

# CUBASE-32M

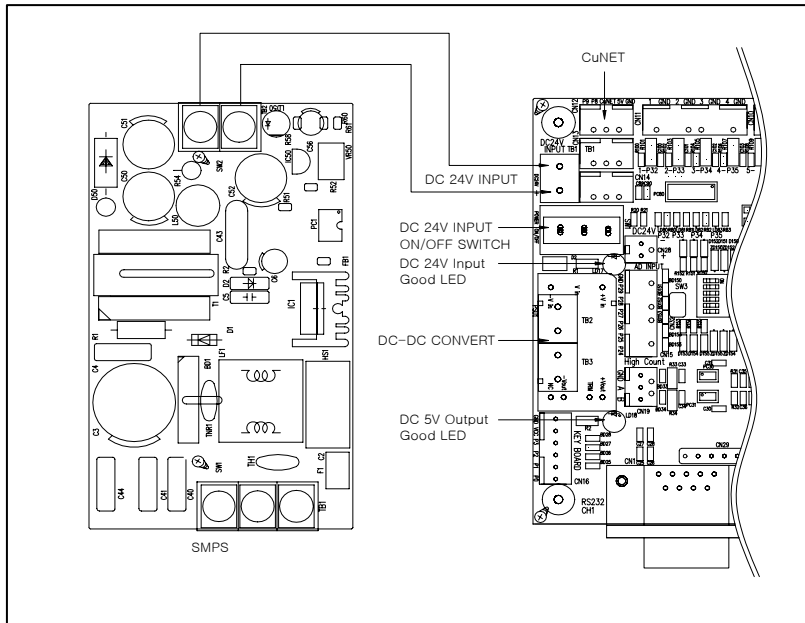
## CUBLOC Base Board – 32M

### 1. How to connect power

As seen in the below picture, please connect 24V DC power to the + and – of the Baseboard. Turn on SW1 and LD17 and LD18 green LEDs will turn ON.

- When LD17 and LD18 green LEDs don't turn ON, please check the input voltage and the polarity.

- Input Power requirements: DC 21~28V (DC24V/0.5A)



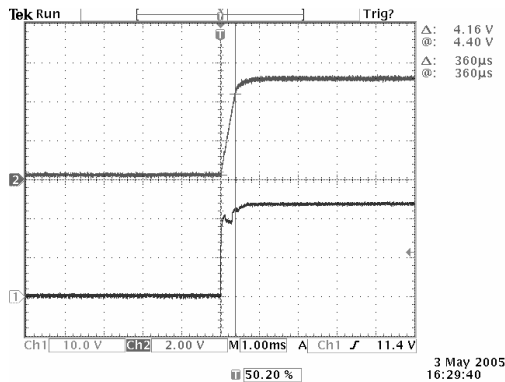
#### a) On Time

CH1 : Input Power +24V / 30mA (Only CuBASE-32M Operating Current 30mA)

*Please aware of the power requirements when designing custom.*

CH2 : Output +5V/ 90mA (Only CuBASE-32M Operating Current 90mA) / Only CB280 Current 51mA

