Working Band Documentation

Release 0.0.1

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Contents

CHAPTER 1

Guide to being in a Working Band.

1.1 License

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1.2 Help

Please drop me a line at edkidgell@gmail.com if you have any questions or queries regarding the content in this manual.

1.3 Introduction to the Manual

This effort is a collation of the knowledge I have gathered during my 30+ years in the music industry. As I'm still gathering knowledge and experience the content in this manual will be constantly updated / added to :-]

For me, playing live is where it's at and for those readers who feel the same way this manual presents insights into the ups and downs of playing live. There are many pitfalls out there, some internal, and others external - my intention is to provide relevant information that will help you on your way to becoming a better live performer.

Please bear in mind that I am presenting my opinion based on my own experiences here, your's may be very different, so I invite feedback if you have a different point of view or approach to any of the issues discussed.

1.3.1 Who this manual is for

The information supplied here is applicable to anyone who sets up their own gear and performs music in front of an audience. It applies to any venue, from churches to restaurants to clubs.

I trust you will find it useful.

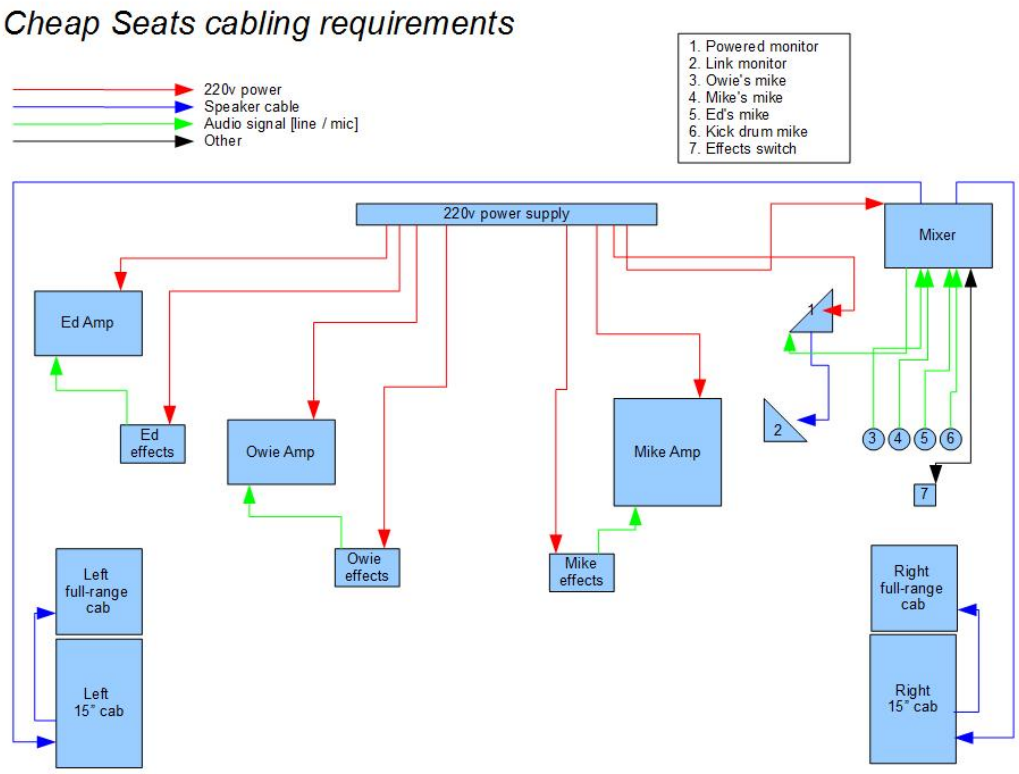
Please email me at edkidgell@gmail.com should you have any questions.

1.4 The Cheap Seats

Thoughout this manual I will use the band 'The Cheap Seats' as an example for us to consider. This is [was] an actual band I played in [see https://www.youtube.com/watch?v=u0ZI4sF6OP0] and will serve as a standard model for the application of ideas / processes I propose.

