



## DESIGN SPECIFICATION

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**ISSUE:** C

**DATE:** 11 January 2011

### Wireless CO Alarm for the USA (5460)

**REF:** D-10-02

ISSUE	A	B	C		
DATE	20/10/10	01/11/10	01/02/11		
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APPROVED-MARKETING					
APPROVED-SALES					
APPROVED-TECHNICAL					
APPROVED-MANUFACTURING					

### RECORD OF CHANGE

#### Issue A

Paragraph	Description of change
Document	First issued

#### Issue B

Paragraph	Description of change
13	Removed the battery monitoring from wireless PCB
13	Specified the use of an in-line header
13.1	Updated header connections to show low battery signalling from Apollo side
13.2	Updated system diagram to show battery signalling direction
13.3	Added PCB outline

#### Issue C

Paragraph	Description of change
13	Removed references to radio partner names

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### 13 Radio sub-system (Radio partner)

The wireless sub-system will be designed by a 3rd party radio partner and supplied to Apollo fully tested ready for installation into the product.

The Radio sub-system will include the aerial and radio transmitter such that it complies with the PCB outline below.

The radio sub-system will also include the radio signalling protocol compatible with 2gig wireless residential security system. The status of the CO detector will be read from the interface at regular intervals to ensure that transmissions to the panel comply with the required response times.

The CO detector status is signalled through a 6 wire interface, power (2) and status flags (4). This will be in the form of a 6 way in line header. To minimise the possibility of an interconnect failure going unmonitored the input side should endeavour to use switched pull-ups from time to time to confirm that the active pin state is being read.

