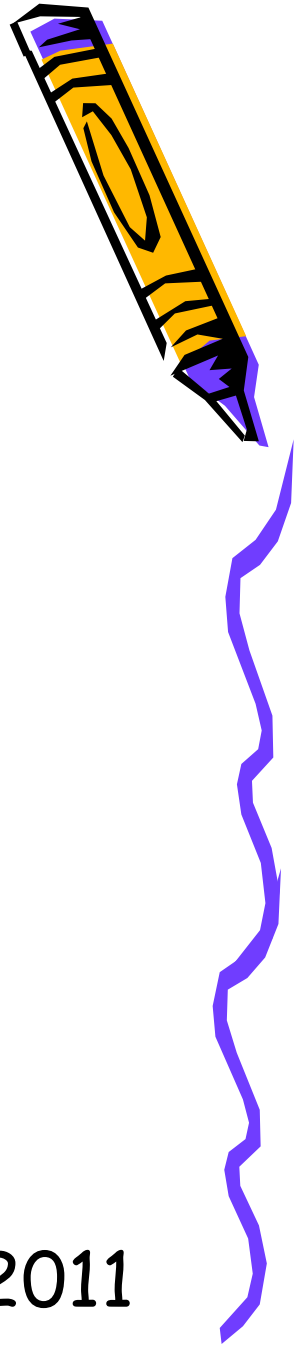
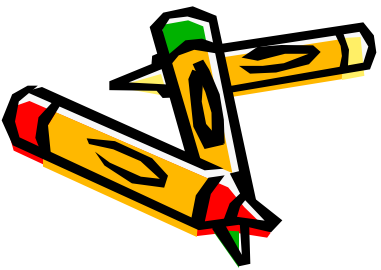


