

Guide to using Sipgate for your VOIP phone service

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Introduction

Once you have your B4RN fibre broadband service up and running the first thing you will probably want to do is to say goodbye to those monthly line rental charges, which, if you still want a regular 'landline' telephone means taking a VOIP (Voice Over Internet Protocol) service. For simple plug-and-play Vonage is the less hassle choice and has a lower monthly charge than a regular landline, but if you want *no* monthly charge at all, then German company Sipgate's '**Sipgate Basic**' service is worth considering.

<http://www.live.sipgate.co.uk>

Creating an account is pretty straightforward and costs nothing. Sipgate has recently introduced an address verification procedure that involves posting you an access code, for which you must wait before you can go any further. You can add money to your account for making phone calls later. If you want a second phone number/phone line later on you just repeat the process, using a different email address, as per Sipgate's instructions. Once you have registered you will receive a SIP ID and SIP Password. Copy and paste or otherwise carefully record these to wherever you keep such things, as you will need these later for your hardware set-up.

Advantages/Features

- Sipgate has the choice of PayG (pay-as-you-go) Sipgate Basic, or various monthly call packages.
- While you can use either your choice of regular phone with an Analogue Telephone Adaptor (ATA), or a VOIP phone, or a computer based 'soft' phone, the latter being not dissimilar to using Skype's paid service, using a regular phone with an ATA is the usual method.
- You can choose any primary UK area code, then pick one of 5 offered phone numbers. e.g. you could choose 01524 and a 6 digit number, probably beginning 88-, but not area code 015242 unless you're keeping your present number.
- Free call forwarding service (but you pay for any forwarded call).
- Free voicemail, instantly sent out by email as a clickable audio file.
- You can have more than one phone number - one per email address. You just need to buy an Analogue Telephone Adaptor (ATA) that supports the number of lines you want. This could be good if you've got teenagers who want their own dedicated phone line. You could then let them pay for their calls out of their own money!
- PayG service is reasonably priced for calls to UK landlines. At time of writing it was 1.18p/min with no connection charge, while calls to many overseas landlines cost 1.9p/minute, also with no connection charge.
- You can choose to hide your own number when calling out, or display a different number. For instance, I choose to display my mobile number. Displaying any phone number that does not belong to you is likely to become illegal if it is not already by the time you read this, so do check the law on this.
- My combination of phone and ATA used with the B4RN service has resulted in audio quality somewhat better than I was getting with my copper wire landline.
- Being able to choose your own ATA allows you to make use of extra functions such as 3-way conference calling and a second phone line/number.
- Sipgate to Sipgate calls are free.

Disadvantages

- Not at all plug and play. Set-up requires entering a fair bit of information on a couple of web pages, following your ATA's and Sipgate's guides.
- To keep your current phone number costs £30 (unlike Vonage which is free)
- You must buy the ATA. Vonage includes one with the rental.
- The Pay as you Go (PayG) cost to call UK mobiles is high at 9.9p/min compared to, say, Three Mobile PayG at only 3p/min, but nevertheless is still less than with Vonage's basic Talk Plan which charges a whopping 29p for the first minute to a UK mobile. Most overseas mobiles are also expensive to call, with a few notable exceptions e.g. USA, Canada, China, Singapore at only 1.9p/min. If you have a favourite overseas destination compare the rates at <http://www.18185.co.uk> with Sipgate's rates, but note that unlike Sipgate, Call18185 has a 5p connection charge. Call 18185 is merely an add-on to *any* phone service you already have, including with Sipgate. It is not an alternative VOIP provider.
- A copper wire phone will work during a power cut because telephone exchanges have banks of batteries, unlike any VOIP service, unless you have a backup Uninterrupted Power Supply (UPS).
- For the purpose of emergency calls ensure that your Sipgate account has your correct geographical address recorded. This would only be an issue if your billing address is different from where your Sipgate phone service is, in which case you would need to manually correct the 'Emergency Address' on your account page on the Sipgate website.
- While "free" web based SMS is available as Sipgate claims, it's only free to sign up for, not free to actually use!

Equipment required

[links given are just examples - other suppliers are available!]

