

Dear customer,

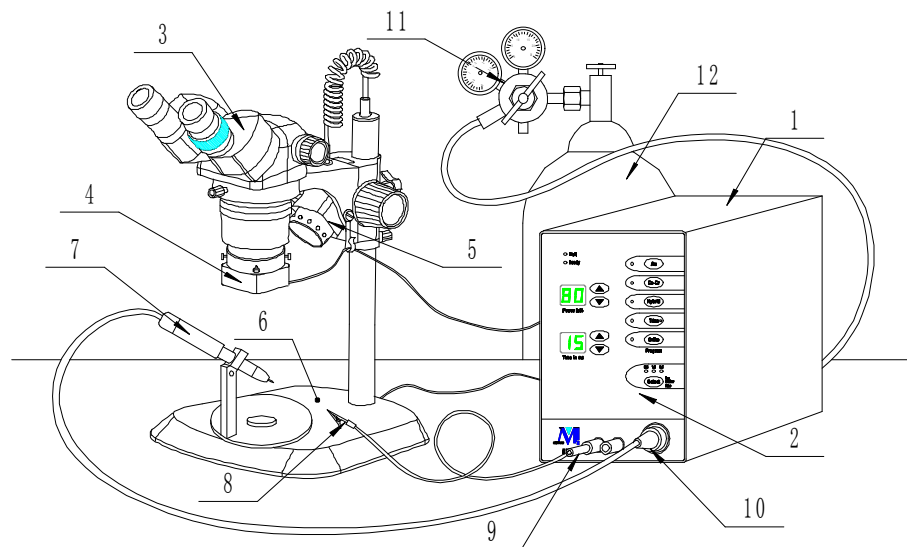
Thank you very much for having purchased the AX-AWM1 Dental Argon-arc Welding System .To get off a perfect start, read the following before use please.

1. General safety precautions

To avoid the electric shocks and fire disaster during use, you must take the basic measures for safety.

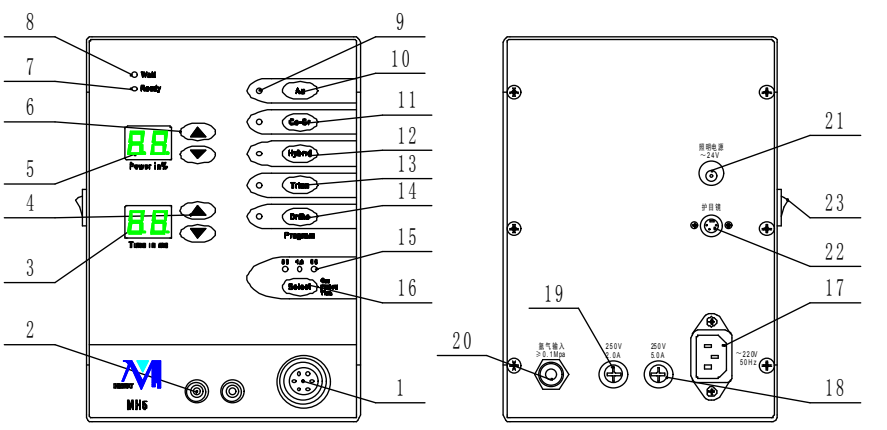
- i. read this manual carefully before use;
- ii. keep the equipments away from children;
- iii. keep a cool,dry and bright environment for the equipments;
- iv. avoid liquid getting inside the equipments;
- v. take necessary measures for protecting your eyes during use;
- vi. do not drag the equipments by cables, keep the cables away from heat, oil and sharp tools;
- vii. cut off the power supply before perform any maintenance or servicing work;
- viii. the equipments are compact in structure, pay attention to clean the equipments especially the microscope;
- ix. cover the equipments after use;
- x. use the accessories appropriately.

2. Main equipments



- | | | | |
|---|-----------------------------------|----|---------------------------------------|
| 1 | main welding body | 7 | welding handpiece |
| 2 | control panel | 8 | welding loop clip |
| 3 | stepless zoom microscope | 9 | loop socket |
| 4 | electrical filter protection lens | 10 | Electropneumatic connector |
| 5 | light source | 11 | argon pressure regulator |
| 6 | supporter for microscope | 12 | argon tank (not supplied in the pack) |