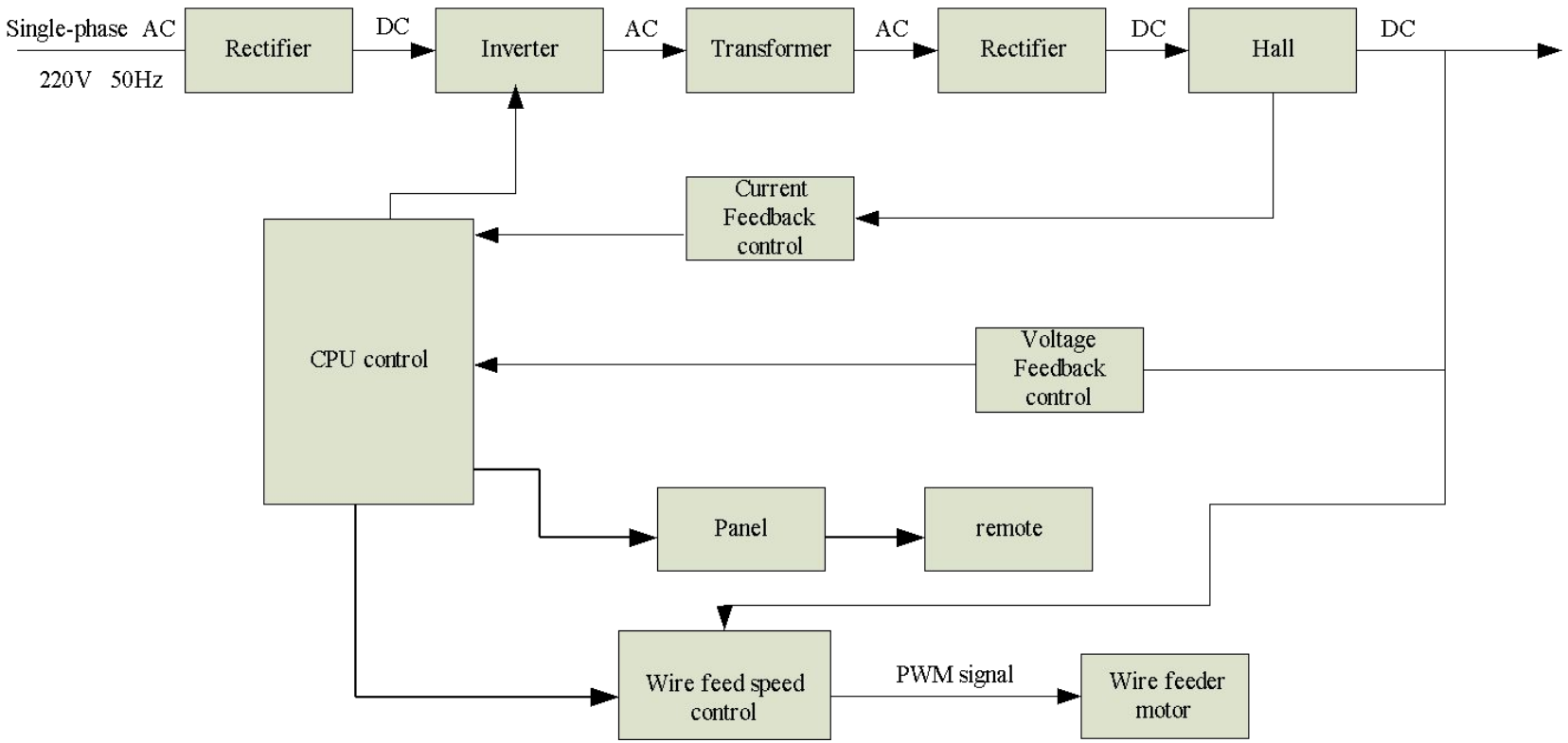
MIG 200P
training manual

March.2011

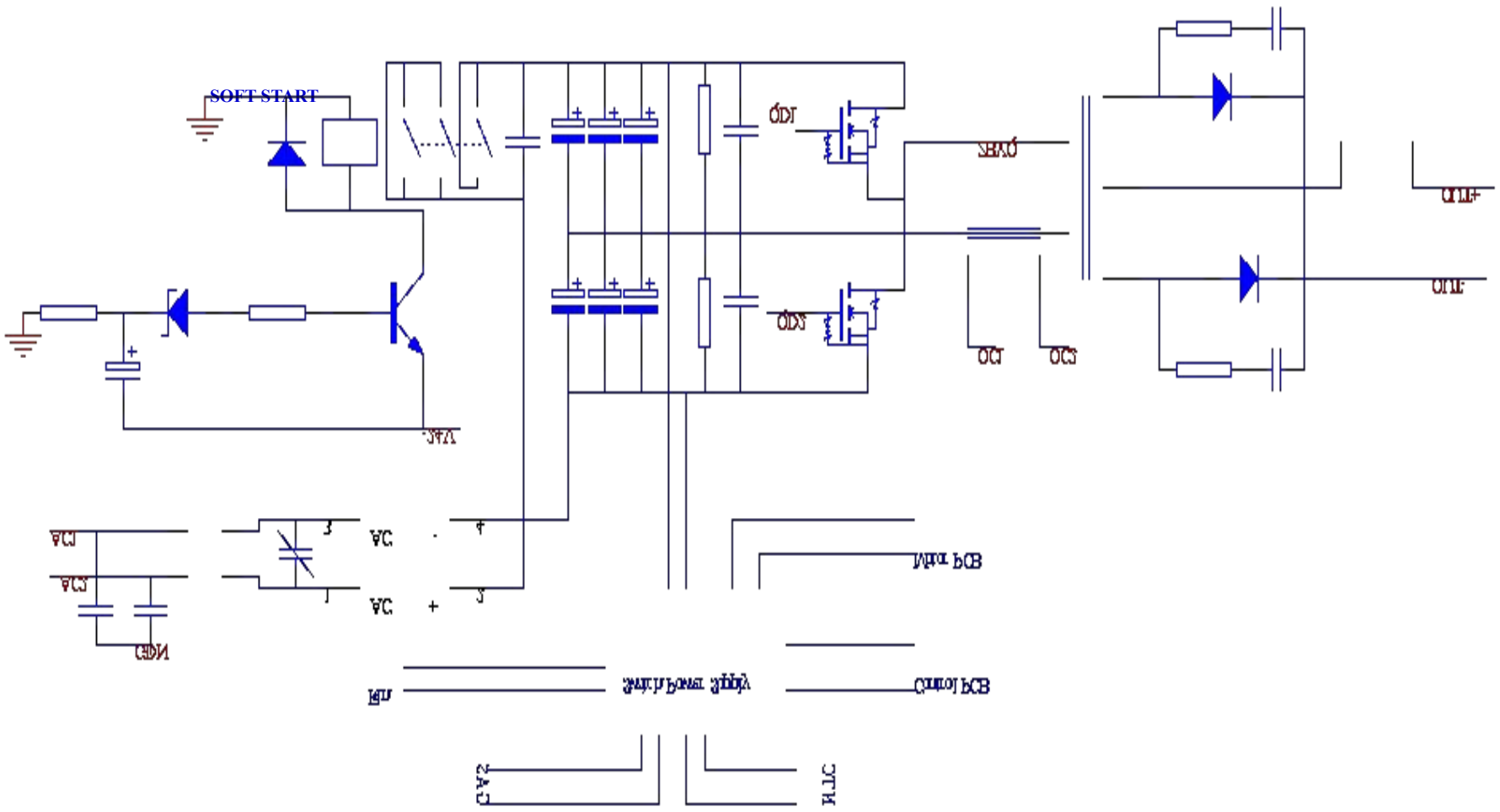
Catalogue



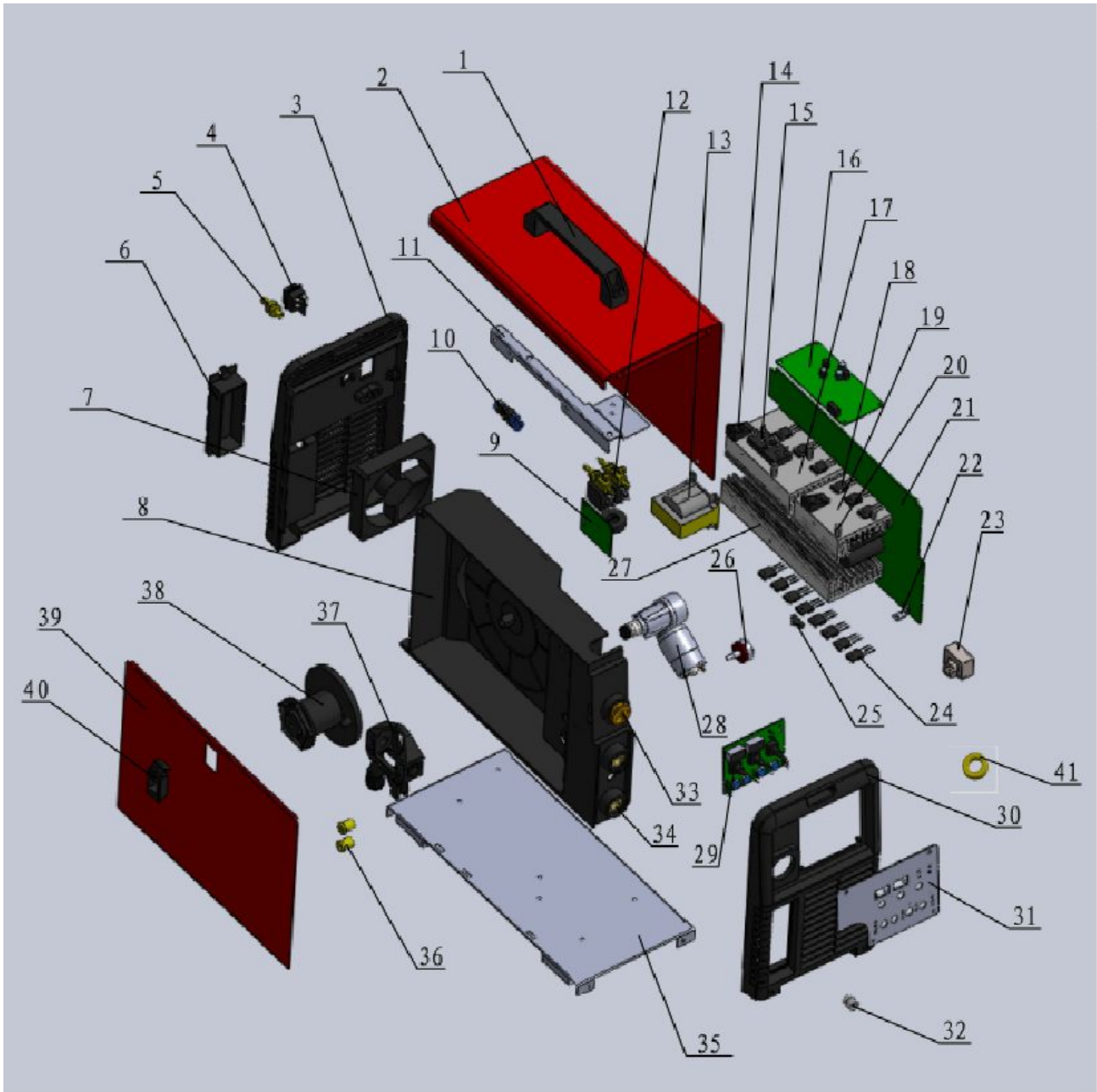
1、Introduction of working principle



Working principle



System chart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No.	Name	Code	Unit
1	HANDLE	8.253.020	1
2	LEFT BOARD	8.050.112	1
3	REAR PANEL	8.068.984	1
4	SWITCH	7.232.730	1
5	AIR INLET	8.462.180	1
6	SPARE AND TOOL BOX	8.831.010	1
7	FAN	7.720.005-B	1
8	CLAPBOARD	8.124.623	1
9	MIG EMC BAN	5.496.067	1
10	Y TYPE THREE-WAY CONNECTION	7.624.281	1
11	GAS VALVES MUNTING PLATE	8.123.159-B	1
12	TWO-POSITION SOLENOID VALVE	7.253.013	2
13	TRANSFORMER	6.185.119	1
14	SHORE	8.123.620	1
15	RECTIFIER	7.411.015	2
16	MIG CONTROL PCB	5.496.996-E	1
17	HEAT SINK II	8.425.119	1
18	TRANSISTOR	7.425.631	6
19	HEAT SINK III	8.425.120	1
20	HEXAGON KEEP POST	7.503.530	4
21	MAIN PCB	5.496.068-A	1
22	SHORE	8.123.633	2
23	HALL	7.321.105	1

24	DIODE	7.421.107	8
25	NTC HOT RESISTANCE	7.445.401	1
26	CHARFILM POTENTIAL	7.456.126	1
27	HEAT SINK I	8.425.118	1
28	MIG FEDDER POWER	4.021.000	1
29	MIG FACEPLATE	5.495.994-B	1
30	FRONT PANEL	8.069.984	1
31	FRONT BLANKING PLATE	8.306.115	1
32	TRIPLEX AVIATION SOCKET	7.132.303	1
33	TRANSEND NEB	8.178.110	1
34	35～70MM^2 SOCKET	7.152.315	1
35	BASE	8.055.118	1
36	CHANGEOVER CONNECTOR	8.462.181	2
37	FEED FIGHT	8.081.110	1
38	FEED PLATE	8.199.130	1
39	RIGHT BOARD	8.051.112	1
40	SQUARENESS BIN	7.686.300	1
41	INDUCTANCE	6.271.132	1

