

# HOW THE MUSIC INDUSTRY OPERATES

THE MUSIC BUSINESS IS JUST THAT... A BUSINESS!

Over the next few pages we will look at how money is made from recording, music publishing, live music performance and all their related businesses. We will look at how those businesses work, and you will hopefully begin to see where you fit in!

Let's start with the basics. If you are writing, recording or performing music in any way, there are three ways of making money.

## RECORDING

If you have made a sound recording and sell it in any way, you are in the recording industry!  
There are a number of ways of doing this:

If you are a recording artist, you will make a record for your record label, who then manufactures CD's and sells them in shops, by mail order or even on the Internet. You will get paid a royalty for every record you sell.

Alternatively, you could look for a distributor yourself, who will get the records into the shops for you. You take a bigger cut, but you have to do a lot more work.

On a smaller scale, you can duplicate your own CD's and sell them at the back of gigs, through local record shops, or even by digital downloads on the internet.

You could create MP3 files and 'license' your recordings to a digital download site, who will sell them on your behalf.

You can also license your recordings to other labels or on compilation albums.

If you are a producer or remixer, you get paid a fee for helping to create that recording, and you may even share in some of the profits.

What is actually being bought and sold, is the rights (or copyright) to the sound recording. More information in workbooks 7 and 8.



You make money when other people use your music to make recordings, perform on radio, television or at gigs.

You make money when someone else covers your music – i.e. they make a recording from it or perform it live to a large enough audience.

You make money when your music is performed on radio / TV, or when someone uses it on a film, TV programme or even a computer game.

The business people you have to deal with are called publishers. They help to exploit your music and make money out of it.

You can receive royalties from the performance and recording of your music through collection societies such as the PRS and MCPS. WORKBOOK 8 – CHAPTER 3

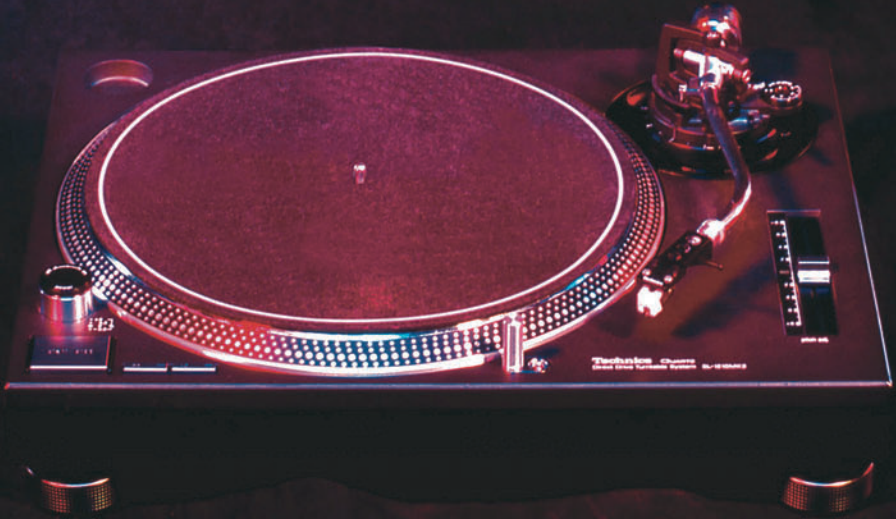
What is actually being bought and sold, is the rights (or copyright) to the music and lyrics. More information in WORKBOOK 7 and 8.

# PUBLISHING

If you have written a song, lyrics, or any piece of original music which you sell, then you are in the publishing industry!

# LIVE PERFORMANCE

If you get paid to perform music as a musician, performer or DJ, then you are in the live performance industry!



If you are a performer, then you will probably receive a fee for performing.

A professional cabaret artist will receive a straight fee.

A DJ will probably receive a straight fee.

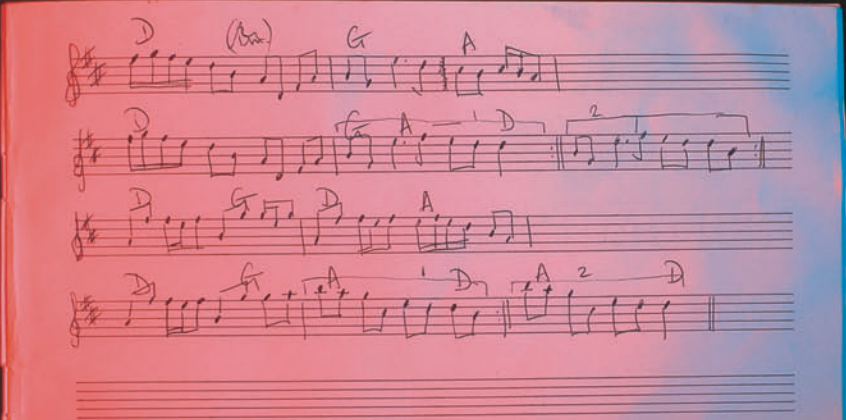
An established touring artist may receive a share of the box office takings as well.

There is also merchandising to think about. Gigs offer opportunities to sell T Shirts and other stuff with your name on it.

The business people you have to deal with are called **AGENTS** and **PROMOTERS**.

