

John Pellowe Interview

By Mike Collins

I thought I would ask you about the work you have been doing with Pavarotti on the Three Tenors concert. When did you first get involved?

Well it goes back a long way. I had a background in telecommunications, strangely enough. I never really wanted to get into telecommunications it is a question of not being able to get into the record business having left school. So I eventually got a job with Decca as a kind of tea boy and I went out on sessions as an assistant. It was quite interesting. I worked mostly in London to start with and of course because it was Decca it was purely a Classical music record company. After a couple of years of doing this I got the attention of a couple of Decca senior engineers who were heavily involved with Opera recordings which is what Decca has always been famous for and I started to work with them initially as an assistant and then they thought they might try me out on the mixer and that was the start of it really. It went pretty well and I went from strength to strength recording Opera, but also a lot of symphonic and chamber works. By the time I had been with Decca 7 years and I joined in 1974, it was going pretty well and it was at that point Pavarotti was getting bigger and bigger, as it were, in reputation as well as girth. I first actually worked with him in 1975, but I was a mere assistant engineer and he certainly didn't even look at me, so that is not a big deal. The Pavarotti relationship with Decca was a very comfortable one. Until about 1983, everything was fine, very predictable. He would record his operas, and he was very demanding about what he wanted by way of editorial content and sound. He has always been quite sticky about the quality of sound we have on tape, and balance. Not just sound, balance. Please don't misunderstand me, Pavarotti would not throw back a tape and say, that is only 16-bit 44.1 or whatever, I am not talking about that, I am talking about his perception of balance and the way you balance an opera with the voices against the orchestra, for any artist is really critical. In 1983/4 the relationship changed. Pavarotti started doing arena concerts and he was suddenly thrown in to the deep end doing quite large spaces, I believe the first one he did was in Miami actually, and no one had a clue what they were doing from the sound engineering point of view. They were getting in rock and roll sound systems. It was lousy sound inevitably for classical music, especially in those days when systems were comparatively primitive to what they are now. In addition to that problem there was no one who could actually sit at the mixer at the concerts who actually knew what they were doing with classical music. I don't mind this being published anywhere! It puzzles me to this day that so many eminent pop producers and engineers ask how do you do the classical stuff, I always retort by saying to them, how do you do the pop stuff, because I still get very puzzled as to how some of the effects and ingenious balances are created in the pop studio. So Pavarotti, here he was in a situation where he was making arena concerts and had no one to mix, so he asked Decca to come and bail him out and my colleague Jimmy Locke who was then Decca's chief engineer was shipped off to Montreal for Pavarotti's 3rd or 4th arena concert, he hadn't got a clue what he was doing, by his own admission, I am not speaking out of turn when I say that, and Jimmy

took half a dozen Schoeps microphones with him in his hand luggage and went off and turned what had been a total disaster to date into a comparative success, albeit he was fairly inexperienced and didn't know what he was doing. And the thing grew from there. And once Jimmy did one good concert there was no way that Pavarotti was going to do a concert without him, but after 2 or 3 years of this it was obvious that this was too much for anyone to handle and Decca were releasing Jimmy from their services for anything up to 3 months, 4 months, a year to do these concerts and I had to be on the ball to help him because at this time I was his mate as it were at this time we had become very serious co-engineers, we used to make operas together and everything else.

When you say make operas, you mean record operas and make a great job of them?

Yes, Jimmy and I had a reputation for recording big operas such as Lowengrune with big casts and laying it down to two track and that was it, there would be no need to go into the remix room afterwards and fiddle with it. I am not saying we never did that, of course we did on occasion, but by and large we laid stuff down to two track, if I might just come back to this but digress at the moment, I think if I have a special skill as an engineer and my colleagues who worked at Decca with me, especially the older colleagues had a special skill, it's that 90% of the product on the market that bears my or the names of my colleagues is done straight to 2 track, no multi track in the way, no possibility to remix, I regret this enormously now, because I want to go and turn this stuff into 5.1 and there is nothing to turn it to 5.1, because it was just laid straight to stereo, but none the less that was the way it was done and we used to frequently do sessions in America under very high pressure where within 5 minutes into the session you would be laying down the master and there would be no opportunity to fiddle with it after, you could equalise it of course, you could add some Lexicon or something, but usually we didn't even do that, it was edited and went straight out onto the market. Coming back to the whole Pavarotti thing, gradually my involvement became more and more and more and Jimmy decided to curtail his activities with Pavarotti because he was more interested in other things. Jimmy and I did the first 3 Tenors concert together and in fact the 3 Tenors and I are now the only people who have been a part of every single performance that they have ever made, even Zubin Mehta and James Levine who have been the two conductors involved can't claim that. I think as I developed in the whole thing with Pavarotti I got more and more involved with pop music, Pavarotti started to do his shows in Modena with people like Bryan Adams and Elton John and Meatloaf, the list is endless, and I got to know some of these artists and work with them and I found that really very exiting. I also had the privilege to work with some extremely competent pop engineers, very well known people like Frank Filipetti who is not only a fantastic engineer but is also Carly Simon's producer. Phil Ramone, who everyone knows is one of the best-known producers in the world. And it has been a great pleasure and an eye-opener to work with these people and it has expanded my horizons enormously.