As you can see the line-up is straight-forward: two guitars, bass guitar, drums, and everyone has a mike.

Our cabling requirements for the stage setup can be depicted as follows:



1.5 Stage setup

1.5.1 Phase I

Setting up the stage - fast

There is no substitute for a well set up stage, and laying your stage out properly is one of the most important aspects of the live show. It's no good setting your gear up all over the stage haphazardly - there has to be a plan, and a base design that creates an aesthetically pleasing view of the stage while allowing you to move around without hindrance.

Usually the band will set up in a specific way - everybody in 'their' spot. There should be a focal point for the setup - at the back of the stage this is usually the drum kit which should be set up centre-stage, while at the front it is the lead singer who must get the attention. Typically the guitarists would place their amps on either side of the kit.

Things to keep in mind:

1. **Everyone on stage should be able to move anywhere on the stage**
    - Guitar leads must allow free movements across the whole stage at all times
    - No mike-stands blocking movement across stage
    - No effect pedals in the way

    - No cables strung across the floor. Run them around to the back!
2. Mind the guitar necks! Never set up in such a way that the guitarists are constantly sword-fighting.
3. Stage monitors must be kept out of the way of the players. This shouldn't be an issue if you keep them in a line across stage-front.

1.5.2 Pre-requisites

Cabling

Make sure you have enough power and audio cables for everything, then add at least two spare power, speaker and audio cables

There are many different ways of cabling a stage but adhering to certain rules when supplying power to amps and routing sound-signal cables from amps and mikes to the mixing desk will make this a simple task. Some things to keep in mind:

- Try and avoid running power and audio cables together
- Never run cables *across* the stage. Go around everything.

Keep spare power extensions handy. Sooner or later you'll have to bring power to the stage from somewhere in the depths of the kitchen / store-room / whatever. Be prepared for this.

In most small-stage environments the signals generated by the various cables should not interfere with each other too much, but in some environments routing cables correctly can improve sound problems dramatically. This is especially true when you are using a single-phase power supply to drive your sound equipment as well as lighting.

Lighting can cause real problems with your PA sound if you are powering your light rig from the same source as your sound equipment. Where possible you should find out if the venue has more than one power phase available. Most actually have a three-phase system and you should make sure that you separate the power for lighting from the power for the sound system and backline. This obviously requires adequate cabling.

Redundancy

The idea is to have a backup for *every* system and cable on stage. By 'system' I mean an assemblage of components used by one person to get their sound from their voice / instrument to the mixer.

Note: Every musician must have access to a tuner on stage.

Electric guitars

An instance of a 'system' would be the guitar rig, which consists of:

Item	Back up ?
Guitar	
Picks [plectrums]	
Strings	
Guitar strap	
Guitar stand	
Cable from guitar to effects	
Effects unit	
Power supply for effects	
Patch cords for effects	
Cable from effects unit to amp	
The amp itself	
Channel switch pedal if needed	
Power cable for the amp	
Spare fuses for the amp	
Mike for the guitar amp or	
Cable from the amp to the mixer	
Mike stand	
Mike clip	

As you can see, the path from guitar to mixer is made up of many components, any of which might break down at any time. If you don't have adequate backup for any of these components you will be in trouble at the gig.

Acoustic guitar

Similar to the electric guitar but usually doesn't include an amp.

Item	Back up ?
Guitar	
Picks [plectrums]	
Strings	
Guitar strap	
Guitar stand	
Cable from guitar to effects	
Effects unit	
Power supply for effects	
Patch cords for effects	
Cable from effects unit to DI	
DI box	
Cable from DI to the mixer	

Vocals

Singers will need:

Item	Back up ?
Their mike	
A cable from mike to mixer	
Mike stand	
Mike clip	
Music stand [optional]	
Light for the music stand	
Power for the light	

Kit

The drummer must bring with him a carpet large enough to place the entire drum kit on, but no bigger than that [unless you like the 'lounge' feel!]. This is critical when you're expected to play on a bare floor, and can be used as a basic template around which all your back-line gear can be arranged.

