SONOSAX MEETING REPORT AND MORE...

Tim White AMPS reports on the Sonosax Meeting and, as a Sonosax user, adds some personal insight and practical experience.

In November 2007, Sonosax celebrated their 30th birthday. Founder, Jacques Sax had started the company to sell audio gear in Lausanne although by 1980 he'd built his first mixers: 12- to 24-channel units initially designed for discos and live performance but the quality of the mic pre-amps soon saw his mixers adopted by radio and television stations. Jacques then turned his attention to a portable mixer and in 1983 the SX-S was released. These compact 6, 8, and 10 input mixers became popular worldwide and the unit of choice for many production sound mixers. It is a credit to their sonic performance and build quality that mixers over 20 years old are still being used today.

As Sonosax have not been represented in the UK for several years, they enjoy an enthusiastic rather than numerous following. Audio Ltd are their new UK distributors and the AMPS meeting of November 4th at Pinewood Theatre 7 hosted Sonosax's Pierre Blanc who demonstrated the current Sonosax product range and gave us a glimpse into the future. Pierre was accompanied by Audio's Kish Patel and a range of enticing equipment.

I will declare an interest here in that I mix using a Sonosax SX-ST. I was only asked to write this piece after the meeting, so not having taken any notes, this is a combination of what I recall from the meeting and my own experience of using the SX-ST.

Pierre started by showing the SX-ST. This desk mixer has been in production since September 2004 and many will see it as a development of the popular SX-S. The SX-S was an excellent mixer and over the years was kept up-to-date with many built-in and outboard modules adapting it to newer recording practices such as multi-track recording and complex comms. The SX-ST is in fact a totally new mixer, taking advantage of newer, quieter and more power efficient electronics but keeping features such as the much loved limiter and the EQ section essentially unchanged.

A first look at the SX-ST sees a very slim unit. The working surface of the desk is just 47mm high and the height of the raised rear section is 74mm - high enough to allow space for the connectors. The casing is black anodised aluminium, which is machined in-house and fabricated at the Sonosax factory. It is built to high standards as the beautifully finished

modules and intricate screen printing indicate. The 10-frame version will just fit within a 19" rack system and has maintained the compact theme of the SX-S. Conventionally, the input section is to the left and the metering, output and comms section, to the right. This is an 8 bus mixer so compared with the stereo SX-S, it is a little deeper to allow for the routing section and the aux controls. The connectors are all on the rear and are predominantly XLRs. There are five D25-type connectors for the B mic inputs, inserts, digital outs, main outputs and the 8 returns. There are also two D15-type connectors: one for the aux outs and one for comms. Headphones are on a jack as well as on a 5 pin binder which will also connect to a headset mic. If the recorder option is fitted (more on this later), timecode is on a 5-pin Lemo and wordclock/video is on an SMA. The remote control unit for the recorder is on a Fisher multipin. Regular connections can be made using the XLRs but the D-type connectors are a massive time saver for connecting looms between the components of a frequently used rig.

Starting with the input section, Pierre pointed out that for audio transparency the SX-ST has transformerless inputs giving the advantage of a flat response (within 1dB) between 15Hz and 200kHz without phase shift. There were various questions from the floor about whether being transformerless could cause problems with long cable runs but Pierre insisted that the Sonosax inputs were properly electronically balanced. In his view transformers were not only unnecessary, they would in fact limit the bandwidth, distort low frequencies and create large phase shifts. During my year using the SX-ST, I have carried a couple of transformer splitters with me in case I needed to isolate a problematic cable but so far they have been unnecessary and I suspect that they will remain so.