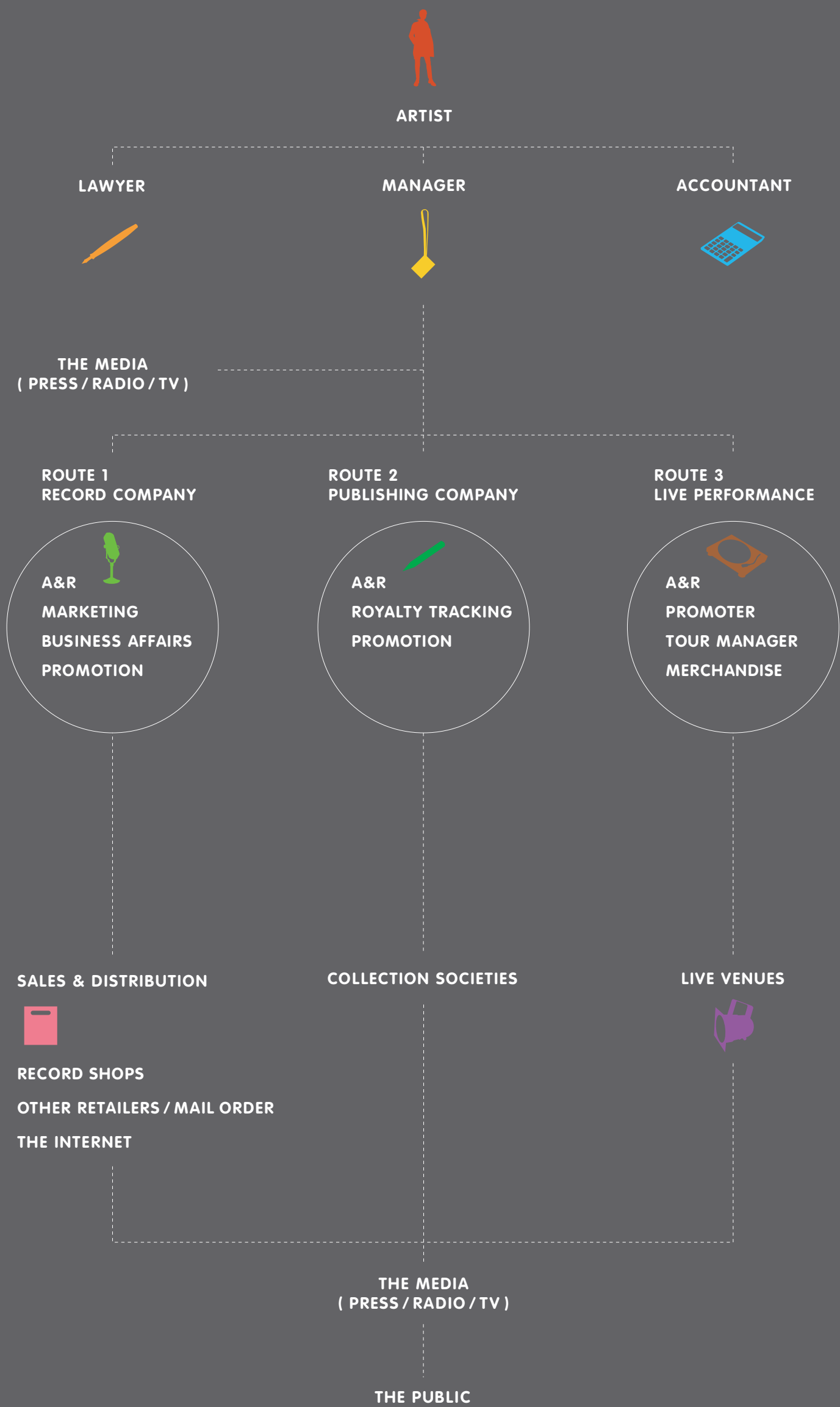
**AGENTS** get paid a commission to book the artists.

**PROMOTERS** take the financial risk on the concert by paying for the venue, advertising and the artist in advance. They take the biggest risk, so they often get the biggest reward.





If you are an artist, you will also come into contact with important business advisers and other businesses. These are...



MANAGEMENT TEAM

The **MANAGER** represents the artist in all business environments and interests. The manager will negotiate ALL contracts in collaboration with the artist and with advice from his / her business advisers ( lawyer and accountant ). Generally takes around 20% ( gross ) of all monies earned – this is called a commission. ( More in workbooks 6 and 7 )

The **LAWYER** ( typically a specialist music lawyer ) is responsible for advising the manager and artist on all offers / contracts. ( More in workbooks 7 and 8 )

The **ACCOUNTANT** is required to prepare financial statements and annual tax returns and oversee all transactions. ( More in workbooks 7 and 8 )



Need to find yourself a manager? Go to [» WORKBOOK 7](#)

# THE RECORDING INDUSTRY

Now lets look at the three 'revenue streams' in more detail.  
The recording industry makes money by exploiting the rights to sound recordings that it owns. In practical terms, this means that it makes money by selling recordings. ( See workbook 7 for more information )

Here are the component parts of the recording industry.



## RECORDING ARTIST

The artist who performs on the recording. They may actually write the music too, **but not always**. The recording artist is generally signed 'exclusively' to the record label. This means that the artist can not record for another label without permission.