2、Introduction of main circuit（parts different from MMA）

Drive
Feedback
Compensate
Input signal

View of main board

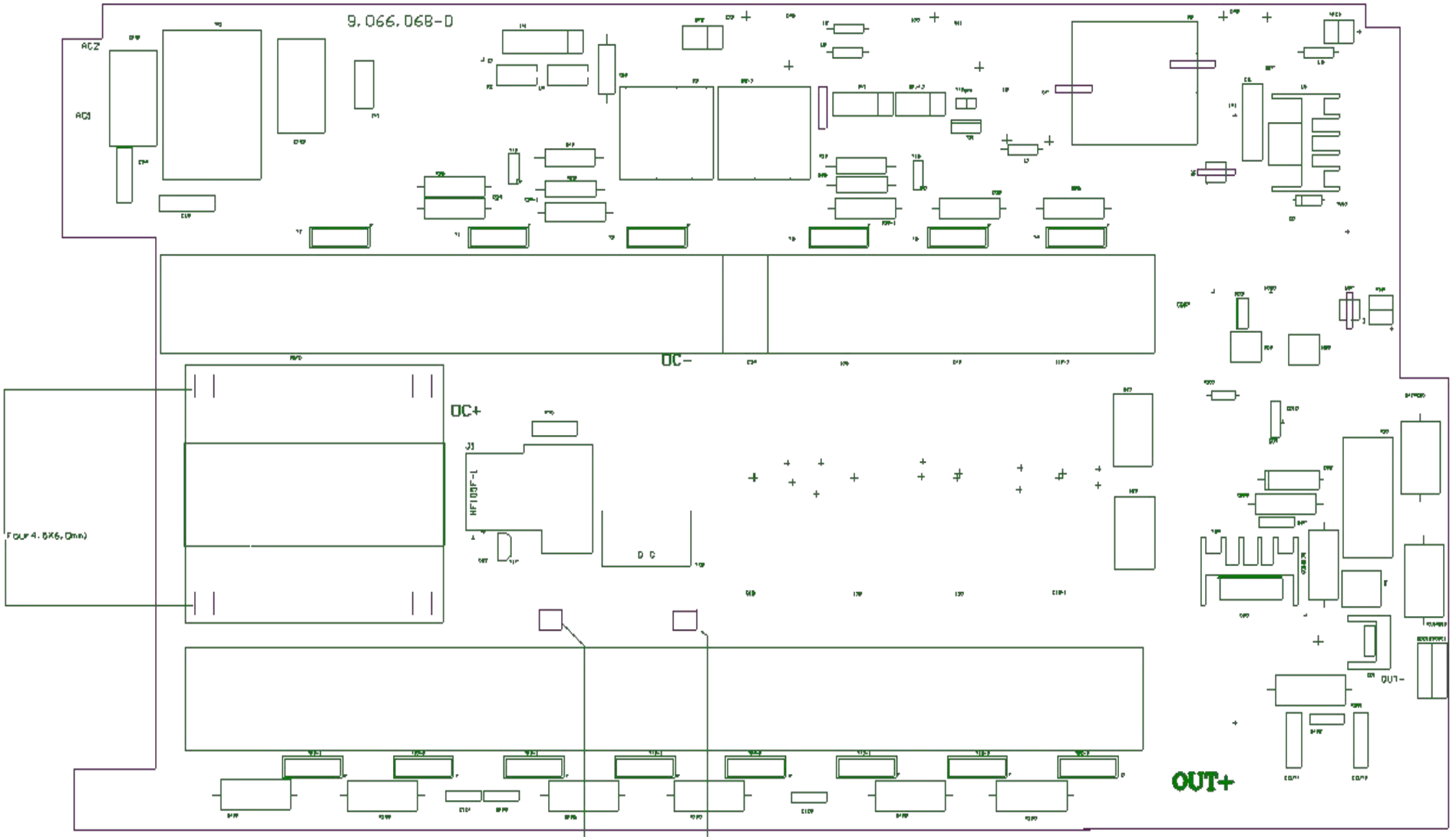


Photo of main board