The drummers system can be listed as follows:

Item	Back up ?
Carpet [where required]	
Drums	Spare vellums
Cymbal stands	
Cymbals	
Drum sticks	
Drum tuning key	
Kick drum pedal	
Mikes	
Mike cables	
Mike stands	
Mike clips	

Bass guitar

Similar to the guitar system, but some bass players use a DI to split the sound from their bass and feed this directly into the PA mixer instead of using an amp line-out or mike:

Item	Back up ?
Guitar	
Picks [if necessary]	
Strings	
Guitar strap	
Guitar stand	
Cable from guitar to effects	
Effects unit	
Power supply for effects	
Patch cords for effects	
Cable from effects unit to amp	
The amp itself	
Channel switch pedal if needed	
Power cable for the amp	
Spare fuses for the amp	
DI for the mixer feed	
Cable from the DI to the mixer	

The PA

Stage monitors

Lighting

Marking your cables

It is a good idea to mark your cables clearly. Getting into a bun-fight over which cable belongs to whom is not worth the trouble. Use some electrical tape for this - it comes in different colours, so pick one and wrap it round the end of each of your own cables.

1.5.3 Best Practise

What stage?

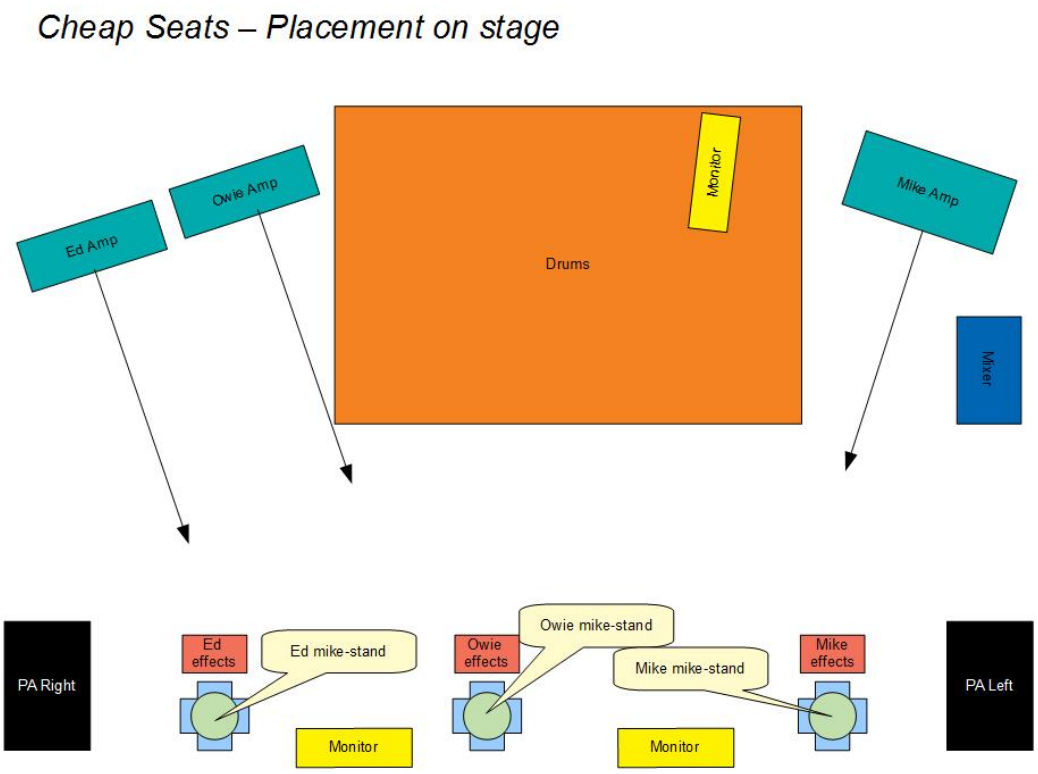
In the case of a venue that lacks a proper stage area, where the band is going to be placed is often the last thing on the club owner / manager's mind. This means you might find yourself in an unsatisfactory situation - pre-empt this as much as possible by visiting the venue and finding the best possible place to play.