## PRODUCTION

This is the recording studio, engineer, session musicians, producer and technical staff who create the sound recording.



## RECORD COMPANY / LABEL

The record label pays for the sound recording to be made and the marketing costs to advertise and promote it. They sign the recording artist to a **recording contract** which stipulates that the artist must record 'exclusively' for them. **A&R** ( Artist and Repertoire ) is the department that finds the talent and nurtures and develops it.



## MANUFACTURE

Manufacturing has been traditionally done by **pressing plants**. Large pressing plants can produce hundreds of thousands of CDs a day. Some recording studios have their own duplication facilities for 'small runs'. Pressing on demand is the key to producing the optimum amount needed to meet pre-sale orders and predicted sales on a regional and national basis. With **digital distribution** on the Internet, pressing plants are not required, as the music is delivered electronically through telephone lines, mobile phones and the Internet.



## DISTRIBUTION

The **distributor** receives the product from the manufacturer, who then warehouses all the recordings and gets them into the shops. With **digital distribution** on the Internet, there are new kinds of distributors who will put your music on the web and manage all the electronic transactions for you.



## RETAIL

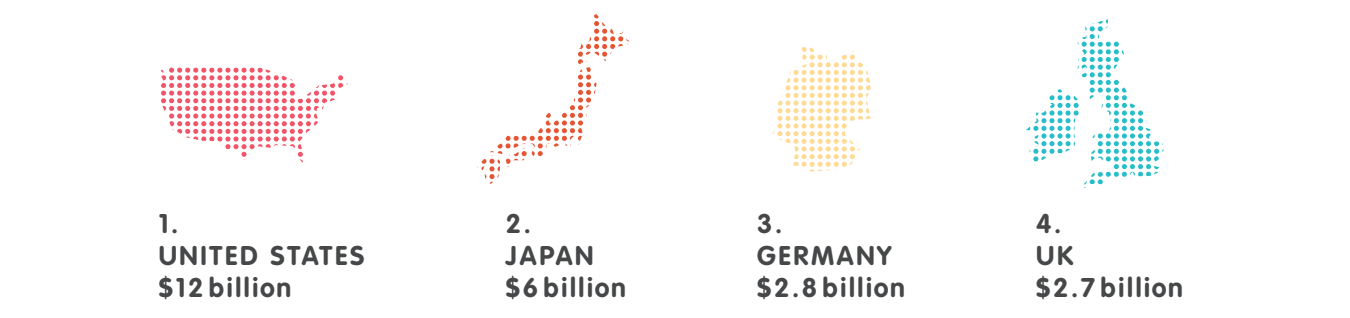
The final **point of sale** to the consumer. This could be a record shop, a book club, mail order, supermarket or an online retailer. With **digital distribution**, you can buy the digital sound files directly on the web with an electronic payment. This is becoming increasingly popular. The sales figures in a relatively small number of record shops are used to generate the weekly Top 40 charts. There are now 'download' charts too.

WHAT'S IT WORTH?

The UK recording industry is worth billions of pounds. Consumers spend around **£3billion** in total on music and spend about **4 hours a week** on average listening to recorded music.

It is estimated that UK artists have a **15% share** of the world music market. The UK exports twice the amount of music it imports

WHO BUYS THE MOST MUSIC IN THE WORLD?



If you want to sell records, these are the countries to do it in!  
» WORKBOOK 6



In the music industry, other countries are called ‘territories’.  
» WORKBOOK 7

RECORD LABELS

The key business in the recording industry is the record label. There are thousands of record labels throughout the UK, however, only five Major International companies at present: BMG, EMI, Sony, Warner and Universal. Each have a range of smaller labels, and they also license to and from independent labels to provide and cater for niche markets. Occasionally artists sign with smaller labels to remain independent and largely in control of their affairs, only to find that a major company has bought controlling shares in the label that they signed to.

There are many smaller independent record labels in the UK. These range in size from £multi-million businesses to tiny one-man-band bedroom operations. Examples of successful indies include Beggars Group, XL and Ninja Tune. The indies are represented by a trade organisation called AIM ( Association of Independent Music ).

HOW DOES A RECORD COMPANY WORK?

ARTIST AND REPERTOIRE ( A&R )

A&R department is responsible for finding, signing, recording and developing artists signed to the label. The A&R person is the initial point of record company contact for the manager. A&R departments receive hundreds of demos, read reviews, surf the web, watch dozens of acts live, and are contacted by numerous managers, agents and lawyers every week. Their job is to check out all of the above and predict the most successful candidates to fill gaps in the company's roster of artists. After the discovery they sign and develop this talent for the company, working closely with the act in its early stages and planning production and recording.

MARKETING

Marketing ( also known as Product Management ) : this department is responsible for developing an image for the artist. Oversees video production, photo-sessions, artwork and media promotion.

BUSINESS AFFAIRS

Business Affairs department oversees and negotiates all contracts and agreements on behalf of the record company. Business Affairs staff are often lawyers and they will discuss, negotiate and agree terms of the record contract, recording budget, advance, and so on.

INTERNATIONAL

British talent accounts for a large proportion of international sales, and UK labels often have an international section which seeks to exploit their sound recordings in overseas markets. This relies on an expert understanding of the different overseas legal systems.

