



# Grade 2/3 Wiring Guide

RINS1552-6

The Deltabell E, Plus and X can either be wired Grade 2 or Grade 3. As the terminals are different from our Grade 2 range of Deltabell's, this guide has been created to help in the wiring of both Grade 2 and 3 installations on popular control panels.

## NEW EN GRADE 3 FEATURES

The Deltabell now has an output on the PCB called 'FAULT', this is used to monitor the SAB back up battery. **This output does not need to be wired on to Grade 2 installations.**

The Deltabell will do an active self test on the SAB back up battery every 24 hours. If the SAB back up battery fails it's self test, then the FAULT relay will open and notify the control panel of a 'Warning Device Fault'. It may then be necessary to replace the SAB back up battery.

The Deltabell siren trigger wire input must also be monitored to be compliant at Grade 3. On some control panels it may be necessary to connect a resistor between the control panel siren output and 0V or 12V. **This must also be done for Grade 2 installations.**

Please refer to the full Deltabell manual for Pyronix and Castle connections, for all other control panels (including other manufacturer's) please follow this guide for all Grade 3 connections. Grade 2 connections are described below.

NOTE: If using 2 Grade 3 Deltabells please do not parallel the bell trigger wire. Always use a separate output. Strobe trigger wires can be wired parallel.

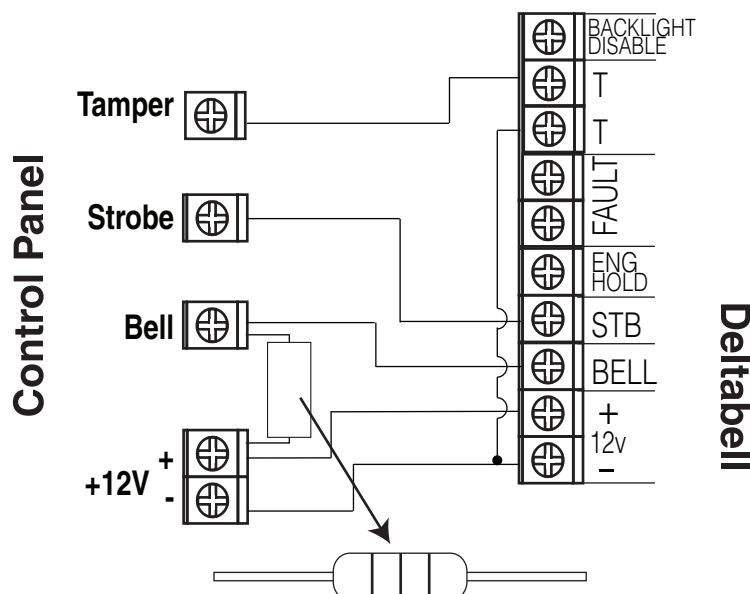
## GRADE 2 WIRING NOTES

If the Deltabell is required for a Grade 2 installation, the FAULT terminals do not need to be connected.

However, a resistor may be needed between the control panel siren output and 0V or 12V.

The example to the right shows how to connect a Deltabell to a control panel on a Grade 2 installation. The value of resistor between the siren output and 0V or +12V will depend on the make of control panel.

A list of control panels and their resistor values for the siren trigger are present on the next page.



Please see the resistor table on the next page for siren output resistor values for other manufacturer's control panels.