On Time : 360uS

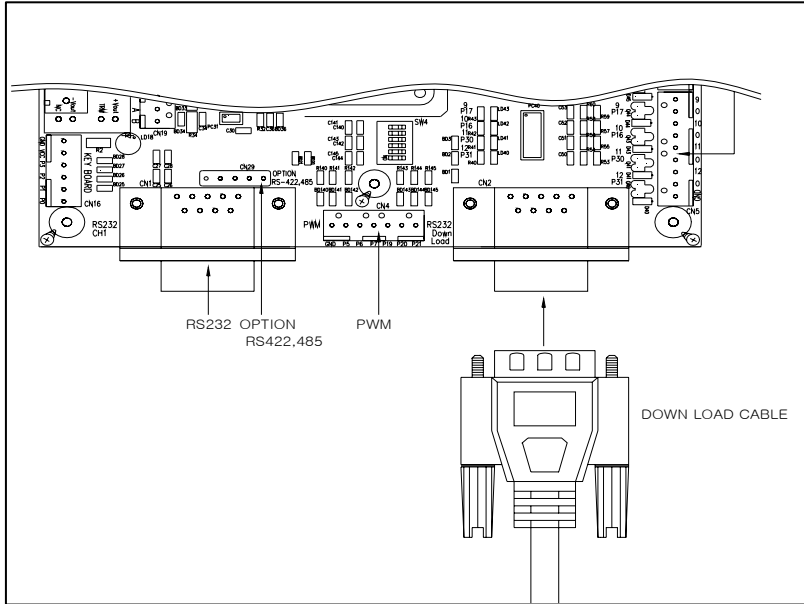


Oscilloscope: TDS3034  
Current Meter: PROTEK 608

**2. How to connect the Down Load Cable**

Please connect a serial RS232 cable to the D-SUB CONNECTOR

You can download the latest version of CUBLOC Studio from our homepage, [www.comfiletech.com](http://www.comfiletech.com).



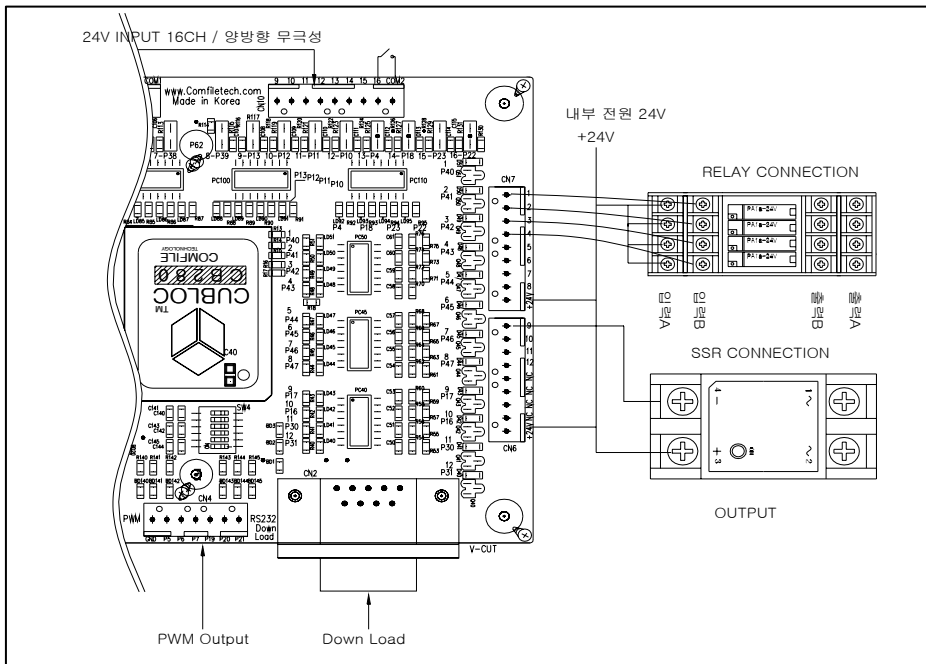
**3. How to connect I/Os**

As you can see in the picture below, inputs are separated by labels COM1 and COM1. Output voltage is 24V and no external power is required.

Output power uses CUBASE's internal power and GND are connected together. The baseboard is ready for SSRs and other relays.

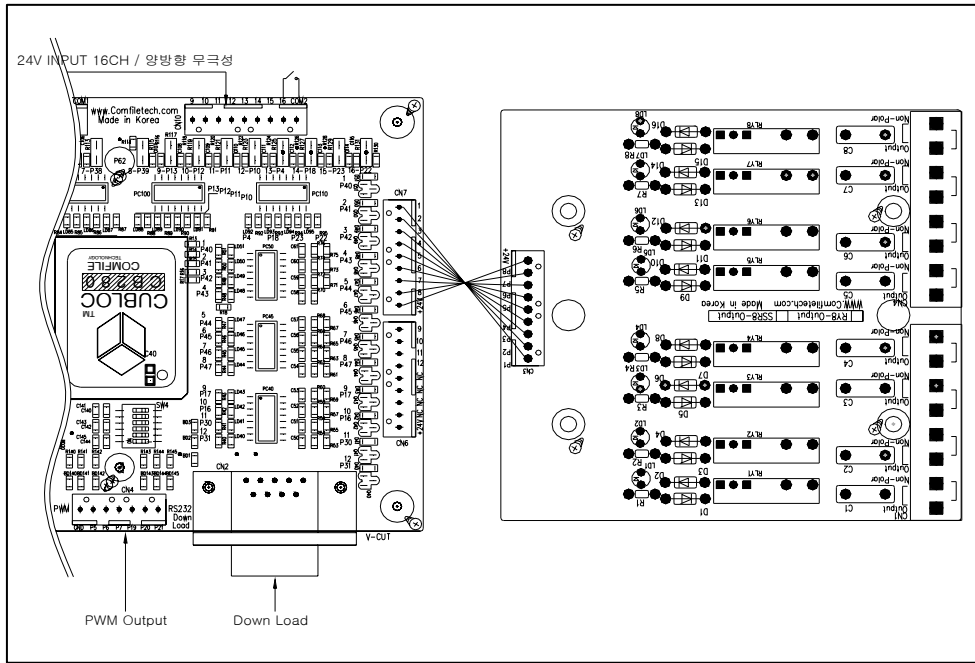
Each port will consume following amounts of current.

