



POWERING A WALL MOUNTED TABLET

3rd April 2025 by 3D Room John

So, you've chosen one of our fantastic wall mounts and are ready to elevate your smart home setup with a sleek, wall-mounted tablet. Excellent choice!

Now comes the slightly less glamorous, yet crucial, question: how do you actually power the thing without a messy tangle of wires ruining that beautiful aesthetic? Let's explore the various options for keeping your wall-mounted tablet juiced up and looking its best.

1 >> THE DISCREET, DIRECT USB CABLE

This is often the gold standard for a truly seamless installation and pairs perfectly with our wall mounts. It involves running a suitable USB power cable directly from a nearby mains socket, either within or through the wall to the tablet's charging port.

How it works: This very much depends on the construction of your walls, whether you are able to mount the tablet over an existing back box and (critically) whether there is a mains socket below (or below and behind) the tablet location.

If the wall is plasterboard, you may have the option of routing the cable within the wall by drilling a hole behind the tablet (or using a back-box to enter the wall) and another close to a socket. A cable fishing tool can be used to guide the USB cable within the wall. Whether this is possible does depend on the location of the 'noggins' (cross-bracing) between your studwork, which can be determined using a stud finder.

For solid walls, if you are decorating, you could chase the USB cable into the wall, but this obviously involves quite a bit of work and 'making good'. If there is a garage, utility room or even a built-in cupboard behind the wall, it may be a better option to drill straight through the wall and run the USB cable to a socket where visibility is less of an issue.

Pros:

- **Invisible Wiring:** Absolutely the cleanest look.
- **Reliable Power:** A constant and stable power supply.
- **Simple Charge Management:** The charge can be supplied by a smart plug and scheduled to not hold the battery charge at 100% all the time.
- **Professional Finish:** Gives your installation a polished and integrated feel, showcasing the sleekness of your 3D Room mount.

Cons:

- **Requires DIY Skills or Professional Help:** Getting the USB cable from A to B may not be as easy as it looks! You'll need to be a competent DIYer, and you may have to call a qualified electrician if you are unsure where mains cabling is routed near your drilling locations.
- **Potentially Disruptive:** Drilling into walls can be messy and require patching afterwards.
- **Less Flexible:** Moving the tablet location later will involve more work.

2 >> HIDDEN MAINS POWER

This method produces the same seamless results as the first option but will require working with mains electricity.

How it works: By installing a certified mains-to-USB power Euro Module behind the tablet. A short USB cable (with right-angle connectors) is connected to the Euro Module, routed behind and around the wall mount, then plugged into the tablet. The Euro Module can either be mounted in a

double back box or a deep single back box. For a cleaner integration, consider our [Angled Recessed Mounting Plate for Single Euro Module](#).

Pros:

- **Invisible Wiring:** Absolutely the cleanest look.
- **Reliable Power:** A constant and stable power supply.
- **Professional Finish:** Gives your installation a polished and integrated feel, showcasing the sleekness of your 3D Room mount.

Cons:

- **Requires DIY Skills or Professional Help:** Installing the Euro module will require electrical expertise and may require additional mains cabling to be installed.
- **Charge Management:** Without an additional in-line smart relay, the tablet will be permanently powered. This may limit your choice of tablet or increase the chances of the battery swelling (see our post about charge management).
- **Price:** Can be expensive if you need to hire an electrician.

UK Considerations: Always ensure any electrical work is carried out safely and in accordance with Part P of the Building Regulations. If you're unsure, hire a qualified electrician.

3 >> POWER OVER ETHERNET (POE)

This method can provide the same seamless results as above and does not require working with mains electricity.

How it works: Power is supplied over existing (or new) Cat5/6 network cabling via a PoE switch or power injector. A PoE to USB converter is hidden in a wall box behind the tablet. This method is probably only feasible if you have an existing network infrastructure within your home or if network cabling is being installed during major refurbishment or new building construction.

Pros:

- **Invisible wiring:** Absolutely the cleanest look.
- **Reliable Power:** Constant and stable power supply.
- **Great potential for charge management:** Many PoE network switches have power scheduling for PoE ports. Some switches can also

expose controls to home automation systems such as Home Assistant.

- **Your Don't Need A Sparky:** No mains-powered devices or modification of mains wiring required.

Cons:

- **Price:** Can be expensive. PoE to USB converters are more expensive than either hiding a USB cable or a Euro Module. Depending on your level of expertise, you may still need the help of a professional to install and configure this solution.
- **Requires Techy Know-How:** To get the most out of this type of installation, you need to be familiar with configuring PoE switches.
- **Requires Existing Infrastructure:** The PoE solution probably is not practical unless you have an existing, suitable network infrastructure or are refurbishing/building and installing cabling for general use. In real terms, it achieves little over and above hiding a USB cable.

4 >> CLEVER CABLE MANAGEMENT (MINIMISING VISIBILITY)

If running wires directly through the wall isn't feasible or you're renting, clever cable management can be a good compromise, and we have solutions to help!

