The Instrument Workshop
by
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MUSICAL INSTRUMENTS.

In this first section we are going to look at musical instruments. They are very important in praise and worship, and need to be selected and used carefully.

THE GUITAR.

The guitar may well be the most common instrument used in modern worship today. Unlike Piano or Organ, it is fairly easy to play, has good rhythmic qualities when played well, and is easily carried about. All good plus points in it's favour. Against it is the lack of melody (unless the player is exceptional), but this is not normally a problem.

CHOOSING A GUITAR.

The key to buying a good guitar is knowing what to look for. Electric solid body guitars are fine for lead work but they are not so good when just strummed, also they need to be amplified which is more expense, and strain on the back muscles.

The rule is 'the right instrument for the job'. Don't be dazzled by knobs switches and fancy paint work.

So what do you look for? well, first decide whether it's to be accoustic (with pickup), or solid/semi solid bodied electric.

THE ACCOUSTIC GUITAR.

This is the best choice for the average player. Look for a good 'action', that is, the height of the strings above the frets. As a rough guide try the yale key test. Slide a yale key between the bottom E (thickest) string and the top of the last fret, it should just be touching both fret and string. This should be the maximum height of any of the strings. Ideally the thinner strings should get closer (lower) to the frets as they get thinner. Anything above this is trouble.

Watch or rather listen for 'fretbuzz', which happens on cheaper guitars, it's when the frets are not all the same height, and one sticks up above the rest and the strings rattle against it as they vibrate. You can find the high fret quite easily. Notes before it will buzz, and notes after it will be clean.

The problem can be the reverse with a single fret being too low. A low fret will be obvious because it will be the only fret to buzz.

If you are buying and you hear this noise then put that guitar down and try

another one.

Look along the neck to see if it is straight. Look along both sides of the neck, bass and treble, it may be twisted. This is a very common problem with guitars. Look especially for a HUMP around the 12th fret on the treble side of the neck.

Don't consider anything that isn't perfectly straight, and don't be fobbed off by fast talking sales people, bent necks are serious trouble. Most sales men don't know that much about what they are selling, and young trainees know even less.

TAKE TIME.

Don't be hurried, the right instrument will last a long time. It is always cheaper to buy the right guitar the first time, than to have two or three goes at finding the right one.

Don't be too price conscious, remember you are buying an instrument with which to praise God, so don't be stingy, God can afford it! Ask Him for the money.

Good shops will offer to adjust the action for you, this is fine, but don't part with any money until you are happy with the guitar.

A really good shop will have adjusted the guitars before putting them on sale, look for this.

Remember the golden rule, if when you hold/play the guitar for the first time you feel the need to 'get used to it' then it probably isn't the guitar for you.

The right one will 'feel and sound right' straight away. Don't adjust yourself to the guitar, rather wait and find one that suits 'you'.

ELECTRIC ACCOUSTIC.

Most modern accoustic guitars have some form of pickup fitted. By far the best type is the pressure transducer. These pickups usually live under the bridge, with the strings providing the pressure, and are invisible. This type of pickup doesn't suffer from feedback, and has the most natural sound.

Other types of pickup are, the 'bug', which is a small round metal 'dot' screwed into the bridge, and the type that fits across the sound hole. Neither of these is to be recommended, as they just don't have that natural sound, and they suffer from feedback.

Find a guitar that sounds good without an amp, and then it will sound good through an amp. (demo acc gtr pickups)

CONTROLS.

With a good pickup you only need a volume control, but virtually all guitars with a bridge pickup have treble and bass controls as well.

On some rather more expensive models you may find a mid range control too. Don't be frightened by the controls, they are there for your benefit. Learn how to use them, they can make a world of difference to your sound.

Use them wrongly and you can destroy the natural sound of the guitar. Use them well and you will enhance the guitars natural sound quite dramatically.

Try to find a guitar with a midrange control. The extra range this control provides will prove very useful.

THE ELECTRIC GUITAR.

All of the advice about action and neck and controls apply equally to the electric guitar. In fact the action will as a general rule be lower than on an accoustic. This is because of the different requirements of the instruments. The height of the strings on an accoustic guitar affects the 'accoustic sound' of the instrument, that is, the unamplified sound. Whereas the electric guitar has no accoustic sound to begin with, so there is no problem in this area.

LOOK FOR.

A comfortable weight, electric guitars can be very heavy, and if you are to play whilst standing this soon becomes a problem, especially for the ladies. Use a wide strap, this normally helps.

Look at semi solids also, they offer a compromise between the accoustic and the solid bodied guitar.

A smooth action, fret ends should be nicely machined and polished, nothing rough.

Look for a good hard wood fingerboard, this is essential if you are to play lead guitar. Finger vibrato (demo), and string bending (demo), will very quickly wear away both fingerboard and frets.

ELECTRICS.

The electrics side of this type of guitar are so varied as to be almost impossible to cover without taking up the rest of this tape and several others besides. Suffice to say, make sure everything works. That may sound daft but some guitars are made in places that are better suited to making grass skirts or growing cocoa nuts!

Check everything thoroughly before parting with a penny. Try it with the amp up very loud, this usually shows up any earthing problems.

Bad earthing is quite common on guitars, and manifests its self as a buzzing sound. Sometimes touching the strings makes the buzz go away.

It is quite common in the recording studio to have to wire the guitarists finger to the earth connection on the jack plug, so that in effect he never takes his fingers off the strings! Also, turning the player round would have

an effect on the volume of the buzz, some directions make it louder some quieter. Without playing or touching the strings or any metal parts on the guitar, listen out for radio coming through the amp'. Try facing in different directions just incase you're not 'tuned' into any stations.

You see the strings can act as aerials picking up stations, touching the strings will often earth out the station and so mask the problem.

This all sounds a bit bizarre but could save you pounds later when taxis or Jimmy Young start to break through into your church meetings. The language out of some taxi drivers is not exactly what you need flying around your church. And I know, because I've heard it happen.

Don't ever buy an electric guitar that feeds back at moderate volume, or you'll end up renewing the pickups one day. And speaking of pickups, make sure that those fitted are of decent quality. Bad pickups can be influenced by the amp being close, this sounds more like a hum than a buzz.

Watch especially the pole pieces, on some designs of pickup these can actually fall out!

Pickups need to be adjusted from time to time, so check the range of adjustment. Many pickups are 'flimsy' in this area of their design, so look for good craftsmanship, after all its good money your spending.

Other than that, get one that sounds the way you want it to, and always get the very best that you can, it will be cheaper in the long run.

