



Australia's  
broadband  
network

# nbn™ User guide





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Congratulations on connecting to the **nbn**™ network. With your hybrid fibre coaxial (HFC) connection, you'll be able to access the benefits of fast and reliable phone and internet services,\* including:



Watching and listening without constant buffering



Connecting via video calls that don't constantly drop out



Playing games over a fast connection



Learning via educational tools accessed over a fast, reliable network

This booklet contains information to ensure your **nbn**™ supplied equipment is connected and stays in good working order. It also outlines what to do if your equipment isn't working properly.

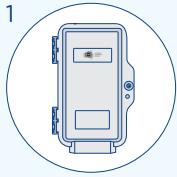


**Important**

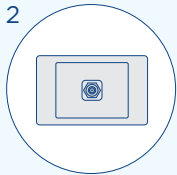
**nbn**™ supplied equipment is the property of **nbn** and shouldn't be removed from the premises in which it was installed. If you move, your **nbn**™ supplied equipment must remain at the premises and won't work at any other location. You must contact your service provider if you require assistance or have any questions regarding your **nbn**™ supplied equipment or connections.

\*Your experience, including the speeds actually achieved over the **nbn**™ network, depends on the technology over which services are delivered to your premises and some factors outside our control (like your equipment quality, software, broadband plans and how your service provider designs its network).

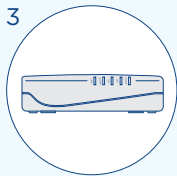
# Identifying your nbn™ supplied equipment



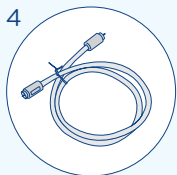
Depending on your needs, your installation may include some or all of the equipment below. Your nbn™ approved installer can confirm what nbn™ supplied equipment has been installed at your property.



1. **nbn™ utility box:** This is located on the external wall of your premises. It connects the HFC cable from the street to the wall outlet(s) in your premises. nbn™ utility box dimensions can vary from 215mm high x 136mm wide x 60mm deep to 330mm high x 228mm wide x 76mm deep.

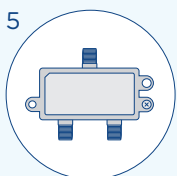


2. **Wall outlet:** This will be located inside your premises. An nbn™ approved installer will advise which wall outlet is suitable or if your premises requires a new wall outlet to be installed. The wall outlet has a screw-in connector that attaches to the coaxial fly lead and connects to your nbn™ connection box.



3. **nbn™ connection box:** This is an Arris Touchstone CM820 Cable Modem. It is designed to deliver high-speed data and supports one data (UNI-D) port for connection to the equipment supplied by your service provider (such as your gateway (router) and Ethernet cable). Your nbn™ connection box will be supplied with a power cord that will plug into a power point in your premises.

**Placement of your nbn™ connection box:** your nbn™ connection box will be connected to the wall outlet via the supplied coaxial fly lead. It is designed to be free standing and can be placed either vertically or horizontally.



4. **Coaxial cable fly lead:** This is a cable with a screw connector on each end. The coaxial fly lead connects your wall outlet to your nbn™ connection box.

5. **Splitter (required for pay TV or existing cable internet services):** This provides an extra cable connection by splitting a single outlet into two. You may need a splitter if you have a pay TV service or existing cable internet that is connected to the same wall outlet as your nbn™ connection box. The splitter is installed by your nbn™ approved installer, and will allow for both services to run from one wall outlet.

Your service provider should supply additional equipment such as a gateway (router) and Ethernet cable that will connect all of your internet and telephone devices as required.

