

Dual Universal Relay Card Kit Relay-2-512

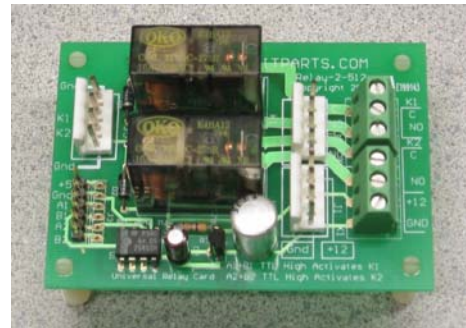
SCOPE: Robotics, Automotive, Microcomputer Peripheral (PIC, Motorola, Rabbit, Z8), Experimenter

- (2) 12 Volt SPST High Current Relays
- 12 Volt DC operation
- Molex connectors and terminations provided
- (Optional Phoenix screw contact terminals)
- (Optional Aluminum Enclosure)
- TTL logic level input
- Coil to ground connections provided
- 5 Volt Regulator provided (78L05)
- Light Emitting Diode Indication
- 2 inch by 3 inch mounting footprint

The universal Relay card provides the components to construct a 12 volt relay interface board to control dual high current loads from a 5 volt input or contact closure. It was designed to extend the current carrying capacity of microcontrollers or switch contacts.

The kit consists of a high quality double-sided circuit card with (2) 12 Volt SPST 16 Amp relays. The relay is controlled by a National Semiconductor DS75452 dual peripheral driver. Each half of the driver provides (2) AND gate inputs for TTL Control. Relay coil low sides are also accessible providing a coil closure by grounding.

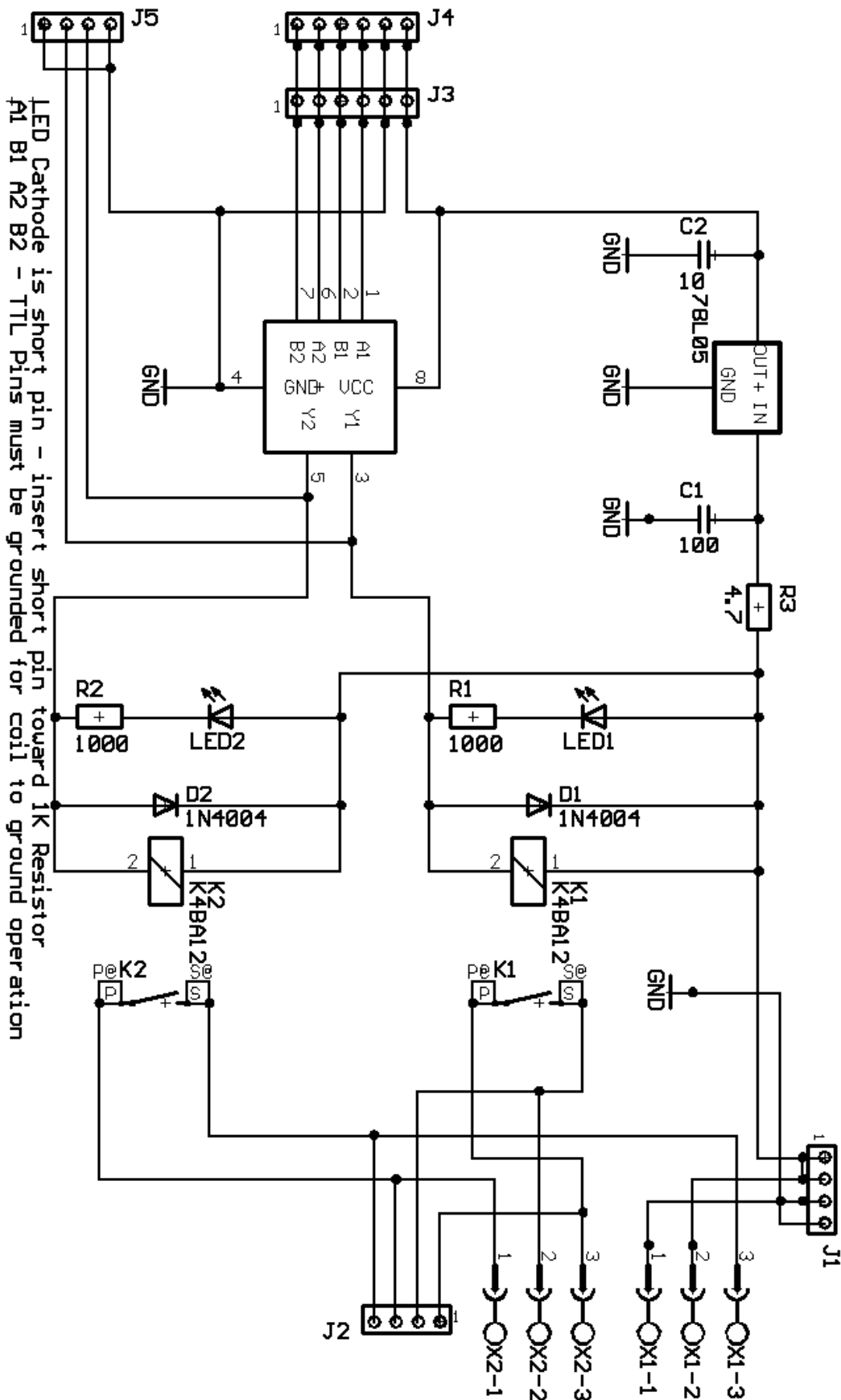
A 12 Volts DC power source, provided by user, supplies the board. A 5 Volt regulator is provided on the board to power the peripheral driver. Each relay has a Light Emitting Diode (LED) providing indication of operation. Molex connectors are provided for external connections (Phoenix Contact screw terminals optional).