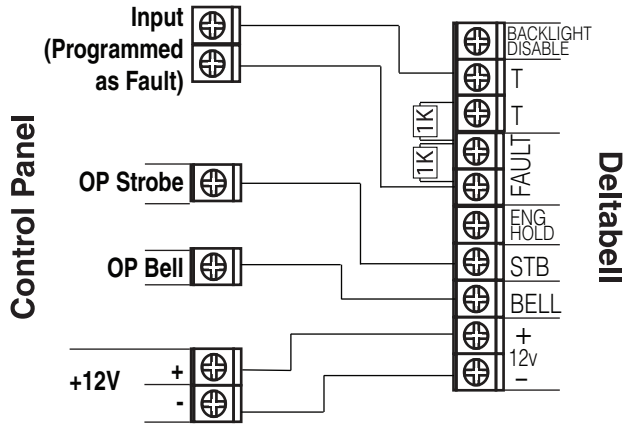
## WIRING RESISTOR SUMMARY

CONTROL PANEL	SIREN TRIGGER RESISTOR	FAULT RESISTORS GRADE 3 ONLY	PAGE
HONEYWELL	n/a	1K/1K	3
COOPER	4K7	4K7/2K2	3
SCANTRONIC 9600	4K7	n/a	3
SCANTRONIC 9651	1K	n/a	3
MENVIER	470Ω	n/a	3
ARITECH CD9503/CD15003	4K7	4K7 (T to 0V)	3
ATS 2003,3003, 4003	1K/1K	n/a	4
ATS 2000, 3000, 4000	4K7	n/a	4
TEXECOM	470Ω	4K7/2K2	5
RISCO (GARDTEC)	4K7	6K8/4K7	5
GUARDALL PX48i	4K7	n/a	5
PYRONIX (PRE VERSION 9)	10K	4K7/4K7	5
CASTLE EURO 46 (PRE VERSION 9)	470Ω	4K7/2K2	5
CASTLE EURO 76,162,280 (PRE VERSION 9)	10K	4K7/2K2	5

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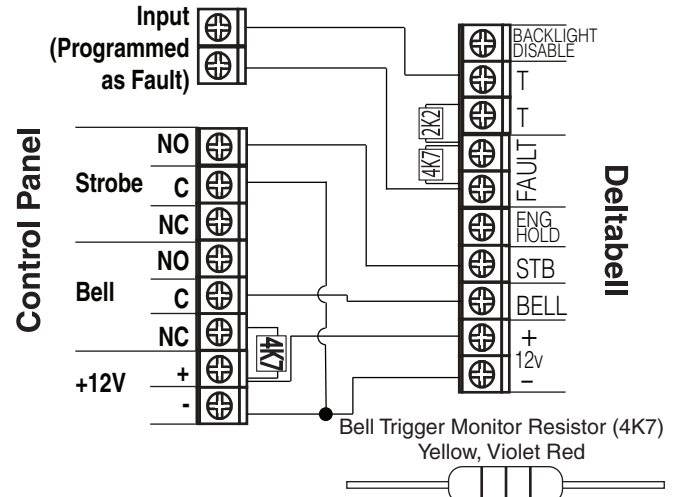
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## HONEYWELL



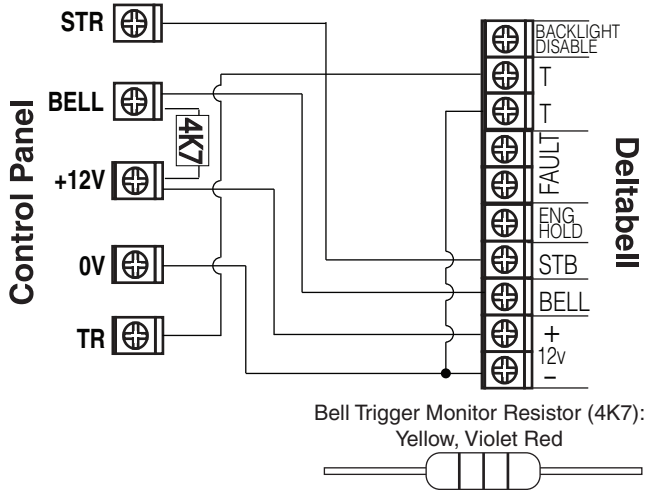
Tamper/Fault resistor values shown are 1K Alarm and 1K Tamper. These values may change depending on the system programming.

## SCANTRONIC / COOPER

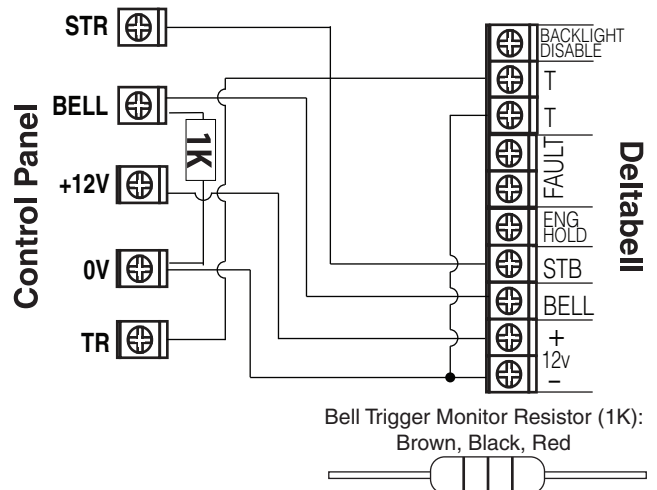


Tamper/Fault resistor values shown are 4K7 Alarm and 2K2 Tamper. These values may change depending on the system programming.

