

OWNER'S MANUAL

RD-886GE

Important : Read these instructions before installing, operating or servicing this product.

MODEL : CB-001 STANDARD CONTROL BOX



Serial Number : 15062500401 ~ and later

Revised date : July. 13th, 2015

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LIMITED WARRANTY

UNITED PROARC CORPORATION warrants all new equipment to be free from defects in material and workmanship for a period of one (1) year, provided that the equipment is installed and operated according to instructions stated in this manual.

UNITED PROARC's obligation under this warranty policy is expressly limited to the replace or repair, at its option, of the defected part only. ProArc's option to repair or replacement of a defected part under this warranty shall be based on FOB Taiwan basis.

UNITED PROARC CORPORATION shall not be liable for any loss or consequential damage or express accruing directly or indirectly from the use of equipment covered by this warranty.

This warranty supersedes all previous ProArc warranties and is exclusive with no other guarantees or warranties expressed or implied.

This warranty excludes the consumable parts that are used in normal operation

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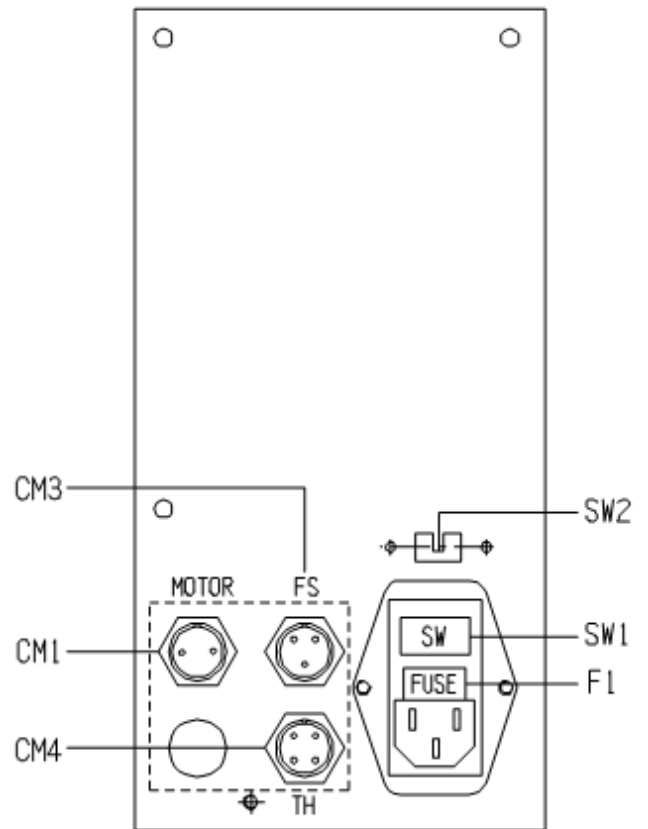
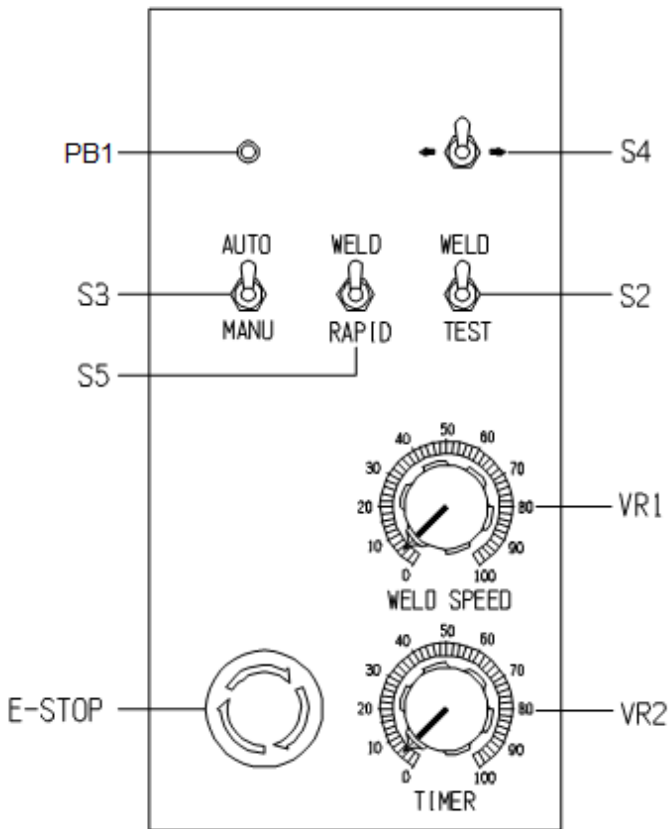
1.1 CONTROL PANEL