So in what ways were you working with these people?

In the case of Phil Ramone, Pavarotti and friends, I set the whole thing up in terms of the recording platform, we had two mobiles, we had 4 48 track machines, numerous Tascams running in the background to take audience mics and so forth, and we had a sound field audience mic which turned out to be an absolutely crucial piece of this recording (I'll tell you more about that later on), and the way that Frank and I worked it out was that Frank looked after the pop side in one mobile and I looked after all the orchestral stuff and some of the vocals in the other and we were working in a monitoring loop so we were listening to each other all the time so that anything I did Frank could hear and anything Frank did I could hear, the only reason we had 2 mobiles was that we needed about 110 inputs or 115 inputs and we just didn't have enough space in one mobile to accommodate all that. The Pavarotti and friends we did with Bryan Adams I did it with Steve McLaughlin who is the engineer for Michael Kamen who was the arranger for that particular show. Steve and I worked in the same mobile and there was not room to move, we had a Voyager 2 which had a 48 input Neve and we had mixers stacked up all around us and it was pretty crazy so we decided that for next year that we needed 2 mobiles. What I am thinking this year is of using a slightly more sophisticated system maybe at least a digital control surface even if we don't have a digital desk, so I reckon it is something like a Euphonix. I am certainly thinking in that direction.

For the resetability?

The resetability, also I am a bit anxious about purely digital desks because when they crash it is catastrophic so something like a Euphonix is a good compromise because when it crashes at least your signal paths are retained and you can actually push faders up and down and control signal levels and you don't lose panning positions.

You can do that with the Euphonix? It has that level of operability?

Yes, it has comparatively primitive level of operational ability if the digital controls crash, but at least you can get through a show in a crisis. I am very nervous, I know people who have had significant pieces of equipment go down on live broadcasts.

Well you can't really compare a Yamaha 02R - a 5 or 6 grand piece of equipment - you can't really compare in terms of 100 grand.

No you can't on the other hand I am amazed by the digital security of this comparatively cheap stuff, but it will be interesting to see what the Ramsa comes up with in terms of security.

I have heard that Mackie are coming up with one, Tascam have one.

Yes everyone has and suddenly... It is like the car business, things like the Espace came out and everyone has got to follow the year after.

Mind you, as I mentioned I did work for Yamaha R and D in 86/87 and that was the year the DMP7D was introduced and I was part of the team that help to specify what inputs and outputs and that sort of thing which is effectively that mixer up there, which is the fore runner effectively of this and that was 10 years ago.

Things have moved so fast, I have 2...

It is 2 years since that came out. Mackie isn't here yet, Tascam isn't here yet and Ramsa aren't quite.

Well the Ramsa exists, but it isn't available in Europe for a while, but I have to think to myself that if it does everything it says, it has 32 moving faders, it is a bigger frame than this and the faders are better spaced.

Is the Ramsa a live console rather than a recording console?

No, I think it is principally a recording console, but you can buy options for it, it has got 8 XLR analogue inputs and I believe it has got another 8 analogue inputs on jacks, but you can buy option cards depending on what you want, you can make it up to a full analogue input 32. But it is fascinating that things are moving so fast but it must be very frightening for people like Euphonics and for Neve, Capricorn Logic and for people who put megatons of money into R & D to have had it kind of walked over by these guys because in the end the DSP protocol they are using in these mixers is incredibly transparent if not invisible. We did a pretty hokey thing with an 02R when we first got one at Decca, we cooked up the most crazy EQ you could imagine and then we mirrored it on another channel, then we stuck a signal in, pulled it out, put it back into the other channel and the bits matched exactly having added and subtracted this equalisation at the end of it. Now I am not saying that there were not other artefacts on it that we couldn't hear, but sonically it appeared to perform fantastically well and it never gave us a noise floor of less than 128db which is impressive for something that cost that sort of money.

So, I was suddenly stuck with all these pop artistes and I found it really interesting to work with them.

You were explaining about Phil Ramone and what it was like working with him.

Basically I acted as a kind of consultant on that but I set the whole thing up. Frank Filipetti and I mixed the album together and...