- A computer with browser is needed, but only for set-up. Preferably with an ethernet socket (RJ45), in case connecting wirelessly to the B4RN router isn't adequate for the Sipgate set-up, but wireless is likely to be adequate.
- [Note that if you wish to access your B4RN Genexis router's control panel the correct access address may be <http://192.168.1.1> rather than the address in the book ending with 254. This is handy if you want to change your router password away from 'admin', your wireless network name to something less gobbledegook and want to set a wireless password you can easily remember for telling visitors, but none of this is necessary for Sipgate set-up...]
- An Analogue Telephone Adapter (ATA). Make sure it is a brand supported by Sipgate. My Grandstream HT702 has been superseded by the HT802. Both have the option of having a second phone line and optional additional phone number. One ethernet cable (RJ45 to RJ45) is included. Guide price: from about £36 delivered. You don't *have* to use Sipgate as your VOIP provider for your other line/s. You could choose any VOIP provider and telephone number from around the world!
<https://www.netxl.com/network-routers/grandstream-ht802-voip-analogue-adapter/>
- An RJ11 to BTS Adaptor (a short lead that converts a U.S. phone plug to a UK phone socket). Guide price: from about £3.20 delivered.
<http://www.ebay.co.uk/itm/UK-BT-Socket-To-RJ11-Plug-Adaptor-With-Telephone-Ringer-/160853680991>
- An extra RJ45 ethernet cable is optional for the ATA set-up, as the ATA set-up should work fine via the wireless connection to the router.
- A telephone! Anything will do, but I can recommend Gigaset for sound quality. The basic models are also easy to use with no weird icons to learn.

How to connect your B4RN Router, ATA, Telephone and Computer

- a) Connect the supplied ethernet cable (RJ45 to RJ45) from your B4RN router to your ATA
- b) Take your RJ11 to BTS Adaptor lead, plug the RJ11 end into the ATA's first FXS (phone) port (marked as No. 1) and plug your phone into the BTS socket at the other end of the lead.
- c) Plug in your ATA's power supply.
 - the above connections remain in place permanently
- d) For setting up only: If your computer is logged in to your B4RN router's wireless connection this is likely to be adequate for the ATA set-up, but if not connect another ethernet cable from your B4RN router to your computer.

Example set-up of Sipgate VOIP using a Grandstream HT802 ATA

The following instructions apply only to a typical Grandstream ATA, but serve as an example of the type of procedure involved, should you buy a different ATA. Check first that Sipgate has a set-up guide for whatever ATA you are considering buying. This [link](#) shows which ATAs Sipgate supports.

<https://basichelp.sipgate.co.uk/hc/en-gb/categories/200656382-Setting-Up-VoIP-Phones-Devices>

1) Login to your ATA

First you must find its 'web' address. On your telephone keypad press ***, wait for a voice prompt, then press 02 and listen. That is, you press the star key three times, wait for a voice prompt, then press 'zero-two'. A voice will then tell you your ATA's (local) IP address. If you hear nothing make sure your phone is connected to the ATA's Port 1 (FXS 1). Write down the IP address you hear, then with everything connected as above put this address into your computer's web browser and press Enter. It will look something like 192.168.1.125. You don't need to add http:// etc. This will give you access to the Grandstream ATA's Control Panel login page. Do bookmark this address. The above is taken from the **Grandstream HT80x User Guide** found on the Grandstream website.

www.grandstream.com/sites/default/files/Resources/ht80x_administration_guide.pdf

2) Enter all the required set-up information

For this you need **Sipgate's guide to setting up** found on the *Sipgate* website, *not* on the Grandstream website. This will give you almost everything needed to set up your Grandstream ATA, but see my additional tips below.

<https://basichelp.sipgate.co.uk/hc/en-gb/articles/204237381-Grandstream-HT-Adapters>

At the Grandstream login page you will enter the default password from the instructions, normally 'admin'. For security, you should change this in 'End User Password' found under Basic Settings, but as there is no 'Forgotten password?' option, when I created a bookmark for my login page I added to the name of the bookmark a clue to the login password. Should you lose your password the ATA has a Factory Reset button.

The Sipgate guide will instruct you how to enter your Sipgate account details in the FXS Port 1 web page. The necessary items are all highlighted in the guide in red - be careful you don't overlook any small red radio buttons •

If you want two phone lines/numbers and have created two separate Sipgate accounts by means of a second email address then you will be entering the second set of details on the FXS Port 2 page. In that case, note the special

instructions concerning the two Port fields that will differ from FXS Port 1, apart from the different Sipgate ID and Password. I would suggest leaving setting up a second phone line until after you have the first set up.

The guide will then have you fill in settings to suit the ATA, under Advanced Settings. After completing the entries on each web page make sure they are saved by scrolling down to the bottom where I suggest you first click on 'Update' before clicking 'Apply' - the Sipgate guide omits this.

Finally, reboot the ATA for the new settings to take effect.

If you want to use 3-way conference calling or get into more esoteric stuff such as free IP address to IP address calling it would be as well to also download the [Grandstream User Guide](http://www.grandstream.com/sites/default/files/Resources/ht80x_administration_guide.pdf) from the [Grandstream website](http://www.grandstream.com).

www.grandstream.com/sites/default/files/Resources/ht80x_administration_guide.pdf

Voicemail and other features

For voicemail you can choose to use your own telephone, Sipgate's voicemail service, or the voicemail option built into your ATA (Analogue Telephone Adaptor, the bit of kit that links your phone to the internet). When at home I like to use our telephone's built-in answering machine because it's easy to use and the handsets all flash if a message has been left, but I revert to using Sipgate's voicemail if I go away as any Sipgate voicemail is instantly sent to me by email with the audio attached - just click to listen.

