



BlackDB4.1

Firstly, thank you for your purchase. Every element of this product has been optimised to give you the best possible performance for your money.

Please take the time to read these instructions carefully. You will need to follow them to have a successful install and get the most from the product.

Do remember that incorrect installation or abuse is NOT covered under warranty – it is YOUR responsibility to make sure that your installation and partnered product is suitable and compatible.

The Bass Face BLACKDB4.1 amplifier is a high power digital 4 channel amplifier with excellent power output and a refined and warm sound. Perfect for powering high power aftermarket speakers and with its highly adaptable crossover network it is ideal for many applications.

Before you even get the amplifier out of the box (realistically, you will have done this already and boy it looks sweet doesn't it!) you will need to install a suitable wiring kit in your vehicle. You can use a high quality 4AWG kit for this product, ideally an OFC cable should be used to realise the maximum potential of the amp. If you are planning to run multiple amplifiers you will need to up the gauge of the wiring accordingly. Do bear in mind that many manufacturers offer wiring kits that actually come up smaller in true wire gauge than advertised.

To begin, disconnect the car battery, taking note of any required precautions suggested by the vehicle manufacturer such as alarm or radio codes, or on board computer or AGM battery requirements.

You need to find a suitable point on the firewall (bulkhead) to run the power wire through.

If you have to drill a hole, you will need to fit a rubber grommet to ensure the wire does not get damaged as a short will ruin the whole setup and can be very dangerous. The positive wire needs to go to the + positive terminal on the battery. A fuse of appropriate size to protect the cable (for a quality 4 AWG kit we suggest 80A) needs to be fitted in line and no more than 18" from the battery.

Once you have the cable in the car, run it back to the boot or to where you intend to fit the amplifier. When you do this, be aware you will need to run the remote cable and the 4 RCA's from the headunit back to the amp too, along with any speaker cables going back the other way FROM the amplifier. If you only have a 2 channel RCA output on your head unit then you can run only one RCA and split them using Y leads in the boot.

A common mistake is to forget that a car amplifier needs the remote 12V turn on cable to see power for it to even work! If you only fit power and ground you're going to get.... Nothing!

If the wires you are running have to run over or go alongside other looms of the car, try to cross them at right angles to avoid unwanted interference in the signal, and try not to run them parallel with other cables either. If you can, run the power and the signal cables down opposite sides of the car. This isn't essential but if you do get any interference once the job is complete the first thing to look at will be separating these wires so if you can do it first it makes a lot of sense!

The absolutely most important aspect of the power install is the earth wire. This wants to be very securely bolted to the chassis of the car. We recommend drilling a hole (take care not to drill through your spare tyre, brake lines or anything else!) in the boot floor and sand off any paint to the bare metal where the wire will be connected. A bad earth is a very common flaw in installation and can cause a number of headaches later down the line so be sure to take care in doing this. Do NOT use a self tapping screw to try and screw the earth down, as it will come loose and impair performance. Other common disasters include trying to earth to rear light mounting bolts, boot lock mountings and other ways to "trap" the cable in the vein hope you might get a good earth. For every volt the amplifier doesn't see it requires TWICE the power to create the same output. That means poor performance and a possible broken amplifier.... DO THE EARTH RIGHT!

Once your power cable, RCA's and remote lead are all securely running through the car to where you want the amp and the earth wire is fastened securely, somewhere close to the amp, you can fit the amplifier.

The amp needs to be mounted on a solid surface, favorites are boot floors, backs of seats etc. Wherever you do choose to mount the amp, it needs sufficient ventilation – a few inches around will be enough. We do not recommend mounting an amplifier on a bass box as the vibrations can cause damage to the internals of the amplifier over time.

You are now ready to connect your speakers! Take care that the positive on the speaker is going to the positive on the amplifier. If your speakers are connected "out of phase" then it will severely affect bass output as the 2 speakers will cancel each other out acoustically.

This bit is VERY IMPORTANT. You need to ensure that the load you subject your amplifier to is within specification and of a sensible nature. This particular amplifier is suitable for running two stereo pairs at minimum of 4 ohms per side, or a bridged mono load at 4 ohms – or a combination of those things. Just as important is to remember that as well as the actual physical impedance you need to consider the type of load you are going to subject your

amplifier to. A single 8, 10 or 12 inch subwoofer of an appropriately matched construction and in a nicely designed enclosure will be fine run off a DB4.2 amp at 4 ohms (assuming proper setup) but you don't want to try and run a pair of massive aluminium coned dual voice coil monster woofers off it even though on paper you might well have a four ohm load. We obviously recommend the Bass Face range of subwoofers and speakers for ultimate compatibility. The other thing to consider with a 4 channel amplifier is that as you load up one side of the amplifier the available power for the other side is reduced. So if you run a subwoofer on one half of the amplifier the available power to drive a pair of speakers on the other half won't be as much as if you were running only a small pair of rear-fill speakers.

