



VAF Research Signature I-93mkII

Owners Manual

A little about VAF Research Pty. Ltd.

VAF Research was established in 1977 by the current managing director, Philip Vafiadis, and was incorporated in 1990 taking its current form. From the beginning Mr. Vafiadis has had an interest in improving the standard of the Australian audio industry with a belief that the skills existed for Australia to be a world leader in this field.

To this end Mr. Vafiadis has visited many key component manufactures around the world to keep informed with the current state of the art in the industry. This has enabled VAF to incorporate new components in their products often before other major international companies, and in this way keep one step ahead.

Through the years VAF Research has developed, produced and successfully marketed, through specialist outlets, a number of high quality speaker systems under the VAF name. Until recently, however, the major part of VAF's output has been product development and production of O.E.M. speakers and speaker parts for other manufacturers to include in their own production under various brand names throughout the world.

VAF Research is a small and vibrant **fully Australian Company** with a unique blend of capabilities.

This document contains useful information. Please retain it for future reference.

This Manual contains the following sections:

1. Warranty Information
2. VAF Research Contact Details
3. Notes on Loudspeaker Usage
4. Specifications

Warranty Information

Your VAF loudspeakers are protected by a ten (10) Year Warranty against manufacturing defects. The warranty period commences on the original date of purchase and is transferable to subsequent owners. Please retain your purchase documents (receipts, invoices etc.) in case you need to make a warranty claim.

Contact Details

If you have any queries regarding the assembly or use of your VAF speakers please contact us:

Address: 52-54 North Terrace
Kent Town 5067
South Australia
Australia

e-Mail: vaf@vaf.com.au

Internet: www.vaf.com.au

Australian Customers

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VAF I-93mkII

Notes on Loudspeaker Usage

There are some matters that should be considered when you use your loudspeakers, both for the first time and every time, to ensure their best performance. This is true of all high quality loudspeakers regardless of the manufacturer.

Power Handling and Amplifier Selection

'Power Handling' is a much discussed but little understood subject. There are actually 2 issues:

- how much power the loudspeakers can take before they start to lose quality and produce distorted sound
- How much power they can take before they are permanently damaged.

The first is a function of the driver and enclosure design, and the spectral and dynamic content of the music, and is usually limited by the distance that the driver cones can linearly travel. Exceeding this level, particularly during heavy bass passages, results in an obvious degradation of sound quality. Many loudspeakers will briefly exceed their linear travel during loud passages of music and, provided that it occurs infrequently and is not excessive, will not unduly impede the overall sound quality.

If the speakers are driven with even more power, the sound will deteriorate further until the point is reached where physical damage occurs. This is usually the result of the driver voice coils getting so hot that either the glue holding them together melts, or the wire itself burns up (like fuse wire). The driver will stop working or will produce a distorted sound with audible scraping and scratching sounds. This is bad news and the driver then needs repair or replacement.

Surprisingly, damage is more common with low powered amplifiers than with high-powered ones. This is because low powered amplifiers are more likely to be overdriven - this results in a major change in the content of the music signals, which places great stress on drivers. At the same volume high-powered amplifiers are less likely to 'run out of power' and send distorted signals into the loudspeakers.

The power handling issue is further complicated by the fact that the 'X Watts RMS into 8 ohms' figure most often quoted in amplifier specifications gives very little information about the way the amplifier will actually deliver power into real loudspeakers on real music signals. It also gives no indication of how the amplifier behaves when overdriven. Many low powered 'Audiophile' amplifiers, for instance, will often play louder before producing audible distortion than some mass market amplifiers of 4 times the rated power output!

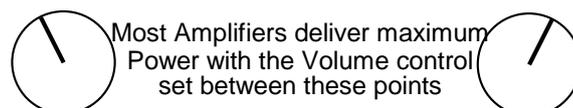
It is therefore almost meaningless to rate a loudspeaker's power handling as a single number. Despite many requests for just such a number, we prefer to state the broad range of amplifier power we believe has the best chance of meeting most peoples needs. This range is:

VAF I-93mkII 10 - 500 Watts RMS

Be aware that overdriving ANY amplifier will risk damage to the speakers. If the sound you are hearing is distorted or showing signs of amplifier clipping TURN DOWN the level. Even a small reduction in the volume control setting may save your tweeters.