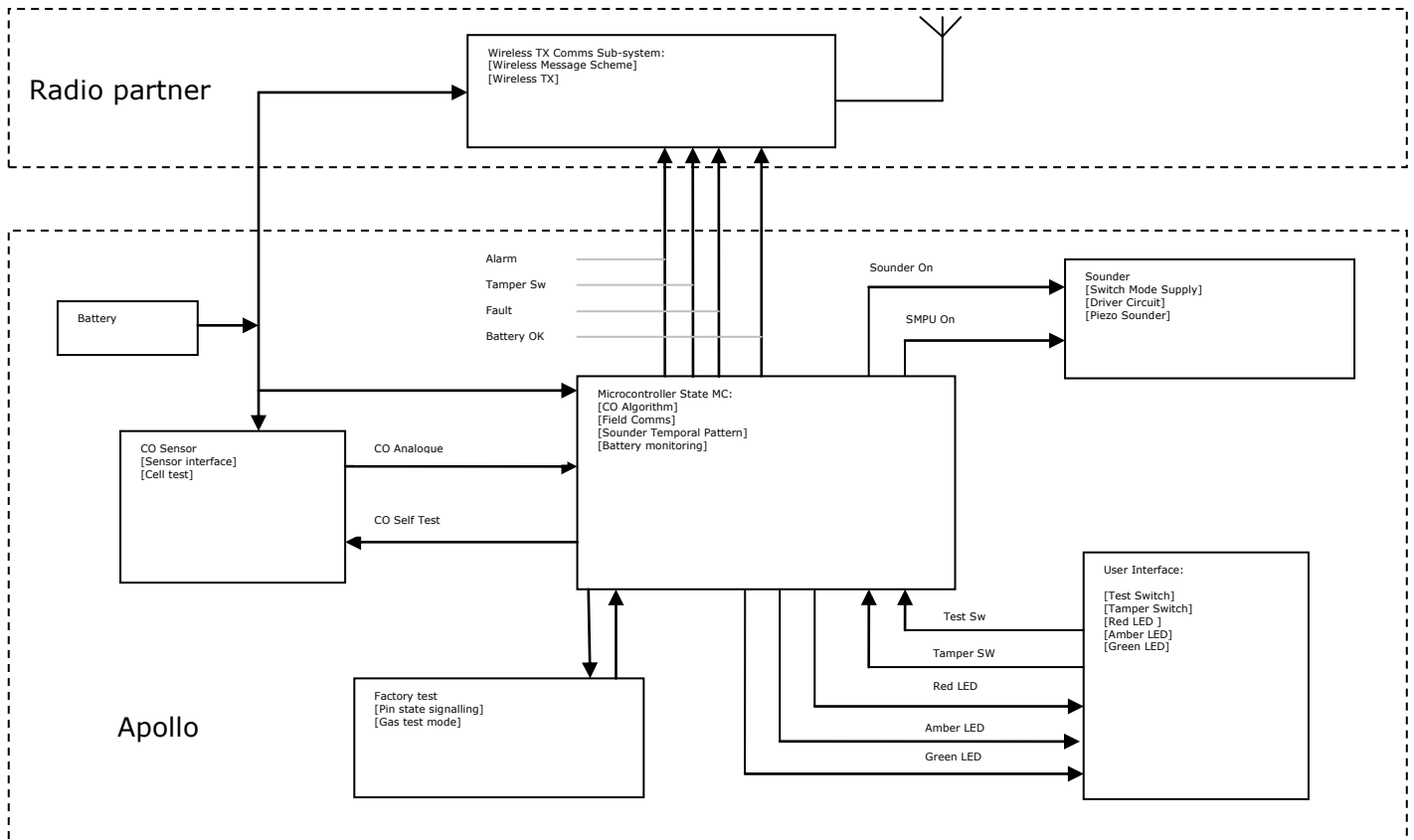
#### 13.1 Specification

Voltage	2.2V to 3.5V
Ripple voltage	200mV
Maximum standby current	20mA for 350ms every hour

#### 13.2 Header connections

Pin No.	Connection	Direction	Signal
1	0V	Apollo to Radio PCB	Battery negative terminal
2	3V	Apollo to Radio PCB	Battery positive terminal
3	Alarm	Apollo to Radio PCB	0=good, 1=alarm
4	Fault	Apollo to Radio PCB	0=good, 1=fault
5	Tamper	Apollo to Radio PCB	0=good, 1=tamper
6	Battery Low	Apollo to Radio PCB	0=good, 1=battery

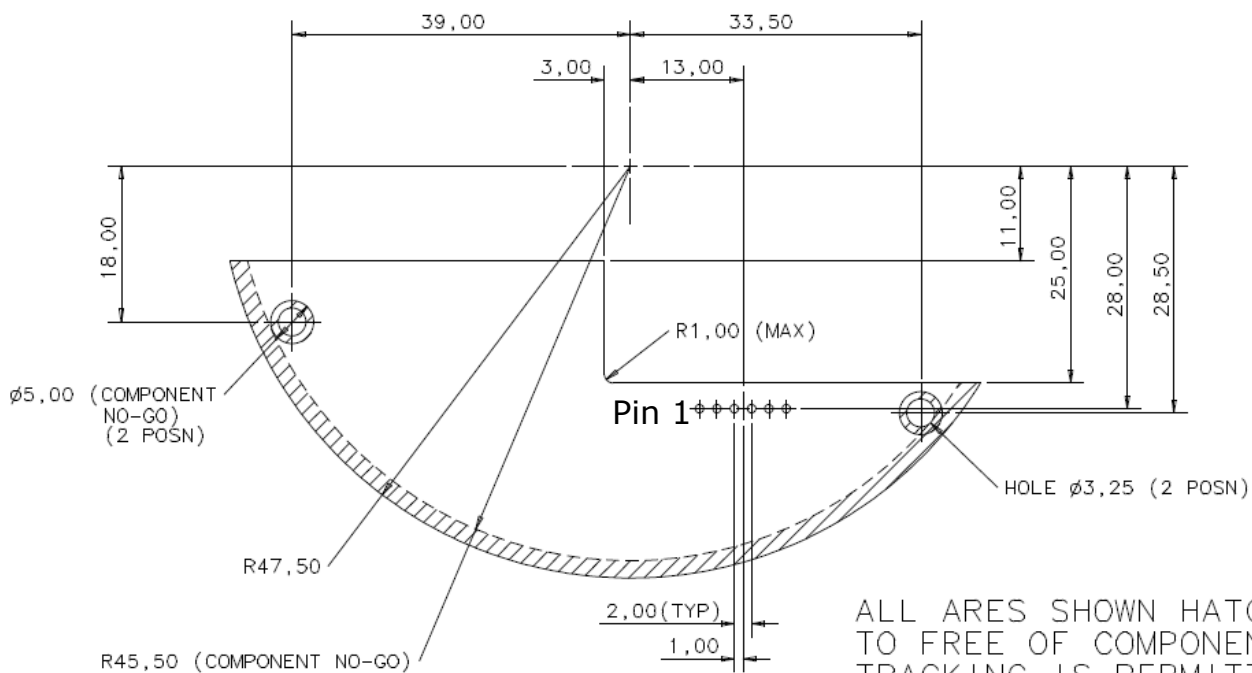
### 13.3 Detector functional diagram



## 13.4 Radio sub-system PCB outline

The outer edge of the PCB (the 47.50mm radius) has a 2mm no-go area for components around the complete arc.

The shaded area may be changed from the current design to square it off or any other form as long as all modifications are within the areas where the shading and the current PCB outline intersect.



ALL AREAS SHOWN HATCHED ARE TO BE FREE OF COMPONENTS. TRACKING IS PERMITTED ON BOTH SIDES OF THE PCB.