Which album?

Pavarotti and Friends, the last one for War Child, this was the Elton John and U2 album, it was the last one we did, and I hope that Frank and Phil are going to come along live for next year's show in June. And then fortunately we managed to negotiate a deal with Decca where this album could be released in 5.1 sound

on DTS and so Bob Margoulouff did some mixing for it in Edgebar? Studios in Burbank and I went over there, and Bob and I and Brad Miller we mastered it as a joint effort - and I am pretty pleased with it. Also by way of 5.1 mixing, I did the 3 Tenors, the original in 1991, which was only on 32 track, but I managed to turn it into a 5.1 mix that I was really happy with. I was left on my own to do that, but everyone seems pleased with the results.

Where did you mix that?

I mixed it at Decca, in Kilburn, the Decca recording centre in Kilburn is now shut down but they had a brand new Logic 2 disk.

AMS Neve?

Yes - but what has actually happened is that Polygram have sold all the equipment to Decca engineers, Jonathan Stokes and Neil Hutchinson, they have sold the whole lot and Jonathan and Neil are running as a facilities company out at Belsize Grove because Polygram have to keep it for another year because the lease doesn't expire for another year and in due course Johnathon and Neil will relocate to another premises but they have been quite fortunate to have been able to buy the Decca equipment and I suspect, I hope for their sake that they got a generous deal out of Polygram, I am sure they did because I wasn't even made redundant, I left of my own accord, Polygram were more than generous with me when I left and I understand they have been generous with everyone that left. It is very unfortunate that the technical side of Decca had to be reduced substantially, but I do have to really say that Polygram have been fantastic with everybody. Polygram and Decca..

So they were ultimately the employer who..

Yes, Polgram owned Decca - and Polygram were really brilliant and you won't hear a single complaint.

Let's just recap a little bit. You said how you originally got involved with Pavarotti and that led to the 3 Tenors and you have mentioned with enthusiasm how you connected with these pop artists and enjoyed that, and it has put you working with Phil Ramone and Frank Filipetti.

It has also put me in touch with artistes that I wouldn't have otherwise worked with. I have a very pleasant professional relationship with Elton John and as a result of that I am in negotiation, I won't say any more that that at the moment, but it is nearly wrapped, I am in negotiation to get the whole of Elton John's catalogue for remix to 5.1 DTS. That is as a result of working with Pavarotti, it has paid enormous dividends from that point of view. I love working with Pavarotti, I would say he was always easy but I am probably not always an easy person and I don't think people have to be an easy ride to be worth working for.

So this has put you in touch with these pop artists.

It has been very nice, don't misunderstand me, I don't have personal relationships with any of them and I don't have personal relationships with the classical artists, the only one I have any decent acquaintance with is Elton John and I get on very well with Simon Le Bon so that was nice, but I would like to get to know some of these people better, I am not a star seeker, I am not in that scene at all, I just like the people I like!

Let's talk a little more about recording techniques.

Coming from telecommunications, even though I had a musical education, my principle background was technical. I think because of the diverse range of activities that I have been faced with in the record business I have been forced to devise new ways of getting things onto tape and turning them into usable products. Believe you me, some of them have been a serious challenge. If I go back a little way, and talk about the pure classical recording, which was my main line of business for an awful long time, I can talk quite clearly about that. Decca and used a space omni-directional mic system for recording, and many people criticised the idea of using spaced omnis.

How wide would that space be or would it vary?

Well we used to have a thing called a Decca tree which was an arrangement where if you have the front edge of an orchestra about 3.2 metres up in the sky you would have a centre microphone roughly in line with the edge of the orchestra, and then maybe 2.5 feet back and 5 feet apart you would have 2 more forming a triangle, omnidirectional microphones. These were Neumann 50's I'm talking about.

TLM 50's.

Not TLM 50's, I am talking about old Neumann 50's really from the 50's, originally valve driven and eventually they got so clapped out that we put fet circuits in them which I sort of regretted but it had to be done. This was a production company and we had 37 Neumann 50's and suffice to say it just wasn't possible to maintain them in their valve form. Also digital crept along and it just wasn't quiet enough for digital recording.

So they would be hanging vertically upside down and there would be a capsule that would face out from the side.

Yes, in fact the Neumann 50 was a great big microphone and you would hang it upside down then you would hang the capsule so it was looking at the musicians.

Were they angled?

Absolutely, because omnidirectional microphones are always directional, don't believe any bullshit your read, they are seriously directional and we used to take this really seriously.