Input 9V — 3.62mA, Input 12V — 5mA, Input 24V — 10mA.



**Connecting CUBASE-32M and RELAY8-OUTPUT**

When you use RCABLE9-B and Comfile's RELAY8-OUTPUT, no external power is needed.



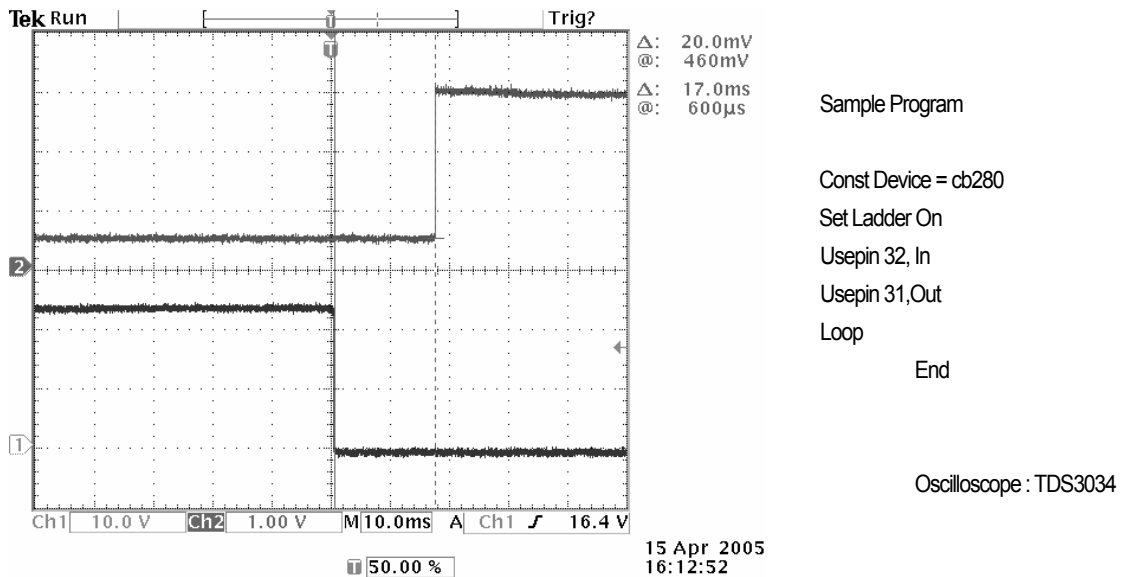
**3.1 I/O Response Time**

Model : CuBASE-32M

CH1 : Input S/W P32      Input Port : P32,P33,P34,P35,P36,P37,P38,P39,P13,P12,P11,P10,P4,P18,P23,P22

CH2 : Output Relay P31      Output Port : P40,P41,P42,P43,P44,P45,P46,P47,P17,P16,P30,P31

I/O Response Time : 17ms



### 3.2 Input Port Test

Input Port : P32,P33,P34,P35,P36,P37,P38,P39,P13,P12,P11,P10,P4,P18,P23,P22

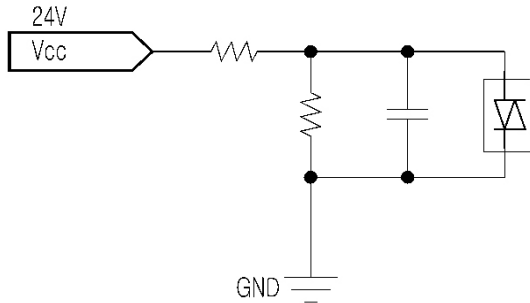
Circuit : Please refer to SECTION 5

Input Current Consumption 9V / 3.62mA, 12V / 5mA, 24V / 10mA

Double Polarity and GND is shared.