Relay-2-512

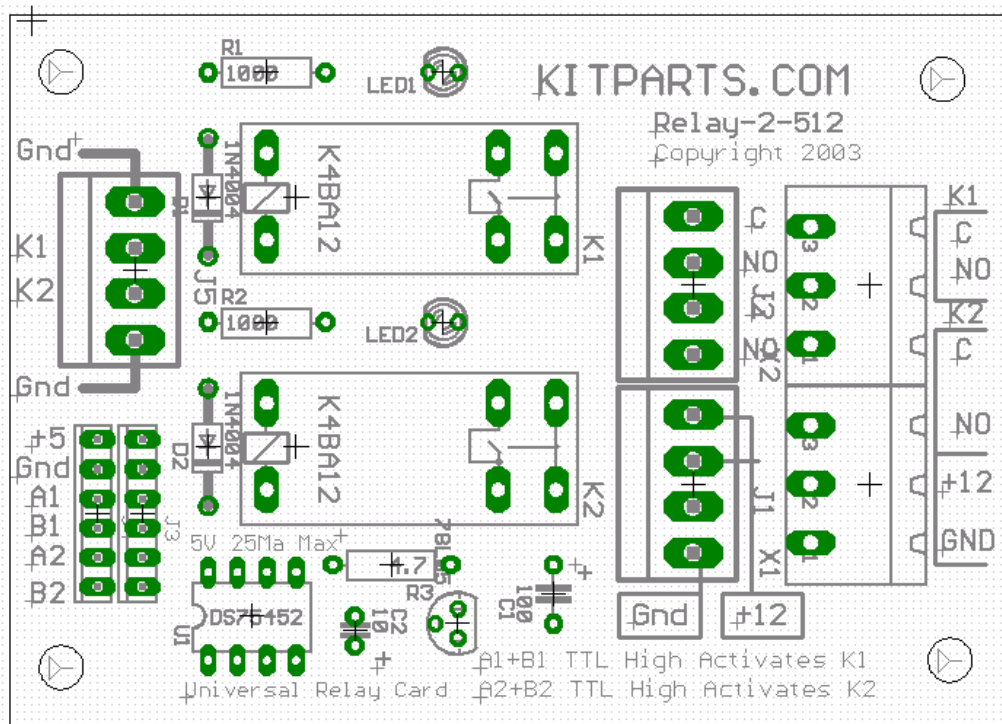


Optional Enclosure



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Schematic (KITPARTS 2003)



Dual Universal Relay Card Kit Relay-2-512 (size 2 X)
Circuit Board (KITPARTS 2003)