The centre microphone would be looking right into the centre of the strings in front of the conductor. You would have the conductor out front, then there would be a couple of desks of strings before you get to the woodwinds and we would be looking right into the centre of those strings with that microphone. Then we would have the two, the left and right tree, which would again be looking right into the first violins and the celli, if that was the way the orchestra was set out, and then we would have a couple of outriggers which were maybe twenty feet apart 3.2 metres high again, typically 3.2 metres high, 10 foot 6, and they again would be omnidirectional so we would have a total of 5 Neumann 50s across the front of the orchestra, they would be 5 feet away from the edge of the orchestra 10'6" high looking down into the strings. This was a very unpopular way of recording with many engineers, it was a very controversial method of recording, because when you have that many spaced omnidirectional microphones you lose a lot of the directional cues, which is absolutely right, the way that we would deal with that was we would pan the left and right tree half left and half right, and the outrigger mics we would pan hard left and right and we would paint an artificial stereo image which really didn't have a great deal of credibility, but the reason we did this and consistently did it and got away with it and got wonderful reviews and many many awards was simply that the localisation cues were missing, but the sound was fantastic. And I still to this day believe that if the sound is good, the pure localisation is something that very few people listen to. I am not saying it doesn't matter, here am I and I am into 5.1 sound now and people are turning round to me now and people are saying who wants that crap, who wants to listen to that, so I am moving into a very specialist market of sound engineering and I absolutely listen to and respect the people who say, well maybe if you had put a sound field microphone up there you would have had better localisation and better stereo image. I completely understand that and I know it, I have done it myself, I have done both things.

The reason that the Decca system survived as long as it did was that it was comparatively adaptable to different acoustic spaces. It was comparatively easy to auto-balance it and you didn't have to fiddle with it much, generally-speaking in order to make it reliable. When we were recording in America, they were 4 hour sessions at unbelievable cost. The fact that record business has disappeared into oblivion on the classical side is actually testament to the amount of money we spent on recording sessions, especially in America. It was completely outside itself in terms of cost, the whole business was screwed up and they spent money for years and years on things that would just not sell but the financial side of it became more and more of a problem, it was essential that we were more efficient and quite often in an American recording session in somewhere like Cleveland or Chicago with a very proficient orchestra, you have a tried and tested location, within 4 minutes of starting a session we would be making a master. To give you just one example, in one 4 hour session in Cleveland, and I have people that will testify to this, I made an Alpine Symphony which is 56 minutes long and a very complicated symphonic work indeed - in one four hour session with Ashkenazy conducting, just a two track, and it is still one of my proudest achievements in the record business. Basically it was two takes and just a few bits and pieces to fill in for mistakes.

So that is the Decca tree?

So that is the Decca tree, the Decca system, it is not patented, anyone can copy it, may people have tried, I actually believe in the end the quality of recording is actually down to the person behind the mixer more than any thing else, but it is there for anyone to try and copy if they want to. Just to give away one little professional secret, obviously you can't use 50's in a live situation, because they are too big, They are huge.

In a public performance?

Yes, in a, for instance, live performance in the Concertgebouw or something like that where you are actually recording the concert, you can't use 50's, they are too big, if TV is involved it is absolutely out of the question. Schoeps MK2S which is an omni with a top lift, which is not quite as omni directional as the 50, it is a little bit more pointed at the top end, and to compensate for that I maybe use 2 outriggers on either side. So instead of having 5 microphones across the front, I will have 7 Schoeps MK2S's. It is a pretty good way of cheating, it is a pretty good substitute for the 50, there are of course other microphones, but I do find..

Where do you put the other microphones?

Just a little bit further out, I have in riggers and out riggers to cover the width of the orchestra a little bit more. I do like, and I respect enormously products like B & K and so on, I find that they are terrific for things like drums, and as measurement microphones they are unparalleled, but for me for orchestral sound, they are almost a little bit too flat and I don't mean that disrespectfully at all. The Sanken is a little bit the same, the 2S has a very definite top end lift and the 50 has the same, and the 50 has a peak sort of in the 3khz region it is quite broad, and it gives everything a bit of energy. I don't actually believe that every microphone we use should be flat. In any case you are only talking about a non-axis response anyway because no microphone is flat once you move off axis. You can measure 14 microphones and they all look identical when you measure them on-axis but when you move them off axis they will all be different, and the sound that they record will be totally different, so I have quite a broad open mind about microphones and I certainly don't close my mind to trying new ones and I like to do that all the time.

You asked me to remind you to tell me the story about the sound field and how it saved your bacon.