PROMOTION

Promotion is responsible for all promotional activity. This area is usually sub-divided into press, TV / radio plugging, clubs and creative / video. Public perception and awareness often hinges on the media. The record company marketing team will plan a campaign to match release dates with television, radio, club reaction, newspaper and advertising coverage of a new product.

ADMINISTRATION

Various administrative roles include human resources (or personnel), legal / business affairs, finance and of course the Managing Director (MD) or Chief Executive Officer (CEO).

# THE MUSIC PUBLISHING INDUSTRY

The music publishing industry makes money by **exploiting the copyright in music that it owns**. The key business is the **music publishing company**, which collects and creates revenue from the original songs and music written by its signed songwriters and composers.

» WORKBOOK 7 for more info on royalties, deals and contracts.

The key thing to remember about publishing is that money is collected and paid to the writers each time their music is played on the radio / TV or performed live in public. Money is also collected by publishers and paid to writers when print, synchronisation or Grand rights are licensed. Or ( in classical publishing ) when scores and parts are hired for performance purposes



For example, if you wrote a piece of music that was broadcast on BBC Radio One for 3 minutes, you would be entitled to a performance royalty of over £50. This royalty would be collected by the Performing Right Society ( PRS ) on your behalf and then distributed to you. ( See P65 – collection societies ).

## HOW DOES A MUSIC PUBLISHING COMPANY WORK?

The job of the music publishing company is to exploit the rights in the original music written by its signed songwriters and composers. The company will sign up a writer and expect them to write music in return for ( probably ) an advance of money and a slice of the royalties generated by that music. The songwriter is entitled to two royalties when working with a publishing company.

**MECHANICAL ROYALTY** ( on any sound-carrier ) – collected by **MCPS**  
**PERFORMING ROYALTY** ( live or broadcast ) – collected by **PRS**

Money is also generated through print and synchronisation  
For more information on MCPS and PRS see next section.

## MUSIC PUBLISHING COMPANY



### A&R ARTIST AND REPERTOIRE

is responsible for finding, signing and developing songwriters and composers signed to the publisher. They will try to attract record company A&R interest in order to have the songwriters’ material recorded and released by their artists, or try and place the music with more established artists, thus generating PRS and MCPS royalties. In classical publishing, the equivalent of A&R is generally referred to as Promotion. People working in this sphere are forging links with festivals, orchestras and broadcasters with a view to securing commissions, performances and recordings.



### ROYALTY TRACKING

administers royalties generated by the use of original music from writers and composers signed to the publishing company. Where original signed material is used for performance, broadcast or other commercial use, money is generated. A manager or accountant will normally check royalty statements on behalf of the songwriter.



### BUSINESS AFFAIRS

oversees and negotiates all contracts and agreements on behalf of the publishing company.

**Q.** Are you clear with all that?

"**YES**, I completely understand how music publishing works"  
There is always more to learn! Look at the weblinks and more tasks.

"**NO**, I still don’t understand how music publishing works"  
Don’t worry! It takes time to understand this business. What is important to realise is that whenever you create an original piece of music, it has a value which can be exploited in the music marketplace. The publisher is the business that helps to exploit it for you. More later on this.



# THE LIVE PERFORMANCE INDUSTRY

Consumers in the UK spend about £350 million a year on admission to concerts and gigs. Playing and performing live is big business and creates jobs for many tens of thousands of people.



## CABARET

Many musicians make a good living by playing in cabaret or function bands. This can range from small pubs and clubs to quite large venues and cruise ships or holiday resorts abroad.



## TRIBUTE

There are ‘tribute’ bands who play in the style of a well known band, such as Abba or the Beatles.



## ORCHESTRAL

Orchestral musicians are often on a full time wage and make their living by performing with an orchestra in smaller ensembles and sometimes doing some music teaching.

» WORKBOOK 9



## POP AND ROCK MUSIC

The biggest acts such as The Rolling Stones and Robbie Williams can command huge fees for playing live. There is lots of work here for roadies, session musicians, techies, sound engineers and many others...



## CLUBS

DJ’s can play in venues ranging from local pubs to huge sellout arenas. Many DJ’s work part time and have another job. Some operate professionally with their own equipment ( this is called self-contained ). In a big city with lots of students, like London, Manchester, Nottingham, Leeds or Glasgow, there is a lot of potential DJ work about. The superstar DJ’s can command fees of £5000+ per night – but this is the exception rather than the norm.



## KARAOKE

Karaoke presenters make a living from running karaoke nights in pubs and clubs. They are usually performers who can do a bit of singing and presenting. This is a big growth area.



## SESSION / TOURING

Session musicians work as freelancers ( self employed ) for TV, radio, record labels, producers and recording studios. They often do some teaching to make up their salary, or even have a full time job as well. They sometimes get a lucrative contract to play in the ‘pit band’ in a musical, which involves months of regular work. Touring session musicians work with the big touring pop acts and get very well paid when they are on tour, including daily expenses and all travel and accommodation.