You do need to know the absolute minimum floor area you require for a setup [when you're all on stage and nobody is being side-swiped by the person next to them]. If you find that the area allocated to the band is too small, then discuss the problem with the manager / owner. Given a logical argument they will usually agree with your requests.

For a quick setup you have to make sure that everyone has clear access to their part of the stage.

Note: Keep the stage as clear as possible at all times. Once you've set an item up, move everything you don't need off the stage.

Here is a representation of our basic layout:



PA first

Place the speakers up front and the mixing desk on stage, as close to the operator as possible. Run all the required cables and plug in. At this time the guitarists should be running power cables from the outlets to where their amp and effects are to be situated. The floor monitors should be placed and power cables set up for them.

Drums second

Get all the kit gear onto the stage, as close as possible to the drummer's space - the rostrum if you're lucky enough to have one. This may take up space required by the guitarist/s at first.

Guitar amps third

Once the drummer's gear is out of the way the guitarists move their amps onto the stage and start plugging in their amps and wiring up their effects. Once complete they can start setting up their mike stands and running cables to the mixer. The drummer should also be wiring up his mikes at this time.

Note: The drummer should be able to hear the bass at all times!

Monitors and mikes last

Plug in the power to the monitors and run audio cabling to the desk. At this point you should be ready for line checks.

1.5.4 Phase II

Checking everything

Okay, so we have a basic checklist of items that should be completed before attempting the line check. This can be summarised as follows:

For the PA	Sorted?
Power to the stage	
Power to the mixer	
Power to the amps	
Power to the monitors	
Audio lines to the speakers	
Audio lines to the monitors	

For the Drum Kit	Sorted?
Drums set up	
Drum mikes set up	
Drum mikes cabled in	

For the vocals	Sorted?
Mikes and stands set up	
Cables all run	

For the Guitars	Sorted?
Guitar amps set up	
Power to the guitar amps	
Power to the guitar effects	
Guitar to effects cabled	
Effects to amp cabled	
Guitar line / mic cabled in	

And all this is before you play one note!!

1.5.5 Process for the Line Check

Note: The one thing you don't want is to blow something before you start the check. Please follow the guidelines listed below to ensure safe operation of your system.

PA

1. Make sure all power amp and / or PA speakers volumes are off
2. Make sure that the powered monitors are off and volumes turned off
3. **The mixer**
    - Check that all the faders on the desk are at the bottom [off][1]. Mute all the channels if possible
    - Check that your Aux output volumes are off - they feed the monitors and you don't want any signal going there yet!
    - Turn the mixer on
4. **If all the right lights are blinking on the desk**
    - Turn on the power amps or the PA speakers
    - Turn on the floor monitors
5. Check that everything is up and running
6. Turn the power amps / PA speakers and monitor volumes up to full
7. Push the main L/R faders up to '0' [some call this 'parity']

Note: Channel settings on the mixer should not change much from gig to gig. If they need to be then you **are** doing something very wrong.

Vox

Starting with the lead vox channel turn the Gain off and push the fader up to '0'. If the volume is too low then ease the channel Gain up until it sounds loud enough. No higher. EQ to taste.

Turn the Aux [monitor] output volume on the mixer up to about 65%, then turn up the Aux pot on the channel until the vocal is clear in the monitors. It should not normally be louder than the front-of-house volume.

Follow suit with the rest of the vox mikes, being careful to maintain a balance between the lead and backing vox levels. Getting everyone to sing together would help!

Drums

Drummer to tap the mikes gently one by one - check that each one is sending a signal to the desk. When you're satisfied that all is connected check each mike for sound per the process for vox mikes. EQ as required then move on to the guitars.

