

tips

Setting Up Your System

Hi-Fi and home cinema systems come in all shapes and sizes. They can take in anything from a basic set-up comprising CD, amplifier and speakers, to far more comprehensive set-ups with multi-channel sources, corresponding speakers and even games consoles.

Just as varied, and perhaps even more intimidating, are the myriad ways you can connect all these electronics together. Fortunately, Richer Sounds is here to guide you through the tangle of wires and you'll soon find connecting such set-ups is easier than you think.

Before we start

Firstly, when you get your nice shiny new kit home, it's a good idea to check that you have all the pieces that you should. Pay particular attention to leads, cables and any other accessories that come with it.

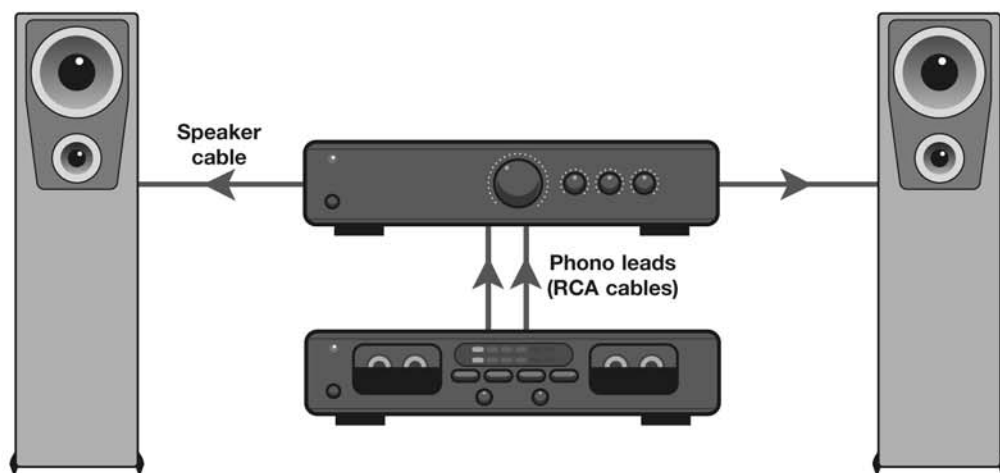
Next you should decide where and how you want to place your equipment. You will need to ensure that you have sufficient mains sockets for each item. All equipment, especially amplifiers, need space around them to "breathe", as overheating can cause serious damage. You should also consider where any wiring is going to run. Particularly the signal from your aerial and speaker cables.

Finally, ensure that all units are switched off and disconnected from the mains while connecting your system together.

Connecting A CD Player And Speakers To The Amplifier

Let's start with the most basic stereo system, comprising a compact disc player, amplifier and pair of speakers. The first connection that needs to be made is from the CD to the amp. The two are wired up using phono leads, which are sometimes called RCA cables. Such interconnects are often supplied with the unit, but it always pays to buy better leads as these offer a significant improvement in sound quality. In fact, a good rule of thumb is to spend 10% of the total system cost on cables. All source components are connected to the amplifier in this manner, whether they are digital or analogue (i.e. either a CD player or a turntable).

The next connection that needs to be made is from the amplifier to the speakers. To do this you will need two lengths of speaker cable. Again it pays to buy quality speaker cable as these offer a significant improvement in sound quality. Make sure you connect the positive terminal on the amplifier (+/red) to the positive terminal on the loudspeaker (+/red) and negative to negative (-/white). If your speakers have two sets of terminals this means they can be bi-wired, which is said to enhance performance by keeping low and high frequencies separate. Please see our 'Tips Sheet' on bi-wiring for more information.



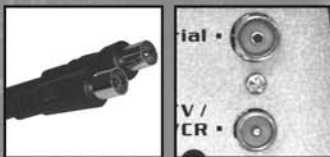
Leads Explained

The leads you use are most often determined by the sockets available on your units. It pays to use the best quality leads available and you should always replace the leads supplied in the box with better quality ones as these will improve both your sound and your picture. Below is a brief outline of the different lead types and their uses.