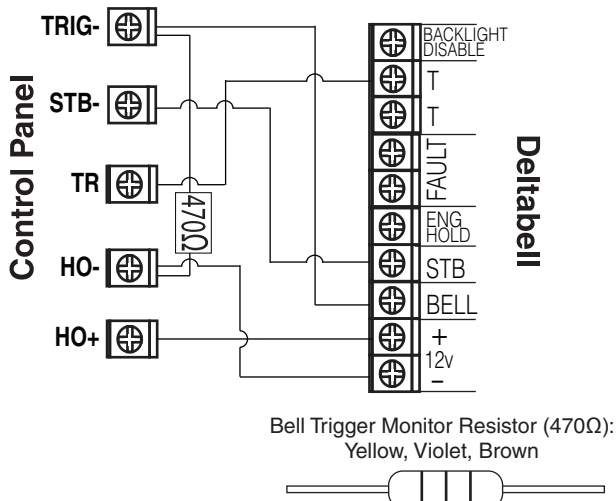
## SCANTRONIC 9600



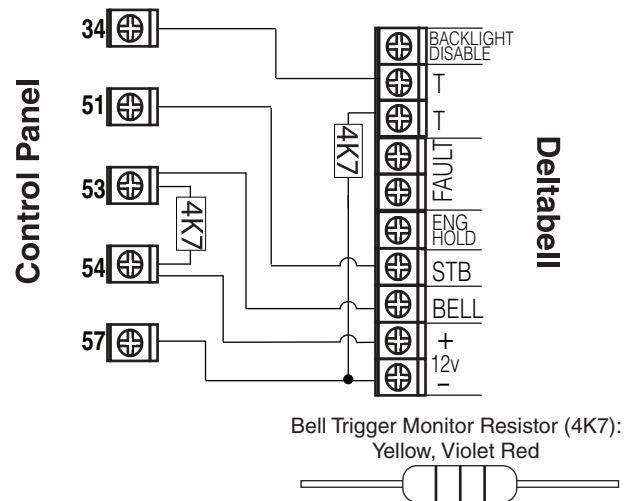
## SCANTRONIC 9651



## MENVIER



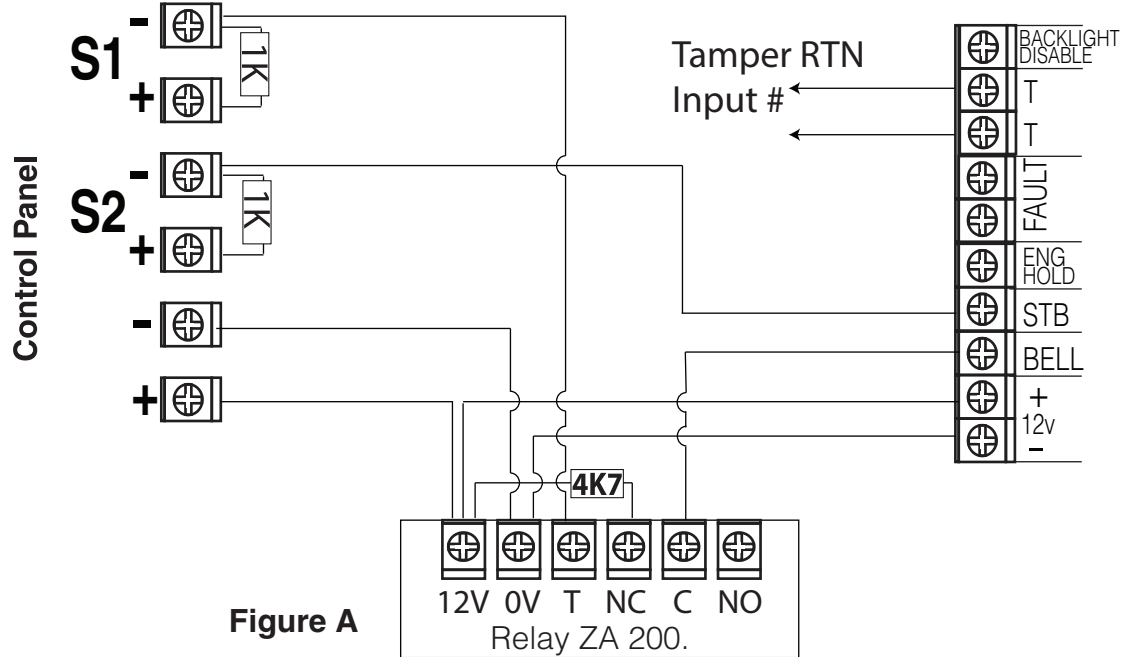
