Congratulations on choosing the Firebeam reflective optical beam smoke detector. Please use this quick start guide to commission the Firebeam.

Step one. Mounting the head

Screw the head backing plate to the wall - always try to use as sturdy location as possible, such as brick or major structural steels (avoid mounting to outer metal cladding etc).

- 2 knockouts are provided on both sides
- Wire to low level controller using bottom colour coded terminals
- Connect the head to the base plate by first plugging in the connector
- Then screw down the head screws with the 3mm Allen key provided
- Wire into system as required

See suggested wiring diagrams on the following pages.

Step two. Mounting the controller

Important: Mount the controller at eye level and with easy access.

- Screw in through holes provided out side of the rubber seal
- Wire to head using colour coded terminals
generic wiring configuration

switch 4 on all rest off

BROWN  + supply (10.2-30 Vdc)
BLUE    - supply (return)
BLACK   zone +
GREY    zone -
GREEN   earth (screen)

Supply Voltage  12Vdc to 24 Vdc +25% -15%
Quiescent Current 3mA
Alarm Current  3mA
Aligning Current 3mA
Fault / Fire relay contact rating 2A @ 30Vdc

FIRE and EOL components as specified by the panel manufacturer
stepthree. commissioning

to commission the fire beam you must follow the simple procedure below

1. **do NOT** put up the reflector or **COVER** it if in place already!

2. power up the unit - you will see then the screen will default to

3. access the menu system by pressing enter

4. scroll through the menus until you get to commissioning

5. **enter** commissioning and **enter** pre-alignment

6. you will see this screen

7. signal power starts at 10% and the receiver sensitivity starts at 5% and automatically increases until a received signal from the blank wall without the reflector of between 5 and 7% is achieved, it will then stop

8. Now press enter and confirm by pressing the right key. The manual alignment menu will appear press **enter** to enter.
9. **NOW** place or uncover the reflector on the blank wall directly opposite the beam head with a clear path though obstructions such as girders etc.

Once the reflector is in place the AQ value should jump up meaning that the head is now seeing the reflector.

The minimum response you need to see is 40% (below this figure the beam will not self align in the next procedure) the higher the number the better - this can be over 100%

10. **If you do not see a rise in received signal strength** move on to 12. manual alignment

11. **If you have received a received signal reading of over 40%** press back and scroll down to Auto Alignment

First you will see the signal power readings and receiver sensitivity drop if the received signal reading is over 100%. once at 100% or if the reading is under 100% the firebeam will automatically move its X and Y axis until it is positioned on the reflector. (This operation could take 20 minutes)

**Note:** if you break the beam whilst it’s auto aligning it will automatically abort, reset by pressing the left back button and pressing enter to re-start auto alignment

The alignment could take to 20 minutes or more depending on how much aligning is required. Once complete you will see a Align Complete notification, simply press the left back button to exit and your firebeam is now ready and commissioned

You will now see this screen. Air Quality may fluctuate slightly around a couple of % above and below 100
12. If you don’t see a rise in received signal strength

You will be presented with the screen below (AQ-air quality could be any number up to 40%)

Now look at the position of the reflector in relation to the beam head. You will need to angle the beam toward the reflector by moving the head about its X or Y axis using the internal motors.

In the example below you will notice that the reflector is below the line of fire of the beam. So in this case you would need to lower the angle of the beam (-Y) until you receive a AQ (Air Quality) reading above 40% sensitivity. (40 steps of the motor = 1 degree of movement)

To make adjustments to the X and Y axis you need to press enter. This will then display an *(adjustment mode)* beside the X and Y co-ordinates.

Adjustments can now be made to the X and Y axis by using the left(x-), right(x+), up(y+), down(y-) keys. Looking at the reflector this will move the beam across the reflector like so (40 steps = 1 degree) (you can hold the key down for faster increments).

Now press enter to exit *(adjustment mode)* and view changing x and y values. Re-press enter to display *(adjustment mode)* to stop movement or to make a further change to values.

in the example above moving the y axis down(y-) results in a greater % air quality

40 steps = 1 degree off movement
Try and achieve as good a result as possible - it must be **over 40%** or auto align will abort. (the better the result the shorter the auto align time will be - a result over 100 is good!)

Press **enter** to exit adjustment mode(*) and then **left-back** to exit manual alignment to return to the commissioning menu.

Press **enter** and scroll down to auto alignment

press **enter** and the beam head will automatically align on the reflector

**Note:** if you break the beam whilst it’s auto aligning it will automatically abort, reset by pressing the **left back** button and pressing **enter** to re-start auto alignment

first you will see the signal power readings and receiver sensitivity drop if the received signal reading is over 100%. once at 100% or if the reading is under 100% the firebeam will automatically move its X and Y axis until it is positioned on the reflector. *(This operation could take 20 minutes or more)*

Align COMPLETE

the alignment could take up to 20 minutes or more depending on how much aligning is required. Once complete you will see a Align Complete notification, simply press the **left back** button to exit and your firebeam is now ready and commissioned

You will now see this screen. Air Quality may fluctuate slightly around a couple of %.above and below 100
to test that the firebeam is aligned correctly you will need to carry out two tests.

1. a filter test for ‘Fire’

   place the filter provided over the eyes of the firebeam

   having done this the red fire LED will flash on both the head and on the controller and the word FIRE will replace NORMAL on the low level controller display

2. a reflector test, to check that the beam is reflected back from the reflector

   cover the reflector completely within one second. If the beam is correctly targeted on the reflector a fault condition will occur. A amber LED will flash on both the head and on the controller, the word FAULT will appear in the display

Your firebeam has now been commissioned and tested.