Grandstream ATAs include many other functions, such as conference calls, that I haven't yet explored. For comments on hardware choices, see my Hardware Comments section on page 7.

Voicemail tips

You could set your home phone to go to voicemail after 20 seconds and set up your free Sipgate voicemail to answer after 30 seconds. Your home phone will by default pick up messages. When you go away just switch off your home phone's answering machine and Sipgate will then take messages by default, which you will receive by email. You can also log into your Sipgate account's web page if your email isn't working for any reason.

Using your mobile as an extension of your home phone

Smartphones can act as extensions to your new VOIP landline number if they are in a Wifi hotspot or otherwise connected to the internet anywhere in the world, by means of a virtual telephone app such as Zoiper. Download the Zoiper app to any number of smartphones and into the app enter your Sipgate User ID and Password. Any outgoing calls you make using Zoiper will get charged to your Sipgate account as if they were made from your phone at home, whether you are in Lancaster, Australia or Timbuktu. Conversely, if someone calls your Sipgate number any Zoiper equipped smartphones connected to the internet will ring simultaneously with your home phone. This could be a cheap alternative to roaming if you are outside the EU, but as it requires internet access it is not a full substitute. If you are at home with a few 'landline' wireless handsets AND a few Zoiper equipped mobiles switched on it can be quite a chorus when someone rings your Sipgate phone number! The call will go through to whichever handset or mobile you choose to receive the call on. Receiving calls this way incurs no charge. One curiosity is that if our 'landline' phone is engaged on a call and someone else calls that number the second call gets diverted through to our two Zoiper-enabled mobiles! I'm unsure if that is because of our Grandstream ATA or due to Zoiper - I suspect it's Zoiper. If you have only have one VOIP phone number set up but have two phones plugged into your ATA the second phone will ring if the first is engaged on a call. I.e two lines on one phone number.

Hardware Comments

Telephones: Gigaset has had good reviews in Which? It uses plain English text in its menus - no obscure icons to learn and it is easy to make internal calls between the wireless handsets. I bought the A540A which has excellent audio quality and while it is still showing on the Gigaset website it seems no longer readily available so the nearest simple equivalent may be the Gigaset AS405A Duo (two wireless handsets with answering machine, about £45). But do do your homework to compare all features as new models appear.

http://www.gigaset.com/hq_en/gigaset-a540a-trio-white/#92=154

ATA: My only experience is with my Grandstream HT702, which works fine but now superseded by the HT802. I have a second phone plugged into the second phone port with its own phone number.

If you have a small business with a few employees then you could be considering something like the Gigaset DX800A PRO used with Sipgate and B4RN's business services.

<https://www.gigasetpro.com/systems/systemsdetail/product/en-dx800a-pro/>

Making Free non-Sipgate Calls Over The Internet / Wifi

One reason for choosing Sipgate's pay-as-you-go service, Sipgate Basic, rather than a monthly call package is the proliferation of free alternatives to paid-for phone calls. If you have a tablet or smartphone, making voice or video calls worldwide using WhatsApp, WeChat or Skype is straightforward and for long regular chats to friends who also have either a smartphone or tablet and a WiFi connection it is a bit of a no-brainer, which may leave you making very few paid-for phone calls. WhatsApp has one apparent advantage over WeChat in that a voice call rings the recipient's phone like a normal phone call and it seems to have a better message alerting service. WeChat is the service of choice if you are visiting, or have friends in, China and is slightly better on an iPad than an Android phone.

<https://www.whatsapp.com> <http://www.wechat.com> <https://www.skype.com/en/>

Backing up your data - Backblaze as an example

With a fast broadband connection, backing up your whole computer's contents online becomes more practicable. I signed up with **Backblaze** for \$5 a month for an unlimited amount of data. They give you 14 days free trial to test out the service. You can set it to continuously backup or backup on demand and it's easy enough to use. On testing I could download selected files as required. I haven't done any sensible comparison of the many other services available, but reckoned the price was OK for unlimited data from one computer.

However, the 'blaze' component of the name is a bit of a misnomer as it is not the fastest of services. It took two to three days to upload the contents of my computer, 326GB, though subsequent incremental backups are much faster, typically 5 minutes, depending on how many photos or videos I've added. Their website has a throttle you can set to *their* maximum speed which nevertheless doesn't get near to making full use of B4RN's bandwidth. I've since uploaded and downloaded some very large files from other websites very rapidly, which proved to me that the speed cap is with Backblaze and not B4RN. The reasonable price per GB and ease of set-up are its main selling points.

<https://www.backblaze.com>

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Prices checked at time of writing - August 2017