

## ANDELI CUT-55DS

# ANDELI CUT-55DS Plasma Cutter User Manual

Model: CUT-55DS | Brand: ANDELI

## 1. INTRODUCTION

This manual provides essential information for the safe and effective operation, setup, and maintenance of your ANDELI CUT-55DS Plasma Cutter. Please read this manual thoroughly before using the equipment to ensure proper function and to prevent injury or damage.

### Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including welding helmet, gloves, and protective clothing.
- Ensure adequate ventilation in the work area to disperse fumes.
- Do not operate the machine in damp or wet conditions.
- Verify proper grounding of the equipment and work piece.
- Keep children and unauthorized personnel away from the operating area.
- Disconnect power before performing any maintenance or changing consumables.

## 2. PACKAGE CONTENTS

Upon unpacking, verify that all items listed below are present and undamaged. If any items are missing or damaged, contact your supplier immediately.

- Plasma Cutter (CUT-55DS) x 1
- Plasma Cutter Torch x 1
- Gas Pipe (3M) x 1
- Hose Hoop x 2
- Electrode x 10
- Nozzle Shield x 10
- Hose Barb x 2
- Oil-water Separator x 1
- 110/220V Plug Converter x 1 (for free switching)

# HIGH FREQUENCY / NON-HF FREQUENCY CUTTING

## HIGH FREQUENCY

- ✓ LOW INPUT VOLTAGE REQUIREMENTS
- ✓ WIDER RANGE OF USE
- ✓ CHEAPER

## NON-HF

- ✓ THE CUTTING THICKNESS IS THICKER
- ✓ ANTI-HIGH-FREQUENCY DISTURBANCE
- ✓ THE CUT IS MORE STABLE



Figure 2.1: The ANDELI CUT-55DS Plasma Cutter and its standard accessories.

## 3. SETUP INSTRUCTIONS

### 3.1 Power Connection

The CUT-55DS supports dual voltage input (110V/220V). Use the provided plug converter to match your power supply. Ensure the power source is capable of providing the necessary amperage for the desired cutting output.

- Connect the power cord to a suitable grounded electrical outlet.
- The machine automatically detects the input voltage.

### 3.2 Air Compressor Connection

A clean, dry air supply is crucial for optimal plasma cutting performance.

- Connect the gas pipe to the air inlet on the back of the plasma cutter.
- Attach the other end of the gas pipe to your air compressor's output.

- Install the oil-water separator between the compressor and the plasma cutter to ensure dry air.
- Set the air pressure according to the material thickness and cutting current (refer to operating parameters).

### 3.3 Torch and Ground Clamp Connection

- Connect the plasma torch cable to the designated port on the front panel of the machine.
- Connect the ground clamp cable to the ground terminal on the front panel.
- Securely attach the ground clamp to the workpiece or work table, ensuring good electrical contact.



Figure 3.1: Front panel of the plasma cutter with torch and ground clamp connections.

## 4. OPERATING INSTRUCTIONS

### 4.1 Control Panel Overview

The LED high-definition display provides real-time information and allows for function selection.