Front Panel :

- E-Stop : Emergency stop button
- PB 1 : Push Button and Power ON signal
- S 2 : Weld / Test mode selection switch
- S 3 : Auto / Manual mode selection switch
- S 4 : Clockwise / counter clockwise selection switch
- S 5 : Weld/rapid speed selection switch
- VR1 : Welding speed adjustment
- VR2 : Welding timer adjustment

Rear Panel :

- SW1 : Power switch
- SW2 : Voltage selection switch
- F1 : Fuse(1A)
- CM1 : Motor connector (2Pin)
- CM3 : Foot switch connector (3Pin)
- CM4 : Welding source connector (4Pin)



1.1 CONTROL PANEL

1. Connect the power cord to the power socket located on the rear panel, turn on the power switch (SW1), then push the PB1 button, the PB1's LED should light up indicating power supply is ok.
 - * **Please make sure the E-Stop button is not pressed/activated before usage. All controls become invalid when E-Stop button is pressed.**
2. S2 (WELD / TEST) Switch enable / disable welding source activation output.
3. S3 (AUTO / MANU) Switch select the operation mode.
 - Manual (MANU) : Turn table rotation is controlled by the foot switch
 - Automatic (AUTO) : The start of the rotation is activated by the foot switch, the duration of the rotation and is controlled by the (TIMER) knob on the front panel from for a duration of (0~60 second).
4. S4 (← / →) Direction switch select the direction of rotation (clockwise or counterclockwise.)
5. S5 (WELD / RAPID) Switch select the operating
 - Welding speed (WELD) : Turn table rotation speed can be adjusted from (WELD SPEED) knob on the front panel.
 - Full speed (RAPID) : Turn table rotation speed is set at full speed.
 - * **Press E-Stop button in case of any emergency situation. All motion and procedure would stop immediately. Reset the E-Stop button and push PB1 again after clearing the emergency situation to return the system to operation mode.**

2.1 TROUBLE SHOOTING GUIDE

SYMPTOMS	POSSIBLE CAUSES / REMEDIES
Power indicator light does not illuminate.	A. Wrong selection of input power : Select the correct input power (110V or 220V)
	B. Blown fuse : Check the circuitry and find out the blown. and then, replace fuse.
	C. Input power switch malfunction : Check and replace the power switch.
	D. Transformer has no output voltage : (1) Check if the input voltage, it should be AC110V/ 220V. (2) Measure CN8 for Pin 1 & 3, there should be 24VAC, and pin 2 & 3 should be 18VAC, if one of the voltage is not correct, please replace a new transformer.
	E. The flat cable is damaged : (1) Check relay board CN1 Pin 7 & 8, it should read 24VDC. (2) Measure Front panel CN1 Pin 7 & 8, it should read 24VDC, if not, replace the flat cable.
Motor has no motion.	A. Motor coil is damaged : Use ohm meter to measure CM1 female plug pin 1&2 and It should give you 2 ohm. If 2 ohm doesn't exist, replace the motor.
	B. Motor has power input, but no motion : Measure CM1 male socket Pin 1 & 2 - if there is 6.5VDC, then replace a new motor.
	C. I/O board is damaged : (1) Check Relay board CN9 Pin 11&12, the reading should be about 6.5VDC voltage. (2) Measure CM1 male socket Pin 1 & 2 - if there is no 6.5VDC, replace a new I/O board.
Welding action not responsive.	A. Weld/Test switch is damaged : Switch to "Test" position and check if relay board D10 illuminates, if not, please replace the front panel board.
	B. Relay board is damaged. Switch to "Test" position and check if relay board D10 illuminates, if yes but has no action, please replace the relay board.

