

## Hammerhead Spot-Welding Set-Up Instructions

Turn main power switch ON and allow the machine to run through internal programme ( approx 7 seconds). When machine is first powered up, the default settings, as seen in figure 1 are shown; the machine will normally default to MMA (stick) welding and LED (3) will start to blink.



NOTE: To modify any setting the LED must remain ON constantly. To do this, simply press and release the main toggle knob (MTK) immediately.

1 - Process LED (MMA)

2 - Confirms amps are selected



3 - Confirms amps has be modified

4 - MTK for all operations

Figure 1

- 1: Process selection button to select desired process (MMA for Hammerhead)
- 2: Confirms LED's for amps/volts/seconds & percentage
- 3: LED will default to this centre display (amps)
- 4: Main toggle knob (MTK) to adjust selected settings
- 5: Button to select desired open circuit voltage (OCV) 15/42 or max

**STEP 1:** After LED (3) starts blinking (figure 1) turn MTK to the required main filling current, typically 160-180 amps without pressing MTK (display will show amps).

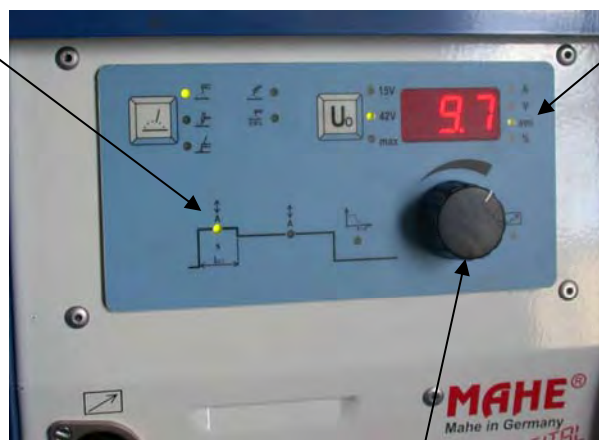
To set-up Hammerhead spot-welding you need to adjust settings to provide for following values;

- 1: Time (seconds) for high current (amps)
- 2: Percentage increase (piercing current) of main base current
- 3: Main (filling) base current

**STEP 2:** Press and hold MTK so LED (3) as shown on figure 1 remains constant (stops blinking) then turn MTK one click anti-clockwise so LED illuminates as shown in figure 2 (1<sup>st</sup> base) . Next press and hold MTK until LED starts blinking, then adjust number of seconds (display shows values) as required by turning MTK. (If it takes more than 5-6 second for you to set, default setting will resume; start procedure again)

1 - LED for selection of time (Seconds)

3 - LED confirms time (sec) selected



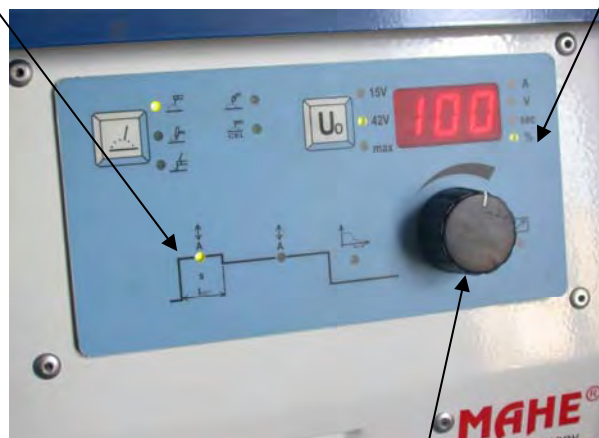
2 - Turn MTK to adjust as required

Figure 2

**STEP 3:** Once set, press and release MTK, LED stops blinking. Next turn MTK one click anti-clockwise to adjust percentage current. Press and hold MTK and adjust as required, once set press and release MTK.

LED remains here

LED confirms % selected



Turn MTK to increase % (high) current

Figure 3

In selecting the required % current increase over base (low) current setting you need to allow for typically an increase of 75-100%.

*Example: If your base (low) current setting is 165 amps and you add 70% to the percentage high current welding cycle, this will provide for 280.5 amps, for the number of seconds you selected.*

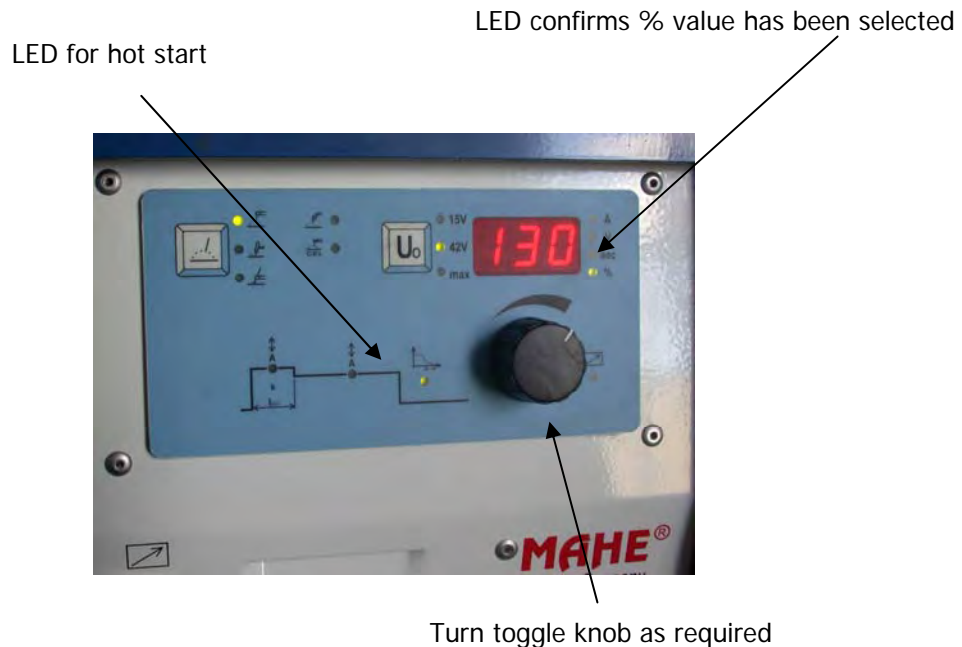


Figure 4

The last setting is to select the hot start. This is to ensure when the change over from high-current to low-current occurs, the arc will not extinguish. This is selected in the same way as all other settings. Ensure LED is not blinking, if so, press once and release; LED remains constant. Turn MTK so that LED in flow diagram illuminates, as shown in figure 4 and adjust in the same way as other settings.

The general rule for setting hot start is to select, as a minimum, 150%. This value may need to be increased, dependent upon material thickness, welding position and current being used.

The system is now set for Hammerhead welding. Upon striking the arc the machine will deliver the high current value (% increase over base) for the number of seconds selected. After this time expires, the machine will deliver the main (base) current selected until the arc is broken or the consumable is used, after which, the programme re-sets itself ready for the next spot weld.