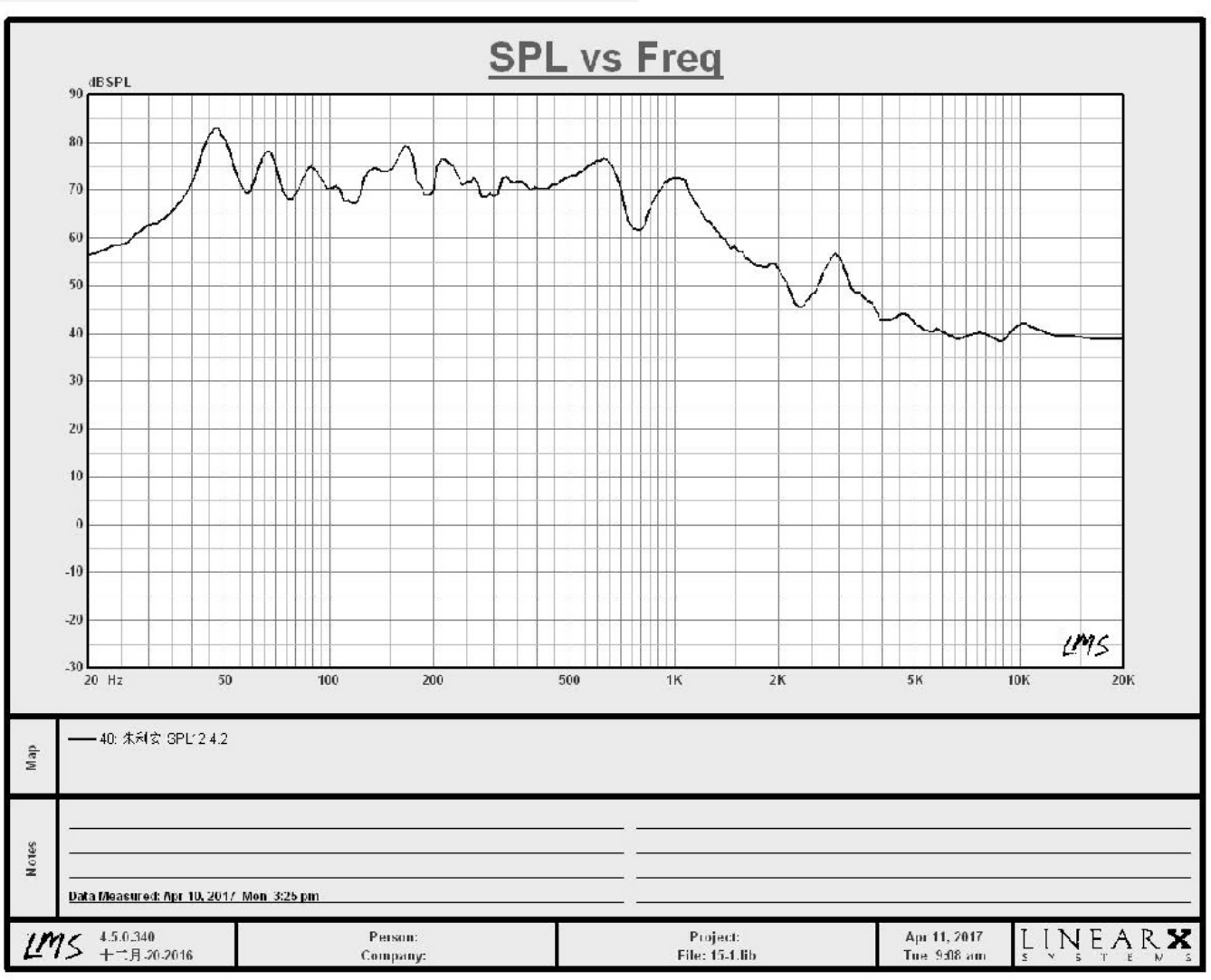
SPL12.4 12" 30cm 2x2Ohm DVC Subwoofer 2500w RMS

SUPPORT CREW

Instruction manual

Thank you for choosing Bassface. From the simplest connector to our top of the range amplifier - every element of these products has been designed to give you the best possible performance for your money. Please take the time to read these instructions carefully as they contain useful and important information. Modern high power audio systems can generate voltages at the speaker similar to mains operated equipment – for some reason everyone seems to ignore or forget this. Your wiring needs to be good to be safe. Please remember this and take your time. Please exercise caution when setting volume levels – powerful audio equipment can easily produce enough sound to permanently damage hearing. Remember that audio competitors use ear protection when operating and competing. Do remember that incorrect installation or abuse is not covered under warranty – please make sure that your installation and any partnered product is suitable and compatible. If you are unsure please seek qualified advice before proceeding. Always use appropriate hand and eye protection when working with tools, and always work within your capabilties as an installer. We offer a 12 month manufacturer warranty via your distributor or retailer. Please retain your purchase receipt as proof of purchase. Please note that Bassface operates a policy of continuous product development and we reserve the right to change specification without prior notice. You can follow our process on our website by reviewing the version history information.