Most amplifiers deliver their maximum power long before the volume control is turned all the way around. Many are set up for maximum power with the control set to between 11 o'clock and 1 o'clock. This will sometimes vary from input to input (e.g. the CD player may play at a higher level than the FM Tuner).

Be aware also that applying Bass or Treble boost by using the tone controls or any equalisation control of your amplifier has the same effect as turning the volume control up. The maximum volume control setting should be reduced if using equalisation.



General Notes

- To avoid damage to the midrange drivers, avoid touching their magnesium cones.
- VAF I-93's are heavy loudspeakers. You may need help to position them.
- Avoid lifting the speakers by the black trim piece attached to the front baffle.
- Protective cloth grilles are supplied. I-93's are designed to be used without the grilles. While good performance will still be had with grilles on, they are intended for protection when the speakers are not in use.

- I-93's should be positioned on spikes to enhance physical stability and provide a solid connection with the floor.

Cables and connections

We recommend the use of good quality multi stranded cables of reasonable size. The cost of cables should be in sensible proportion to the value of the rest of the system. As a general rule allow about 5% of the total cost of a system for speaker cables.

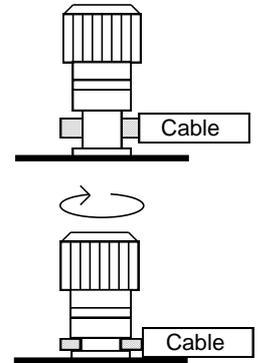
VAF Research Pty. Ltd. can supply a variety of cables and we suggest you ring to discuss your needs.

The speaker cable should be as short as possible, leaving enough length to position the speaker once connected. Excess cable should not be rolled up but laid out neatly on the floor behind the speaker or the system. We recommend that the same length of cable be used for both speakers in a pair, even if this results in one cable having more excess than the other.

Ensure that your amplifier is turned off before making any connections to your speakers as bare wires may short out, potentially causing amplifier damage.

Strip about 1cm of insulation from the end of the cable. Unscrew the cap on the speaker input terminal until the hole in the post is visible. Push the stripped wire end through the hole in the post and retighten the cap. Ensure that the cable insulation is not caught under the cap.

Alternatively, speaker cables can be terminated with banana plugs, which are then plugged into the terminals on the amplifier and speakers. This can be useful if the system is frequently changed or moved. Banana plugs offer no improvement in performance over bare wire connections but are more convenient to use. If using banana plugs, we recommend good quality gold plated types which will provide a reliable and corrosion resistant connection.



Whether using bare wire or banana plug connections, we recommend that the cables be disconnected and cleaned (using a good contact cleaner or methylated spirits) or reterminated every year or so.

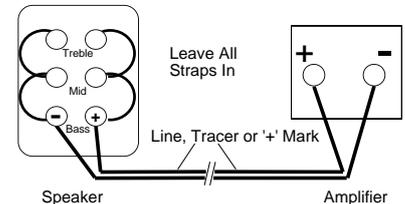
Phasing

For correct performance all of the loudspeakers in the system must be correctly phased. The deterioration of sound quality caused by incorrect phasing is significant.

The red or positive terminal of the amplifier must be connected to the red or positive terminal of the speaker. Most speaker cables are marked with a line or tracer on one conductor. Connect this conductor to the red terminals of both the amplifier at one end and the speaker at the other. Similarly, connect the other conductor to the black or negative terminals.

Standard Wiring

If you do not wish to Bi-Wire or Tri-Wire your speakers (see below) leave the straps fitted to the terminals and connect the speaker cables to the bottom set of terminals. Ensure that the terminal caps are screwed down tightly onto both the cables and the straps.

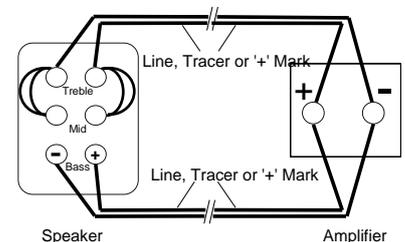


Bi-Wiring / Tri-Wiring

I-93s are fitted with Tri-Wire terminals. This allows you to use alternative wiring methods called "Bi-Wiring" and "Tri-Wiring". This requires the use of two or three sets of cables from the amplifier to the speaker. Bi-Wiring offers potentially better performance than standard wiring but we recommend the use of one set of good quality cables rather than Bi-Wiring with poor quality cable. The benefits of Bi-Wiring will only be realised if good quality cable is used for both Bass and Treble.

