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# Arc 401

Wireless remote control  
Order code JA-WRC



## OPERATOR MANUAL



# 1

## Product Overview

### 1 Overview

The signal carrier remote control is designed for use with the ARC 401 series welding products. It is for use when welding at distance from the power source in construction, awkward welding positions etc. Its main features are:

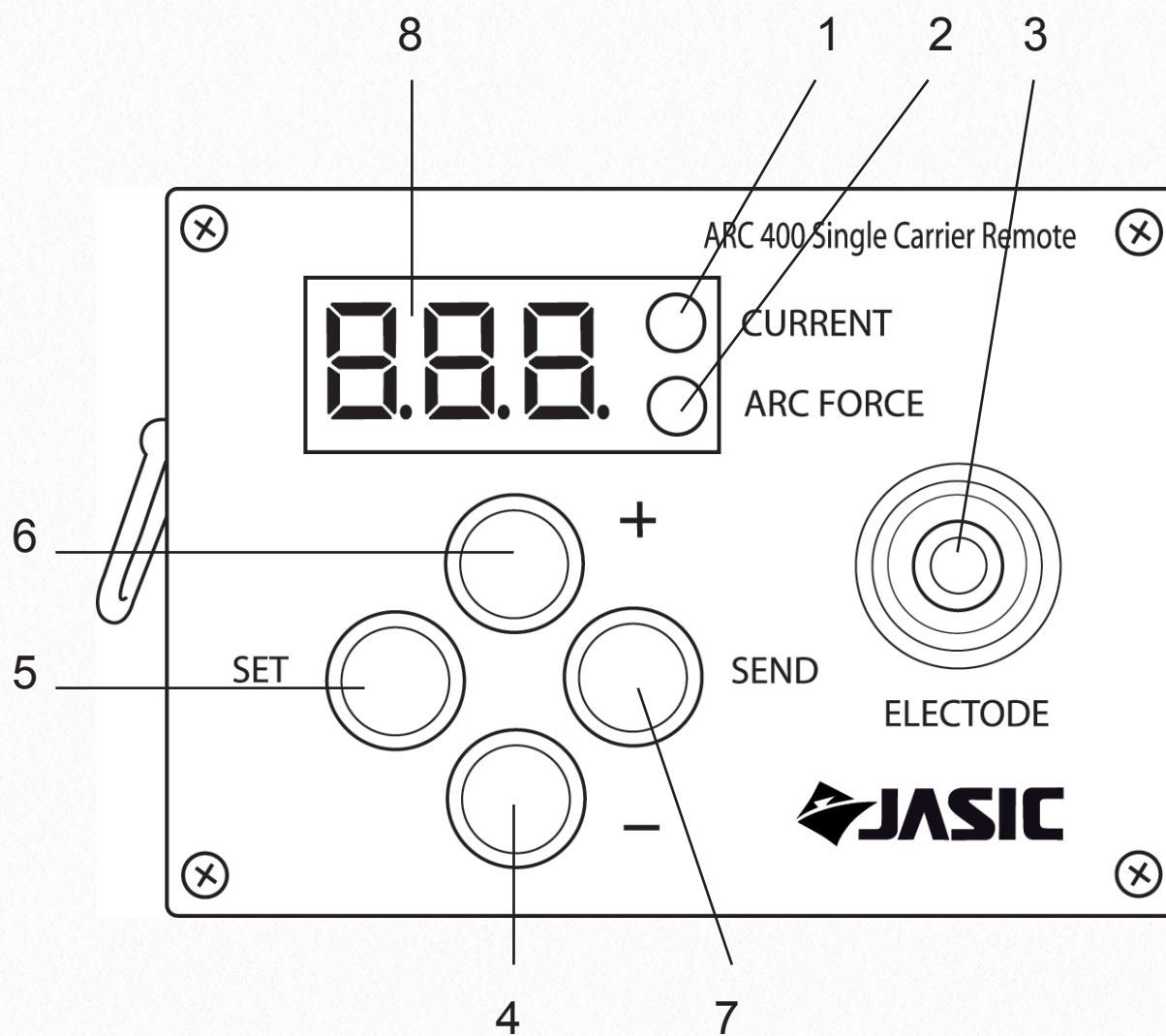
- No requirement for remote control cables. The system uses the electrode lead and work return lead to send the data from the control to the power source.
- The digital meter displays the welding current and arc force settings so that the operator can accurately pre set welding parameters
- The remote control needs no additional power supply.
- The remote control is small, light weight, simple to operate easy to carry, with excellent performance.
- The remote control can operate with cables of up to 100 metres.



