

**BRANSON**

## LPX Platform

Ultrasonic Welding Systems  
for Low Power Applications

# Application Flexibility with Maximum Process Control



Custom Icon-Driven  
User Interface

Ten Presets

System Protection Monitor  
with Autotune

Line/Load Regulation

Multiple Welding Modes  
with Ground Detect Available

NRTL Certified

Hand-Held  
Systems

## Available in Three Frequencies with Multiple Weld Modes

The LPX platform of low power ultrasonic systems is Branson's latest offering for applications with power requirements of 550 Watts or less. The LPX utilizes Branson's patented circuitry with closed-loop control to provide maximum process control.

The LPX units can be used with their appropriate hand-held welder or can be connected directly to a converter/booster/horn stack. The LPX provides the user multiple weld modes: continuous, time, and energy. The LPX is also available with an optional factory-installed ground detect.

Three frequencies are available:

- 20 kHz at 150 and 550 Watts
- 30 kHz at 550 Watts
- 40 kHz at 550 Watts

## Hand-Held Welders with Pistol or Barrel Grip

The LPX series hand-held ultrasonic welders are compact, lightweight tools used to spot weld or stake large, complex parts and those with hard-to-reach joint areas. Two types of hand-held welders are available, pistol grip (PT) and barrel grip (HT).

With pistol grip (PT) models, the trigger switch is located on the grip; barrel grip (HT) models have the trigger switch located on the side of the barrel. All units may be operated utilizing a remote trigger, a start signal, or by the start/stop switch located on the front panel.

With the HT-215 model, a spring-loaded sleeve automatically triggers the ultrasonic welding cycle when the operator applies pressure against the part. An adjustment screw is used to vary the force required before ultrasonic triggering occurs.



## Configurations to Match Your Needs

Frequency	Power Supply	Power Output	Line Voltage	Hand-Held Systems	
				Hand-Held Welder	Converter Req'd
20kHz	20:0.15	150 Watts	200-240 V AC NRTL 50/60 Hz, 1 A single-phase	HT-215	TW-1/TW-2/TW-3
				HK-215	TW-1/TW-2/TW-3
20kHz	20:0.55	550 Watts	200-240 V AC NRTL 50/60 Hz, 6 A single-phase	PT-250	402
30kHz	30:0.55	550 Watts	200-240 V AC NRTL 50/60 Hz, 6 A single-phase	PT-350	Converter built in
				HT-350	Converter built in
40kHz	40:0.55	550 Watts	200-240 V AC NRTL 50/60 Hz, 6 A single-phase	PT-480	Converter built in
				HT-480	Converter built in

# Advanced-Performance Features for Process Control and Reliable Power

## User Interface/Process Controls

- **Digital parameter entry** for precise, easy setup.
- **1 ms sampling rate** of all data provides superior performance.
- **Digital amplitude control** allows fine-tuning for critical applications (ranges from 10% to 100% in 1% increments).
- **LCD interface** with straightforward icons provides improved navigation, easier configuration, and shorter setup time.
- **Self-diagnostics and monitoring** provide visual, audible, and logic output alarms.
- **Selectable auto reset conditions available for all alarms.**
- **Save and recall presets** provide up to ten presets for aid in setup.
- **Optional ground detect** can be used to detect horn-to-anvil contact or can be utilized as an “ultrasonic cut-off” signal/safety override in all available welding modes. (This is optional and must be factory installed).

Current weld mode when running, or available weld modes during setup

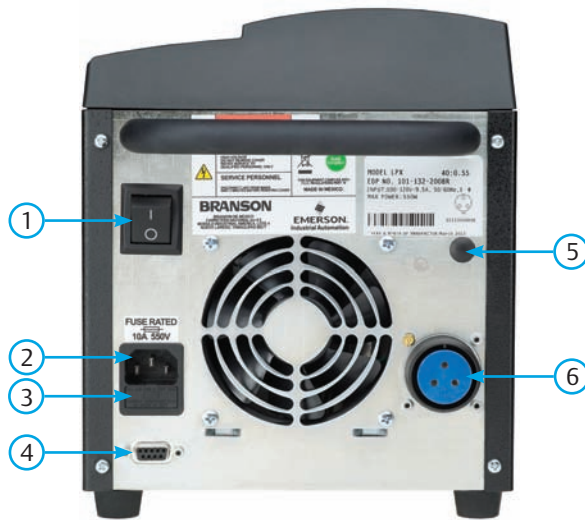
Available weld parameters for each weld mode

Parameter values



## Power Supply Key Features

- **Line/load regulation** – Branson’s patented closed-loop amplitude control corrects for variations due to power line fluctuations ( $\pm 10\%$ ) and varying load conditions.
- **LCD interface** displays weld mode and weld parameter settings with straightforward icons to ease configuration and shorten setup time.
- **Visual and audible alarms and external outputs** identify overload, machine faults, and setup errors.
- **Last weld results** including peak power, time, energy, and amplitude are available for viewing on the LCD interface.
- **System Protection Monitor (SPM)** – Five levels of power supply protection are provided to reduce equipment failures and improve weld accuracy and repeatability.
- **Autotune Plus Memory (AT/M)** – Provides fully-automatic horn frequency tuning by storing the horn frequency at the end of each weld for consistent and reliable horn starting.
- **Timed seek** tracks the operating frequency of the stack when the system is idle.
- **Sequence of operation** is viewable through the LCD interface during the welding cycle.
- **Non-volatile storage of setup parameters** provides storage of setup parameters if system is shut off or a power loss occurs.
- **User I/O interface** provided for direct hookup with +24V DC programmable controllers.
- **Preset weld setup** – The power supply can save and recall up to ten preset configurations, allowing consistent and repeatable setup.



**Mechanical Specifications**

Height: 242.3 mm  
 Width: 203.2 mm  
 Depth: 348.2 mm  
 (Add 76.2 mm for cable clearance)  
 Depth Including Handle: 389.2 mm  
 Weight: 14.5 lbs (6.5 kg)



**Connections to the LPX Platform Power Supply**

Item	Name	Function
1	Power Switch	Turns the unit on/off.
2	IEC/C14 Power Connector	To connect the power supply to a grounded electrical power source using the provided detachable line cord.
3	Fuse Holder	Provides access to a replaceable protective fuse.
4	User I/O J2 Connector	Connects the power supply to a PLC controller for remote control.
5	Ground Detect Terminal (Optional)	Factory installed option used to detect contact between the horn and an anvil that has been isolated from ground.
6	3 Pin RF Connector	Connects the power supply to the ultrasonic converter.

All units are NRTL certified by Curtis-Straus and comply with FCC rules and regulations governing radio frequency interference.



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