# CASE STUDIES

## RECORDING INDUSTRY



**INDEPENDENT RECORD LABEL MANAGER**  
– small UK specialist indie label

I manage a small label, putting out 10-15 releases a year. Everyday jobs are making telephone calls, completing label paperwork – clearances, agreements and similar and meeting with artists, managers and recording studios. I listen to all demos myself and keep in touch by DJ'ing myself.

You need to be interested in every aspect of the business and really know your music. I've never really been nervous of talking to people; being cheeky enough to ask gets you far.

I've been a graphic designer, a DJ in pubs and clubs, a promoter, done producing and remixing and then got involved with A&R for a local label. Now, I sort of use all those skills combined with a good sense of business to manage the label.

Good tips would be to believe in yourself, your own abilities and your judgement.  
Your music may not be for everyone, but never let that bother you.

## MUSIC PUBLISHING INDUSTRY



**A&R MANAGER**  
– independent music publisher

The first thing you need is a total passion for music. You need to live, breathe and sleep music and know everything about what's happening musically.

I spend a lot of my day in an office environment, making calls, listening to music, talking to writers on our roster and dealing with labels, managers, publicists, designers and recording studios. My job is to find and develop writing talent that will hopefully make us all some money. The business is really competitive and it's really difficult to get into A&R unless you know people. So get to know them, and don't give up.

I also spend a lot of time going to gigs, showcases and recording studios in the evenings. It's the music industry so plenty of late nights and the occupational hazards that go with it, but don't expect to get a lie-in every morning.

You are dealing with creative people, so you need great people skills, as well as an excellent knowledge of music and commercial markets to channel the music into.

## LIVE PERFORMANCE INDUSTRY



**PROMOTER**  
– large UK promotions organisation, arranges tours for international artists.

Working as a 'rep' for a large UK promotions organisation, the job is to make sure everything runs like clockwork, from the time that the bands go out on tour – from changing budgets to liasing with security, caterers, agents, sound and lighting crews, to making sure that there are fresh towels in the dressing room.

Top of the list of skills you need are 'people skills' – knowing how to get results from people as well as knowing how to calm them down.

Love your music, but don't be precious – it's a business as well. Be prepared for hard work, late nights and early mornings. I started out by working in a pub, putting on local bands, then got in with a national promoter. Best advice is to go to loads of gigs and get to know the people who run these things.



# WHO ARE THE BUSINESS PEOPLE TO DEAL WITH?

Are you more interested in the business side of promoting and management?  
➤ WORKBOOKS 6,7 and 8

## AGENT

An agent is someone who gets work for the performer. In return, they take a commission – a percentage of your earnings. This is their payment for helping to get you the gig. There are music agents, concert agents, theatrical agents, DJ agencies... and so on. For large rock and pop gigs, the agent is responsible for booking all live appearances on behalf of the artist. The agent will normally be appointed by the manager. Commission is typically 15% of performance fee / ticket sales. An agent may work with many local promoters to set up a tour. DJ agencies will charge a commission of typically 15% of the performance fee.

## VENUES

A venue can range from a corner in a local pub, to huge arenas. Every day in hundreds of towns and cities all over the UK, there are small gigs and performances happening in bars, pubs, restaurants, department stores, hotel lobbies and street corners. If you write songs that are performed in public places, you may be entitled to a PRS royalty.  
➤ WORKBOOK 8 – CHAPTER 3

## PROMOTER

The Promoter is responsible for co-ordinating all elements of individual live performances; sound and lighting equipment, tickets, posters and advertising. They take the ticket money and pay all the costs. You will find a music promoter in every city and most towns in the UK. It's a tough job and promoters can ( and often do ) lose money.



You will find local promoters by speaking to the manager at local venues. You will national promoters by looking at the small print in adverts in papers and music magazines.

## MERCHANDISE

This work may be franchised to a professional merchandiser but typically the work is undertaken by staff employed by the manager. Merchandised goods include T shirts, pens, mugs, stickers, posters, calendars and anything with the artist brand, name or likeness on it.

## TOUR MANAGER

The Tour manager is responsible for the artist / musicians while the act is on tour. This includes hotels, transport, instruments, crew, punctuality and behaviour.

## THE MEDIA

Workbook 6 explains how you can use the Media to promote your music. But what exactly is 'the Media' and why do you need to know about it? The parts of the media that are of interest to musicians, performers and DJ's are:

- Radio:  
National and local radio, pirate radio.
- Television:  
Terrestrial ( BBC, ITV, Channel 4, five ), Satellite and Cable ( Sky ).
- Publishing:  
Newspapers, magazines and specialist publications.

