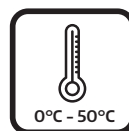
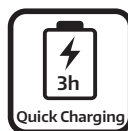


Lk-power

Battery Powered Welder User Manual



LK-160MB MINI

Lk-power

INTRODUCTION

Thank you for choosing our product. Please read the user manual thoroughly before using our product for optimal and secure usage. Please carefully inspect the product and compare all items to the packing list upon unpacking.

Design standards of the product: GB/T 15579.1 EN60974-1
Certification standards: PSE UN38.3 ROHS

The relevant design schemes and manufacturing technology used in this product are protected by patents. The copyright of this manual is owned by Suzhou LK Power Electronics Technology Co.,Ltd. Its contents are subject to change without notice.

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This manual will explain how to use the unit safely and effectively. Please read and follow these instructions and precautions carefully.

SAFETY TIPS AND PRECAUTIONS

Please keep this User Manual and read it carefully before use.
This user manual describes how to use the equipment safely and efficiently.
Be sure to follow the instructions during its use.



1.1 Lithium-Ion Battery Warning

- This welder uses Lithium-Ion type batteries. All Lithium-Ion batteries have the potential to overheat when used improperly.
- Overheating may lead to fire, property damage, personal injury or death.
- Please read and adhere to the following safety instructions.



1.2 Beware of Electric Shock

- Install the grounding device correctly according to the application standard.
- Wear dry and hole-free protective clothing and protective gloves to keep your hands insulated. When in contact with live parts, do not expose any part of your skin or wear wet gloves or clothes.
- Please use the product in a clean and dry environment to ensure the work site is safe.
- Insulate yourself from the workpiece and the ground.
- Ensure the workpiece is properly connected to the ground lead.



1.3 Beware of Fire

- Remove all flammable or explosive materials from the worksite.
- This welder should be used in an upright position.
- The welding position should be isolated from surrounding objects.
- Avoid welding at hydraulic lines. Place the fire extinguisher in an easy-to-access location.
- When not in use, disconnect the welding leads from the workpiece.
- When welding, splashing sparks and hot metal fragments may cause clothing to catch fire. Be sure to wear protective equipment and appropriate clothing.
- Do not heat, cut or weld fuel tanks, drums, or other containers which may contain flammable or toxic substances.
- The built-in battery of the welder should be used within the environmental conditions specified in this manual.



1.4 Beware of Smoke Damage

- Harmful fumes and gases may be generated during the welding process. Direct inhalation should be avoided.
- Keep the working environment well-ventilated.



1.5 Beware of Arc Flash

- Strong arc flash will be generated during welding. Therefore, a welding helmet with a qualified filter and cover should be used to prevent the eyes from being hurt by sparks or arcs when welding or observing the arc.
- Wear durable protective clothing and protective gloves made from flame retardant material to protect the skin from arc flash.
- Instruct personnel around the workplace not to look directly at the arc and when necessary, install protective barriers to shield against arc flash.



1.6 Beware of Electromagnetic Radiation

- When the welder is working, there may be electromagnetic radiation around the welding cable and the welder.
- Operators with a cardiac pacemaker should consult their doctor before welding.
- When welding, maintain a safe distance from the welder.
- Wrapping the welding cable around your body is strictly prohibited.



1.7 Beware of Burns

- Several parts of the welding process may present the risk of high temperature burns before, during, and after use of the welder.
- Do not touch the hot workpieces with bare hands.
- Wear protective clothing to avoid being burnt by welding sparks.
- The temperature of the electrode holder is high after use and it takes a long time to dissipate its heat.
- Warn surrounding personnel to avoid burns.



1.8 Other Safety Tips

- Avoid violent vibration and collision since the welder contains a Lithium-Ion battery. Do not store the welder with other items. Do not place heavy objects on top of the welder.
- Do not disassemble the welder by yourself in case of failure.
- Keep away from high-temperature heat sources.
- Keep moisture off of the welder.