## ARITECH CD9503/CD15003



## ARITECH ATS GRADE 3 WIRING DIAGRAMS

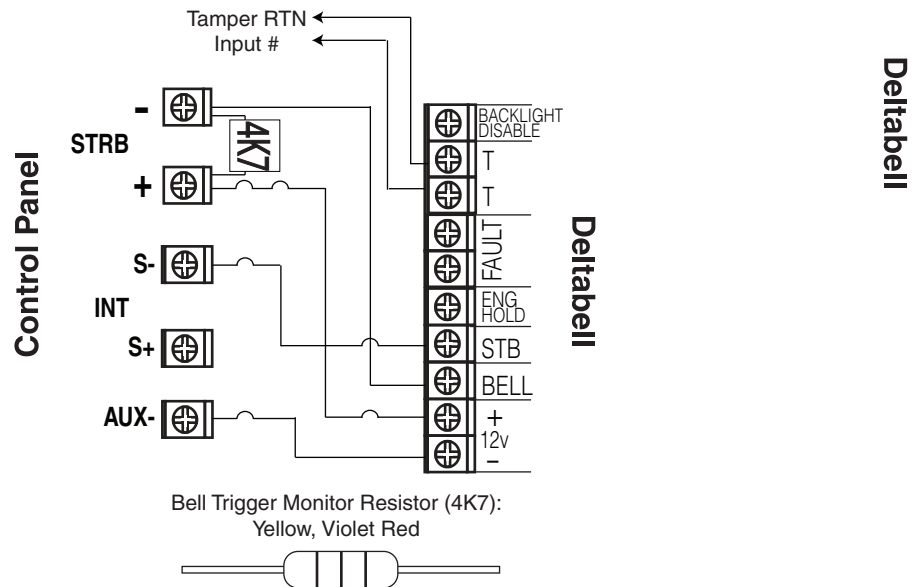
When wiring an Aritech ATS 2003 3003 4003 the bell trigger wiring must be wired through a relay,