Input Port Test

Connection : Connect Vcc(24V) to 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16



### 3.3 Output Port Test

Output Port : P40,P41,P42,P43,P44,P45,P46,P47,P17,P16,P30,P31

Circuit : Please refer to SECTION 4

Warning

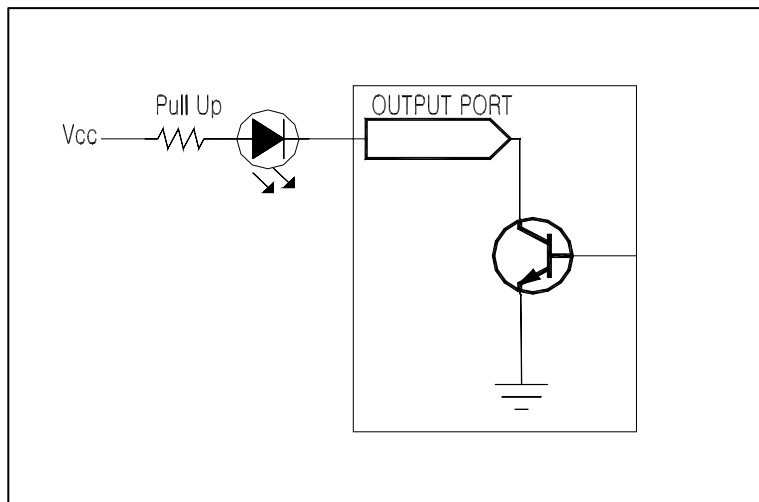
Please use a Pull Up resistor when testing as it's Open Collector type.

When no resistor is used, TR may be damaged.

Relay and SSRs can be connected directly as they have internal resistors.

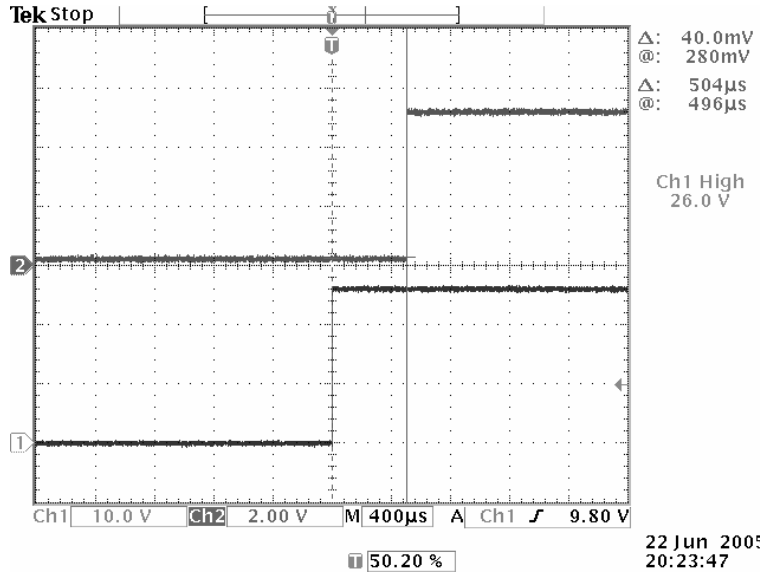
Output Port Test

Connection : Connect 1,2,3,4,5,6,7,8,9,10,11,12 to output. — GND is separated for each CN5,6,7



**4. Interrupt**

Model : CuBASE-32M  
 CH1 : Input Interrupt SW P22,P23  
 CH2 : Output  
 Interrupt Responsible Time : 504uS



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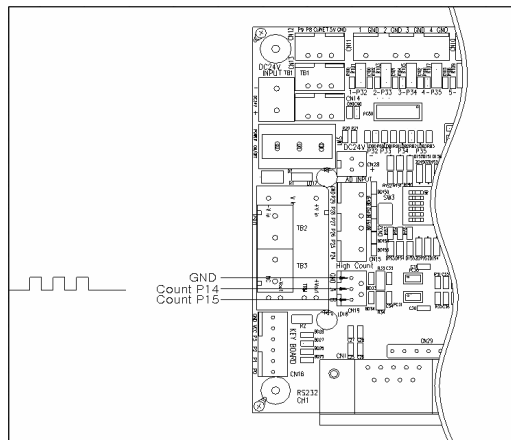
Oscilloscope : TDS3034

**5. HIGH COUNT**

Please connect the Encoder pulse output to P14 or P15 and GND to GND.