Absolutely. Brad Miller, who runs a company called HDS in Nevada, which is actually a company that licences software to DTS. Once we knew that we were going to record Pavarotti and friends, in Modena, this last one, for 5.1 surround sound, Brad said to me, I am really pleased, shall I bring my soundfield microphone, I said "Do, do!". so he brought it and the poor guy got absolutely no support but he put it up in the middle of the audience and it wasn't in the right place, and next time we do the show it will be in the right place, but the

sound that we got from the audience with the sound field microphone right in the middle of it was just spectacular and in the audience breaks in between the songs on this particular record it does sound very nice indeed. Now, what we want to do for the next recording, which will be Pavarotti, Celine Dion, and all sorts of other artists which I daren't mention, because if I mention them they will not turn up, what we are going to do next time is hang the sound field almost from the proscenium of the stage so that one half of it is looking into the stage, and the other half is looking out into the audience, this is where we would have liked to have had it before, but the Italian television, the RAI, were being awkward, and I won't have that this time, if we are going to do it we will do it properly, and I don't care if they have to rearrange their lighting and camera shots, tough titty, we have got to have this done properly. Even so Brad's microphone, in the middle of the audience, he makes his own sound field microphone, please don't ask me what it is called because I can't remember.

You mean it is not a Soundfield microphone?

It is one that he has developed himself, it is a sound field microphone but it is something he has developed himself.

It is not made by the company Soundfield?

It is a sound field. The word sound field is not patented, a sound field is a sound field, I am not talking about the make of Soundfield, I am talking about a microphone with 4 capsules arranged in...

So the capsules are spreading all around?

Absolutely. At least as far as I know the word sound field is not held or licenced by anyone. DTS have been using it all the time in reference to the way we create a sound field.

So Brad Miller has designed his own, or made his own?

I don't know the exact story. But it was crucial to the whole thing because it gave us a spatial perception of the audience that was wonderful when you brought it in to mix. We couldn't, because of the way the microphone was positioned, use it during the part of the show where there was music going on because it was picking up a very contaminated and delayed sound system, that was coming back onto it. Although we put a time code offset into it to time align it to the stuff coming off the stage it wasn't something that you wanted to use while music was going on. However when you get it down on to the stage next time I think it might be more interesting. I like the idea of using my multi-mic technique combined with a microphone like that, a little bit of each.

I hope that this one turns up for me tomorrow. I have got excited by the idea of having something that can catch a field of sound rather than just a stereo image. After the event, with the sound field microphone, you can record the 4 outputs and mess with them afterwards.

You can matrix them, you can do what ever you want to do.

That is also another interesting idea.

DTS has two things in its favour over Dolby AC3, principally that it has a much slower reduction (compression) ratio, which I think everybody knows. I don't think there is any secret about this, in fact 2 Dolby engineers at the consumer electronics show admitted to me, comparatively openly that Dolby didn't really try to compete with the DTS algorithm coding.

I was just talking about the difference in AC3. The difference in AC3 is obvious, there is much lower compression ratio.

Is that the major difference?

Well I think the other main difference is an invisible one, one that is not obvious to potential customers. DTS have invested much more in software whereas Dolby have tended to..

By software, what do you mean?

I am talking about recordings. Already DTS have a very heavy schedule of investment in recordings, and I am partly responsible for the European investment.

So you have taken on an involvement with DTS?

I have taken on a consultancy with DTS and I am basically looking after the European artistic acquisitions be they pop or classical. I am doing this as well as 20 something classical concerts a year for Carreras and Pavarotti and the 3 tenors.

So you're a busy guy...

Well I have been doing this almost for a year anyway. I have been working along side DTS since January but it sort of gets properly formalised this January. But I hope it will be anyway, when I see the cheque. Actually DTS have been really very good to me and because they have been good to me I have been decent to them. They have been incredibly busy, but I have done my bit and if I have succeeded getting them Elton Johns catalogue I think that I have helped them quite a bit. I have many things I want to acquire for DTS, I want to acquire about 30 titles next year for them, from the European side. Indeed they would like 30 titles from me from the other side of the Atlantic. It is not just DTS, Brad Miller, my colleague, actually runs a company called.....

We talked about your early career at Decca, we haven't said anything about how it developed.

The type of technique I was talking about earlier, using spaced, omnidirectional microphones, maybe 10'6" up in the air, as your initial pick up then maybe having a couple of spot microphones and maybe 15 or 20 microphones recording an entire symphony orchestra is wonderful if you are in a beautiful acoustic, and you want to capture a lot of that acoustic energy and you have nothing else to interfere with it. This situation rapidly changes when you start to record music in maybe arenas or big open spaces where you have a mighty power amplification system to help you on your way. You certainly don't want to be using omnidirectional microphones in that sort of situation, because as you can imagine, in a lot of arena spaces you can get a half a second round trip for the sound from the PA system to slap back off from the back of the arena and come whacking back on stage and that can be quite disturbing for the artists. Also artists, by that I mean vocalists, singers, in a live recording environment, in an arena or an open space like Hyde Park, Central Park, Miami Beach, wherever you would like to think of, they need assistance, they can't just sing into thin air, even if there is a PA system, so you have to give them monitors. We suddenly degenerate into pop music, and I don't mean that in a frivolous way, if you were to quote me on that, I am sure that any pop engineer who does front of house mixing would understand completely what I am saying, that suddenly you have contamination everywhere. You have contamination from the PA system, contamination from the monitors.