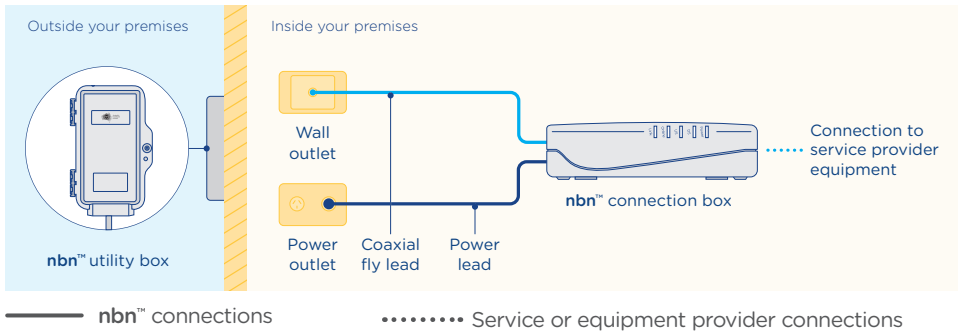
# Installation

nbn™ supplied equipment may be installed in several different ways depending on your premises and needs. Your service provider and nbn™ approved installer should advise you on where and how your equipment is to be installed.

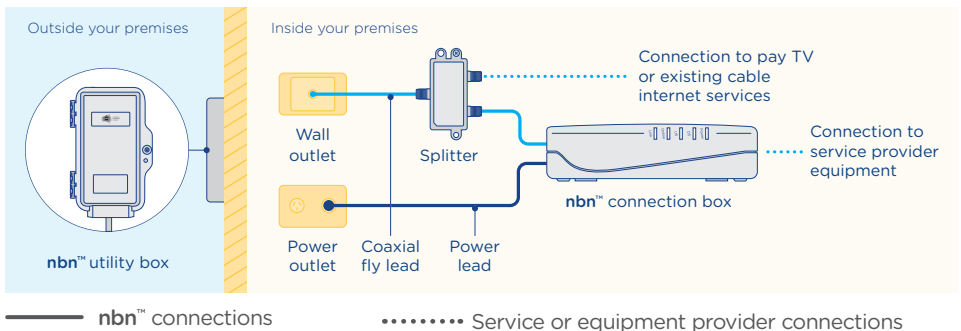
After your nbn™ connection box is installed and activated, your service provider will activate your broadband service over the nbn™ network, which may include the supply of a new gateway (router) that connects by Ethernet cable to the data (UNI-D) port at the rear of your nbn™ connection box. Once your gateway is connected, you can start accessing your broadband service.

The diagram below shows the two main combinations of nbn™ supplied equipment, including installation without a pay TV service and installation with a splitter for pay TV.

## Installation without pay TV service



## Installation with existing pay TV or cable internet service

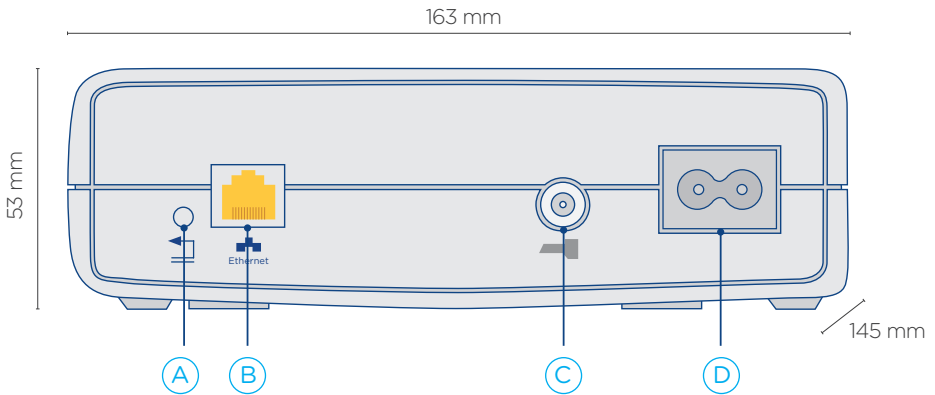


# Plugging devices into your nbn™ connection box

Make sure only compatible equipment, such as your own or your service provider's supplied gateway (router), is connected to your nbn™ connection box via the data (UNI-D) port located on the rear panel.