All these organisations can help you to promote your music, using articles, reviews, airplay and interviews. The media also forms part of the music industry, as radio and TV stations have to pay for the privilege of broadcasting music. ( See p65 – collection societies )



# INDUSTRY MEMBERSHIP ORGANISATIONS AND TRADE BODIES

There are a number of music industry organisations that represent the interests of writers, artists, publishers, musicians, managers, producers and record companies. Here are some of the best known organisations:

<b>AIM</b> Association of Independent Music	<b>British Academy of Composers &amp; Songwriters</b>	<b>BPI</b> British Phonographic Industry	<b>British Music Rights</b>	<b>Equity</b>
AIM is a trade organisation which represents the interests of independent record labels.	British Academy of Composers & Songwriters is a membership organisation for songwriters and composers.	The BPI is a trade organisation which represents the interests of UK record labels, particularly the majors.	Promotes the interests of British composers, songwriters and publishers through lobbying, education, PR and events.	Equity is the union for actors and theatrical performers.
<b>MIA</b> Music Industries Association	<b>MMF</b> Music Managers Forum	<b>MPA</b> Music Publishers Association	<b>MPG</b> Music Producers Guild	<b>MU</b> Musicians Union
Represents the interests of UK businesses selling musical instruments and associated products.	The MMF represents the interests of artist managers.	MPA represents the interests of UK music publishers.	MPG is a membership organisation which represents the interests of UK Music Producers.	The MU is a union that represents the interests of its musician members. New Deal customers get a reduced membership rate. Ask your MOLP!

These organisations do not guarantee any success for you in the music business but they can offer vital support in areas such as business, insurance, legal advice, contacts and career guidance. In some cases, you can join simply by paying a subscription, in others, you will have to fulfil certain professional criteria.

## OTHER SERVICES PROVIDE ADDITIONAL SUPPORT TO THE MUSIC INDUSTRY.

For example: Education and training organisations (colleges, schools, universities, private training companies, teachers, lecturers, trainers, community musicians, music therapists), Music Industry associations such as Sound Sense, Regional Arts Boards, Local Authority Arts Officers, Music Education Council, Jazz Services.

# COLLECTION SOCIETIES

The role of the collection societies will be fully explained in workbook 8 (Business and Money), but here is a summary.

## WHAT DO COLLECTION SOCIETIES DO?

If you write, publish or play music that is performed, broadcast or commercially released in the form of a sound recording the following collection societies collect money (royalties) on your behalf:

<b>PRS</b> Performing Right Society	<b>MCPS</b> Mechanical Copyright Protection Society	<b>PPL</b> Phonographic Performance limited	<b>PAMRA</b>
The PRS collects a licence fee for the broadcast and public performance of music, on behalf of its members who are songwriters, composers and music publishers. This fee is distributed four times a year in the form of royalties to the copyright owner/s with a minimum of 50% always paid directly to the songwriter/s or composer/s. ➤ <b>WORKBOOK 8 – CHAPTER 3</b>	The MCPS, on behalf of its members who are songwriters, composers and music publishers, collects a licence fee from record companies and any other business that embeds music in a sound bearing device (eg toys, computer games, greeting cards, films and TV programmes). This fee is distributed monthly in the form of royalties to the copyright owners. For any song / music that is published 100% of the royalty will be paid to the publisher.	PPL collects a royalty for the broadcast use and public performance of a recording. Part of the royalty is paid to the record company and part to the performers who appear on the recording. PPL is the record label’s collection society. ➤ <b>WORKBOOK 8 – CHAPTER 3</b>	PAMRA is the collection society for performers. If you have performed on a recording that has received airplay (on radio or TV), then you could be eligible for a royalty.

## HOW DOES IT WORK IN PRACTICE?

Broadcasters such as the BBC have to pay PPL, PRS and MCPS for the broadcast use of recorded material and the music itself. The collection societies collect this money and distribute it to record companies, musicians, writers and publishers.

# THE INTERNATIONAL MUSIC SCENE

Music is a global industry. The UK is a world leader in the writing and production of popular music. It's quite possible to create music that you may never sell in your own country. Many musicians, writers and producers earn a good living from having their music released and performed overseas.

Examples:  
The major record labels are all international, and have offices all over the world. If you sign to a record label in the UK, they can exploit your music in many other countries.

Even if you are signed up to an independent record label, they may have good connections with other European and international labels.

# TRADE FAIRS

Small record labels, or freelance producers, remixers and songwriters don't have the resources to have offices all over the world. Sometimes they do a deal with another record label, publisher or distributor in another country to sell their product. Sometimes they do it themselves, by attending one of the numerous international music trade fairs that take place all over the world.

Examples:  
**MIDEM**  
Every January in Cannes ( South of France )

**SXSW** ( South by South West )  
Every March in Texas, USA

**Popkomm**  
Every August in Germany

These events are full of small labels, publishers, producers and writers trying to sell their products into a global marketplace that is hungry for music of all kinds and types.



It can cost quite a lot of money to attend these events. and there is no guarantee that you will find a customer for your music. Try to link up with a local music professional or organisation and see if they can take product out on your behalf. You can give them a cut if they generate some business for you.





# INTERNET SEARCHING

## INTRODUCTION

This brief guide will give you enough information to become a ‘search’ guru. Within the next 10 minutes you’ll be fine - tuning your search skills to produce search results that are accurate and plentiful.

Generally, if you know a little about how something works you can operate it with greater skill. The same goes for the Internet, so we start off with a quick crash bang course on the Internet. Then we take a quick look at how the search engines actually work and how they rank the results from searches.

Then, straight to the tips and tricks of searching. Don’t skip straight to this part as you won’t be able to take full advantage of your new skills.

Finally, there is a brief list of search engines and browsers you can use to search the Internet.

## THE SHORTEST EXPLANATION OF HOW THE INTERNET WORKS YOU’LL EVER FIND!

How does the Internet work? Well there's a long technical answer, a medium technical answer and a really short 'give me the facts' answer. We're going to go for the latter. Why, because it’s all we need to know at this time and it can start getting messy!