You mean on stage monitors?

Yes, wedge monitors for the artists to hear themselves, and to hear the orchestra properly. I often have to give monitors to the orchestra themselves, in order to hear the artists and other aspects of the orchestra. I often have to do left/right cross monitoring, I don't do it if I can avoid it, but sometimes I have to. Sometimes I give the conductor monitors. In the worst scenario, such as the one I had in Rome last summer, where I did Turandot in the Stadio Olimpico in Rome for the Theatre de la Opera, this is the place where they had all that football trouble - it is a huge place. In that particular instance I think I had over 30 wedge monitors and a completely separate monitor set-up, it was really complicated. So that Daniel, who was conducting could hear what was going on stage, and the people on stage could hear the orchestra, and the off stage chorus could hear this, and so on. So we had a mixer devoted just to monitor sets. So when you get into that environment, purism goes out of the window and I then use a lot Schoeps microphones, dozens of them. I use Schoeps for a number of reasons, I don't dislike the sound but I am by no means claiming that they are the best microphones, but they are pretty good and they are reliable and they need 10 out of 10 for that. I have used them in all sorts of situations and people who watch what I do and look at my Pavarotti shows and my 3 Tenors shows will notice that I have taken a very dangerous step, but one that I feel confident about, I have gone down to using 1 microphone per vocalist, and if that goes down the only way to fix that situation is for somebody to run on-stage and put another one in place, and in the middle of a concert when you are broadcasting to 800 million people, you don't take a decision like that lightly. And I have simply grown to respect these microphones so much, I know what to look for, I know how to check them. We have had stupid things go wrong like screws

falling inside the cases, but every microphone that can happen, but we have learnt to check for this, test for it and do all of this before a concert. And yes I run with one microphone and if that goes down, it doesn't matter if it is Elton John on the end of it or Eric Clapton, it has gone. On the other hand I took a lesson from some of my pop colleagues and most pop vocalists have only gone with one microphone for years and years, albeit maybe a dynamic unit. But I use Schoeps MK4's for vocalists.

Are they dynamic?

No, they are cardioid, they all condenser. Schoeps CMC6, which is the amplifier and then the MK4 is the capsule which indicates a cardioid. MK4 which is a cardioid capsule for everything including vocalists other than strings. For strings, first and second violins, violas, cellis and basses, in a live situation I use MK21 capsules which is a sub-cardioid, it is a wide cardioid. It simply makes the strings sound sweeter and it also gives me problems because once you start using sub-cardioids you're picking up more from the rear of the microphone including from the PA system and the monitors, that is the price you pay. Nonetheless for a better quality string sound I choose that as being the best compromise, and I really want to emphasise this word compromise because I think anyone who works in a situation where you are trying to make a first class recording, you have a big PA system, you have monitors on stage, you also have a classical orchestra - let's face it, no one wants to mic a classical orchestra by putting little clip mics on the violins. Sure you can do it, but to make a really lovely classical sound or to make a good orchestral sound you don't want to do that if you can avoid it, so you have many things working against you and you have to...

So where do you position the mics then, in a classical orchestra, in such a circumstance?

In live situation I put the microphones about just under 2 metres high.

Say I am a cello player?

For cellos, I put the microphones comparatively lower down and I get a comparatively scratchy sound because they are quite close.

What about violins then?

Violins I need the height then, I need the resonance. Any musical instrument, if you put the microphone right next to it you are not going to get the full sound, anyone who understands anything about acoustics, you need to be a distance away from it to hear the whole thing. This is why I get annoyed with certain artists who sing right on top of the microphone because really your voice is better here - an arm's length way.

Brass and woodwinds?

I try and keep as far away as I can get away with, woodwinds for these live shows would be about here (motions to just below head height). if you are a flute player I would try and be here (motions to indicate a position about an arm's length away and slightly higher than the flute would be - pointing downwards toward the flute), which is not on top of you. If I am doing a pop thing it is another matter.

Percussion, piano?

Again keep as far away as I can get. Piano mics for a live show I usually stick it fairly close in actually, because for most of the shows, like the 3 tenors, the piano is not particularly prominent and therefore it tends to get lost and therefore I tend to go just inside the lid then I will equalise it, and I equalise everything. This is an important point. When I am making classical recordings in a beautiful acoustic, there is hardly any equalisation, none. Hopefully none. Whereas for these shows I am absolutely brutal - I'm brutal.