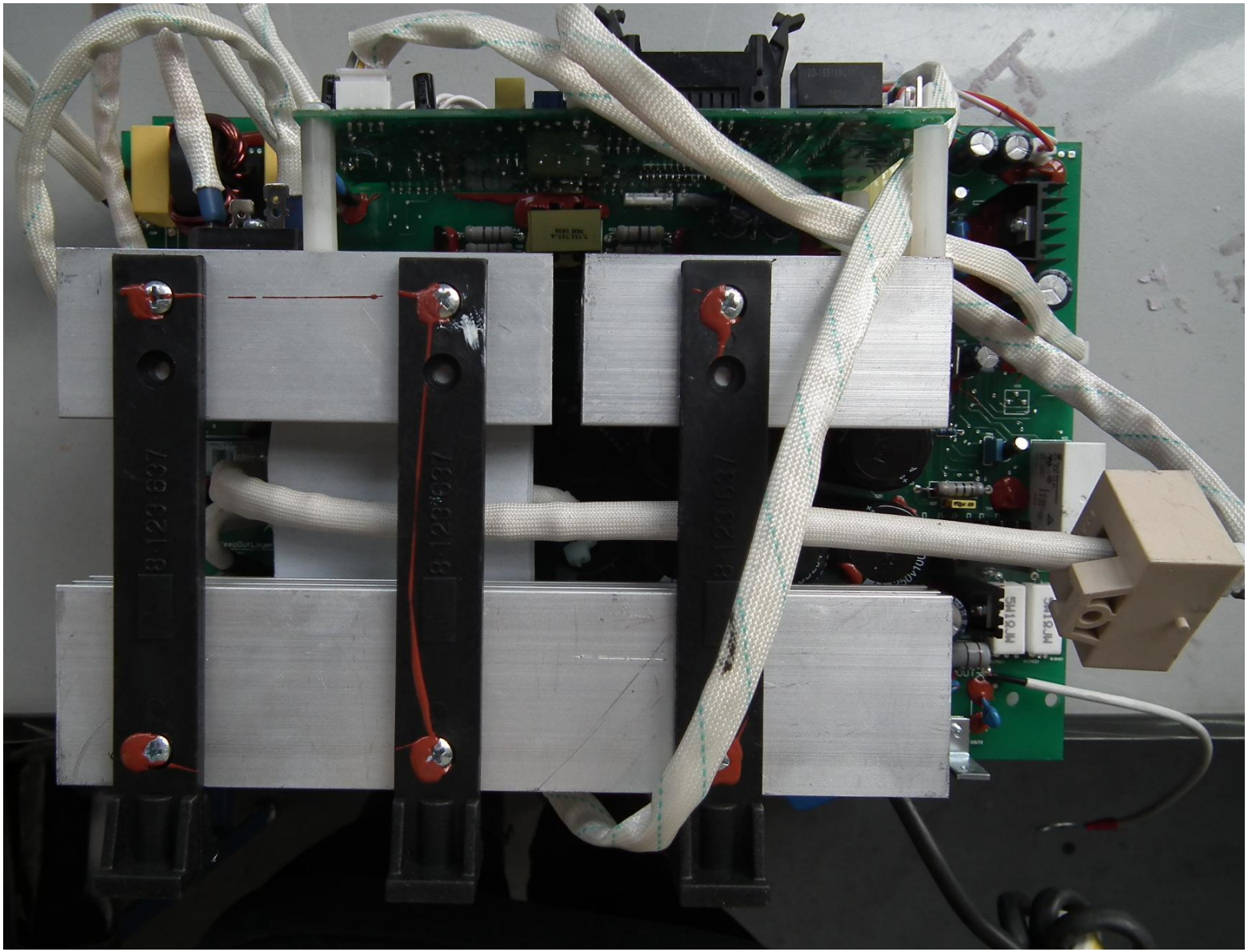
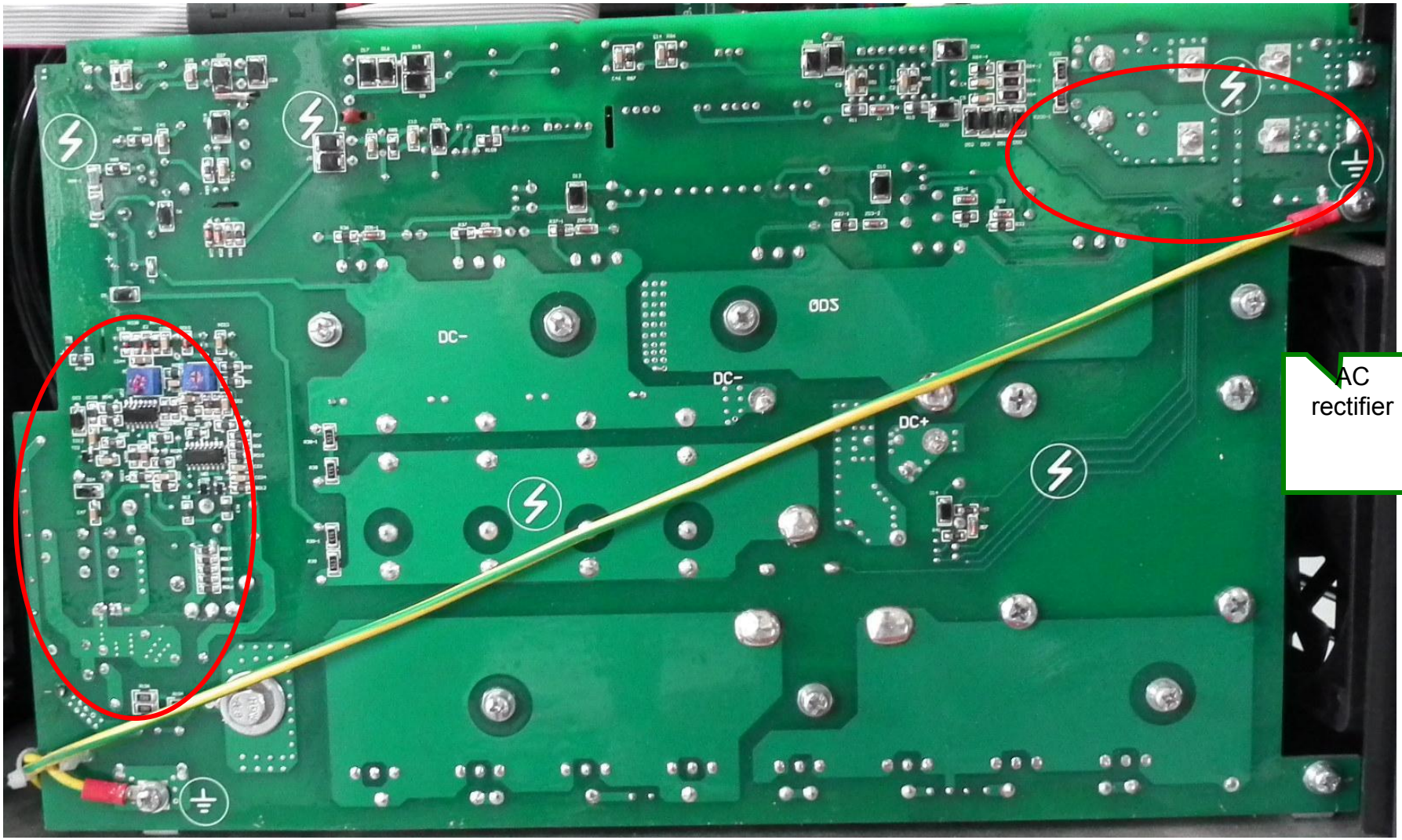
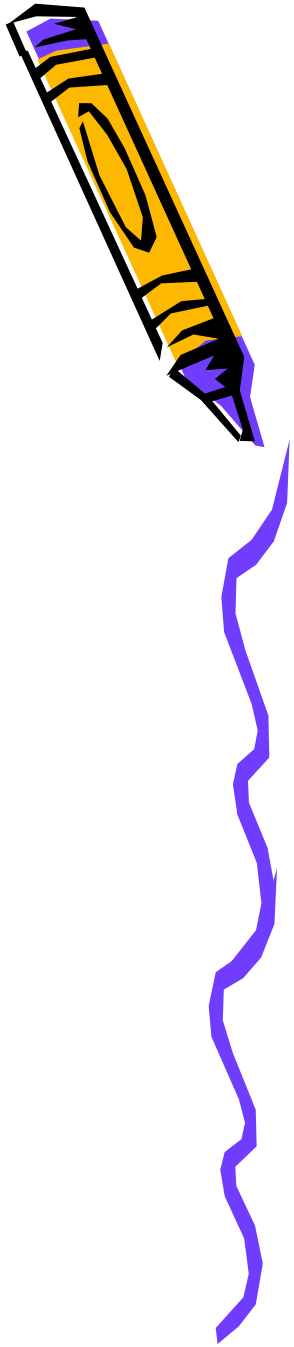
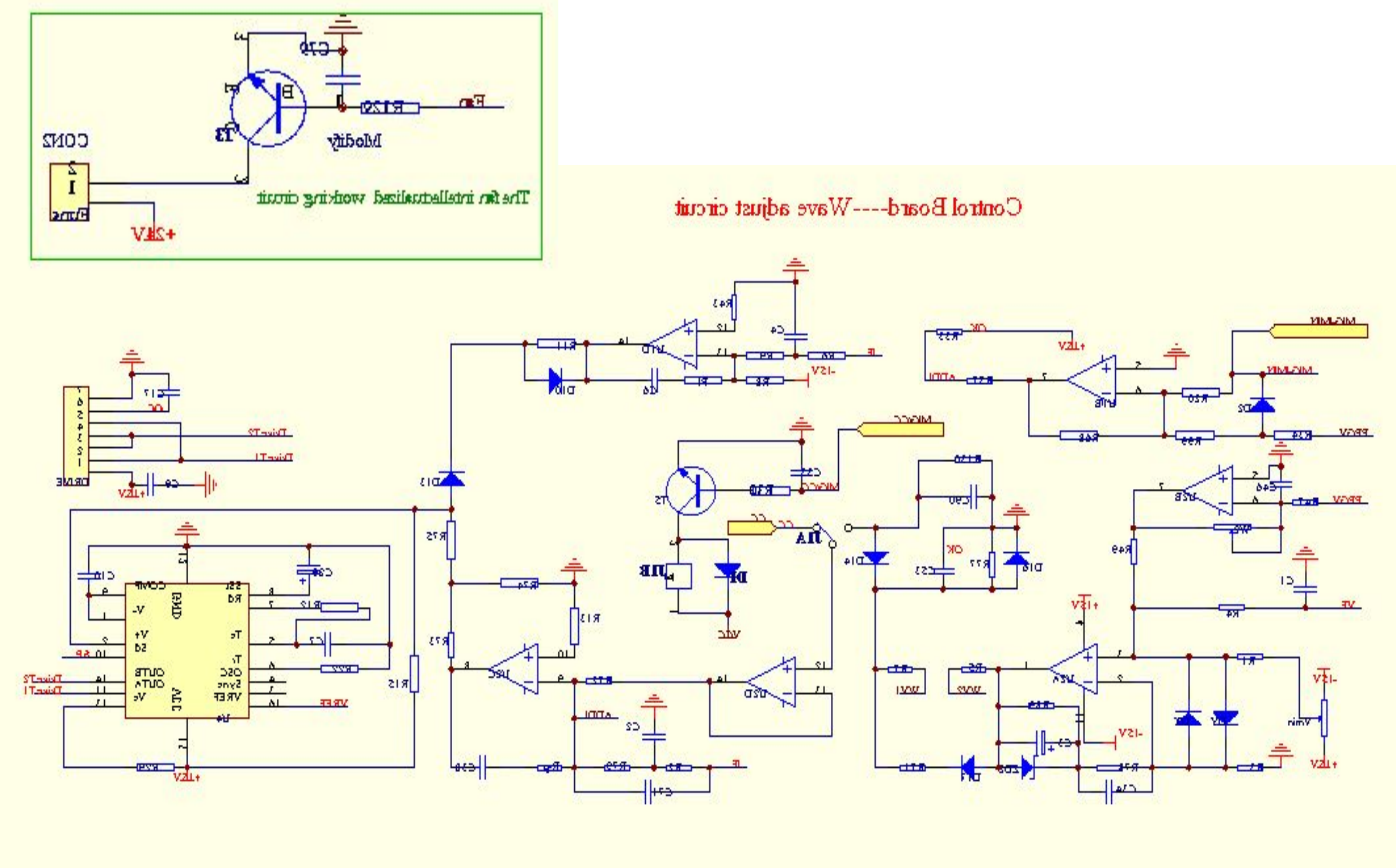