Bass

Bass player to fire up effects then his / her amp. Check for sound and EQ to taste. Check that any lines to the mixer are working and EQ to taste.

[1] This would be an initial setup methodology. Subsequent setups at other gigs would entail that you ensure that only the main fader is off, not those for *all* the channels.

Guitar/s

Guitarist/s to power on effects then amp/s. Check that they have sound and EQ to taste. Check that any lines to the mixer are working and EQ to taste.

If everything has worked up to this point then you are ready for Phase III which is the actual Sound Check.

1.5.6 Phase III

The Sound Check

Okay, so we've finally reached the place where:

- everything is in it's place on stage
- all the lights are on
- all instruments and vocals and kit mikes are coming through the system
- all the vocals are present in the monitors
- all bags, cases, boxes etc. have been cleared off stage and we can move around without falling all over the place

It's time for the sound check.

The drums

Kit balance

For live kit you should use a microphone on the kick drum and two overheads for ambience. If necessary add a mic on the snare. Before you start the soundcheck ensure that the kit sound is naturally balanced. This presupposes that your drummer knows how to get a sound on the kit. Let's assume that he does.

Kick drum

Drummer to kick the kick while you go out front to listen. Bring the volume up until you can hear it nicely, not too loud, but punchy and full.

Overheads and snare

Add in the rest of the kit taking care to bring the overheads up just enough to lift the sound of the cymbals above the general kit level. If the snare volume is too low ease the fader up a little; just enough to peek through.

Once you're happy with the overall effect add the bass guitar in.

Bass guitar

Most of the time it's not necessary to send the bass guitar through the PA, and we will go with this assumption.

Because of the wavelengths of the bass frequencies it can be difficult to get a good stage / FOH balance for the bass. This can result in a situation where the bass player can't hear their amp as clearly as it sounds 8 or 10 metres away.

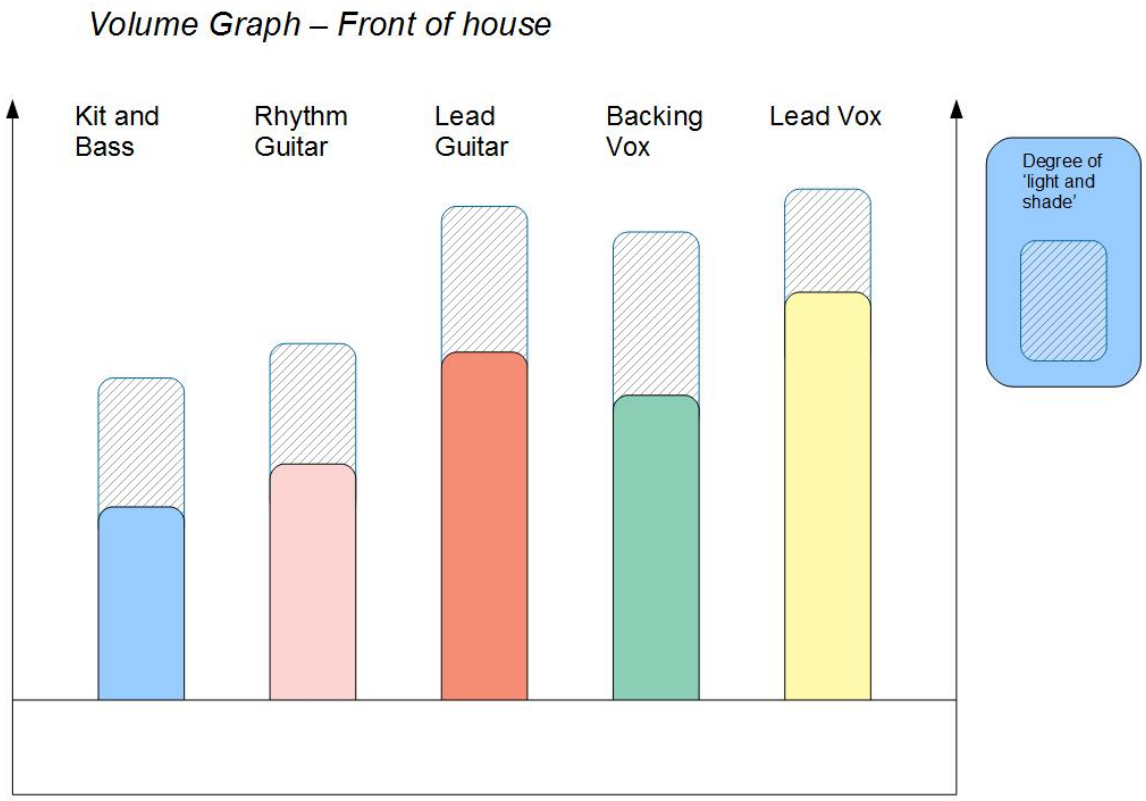
Obviously the bass must be clearly heard on stage while also being present in the room sound. Without it your live sound will be dull and lifeless.