HUMBUCKERS

You will have heard of the humbucker pickup. Ever wondered what it was? Well the humbucker has two coils wound one on top of the other. Also there is a switch to bring in the humbucking effect. When switched in, one of the coils is made to be out of phase with the other, and any stray signals that get picked up are lessened by phase cancellation. Hum is the first to go hence humbucking.

THE PHASE SWITCH

Almost all modern electric guitars have an out of phase switch fitted. This switch usually works between 2 pickups. Allowing one to be switched out of phase with the other. The effect is to sweeten the sound, because the dominant frequencies (usually the mid) are lessened by phase cancellation more so than the top and bottom. It acts as a sort of mid range cut.

TREMOLO ARMS.

Tremolo arms, or 'whammy bars' as they're sometimes called, can be used to great effect by a good player. Always check the type of return springs used. These springs are essential to keeping the guitar in tune. A great fault with the old Fender Strat was the variance in the pull of these springs. Also, the tuning of the whole guitar would go if a string broke. These things need to be checked out before you buy.

LOCKING TREMS.

A more modern approach to the problem of tuning is the locking tremolo arm, or sometimes just the locking without a tremolo arm.

A locking system consists of a special bridge and nut. Both of which have a bar that can be locked down across the strings thus ensuring that the string length cannot change (in the case of whammy arms), and also that strings cannot slip or stretch out of tune.

This system works very well but makes life a bit awkward when tuning. Usually the bars have to be slackened off to allow the strings to move over the nut or bridge. This means you need an allen key with you all the time or else you can't tune the guitar.

Temperature still affects the tuning even with a locking system fitted. Nothing is perfect.

THE BASS GUITAR.

Again, all of the previous mentioned items on necks, actions, and electrics apply to the bass, but remember that fret buzz is much more of a problem on the bass, due to the thickness of the strings, so a small amount can be permitted so long as it is not audible in the amplifier. (demo using mic on strings)

On a good bass the action can be low all the way up the neck, so look out for basses designed for firing arrows!

The string gauge is of vital importance on the bass as is the scale or length of the neck. Heavy strings on a short scale neck will not ring like they should, and the notes won't be so clear. On the other hand light strings on a long scale neck can work very well. You need to experiment to find out what suits you best.

There is also the fretless bass, which doesn't suffer from fret buzz, 'cos it aint got no frets!. These basses sound really good and rich, but you have to be able to play in tune, or all advantage is lost. These basses seem to deliver more bass than fretted ones.

I thought it would be good to include a section on how to adjust your guitar, these adjustment will help you get the most out of your instrument.

ADJUSTMENTS.

The action on an accoustic guitar is not easily adjusted by the novice, so bear this in mind before starting. Also remember that many good music shops will undertake repairs and adjustments for you if you aren't confident enough to do it yourself, but I would encourage you to try. Most of what I know I have learned by trying.

The action of a guitar can be adjusted in 4 ways, neck, bridge, string gauge, and nut. All are interactive.

THE NECK.

A straight neck is the first requirement for a good action.

The neck adjusting screw will be found either under a plastic cover above the nut, or at the end of the neck near the bridge. You will need a special tool to make the adjustment, either a 'nut spinner', or an 'allen key'. At best these are awkward to get to and at worst almost impossible. If buying new then insist that the shop supply you with a tool that will do this job. Don't part with any money until you are completely satisfied.

On electric guitars and basses it is sometimes easier to take the neck off the guitar. This is not so drastic as it sounds, usually 4 bolts or large screws through a plate found where the neck joins the body are all you need to remove. Slacken the strings off first!!.

On the bass if you are using heavy gauge strings, it may be necessary to adjust the neck so that it bends backwards slightly, then, when the strings are back on, the tension pulls the neck back to straight.

Remember also that tremolo arms add to the string tension, the amount will vary according to the spring pull of the particular arm fitted to the guitar.

Tighten the bolt (turn it clockwise) to straighten the neck. Remember you can only see the true result of what you've done with all the strings at normal pitch. Once done always use the same gauge strings. Get the neck as straight as you can. A small curve is OK.

THE BRIDGE.

Accoustic guitars don't normally have adjustable bridges, this is not a bad thing as tone quality can be lost through the bridge, you need a good mechanical connection between the bridge and the body for a good tone.

You have to remove the strings and sand paper the 'bone' down by the required amount.

If you can get the bone out of the bridge then do so. This will avoid dust etc getting into the guitar. Use fine grade sand paper unless there is a lot to take off, but always finish with fine grade.

Be careful to follow the contour of the neck when sanding from the top, but better still, assuming that the top of the bone has a good shape, sand from the bottom. This makes life a lot easier as you only have to keep straight.

Take it in small steps, and reassemble the guitar frequently to see how you're doing.

Check with the guitar at normal pitch to see if all the frets are free from fret buzz. This is important because the neck will be pulled into shape by the string tension.

Remember that the thin strings need to be lower than the thick strings, so that all the strings clear the last fret by the same amount.

Most music shops sell replacement bones if you get carried away, so don't panic. You could always buy a couple of spare bones before you start, and sand down one of these instead of the one on the guitar. Then you always have a 'safety' factor if you make a mess of it.

On electric guitars and bass guitars, adjusting the bridge is simply a matter of turning the screws at either end of the bridge. Some instruments have individual adjustment for each string, this makes life a lot easier, and a lot more accurate too. Experiment, You'll be surprised at the results.

STRING GAUGE.

This is the easiest adjustment to make to the action of any guitar. The tension of the strings bends the neck forwards, so using lighter strings bends the neck less, lowering the strings in the process.

If the strings are reasonably low and the guitar is still hard to play, then try using a lighter gauge of string, they require less effort to press down onto the frets, making the feel of the guitar 'lighter'.

In view of the above comment about neck adjustments on basses, going to a lighter gauge may mean that you have to take some tension off the neck to get the strings off the frets.

Most accoustic guitars can benefit from this adjustment, but electric guitars normally use light strings anyway. Try it.

THE NUT. (not the player!)

The nut is made of plastic it is the last point of contact for the strings before they meet the tuning pegs. You should really checkout the neck and bridge before attempting to adjust the nut.

The nut is infact another bridge and should be looked on as such, the nut sets the height of the strings over the first fret, and the bridge sets the height of the strings over the last fret.

It is rare to have to alter this but again some cheap (and not so cheap) guitars need adjustment here.

If it is hard to stop the first fret especially with a bare chord, then the nut is too high.

As a rough guide, stop the E (thick) string at the third fret and slide a piece of thin card, IE Christmas card between the string and the top of the first fret. There should be just enough pressure from the string to hold the card in place against the force of gravity. If not then the way to adjust the nut is as follows.

