Simulator Installation Details

Simulator Interface

Location	St Mary, Chirk
Simulator Type	Multiple Bell
Sensor Channels Equipped	6
Interface Enclosure	MB7
PCB Versions	Simulator Interface PCB – Rev B LED/Reset Board – Rev A
Firmware	Simulator Interface v2.4
Active Channels	6
De-bounce Timer	3ms
Power/Data Cable Length	14m
Power Supply	9v
Serial Port	USB-Serial Adapter (Prolific)
Simulator Software Package	Abel v3.9.0b
Notes: Reset switch fitted. Simulator Interface wired for dual-headed Sensors Heads; Channels 1+2 on input connector #1, channels 5+6 on input connector #5. 4-Core cable is used for the dual-headed Sensor Heads on 1+2, and 5+6. Experimental TVS daughter board Rev A fitted (first 6 channels equipped).	

Sensor Heads

Bell	Sensor Head Type	Sensor Head Cable Length	Sensor Head Mounting	Delay Timer (~~ms~~ / cs)
1	Infra-Red – E18-D80NK	5.5m (4-Core)	Frame (Cable Tie)	43
2	Infra-Red – E18-D80NK			44
3	Infra-Red – E18-D80NK	8.0m	Frame (Cable Tie)	45
4	Infra-Red – E18-D80NK	6.5m	Frame (Cable Tie)	46
5	Infra-Red – E18-D80NK	3.5m (4-Core)	Frame (Cable Tie)	47
6	Infra-Red – E18-D80NK			48
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-

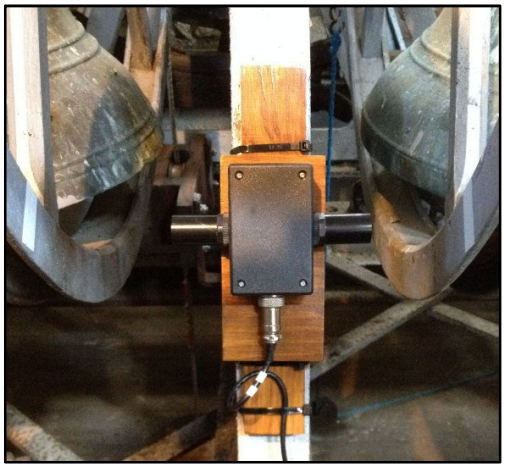
Belfry Installation

Sensor Heads

The Sensor Heads are mounted on softwood support brackets, which are secured to the frame members with cable ties. The Sensor Heads are positioned with the connector pointing downwards to limit water ingress, and the brackets are treated with a proprietary wood preservative. Because the wheels have been treated with a reflective aluminium primer, some of the brackets are cantilevered out from the frame to increase the distance between sensor and reflector.

A length of reflective tape is stuck to the shroud of the wheel, positioned directly opposite the sensor when the bell is down. The tape is self-adhesive, and the wheel shroud was lightly sanded and cleaned with methylated spirits to improve adhesion of the tape.

Dual-headed Sensor Heads are installed on the treble and 2nd, and the 5th and tenor. The following pictures show the dual-headed Sensor Heads.



Treble/Second Sensor Head

Fifth/Tenor Sensor Head

Third Sensor Head

Fourth Sensor Head

Simulator Interface

The Simulator Interface is located next to the frame in an alcove below the louvres in one corner of the tower, and the Power/Data Cable runs down to the ringing room through the disused clock weight shaft. To protect it from the worst of the weather the Interface has been placed in a secondary enclosure, with cable entry arranged so as to limit any water ingress.

The following picture shows the Simulator Interface in position.

Installed Simulator Interface