Input Port : P14,15

For High Count, you can use 12V or 24V.



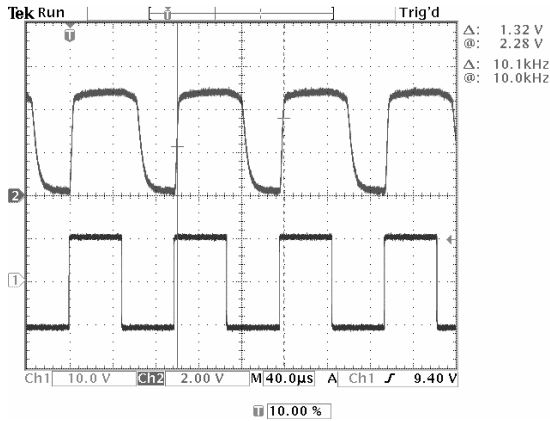
Model : CuBASE-32M  
 CH1 : Input A or B ——— Function Generator  
 CH2 : Output P14(A) or P15(B)

High Count can count up to 10 KHz.

Frequency : 10 KHz

On Time — 5.6uS

Off Time — 16.8uS



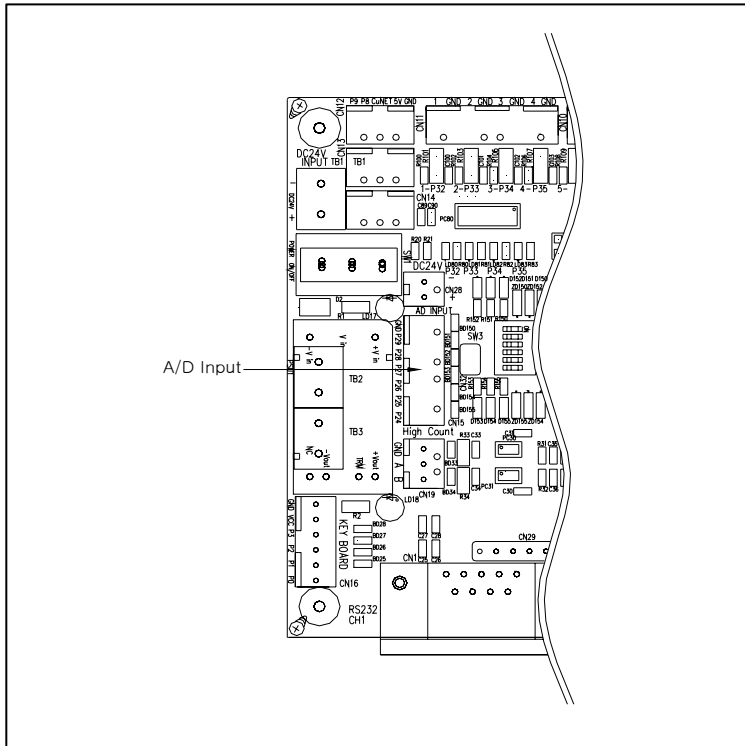
### 6. A/D Input

Please connect A/D Input as shown below. A/D Input voltage range is 0 to 5V.