### ATS 2003 3003 4003

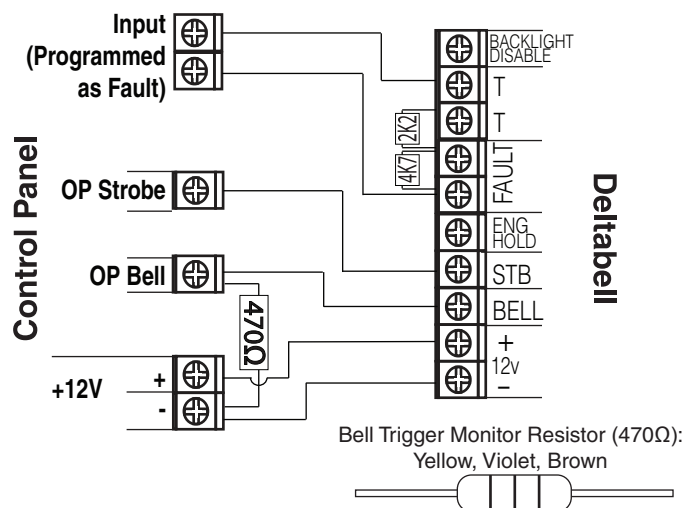


### ATS 2000, 3000, 4000

**NOTE:**  
The STRB output needs to be programmed as BELL

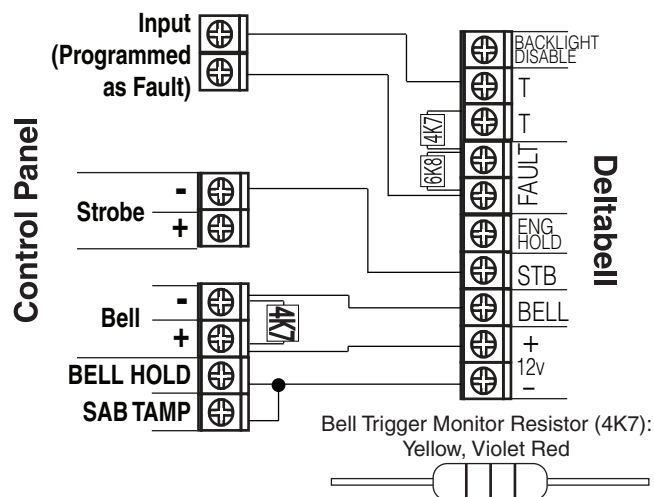


### TEXECOM



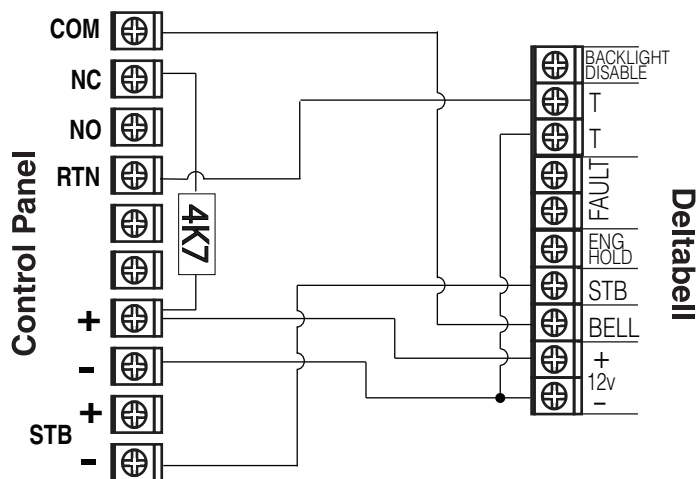
Tamper/Fault resistor values shown are 4K7 Alarm and 2K2 Tamper. These values may change depending on the system programming.

### RISCO (GARDTEC)

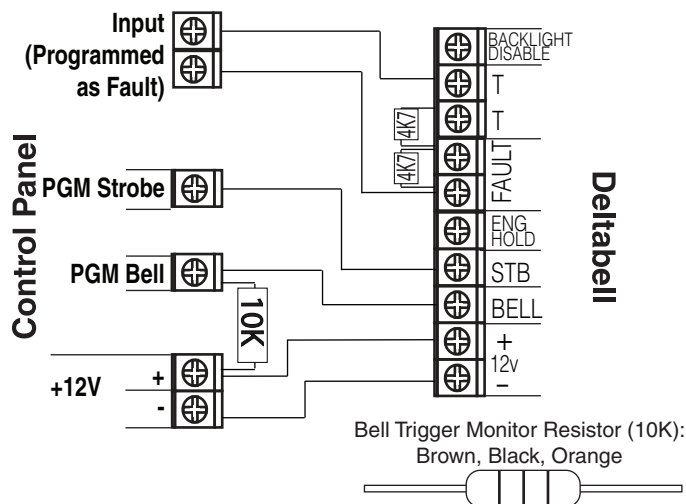


Tamper/Fault resistor values shown are 6K8 Alarm and 4K7 Tamper. These values may change depending on the system programming.