Please note that we sometimes include information inside these manuals which we feel is of potential value to the client on related subjects such as conversion charts, capacitance values or wiring diagrams. Please feel free to copy any of this information since it is in the public domain.



Before we move to the design and installation of the subwoofer it is important to understand about woofer power handling. When we rate a speaker for power, we are aiming to give the customer a good indication of the level of power that the speaker will be able to cope with as a maximum value, when installed into a closed field environment (a car!) using a suitably designed bass enclosure and running an intelligently set subsonic filter and low pass crossover and when fed from an amplifier that is outputting clean, crisp power (not a load of distortion!). To be clear, we are not attempting to rate for "continous" or "indefinite" performance - we are rating for a genuine, RMS value over the short term, rather like what you might do to enjoy one song at absolute maximum level, or at the other end of the spectrum if you are competing in sound pressure contests we are offering you the "burp" RMS level. It is the system designer that is responsible for choosing equipment that works in harmony together - speaker, enclosure, amplifier and source unit as well as setup. There are vast differences in the final power handling of a speaker system depending on these factors, and "raw driver" theoretical power limits are only one factor in that final number. Heat management is the responsibility of the system designer, therefore, and we will not accept warranty claims for burned coils under any circumstances. A burned coil is always because of either bad setup (distortion) or bad heat management (too much power for too long - choose a higher subsonic filter level, a lower crossover low pass point or allow the hardware to cool down between periods of extreme load.) Lets face it, we all want to run with a 10Hz subsonic in a massive enclosure and do huge numbers easily but that's not possible in every case. You have to set expectations accordingly. A race engine might last 2 hours at the absolute maximum level of performance it is capable of. The same engine running a lower state of tune might last many thousands of miles on the road. That's the same engine in a different situation with different setup. Our speakers are no different than this and the longevity will vary in a similar way depending on how close to their thermal and mechanical limits they are run.

The first consideration is enclosure design. This is a complicated and technical subject. You can use our recommended box design where we quote one, or approach your distributor for advice. Please do not guess the box size as it is a very important part of your success with the product. For the construction of the enclosure we recomment the use of MDF or Weather Proof Ply Board (WBP) in 18mm thickness as a minimum. Do not construct bass boxes from chip board. Improved performance will result from thicker box material - either 25mm or even laminations of thinner material are common methods for improving box rigidity. Corner bracing is popular and works well, as do internal braces between walls. Don't forget to take account of the volume of any inner bracing when you are optimising the box size. When we are designing boxes we always allow an additional small amount (say 0.25 cubic feet or a few litres) of extra space so that we can tune the box accurately afterwards. You can't add space after but you can fill it with bracing and resin or other objects to reduce it! On the larger subwoofers it is essential to make the baffle (the side of the box where the woofer is affixed) from a double layer of 18mm MDF as a minimum. This reduces box interference greatly and is proven to be a worthwhile exercise. DO NOT use screws to fasten your subwoofer into the box. It works but they strip easily, can come undone and do not offer professional repeatability in respect of service work to the enclosure or speaker. We offer our BFTNUT.1 kit which has ten 60mm long high grade M5 bolts with matching T nuts as an excellent way of retaining your woofer to the enclosure. Also take note that should you carpet the enclosure you will need to cut the carpet carefully around the woofer. Do NOT bolt the woofer to carpet as it is porous and could affect the box parameters.

When running more than one woofer in a mono configuration we recommend that you share enclosure space and keep the speakers as close together as possible in the baffle. This tends to do the most effective job of allowing the speakers to act as a single piston, moving the optimum amount of air. Do note well that should you decide to operate stereo bass you MUST run the woofers in separare air chambers. Additionally, if you are running a complex setup of multiple amplifiers driving multiple coils or speakers you MUST meter the amplifiers at various levels to ensure the voltages using a test tone at the coils are equal. Imbalance in this area will at best cost you SPL and at worst will damage your equipment.

You'll be referring to our data and speaking to our distributors to choose a box design, but some general information is that a larger box will tend to give more low bass but at the expense of some power handling. If you are lucky enough to have a large and powerful amplifier then you will be able to run the subwoofer harder in a more controlled fashion. A less powerful amplifier always carries with it the risk of burning out the speaker due to distortion and the resulting excessive heat soak.

Every subwoofer installation needs a crossover function - the precise settings are a subject of discussion for each particular setup but a good starting point is to work with a 25Hz subsonic (high pass) filter and a 100Hz low pass filter. Whilst these will not produce optimum results in every case they will certainly be enough to get you up and running.

Once the speaker is installed and working it is vitally important to follow a break in procedure. On smaller woofers with single spiders a short break in period of a few hours at medium volume, making sure the woofer is not in any way stressed, will result in a satisfactory looseneing of the components. On the larger or multi spider products or specialist professional woofers such as RED series and XPL it is absolutely critical that the speakers are not extended until at least 20 hours of playing at medium volume has been completed. Failure to do this will almost certainly lead to failure of the motor due to the suspension presenting excessive resistance in its pre-break in state. Failure of speakers due to insufficient running in is not covered by warranty. Please note that TS parameters can and do change dramatically after break in - until the speaker is at its equilibrium.

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