Take the strings off the guitar, and using needle files, file a slightly deeper slot into the nut, go very slowly as just a little amount taken out will really affect the action of the guitar.

You can buy needle files from any good hardware shop, or if you have access to an account, you can order them from Radio Spares. My set cost 10.

Always be careful to check what you are doing at regular intervals. Use the same gauge strings that you intend to use after the adjustments.

All strings should clear the first fret by the same amount. Do each string in turn checking with the card as you go.

Replacement nuts are available if you over do it.

If the nut on your guitar is made of metal then it may be best to get expert help.

STRING CARE.

Always clean the strings after every session. It only takes a minute to wipe them with a soft dry cloth, carry one in your case. You have got a case haven't you?? Don't forget to clean 'under' the strings all along the fret board, and change them regularly.

Use WD40 on the cloth to stop rusting and damp problems. Or better still, buy some proper string cleaner, and use it regularly.

You can put some life back into dead strings by boiling them in a pan of water for 10 or 15 minutes or so. This dissolves all of the grease from inbetween the windings, which is the main cause of strings losing their brightness. If they look bright they usually sound bright.

Remember if you have a locking trem' that you need suitable strings.

TUNING.

This is an area that badly needs sorting out amongst worship musicians, and that includes soloists, duo's, and any other combinations.

There can be nothing worse, nor less glorifying to God than the band/organ and piano being out of tune. I say organ and piano because it is still a fairly popular combination these days, and is usually set up with the organ on one side of the platform, and the piano on the other.

If they are out of tune with each other (which they usually are) you have half of the congregation singing to the organ, and the other half to the piano. No one in the congregation likes it, the Lord doesn't like it, and yet the musicians/Pastor/vicar, stand there in total oblivion to it all. And this is our offering of praise to the Lord?

There is no excuse for it, it's just as easy to play an instrument in tune as out of tune. The art of tuning a guitar is not difficult to learn so long as you set about it the right way.

One word to start with about electronic tuners, they are very good, I use one myself. They are quick and accurate, I recommend you get one, but get a good chromatic one, and only use one for the whole band. If you have 2 or more of

them then you have to tune the tuners, to make sure they are all at the same pitch. Yes they do vary!

SOME HINTS ON THE USE OF TUNERS:

1, For electric instruments, turn the volume right down, and play a note. Whilst it is still ringing slowly turn up until you get a reading on the tuner, don't go any further than this. A lower volume setting will prevent the tuner's meter from bouncing around. This is caused by more than one pitch being read at the same time, so keeping the volume down helps.

2, Always damp out the strings that are not being tuned, never have two or more strings ringing at once, even slightly.

3, For accoustic instruments without a pickup, go somewhere quiet. It's no use trying to tune up in the midst of the general hubbub. The mic in the tuner will pickup all accoustic sounds. To check the pitch of instruments like trumpet, sax, or flute etc, which can be 'lipped' sharp or flat by the player, the trick is not to let the player 'see' the tuner's meter. Get them to play a note, and you tell them whether they are sharp or flat.

4, For keyboards and synths, switch off all forms of modulation, vibrato, and any other kind of effects etc. These will confuse the tuner, and use a 'pure' sound if possible, flute or piano. Not strings or brass that may contain multiple pitches.

5, Always have a spare battery to hand.

THE PRINCIPAL OF GUITAR TUNING WITHOUT A TUNER.

When tuning the guitar, most people play one string (usually on the 5th fret), and then another string (usually the one below), and try to hear the difference in pitch (demo).

This is quite wrong, and unless you have wonderful ears, at best you are guessing.

The trick is to always sound both strings together and listen not for the pitch, but for the 'beats'(demo).

As the strings approach being in tune, the beats will slow down. When the strings are in tune the beats will stop.

This is called 'zero beating the strings'. Thats how they tune pianos! (demo using sine waves). Watch the meters on your tape machine, they should give you a visual idea of what is happening.

Always turn the string down first, and pull up to the correct pitch. This has two benefits.

1. It takes any play out of the tuning peg.

2. It lessens the chance of breaking the string.

TWO WAYS TO TUNE.

Most players are aware of the fifth fret method, that is stopping the E string on the 5th fret (A), and then tuning the A string to it. This method works well on some guitars and not on others, so as an alternative try this other method.

Tune your top E (thin one) to the pitch you want (IE piano/keyboard), now stop it at the 3rd fret (G).

Tune the open G string to the E string (1 octave lower).

Now stop the E string at the 7th fret (B) and tune the open B string to the E string, again 1 octave lower. Check against the G string stopped at the 4th fret.

Now stop the B string at the 3rd fret (D) and tune the open D string to the B string.

Stop the G string at the 2nd fret (A) and tune the open A string to the G string.

Lastly stop the D string at the 2nd fret (E) and tune the open E (bass) string to the D string.

This method seems to work more reliably than the 5th fret method.

Don't try to use harmonics to tune unless your guitar cost a lot more than 500, it wastes a lot of time. (demo)

PROBLEMS.

There are 2 tuning related problems that constantly crop up on cheap and mid priced guitars, and basses.

One is when the string is nearly in tune, and the last little turn on the peg sends it a mile sharp, usually with a nice little click!

This is most infuriating. It is caused by friction as the string passes over or through the slot in the nut. The real cure is to get the nut sorted out so that the string glides over or through the nut smoothly.

Next time you change the strings, slide the old string through the nut a few times to loosen it up, or, put a layer of plumbers tape over the nut. Let the string sit on the tape, the tape will lubricate the nut and so lose the friction.

The other problem is when the guitar is in tune at the bottom of the neck but not at the top. This is caused by bad positioning of the bridge.

On accoustic guitars with no adjustment built into the bridge the only cure is to alter either the string height or gauge, or neck angle.

On electric guitars and basses you simply need to adjust the string length at

the bridge.

The distance from the nut to the 12th fret should be the same as the distance from the 12th fret to the bridge.

Most guitars have individual adjustment for each string. This is one area where an electronic tuner is worth it's weight in gold.

You shorten the string length to make the 12th fret sharper, or lengthen it to flatten it. Always checking it against the open string. Only use the 12th fret harmonic as a reference when you don't have an electronic tuner.

Also if your guitar has been in the cold, when you bring it into the warm it will take a little time to reach room temperature. Allow this to happen before you tune it. As it changes temperature it will change pitch.

KEYBOARDS.

We've spent a lot of time on guitars, now lets take a look at keyboards. They are fast replacing the more traditional instruments, possibly because of their greater sound range and reliability. (pub piano demo). A lot of church pianos sound like that, especially in the minor or second halls, and keyboards are certainly more portable than even the smallest piano.

