

The Art of Noise

When it comes to maximising the volume, a good microphone will be your best ally. Catherine Nelson talks to the pros to find out the best mic secrets

The most powerful Stradivari may be able to soar effortlessly over a full orchestra, but when it comes to competing with the sound of an amplified drum kit and the odd eleven-piece brass section, the string player will always need help. It's all very well slapping the first pick-up or condenser mic you come across on to your bridge and cranking up the volume, but which devices will allow you to hang on to your refined acoustic tone colour as well as giving you the extra projection you need? We turned to the amp-ed-up aficionados of the string world to find out.

Jon Boden – violinist, Bellowhead

I have an L.R. Baggs pick-up which is built into the bridge. I've tried about five other pick-ups but the Baggs is always the best if you've got a drum kit in your band. I use one in conjunction with a clip-on condenser mic. The bass end of the pick-up sound is much fatter than the mic's, so our sound engineer uses the bass end of the pick-up and the top end of the mic for my sound out front. I'm trying to recreate the sound of an acoustic fiddle – I don't like electric violin sounds.

My advice is to buy a reasonably good fiddle that you don't mind using just as a semi-acoustic instrument. Mine is a 19th-century German Stradivari copy. The Baggs has a chin-rest-like socket that clips to the side of the fiddle, to hold the jack. This is another reason to invest in a cheaper fiddle.

Having a fiddle that's loud even when not amplified makes a big difference – if you're having trouble hearing yourself, you can put your ear straight on to the instrument and you'll hear it. It also helps to resolve feedback issues. I often see people trying to play over a drum kit with a mic, and there's a real muddiness.

My bridge got very bent recently so I took it to a maker for straightening. The standard way to do this, apparently, is to put the bridge in the microwave. That is, unless it's got a built-in metal pick-up! It burst into flames and he had to call me up and sheepishly tell me what he'd done.

Chris Garrick – jazz violinist

The violin is already the most perfectly amplified instrument – that's a fact worth remembering before trying to compete with Iron Maiden! But of course, when playing with Iron Maiden, volume demands overwhelm this system, perfected in over three centuries ago, so we need to turn to various modern methods to compensate.

I have used many different piezo pick-ups and mics. I've found that a good-quality, flat-response condenser mic on a flexible mounting for ease of positioning, and one which is not in contact with any 'working' part of the instrument, is the best compromise. I was very happy with an Accusound-built system that performed well for twelve years – a £200 investment that really paid dividends.

I recently replaced this with a mic by SD Systems. It performs almost identically to the Accusound – high output and a flat, even response – and features a flexible gooseneck that mounts on to the tailpiece, just like the Accusound.

I use my mic with a good parametric equaliser – the D-TAR Equinox – which is extremely handy for eliminating feedback and for boosting tone. Each venue affects the sound differently and this device goes a long way to overcoming acoustic problems. For anyone thinking about investing in a mic or a pick-up, first of all consider what you're playing on. If you are amplifying your main, favourite instrument, it has to be a mic. If you are playing through amps a lot it is preferable to have a second, less valuable violin for this purpose. Fixing horrible metal things on to your beloved Stradivari can scar it forever.

Another piece of advice is to avoid spending money on something you don't really want. Try as many different makes as you can first and choose carefully. It can get expensive and you want to avoid making the wrong, snap decision.

Corrado Canonici – double bassist

I use the Accusound integrated microphone. It's one of the best for achieving both a powerful and a natural sound. Most microphones deliver power with pizzicato, but usually sound like wardrobes when bowing: the Accusound is able to retain the natural quality.

The mic system is made up of two separate microphones: one condenser and one contact. They both feed into an equaliser allowing the player to mix the two sources and choose a more edgy (using more contact) or a more natural-acoustic sound (using more condenser). I usually find that a good balance of the two gives both power and natural sound. Every part of this system is fixed to the double bass with a low-adhesion tape, so you can take everything away when amplification is not needed and nobody will ever know it was there.

The double bass is a very difficult instrument to amplify. I mainly play contemporary classical music, which often involves electro-acoustics. But I also play the classical repertoire with orchestras – and a double bass concerto is a serious struggle with no amplification at all (especially compositions like the Koussevitzky Concerto, where a 60-piece orchestra is needed). So a pick-up is necessary, and I honestly couldn't care less if 'purists' say that a good double bass player does not need one: this is ridiculous, unless the player plays almost everything fortissimo, and the orchestra plays almost everything mezzo piano.