Photo of main PCB



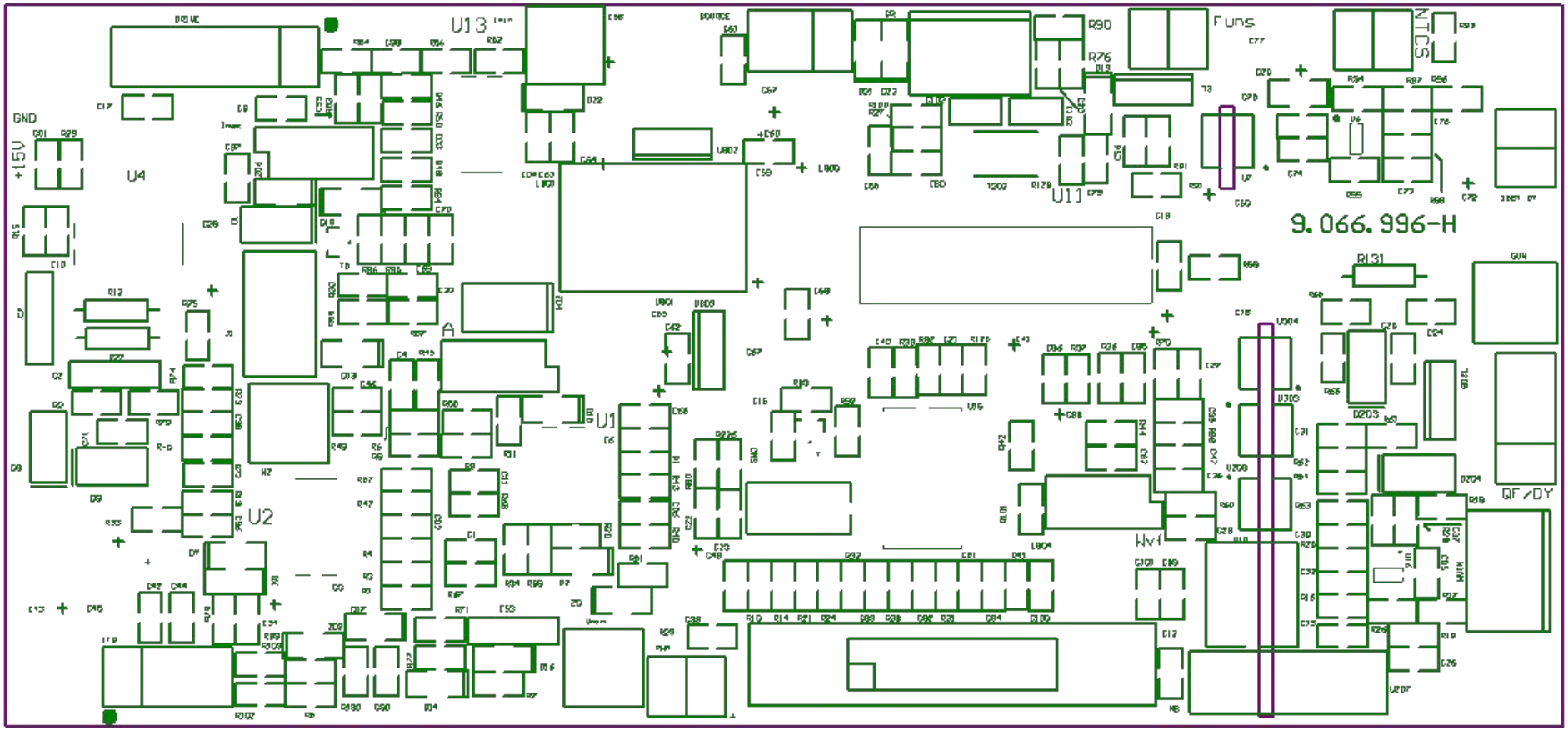


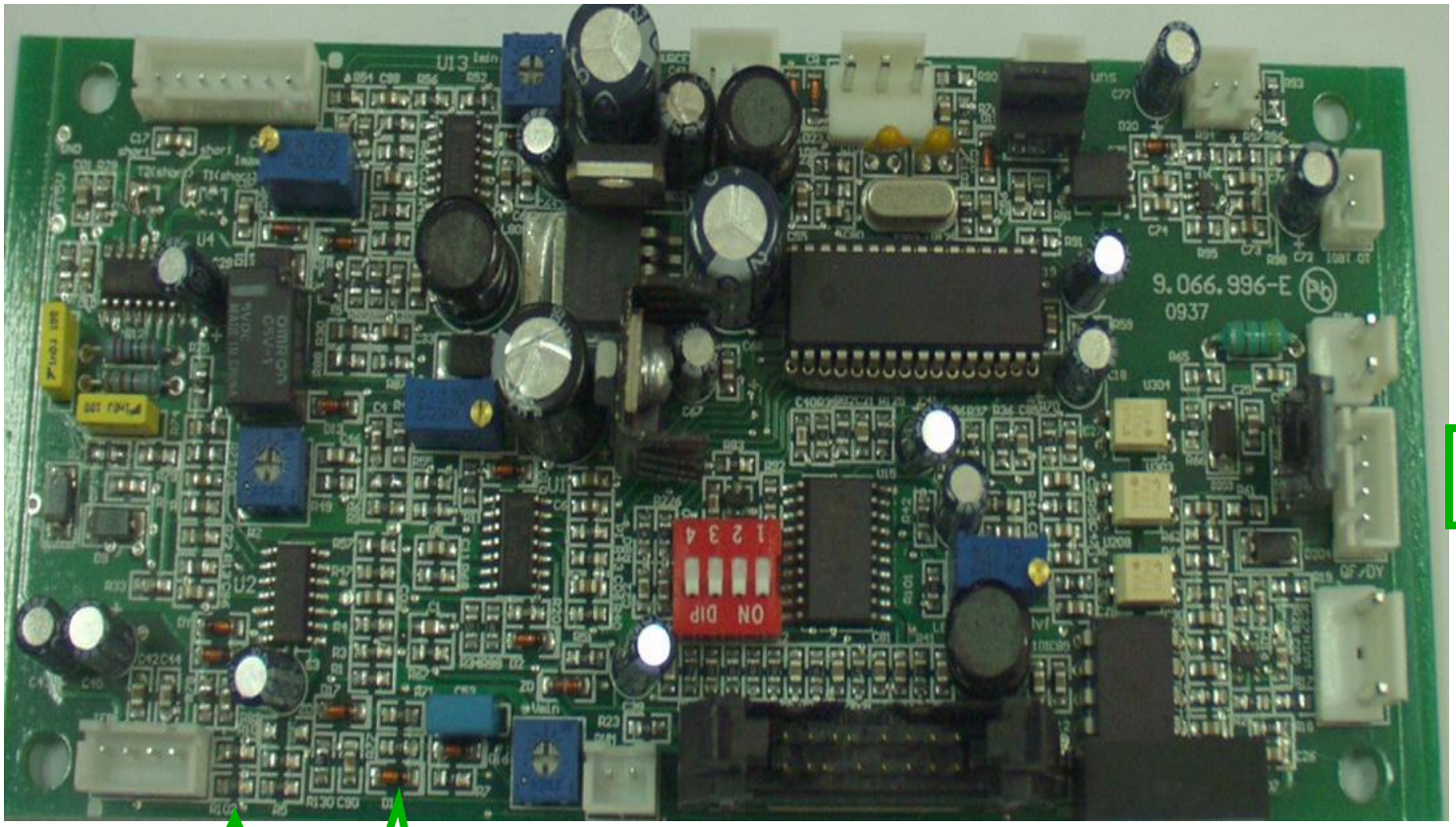
3、Introduction of control circuit（parts different from MMA）



Control Board----Wave adjust circuit

The fan intellectualized working circuit


U13
U4
U2
U1
U11
GND
+15V
Funs
9.066.996-H
QF/DY


Drive
Imax
Imin
Power
CR
Funs
NTCS
IGBT OT
Gun
QF/DY
WVIN
IFB
W2
A
Vmin
PWM
MB
Wvf

- DRIVE--Connected with main board to provide drive signal for discrete IGBT.

Pin 1---- +15V；Pin 2~5---- Drive signal；Pin 6---- OC; Pin 7---- GND

- SOURCE--Connected with main board to provide control board with power source and test signal of tip.

Pin 1---- +24V；Pin 2---- GND；Pin 3---- -24V.

- MB--Connected with panel board to communicate.
- CR--Connected with crater arc potentiometer, Burn back signal .

Pin 1---- GND ；Pin 2---- crater arc；Pin 3---- +5V.

- GUN--Connected with the torch to provide signal of gun.
- QF/DY--Connected with the gas switch.

- IGBT OT--Connected with the IGBT NTC to provide over-temperature signal for MCU.
- WVIN--Connected with the output to sample voltage signal.

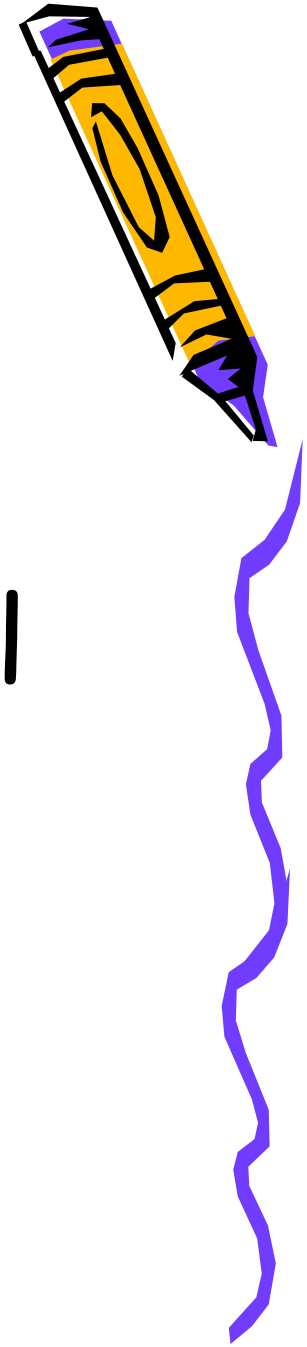
Pin 1---- cathode of output；Pin 2---- positive pole of output.

- IFB--Connected with HALL sensor to sample current signal.

Pin 1---- +15V；Pin 2---- -15V；Pin 3---- Output of HALL sensor；Pin4---- GND.