WHAT TO LOOK FOR.

When buying a keyboard don't think of cost or you'll end up with a Casamah, or a little Yamio, that goes bink bonk, and sounds like a fly in the loo!
Don't do it, God is worth much more. Both of the affore mentioned anagrams do make good keyboards, but the good ones cost as much as all the other good makes.

Piano is by far the best instrument (soundwise) to lead worship on, and there are some very good electric pianos around at the moment. Korg do a really nice range of electric pianos. The action being particularly good and piano like. They look like pieces of furniture and so would fit into any church setting.

Kurzweil also make some tremendous keyboards, but they're not so common in England. You are not likely to run into one in your local music shop, but they are well worth checking out. Sound wise they are second to none, and they are light enough to carry.

Consider size and weight, both very important if you are going to be mobile. Consider the transportation side of the instrument very carefully, as damage can be done to both backs and keyboards by struggling against the force of gravity.

If you are in a band of 3 or 4 with a van then OK you can take liberties, but if you are like me with just the wife and a fairly big car then this is one of the major considerations.

A word about keyboard actions. If the keyboard you play on is used by others, then you will have noticed the problem of sticky finger deposits on your keys from clammy hands etc. This can be wiped off with a soft slightly damp cloth, but try putting some talc on the keys after wiping, or just on your hands. It will make the action seem much lighter, and faster. Don't use too much.

SOUNDS.

Get an instrument with more than one sound, something that can play two sounds at the same time, try to be flexible, it makes for a more profound time of worship.

Remember that the keyboard plays a big role in the musical arrangement. Piano and strings together sound great listen! (demo). Or piano and brass (demo).

MIDI.

If you don't know what midi is don't worry about it, you'll soon learn. Midi allows you as a keyboard player (or guitarist with a midi guitar), to link several keyboards together, and play them all from one keyboard. Listen to my Korg DSS1 keyboard playing on it's own (demo strings), now lets midi it up to another keyboard and play the same tune (demo). See what I mean.

MODULES.

I've been using Roland modules for these demonstrations. For those who don't know what a module is. It is a keyboard without the keyboard!

Modules are very portable, and very versatile, listen (demo D110). That was a Roland D110, all the sounds came from the one module, impressive isn't it. And they don't cost the Earth either, around 400 for all that sound. Always go for flexibility.

SAMPLERS.

Samplers have really come into their own in the last 10 years or so. Some of them are so sophisticated that you need a degree to just get a noise from them. They are really expensive as a rule, and anything that isn't really expensive is usually not worth having. Points to look for when (if) buying one would be: length of sample memory, ease of looping samples, and save/load times of samples.

Sample memory or RAM as it is called is expensive, and so this is usually the first corner to be cut by manufacturers. You need at least 5 seconds of memory to do anything worth while with a sampler. Ideally 10 or 15 seconds would be much better.

Looping a sample can be a right pain, but you can really save on memory if you can take short samples and loop them. Take strings for instance, one of the most used sounds from the sampler and one of the hardest to loop. A good sampler will have some sort of automated looping system to help with this little problem. They're not perfect but they help.

A bad loop sounds awful and takes on a vibrato effect that changes speed with

pitch. Try to avoid taking samples that have vibrato in them. For the same reason they sound a bit naf. (demo flute).

If possible take several samples at different pitches and spread these out across the keyboard. Most samples sound grotty when played out of range.

Try taking a sample of 2 tea spoons being hit together. Now play it back 2 octaves lower. Interesting.

SOME USES FOR SAMPLERS:

To create. Samplers can do things that no other musical instrument can do. (mega demo of a sampler).

To replace. Samplers can be used to great effect when something goes wrong. Say the drummer misses a vital bass drum beat in an otherwise perfect take, and to add to the problem he's gone home and taken his kit with him. Answer, sample an earlier bass drum beat and 'fire' it onto the tape at the proper place. This kind of patching up is fairly easy with a sampler. Voices too, you only need to sing the backing vocals in the first chorus, and then sample them and fire them into all the other choruses. Saves time and throats. (demo from hosanah).

Samplers are a breed apart and need some time to master, but once that's done they can be used very effectively.

THE PIANO.

It has taken me a long time to come to appreciate the piano. Like most kids I had piano lessons. I really wanted to learn the guitar but mum and dad said "piano first", so I went for two years. I wasn't very good, and as a child I was so shy that I couldn't play in front of any one so practice was a bit awkward.

Only in the role of worship leading have I come to see the beauty and power of this instrument. Assuming that the one you are playing on is a good instrument, and not some old crock that has seen better days. All too often the piano is neglected in the church, and allowed to go rotten, which is a great shame.

So what should you look for in a piano? Well if you are buying, go for a new one. Virtually all new pianos are treated against moth, damp, and wood worm. These are the main enemies of the piano. Also you should be able to get a maintenance contract thrown in, which will make sure that regular servicing and tuning are carried out.

Regular tuning is essential to keep the piano in good condition. WHY? Because the strings will stretch over time, and things like heat and cold accelerate the process dramatically.

Slack or stretched strings put less pressure on the frame and this allows all

sorts of nasty little things to happen, like warping of the sound board, also caused by damp.

As a rule, strings that have been allowed to go half a tone flat will not re-tune to concert pitch (without breaking). Over a long period of time the frame will also suffer from this, lack of tension.

Keep the temperature as constant as you can. Large changes cause expansion and contraction damage, and also breaks strings.

Avoid damp, this causes the wood to swell, which in turn causes notes to stick. A simple way to keep the humidity down is to use a low power light bulb mounted inside the piano in some way. When the piano is not in use close the lid and switch on the light. 40 watts should be enough. Remember to turn the light off before playing the piano, as the vibration will cause the bulb to blow.

Avoid central heating if possible. A dry atmosphere causes the felt to become hard, and also the sound board may crack spoiling the tone. A bowl of water under the piano will evaporate slowly and release moisture into the air thus avoiding over dryness.

Keep it shut and covered when not in use. Insects really like pianos and will happily lay their eggs inside, moths being a particular problem as the grubs eat the felt.

Keep it clean. Nothing is worse than a piano with dirty, sticky keys. Children with chocolate covered fingers are not recommended.

Clean the inside too. CAREFULLY vacuum the inside, especially the bottom section of an upright. To get dust out of your piano, use your vacuum cleaner to blow it out. Put a new bag in first though.

If you are buying second hand then look out for damage of any sort. Look inside at the felts for tell tale signs of moth (eaten felt). There will be an acrid smell inside the piano if it has moth, or a musty smell if it is damp.

Look for wood worm, this is easy to spot because of the holes. Look round the back and low down for the signs. Don't buy anything that has had woodworm. Even if it has been treated.

