com
AMADA MIYACHI AMERICA, INC. ISO 9001 Certified Company • 24/7 Repair Service: 1-866-751-7378

AMERICAS
AMADA MIYACHI AMERICA (Midwest Office)
Detroit, Michigan
T: (248) 313-3078
midwestsales@amadamiyachi.com

AMADA MIYACHI DO BRASIL LTDA.
Sao Paulo, Brasil
T: +55-11-4193-3607
antonio.ruiz@amadamiyachi.com

EUROPE
AMADA MIYACHI EUROPE GmbH
Munich, Germany
T: +49-89-839403-0
info@amadamiyachi.eu

ASIA
AMADA MIYACHI CO., LTD.
Isehara, Japan
T: +81-47-125-6177
sales@miyachi.com
AMADA MIYACHI KOREA CO., LTD.
Seoul, Korea
T: +82-4-7125-6177
dykim@mkc.miyachi.com

AMADA (THAILAND) CO., LTD.
Bangkok, Thailand
T: +66-2-170-5977
info@mtl.miyachi.com

AMADA MIYACHI INDIA PVT., LTD.
Bangalore, Karnataka
T: +91-80-4092-1749
or +91-80-4092-3549
info@miyachiindia.com

AMADA MIYACHI AMERICA (Mexico Office)
El Paso, Texas
T: (915) 881-8765
mxsales@amadamiyachi.com

AMADA MIYACHI SHANGHAI CO., LTD.
Shanghai, China
T: +86-21-6448-6000
jwu@msc.miyachi.com

AMADA MIYACHI TAIWAN CO., LTD.
Taipei, Taiwan R.O.C.
T: +886-2-2585-0161

AMADA VIETNAM CO., LTD.
Ha Noi, Vietnam
T: +84-4-6261-4583

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