- PWM-- Connected with main board to control Motor speed (pulse).
- Fans-- Connected with the fan.

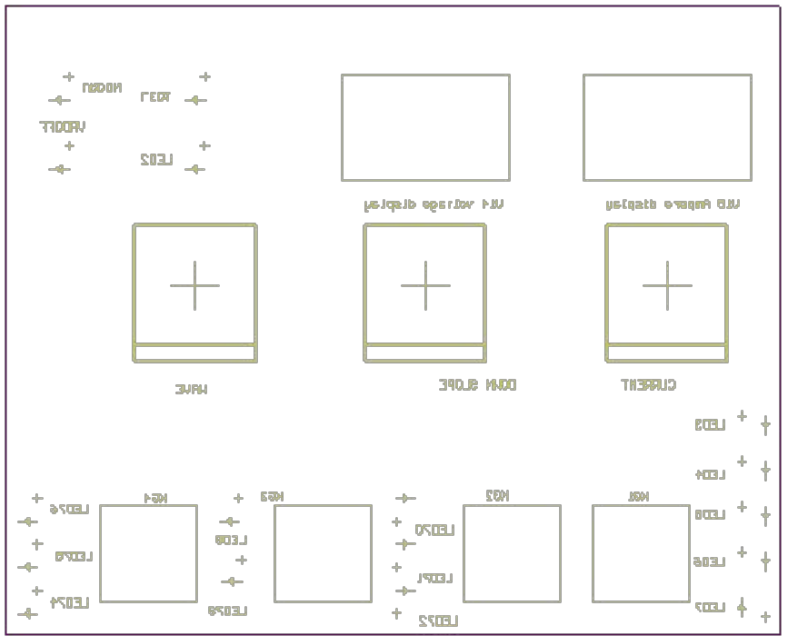
- Imax—used to adjust maximum welding current (MMA).
- Imin—used to adjust minimum welding current (MMA).
- A—used to adjust display current (MMA).
- W2—used to adjust maximum welding voltage (MIG).
- Vmin—used to adjust minimum voltage (MIG).
- Wvf —used to adjust display voltage (MIG).



