How to set Flame cutting - debugging process ---Thunder X-PRO

➔ Flame cutting - debugging process, Contains three steps

Solution overview: Step1. Set the system to flame mode and parameters;

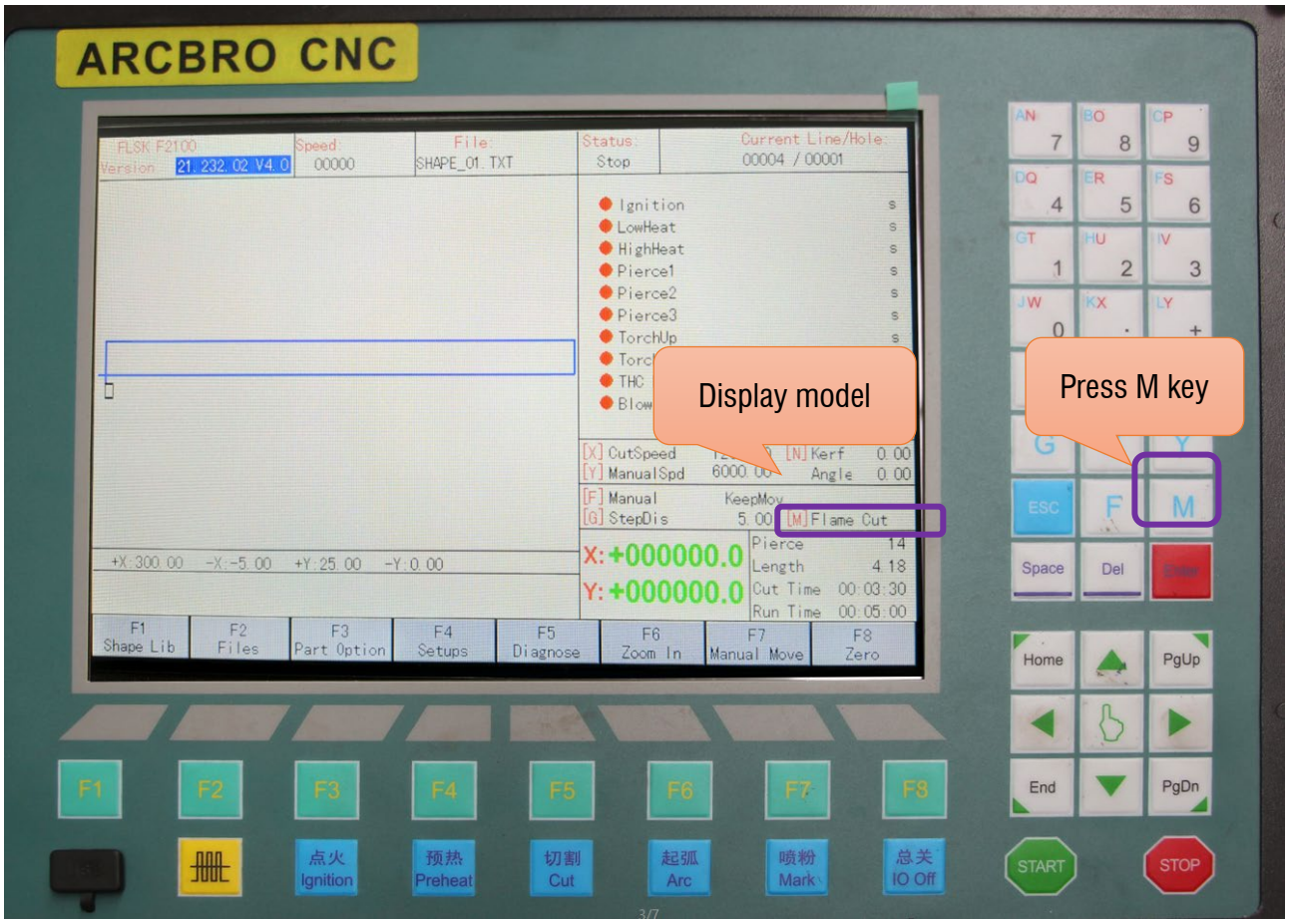
Step2. Manual test flame cutting;

Step 3. Start formal flame cutting ;

Detailed Description:

❋ Step 1- Set the system to flame mode and parameters

Step 1-1 : Press the 【M】 key on the keyboard at the cutting interface; change the cutting mode to flame mode;【See photo below】:



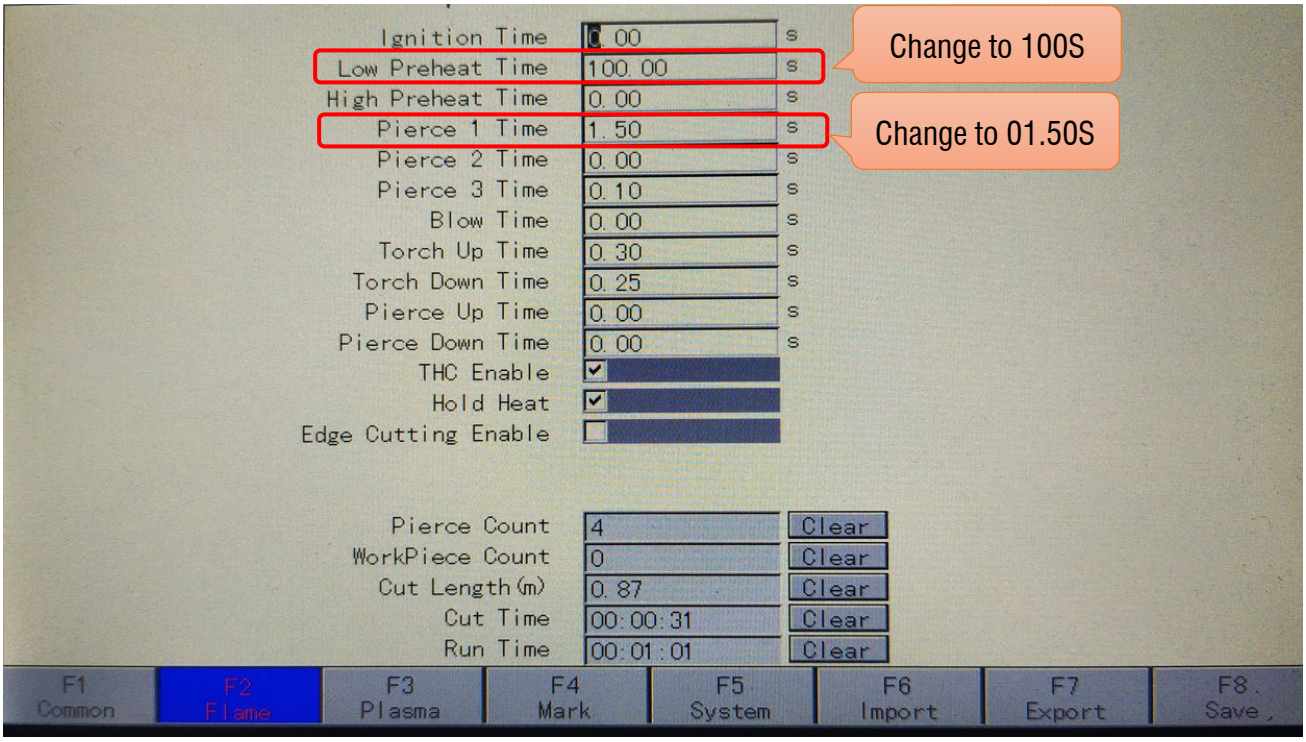
Pic1

Step 1-2 : Press the 【F4 Setups】 key at the cutting interface→Into Parameter interface; → Press the 【F2 Flame】; Need to change two parameter;

--Low Preheat Time 100.00S{This is the Preheat time of the flame. As the thickness of the steel plate increases, the Preheat time increases.}

--Pierce 1 Time 01.50S{ This is the Pierce time of the flame cutting. As the thickness of the steel plate increases, the Pierce time increases.}