3. Description and function of the operating controls



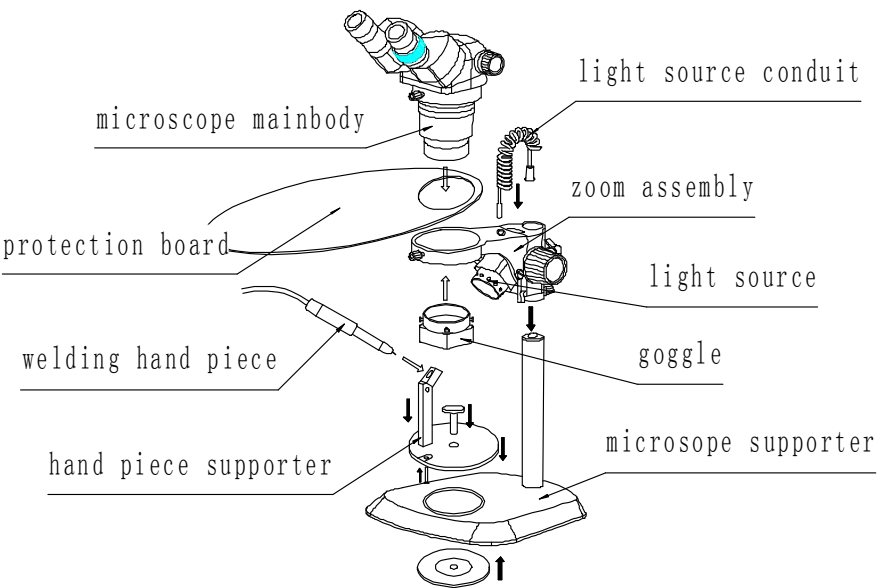
- | | |
|-------------------------------|--|
| 1 welding handpiece socket | 13 Titan |
| 2 cathode loop socket(2) | 14 Ortho |
| 3 welding time(ms) | 15 gas preflow time(s) |
| 4 welding time adjust button | 16 gas preflow time adjust button |
| 5 welding power(%) | 17 power supply socket(220V/50Hz) |
| 6 welding power adjust button | 18 power supply fuse tube socket(5.0A) |
| 7 ready for welding | 19 light source fuse tube socket(2.0A) |
| 8 charging | 20 argon inlet(0.1Mpa) |
| 9 solder display(5) | 21 light source socket(24V) |
| 10 Au | 22 filter lens socket |
| 11 Co-Cr | 23 power switch(on one side of the case) |
| 12 hybrid | |

4. Main performance parameters

Input voltage/frequency	~220V / 110V 50Hz / 60Hz ±10%	Welding voltage	40V
Max. input current	4. 5A	Welding current	5A~600A
Fuse tube	230V/5. 0A	Welding time	3ms~30ms
Degree of protection	IP21	Max. welding frequency	1Hz
Gas supply pressure	≥0. 1Mpa	Max. argon consumption	5L/min

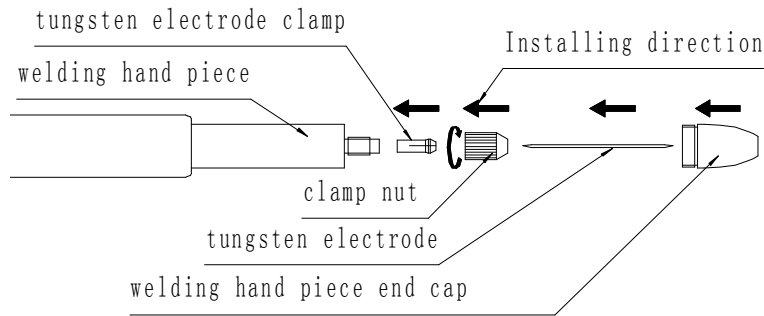
5. How to use

- i. preparation for the equipments
assembly drawing for microscope



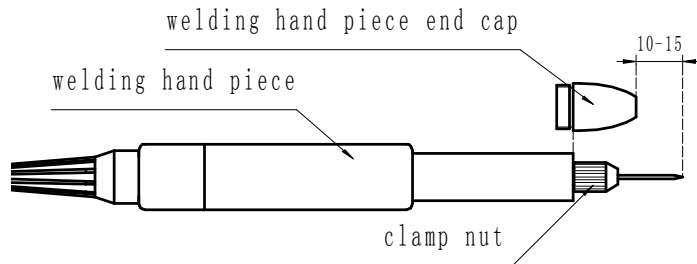
Put the assembled microscope, main chasis, welding handpiece etc. on the work table(refer to the main equipment drawing),and get them connected each other firmly for use.

ii. installation of the tungsten electrode



The order of installation refer to the drawing

Pull off the welding hand piece end cap in use, loosen the clamp nut, insert the tungsten electrode, measure with the cap, the electrode should extend 10~15mm out of the cap, then, tighten the nut and the cap.