For what purpose?

I treat the EQ to make the sound appropriate, I use reverbs, I use every cheat in the book. For instance, if I have got a microphone close to a cello, because it is stuck up its music stand, if you listen to the dry sound you are going to have a very scrawny, raunchy sound and I EQ that to death, I take out that raunchy, scrawny stuff away, or as much as I can. Then I add reverb to it, maybe on a fairly short reverb time, a deep reverb, to try and cover all that stuff up. I have learnt a lot of tricks over the years, it is the same with woodwind, if you are forced for television sometimes, I have to go low with my microphones. I do this willingly, actually, rather than being forced to, because I want television productions to look good, I really care about everything in my shows, not just the sound. So if I really have to go low with my microphones that woodwind will sound over close at the front so I EQ, I EQ quite heavily to take that away. I can't put depth that isn't there, unless I use delay, and then I can begin to fabricate it. But for most of the things that I do, I am not trying to do. For a lot of the live shows that I do, I am not in the end trying to deliver pure, perfect sound, I am trying to document the event and give people a really credible product at the end of it. I do not mind recording purists having a go at me because I have been on both sides and I respect every aspect of what people in the recording business do, so I am not being grand or anything about this, I have simply had to develop survival techniques. I have been in particularly difficult situations, if you get a rock and roll band on stage and you also have an orchestra, then you are faced with big problems. Phil Ramone actually taught me an awful lot - he came on and he said we can't have this and built a huge plexiglass box around the drum kit, I am talking plexiglass about three quarters of an inch thick, boxed him in completely and sprayed it with something that made it not show up too much, in fact if you didn't know it was there you would not have noticed it. But he just boxed the drums away! God Almighty - I would never have thought of that, but this is why working with people like Phil who have such great ideas has been so good for me. Where I do one of these shows where we have rock and roll and orchestra, then I put my overhead Schoeps MK21 sub-cardioid microphones up,

but then I hate to say it, I will use clip mics as well, because there are some situations where it is the only way you will hear anything. When the rock and roll gets really loud you just have to duck out of the overheads, because they are picking up far more rock and roll than orchestra, because violins are violins at the end of the day.

So clip mics?

I have used a microphone I have been getting from Sensible music who won't tell me what it is, but I happen to know it is a Sennheiser MK2H which is a tiny little omnidirectional capsule which sits in a plastic tube. You can stick it just under the strings and I usually aim it just above the bridge of the stringed instruments, towards the lower strings and it is OK. Apparently B & K have just come out with a new one which is something else, and I can't wait to hear it.

In fact, I am going to ask B & K to give me 40 of these for my next Pavarotti and friends concert because I am told they are superior to anything else that has gone before them and I am delighted to try them. Also I am told that B & K have a very interesting development in terms of microphones that can fit in people's hair and go to hidden transmitters. For my production in Rome, the Turandot, that I did last summer, all my artists were walking about all over the place and we used Sanken microphones just in their heads.

Sanken do quite a good range of microphones. These things are about the size of a matchstick connected to a cable and Sanken do quite a nice microphone but I am told that B & K have exceeded them by a long way and I am anxious to try those next time I do something I do something like this. Interestingly, in Rome, I used Sennheiser radio mics - transmitter and receiver packs and they are sensational. I was right underneath the TV transmitter and we didn't have one problem from any of these radio mics during the whole time I was there!

I got the opportunity last week to work with the Sennheiser MKH80, it is a very nice mic like that, and it is small capsule. It had variable patterns. That came up very well against the range of other things I did. Very clean, very flat, very uncoloured.

Absolutely. I have a very good colleague called Louise de la Franté who is in New York, she is a producer and also an engineer of some standing. We worked together on the 3 Sopranos. She produced and I mixed, we are going to make an album of the 3 Sopranos together next year. Louise swears by Sennheiser mics and listening to the results of recordings that she has made I have got to say that they are just stunning and next time I work with her I am going to try and find the time to pick her brain about this. Because I am never afraid to learn from other people! And, by the same token I have no secrets myself. I think when everyone is younger they are a bit more insecure and secretive, and now I don't have any secrets because in the end I could tell people everything about how I do my set ups, how I do my EQ, but they would do it differently. For me, what has made my career is two things - it's what I do with the faders and the way I

relate to my artists and the people who work around me and that I can't sell. I can pass it on but I can't pass it on over night.

I just want to cover mixing desks.