Look at the strings. Black strings are useless, and will need to be replaced. This is expensive, several hundred pounds is quite common for this kind of work.

Check for cracks in the sound board. These may be very thin so take care when looking. Cracks will usually run the same way as the grain of the wood which can make them hard to spot.

And of course play the piano. Any rattles need to be found, as this is one of the symptoms of a cracked sound board, if it rattles and you can't locate the source then don't take any chances, don't buy.

Stiff keys mean damp, and too much left/right play in the keys means that the piano has seen a lot of action and needs reconditioning.

The action should be light and smooth.

Check the pedals. The soft pedal can be a problem depending on which type of action is fitted to the piano.

As a rule there are two main ways of achieving a 'soft' sound on the piano. On the grand piano the action will move to the right when you press the soft pedal. This causes the hammers to hit only one of the three strings that make up most of the notes. If the action doesn't move far enough then the effect of the pedal will be diminished.

The action is returned to it's normal position by a somewhat large spring. These can become weak or break!

Never hit the keys hard when the soft pedal is depressed as this will cause the string to 'eat' into the felt on the hammer, causing uneven wear.

On the upright, the soft pedal will move the hammers about half way forward. This means that the hammer cannot generate the same force before striking the string and so the sound is softer, or it makes it easier for the player to play softer.

This type of soft pedal is far less likely to need repair than the other type.

The sustain (not loud) pedal lifts the dampers off the strings so that they ring on. The main problem here is usually that the dampers don't go back on fully. This is more of a problem for uprights as grands have the force of gravity to help.

Damper springs can lose their strength with age and so will not be able to 'push' the dampers back onto the strings. Pianos are full of little springs, and loops of cord, as well as felt pads, and paper washers. (I know because I used to recondition them when I first left school) All of these things are perishable so beware.

If you are a none musician and you are going to buy a piano, then please take a pianist with you. Looking at the polish is about as much use as looking at the paint work on a second hand car.

If the piano in your church sounds a bit dull there is a way of making it sound brighter. It requires that you take the action out so if that doesn't put you off this is what you do.

Remove the action, this is easy on upright pianos, but very awkward on grands. Carefully lay the action on it's back with the hammer felts facing up. Now get a clothes iron and iron the felts. The iron needs to be quite hot, but start with very warm and work up.

Iron the felt in an up and over fashion, just treating 5 or 6 hammers at a time. Don't iron side ways as this will break the shanks and cost you money for repairs.

Put the action back in the piano and play it, if it still is not bright enough then do it again with the iron a little hotter.

The heat from the iron will harden the felt and hence the tone. Felt is quite robust stuff so there is not much chance of causing damage, but do take great care when moving the action about. Never drag it side ways across the top of a table as this will certainly destroy most of the working parts. Piano actions are very delicate.

GENERAL CARE OF INSTRUMENTS.

Don't ever let any polish etc get into the electronics or pickup coils on your instruments, and don't use household polish on your guitar. Most shops will sell you a safe polish, use it.

A couple of words about cases, get one.

Never leave your instrument propped up against the wall, or anything else. It's asking for trouble. Cover keyboards, keep dust off as much as possible. Cover amps too, and never, never let any drinks etc near your gear. Spilled drinks cause havoc to electrics, not to mention possible death to those plugged into the said electrics.

That goes for pianos too. No drinks on or near is the only safe rule.

AMPLIFIERS.

I suppose the first consideration with amps is how they sound, I remember having a Selmer 'Little Giant' when I started out in pop music. It had the most unbelievable power, 4 watts. All delivered through a 4 or 5 inch speaker. It sounded terrible, and do you know they asked us to turn down!!!

So watts don't count for much in working mens clubs.

Wattage actually refers to heat and not volume, although it does follow that higher wattage amps deliver more volume than lower wattage ones.

A light bulb is rated in watts, but it isn't very loud! The heat dissipation of the voice coil is given in watts, so a 100 watt speaker will handle the same heat as a 100 watt light bulb.

A 200 watt amp will never give you twice as much volume as a 100 watt amp, in fact you won't hear much difference at all. Bigger amps tend to sound 'bigger' not louder.

ACCOUSTIC GUITAR AMPS.

Accoustic guitar is a bit awkward to amplify if you want to keep the natural accoustic sound, you can of course plug into almost any amp and it will work, but I think you'll find that a good keyboard amp will work best.

The reason for this is that keyboard amps are designed to reproduce a much wider frequency range than guitar amps. You will usually find 2 or 3 speakers involved, bass, mid, and top, sort of like a stereo system.

Most keyboard amps have 15 inch bass speakers, which is slight overkill for the accoustic guitar, but there are smaller versions available in the better music shops. A 12 inch speaker is ample for any church setup.

If you intend to plug straight into the PA system you will need a DI box. You won't get much of a sound from your instrument if you simply plug it into a mic input. Keyboards even more so than guitars. (more in Workshop 2)

ELECTRIC GUITAR AMPS.

There is no shortage of guitar amps, there must be dozens of makes offering just about every kind of gizzmo you could want.

If you are a lead player make sure the overdrive side of the amp sounds good. I've heard loads of amps in my time some of them quite expensive ones, and the number that had a really good sounding overdrive system were very few.

For those of us who are not guitar players, an overdrive system adds distortion to the sound!

Very often the distortion would sound really gritty, which is quite offensive at high volume.

Look for something that offers control over the distortion, even a simple soft/hard switch can be effective.

If your faith is up to it I would recommend a Mesa Boogie, but there are many other makes that are very good.

Buying an amp that has the right sound built in saves you having to buy extra pedals and things later on.

Look for a DI output. Most modern amps have these fitted. Check if it is low impedance and balanced, if so then you won't need a DI box to take a PA feed. DI boxes can cost from 40 to 80 so this is a good saving for the music group or church kitty.

BASS AMPS.

Bass amps can be a real problem. To get a good one you will have to payout quite a bit of dosh. If money is no problem go straight for a Trace Elliot, you won't find better but they are expensive.

Before buying, turn the thing up and test it at a healthy level, its no use playing it in the shop whilst trying to talk to the salesman at the same time. Give it some welly, it's the only way to find out how it will stand up

to the rigors of your playing style.

Talking about style, if you are a slap player, then you will need smaller speakers than a reggae type player.

10 inch speakers are, believe it or not, the best for punchy bass, a 4x10 cab is ideal.

The reggae chap will need an 18 inch for that deep noteless rumble.

It is a good idea to mix the two, 15 or 18 inch for the deep bass, and 10 inch for the punch.