Coaxial

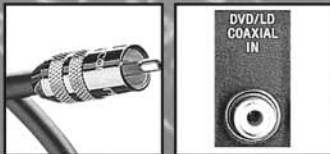
There are actually two types of coaxial cables in use at present:

Analogue



Used to carry RF signals from an aerial, these leads are also used to connect a video to the TV. However, these leads have largely been replaced by Scart on more recent models.

Digital



This audio only digital cable is usually used to connect a DVD player to an amplifier. Unlike the analogue Phono leads, which they closely resemble, this uses only a single cable.

Component video



Three separate leads used to carry video signals only. In terms of performance this is the best with only RGB scart coming close.

Composite video

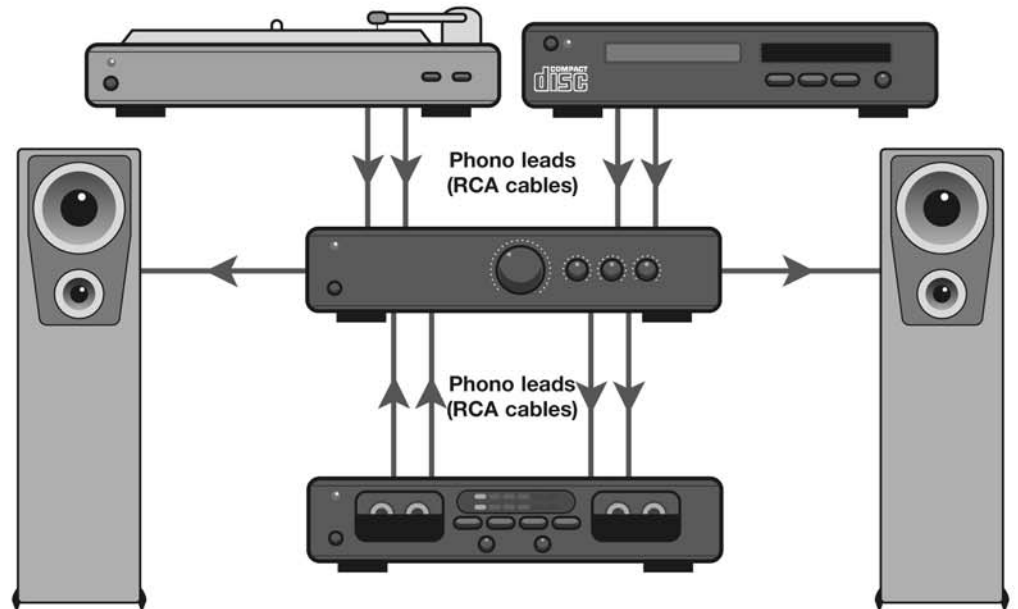


A single lead terminated in phono plugs that transfers video only signals. However, S-Video, Scart and Component leads will all produce superior pictures.

Adding A Turntable Or Cassette Recorder To The Amplifier

If you want to expand your system a variety of other sources can be added. In fact, you can connect as many source components to the amp as it has inputs (usually about five). These can take in anything from a tuner to a turntable. Do bear in mind that, if you want to connect a turntable to your amplifier make sure it has a phono amp section, or that this is an optional extra that can be added.

Another type of component that can be added is a recorder. To do this a pair of phono leads must be added from the recorder to the amplifier (for playback) and another pair going in the opposite direction from the amplifier to the recorder (for recording). This creates a tape loop.



Connecting A Home Cinema System

Wiring a home cinema system together works in exactly the same way - source components connect to the amplifier which powers the speakers. Home cinema setups tend to have more elements. As well as the TV, the package can include anything from a DVD player and video recorder, to a Freeview box, games console or even hard disc recorder.

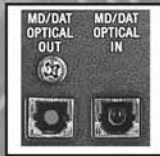
To begin with, let's start with a basic DVD setup of DVD player, surround sound amplifier and speakers and a TV. The first thing to do is connect the DVD player to the TV. The easiest, and most common, way to connect these components is via a Scart lead. Buy a decent brand as it will deliver a much better picture and sound than any freebie. If you can, use component video cables over a Scart lead as they provide vastly enhanced picture quality. The final connection option is S-Video, found on every DVD player, which delivers no improvement over Scart and isn't as good as component cables.