The important thing to remember is that the volume of the bass in the room itself is as, if not more important than the bass volume on stage. It's no good getting a fat bass sound on stage while peeling the paint off the walls in the room. For the sake of the overall balance [the sound your customers will hear] you should err on the conservative side.

Once the drummer and bassist are happy you can add the guitars and vocals in.

The whole band

Pick an easy song to play - one where everyone has a go ie. all the vox are used, and the guitarists play a solo each. Someone should be out front to listen to the overall sound. Use this diagram as a basis for the balancing of the various instruments:



The relationships depicted should be held to as a general rule of thumb. You will find if you deviate too far from this arrangement that the whole foh sound goes out of whack.

Play enough of the song to get an idea whether:

- the stage volume is not too loud, and
- everyone can hear the vocals

Adjust the monitors accordingly, bearing in mind that a too-loud stage volume will badly upset the balance on the PA. In other words: Try to keep the stage volume down by turning guitars down instead of turning the monitors up.

Things to keep in mind

Your ears will take at least 5 minutes to acclimatise to the general sound level. What this means practically is: play through two or three songs after the initial stoppage - playing the whole song is unnecessary - just do the intro and two verses with solos. Check with everyone after each song. You will find that the problems usually iron themselves out.

Kit

Note: If playing in a corner [as sometimes happens] and the kit sound is bouncing around [messy], try to pad the area around the kit with speaker covers, guitar cases etc. This can make a huge difference to the overall stage sound.

The drummer should *never* have to bash the kit in order to hear himself. If this is the case then **turn the guitars down**!

The vocals

Some questions:

- Can the lead singer hear themselves in the PA?
- Can the backing singers hear themselves in the PA?

If the answer to both these questions is 'no', then the next question to ask is:

- Are the vocals loud enough in the PA?

If the answer is 'yes', then the stage volume is *too loud*. **Turn the guitar amps down**!

If you're one of the guitarists who sings backing and you find that you can't hear your voice but can hear the lead vocal then **turn your amp down**.

The guitars

Both guitars must be heard at all times. This often requires a balancing act, but the process is not as complicated as it seems.

1. The guitarists should not be playing the same chord inversions and / or rhythm patterns
2. If they are duplicating either the inversions or patterns they must be perfectly synchronised
3. No guitar should be louder than the other

Lead volume should be up at the same level as the lead vocal, **however**, at the end of a solo the guitar volume *must* return to where it was previously, otherwise *volume creep* happens! While this may feel great to the guitarists, it most certainly makes things harder for everyone else.

The rhythm section [kit and bass guitar]

This is the heart of the live sound. If there is something off kilter with either the kit or the bass volume it will throw the whole FOH mix. They have to mesh together on every level. That is to say:

- The kick drum and bass guitar must both be heard equally loudly. The one *cannot* be allowed to overpower the other. Balance the volumes.

- Nothing is more disconcerting to a front-line musician / singer than a rhythm section that is pulling in all directions at once. The players *must* play as one.
- Their overall volume cannot overpower the other instruments in the mix.