# LED HIGH-DEFINITION DISPLAY

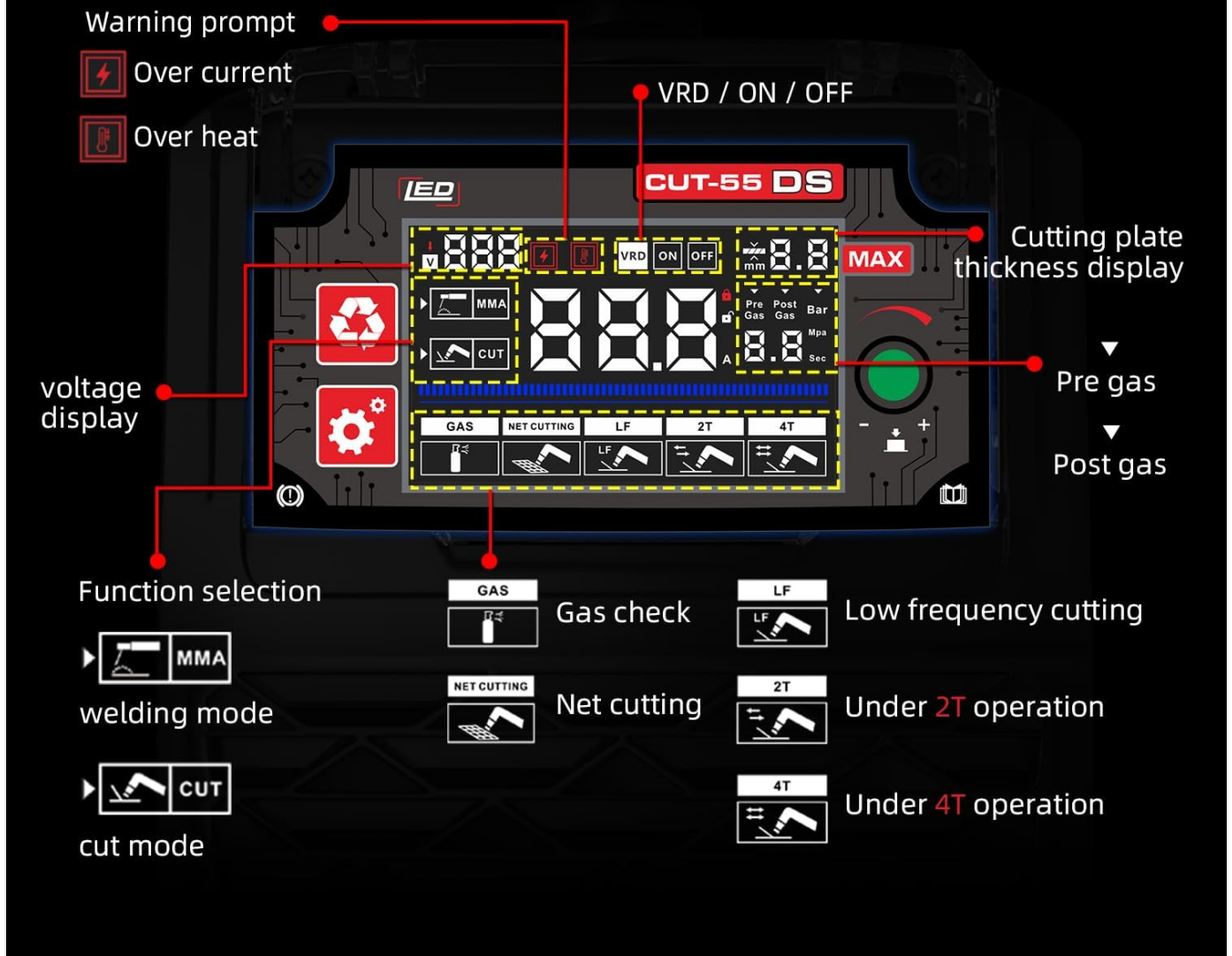


Figure 4.1: Detailed view of the LED control panel.

- **Warning Prompts:** Indicators for "Over current" and "Over heat".
- **VRD / ON / OFF:** Voltage Reduction Device status.
- **Cutting Plate Thickness Display:** Shows the recommended cutting thickness.
- **Voltage Display:** Shows the current voltage.
- **Function Selection:** Toggle between MMA (welding mode) and CUT (cutting mode).
- **Gas Check:** For testing air flow.
- **LF (Low Frequency Cutting):** Select for specific cutting requirements.
- **2T / 4T Operation:** Torch trigger modes (see Section 4.3).
- **Pre Gas / Post Gas:** Adjusts gas flow before and after cutting.

## 4.2 Cutting Process

The CUT-55DS features a Non-Touch Pilot Arc, allowing for easier cuts on rough, rusty, or painted surfaces with minimal slag.

- Select "CUT" mode on the control panel.

- Adjust the cutting current (Amps) based on the material type and thickness.
- Ensure proper air pressure is set.
- Position the torch nozzle approximately 1/8 inch (3mm) above the workpiece for non-touch pilot arc initiation.
- Press the torch trigger to initiate the arc and begin cutting.
- Maintain a steady travel speed for a clean cut.



*Figure 4.2: Example of plasma cutting mesh material.*

### **4.3 2T / 4T Torch Operation**

The 2T and 4T modes control how the torch trigger operates, offering flexibility for different cutting tasks.

# 2T / 4T ADJUSTABLE

CUTTING NOZZLE FOR COOLING  
PROVINCIAL CUTTING MOUTH

THE PRE-GAS AND POST-GAS CAN BE SELECTED

PRESS TO RELEASE  
(CONTINUOUS OUTPUT)

PRESS AGAIN  
(STOP IT)

4T:SELF-LOCKING

HOLD

RELEASE TO STOP

2T:NO SELF-LOCKING

Figure 4.3: Explanation of 2T (No Self-Locking) and 4T (Self-Locking) modes.