You can mix speakers like this quite safely on the same amp so long as the overall impedance is within the amps spec'. More in workshop2

The rule is always use speaker cabs of the same impedance, two 8ohm cabs will give an overall impedance of 4ohms. Don't mix 8 and 16ohm cabs, the amp won't like it.

Combos are fine but sooner or later you will get vibration trouble in the amp, so best to buy separate amp and speakers.

GRAPHIC EQUALISERS.

Most amps these days have some kind of graphic equaliser fitted. Just how sophisticated they are depends on the price you paid for the amp. Designs vary greatly, but as a rule graphic EQ is a tremendous tool, and can be used to great effect if you know what you are doing.

SO WHAT IS A GRAPHIC?.

It is a more flexible equaliser than the ordinary one fitted to most amps. It will consist of anywhere between 3 and 6 sliders on your average guitar or bass amp. Each slider affects a narrow band of frequencies but is marked with only on frequency number IE 100hz, or 5khz. The number shown is known as the centre frequency, which simply means that the slider has greatest effect at that frequency.

There will be what is known as side band effects, which means that frequencies at either side of the centre frequency will be affected to some extent, but only in a limited band width. The most control will be at the centre frequency.

Operation of a graphic is simplicity itself. You look at the sliders, the leftmost is always the deepest bass, and the right most is always the highest treble. The middle sliders will be set at some logical frequencies between. Simply pick the area you want to alter and move the appropriate slider, up to boost, and down to cut.

Try cutting before boosting, you can sometimes achieve the same result by

cutting. This saves undue wear and tear on your speaker. You will need to experiment a bit to get what you want, but once you know what you are doing you can very quickly make alterations to your sound to allow for almost any hall you may play in.

A word of warning about graphics. Some have as much as 15db of boost (12db would be more common). This amount of boost can seriously damage your speakers. An increase of 6db is an exact doubling of volume, so if you turn up the bass slider on your graphic by this amount, you will be asking your amp and speaker to work twice as hard at the bass end as they were before. Worth remembering.

VALVES OR TRANSISTORS.

I don't know if this debate still goes on, but people used to argue that valve amps sounded better than transistor amps. They did, and the reason is quite simple. The human ear is more sensitive to distorted sound waves than non distorted ones, so a valve amp of 20 watts running at 20% distortion will always sound louder (hence better) than a transistor amp of 100 watts running at 1% distortion.

See I told you it was simple.

Another effect of valve distortion is to make the sound 'warmer' than that of the more clinical transistor. Warmer = nicer in most guitar players vocabulary.

Manufacturers were not slow to pick this up, hence the introduction of the transistor preamp powered by valves in the output stage, and vice versa.

Let your ears do the testing, don't be too impressed by any figures that are thrust at you. Figures can be manipulated to tell you almost anything the manufactures want you to see.

And don't be put off by low wattage, amps of 25 watts are quite capable of getting you thrown out of the church!

PERCUSSION INSTRUMENTS.

By percussion I mean things shaken or banged, not drums, they are coming later.

TAMBOURINE.

The age old favourite, it's one of the most effective instruments when played well. It can really make the rhythm dance, but on the other hand it can totally destroy any sense of rhythm if it is played badly.

Tambourines are also very loud, (like all percussion instruments), they can be heard over any size of orchestra. Why else do you think they have the percussion instruments at the back.

Now most people when they pick up a tamb', shake the living daylights out of it, there should be an RSPCT set up.

No friends, tambourines can and should be very delicately played, listen. (demo without then with), (demo rock without then with).

You see how effective they can be.

Arm muscles get tired very quickly, especially in the older folk, so follow this golden rule. Make all the movements of the tamb' small ones, only a matter of a couple of inches.

Don't have a strangle hold on it, let it move freely inside a loose grip.

Move only your wrist, not your whole arm, and don't try for high speed all the time, playing in half time is very effective. (demo)

Volume is not a problem, they will hear you at the back, and lastly stand by the other musicians, not 6 rows back.

There is nothing worse for the musicians on the platform than a tambourine being played at the back of the church, the drag effect is murder to play against. (demo)

CABASA.

The cabasa is another instrument that can be very effective when properly played, listen (demo). All the advice for tambourine applies to the cabasa. Give it a try.

CLAPPING.

Now you wouldn't think anything could go wrong with clapping, but it does. Most church people have this uncanny desire to clap on the 'on' beat. For those who don't know about such things the on beats are the 1st and 3rd beats in the bar in 4/4 time. Any drummer will tell you that the 'off' beat (IE the 2nd and 4th beats) are much more effective. (demo on and off beat clapping)

The only 'musical' form that I know of that accents the on beat is reggae, tell that to the congregation and you should have an instant cure!

In the event that worldly association doesn't work, try having a clap leader. One of the singers can take this role quite easily, or better still all of them.

Teach them the difference between on and off beats and make sure they clap on the right one. It only takes a couple of over emphasised gestures with regard to hand clapping and the congregation get the message. The effect of this 'unity' can be quite stunning. (faith 92 funky psalm demo).

THE DRUM KIT.

Here we have one of the worst cases of prejudice that I can think of. Before the guy has hit anything the drums are too loud. BUNKUM.

I have been in churches of all shapes, sizes, and denominations, and wherever there has been a drummer I have always been amazed at how well balanced the overall sound has been. I have never heard a drummer play too loudly in church (I think they must've been Christians!).

So why the panic when someone wheels in his drums?

Do you know the days of quiet praise are over. One day the Lord is coming back (Hallelujah), and when He does it will be with the sound of a loud trumpet, (do you know that trumpets are louder than drums?)

When that happens all decorum will go out of the window, and we'll get back to praise and worship as it should be, good and loud and full of joy (sorry I'm preaching).

DRUMS IN CHURCH.

So how do you get drums to work in church?

Set up with the amps behind the drums, this will help the drummer to feel part of the band, (it can be lonely at the back). It also makes for better time keeping across the platform, and also lessens the need for drum monitors.

Dear drummer, don't play too loud. Everything hinges on you with regard to balance. If you are too loud then all the other instruments will have to turn up to hear themselves. The guy on the PA is also bound by your volume.

If anyone else plays too loudly then it's up to the leader to tell them to turn down. Again, the guy on the PA is bound by the volume of the band, if he's struggling to get the PA over the top of the band, or any individual instrument then something is wrong and needs to be sorted. Excessive volume is always down to ego, and plays no part in the worship of God.

On the other hand, too little volume is a sign of timidity. You are not in the worship group to hide. People with this problem need to be encouraged, and have their confidence built up. If encouragement doesn't work try threats!