1.6 Perfecting the live act

1.6.1 Practise

> "Amateurs practise until they get it right, professionals practise until they can't get it wrong" - Unknown

At the group level

Practice time together is critical for a band. The two biggest problems with regard to practicing though, are time and space. Having said that, there is no substitute for a regularly scheduled practice. It's much easier to plan ahead when you know that, say, your Tuesday nights are booked up. Whether you get together once a week or once a month is not the issue, that you get together is.

The less you practice together the less tight, you'll be when on stage. And practice time can also be used for experimentation within the group - try new songs / leads / harmonies / fees etc. The trick is to feel each other out, push each other [and by extension the band] into new territory. Open up new possibilities. But you can only do this correctly if you are working off the strong foundation supplied by a large repertoire. Too much speculative experimentation in the practice room can make a band's presentation unstable.

Note: Tip: A metronome is an invaluable tool and you should always use it when practising. You can get these at any music shop - so do it !

As individuals

Personal improvement is an ongoing effort. It's easy to slip into the routine of banging out the notes every night, especially if you know the material well. What you should be doing is thinking about how you can improve your part in such a way that it adds to the whole; takes the band up a notch in some small way. There are many ways to do this.

More you can do . .

1. Record often
2. Video the band

1.6.2 Butterflies

This may seem a little odd to some, but many performers, myself included, even after many years of playing live, get nervous before going on stage. At first, it hampered my performance significantly, but I later learned to use this nervous energy to my advantage.

1.6.3 Preparation

Repertoire

One of the pillars of your presentation of course - without songs you....well obviously you can't play anything.

Adding new material to the repertoire is essential if you want to keep the interest of your followers. If you're like us you do a lot of standards that everyone knows, and you should be adding something to the songs by putting a fresh angle on them as well as rotating songs in and out of the line-up, hence the need for too many songs.

In SA the standard procedure for bands is to start around 8:00pm and finish at 12:00. This is largely due to the liquor laws and seems to be the norm everywhere. We always play 3 sets of 1 hour duration each giving us an effective time of 3 hours on stage. Other bands prefer doing 4 sets, and while this makes the sets shorter the night seems longer - if you get my drift. Sometimes the club owner / manager dictates the times and we stick to those instead.

We have enough songs in the repertoire to play 5 full hour-long sets without doing repeats. And I know bands who rotate 20 songs, repeating some of them every night. Whatever floats your boat. But I recommend a larger repertoire.

How many songs per hour?

This is dependent on many factors, but given our average of around 4 minutes per song we normally list between 12 and 15 numbers for every set. This gives us the chance to chop and change if required. 12 is the minimum if we do two or three longer songs like Roadhouse / Radar Love / Hotel California, but 14 should be ample for any band playing standard covers.

We need at least 14 songs per set for three sets so that means we have 42 songs ready to roll at any time. Our current repertoire consists of around 55-60 good songs and another 10-15 of 'throw-away' stuff we can use anytime.

How often do you do new numbers?

As often as possible. We try to add at least one song a month, and sometimes we've done 3 in one month. Bear in mind we are 'Weekend Warriors' with day jobs, so practise time is a rare commodity. It requires discipline to get this right, and we use time-saving methods to get a lot done in a short space of time. See the practise section for more details on how you can too.

Set lists

Love them or hate them I believe they are absolutely necessary. I personally dislike not knowing what's coming up next, and the waiting between songs before someone decides what to do next. This is very unprofessional and causes the crowd and the band to lose focus. Your choice though.

1.7 Playing with Passion

> "To play without passion is inexcusable!" - Ludwig von Beethoven

I've been playing music since the late '70's and it took a long time for me to learn this truth. In the beginning we all played with passion - we just loved it, but after years of playing you tend to become jaded - every song is just another song. The trick is to get the passion back - only then can you really start playing, and not just rely on your ability to get through.

Punk Rock epitomises the sentiment - the muso's might not be, or sound, too clued up, but they put their heart and souls into every note. And this alone garners a strong reaction - whether positive or negative is immaterial. They play - people react.

