How to Install Your Mini House Alarm
An Illustrated Guide

Introduction

This guide walks you through installing your Mini House Alarm for reliable, long-term protection. Follow each step carefully to avoid common pitfalls and ensure a clean, trouble-free setup.

Step-by-Step Planning

Before You Begin

Don’t rush in—planning first will save you time and frustration later.

- **Sketch the protected area**: Include all doors, windows, and nearby power outlets. This helps you visualise sensor placement and cable routing.
- **Decide on Channel 2 usage**: If you need entry/exit delay, plan to use Channel 2 accordingly. To enable the exit/entry delay, ensure the PCB jumper is set to the right most pins.
- **Siren Time:** The siren on time for a panic and intrusion alarm is set by two “trim pots” on the PCB. Setting the to the minimum time is useful whilst testing and setting up the alarm. A “jewelers screwdriver” is needed for this and can be obtained from most Chinese gadget shops. To set for minimum siren time, gently turn the adjustment fully **ANTICLOCKWISE**. When every thing is setup and running correctly, set the time adjustment to maximum by turning each pot fully **CLOCKWISE.** This will give you 3mins for the intruder alarm, and 4mins for a panic alarm.
- **Choose a discreet panel location**: Mount the alarm panel somewhere not immediately visible or accessible when entering.
- **Select a power supply location**: Again, keep it out of plain sight but accessible for maintenance. Ideally, use a dedicated power socket. If your socket only has one outlet, consider upgrading to a double—it's usually a simple job.

Sensor Placement & Cable Routing

- **Review your sketch**: Identify optimal PIR sensor positions—corners are best. Avoid placing sensors near windows, heaters, fans, or air conditioners. (See the installation tips document on our website.)
- **Plan your cable route**: Keep sensor cables high until the final drop to the panel. Avoid routing around door frames.
- **Drill-throughs**: If needed, drill through walls to pass cables between rooms. This is cleaner and more secure than looping around frames. If your attic is accessible and secure, routing through the ceiling and attic can be quicker and tidier.

- **Mounting brackets and PIRs**: Secure the brackets, attach the sensors, and run cables back to the panel.

Wiring & Final Connections

- **Remove the fuse**: Take out the 2A fuse from the panel and store it safely. (If lost, it's a 5×20mm glass, fast-blow, 2A fuse.)
- **Label your cables**: Clearly mark each cable to identify which sensor it connects to.
- **Feed and terminate**: Pass cables through the enclosure and terminate them at the correct terminals.
- **Repeat for panic buttons**: If you're installing panic switches, follow the same cable routing and termination steps.
- **Run siren/strobe cable**: Install a dedicated cable for the siren and strobe unit.

Powering Up

- **Inspect terminal blocks**: Check for stray strands or bare wires that could cause shorts.
- **Connect power last**: With everything else wired, disconnect one wire from the battery at the power supply and turn the AC supply OFF to the power supply. Next, connect your cable to the alarm panel, then to the power supply/charger.

Important Wiring Notes

- RED = Positive
- BLACK = Negative
- Avoid using AC cable (typically BROWN and BLUE).
- Use 0.5mm² stranded cable.
- **Do not use sensor cable**—the thin conductors aren’t suitable for powering the siren and may cause a siren volume drop due to voltage loss.

MHA-100KS Alarm - Power-Up and Test Procedure

1. Initial Setup

- Set the key switch to **Standby**.
- Remove the fuse on the alarm PCB.
- Ensure the **AC power to the power supply/charger is switched off**.
- Connect the **battery** to the power supply/charger.

2. Polarity Check (Recommended if you have a multimeter)

- At the alarm panel:
    - **Terminal 1** must be **positive (+)** with a **RED wire**.
    - **Terminal 2** must be **negative (–)** with a **BLACK wire**.
- At the power supply/charger:
    - The **+ output terminal** should be **RED**.
    - The **– output terminal** should be **BLACK**.
- Double-check polarity at terminals 1 and 2 **before replacing the fuse**.
- **NOTE:** The alarm is protected against incorrect polarity on its power terminal. However its always a good policy to check before applying power.

3. Power-Up Sequence

- Once polarity is confirmed, **insert the alarm panel fuse**.
- The **Power LED** should light up.
- The **Status LED** should come on briefly (about 1 second), then go off—this indicates the alarm electronics are booting up.

4. PIR Sensor Warm-Up

- Most PIR sensors power up in **alarm mode** for **30–60 seconds**.
- During this time, the **Status LED** may remain on.
- Once the PIRs settle, the **Status LED should go off**, confirming the alarm has recognised the sensors.

5. PIR Sensor Walk Test

- Ask an assistant to walk past the **first PIR sensor**—the **Status LED** should light up.
- Repeat with the **second PIR sensor**—again, confirm the **Status LED** responds.

