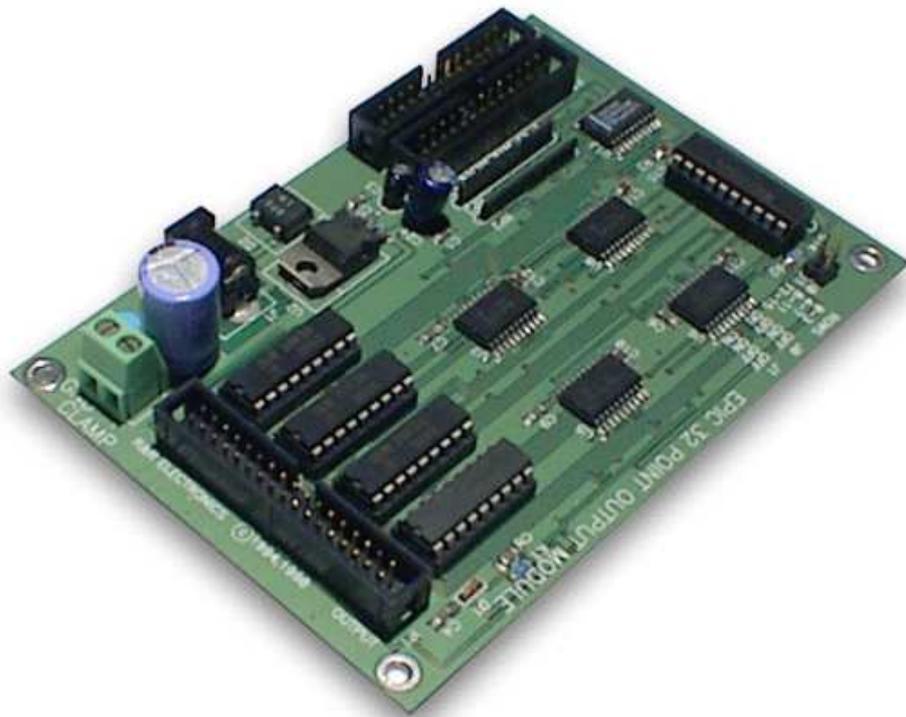


EPIC

32 POINT OUTPUT MODULE



The EPIC 32 Point Output Module

DO NOT power up until all wiring is checked and tested. A short from any ribbon lead to any power supply + will blow the output chip and possibly vaporize a trace on the board. Also, **DO NOT** reverse the power supply leads. This could cause a Fourth of July show in your cockpit!

If a battery charger is used for the external supply, connect a 4700 microfarad 25 volt or greater capacitor across the supply leads, + to the + and ground to the -. Battery chargers are pulsating DC and should be smoothed out with the capacitor. Rule of thumb is about 1000 microfarads per amp. That is amp of usage, not capability. If you have a 100 amp supply and only use 1 amp, you still only need a 1000 microfarad capacitor. These are available at Radio Shack or any electronics parts supplier.

Inductive loads should have a diode connected across the winding with the cathode (band end) connected to the supply (+) side.

Wire power supply ground(s) (-) to the output module CLAMP GROUND terminal (Green Terminal block). If the supply is the low current module supply (ribbon lead #1) and no external supplies are being used, the CLAMP GROUND terminal can be left unconnected.

Wire the positive (+) lead of the power supply used to the CLAMP + (Green Terminal block). If multiple power supplies are used (5/12/24 volt), wire the highest voltage lead to the CLAMP + terminal.

Plug 26 wire ribbon from output module 26 pin header to open connector in EPIC expansion bus daisy chain.

Plug power supply 12 VDC into power connector on module. Polarity does not matter.

After making any wiring changes, unplug the 34 pin ribbon from the module, power up, and short each lead, except 1 (first wire on end marked with triangle, usually with red stripe), and 2 (ground) to ground by using a clip lead to ground and a small solid wire (resistor lead is good) on the other end of the clip lead. Place the wire in each hole of the female ribbon and check that the desired result happens. Plug the ribbon back into the module after testing. This assumes an external power supply. If using the internal power supply (from wire #1 of the ribbon) you will have to provide power (+12V) to wire #1.

Tutorial:

1. Wire a test LED. Connect cathode (usually flat side) to 34 lead ribbon wire #3 (row 0, bit 0). Wire a 1k, ¼ watt resistor to the LED anode. Wire the other end of the resistor to 34 lead ribbon wire #1 (+).

2. EDIT LEDTEST.EPL

```
#define fastscan 0
#define output 2
definemodule (0,fastscan,0,7)           ;define input module 0 DB15's
definemodule (0,output,0,4)           ;define output module 0 rows 0-3

#define TESTLED 0,0,0b00000001       ;test LED at output module 0 row 0 bit 0

;led_on{setpoint(TESTLED)}           ;turn on
;led_off{clearpoint(TESTLED)}        ;turn off
;flip_led{flippoint(TESTLED)}        ;reverse LED state
:check_led{fpoint(TESTLED)led_off elseled_on}
definebutton(0,on,check_led)
definebutton(1,on,flip_led)
```

3. Run EPL LEDTEST
4. LOADEPIC LEDTEST
5. Plug a joystick into "A" connector.
6. Each time trigger (button 0) or button 1 is hit, LED will reverse.

See also SENDDATA in SYNTAX.TXT