2.1 TROUBLE SHOOTING GUIDE

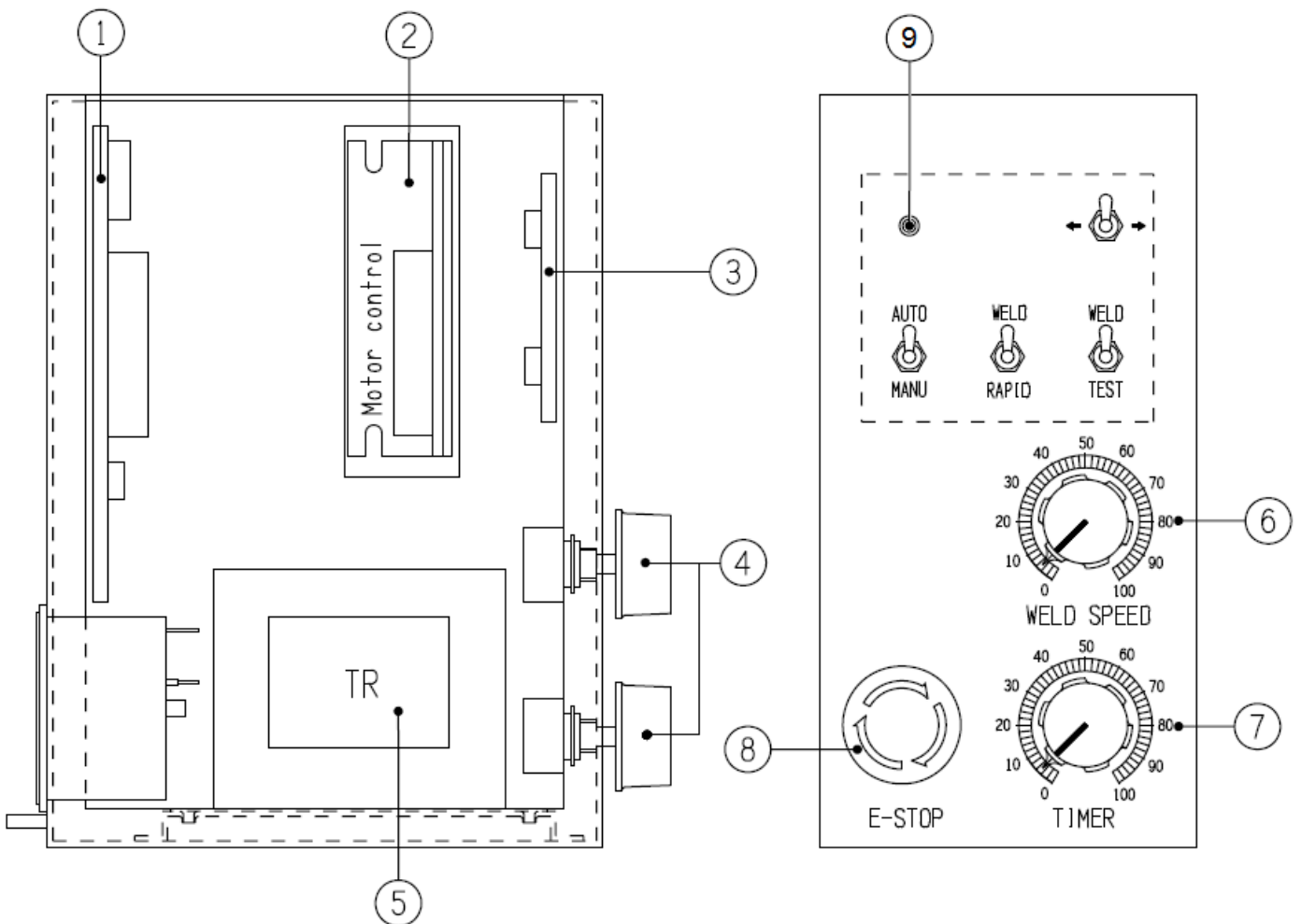
SYMPTOMS	POSSIBLE CAUSES / REMEDIES
Forward / Reverse revolutions not functioning correctly.	<p>A. Footswitch is damaged :</p> <ol style="list-style-type: none"> (1) Measure footswitch connector Pin 1&2, step on the footswitch and measure Pin 1&2 is shorted. if not, replace a new footswitch. (2) Step on the footswitch and check if relay board D11 illuminates, if yes ,but has no action, replace a new relay board.
	<p>B. Forward / Reverse revolution switch is damaged :</p> <ol style="list-style-type: none"> (1) Switch to "Forward" position and check if Relay board D3 illuminates, if not, please replace the front panel board. (2) Switch to "Reverse" position and check if Relay board D4 illuminates, if not, please replace the front panel board.
	<p>C. K1 ~ K4 relay is damaged :</p> <ol style="list-style-type: none"> (1) Switch to "Forward" position and if Relay board D3 illuminates but the relay has no action, please replace the relay board. (2) Switch to "Reverse" position and if Relay board D4 illuminates, but the relay has no action please replace the relay board.
Can not adjust speed.	<p>A. Motor control PCB is damaged :</p> <ol style="list-style-type: none"> (1) Check the motor control PCB. It should have an input voltage of 30VDC between DC+ & DC-. (2) Adjustment weld speed, measure A1 & A2, it should read approx. 6.5VDC, if not, voltage replace the motor control PCB.
	<p>B. Weld / Speed switch is damaged (Weld /Full speed) :</p> <ol style="list-style-type: none"> (1) Switch to Manual mode and adjust the weld speed dial to about 50% of the full speed, then step on the footswitch. (2) Switch to both weld and speed positions, the motor should respond with slow and fast speeds respectively, if not then replace a new front panel board.
	<p>C. The potentiometer is damaged :</p> <ol style="list-style-type: none"> (1) Detach the Front panel board CN2 connector, use ohmmeter to measure Pin 1 & 2. (2) Rotate the weld speed variable resistor's and check if the resistance value is changing. If not, please replace VR1.
Weld timer not functioning	<p>A. T1 Timer is damaged :</p> <ol style="list-style-type: none"> (1) Switch to "Auto" position and step on the footswitch. (2) Check T1 the motion window of the timer, the "UP" signal should lit, if not, please replace relay board.
	<p>B. T1 The Timer is unable to stop :</p> <ol style="list-style-type: none"> (1) Detach the Relay board J1 connector, measure Pin 1&2. (2) T Rotate the timer knob and see if the resistance between Pin 1&2 is changing from 0~1M ohm. If not, please replace the VR2 (Timer knob).