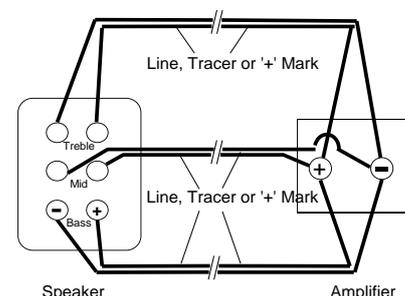
To Bi-Wire your I-93s:

1. Unscrew the Bass and Treble terminal caps and move the lug from the Bass terminal to the treble terminal.
2. Refit all terminal caps and ensure they are screwed down tightly.
3. Connect the bottom pair of terminals (Bass) to the amplifier as normal.
4. Connect the top pair of terminals (Treble) to the amplifier using another set of cables
5. If your amplifier has more than one set of output terminals, you may connect the bass cables to one set of amplifier terminals and the treble cables to the other.



To Tri-Wire your I-93s:

1. Unscrew the terminal caps and remove the terminal straps. Put them in a safe place.
2. Refit all terminal caps and ensure they are screwed down tightly.
3. Connect the bottom pair of terminals (Bass) to the amplifier as normal.
4. Connect the middle pair of terminals (Mid) to the amplifier with a second set of cables.



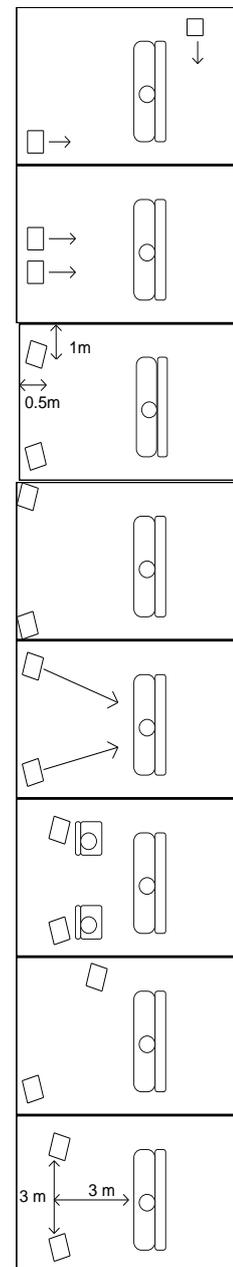
5. Connect the top pair of terminals (Treble) to the amplifier using a third set of cables
6. If your amplifier has more than one set of output terminals, you may connect the bass cables to one set of amplifier terminals and the mid and treble cables to the other.

Positioning

The positioning of loudspeakers is often dictated solely by the available space in the room and the locations of existing furniture and architectural features. Every room is different, and the ideal listening position and placement of speakers will also be different. It is worth spending some time to try out various positions and select the one that provides the best balance between performance and convenience.

We offer the following points to guide you in selecting positions:

1. As far as possible both speakers in a pair should be positioned in similar ways. It is not a good idea for them to be at different heights, pointing in different directions **x**
2. Speakers should be positioned at least 2 meters apart. **x**
3. Most loudspeakers sound best when positioned away from side walls, say 1 meter or so. It is a good idea that the distance from the rear wall and the side wall be slightly different. I-93's should be positioned on spikes to enhance physical stability and provide a solid connection with the floor **✓**
4. Avoid positioning the I-93's in corners. **x**
5. The loudspeakers should ideally be angled towards the listener so that the fronts 'point' towards the listener. **✓**
6. Avoid placing furniture or other obstacles between the loudspeakers and the listener. **x**
7. The listener should be nearly equidistant from each loudspeaker. **x**
8. As a rule of thumb, the speakers should be approximately as far away from each other as the listener is away from a line drawn between them. **✓**



Running - In

Most good quality loudspeakers need time to 'run-in' when new. Like a new car, the mechanical components of a speaker require some hours to settle in to their final positions and to give their best performance. In general, the speakers will be run in with about 40-50 hours of use, depending on the type of program material played on them. During this time they will become noticeably smoother, produce more detailed bass and generate an increasingly accurate stereo image.

If in Doubt...

If there is any aspect of the installation or performance of your VAF I-93s that is not clear, please contact VAF Research.

Contact details are listed on the front page of this Users Manual.