## Rear panel on the nbn™ connection box (Arris Touchstone CM820 Cable Modem)

The rear panel of your nbn™ connection box will look like this:



- A** Reset button: resets your nbn™ connection box (consult your service provider first)
- B** Data (UNI-D) Port (yellow): for Ethernet cable connection to your service provider's supplied gateway (router)
- C** Cable: connector for the coaxial fly lead that will connect your nbn™ connection box to your wall outlet or splitter
- D** Power: connector for the power cord

## Connecting your HFC broadband service

Your broadband service will be delivered through the data (UNI-D) port on the rear panel of your nbn™ connection box. Your service provider should advise you how to connect any equipment.

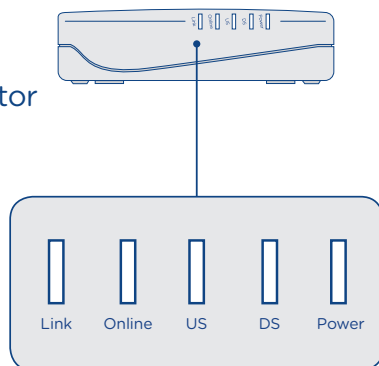
## Connecting your phone service

If you have chosen a phone service to be delivered through your gateway, your service provider should advise you on how this is connected.

# Indicator lights on your nbn™ connection box

Your **nbn™** connection box has five indicator lights to help with troubleshooting.

- Link** Ethernet connectivity between your **nbn™** connection box and gateway (router)
- Online** **nbn™** network connection
- US** Upstream connectivity
- DS** Downstream connectivity
- Power** AC power



## Indicator lights: start-up sequence

Link	Online	US	DS	Power	Mode
Off	Off	Off	Off	Off	No power to the <b>nbn™</b> connection box
Flash	Flash	Flash	Flash	Flash	Power-on self test
Off	Off	Off	Flash	<b>On</b>	Downstream search
Off	Off	Flash	<b>On</b>	<b>On</b>	Downstream found; upstream search
Off	Flash	<b>On</b>	<b>On</b>	<b>On</b>	Downstream and upstream found; retrieving setup information from <b>nbn</b>
<b>On</b>	<b>On</b>	<b>On</b>	<b>On</b>	<b>On</b>	Ready for service

## Indicator lights: normal operation

Link	Online	US	DS	Power	Mode
<b>On</b>	<b>On</b>	<b>On</b>	<b>On</b>	<b>On</b>	Ready for service
<b>On</b>	Off	Flash	Flash	<b>On</b>	Not connected to the <b>nbn™</b> network
<b>On</b>	<b>On</b>	Flash	Flash	<b>On</b>	Firmware upgrade
Off	Off	Off	Off	Off	No power to <b>nbn™</b> connection box

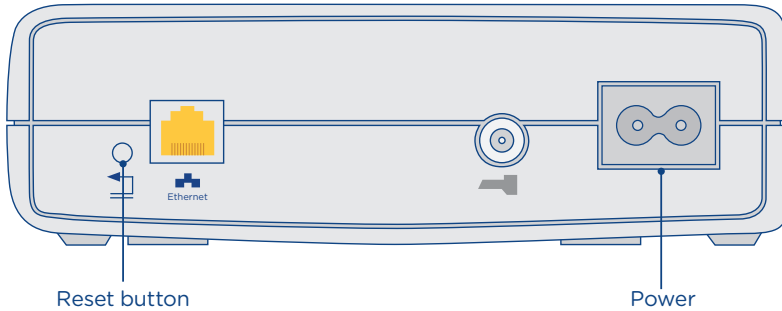
Note: All indicator lights shine green if the **nbn™** connection box establishes a connection.

## Troubleshooting indicator lights

If you've followed the instructions from your service provider and your nbn™ connection box or other connections are not working, please read the troubleshooting section opposite.