Next connect the DVD player to the amplifier. For Dolby Digital or DTS surround sound you must use a digital lead - either coaxial or optical as there is little difference between them. Plug the lead into the 'DVD' socket on the amplifier. Next you should connect the speakers to the amplifier. This works in exactly the same way as the stereo system described earlier but, instead of two speakers there are now five. Finally connect up the subwoofer. If your system uses a passive subwoofer, this connects just as any other speaker but if it's active you will need a single phono lead which runs from the subwoofer pre-out socket on the amp to the line-in socket on the sub.

Some DVD players also come with a 5.1 analogue output. This is the connection you would use when wiring up a DVD-Audio or Super Audio CD player to a home cinema receiver. Such an output is also helpful if you have an older A/V receiver, which might only have Dolby Pro-Logic decoding. Using the 5.1 analogue output it is still possible to enjoy the wonders of DVD, so long as the DVD player has an on-board Dolby Digital and DTS decoder.

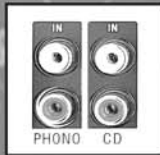
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Optical



A digital lead that uses fibre optics to carry the signal. This audio only lead is most commonly used to connect a DVD player to a home cinema amplifier.

Phono



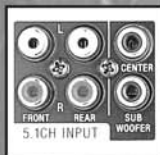
The standard connector used in stereo systems. Phonos have two separate cables - one for the left stereo channel and one for the right.

Scart



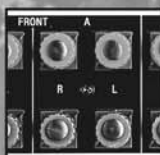
A high quality connection that can carry both sound and picture. RGB scarts separate the signal into Red, Green and blue channels and provide a picture quality second only to component video. Scarts can carry signals in both directions making them ideal for connecting a video recorder to a TV.

Six Channel



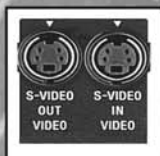
Also known as 5.1, the audio only six channel connection is essentially 6 phono leads and is used exclusively to carry the decoded surround sound from a DVD player with a built-in decoder to a surround sound amplifier.

Speaker cable

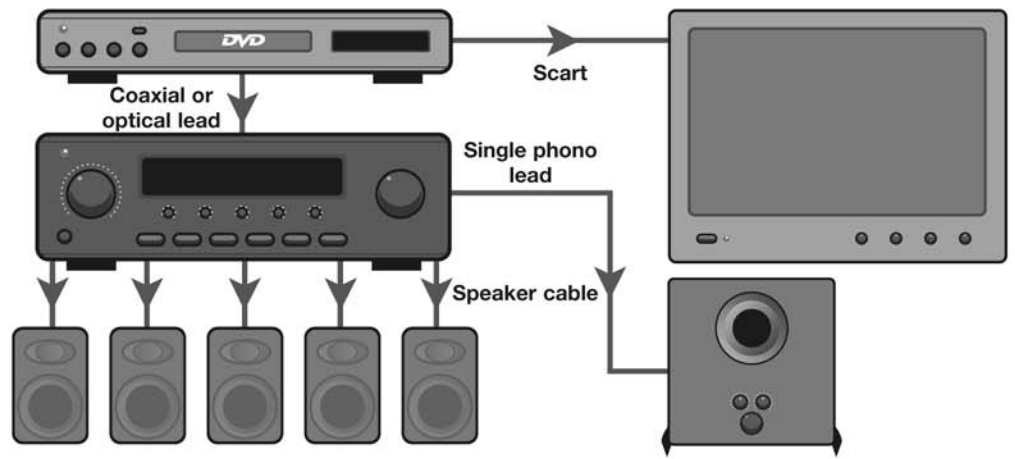


Typically a pair of wire leads (positive and negative). The bare wire is exposed, twisted and inserted into a 'Binding Post' which is screwed in to hold the wire securely.