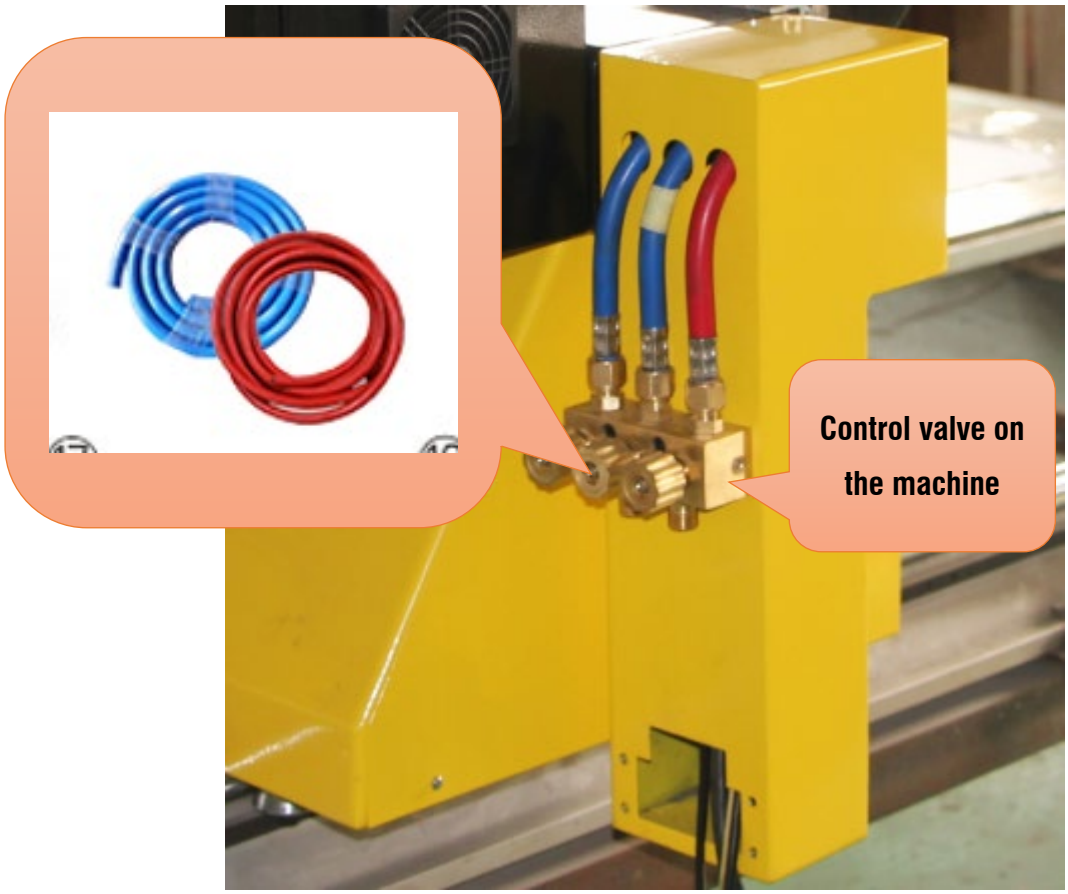
Note: This time is based on the actual situation on site.



Pic2

❋ Step 2- Manual test flame cutting;{ We use oxygen+ acetylene as an example}

Step 2-1 : Connect acetylene and oxygen to the gas pipeline of the machine - red for gas pipeline and blue for oxygen pipeline;



Pic3

Note：The Oxygen pressure is adjusted to below max0.8Mpa; The acetylene pressure is adjusted to below max0.8Mpa;Document attachment with flame cutting parameter table;

Step 2-2 : Ignition→Adjust the intensity of the flame

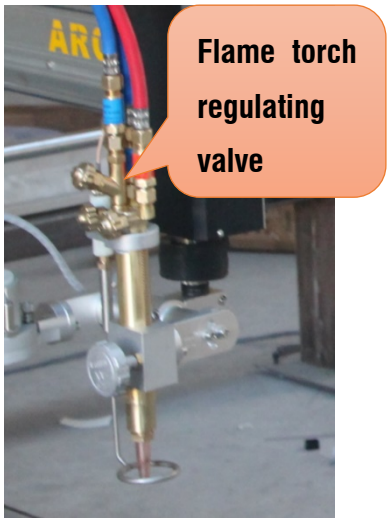
Press the 【Ignition】 key on the keyboard;→ Open preheated oxygen and acetylene valves, Feel gas ejected by hand;→Ignition with a flame igniter