Time to lay on some power. Connect the earth first. Then 12V power, then remote. Then connect in the RCA cables and you can move onto setting up the gain and sound controls on the amplifier (the fun bit!)

Setting the "Gain" or "level" on the amp is a crucial aspect and needs to be done with care, otherwise you can easily damage your equipment. Before we move onto this we need to be sure the crossover settings are right for the application.

Set up each half of the amplifier separately – so – here we go – first side of the amp.

Channels 1+2:

If you are running Coaxial or Component speakers you first need to check the "HPF/FULL/CLONE" switch for this side is set to HPF. The BLACKDB4.1 has a multiplier switch on channels 1+2 for use with tweeters. So the crossover frequency range is from 50hz-3khz or 500hz-30khz this gives you the ability to use it to power bullet tweeters with a crossover point at 7khz and above which will not only sound better than relying on the capacitor typically wired on to them but also further protect the driver. The CLONE setting with clone exactly what the settings on channels 3+4 are set to. So you can run 4 channels of bandpass filtered midbass with a low cut at 100hz and a high cut at 5khz for example.

Channels 3+4:

Channels 3+4 feature a LPF, HPF and BPF settings.

For Components, coaxials and some other full range devices, switch the switch to HPF. A typical component or coaxial driver will be able to respond happily down to 70hz and some as low as 40hz. We recommend 100hz as a good starting point.

If you are running a Subwoofer on this half of the amp the switch needs to be on "LPF" or Low Pass Filter, as it describes, this will let the low frequencies pass through. The controls start at 500hz. This amp will work in bridge on subwoofers but your going to need to use an external crossover to crossover below 500hz. But you can use the HPF as a subsonic filter in this case as the control starts at 15hz.

When using with a Midrange/midbass driver set the switch to BPF and adjust the high and low pass dials accordingly. For a typical 8" midbass driver you would use a 100hz high pass and a 3khz low pass. This will let only the "pass band" between these 2 frequencies through to the driver.

Once your crossover settings are set up, you can move on to the gain or "Level". This bit is REALLY important!

First, disconnect all other subwoofers or speakers so that you can hear only the speakers (or woofer) powered by this side of the amplifier. Next, turn the level on this side of the amp all the way down. Choose some music that you're not particularly keen on that has a good range of bass, treble and vocals (helps not to get lost in the music whilst you work on the system.)

Then go to your head unit and gradually turn up the volume until you begin to hear slight distortion. This is normally about $\frac{3}{4}$ the way up the scale. This is the maximum setting that you will EVER use from now on – make a mental note of it. Next, turn the head unit down from here by around $\frac{1}{4}$. This builds in a little bit of “headroom” so should you have a track that is recorded quieter than the others or is at a lower bit rate, you can boost the volume without pushing anything into distortion.

Once the volume is set on the head unit, go to the amplifier and slowly start to turn the “Level” knob up, keep going till it is at a level you are happy with (that isn't going to deafen you!) or until your speakers are just about to distort. If they do start to distort, turn back down till they sound perfectly clear – and then, because you're setting up a 4 channel amp you want to tweak it down a bit more for good measure to take account for the effect that loading up both sides together will have.

If you are setting up a subwoofer or midwoofer the procedure is exactly the same, except that rather than hearing distortion in the conventional sense you will hear it as an unclear bass note – you may hear a cracking, a metallic slapping sound or a rattle. It is CRITICAL that you detect this sound and back the amp off to stop it NOW. If you do not perform this step you will become another sad statistic in our “rejected warranty” book – you will be ringing up in about a week wondering why your driver is toasted. Don't be this sad individual!

Now, disconnect the side of the amp you have just done and go back and set up the other side.

Once this is done, connect both sides of the amp and listen to the whole thing. You may find that there is an imbalance in the sound – now you can balance the levels out very carefully. Remember that you can't turn one side up without turning the other side down by a corresponding amount.

When setting up a 2 way system with tweeters on channels 1+2 and mids on channel 3+4 its recommended to set the gains on both pairs of channels at the same time so you can correctly match the tweeter output to the mid output. Because tweeters are normally much more sensitive than midrange and subwoofer drivers and this will result in a very top heavy sound.

One final comment - If you are not running a subwoofer at all in your car you may want to set the crossover switches to FULL - this will send the full spectrum of sound to the speakers. However, it is likely that in most cases this will result in your not being able to listen to the system without obvious distortion at even fairly modest levels (depending on your speakers, installation and source unit) although below the distortion threshold in this situation it will sound as sweet as possible.

You have done it! Enjoy your system!