4、Introduction of panel circuit

Knop
Digital Display
Controller
Key
Display Driver

View of panel board



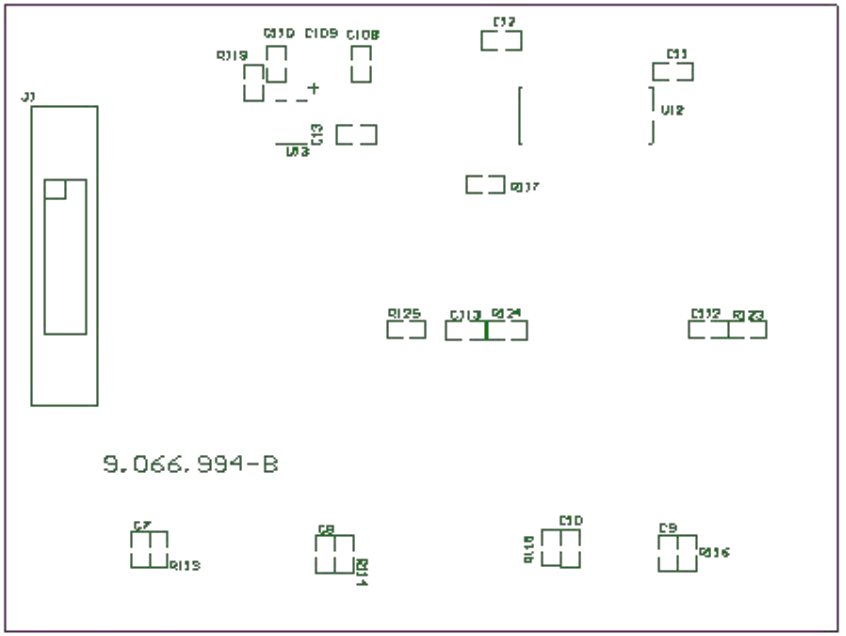


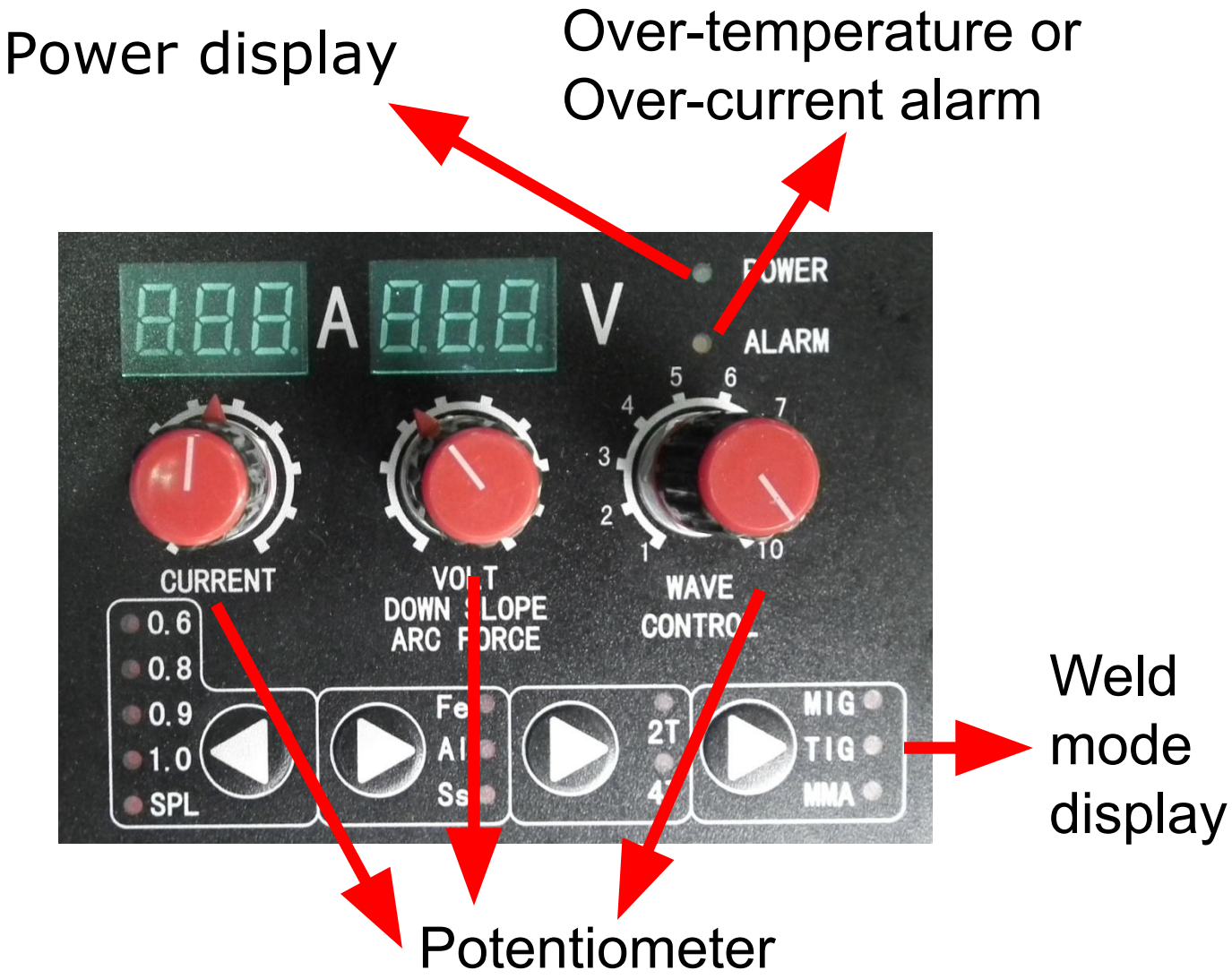
Photo of panel board

5、Troubleshooting

Series A: Troubles about panel display

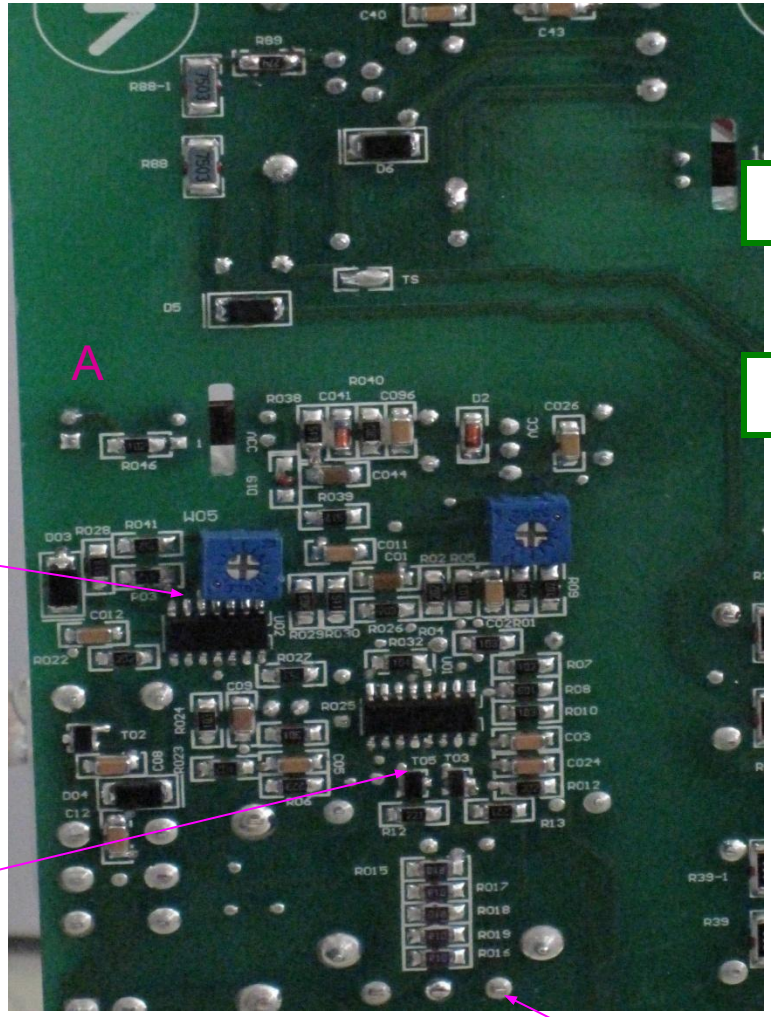
Series B: Troubles about power system

A、Presentation of panel



B、Presentation of wire-feeder

Motor drive circuit In Main PCB



Between the two Pins, is CPU speed Voltage

WD5--Max speed adjust

WD2--Min speed adjust

E/F/G wave point is the IC 1/2/3 P

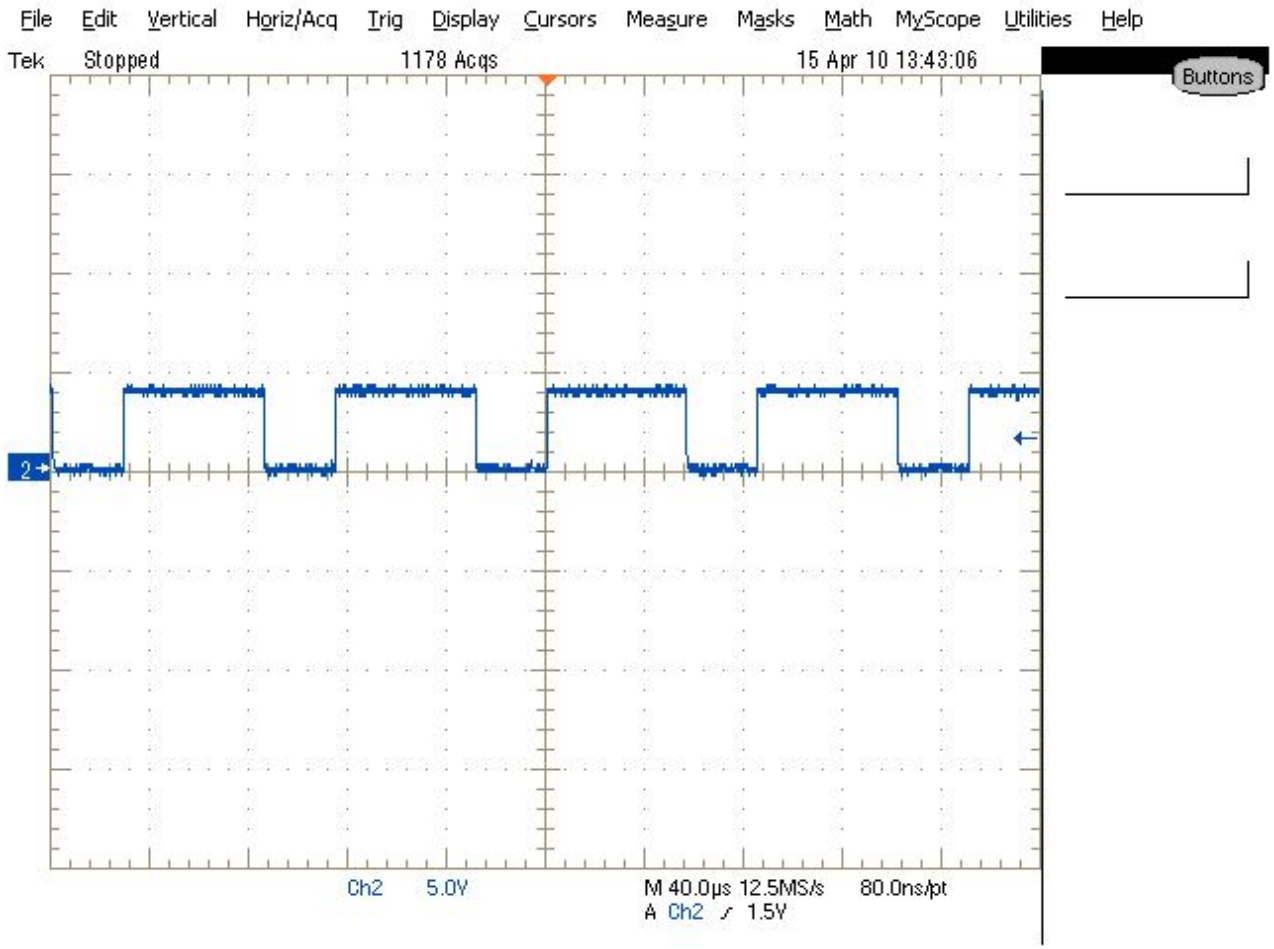
Drive transistor

Between the two Pins, is Motor voltage

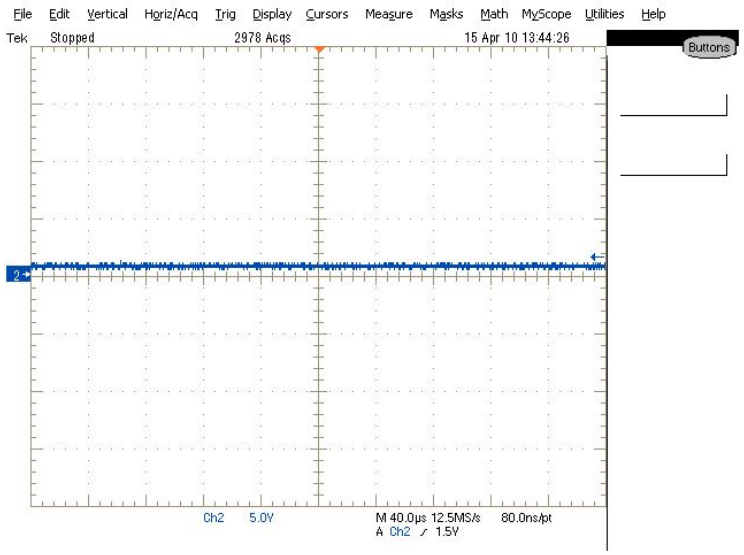
Motor circuit GND (common point)

Test point wave

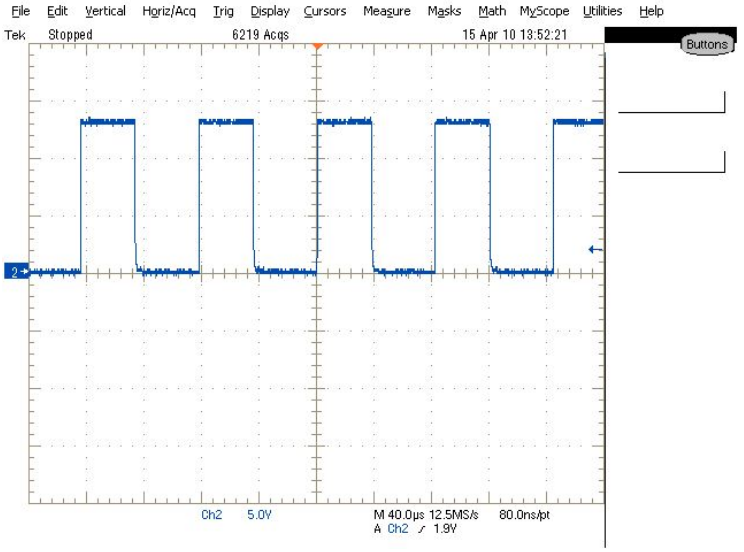
Point A wave :The PWM wave from digital control PCB