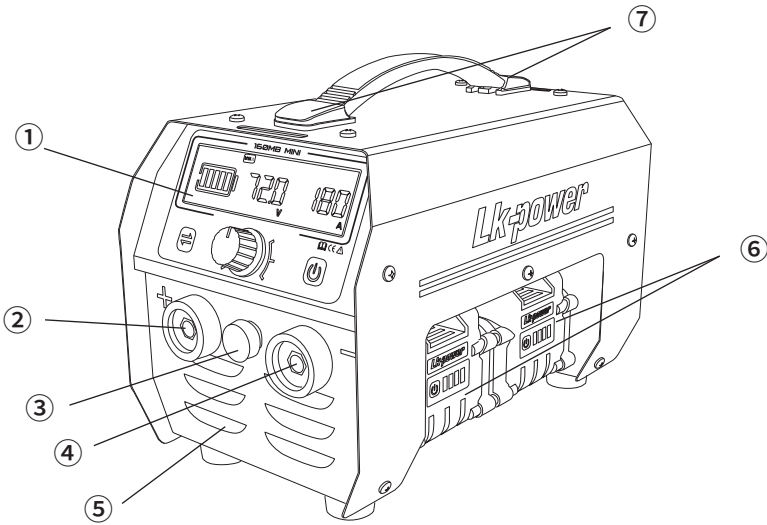


1.9 Beware of Noise

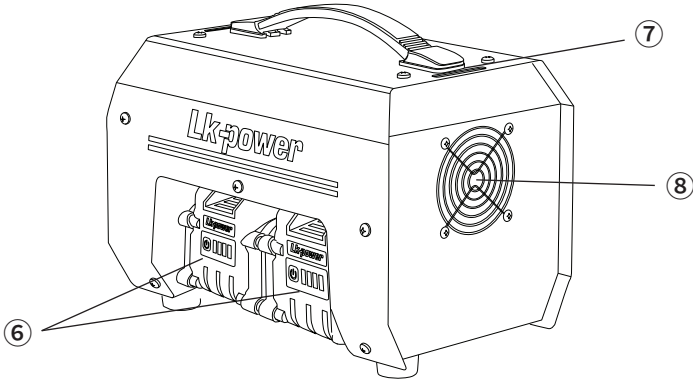
- Wear a hearing protective device to protect ears from noise.
- Warn bystanders to avoid potential damage caused by noise.

PRODUCT INTRODUCTION

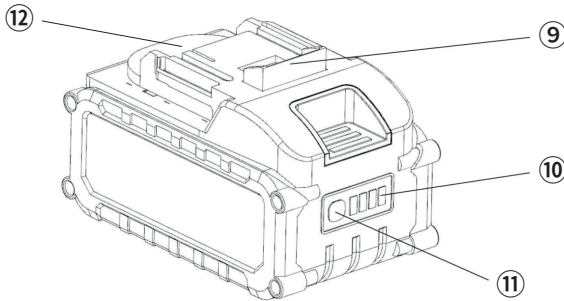
2.1 Appearance



SN.	Description
1	Panel Control
2	Positive Welding Cable (+)
3	Gasless MIG welding Port
4	Negative Welding Cable (-)
5	Air Inlet
6	Battery Pack
7	Shoulder Strap Hole