- **2T (Two-Touch / No Self-Locking):**

- Press and hold the trigger: Arc initiates and cutting continues.
- Release the trigger: Arc stops.
- *Recommended for short cuts or tacking.*

- **4T (Four-Touch / Self-Locking):**

- Press and release the trigger: Arc initiates and cutting continues without holding the trigger.
- Press and release the trigger again: Arc stops.
- *Recommended for long, continuous cuts to reduce hand fatigue.*

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your plasma cutter.

### 5.1 Consumable Replacement

Electrodes and nozzles are consumables that wear out over time. Replace them when you notice a decrease in cut quality or difficulty in arc initiation.

- Ensure the machine is powered off and disconnected from the power supply.
- Unscrew the torch head to access the electrode and nozzle.
- Remove worn components and replace with new ones, ensuring they are seated correctly.
- Tighten the torch head securely.

### 5.2 Air Filter / Oil-Water Separator

Periodically check and drain the oil-water separator to prevent moisture from entering the plasma cutter, which can damage internal components and affect cut quality.

- Drain accumulated water from the separator bowl regularly.
- Clean or replace the filter element as needed, depending on usage and air quality.

### 5.3 General Cleaning

- Keep the machine clean and free from dust and metal particles.
- Use a dry, soft cloth to wipe down the exterior.
- Periodically use compressed air to blow out dust from the internal components, ensuring the machine is unplugged.

## 6. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, contact customer support.

| Problem                                                              | Possible Cause                                                                                                                                                                                                                                                   | Solution                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Machine powers on, but control panel display is off or unresponsive. | Internal connection issue, faulty display, or specific internal component failure.                                                                                                                                                                               | Power cycle the machine. If the issue persists, contact customer support for assistance.                                                                                                                                                                                                                                    |
| No arc initiation.                                                   | <ul style="list-style-type: none"><li>◦ No power or insufficient power.</li><li>◦ Poor ground connection.</li><li>◦ No air supply or insufficient air pressure.</li><li>◦ Worn consumables (electrode/nozzle).</li><li>◦ Torch not connected properly.</li></ul> | <ul style="list-style-type: none"><li>◦ Check power connection and circuit breaker.</li><li>◦ Ensure ground clamp is securely attached to clean metal.</li><li>◦ Verify air compressor is on and pressure is adequate.</li><li>◦ Inspect and replace consumables if worn.</li><li>◦ Re-seat the torch connection.</li></ul> |
| Poor cut quality (rough, excessive slag).                            | <ul style="list-style-type: none"><li>◦ Incorrect cutting speed.</li><li>◦ Incorrect amperage setting.</li><li>◦ Worn consumables.</li><li>◦ Insufficient air pressure or contaminated air.</li><li>◦ Torch too far from workpiece.</li></ul>                    | <ul style="list-style-type: none"><li>◦ Adjust cutting speed.</li><li>◦ Adjust amperage according to material thickness.</li><li>◦ Replace electrode and nozzle.</li><li>◦ Check air pressure and drain oil-water separator.</li><li>◦ Maintain proper torch standoff distance.</li></ul>                                   |

| Problem                                | Possible Cause                                                                     | Solution                                                                                                     |
|----------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| "Over heat" warning light illuminates. | Machine has exceeded its duty cycle or is operating in a high ambient temperature. | Allow the machine to cool down. Ensure adequate ventilation around the unit. Reduce continuous cutting time. |

## 7. SPECIFICATIONS

| Parameter                            | Value                              |
|--------------------------------------|------------------------------------|
| Model Number                         | CUT-55DS                           |
| Manufacturer                         | ANDELI                             |
| Power Source Type                    | AC (Alternating Current)           |
| Input Voltage                        | 110V/220V Dual Voltage             |
| Output Current                       | 15-50A DC                          |
| Ideal Clean Cutting Thickness (220V) | 1/2 inch (14mm)                    |
| Maximum Cutting Thickness (220V)     | 3/4 inch (20mm)                    |
| Technology                           | IGBT Inverter, Non-Touch Pilot Arc |
| Package Dimensions                   | 51.41 x 40.59 x 27.51 cm           |
| Item Weight                          | 11.46 kg                           |

## 8. WARRANTY AND SUPPORT

### 8.1 Product Warranty

The ANDELI CUT-55DS Plasma Cutter comes with a two-year warranty covering manufacturing defects and free replacement parts. Please retain your proof of purchase for warranty claims.

### 8.2 Customer Support

For technical assistance, troubleshooting guidance, or warranty inquiries, please contact ANDELI customer service. Refer to your purchase documentation for specific contact details.

### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

### Question

Example: How do I reset this device or fix this error?

### Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question