Here we go.

A network is a collection of computers joined together usually by ethernet cables (a special type of cable like a telephone cable but with more wires ).

It's also becoming common for networks to be wireless. This just means that special wireless transmitters and receivers are doing the job that the cable can do ( just like a cordless phone ). Computers at colleges and universities and offices are nearly always networked. When networked, computers can share files, print to one shared printer, share Internet connections and in some circumstances use software programs on other networked computers.

The Internet is basically a network on a global scale. Millions of computers and wires that are all connected together so they can share, store or converge information.

When you go on the Internet you are actually connecting 'to' the Internet to access, share or store information. From now on we'll call that information 'data' instead simply because data is a more generic term than information and can apply to lots of different things.

There are basically two types of computers on the Internet. These are Servers and clients.

SERVERS

Servers **serve** information ( web servers ) and clients **look** at information ( e.g. Your computer at home / College / University / work etc ).

So, think of the servers as being stacks of pc's ( without the screen, keyboard and mouse ) that live at Universities, large companies, Internet service providers ( ISP's, like Wanadoo ) and professional web hosting companies ( companies that provide web server rental to web design agencies and other people that want to put websites on the Internet ).

Generally, these servers are on 24hrs a day, 7 days a week ( unless they crash and need to be restarted ) serving information to clients all over the world through a variety of cables that carry the data.

So, there are literally millions of servers all over the world that store, share and converge all sorts of information. Servers are the hub of the Internet and without them the Internet would not function.

CLIENTS

Think of clients as being normal everyday computers connected to the Internet. So, once you connect a computer to the Internet it becomes a client and when you come offline ( disconnect from the Internet ) it is no longer a client.

LANGUAGE

They talk to each other using what are called 'protocols'. There are many different protocols, but the main one used for the Internet is called hypertext transfer protocol ( or http- which is why web addresses start with http:// ). To give you a better idea, another protocol is for sending email ( smtp - simple mail transfer protocol ) and another is for receiving email ( pop - post office protocol - this is nothing to do with the post office, it's just its name ). So, protocols allow different communication channels. This is a little confusing, but you don't need to understand this, you just need to know they all speak the same language.

So, now we know the language, how do they get the data from a server to a client? Well, the data ( remember, information ) is sent using a number of other protocols that are collectively called TCP/IP ( transmission control protocol and Internet protocol ). TCP/IP does the job of delivering the data to the correct address and makes sure all the data gets there in the right order.

So, let's say you go on the Internet and log onto <http://www.google.co.uk>. This is what happens. First of all you connect to the Internet,

- using a dial up modem on a normal telephone line

or

- using a network connection at a place of work or some form of ISDN or broadband which are basically faster Internet connections.

Let's say you are using a dial up connection from home, the number you dial ( on the PC ) connects you to your ISP ( Internet service provider ). You are then on the Internet. You open up your browser ( the program that lets you see Internet pages, like Microsoft's Internet Explorer ) and type in the address <http://www.google.co.uk> and hit enter. Kappooow. Your request is sent down the wire to the ISP web servers which automatically redirect the data to Google's servers. Then the Google servers send you back the data you requested via the quickest route.

**The data quite often travels around the world at least once before you receive the page!**

In a nutshell, that's about it!

# HOW DO THE SEARCH ENGINES WORK AND HOW DO THEY RANK THEIR RESULTS?

There are 3 types of search engines.

## CRAWLER-BASED SEARCH ENGINES

They're called crawler-based because a little program called a search robot ( sometimes called spider or agent ) 'crawls' the web looking at websites and gathering information. Think of them as reading the content of the website. They also look at specific data that can be inputted by the web designer when the site is built. This information is called meta data and is supposed to give the search robot a clear idea of the most important words, phrases and information on that site. This information allows the search engine to create a directory of websites that can be searched. This process is virtually fully automated. These little 'robots' are constantly crawling the web looking at websites and placing information about them into a large database.

## SEARCH DIRECTORIES

These are directories made by people ( not automated like crawler-based engines ). Website administrators send a brief description of their website to the search directory and eventually someone working with or for the search directory will rank the site according to its suitability for a category.

**It can take months to rank a site on a search directory.**

## COMBINATION

Generally most search engines use both human developed directories and crawler-based directories.

# HOW DO THE SEARCH ENGINES RANK THEIR RESULTS?

When you perform a search the search engine has to go through billions of pages to find the most relevant results. The search engine looks at various aspects of the websites to decide how to rank each site. Different search engines generally return different results because they look at different aspects of a website and therefore come up with a slightly different results. Each search engine uses a complex mathematical equation ( called an algorithm ) to determine how to rank each website.

Because search engine ranking is such a competitive industry in itself, no-one really knows exactly what search engines are looking for but there is a general consensus that the following factors are extremely important to achieve a good ranking with a search engine.

## LOCATION AND FREQUENCY

If the words 'music' and 'producer' appear in a website title or domain name, but the word is only listed a few times on the actual website and these words are towards the bottom of a page, then that site will not be ranked highly by the search engine. However, if the website had a domain of [www.themusicproducer.com](http://www.themusicproducer.com) and the title of one of the pages was 'the music producer' and the first line of every paragraph in this page started with 'The music producer', then the site would have a better chance of receiving a good ranking.