How it works: This involves strategically routing the charging cable along walls, skirtings, door frames, etc. The cables can be covered with self-adhesive trunking (small plastic channels), which can often be painted. One of the advantages of using our wall mounts is the fact there is space for the cable to exit out from under the rear frame and be routed down the wall (instead of coming in from the rear). The cable can then be run within trunking to minimise the visual impact.

Pros:

- **Less Invasive:** No drilling required.
- **More Flexible:** Easier to reposition the tablet later.
- **DIY Friendly:** Can usually be done with minimal tools.

Cons:

- **Still Visible:** While less obtrusive, the cable will still be somewhat noticeable. ^
- **Aesthetics Depend on Execution:** A poorly managed cable can look worse than no management at all.

UK Considerations: Look for cable management solutions that are discreet and blend in with your décor. Self-adhesive options are readily available in DIY stores. To complement your chosen wall mount from The 3D Room, consider using slim decorative trunking from D-Line. This is available from popular DIY stores in a variety of profiles. D-Line trunking can be painted to match your decor to minimise visual impact.

5 >> UTILISE EXISTING LOW VOLTAGE CABLING

This option is entirely dependent on what may exist in your environment and is more of a suggested possibility than a hard and fast option.

How it works: As technology moves on, many houses and offices have cabling infrastructure that is no longer used. This may include things like landline telephone cabling, alarm panel cabling, hard-wired doorbells, old loudspeaker installs, intercoms, decommissioned room thermostats and servant bell pushes😂.

If you are lucky and can work out the cable routing, you may be able to supply 5 volts over this cabling to power the tablet.

Pros:

- **Could Be Straightforward**

Cons:

- **Could Be Extremely Difficult!**
- **Requires Electronics (and possibly soldering) Knowledge and Skills:** Often, this type of cabling is completely unlabelled and will require testing with a multimeter to isolate the correct conductors. You may also need to attach the correct connectors to allow one end to be plugged into the tablet and the other into a charger. You will also need to assess whether the cabling is capable of supplying 5 volts at a suitable amperage. If you are extremely lucky and there is some form of marking on the outer jacket of the cabling, you may be able to research cable specifications. If not, you will need to measure the conductors and refer to references online as to how much power the conductors can safely transmit.
- **May Require An Electrician:** It's vital that you are 100% sure what that random bit of wire sticking out of your wall was actually used for and that it's safe!
An example would be a decommissioned room thermostat. In the UK, the

majority of old-school room thermostats switched mains voltage so you need to know whether it's been decommissioned properly. As with anything electrical, if in doubt, contact a professional!

- **Charging Limitations:** Following on from the above. USB-C tablets will default to charging at a very low rate (500mA) if only the power conductors are connected (part of the USB-C specification). The same tablets will also produce annoying 'check your charger/check your cable' pop-up messages if only supplied with 500mA! You can source USB-C breakout boards containing an in-circuit resistor to raise the charge rate. **But** you also need to know the cabling is capable of the increased rate or choose a power supply that will put a ceiling on that rate. For instance, most modern tablets will charge at a rate of over 2 Amps if the power is available. Using a 1 Amp charger would limit the current draw.
- **Limits Tablet Positioning:** Is the existing wiring in a place suitable for a wall mounted tablet? Old alarm panels or thermostats may be but, if that bundle of wires is somewhere completely unsuitable, you would be better off starting from scratch and use one of the other methods!

6 >> FINALLY, CONSIDER USING FURNITURE OR MAKING A FEATURE

There is no reason why you can't mount a tablet to the side of a cupboard or other piece of furniture. There may be the opportunity of hiding cabling within.

Another option is making a feature wall (or part wall). We have all seen the trendy slatted acoustic panelling in DIY stores. Using battens behind these panels could be a great way of providing enough space to route a USB cable from a socket to the tablet if you are decorating a room.

CHOOSING THE RIGHT OPTION FOR YOUR WALL MOUNTED TABLET

The best way to power your wall-mounted tablet depends on several factors, including:

- Your DIY skills and comfort level with electrical work.
- Your electronics skills and knowledge.
- Whether you own or rent your property.
- Your desired aesthetic (we know this is important to our customers!).
- The intended use of the tablet.
- The proximity of power sockets.

- Whether you have an existing network cabling infrastructure.

For the cleanest and most professional look that truly complements our range of wall mounts, the hidden USB cable or hidden mains power methods are the top choices. However, we understand this isn't always feasible.

No matter which option you choose, remember to prioritise safety and seek advice from a qualified electrician if needed. If you choose to use any mains powered modules or adaptors, do not skimp on them by purchasing the cheapest thing available. Make sure they are fully tested and certified for use in your country. There is a lot of sub-standard crap being pushed on various online marketplaces!

Also, consider introducing [charge management](#) with your installation to enhance safety and the long-term functionality of your wall-mounted tablet. Happy mounting, and thank you for choosing The 3D Room!

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John & Sally Beardon Trading as The 3D Room
Ashleigh, Hillfarrance, Taunton, Somerset, TA4 1AW, UK

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