Successful Blues players / singers play with passion - it's all about emotion, and if they didn't no one would be the least bit interested in their offerings. I've seen the exact opposite happen [regularly] on jam nights all over the place. Muso's gather together at a designated place to jam together, and invariably each song becomes an over-extended live version of itself - blandly wandering along until someone puts a stop to it. Recently a drummer I know got so tired of playing one song for so long he eventually got off stage and left the band to their own devices.

1.8 Alternatives

1.8.1 Backing tracks

Many gigging musicians would prefer not to work with backing tracks. There are however, obvious advantages to using them in a live setting. A solo artist or two-piece band can get a much bigger sound and broaden their repertoire considerably using backing tracks.

Having said that, it is obvious that a band with less members is more likely to earn more money per member. There is more scope for gigs: * The band has a smaller stage footprint * They can play in many venues that cannot accommodate bigger bands * The logistics involved are simpler for a smaller band

All of the above contribute greatly to the band's value for money from the pub / club owner's point of view - *more bang for your buck*, so to speak.

> The question for many is: *"Do I compromise my artistry by pushing some buttons, or do I earn less money in an effort to maintain my musical integrity?"*.

So where to now? Or . . .

> *If you're ok with the thought of using backing tracks what are the next steps?*

Sources for backing tracks

The best way to use tracks would be an mp3 player of some kind - an iPad with SoundCue installed is *very* handy for this, but there are other options. You can use a laptop just as well.

There are only two options if you want backing tracks. Either you purchase them from providers or you make your own.

The Internet

Buy Direct

Build your own

Using midi files to create your own tracks

If you have a sequencer setup at home - either hardware- or PC-based you can create your own midi files and use these as a basi

2. Downloading the midi files from the net is a really fast way to pick up midi tracks, but just remember that the quality can be very suspect.

Now, once you have the midi file how do you convert it to a form usable on stage?

Playing the file on your PC will give you a really basic sound - Windows has a built-in Software Synth capable of playing midi files, but the sound quality irritates rather than elevates. You want the songs to sound big. And fat. Like the CD.

How to make your tracks you achieve this?

Using a sound card

You can purchase a dedicated sound card for your PC - works just like your graphics card in that you use the inputs / outputs on the card instead of the ones supplied with your PC. There are a number of good quality cards out there and you may have to shop around a bit before finding one that suits both your pocket and your ears.

If you adopt this method and are happy with the results you can jump to section [x] where we discuss recording the output.

Using a midi in / out connection to an external sound module

If you have a hardware sound module available - this can be any midi-capable keyboard or actual sound source - you can purchase a USB-midi connector to connect your PC to the sound source.

Follow the instructions for the sound module and connector and if you're happy with the results go to section [x] - recording the output.

Using a third-party program to play / edit the midi file

You can always go out and blow some cash on something like CuBase, but this is a fully fledged recording studio application with all the bells and whistles - unnecessary expense in this situation. My personal preference is an app called REAPER - I use it for all playing / recording / editing of files to be used for backing tracks. It can run on a reasonably low spec machine and you don't need to outlay any cash in order to achieve great sound. It plays the midi files, and once the file is split into it's component channels you can edit them individually, add effects, add / change instruments etc. to your hearts content.

Sounds can be downloaded from the net [free or purchased] and once you are happy with them you can record the tracks as a single mp3 / wav or whatever format you prefer. Brilliant.

REAPER is not free and you are expected to pay for a license if you are going to use it commercially, so Do The Right Thing and buy the license. It's worth every cent. However, REAPER retains full functionality indefinitely without being licensed. Odd but true.

1.9 Terminology

Backline - The term 'backline' usually refers to all the equipment the musicians use on stage. This includes the amps, monitors, drum kit, mikes, mike-stands as well as any mixers and other paraphernalia required.

FOH or foh - front-of-house sound ie. any sound coming through the speakers into the house.

CHAPTER 2

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