For the Pavarotti and friends and the Tenors shows. Well for the 1st 3 Tenors show we used the Fleetwood Mobile which then had a Raindirk desk which was alright. For the 2nd 3 Tenors show in Los Angeles, the big recording, I used a remote recording mobile, Silver Studio which had a Neve VR. For the numerous other live recordings I have used Neve VRs. I am not particularly quick when it comes to SSL desks so I try to avoid them, it is nothing to do with their quality, but I have got used to the Neve VR, I can fly around on it and it is no problem. For the next 3 Tenors concert in Paris in the summer, I am as yet undecided but I do think I made it clear to you earlier on I am looking at the idea of a digital control service. Which points to Euphonix.

Have you seen the Sony Oxford. That is a diferent kettle of fish, I have been out to see it at Real World recently.

No, I haven't and I am really looking for options here. I have an almost unlimited budget for this recording. It is a digital desk isn't it? I am still a bit frightened. I have a lot to lose if it piles on me. Also I find it's a very big control surface.

Are you thinking compactness here?

I always am because, probably like a million engineers, I had a road accident a few years ago and my back is not very good and I find big control surfaces just wear me out and there is no need for it.

Because you are having to lean and stretch.

The Neve VR. I am a short-arsed little git you know and I can hardly reach the top buttons and I find it a serious disincentive and also I don't find such a big mixer does anything for the acoutstic environment in any kind of space, and also they are so bloody hot, it is a small detail but you have got to pump the air conditioning 3 times as hard as you have for say a digital control service which produces no heat at all. So I am looking at Euphonix but I haven't made my mind up, and I have a lot of responsibility.

Are there any other alternatives because that is a digital control surface.

With an analogue path. Yes - if you pull the plug out of their digital control surface at least you retain some control. I'm sure there are many. I am also going to look at an SSL desk, in a Paris-based mobile.

SSL do the digital ones but they are still pushing the analogue things - particularly for music recording. For film they have got this big digital console

called the Avant and they have also got the Ultimix or something which is a more compact digital thing for post production.

I think that SSL are a terrific company. I can't say that I was a fan of their early mic amps or their audio processing generally, but I am not alone I know that many other people agree with me. But I think their latest generation of desk is a huge improvement. I must admit I have never quite got a handle on SSL automation but that is my fault, that is nothing to do with it not working, because I have watched people fly through it and it is just what you get used to. If I used Le Mobile Son which is the other option, that is an SSL 8000, this is for for the 3 Tenors concert and that is fully equipped for 5.1 with Genelec loudspeakers which I can cope with, I don't mind them. It is ready to go, it is a 48-track equipped, analogue, SSL 8000 desk. In fact I might end up with that. I have to go to Paris, unfortunately I can't go until after Christmas.

What about monitors?

For classical music it is very interesting. Traditionally the speakers that have been sought after by pop engineers, Genelecs, KRK, ATC, PMC, the list is long, I am not by any means mentioning them all - have never seemed to be compatible with classical music and the whole classical industry has seemed to go with B & W and in fact I have had a long and very fruitful and happy relationship with B & W loudspeakers. The 801, which is a big studio control room monitor is fine, it makes classical music sound lovely and it is a very nice loudspeaker to mix on, it is not hard, you could listen to it for hours and hours without any problem. When it comes to real pop, rock and roll, it can't deliver the goods. I don't think B & W would even pretend it can. It can't deliver a really thumping bass and screaming top, it's just not designed to cope with that and it will cut out. The only thing I can tell you about B & W is that are a company that never stand still, a bit like SSL, they are in exactly the same boat. SSL, who in my opinion once had a comparatively average product have now come out with a really superb product - by the same way B & W who have always had good products are on their way to bringing out some very superior ones, which will address all of the problems that have been previously thrown at the 801 and their whole classical series of speakers. You might find, without my being too specific, a new generation of loudspeakers will appear on the market that will bridge the gap between things like the Genelecs and the sweet-sounding classical loudspeakers.

One loudspeaker that has, from what I have discovered, or been told about, is ATC which has a measure of acceptance.

ATCs are extremely good loudspeakers, and deliver wellie.

That is the thing. You will notice that I have SCM20's.

Little whackers aren't they? What did they set you back?

Over a grand. So I had 30 sets of nearfields that is including the KRK's, the Questeds, the PMC's and a pair of B & W.

I am about to spend a huge amount of money on a 5.1 set up. DTS have asked me, because I live in an ordinary house, but I have a playroom built at the back and my kids are now grown up, so I am going to put a small DTS surround system in there and I am looking at small loudspeakers, the whole idea is to say, you don't need speakers that are 15 foot high and 9 foot wide, you can actually do this with small boxes.

We play the ATCs: "Great ambient retrieval and sense of depth."

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