The end of the electrode should be kept sharp and the angle of the end should not be larger than 25 degree. grind the end of the electrode after a period of time, until the length of the electrode could not meet the requirement, replace it in time

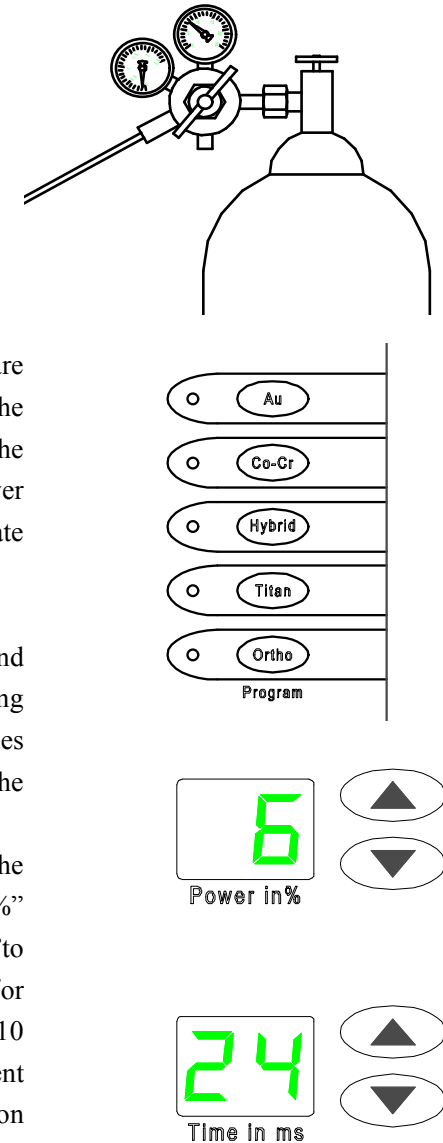
iii. settings for the equipments

turn on the power supply, make sure that the gas supply pressure be of 0.1 Mpa.

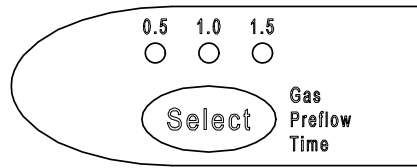
Choose the mode on the panel depends on the solder, there are five modes on the MH5, press the button on the panel to change the state of work.. the welding power and welding time LED indicate corresponding value.

Adjust the welding power and welding time to change the welding parameters where the five modes described above could not meet the requirements.

Press the down/up arrow key on the right side of the "Power in%" and/or "Time in ms" to decrease/increase the power and/or time, the power keys provide 1-10 stepped integral adjust. the current power is the number displaying on the panel multiplied by 10. the time is adjusted by multiple of 3 (unit: ms).



The “select” button is used to set the gas preflow time as desired. The LEDs show which preflow setting- 0.5, 1.0 or 1.5 sec.-has been selected. (skilled person could select shorter preflow time to decrease the consumption of argon).



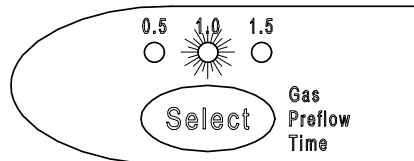
The equipment becomes Ortho mode automatically where no operations were performed in 5 mins since the equipment turned on, in order to prevent the workpiece to be soldered from being destroyed by misoperation.

iv. welding

connect the welding loop clip to the workpiece and take the workpiece in hand. Observe it through the microscope. Touch the place you want to weld to the tip of the tungsten electrode. Do not exert any pressure on the electrode tip. Maintain a space for the electrode retraction. The welding procedure itself runs automatically. It should be noted that the two electrodes should never be shorted.

v. indication for operation

indication for pressure:: if the argon supply pressure is lower than the pressure for welding, an indication LED beyond the “Select” button will flash (depending on the current setting).



Waiting for welding: it is indicated that the equipment is charging when the “Wait” lit. If the “Ready” lit means that the charging is completed.



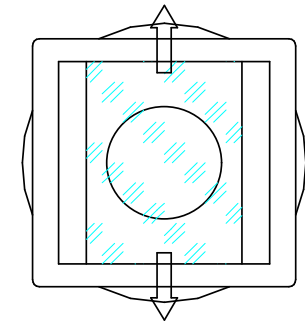
Be ready: when it is ready, the “Ready” lit.



vi. replacement for protection lens

Protection lens are mounted under the electrical filter goggle since the goggle is near the welding position. Push the lens and replace it.

Note: The electrical filter goggle will be degraded in about two years after use, you are suggested to replace it by a new one provided by the manufacturer.



Manual for AX-AWM1 Dental Argon-arc Welding System

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