### GUARDALL PX48i

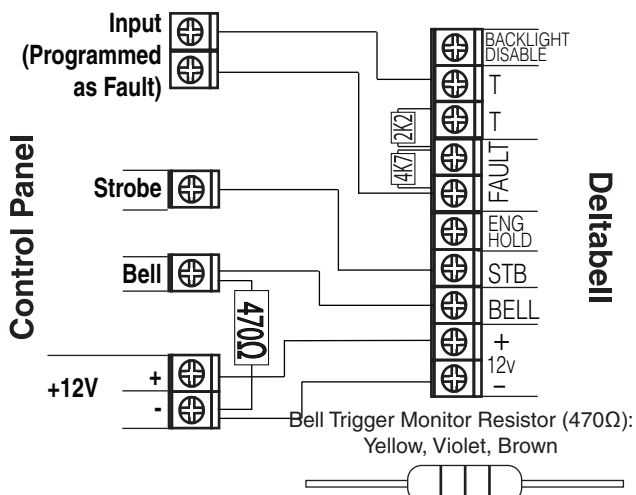


### PYRONIX (Pre-Version 9)



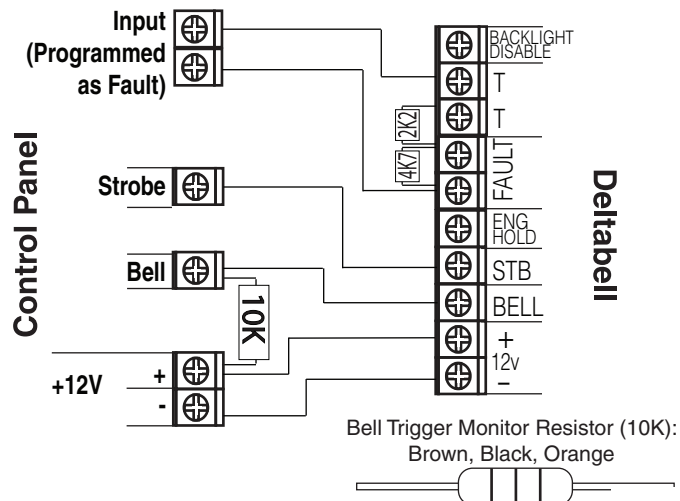
Tamper/Fault resistor values shown are 4K7 Alarm and 4K7 Tamper. These values may change depending on the system programming.

### CASTLE (Pre-Version 9 - EURO 46)



Tamper/Fault resistor values shown are 4K7 Alarm and 2K2 Tamper. These values may change depending on the system programming.

### CASTLE (Pre-Version 9 - EURO 76, 162, 280)



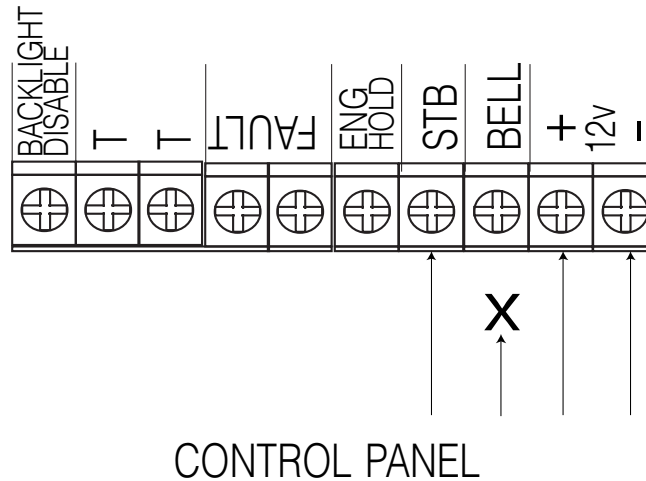
Tamper/Fault resistor values shown are 4K7 Alarm and 2K2 Tamper. These values may change depending on the system programming.

## DELTABELL BELL TRIGGER MONITORING INSTALLATION GUIDE

- **MINIMUM BELL TRIGGER MONITORING VOLTAGE = 1.6 VOLTS**
- **MAXIMUM BELL TRIGGER MONITORING VOLTAGE = 3 VOLTS**

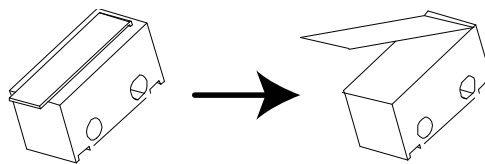
### Step 1:

- Wire the Deltabell as shown in the Deltabell installation instructions, but leave the Bell Trigger wire disconnected.



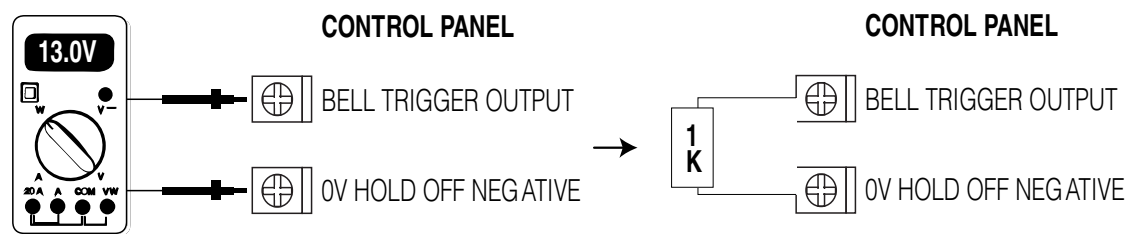
### Step 2:

- When the Deltabell is powered up make sure that the Deltabell Tamper Switch is in its open state. This will ensure that the Bell Trigger Monitor is disabled until the Deltabell Tamper Switch is closed. This open tamper state on initial power up will prevent the bell from making any noise, and it will ensure an easier installation.