A contact mic is fine for jazz if mostly pizzicato is involved, but it becomes insufficient if you need an organic sound. Last but not least, remember that your budget also needs to stretch to a good amplifier – a great pick-up will never be good enough if the amp has a cheap sound.

Matthew Barley – cellist

I refused to do anything amplified for years, as each time I tried I was so dissatisfied with the resulting sound that I just didn't accept any engagements that required it. I remember once I was deputising with the Balanescu Quartet in Utrecht, and there was a mic stuck about half a foot away from my cello. I bumped the cello into the mic and gouged a huge bite out of it – and sent a big crash over the PA!

Then six or seven years ago I tried a lot of different pick-ups and contact microphones in a live situation. One of these was the DPA 4021. It has a clever mechanism that folds over the strings between the bridge and the tailpiece – it's mounted in a very precise way. It produces a fabulous sound and I've been using it ever since.

Since I got this mic I've gone out of my way to get amplified engagements. As string players we spend all our lives trying to make a good sound. When you've spent a fortune on your instrument, you might as well spend a little extra on getting the amplification right. The basic sound is as close as possible to the acoustic sound, and I can put on various effects if I want to. In the bass register the sound can be like an enormous bass guitar. I love seeing the sound engineer's face light up when I play because they've never heard such a fantastic bass sound coming from a miked-up cello.

The best thing to do if you're going to buy a mic is to try out as many as you can. Test out different microphones in the same situation. Don't try one on one weekend and another the next as you'll be comparing different cables, speakers and engineers. And get people you trust to listen to your sound.

Once you've got your mic, it's important to make friends with a really good sound engineer. They have several dozen knobs on the mixer that they can use to adjust your sound. I've found sometimes that the first few notes you play can sound terrible, but then you and the sound engineer can play around with the sound to make it fantastic.

Sophie Solomon – violinist

I use an L.R. Baggs pick-up, which is by far the best I've tried. An integral bridge pick-up allows you to pump the volume really high and still achieve really good tonal quality. I've experimented with some innovative microphone systems but none of them were as good as the Baggs – especially because feedback was endemic. Also there's a danger of it getting knocked by the bow or transmitting any sounds that you might emit while you're playing.

My only issue with the pick-up systems (such as those made by Baggs and Fishman) is that the way they attach to the violin using a chin-rest-type mechanism, combined with the weight of the jack cable, can mean that I have problems with the attachment falling off – I have to secure it with extra gaffer tape.

Esperanza Spalding – double bassist

I use a David Gage Realist acoustic pick-up on my bass. It gets the most sound from the instrument of all the ones that I've tried.

Once I was trying to adjust a pick-up that was installed at a bad angle. As I was moving the bridge a smidge, the whole thing flew out and the soundpost fell. And it was about five minutes before I was supposed to play.

If you haven't used a mic before, spend time finding your amplified sound before your first gig. Spend time with your amp finding the balance you like and where the strengths lie in that particular pick-up's sound, and find the sound you like yourself.

David Balakrishnan – violinist, Turtle Island Quartet

We use Crown GLM-100 lavalier microphones that we clip to the strings behind the bridge with an alligator clip from Crown. In addition, cellist Mark Summer has a bridge with a built-in pick-up made by L.R. Baggs, which he uses for playing pizzicato lines in

the style of a jazz bass player. He has a volume pedal for the pick-up, which he brings in for these pizzicato parts and then takes out when he returns to arco.

As a quartet we go for what we like to refer to as 'sound magnification' as opposed to amplification, meaning we are careful to ensure that the audience can hear the acoustic image of the group from the stage, rather than letting the speakers supply the dominant sound. Essential to this approach is a competent sound technician who knows our system and who we can work with to achieve this sound.

The funniest story I have about things that have gone wrong using amplification involves a situation that actually I wasn't part of, as Tracy Silverman was standing in for me. The group had begun to experiment with wireless mics, which allowed for all sorts of creative staging, including people coming on and off stage. So on one particular evening, one player left the stage but forgot to turn off his wireless transmitter. The other three were still on stage, and they started to hear all sorts of weird noises, which were evidently due to his using the restroom – to put it politely!

If you haven't used a pick-up before, put some thought into what you are trying to accomplish. If you simply want to allow the audience a better chance to hear you, then you should go with a solution like ours. But if you are interested in being more adventurous, check your expectations of sounding like Heifetz at the door and see what is out there. Whatever your approach, you need to realise that you are no longer working in the same sound medium as the acoustic one and that you shouldn't kill yourself trying to do the impossible.