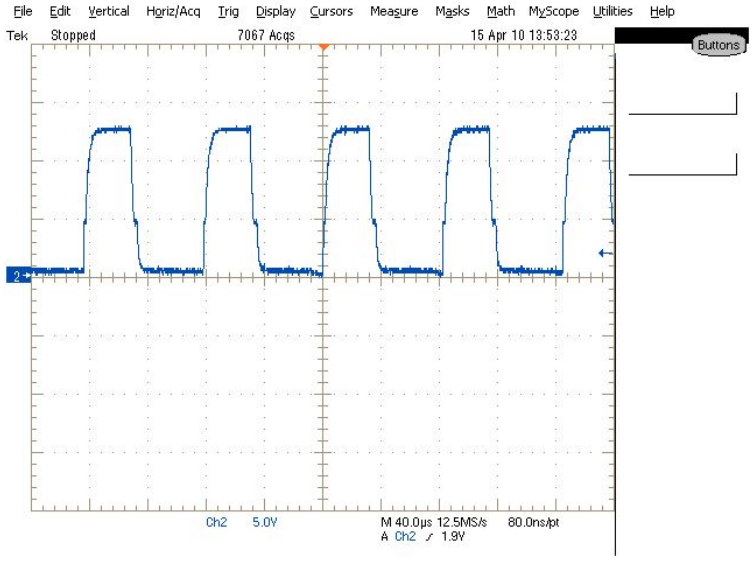
Point B wave :The PWM set point from 6P of U02



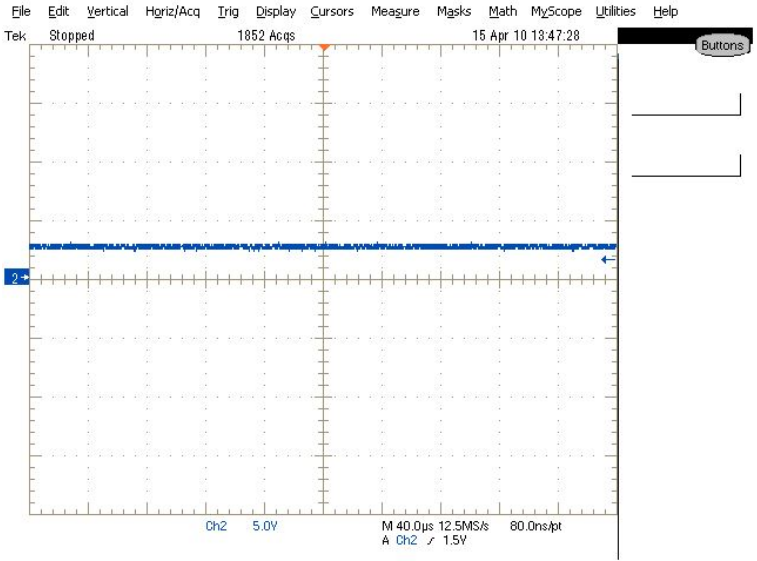
Point C wave :The drive PWM from SG3524 11P



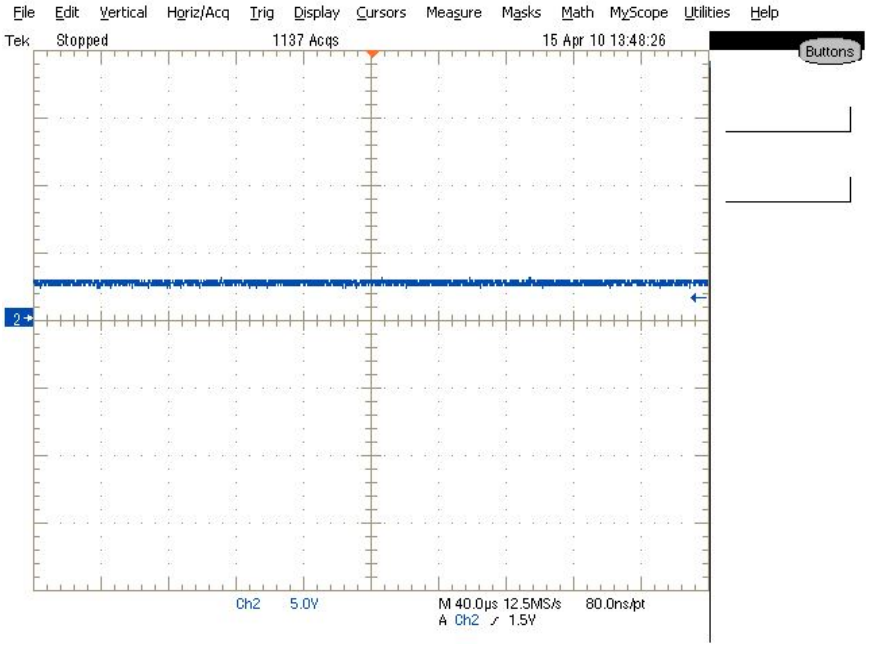
Point D wave :The MOSFET gate drive PWM



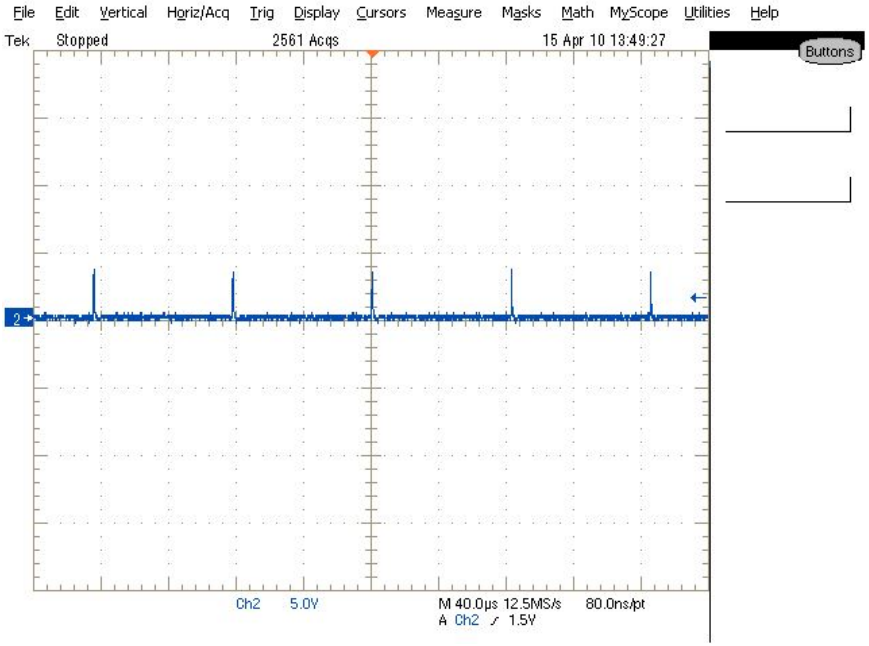
Point E wave : U01 SG3524 1P



Point F wave : U01 SG3524 2P



Point G wave :U01 SG3524 3P



Wire-feeder doesn't work	**Wire reel doesn't work**	**Motor damaged**	**Check and change it**
		Control circuit damaged	**May be the MOS or DIODE in the board is damaged, check it according to the above information.**
	Wire reel works	**The press wheel is loosen or weld wire skids**	**Press it tightly again**
		The wheel doesn't fit with the diameter of weld wire	**Change the wheel**
		Wire reel damaged	**Change it**
		Wire feed pipe or tip is jammed	**Repair or change it**
Fan don't work	**According to page16, check the socket Funs, there isn't +24V,**		**Check +24V power source and whether the socket link is good.**
	If there is +24V,check netlabel Fan , there isn't 5V.		**Change control PCB**
	If there is +5V,check T3, there isn't 0.7V between B and E.		**Change T3**
No gas	**reference to 170HF**		

List of spare part

Title	Unit	
Hall	1	
Rectifier	1	
MIG panel	1	
MIG sole plate	1	
NTC	1	
Waterproof switch	1	
Control PCB	1	
Wire feed frame	1	
Plastic front panel	1	
Plastic rear panel	1	
Insulated potentiometer	3	