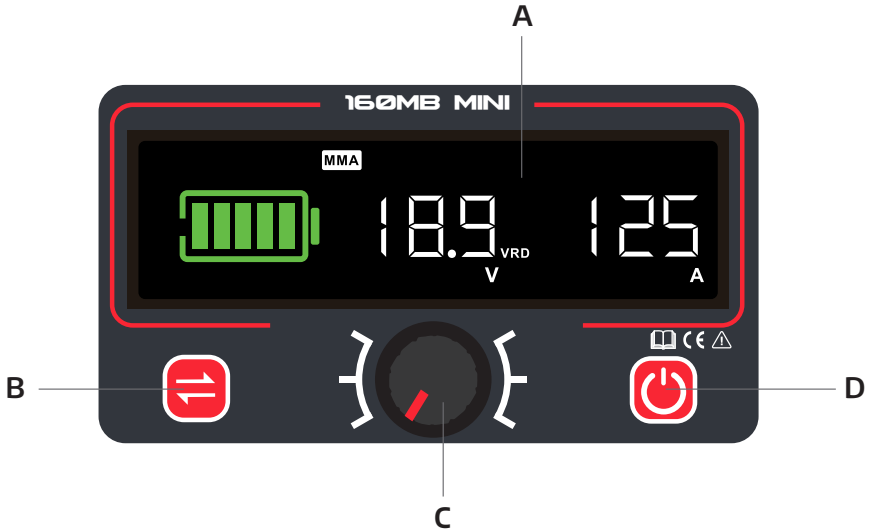


SN.	Description
6	Battery Pack
7	Shoulder Strap Hole
8	Air Outlet



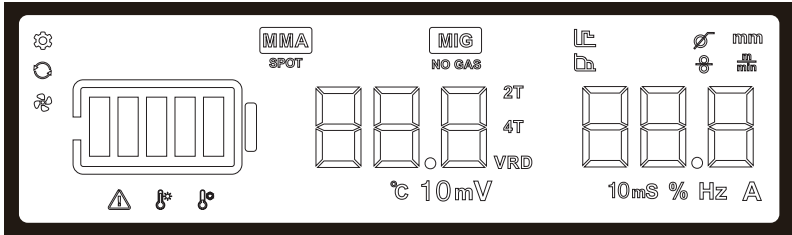
SN.	Description
9	Latch Button
10	Power Indicator Light
11	Battery Pack Button
12	Charging Port

2.2 Control Panel



SN.	Name	Description
A	LCD Screen Display	See 2.3 for Details on its Icon Means
B	Function/Mode Switch Button	Short Press:Detail Functions Selection Long Press: Switch MMA/MIG Mode
C	Adjustment Knob	Press and Turn to Adjust Parameters
D	Power Switch Button	Turn on / off the Welder

2.3 LCD Screen Display



Pic	Icon means
	Set up Icon
	Initialization Icon
	Fan Icon
	Alarm Icon
	High Temperature Icon
	Low Temperature Icon
VRD	VRD Mode Icon
A	Current Icon
V	Voltage Icon
10 mV	Voltage Icon
°C	Temperature Icon
10 mS	Time Icon
Hz	Frequency Icon
%	Percent Icon
	Batter Capacity Icon
	Hot/Soft Start Icon
	Arc Force Icon
	MMA Mode Icon
SPOT	Spot MMA Icon
	MIG Mode Icon
NO GAS	Gas Empty Mode Icon
2T	2T Mode Icon
4T	4T Mode Icon

2.4 Technical Details

Technical Specification	
Capacity	216Wh (108Wh * 2)
Cycle Life	500 Times (DOD 60%)
Charge Temperature Range	0~50 °C
Discharge Temperature Range	-20~80 °C
Input Voltage Range	100~240 V AC, 1 Phase
Input Voltage Frequency	50/60 Hz
Rated Output Power	42W
Charging Time	3.0 hrs
VRD	Support
Net Weight	5 KG
Product Dimensions	282*169*198mm

MMA Parameters

Welding Current Range	20~130 A
Rated Output Voltage	24.8 V
No-load Voltage	60~80 V
Reduced No-Load Voltage	18 V
Hot Start	Support
Soft Start	Support
Arc Force	Support
Support	VRD, Spot Welding, Anti-Stick
Welding Capacity	E4303- ϕ 3.2-350mm * 3 rods E4303- ϕ 2.5-350mm * 6 rods

MIG Parameters

Weld Current	50~160A
Welding Wire	ϕ 0.6mm~ ϕ 1.0 mm
Wire Feeding Speed	2~8 m/min
Wire Feeder	Handheld
Welding Wire	Flux-Cored Wire

INSTRUCTIONS FOR USE

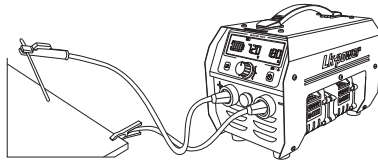
3.1 Turn On/Off Welder

Press the power switch button (D) to turn on/of the welder.

3.2 Charging Methods

Connect the battery pack to the charger to charge, a green light indicates that it is fully charged, and a red light indicates that it is charging.

3.3 MMA Mode



To activate MMA mode, press the mode switch button (B) briefly. Then, follow these steps to set up the ground cable:

1. Insert the ground cable into the Negative Welding Cable (-) (4).
2. Rotate the cable clockwise to secure it.
3. Connect the other end of the cable to the workpiece.
4. Insert the welding clamp into the Positive Welding Cable (+) (2).
5. Rotate the clamp clockwise to secure it.

After completing these steps, you can insert the welding rod into the clamp and begin your welding project.