3.1 PART LIST — CONTROL BOX (FRONT)

Fig No.	Part No.	Description	Q'ty	Remark
1	* 6620-1124	Relay board	1	Relay board
2	* 6651-0011	Motor speed control board	1	Motor control
3	* 6621-2240	Front panel board	1	Front panel board
4	3216-0003	Knob (Blue)	2	Knob
5	* 3311-0039	Transformer	1	TR
6	* 3747-1001	Potentiometer	1	VR1
7	* 3747-1002	Potentiometer	1	VR2
8	* 3214-2009	E.S Push button	1	E-Stop
9	* 3271-3002-8	LED Push button	1	PB1

* Recommended spare parts

**Options

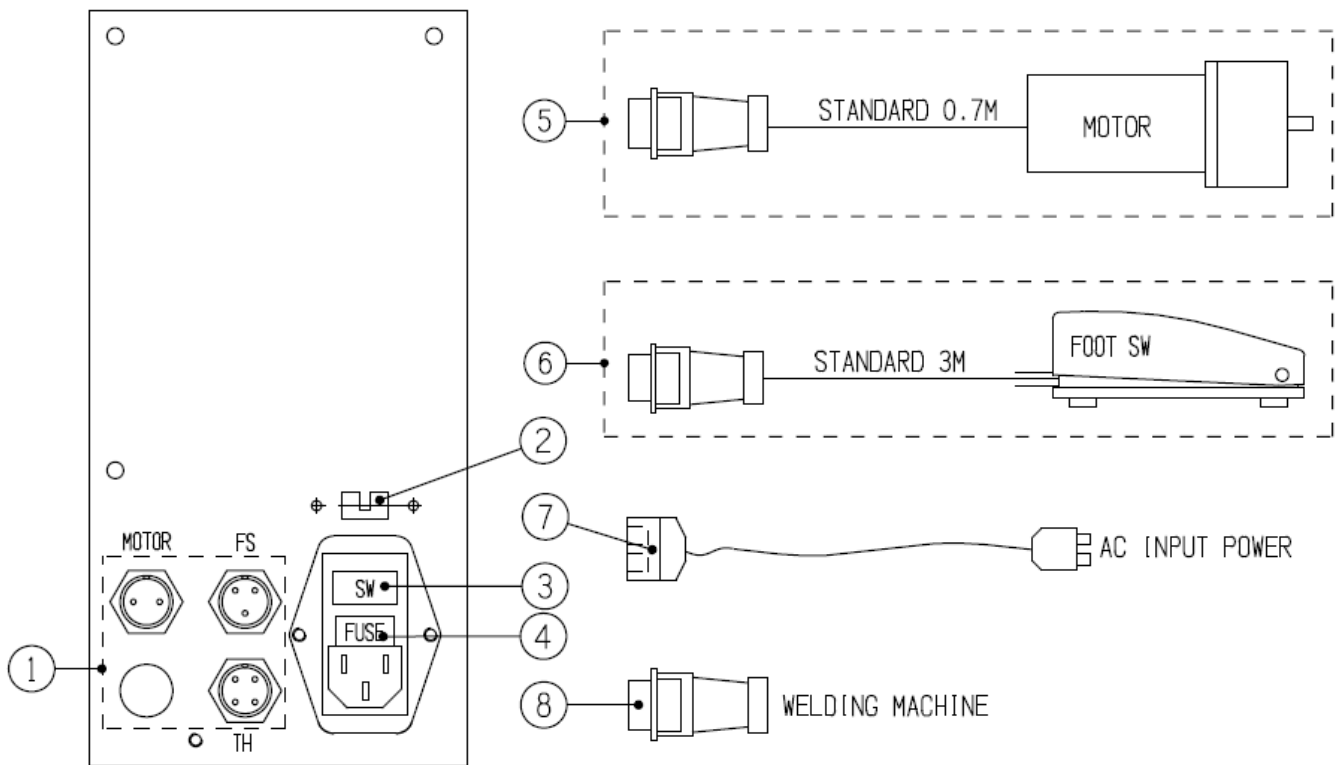