S-Video



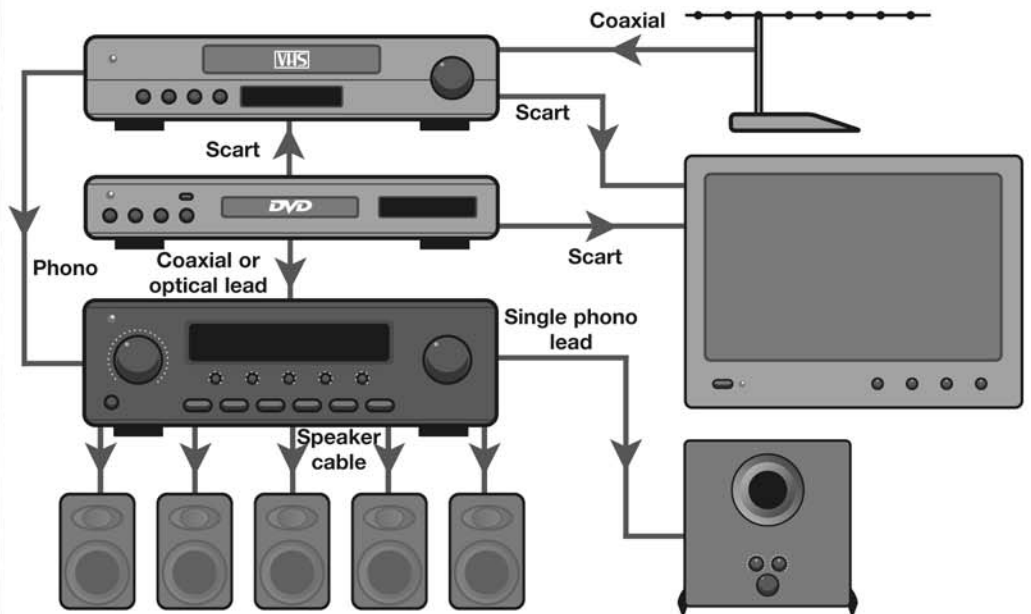
A video only cable that produces pictures which, while not as good as RGB scart, are better than composite. Separate audio cables will be required.



Adding a recorder

So far our example system has two sources from which you may want to record. To add a VCR, DVD recorder or other such device, you will need to send it signals from both the aerial and the DVD. The aerial will use a simple coaxial lead to connect to the VCR, while the DVD player will connect using a scart lead. Finally connect the VCR to the TV using a further scart lead.

While you need a digital source, such as a DVD player, to get Dolby Digital or DTS surround sound, you can still get Pro-Logic surround sound from a VCR. Simply connect a pair of phono leads from stereo output of the recorder to the VCR input on the amplifier.



Help! I've run out of sockets

In the example above, we have used two scart sockets on the DVD player, two on the VCR and two on the screen. But what if you only have one socket on the DVD player or the TV to start with? The first option is to use a different type of lead an S-video or component video lead for example. Failing that, you could ignore the direct connection from the DVD player to the TV and watch a DVD through the video. Although this will affect your picture quality, switching your TV to the VCR channel and the VCR to the DVD channel will enable you to watch DVDs and requires only one socket on the player and one on the screen.

Alternatively, you could buy a scart switcher. These simple inexpensive devices accept signals from a variety of sources and send them to your TV through a single scart lead. Some home cinema amplifiers even have switching for the picture as well as the sound. Usually this involves connecting an S-video or Component video lead to the amplifier and the amplifier to the TV. Do bear in mind, however, that by doing this, you will affect the picture quality as you won't be able to use the best quality leads and the less leads the signal has to travel down, the better the signal quality.

Configuring your system

Equipment manuals will explain in detail how to configure each component, but here are some general tips to get you going.

Screen setup

Adjust your picture to give a neutral image. Contrast should be kept below three-quarters and Brightness around half-way. You should also turn off any picture sharpness settings. You should also set the aspect ratio of widescreen TVs to 'Full' or '16:9'. Remember to turn the volume down on the TV when using an external sound system.