Short press Function Switch Button (B) to cycle through MMA, SPOT and VRD functions and adjust settings or access features.

MMA function



SPOT MMA function



VRD MMA function



3.3.1 MMA

Press the C knob briefly to change the setting and make the necessary adjustments by rotating the C knob.

Welding current
(Range 20A - 130A)



Hot/Soft start current percent
(Range 50%-150%)



Arc force current percent
(Range 100%-150%)



3.3.2 SPOT MMA

Press Function Switch Button (B) to choose SPOT MMA functions. Press the C knob briefly to change the setting and make the necessary adjustments by rotating the C knob.

Spot welding current
(Range 20A - 130A)



10 mS Spot welding time
(Range 200ms- 2000ms)



3.3.3 VRD MMA

Press Function Switch Button (B) to choose VRD MMA functions. Press the C knob briefly to change the setting and make the necessary adjustments by rotating the C knob.

VRD welding current
(Range 20A - 130A)



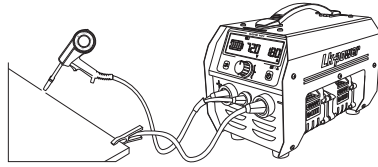
Hot/Soft start current percent
(Range 50%-150%)



Arc force current percent
(Range 100%-150%)



3.4 MIG Mode



To switch MIG mode, Long press the Function/Mode Switch Button (B). Then, insert the MIG welding torch into the Negative Welding Cable (-) (4) and Gasless MIG welding Port (3), and turn it to secure it in place. Place the ground cable into the Positive Welding Cable (+) (2) and turn it to secure it. Finally, connect the other end of the ground cable to the workpiece.

Short press Function Switch Button (B) to cycle through 2T and 4T functions and adjust settings or access features.

2T_MIG function



4T_MIG function



Press the C knob briefly to change the setting and make the necessary adjustments by rotating the C knob.

⊗ Wire feeding speed
(Range 2.0m/min-8.0m/min)



% Voltage fine-tuning
(Range 50%-150%)








∅ Wire diameter
(Range 0.6mm-1.0mm)




3.5 Set Up

Press the C knob for 10 seconds, the  will light up. To exit the set up process, Press the C knob for 10 seconds.

Page No.	Pic	Description	
		Left Side	Right Side
P1		N/A	N/A
P2		Welding PCB Temperature	Welding PCB Temperature
P3		Mainboard Firmware Version	N/A
P4		Code:Sht	Default shutdown time (Minutes) Press the knob and then rotate it to set the auto-shutdown time, ranging from 10 to 100. After setting, press the knob again to confirm.
P5		Code:rSt	Restore factory settings function Press the knob and then rotate it to set ON (restore factory settings) or OFF (do not restore factory settings). After setting, press and hold the Mode Switch Button (B) for 2 seconds to apply the settings.

3.6 Set Up

Code	Icon Status	Description
PLo	 Flash	Overheating or Low Battery

MAINTENANCE, STORAGE, AND DISPOSAL

4.1 Maintenance

- After use, remove the charging cable and welding leads before performing maintenance.
- Use a piece of dry cloth to remove the dust and oil stains on the clamps, wires, and casing.
- Please refrain from disassembling the equipment as there are no user-repairable parts.
- Qualified maintenance personnel should be contacted for any repair services needed.
- It is recommended to fully charge the product after each use.

4.2 Storage

- Charge the welder fully before storing long-term.
- For long-term storage, it is recommended to keep the ambient environment dry, ventilated, and at a temperature of approximately 77°F (25°C).
- To prevent excessive discharge, it is important to charge your device at least once every three months, even if it is not used regularly.

4.3 Disposal

To properly dispose of this product, kindly refer to your state and local regulations regarding the disposal and recycling of FP4 batteries.

AFTER-SALE SERVICE

Kindly keep the warranty card in a secure location. This product has a one-year warranty that starts from the purchase date. Please be aware that this warranty does not cover damages due to regular usage or abuse. If you need more details about the warranty policy or have any warranty-related inquiries, feel free to contact us.

PACKING LIST

Name	Quantity
Welder	1 pc
Battery Pack	2 pcs
AC Power Charger	2 pcs
Strap	1 pc
Ground Clamp	1 pc
Welding Clamp	1 pc
Manual	1 pc
MIG Spool Gun	Optional