6. Panic Circuit Test (if installed)

- Press a **panic button**—the **siren should sound**.
- Reset the alarm by turning the **key switch to Arm**, then back to **Standby**.
- Repeat this test for **each panic button**.

7. Armed Mode Test (with Entry/Exit Delay)

Assumes **Channel 2** is configured for **entry/exit delays**.

- Set the alarm to **Armed** mode and **immediately exit** the area.
- After **20 seconds**, the siren will emit **two beeps**, confirming the system is armed.

- Wait **10 seconds**, then **re-enter** the area.
- Confirm the **entry PIR sensor detects you** (its LED will light up).
- Do **not reset** the alarm—wait for the **entry delay** (about 10 seconds) to expire.
- The **siren should sound**.
- Reset the alarm by turning the **key switch to Standby**.

8. Instantaneous Sensor Test

- Set the alarm to **Armed** mode and stand still near the **instantaneous PIR sensor**.
- Wait for the **two beeps** indicating the system is armed.
- After about **5 seconds**, walk across the sensor's path.
- The alarm should **trigger immediately** upon detecting movement.
- When everything is OK, set both siren pots to maximum (fully clockwise)

✅ Test Complete

You've now completed the full installation and verification of the **MHA-100KS alarm system**.

MHA-100MK Alarm - Power-Up and Test Procedure

The MHA-100MK procedure is very similar to the KS version. The only difference is the MK version uses our unique MagKey to arm/reset/ and set standby mode rather than a key switch.

1. Initial Setup

- Each alarm panel is set to **standby** mode prior to shipping. The alarm automatically resumes its previous mode after power is restored.
- Remove the fuse on the **alarm PCB**.
- Ensure the **AC power to the power supply/charger is switched off**.
- Connect the **battery** to the power supply/charger.

2. Polarity Check (Recommended if you have a multimeter)

- At the alarm panel:
    - **Terminal 1** must be **positive (+)** with a **RED wire**.
    - **Terminal 2** must be **negative (–)** with a **BLACK wire**.
- At the power supply/charger:
    - The **+ output terminal** should be **RED**.
    - The **– output terminal** should be **BLACK**.
- Double-check polarity at terminals 1 and 2 **before replacing the fuse**.

- **NOTE:** The alarm is protected against incorrect polarity on its power terminal. However its always a good policy to check before applying power.

3. Power-Up Sequence

- Once polarity is confirmed, **insert the alarm panel fuse**.
- The **Power LED** should light up.
- The **Status LED** should come on briefly (about 1 second), then go off—this indicates the alarm electronics are booting up.

4. PIR Sensor Warm-Up

- Most PIR sensors power up in **alarm mode** for **30–60 seconds**.
- During this time, the **Status LED** may remain on.
- Once the PIRs settle, the **Status LED should go off**, confirming the alarm has recognised the sensors.
- When the **Status LED is off**, its time to check the MagKeys. If your MagKey has a sticker on one side, this is because the MagSensor in the alarm enclosure is sensitive to N or S magnetic polarity. Place the side with the sticker against the sticker on the enclosure, you should hear TWO beeps from the siren. This is the alarm going into **ARMED** mode. Place the Magkey on the hotspot again and you'll hear ONE beep. This is the alarm going back to **STANDBY** mode.
- Leave the alarm in **STANDBY** mode.

5. PIR Sensor Walk Test

- Ask an assistant to walk past the **first PIR sensor**—the **Status LED** should light up.
- Repeat with the **second PIR sensor**—again, confirm the **Status LED** responds.

6. Panic Circuit Test (if installed)

- Press a **panic button**—the **siren should sound**.
- Reset the alarm by **tapping the HotSpot once**, this briefly puts the alarm in **ARMED** mode. Then tap once more putting the alarm back to **Standby**.
- Repeat this test for **each panic button**.

7. Armed Mode Test (with Entry/Exit Delay)

Assumes **Channel 2** is configured for **entry/exit delays**.

- Set the alarm to **Armed** mode and **immediately exit** the area.
- After **20 seconds**, the siren will emit **two beeps**, confirming the system is armed.
- Wait **10 seconds**, then **re-enter** the area.
- Confirm the **entry PIR sensor detects you** (its LED will light up).

- Do **not reset** the alarm—wait for the **entry delay** (about 10 seconds) to expire.
- The **siren should sound**.
- Reset the alarm by tapping the hotspot and put the alarm in **Standby**.