3.2 PART LIST — CONTROL BOX (REAR)

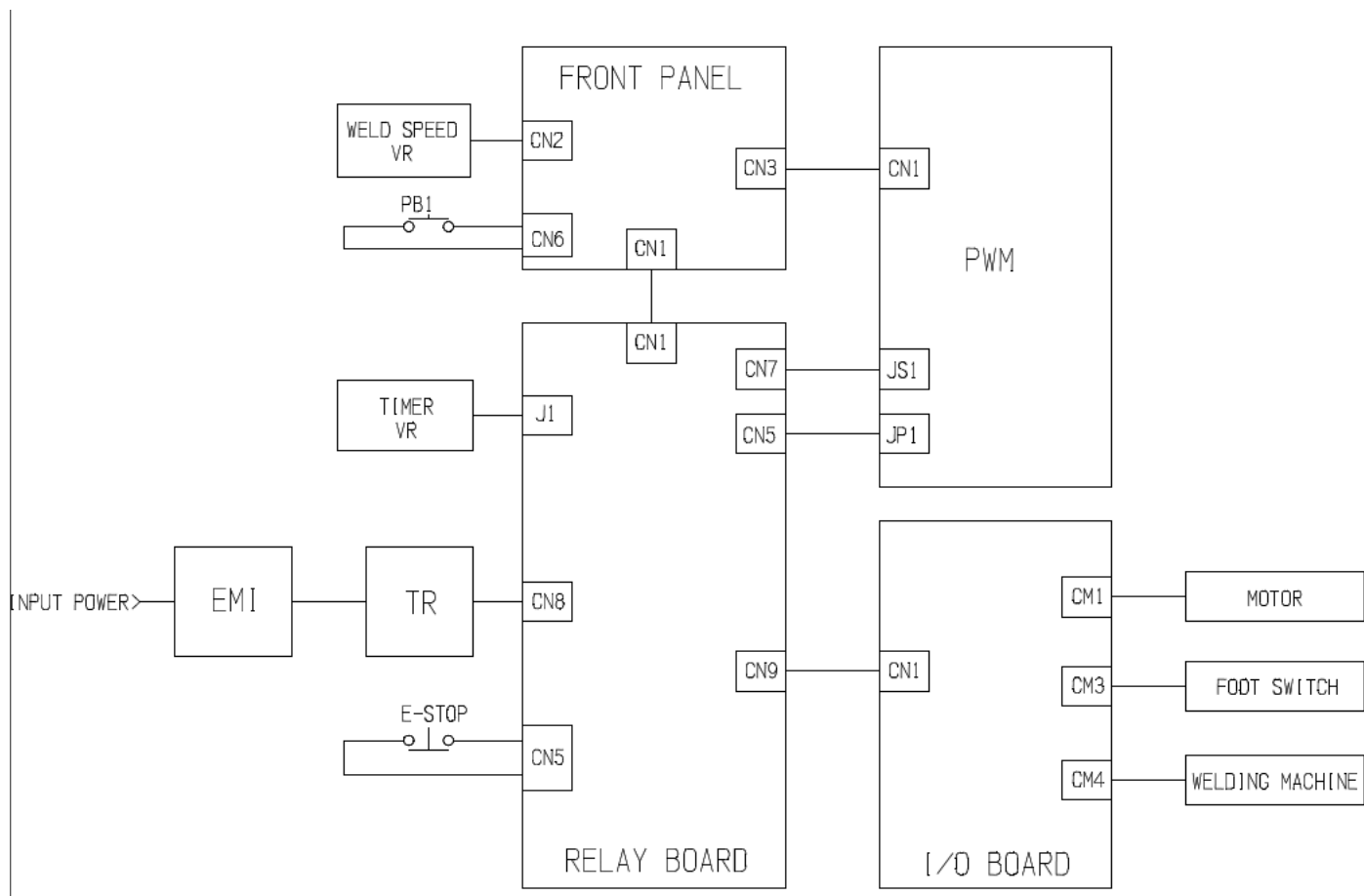
Fig No.	Part No.	Description	Q'ty	Remark
1	6620-1311	I/O Panel board	1	I/O board
2	3217-2002	Selection switch	1	SW2
3	3331-2001	Power entry module	1	SW1
4	* 3226-2001	Fuse 1A 20mm	2	
5	5010-1020020-11	PMDC Motor with connector	1	CM1 Motor connector
6	** 3242-1101	Foot switch Assy cable 3M	1st	Foot switch Assy
7	** 3445-0001	Power cable	1st	Power cable
8	3123-2005	Female connector 4 pin	1	CM4 TH connector