BE TIDY

Start with compactness, neatness in the set up. This applies to all the musicians. A tidy platform is a safer platform, untidy, loose cables trip people up and look horrible too.

Don't get anything caught under the kit, especially mains cables, this can be lethal, and drummers are too scarce to have them blown up!

Ladies beware of your heels, if they are small with steel caps they can also pierce cables.

ACCOUSTICS.

It's a common thought that churches are echoy places, and so they are when they are empty, but when the people are in they have this effect of drying up

the echo.

Don't go and listen to a drum kit in an empty church and make judgements based on what you hear. When the congregation are singing and clapping, the drums will be lost on the overall 'din'.

Modern churches are not nearly as echoy as the more traditional ones, so they don't suffer from this problem.

SOME HINTS AND TIPS.

The spiky legs on the bass drums make holes in carpets and nice wooden floors, use rubber pads over the spikes.

If the bass drum wants to move away from you tie it to the drum stool with some nylon type string, that'll stop its nonsense.

The same goes for floor toms, if they move tie them to your stool and bass drum. Or take a piece of carpet with you, and set the kit up on this. It need only be just big enough to take the bass drum floor tom and your stool.

While we are on the subject of floor toms, you can usually get more bass from the drum if you stand it on some kind of pad, this stops loss of bass down the legs into the floor!

TUNING.

Tuning the kit is most important, a kit that is in tune will sound much better than the 3 biscuit tins and a cardboard box sound that you come across every once in a while. (with nails in the 1 tin for a snare drum).

To check the tuning of a drum, put your finger lightly on the middle of the head, now tap around the edge near to the tension bolts. If you can hear very different pitches then the drum needs tuning.

What you are hearing when you hit that drum is like a 10 string guitar with all the strings tuned somewhere close to the same note, when you hit the strings you get a horrible disonant sound. It's the mixture of pitches that make the disonance.

So back to the drum, you need to equalise the pitches around the drum. This is not easy, it takes skill and patience to learn.

I've seen a drum key made in America that was also a torque wrench, with a gauge on the top. Having set the pressure you want you simply turn it until it clicks. It works and it's very quick. Get one if you can.

Once you've done this it's a simple matter to turn just one bolt to alter the pitch of the whole drum.

Drums don't sound good when they go 'brioing', but sound great when they go 'thume'.

If you have both heads on the drum then you need to tune both heads, the

bottom relative to the top.

THE BASS DRUM.

The bass drum should be good and deep, not thin. A click sound on the bass drum usually gives it more definition in the overall noise, sorry sound. This can be achieved in many ways but the following 2 are the most common. (demo using sampler to cut front)

1, tape a 'beer mat' onto the head under the beater, this is the quickest way, but of course the said beer mat will only last a short time. You can buy special pads (rock pads) but who wants to spend money when you can use beer mats. Besides rock pads don't last much longer than the home made variety. A wooden beater helps, but goes through heads quicker than a felt one. Don't put sticky tape directly under the beater. The beater will go through the outer layer to the sticky stuff in a few minutes, and the beater will keep sticking to the head.

2, You can also do it by tuning the head down, taking the head down seems to add a click to it, don't ask me why, it just seems to work. This method takes a lot longer than the other one and needs a certain amount of skill to achieve, but its cheaper than buying beer mats or rock pads.

A cushion inside the drum with a weight to hold it down (house brick), is useful for controlling resonance in the shell. Most drummers have a hole cut in the front head (of the drum!!), so the insertion of the cushion is simple. Nothing too big mind, 12 inches square should be plenty. Push the cushion up against the inside of the front head, this helps to lightly damp the head and take out any 'open head' ringing which sounds naf. It also helps the player to control 'beater bounce' which again sounds naf and clouds the sound of the drum.

NOTE, open head ringing happens when the beater is pulled back from the head by the pedal spring, and the head rings on from the last hit, (demo).

Beater bounce is when the beater hits the head twice very rapidly, this takes the definition out of the drum. (demo).

Don't fall for the blanket trap, that is stuffing the drum full of old blankets, this just kills all the shell resonance and makes the drum sound lifeless.

THE SNARE DRUM.

The snare drum is if anything more important than any other item in the kit. The sound is personal to the player, some like deep snares, and some like tight snares, listen to the difference (kit demo).

Deep sounding snares are less offensive to the ear than the high crack sound, but some styles of music demand or at least seem to fit one or other better, the choice is yours. (demo)

Most snares will benefit from some light damping. Again don't go putting cloth right over the head, (no matter what anyone says). There are many ways

of messing around with snare drums but I'll mention only a couple here.

By far the most effective and least offensive damper is the 'RING'. An old head has the outer collar removed and the centre cut out leaving a rim of 1 and a half inches or so, this is dropped onto the snare and just sits around the edge of the head (no tape). It doesn't affect the bounce of the sticks at all, but does damp out all the edge ringing of the head, the result is a much cleaner snare sound. This is usually the only treatment needed on a good drum. The ring must be flat though if it gets kinked then a new one is needed.

Another method of messing about with the snare is to tape onto the top head some coins, tape them in such a way that they can freely vibrate as it were in an up and down direction, without being able to move left or right. Tape them near the edge of the drum, The size of the coins is relevant to the overall effect, large coins have more weight and so are slower. You need to experiment with this quite a lot, but some very interesting sounds can be obtained with this method.

Don't forget the bottom head, this plays a very important role in the overall sound of the drum. It too can be dampened, but it's much better to get the bottom head well tuned. Damping the bottom head takes a lot of skill to avoid messing up the 'snares'.

OTHER MATTERS.

Heavy 'hihats' played loudly tend to mush up the overall sound, light ones are much cleaner and crisp. Learn about cymbals, there is more to a cymbal's life than just crash and ride, find out about bell, rim, and slide (demo), and don't forget beaters, they can be really effective on swell rolls as well as tom rolls.

Consider also light sticks, and brushes. Make the drums interesting they are an invaluable tool in the art of making music.

Don't have 17 cymbals if 3 will do, it's nice to be able to see the drummer for cues etc.

OTHER OPTIONS.

There are two options that need to be considered with regard to drums in church.

Electronic drums are a different breed to the normal sort, they don't have heads and shells, and as a consequence they don't make anything like the same noise. This is true both of accoustic noise level and the actual sound created. (demo electronic kit). The cymbals are of course just as normal. There are many types and makes of electronic kit, you would need to spend time in choosing one, but they can be very effective, and not all of them sound like the one I just played you.

There is also the humble drum machine, which can of course be played 'live' either by a drummer using midi pads, or by just hitting the pads on the drum machine itself. (demo) One instant advantage here is that the drum machine will have cymbal sounds as well as drum sounds, so there would be a saving on

accoustic noise and also transportation.