8. Instantaneous Sensor Test

- Set the alarm to **Armed** mode and stand still near the **instantaneous PIR sensor**.
- Wait for the **two beeps** indicating the system is armed.
- After about **5 seconds**, walk across the sensor's path.
- The alarm should **trigger immediately** upon detecting movement.
- When everything is OK, set both siren pots to maximum (fully clockwise)

☑ Test Complete

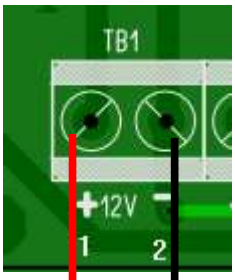
You've now completed the full installation and verification of the **MHA-100MK alarm system**.

Its said a picture **SAVES** a thousand words, to avoid writing several thousand words. The next section illustrates the connections to the alarm.

MHA-100 Connections

Terminal	Description
1	Power +12v DC
2	Power - 0v DC
3	Chan1 +V supply to PIR
4	Chan 1 input from PIR
5	Chan 1 0v
6	Chan2 +V supply to PIR
7	Chan 2 input from PIR
8	Chan 2 0v
9	+12v supply to panic buttons
10	Input signal from panic buttons
11	Siren / Strobe 0v
12	Siren / Strobe +12v
13	Signal relay out N.C. contact
14	Signal relay out Common
15	Signal relay out N.O. contact

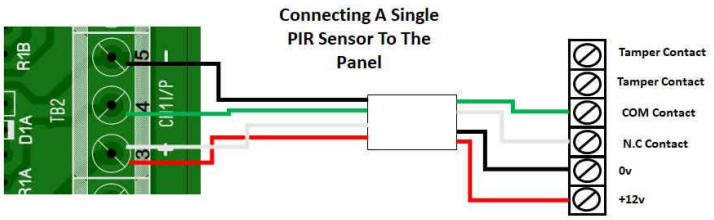
Power Supply Connection

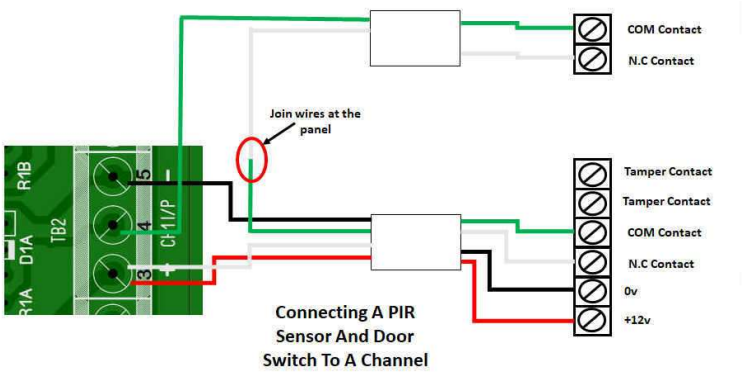


To Power Supply / Battery

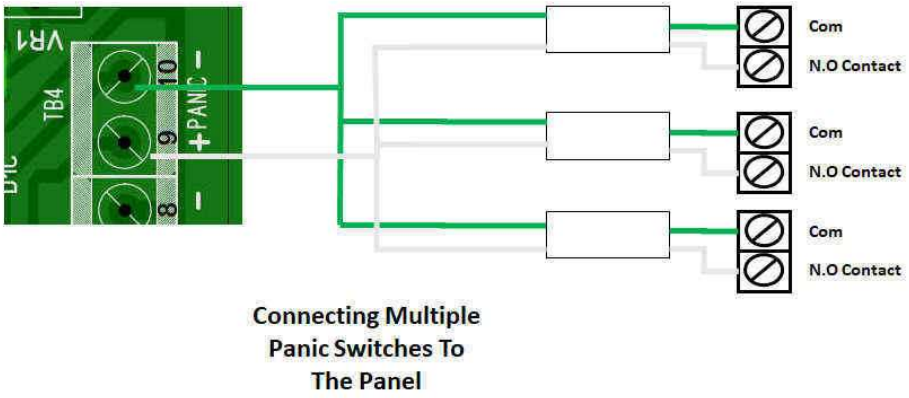
Connecting a PIR Sensor

NOTE: The colours of of alarm cable may change from one supplier to another

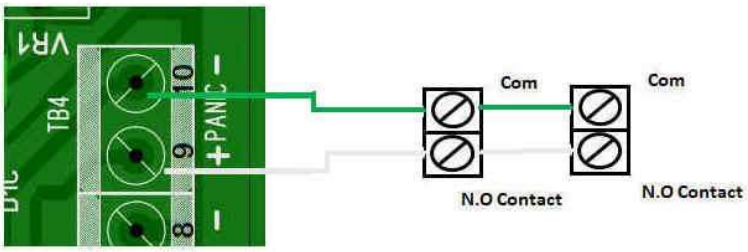




Panic Buttons Connected In Parallel



Panic Buttons Connected In Series



Connecting A Remote Receiver
For A Panic Alarm