Part	Value	Description
78L05		VOLTAGE REGULATOR
C1	100	100UF @ 25Volts
C2	10	10UF @ 25 Volts
D1	1N4004	DIODE
D2	1N4004	DIODE
J1		Molex connector
J2		Molex connector
J3		.1 inch inline 5 position
J4		.1 inch inline 5 position
J5		Molex connector
K1	K4BA12	RELAY
K2	K4BA12	RELAY
LED1		LED
LED2		LED
R1	1100	1/4 W 5%
R2	1100	1/4 W 5%
R3	4.7	1/4 W 5%
U1	DS75452	Dual Driver National Semi
X1		PHOENIX
X2		PHOENIX
PCB		Printed Circuit Card
Stand Off		.150 X .75" Stand Off

Parts List (KITPARTS 2003)

Substitutions may occur based on part availability

J1	
Pin 1	+12 Volts
Pin 2	+12 Volts
Pin 3	Gnd
Pin 4	Gnd

J2	
Pin 1	K1 Common
Pin 2	K1 NO
Pin 3	K2 Common
Pin 4	K2 NO

J5	
Pin 1	Gnd
Pin 2	K1 Coil
Pin 3	K2 Coil
Pin 4	Gnd

J3	
Pin 1	B2
Pin 2	A2
Pin 3	B1
Pin 4	A1
Pin 5	Gnd
Pin 6	+5 Out

J4	
Pin 1	B2
Pin 2	A2
Pin 3	B1
Pin 4	A1
Pin 5	Gnd
Pin 6	+5 Out

X1	
Pin 1	Gnd
Pin 2	+12 Volts
Pin 3	K2 NO

X2	
Pin 1	K2 Common
Pin 2	K1 NO
Pin 3	K1 Common

Connector Pin Assignments Relay-2-512 (KITPARTS 2003)

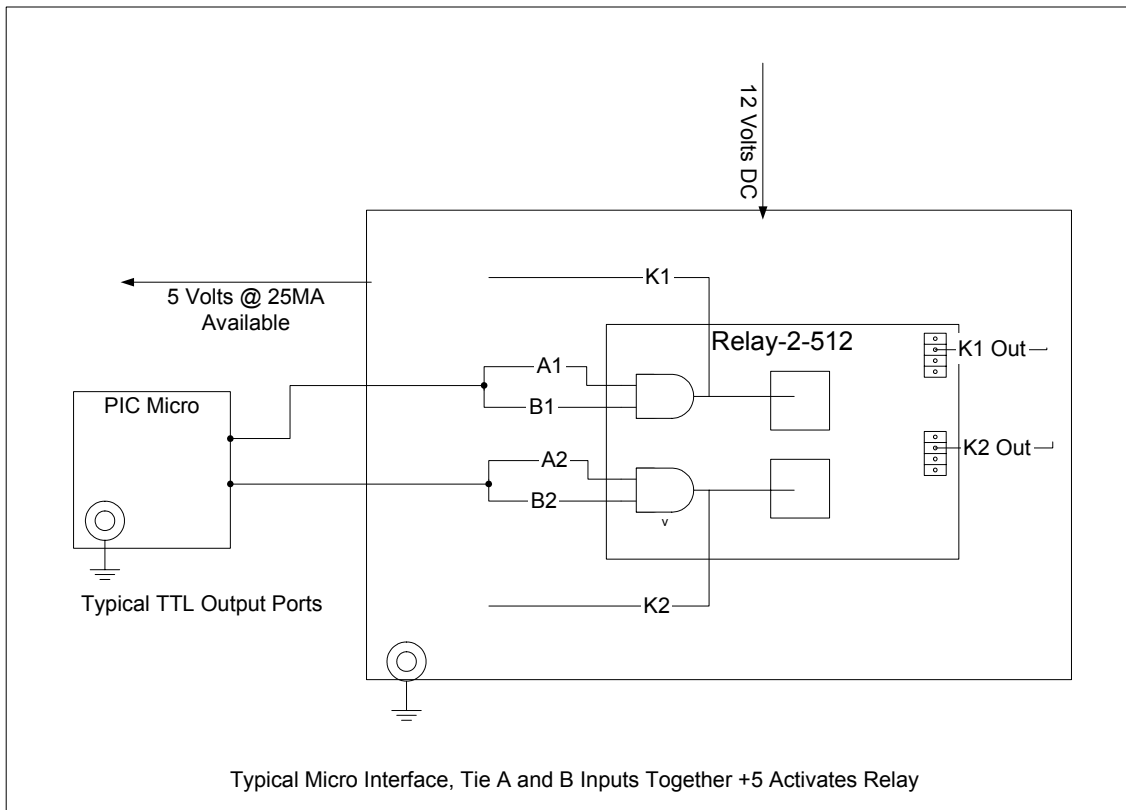


Figure 1

The following figure provides a simple application depicting the Relay-2-512 being activated by a +5 Volt Logic Level from a microcomputer. A 5 Volt output is available for powering external logic; it is limited to 25 MA.