Port : P24,25,26,27,28,29

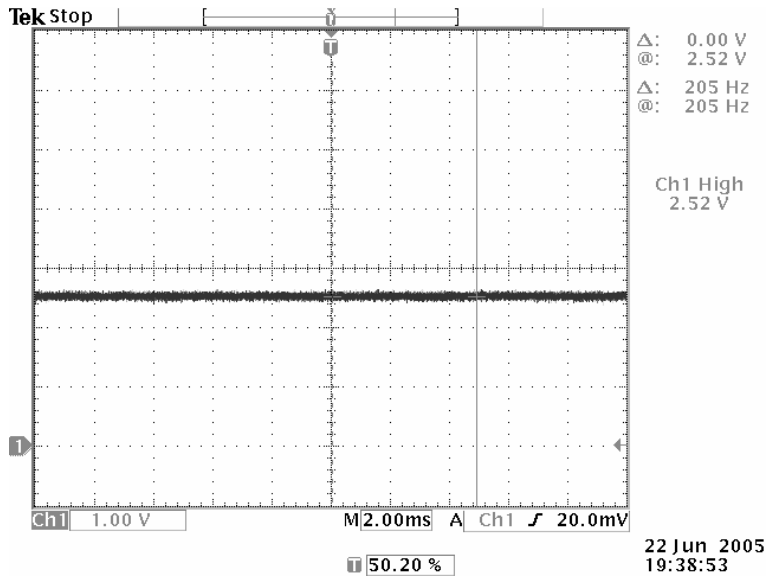
**Warning :** When more than 5V is inputted, the A/D input ports may be damaged.

**When using 10V, please turn SW3 ON and only half of the voltage will be inputted.**



Model : CuBASE-32M

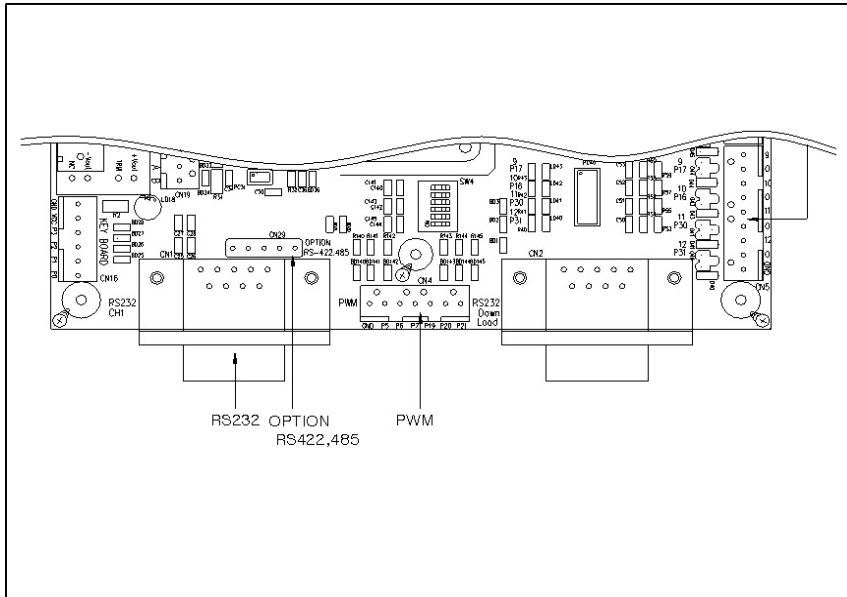
CH1 : Voltage Input 2.5V — DATA Value : 511



## 7. PWM

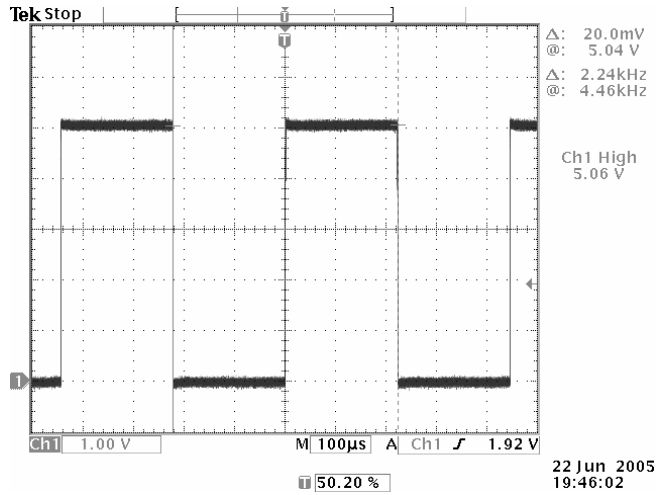
PWM Outputs

Port : P5,P6,P7,P19,P20,P21



Model : CuBASE-32M

CH1 : Voltage Input 2.5V — Data Value : 511



## 8. KEY BOARD

You can connect KEYPAD to the KEY BOARD connectors.