## The reset button

Your service provider may need to reset your nbn™ connection box if it is having problems connecting to the internet. This is done by pressing the recessed reset button (see diagram below) with a pointed, non-metallic object.



# Maintaining your nbn™ supplied equipment

Here's how to ensure your nbn™ supplied equipment stays in good working order.

## Inside your premises

**Do** keep your nbn™ connection box plugged in and switched on at all times to keep your broadband or phone service working.

**Do not** unplug your nbn™ connection or its power supply, even if you are going away for an extended period, unless otherwise told to do so by your service provider.

**Do not** touch or disconnect the coaxial fly lead connection (even by unplugging it), as this could damage the connection and require a technician visit.

**Do not** use water to clean your nbn™ supplied equipment.

**Do not** cover or place objects on top of your nbn™ connection box, as this may reduce ventilation and cause it to overheat.

## Outside your premises

**Do** keep branches and shrubs away from your nbn™ utility box. Make sure you know where any underground cables are located before digging, to avoid damaging them. You can contact Dial Before You Dig by calling 1100 or visiting [1100.com.au](http://1100.com.au) (enquiries are free of charge). You may be charged for repairs if cables are damaged, and your services may be disrupted.



# Troubleshooting

If any of the services provided through your **nbn™** connection box stop working (e.g. internet or phone), first check the following:

## Everything is plugged in and turned on

Is your **nbn™** connection box power cord plugged in firmly at both ends? (Always keep your **nbn™** connection box plugged into AC power and connected to the wall outlet.)

## The indicator lights on your **nbn™** connection box

- I. The **Power** and **Online** lights should be on.
- II. The **Link** light should either be on or flashing.
- III. The **DS** and **US** lights should be on.
- IV. If the **Power** light flashes for more than 30 minutes, contact your service provider.

## The cable and device connections

- I. **Coaxial fly lead:** this should not be pinched, kinked or bent sharply as it can cause a break or short in the cable (and the cable may have to be replaced).
- II. **Splitter (if you have one):** make sure the splitter(s) between your **nbn™** connection box and the wall outlet is (are) connected correctly.
- III. **Ethernet cable:** make sure the Ethernet cable is correctly connected.
- IV. **Your own equipment and devices:** check that all cables and power points are switched on and connected correctly.

## External equipment

Has external **nbn™** supplied equipment been damaged? For example, a fallen branch may have damaged the coaxial cable connection or associated outside equipment, such as the **nbn™** utility box. If you think this may be the case, do NOT try to remove or repair the cable yourself. Contact your service provider immediately.

## Speed

Once your **nbn™** supplied equipment has been installed and you have checked that everything is working well, conduct a speed test by checking online. Ask your service provider how this can be done.

## Still can't identify the problem or solution?

Please note which lights are on, off or flashing, then contact your service provider for further advice. For more information visit [nbn.com.au](http://nbn.com.au)

# Frequently asked questions

## Who do I contact if I need help?

If you have any questions or want to report a fault, please call your service provider in the first instance, or visit [nbn.com.au](http://nbn.com.au)

## What do I do if I accidentally damage my nbn™ supplied equipment?

Your nbn™ connection box and coaxial cable are your responsibility to keep in good condition. If you happen to accidentally damage any part of your nbn™ supplied equipment or cable, please contact your service provider to have it repaired (charges may apply).

## Will my pay TV service be affected?

If you have an existing pay TV service, an nbn™ approved installer will include a splitter with your installation. The splitter allows both your broadband internet service and pay TV service to operate from one wall outlet. It also ensures you'll have minimal interruption to your pay TV service during installation of your nbn™ connection box.

## Is my coaxial cable fly lead safe?

As coaxial cables conduct electricity, you should never disconnect, tamper with or alter the coaxial connection without consulting your service provider. The coaxial cable should not be pinched, kinked, or bent sharply – this can cause a break or short in the cable (which may have to be replaced, and charges may apply).