**Step 3:**

- At the **control panel** measure the DC voltage between the 0 Volt Bell Hold off connection, and the Bell Trigger output connection. If the measured DC voltage is 12 Volts or above, then fit a 1K resistor between the 0 Volt Bell Hold off connection and the Bell Trigger output connection. Now move to **STEP 4**. If the measured DC voltage is 0 Volts then move straight to **STEP 7**.



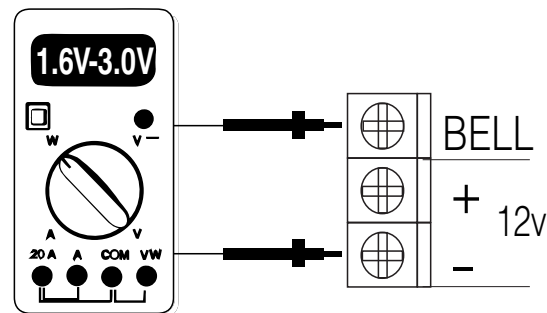
**Step 4:**

- At the control panel measure the DC voltage across the 1K resistor which has been inserted between the 0 Volt Bell Hold off connection and the Bell Trigger output connection . The measured DC voltage reading will be close to the readings shown in the table below.

APPROXIMATE MEASURED VOLTAGE	REQUIRED MONITORING RESISTOR
6.8 Volts	470 ohms
4.5 Volts	1K
4.2 Volts	1K
3.4 Volts	No resistor required
3.1 Volts	No resistor required
2.3 Volts	No resistor required
0 Volts	See STEP 7

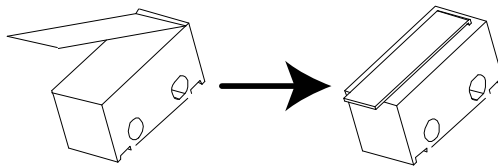
**Step 5:**

- At the control panel remove the 1k resistor from the 0 Volt Bell Hold off connection and the Bell Trigger output connection. Replace the 1k resistor with the chosen value of resistor from the table above. Insert and screw down the Bell Trigger wire into the control panel Bell output connection. Make a final measurement of the DC Voltage at the **Deltabell** between the 0 Volt Bell Hold off connection and the Bell Trigger output, the Bell Trigger Monitor voltage will read between 1.6 Volts and 3.0 Volts DC.



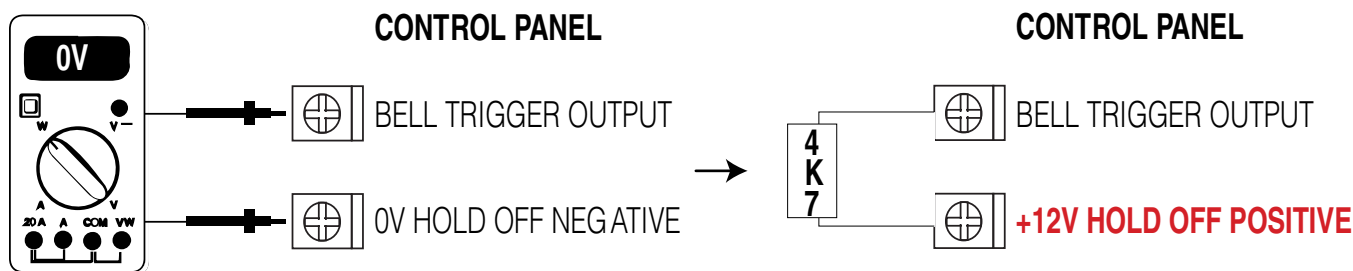
## Step 6:

- Close the Deltabell case lid and Tamper Switch and the Bell Trigger Monitoring will be fully operational.



## Step 7:

- If 0 Volts is measured when following instruction number 3, then ONLY fit a 4k7 resistor between the control panel +12 Volt Bell Hold off connection and the Bell Trigger output connection. The Bell Trigger wire can now be inserted and screwed down in the control panel Bell Trigger output connection.



Most Panels fit within the table above if you have any doubts please contact technical support for assistance:

Telephone: +44(0)845 6434 999 (local rate) or +44(0)1709 535225

Opening Hours: 8:00am – 6.30pm, Monday to Friday

If you require any further assistance please contact Customer Support:  
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