Any drummer worth his salt would soon be able to master the technique of playing with his fingers. If not try playing from a midi keyboard (demo).

Both of these options work really well, and as the volume is very controllable, especially the drum machine, it's cheap, and it gets around all of the arguments levelled against having drums in the church.

OTHER INSTRUMENTS.

As churches get fired up in praise and worship, the music team tends to swell. This is good and healthy, but also a bit dodgy if leaders are not on their toes.

People like to get in on the act as it were, and nowhere more so than in music.

It's sad, but church leaders are cagey about who preaches the word, but they will allow almost anyone to sing or play.

For years the church has made do in the area of music, if anyone could knock out a tune on the piano, or had a piece of paper that said qualified, then, regardless of anointing, they got the job. That state of affairs has got to change if we are to see true praise and worship develop in our meetings.

The greatest stumbling block in most churches to the on going move of God in praise is usually the leader/organist/choir master, who has become entrenched in their ways and won't budge.

Congregations will nearly always react positively to God if they are allowed to, but that rigid attitude will spread from the front of the church to the back if not stopped.

Only those who are anointed of God should stand in the office of leader, choir master, musician etc. Even if there is a better player in the congregation. The anointing counts more than human skill, or the praise becomes stayed, traditional and lifeless. (I'm preaching again).

STRINGS.

It is quite common to see a violin in the music group, even cello, this is marvellous, these instruments add a dimension that cannot be duplicated by any means. A good violin player can add flourishes to high tempo passages, and such lovely feeling in tender moments.

Encourage adlib playing with freedom of expression, these players are usually schooled in music, which is fine but has no freedom.

Cello can add great strength to high tempo passages playing 'spicatto' in quavers, (cellists will understand what I mean), and as for solo sections, cello can make you weep for joy, it is my favourite string instrument.

Now the rub, all of these things are true of good players, but violin can sound like strangled cats, and cello like a hippo' in the bath if they are not played well.

No music group needs cats and hippos, leaders take note. Always insist on the very best from your players, God is worth it.

BRASS.

The trumpet has been part of classical church music for centuries, and rightly so. What can be so majestic as a trumpet playing high over the singing, with clear notes and fanfares. How good it is to have a good trumpet player in the modern music group. This is also true of the other brass instruments. Trombone has great strength, and many of the instruments used in brass band music have lovely tones. E flat horns in particular can be used most effectively in the music group.

But sadly, many players split notes and don't know how to get the 'spit' out of the valves, so the sound becomes raspy and unpleasant.

Beware of volume. Brass instruments are loud. Always play in balance with everything around you, it matters.

WOODWIND.

The flute is becoming popular also, and again it is a beautiful instrument when played well. Both rapid and sweet. It adds so much to musical arrangements that I use it a lot (too much according to my wife).

But, if there is one instrument above all others that I regularly hear being played miles out of tune it's the flute. Sorry but it's true, and that goes for pro' players too. And not just flute, but clarinet also suffers from bad tuning.

I recently heard a bassoon being played in a church. It was marvellous, please let's hear more of these kinds of instruments.

PLEASE.

Please all players of instruments, learn about tuning and intonation on your particular instrument.

Practice and be aware of these as much as anything. If you are in tune with

all that surrounds you, then even a simple musical phrase will sound marvellous. But if you are fighting against the pitch of the other instruments no matter how tricky or clever the passage you are playing, at best it will achieve nothing, and at worst it will distract others from the Lord and break whatever it was that you were trying to achieve. If you can't get it in tune then you are an incomplete player, no matter how many notes you can get into 1 bar.

Electric guitar players should also beware of tuning, especially when bending notes. Make sure you bend them all the way. Nothing sounds so disappointing as a nice lead guitar solo where the string bends are flat or sharp.

And leaders please don't use the music group as an encouragement clinic. It is for called, anointed, appointed people only. It is also front line ministry, and not the place for little Ethel who has been struggling with her sunday school homework!

Also, the worship time is not a platform for frustrated preachers! God doesn't need your help, and talking between the songs takes the focus away from God and on to you, which in effect places you between God and His people, which is idolatry! Think about it.

PRACTICE.

This applies to all of us, flash human skill carries no weight with the Lord whatsoever, but nor does incompetence, or laziness.

You must be skilful on your instrument to be able to move with the Holy Spirit. He might just lead into a keychange, and put you in E flat (yuk) or even worse A flat. How about C sharp or G sharp.

I speak now to the unschooled in music (which I am), to those who play by ear. Learn to flow in these keys as well as the normal ones it's important.

Learn the songs inside out, so that you can come in in the middle (my wife is always doing this to me), or on the last line of a verse or chorus. This makes for some really smooth changes from one song to another, and adds variety to the same 20 choruses or so that we seem to sing over and over. People notice!! They might not say much but they hear plenty.

Try to avoid the dominant player syndrome, you know what I mean? The violin or trumpet that just has to play a solo in every gap, and doesn't leave any space for others. Don't do it, you are there to glorify God not yourself.

Leaders, lead, don't follow, and don't allow any tantrums. God will always supply another player if anyone gets too big for their boots.

REGULARLY.

Regular practice is important, like regular prayer, pray before you play. Personal and ensemble (oops a musical term crept in). You need both in equal proportions. A music group will start to knit together after only a few weeks if it practices together regularly. That unity of thought that comes from regular practice is invaluable to the worship team. Just a nod from the

leader and everyone comes in at the right time etc. It comes from practice.

IN SPIRIT.

I can't stress enough the need for Spiritual awareness, the need for group, and private prayer, also group and private praise.

Socialise away from the practice hall. It's good to be friends and have fellowship together. This has a profound effect on your playing together.

Beware of anyone who won't, or consistently can't come to fellowship times. It either means lack of commitment in the case of "can't come", or some other more deep problem in the case of "won't come". These things need to be sorted out if the music group is to be really effective.

Leaders, don't carry passengers. Weakness, I mean weak people, in the group can allow in all sorts of problems. Stop them before they get in and cause any trouble. Give strong leadership.

Use some of your practice time to just praise and worship the Lord. Don't concentrate only on the 'new' songs and leave the Lord out.

These are all essential items for the musician/singer. Be Spirit filled, and re filled. Move in the gifts of the Spirit, especially the vocal gifts. Pray for each other. Fight for each other in prayer, praising God as you practice.

And that is what you should do as long as God gives you breath, praise Him and praise Him, for you can only take the congregation where you yourself have been and are willing to go.

PRAYER.

I pray that God will richly anoint all who listen to this tape who have that deep burning desire to praise Him and serve Him in music.

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