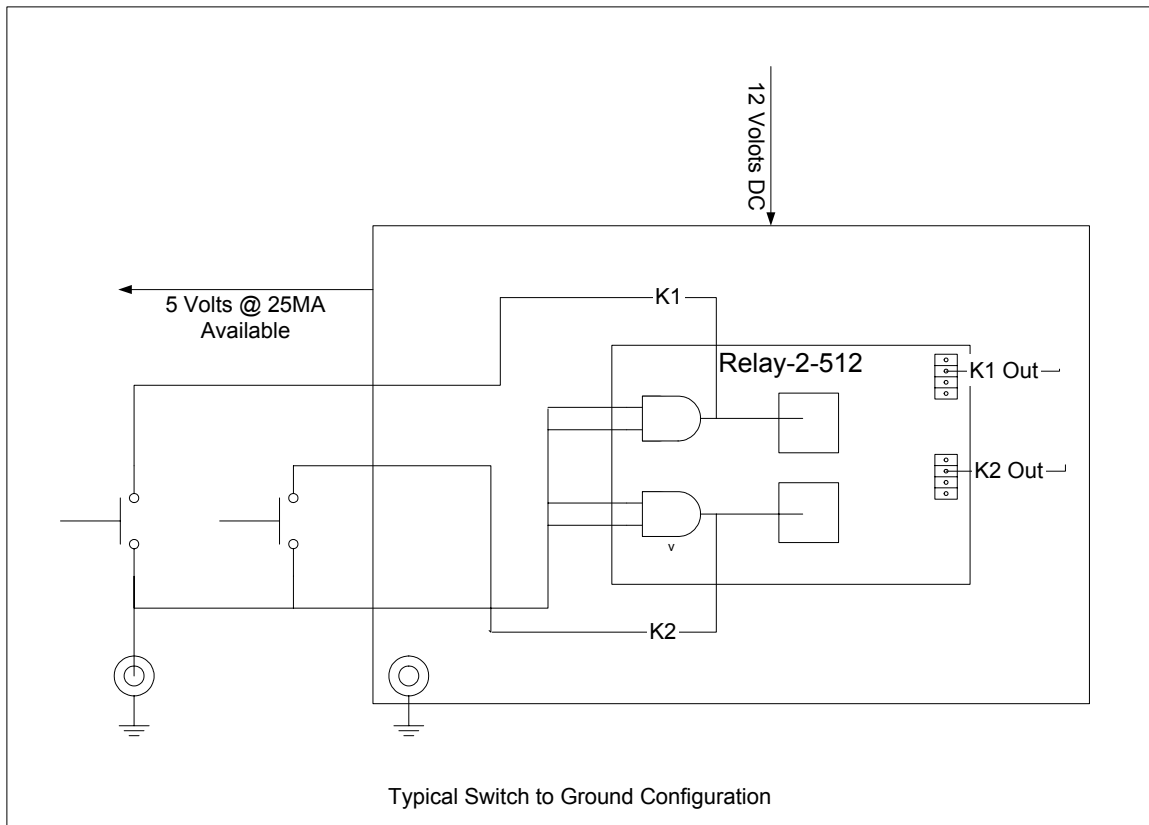


Figure 2

The following figure depicts the Relay-2-512 being activated by bypassing the TTL driver and grounding the relay coil. Note: Inputs A1, B1, A2, B2 should be connected to Gnd for proper operation in this configuration.

Pricing:

Relay-2-512-K Kit including all parts Molex style connectors and plugs	\$25.00
Optional Phoenix screw contact terminals: Option 1	Add \$ 3.00
Optional Enclosure: Option 2	Add \$ 6.00
Relay-2-512-A Assembled and tested	\$40.00