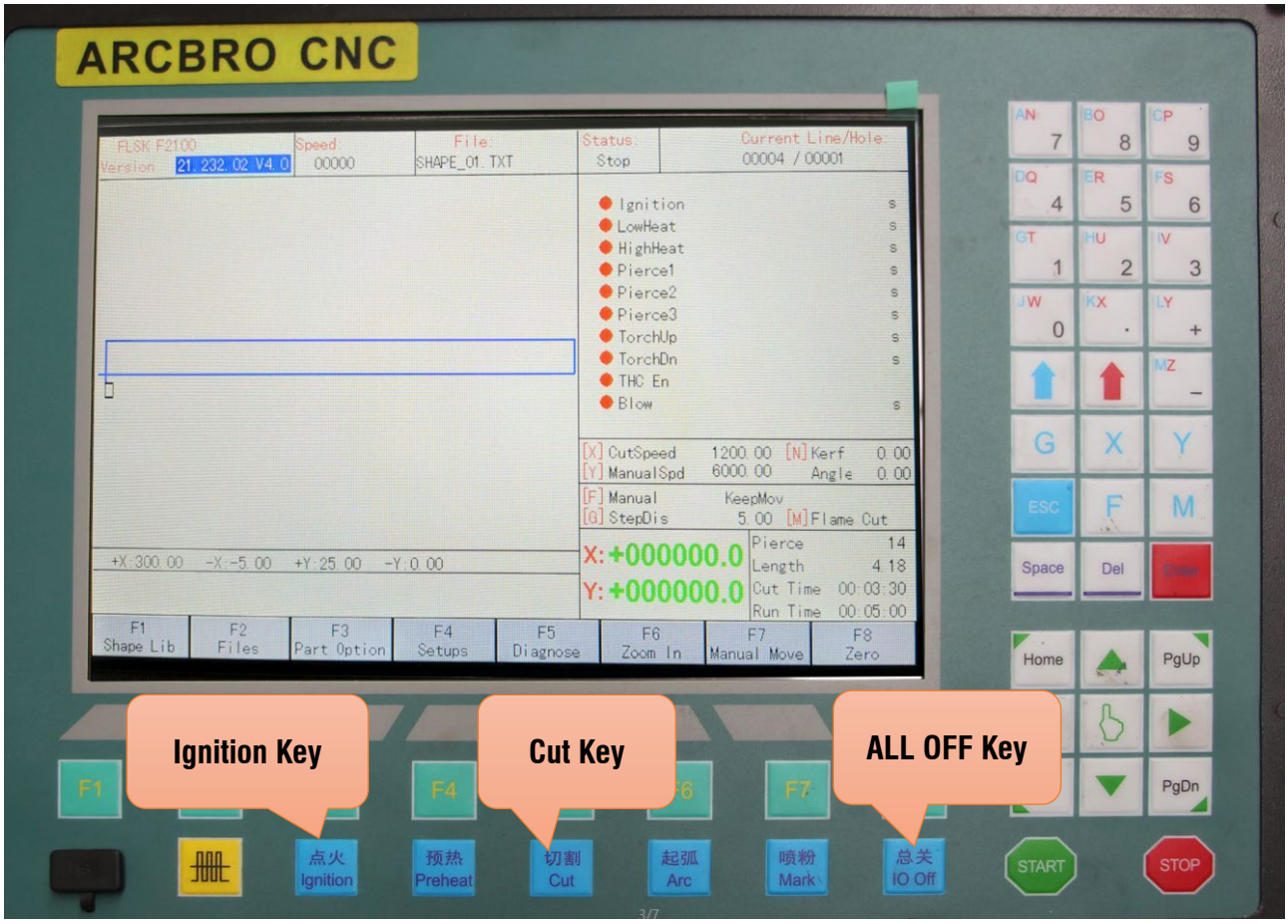
Note：When igniting, the oxygen output gas is too large and the flame is extinguished;

Adjust the intensity of the flame

Press the 【Cut】 key on the keyboard;→ Open Flame torch regulating valve →Check the strength of the flame;→Press【IO OFF】Test flame finish

The strength of the flame is adjusted according to the thickness of the steel plate





Step 2-3 : Test flame cutting

Select a graphic in the system gallery to test flame cutting;

Flame cutting process:

Load G code or graphics→Press the green【start】button→Ignition with a flame igniter→Waiting for Preheat→See redness steel reaches the molten state;→Press【Cut】key then Start flame cutting;

Repeatedly adjust the intensity of the flame, the pressure of cutting oxygen, the cutting speed, and the height of the cutting to optimize the cutting effect.

❋ Step 3- Start formal flame cutting;

Load G code or graphics→Press the green【start】button→Ignition with a flame igniter→Waiting for Preheat→See redness steel reaches the molten state;→Press【Cut】key then Start flame cutting;

Note：If the preheat time is not modified, the system will automatically remember the last preheat time, the next time the cutting machine runs the last preheat time and then automatically pierce-cutting; However, it is also possible to press the 【Cut】button according to the preheat condition; Then perforation-cutting

In the cutting process, you can adjust the cutting speed according to home and end; adjust the capacitance value of the CHC---control the height of the torch

Acetylene-Oxygen cutting parameter

Tip No.	Cutting thickness(mm)	Cutting kerf （mm）	Oxygen pressure （MPa)	Acetylene pressure （MPa)	Cutting speed(mm/min)
0	3-10	1	0.6	0.025	600-700
1	5-20	1.5	0.6	0.025	550-600
2	20-30	2	0.7	0.025	450-550
3	30-50	2-3	0.7	0.03	380-450
4	50-70	3-4	0.7	0.035	320-380
5	75-100	3-4	0.7	0.035	250-320
6	100-150	5	0.7	0.04	160-250
7	150-200	5.5	0.7	0.04	130-160
8	250-300	6	0.7	0.04	100-130

Propane-Oxygen cutting parameter

Tip No.	Cutting thickness(mm)	Oxygen pressure （MPa)	Propane pressure （MPa)	Cutting speed(mm/min)
0	3-10	0.6	0.025	600-700
1	5-20	0.6	0.025	550-600
2	20-30	0.7	0.025	450-550
3	30-50	0.7	0.03	380-450
4	50-70	0.7	0.035	320-380
5	75-100	0.7	0.035	250-320
6	100-150	0.7	0.04	160-250

7	150-200	0.7	0.04	130-160
8	250-300	0.7	0.04	100-130