DVD setup

From the setup menu, set the aspect ratio to '16:9', this is the correct shape for a widescreen TV. If your model can output progressive scan pictures and you have a similarly fitted screen, you will need to activate this feature if it isn't already enabled. Finally, set the audio output to bitstream - Digital multichannel information for Dolby Digital and DTS will now be sent down the digital cable to the amplifier where it will be decoded. (Some DVD players disable DTS output. you should check that DTS playback is activated).

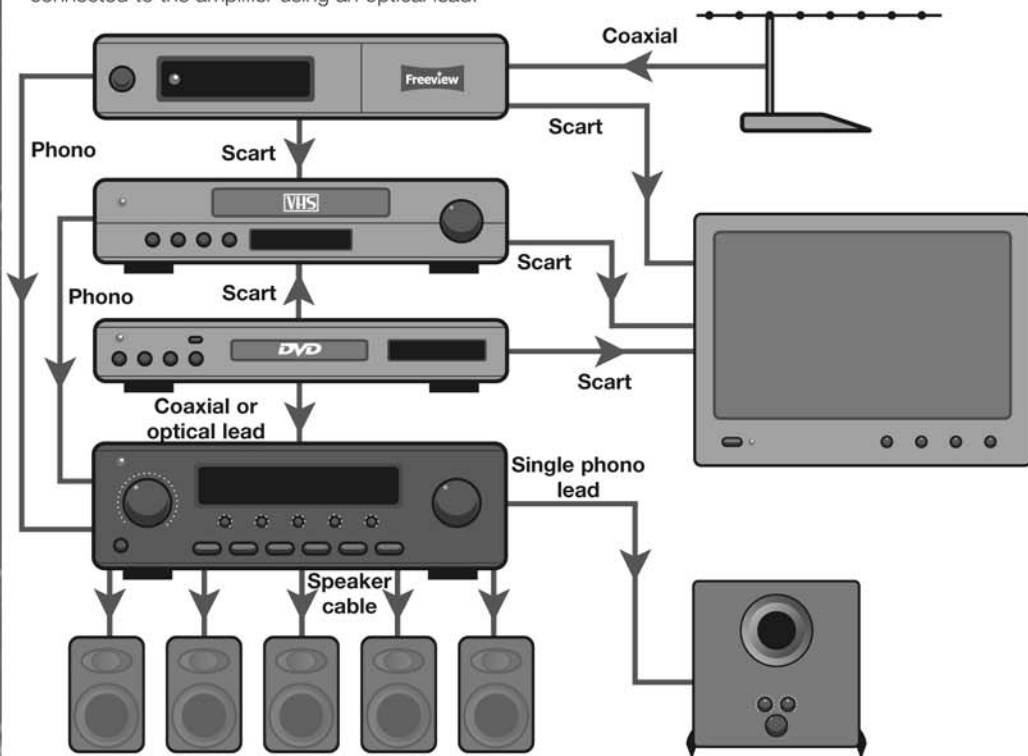
Amplifier setup

Firstly set the correct speaker size for those that you are using. Then set the delay time for each speaker. This ensures that effects reach you at the right time and can be done by either setting the distance of each speaker from the listening position or by adding milliseconds of delay. Most amps have a test tone that can help to check these settings.

Adding Freeview, Satellite and Cable.

Freeview boxes are remarkably easy to install. An external aerial connects to the box using a standard coaxial cable and connects to the screen using a scart lead. Many models come with twin scart sockets so that one lead can also be connected to the VCR. For surround sound, simply connect the phono outputs of the unit to a line level input on the amplifier.

Satellite and cable boxes are usually installed for you by their respective companies, but typically this only involves connecting them up to the external source (cable or dish) and connecting the box to your TV and VCR. If you want to connect them to the rest of your system, simply follow the same steps as with Freeview above. It is worth noting that the Sky+ digibox does feature Dolby Digital sound and should therefore be connected to the amplifier using an optical lead.



Adding A Games Console

As a final aside a games console can be connected to the screen using a lead that plugs into phono inputs on the front of the screen, while the audio output connects to the auxiliary phono input. Newer consoles have Scart outputs which deliver images to the screen, while a digital output delivers the audio signal to the amplifier.