*Recommended spare parts

**Options

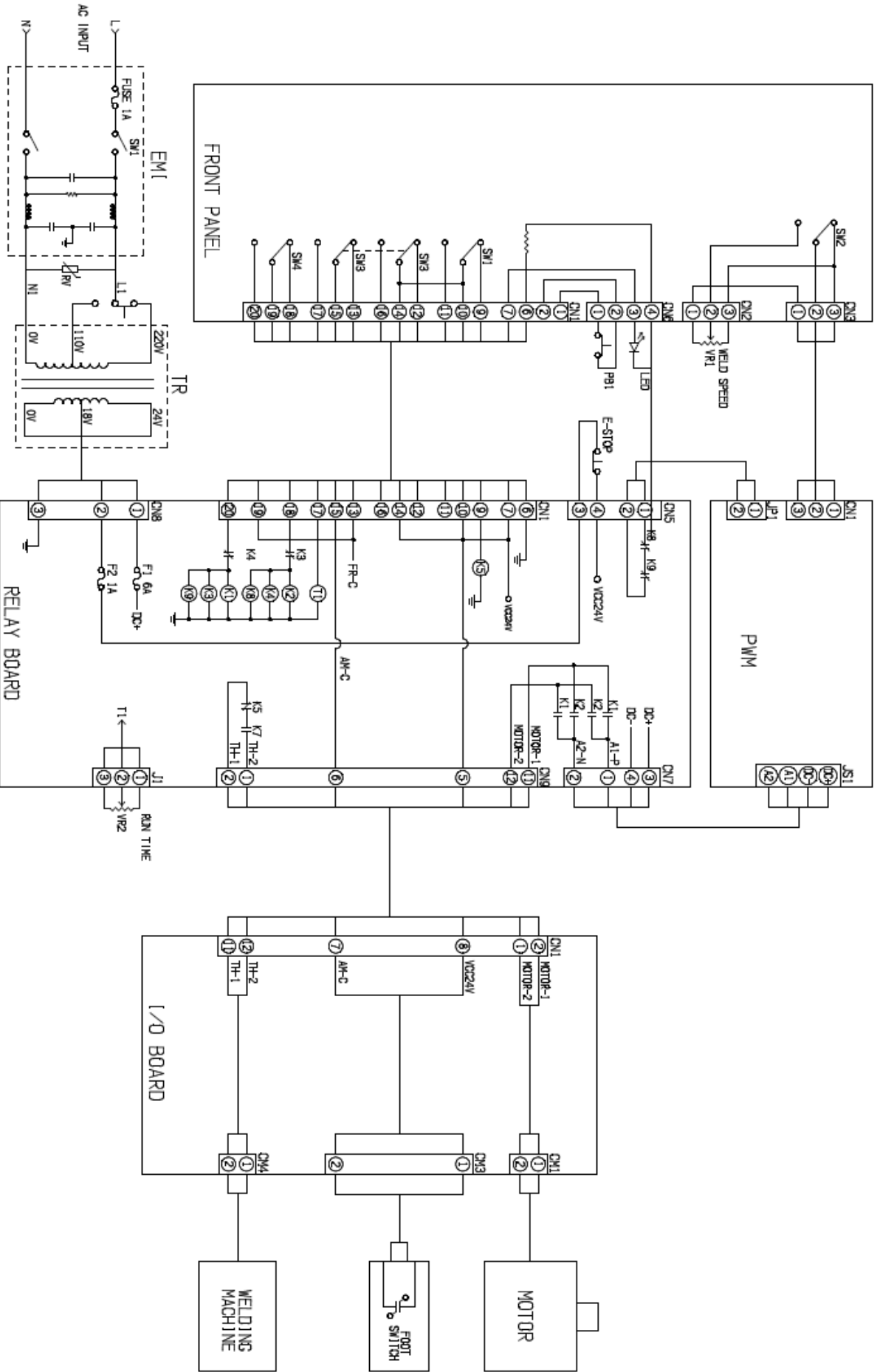


4.1 CONTROL SYSTEM



4.2 WIRING DIAGRAM

APPENDIX A: WIRING DIAGRAM



REVISIONS

Manual number	Print data	Changed page	Revisions
RD-886CE	Mar. 17, 2010	3.1 (P9~P10)	Adding : E-Stop
RD-886DE	Jul. 21, 2010	3.1 (P7~8)	Revised : 6651-0001→6651-0011
RD-886DE	Jan. 03, 2011	3.1 (P5)	Revised : 3311-0023→3311-0039(Number 2011~Later)
RD-886FE	Mar. 29, 2013	3.1 (P5)	Revised No.1 : Relay board 6620-1122→6620-1123
RD-886GE	July. 7 th , 2015		Add PB1 control and part list