



## BlackDB1.1

Firstly, thank you for your purchase. Every element of this product has been optimized to give you the best possible performance for your money. We think that Bass Face represents the highest quality to price ratio available on the market today.

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.

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. We recommend the use of a 4AWG wiring kit with appropriate termination for maximum performance, especially if you will be running the amplifier at 1 ohm impedance. 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 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 RCA's from the head unit back to the amp too. 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 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. Don't forget to fit the bass remote control and run the control cable with the other wires to the amplifier! This can be plugged in right away.

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; 2-3" 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 subwoofers! The BLACKDB1.1 has 2 sets of positive and negative connectors, this is for ease of connecting multiple speakers and bridges inside the amplifier (they are not separate outputs) Take care that the positive on the speaker is going to the positive on the amplifier. If your car speakers and woofer are connected "out of phase" then it can severely affect bass output as the speakers might cancel each other out acoustically.

The Phase control on the amplifier is there so you can quickly flip the phase of your subwoofers to your car speakers, instead of taking out the wires and changing the + and – around. This can be very useful if you are trying to get a specific sound or if you have wired your door speakers and subwoofer out of phase to each other by accident.

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 and that you have the appropriate cooling where applicable. This particular amplifier is suitable for running a mono load at a minimum of 1 Ohm, however at 1 Ohm it may generate a large amount of heat due to being less efficient. At 1 Ohm loads, it is YOUR responsibility to ensure the amp is kept cool. Vertical mounting, “hot boxing” or other improper installation can cause severe damage to the amplifier. The amplifiers protection circuitry reads current draw to define protection parameters, the algorithm it uses presumes the amplifier is used at 4 Ohm. If you are using the amp at 1 Ohm you will need to bear in mind that the protection circuitry may not intervene in time. That is not to say that the amplifier can not function reliably at 1 Ohm. It just needs the appropriate cooling; if used in a confined space it needs fans to circulate the air (especially if mounted vertically) ideally the amp needs to be horizontal on the ground plane and be mounted to a heat conductive plate. A regular mistake that is made is to mount the amp onto a board that has been covered in carpet. This restricts airflow under the amplifier, limiting the amount of convection cooling that can be achieved and insulating the amplifier underneath. This actually builds up heat inside the amp! Avoid mounting on to carpet where possible.

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 (or pair of) 8, 10 or 12 or 15 inch subwoofer of an appropriately matched construction and in a nicely designed enclosure will be fine run off a BLACKDB1.1 amp at 2 ohms or 1 ohms in the case of the pair (assuming proper setup) but you don't want to try and run eight massive heavy coned dual voice coil monster woofers off it, even though on paper you might well have a 1 Ohm load. You have to use a bit of common sense – if you need to fill a van with eight woofers like that then use eight DB1.1's. Big power woofers often have heavy cones, these type of woofers can have big impedance dips and can cause clipping on transients. If you are going to wire in 2 of these or a DVC heavy coned subwoofer, we recommend that you wire them in series at 2 Ohm and use a higher gain setting on the amp. For wiring instructions please see the diagram later in this manual.

Obviously, we recommend the Bass Face range of subwoofers and speakers for ultimate compatibility. It's also worth mentioning at this point, that, running audio into the amp, with any level of gain, but no speaker attached can and will seriously damage your amplifier if done for long periods of time. Some amps have load sensing and will shut the amp down if no speaker is attached, some do not. Car amplifiers often do not.

Another danger to your amplifier is mounting it onto your bass box. While this is a very popular technique, people completely overlook the fact that the bass box will cause the internals of the amplifier to be vibrated violently and can cause components to become disconnected from the board, or crack the board itself. This will of course break the amplifier and would not be covered under the limited warranty.

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.

If you have an active crossover elsewhere in your system (such as the head unit) then you may wish to set the crossover switch on the amp to OFF. Otherwise, in most cases, this must be set to ON.

We recommend a LPF of about 100hz initially as an excellent starting point for most car woofers. Try 80Hz and 120Hz too – you will notice the sound change. If you are running a 15 inch woofer then you will want to be looking at a lower crossover frequency (like 80Hz) – if it's an 8 inch driver then you may want to go up to 120, 150 or even higher.

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

Before you do anything else, please ensure the BASS BOOST knob is set to 0 – i.e. switched off. We also suggest you turn the bass remote level to a mid setting to allow adjustment later to taste.

Next, you need to learn about the subsonic filter. This is a crucial part of the setup. When the music frequency goes lower than that which the subwoofer system can reproduce with any guts you are wasting a lot of energy asking the amplifier to create those parts of the music. Worse still, your woofer will try its best to create them and find itself moving backwards and forwards at very large levels of excursion and distortion from the overstretched amplifier. Many bass amplifiers do not have subsonic filters – this is MADNESS and results in a lot of burned out woofers and amplifiers. Many bass amplifiers DO have subsonic filters that their owners do not understand – this is MADNESS and results in a lot of burned out woofers and amplifiers!!!

As a rule of thumb you should set your subsonic filter to about 30Hz – this is a generalization because obviously different subwoofer setups can play to different low frequencies. Something like an 8 inch sub in a ported box designed to be very punchy will struggle to get below 50Hz – in which case inch up the subsonic to that level to improve all round performance and protect the components. If you have a 15 inch woofer in a well sized sealed box that is designed to sound low and atmospheric then you may be able to come down to 20Hz with the filter. As you turn the filter up you will hear it stopping the low bass from being played – but you will notice that you can play the music louder with less distortion. You need to set this to optimum balance later.

Now it is time to disconnect all other subwoofers or speakers so that you can hear only the woofer powered by this amplifier. Next, turn the level on 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 from the subwoofer. 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 woofer(s) are just about to distort. If they do start to distort, turn back down till they sound perfectly clear.

One thing that you need to learn is how to actually hear a woofer “distort” – it sounds different than a full range speaker because rather than hearing distortion in the conventional sense you will hear it as an unclean 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 woofer or amplifier is toasted. Don't be this sad individual!

You will notice that earlier in the text we set the bass boost to off. This is because more often than not this EQ control is misunderstood and can cause damage. The bass boost control ramps a range of frequencies in the bass region that will cause more bass to be created than the signal coming in from the head unit expects. It will also consume more power and can push a system into distortion if the settings are not made carefully. An example of a valid use of bass boost might be where your woofer system has an uneven response – as you turn up the gain the upper region of the output becomes strained and begins to distort but yet with low frequencies you are able to turn up the bass without distortion. In this case, you would go back to the beginning of the setup instructions, get the woofer playing at a modest level and then swing in some bass boost until the distortion happens at the same volume level, regardless of the music you are playing. Then, you would set the gain with the bass boost control in THAT position – to take account of that level of boost. You ABSOLUTELY cannot increase the bass boost once you have already set the gain level – you'll overdrive the amplifier and burn something out.

Treat the bass remote with similar caution. It is effectively an overdrive gear – designed to allow you to fine tune the sound to your preference. It cannot, however, make the system more powerful than it already is! So yes, as you drive slowly with little tyre noise you might want to reduce the setting on the cockpit knob to reduce the bass level. And yes, if you are listening to a track with a low recording level and you fancy a bit more output you might

increase the setting. But it is your responsibility to listen for “dynamic compression” (where you are turning the system up on the knob and yet the actual volume is not increasing) since this is an indicator that the limits of the power available have been reached and over-reached!

We hope that these instructions have been helpful and that the information will help you to build a well balanced and stable system that will provide years of listening pleasure.

Enjoy your system!