## If I'm going away, can I unplug my service to save power?

nbn™ recommends leaving your nbn™ supplied equipment connected and powered at all times.

## Is my nbn™ connection box safe?

Your nbn™ connection box only uses fixed cables and connections, which are not designed to emit any wireless radiation.

## Can I plug my nbn™ connection box into a power board?

Yes, however it is preferable that your nbn™ connection box is first connected to a fixed power point. If this is not possible, then your nbn™ connection box can be plugged into a double adapter, extension cord or power board, as long as they are safe.

## Will any extra nbn™ supplied equipment be included in my standard installation?

In some circumstances, if your premises have multiple services connected or low signal levels, an amplifier will be included in your installation as part of your nbn™ supplied equipment. The amplifier will usually be located in your nbn™ utility box and connected to your internal wall outlet, as well as to a power point inside your premises. It is important that you leave everything connected and the power on at all times.

## Will my monitored security system work over the nbn™ network?

Monitored security systems may operate over the nbn™ network. However, if you would like to use an existing system, you should check with your security provider to ensure it is compatible with the nbn™ network. You should test your alarm on the day your service over the nbn™ network is activated. For more information, visit [nbn.com.au/alarms](http://nbn.com.au/alarms)

What happens to my **nbn™** connection box and other equipment if I move? Your **nbn™** supplied equipment is the property of **nbn** and should not be removed from the premises in which it was originally installed. Contact your service provider for advice on connecting services at your new premises.

### I have moved somewhere with an **nbn™** connection box, how do I get it working?

If you move to premises with an existing **nbn™** connection box, please contact your service provider to arrange for a new service over the **nbn™** network to be activated.

### Can I install cabling myself?

An **nbn™** approved installer will install the cabling from the street to your **nbn™** connection box (for more information on what's included in a standard installation, please visit [nbn.com.au/installation](http://nbn.com.au/installation)).

If you choose to have additional permanent phone or data cabling installed through wall, floor or ceiling cavities, it must be done by an ACMA registered cabler. Your service provider may be able to recommend a registered cabler in your area.

### How do I care for my **nbn™** connection box?

You can clean your **nbn™** connection box by wiping it with a dry cloth.

**Do not** use a damp cloth on internal equipment or cables.

### Can I connect my phone to a gateway (router) provided by my phone company?

Yes. Ask your phone service provider how your phone can connect to a gateway that is not the **nbn™** connection box.

### Will my device work during a power blackout?

The **nbn™** network will not work during a power blackout, so you should consider having an alternate form of communication handy – such as a charged mobile phone. If you have a safety-critical device such as a medical alarm, fire alarm or lift emergency phone, please speak to your equipment provider about any alternate solutions.

### I have a medical alarm, what should I do?

If you use a medical alarm, or care for someone who does, you'll need to register it with **nbn**. This will help us identify premises where support may be needed to help minimise potential breaks in service. To register, visit [nbn.com.au/medicalregister](http://nbn.com.au/medicalregister) or call 1800 227 300, 9am – 5pm AEST, Mon – Fri. You should also contact your medical alarm provider.

# Quick troubleshooting

Things to check	Solution
Has your broadband service ever worked?	If not, please contact your service provider to enquire whether your service has been activated correctly.
Is your equipment plugged into the data (UNI-D) port on your <b>nbn</b> ™ connection box?	Ensure that you have plugged the equipment supplied by your service provider into the data (UNI-D) port at the rear of your <b>nbn</b> ™ connection box.
Have you tried turning your service provider supplied equipment (such as your gateway) off and then on?	Sometimes your gateway or other equipment may have stopped working and this can be resolved by turning the power off and on.
Have you tried using another Ethernet cable between your <b>nbn</b> ™ connection box and your equipment?	It's possible your Ethernet cable is faulty and is not connecting properly to your <b>nbn</b> ™ connection box.



If your phone or broadband internet still doesn't work, contact your service provider or visit [nbn.com.au](http://nbn.com.au)

