

# Trigger on Broken Circuit

## Alternative set up: Trigger on Loss of Trigger Voltage

### 1. STANDARD AND ALTERNATIVE TRIGGER SETUPS

Trigger selection is done via the two columns of pins (J2) positioned in the top-centre of the DualTimer's board. Each column has 3 pins.

#### 1.1 Standard Setup: Application of a Trigger

The standard Trigger setups are described in the Generic manual instructions entitled *DualTimer12*. The DualTimer is to detect the application of one of two sorts of Triggers at the TRG terminal:

- a **Positive Trigger** (+3<sup>(1)</sup> to + 24v DC), or
- a **Negative Trigger** (0v DC).

#### 1.2 Alternative Setup: Loss of a Trigger ie Broken Circuit

Alternative Trigger setups exist which may be used to detect the loss of a Positive or a Negative Trigger. In other words, the DualTimer can be set up to **trigger on a broken circuit**.

### 2. ALTERNATIVE SETUP: DETECT LOSS OF A POSITIVE OR NEGATIVE TRIGGER DUE TO BROKEN CIRCUIT<sup>(2)</sup>

Trigger selection is still done via the two columns of pins (J2) positioned in the top-centre of the board. Each column has 3 pins. To detect **LOSS** of a:

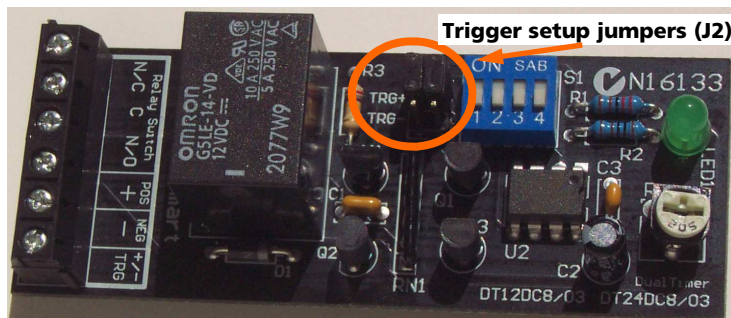
- Positive Trigger** place one jumper across the top and middle pins of column 1, and the second jumper across bottom and middle pins of column 2
- Negative Trigger** place one jumper across the bottom and middle pins of column 1, and the second jumper across the top and middle pins of column 2

### 3. SEQUENCING OF TRIGGER AND TIMER POWER UP

Some thought needs to be given to power up sequencing when using the alternative setup to detect a loss of trigger voltage - especially when using Time Out mode, or a very short time setting on Delay Mode.

If power is supplied to the DualTimer before the trigger voltage is applied to the TRG terminal, the unit will see the delay as a loss of Trigger voltage/broken circuit.

For this reason, simultaneous power up<sup>(3)</sup> or application of the Trigger voltage prior to Timer power up is recommended.

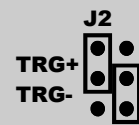


#### Notes:

1. A minimum Positive Trigger of +5 volt DC is recommended, especially in "dirty" electronic environments.
2. Same setup for the 24v DC supply DualTimer24 (DT24DC8/03) modules.
3. Simultaneous power up is normally fine, but you should check this for your specific application.
4. Refer to 12 volt coil Relay Module's manual (on web site) for important additional information including relay switch contact ratings (AC and DC voltage, current, power), and other specifications.

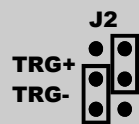
### JUMPER J2 SETUP<sup>(2)</sup>

#### Alternative Trigger Setup: Detect Loss of Trigger / Broken Circuit



#### Loss of Positive Trigger:

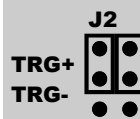
- Jumper 1 across top and middle of left column
- Jumper 2 across middle and bottom of right column



#### Loss of Negative Trigger:

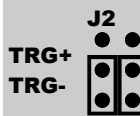
- Jumper 1 across middle and bottom of left column
- Jumper 2 across top and middle of right column

#### Standard Trigger Setup: Detect Application of Positive or Negative Trigger



#### Application of Positive Trigger:

- Jumper 1 across top and middle of left column
- Jumper 2 across top and middle of right column



#### Application of Negative Trigger:

- Jumper 1 across top and middle of left column
- Jumper 2 across top and middle of right column

#### Important

1. Colour and appearance of components may vary from that shown in pictures.