# 2

## Controls

### Control panel layout



1. Indicates display is showing welding current
2. Indicates display is showing arc force setting
3. Electrode touch point
4. Adjustment minus button
5. Selection button
6. Adjustment plus button
7. Send button
8. Digital display



# 3

## Installation

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**Connect the remote control using the magnetic back plate to the work piece (work return). Place the end off the electrode in contact with the electrode touch point (point 3 – control layout).**

**The unit provides a modulated carrier signal**

**The power source contains a receiving circuit for receiving and demodulating the modulated signal, and then the demodulated signal is converted to the desired welding parameter so that welding can be carried out according to these adjusted parameters.**

**The carrier signal has a high immunity to interference.**



# Operation

## Operation of the remote control

1. Turn on the welding power source.
2. When setting the welding parameters using the remote control connect the remote control using the magnetic back plate to the work piece (work return). Place the end off the electrode in contact with the electrode touch point (point 3 – control layout). The electrode should remain in contact for the duration of the process of setting.
3. When contact is made the remote control power displays "---".



The display will then light, the current setting will be displayed and the current indicator LED will be lit.



## Remote control operation

1. On the remote control press the set button (point 5 – control layout) to highlight the parameter to be set, either welding current or arc force (the parameter will be indicated by either LED 1 or 2 lit on the control).
2. The display will show either welding current or arc force dependent on the selection
3. Adjust the value using the plus or minus buttons to the required value, shown on the display. When adjusting the welding current or arc force LED (dependent on selection) will flash
4. When adjusting the arc force if no buttons are pressed within 5 seconds, it will automatically switch to the current display state.
5. When the values are set press the send button and the digital display "---", which means that it is in communicating mode. If the digital re-displays the current parameter values and the LED stops flashing, this means that the communication is completed and data has been transmitted to the data to the power source.
6. If the communication does not work within 5 second, please re-press the "Send" button.



7. When setting is completed remove the remote control unit and store it in a safe place. Welding can now take place.

### **Power failure or shutdown**

This product has parameter memory function. Parameter settings are automatically stored even when the power is disconnected or the remote control removed. Upon restoration of the power the last adjusted parameters will be stored ready for welding.

# 4

## Troubleshooting and Precautions

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The most common carrier communication problems of remote control are unsuccessful communication or low communication rates. If these problems occur, please check the following:

1. Welding cable length is over 100 meters
2. Welding cable is coiled up. Remove the coils be extending the welding cable. Avoid excessive coiling
3. When the remote control and machine shows current inconsistency it may be necessary to reset the internal adjustment.

### Precautions

#### Environment

- Use the remote control should be carried out in a relatively dry environment, The air humidity should generally not exceed 90%.
- Ambient temperature should be between -10C to 40C.
- Do not let the water penetrate into the remote control.  
Avoid use in dusty areas or corrosive atmospheres

- When using the remote control at high levels, ensure that it is secured to prevent falling to avoid injury.
- Avoid connection to a work piece with a temperature higher than 100 °.

#### Over voltage

The remote control must be used within the required voltage range of 50 - 100V.

If the voltage does not meet the requirements or voltage exceeds the upper limit of the remote control, please do not use the remote control to avoid permanent damage occurring.

#### Physical damage

The remote control contains sophisticated electronic circuitry, care should be taken to avoid physical damage which could cause short-circuiting in the remote control, or other permanent damage



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Product is subject to change without notice