## YOU CAN'T KID ME!

If a website has the same word repeated over and over again the search engine robot will think the website developer is trying to cheat their way to a higher ranking than deserved, so the robot will either ban the website from being listed, or simply ignore the website and move on.

## LINKS

Search robots look at how many links there are to and from page and calculate how popular each page probably is. This again determines the rank of each website.

## TRAFFIC

The more traffic a website receives, the higher the ranking and vice versa.

## MONEY TALKS!

So, the problem is the search engines are rewarding web developers who know how to create pages to receive high rankings. That's no good to most small businesses who cannot afford or do not want the expense of employing a 'search engine optimisation' expert to design their website for better ranking. This puts more emphasis on our ability to conduct accurate searches.



TIPS AND TRICKS

"Getting information from the Internet is like getting a glass of water from Niagara Falls"  
Arthur C Clarke ( 2000 )

The most important aspect of improving your searching skills is practice. Get as much practice as possible with the various techniques listed below. Only with practice will you become an expert.

WHICH SEARCH ENGINE SHOULD I USE?

First, a decision needs to be made on which search engine to use. At this moment, Google is the most accurate and most widely used. However, if you are not getting the results you are looking for with Google, you could always try another search engine ( see the list at the end of this section ). Google has a number of ways you can search including the default web search or directory, groups and news listings searches. The directory is very useful and many searchers now use this before trying the web search. The directory search enables you to dig deeper and deeper into a specific topic and is best for broad ranging searches. It can be a little more time consuming than a web search.

WHAT AM I LOOKING FOR?

The phrase you type into the search box has to be an accurate summary of what you are looking for. Before you type anything in, have a quick think about what you are looking for and if possible write out the question that you need answering or something about the topic you are researching. Then pick out the most common words and put them together ( in a phrase if possible ). Always use lower case letters, as this will ensure your search returns both upper and lower case ( this doesn't matter with Google ). Remember some words are spelt differently in American English so you may need to compensate for this. Some words are commonly misspelt so you could try the various spellings within your search. You can also try using singular and plural phrases ( e.g. music producers and music producer ). Strangely, the order in which your search phrase appears will also make a difference ( e.g. Music producer will produce a different result than producer music ). If you are looking for something specifically in the UK, try the www.google.co.uk search or try inputting UK at the end of your search. Be as specific as possible. Asking questions sometimes works well.

FINE TUNING YOUR SEARCH

This sounds much more complex than it is. Including either a plus + minus - or speech marks " " in your search will enable you to really fine tune what you are looking for.

+

Using this ensures your search returns pages with all the words in your search phrase.

+music +producer

This will return results with both words on the same page. There is no limit on the number of words you use but generally search engines only allow for the first 10 words.

-

Using the minus function ensures your search returns pages with the word after the - omitted For example, let's say you wanted to find information on music producers, but not engineers

+music +producer -engineers

" "

Placing your phrase or words within speech marks ensures the words are next to each other on the web page

Let's say we wanted to fine tune our search even more and find pages with the words music producer together but not with the words engineer or manager

"music producers" -engineers -manager

Now to fine tune even more, let's say we are looking for music producers with their own studio

"music producers" -engineers -manager +studio +owner

EVEN MORE FINE TUNING!

BASIC INFORMATION ABOUT BOOLEAN SEARCHING

This is the use of boolean operators for searching. The 2 most common are AND and OR. Google by default uses AND. So if, you search for 'music producers' Google will automatically look for pages with both words. If you use the OR operator then the search will be for either the word music or producer within a web page. If you prefer you can use the pipe character ( | ) instead of the OR word.

"music producers" -engineers -manager +studio OR owner

This search phrase will look for web pages with the words music and producer together without the words engineer or manager and with the word studio or owner.

SPECIAL SYNTAX

intext:  
This will enable you to search just the text. It's really handy for searching the actual website content rather than the information the website administrator has placed to improve the ranking of the site.  
For example,

intext:"music producers" +studio OR owner

related:  
Related allows you to look for websites related to the URL( website address ) in the search

related: www.google.com

This will return websites that are in some way related to Google.

\* WILDCARDS

A wild card can be any word. This comes in useful when you are not sure of a word or phrase. \* = any word

"red sky at night is a \* delight"

This will return both 'sailor' and 'shepherd' answers.

ADVANCED SEARCHING WITH GOOGLE

Google has its very own advanced search function. This enables you to be really specific about what you are for. It's easy to operate as you just need to complete the form on the advanced search page. The advanced is self-explanatory but takes some practice to get used to.

SEARCH ENGINE LIST

This is a recommended list of search engines. Try to get used to using two or three and becoming accustomed to the type of results they return. You'll quickly find that some are better than others for certain searches



www.google.co.uk



www.alltheweb.com



www.yahoo.com



www.hotbot.com



www.lycos.com



www.teoma.com

BROWSER LIST

Some browsers can return results quicker than others. Try experimenting with the following:

PC

- Internet Explorer
- Opera
- Netscape
- Mozilla

MAC

- Safari
- Opera
- Internet Explorer