Pierre guided us through the input chain starting with the XLR/B input switch which switches inputs from
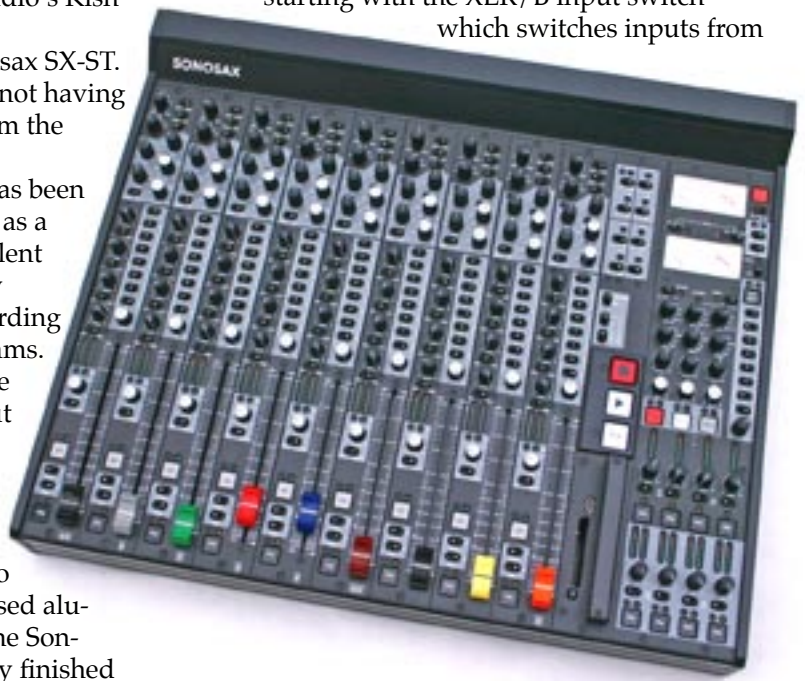
either the XLRs or the B inputs on the D connector, 48V power on/off and phase reverse. The SX-ST has six gain settings and a trim pot which cover all mic and line level inputs. Whatever level the input, the gain is matched rather than padded, reducing the number of gain stages and contributing to an input noise figure of -129.5dB. Having very low noise inputs enabled another useful feature. The input faders are calibrated on one side conventionally to +12dB and on the other side to +24dB. Moving the level switch from 12 to 24, you have an extra 12dB of gain that is invaluable when, within a take, speech goes from a whisper to a shout. The inherent low noise enables extra gain for the whisper, but the headroom is such that you can mix for the shout without having to adjust your input gain controls. I was sceptical when I first saw this feature but I am a convert. Although this not a feature that is called upon a lot, it works incredibly well when it is switched into use.

As mentioned earlier, the EQ remains much the same as the SX-S and to my mind is just about perfect for speech. It consists of a LF cut of 18dB per octave, adjustable from 15Hz to 400Hz. There is plus and minus 15dB at 80Hz and 8kHz and the mid is sweepable between 200Hz and 8kHz. The limiter is very subtle and at its lower settings can be adjusted to be almost transparent. It is one of the features that makes using this mixer so enjoyable, knowing that an unexpected peak will be limited subtly and will not catch you out. Pierre explained that despite the position of its controls, the limiter is integrated into the pre-amp circuitry so that it protects the whole of the input section: it is not just limiting its output.

Each input has a pair of 5-LED bargraphs to the side of its fader. The left bargraph shows the pre-fade level and the right shows the post-fade level. This is invaluable as you can keep an eye on individual levels without having

to check them on the main meters. A power on/off toggle switch powers up each channel as required, so power usage can be kept to a minimum by turning off unneeded inputs. There is also a mute button that will silently mute and un-mute an input. A delay can be programmed into the mute button to avoid accidents. This means that if you have more inputs than recorder tracks, taking advantage of the bus switching, it is really easy to share tracks. When one character has finished their dialogue, you can mute their channel and silently activate the channel of the character who will take over the track. But even when the channel is muted, you can see the input level on the pre-fade meter. At the bottom of the input strip, there is the interestingly labelled P/A button which is pre-fade or after-fade listen (that is pre or post to you and me). This is assigned to be either pre or post using the master P/A switch next to the main meters. On my own mixer I have had it configured so that it so the channel solos are always pre-fader. This is one of a number of custom configurations that can be programmed by the factory or dealer as although the mixer is analogue, there are many settings such as routing and user options that can be programmed into the mixer's EPROM rather than making hard adjustments on the boards.

The pan pots and routing enable the signal to be routed to any bus, pre- or post-fader. The ability to route pre-fader is for me one of the real boons of this mixer and its effect on how we work cannot be underestimated. Rather than plugging up the direct out from each input to a track on the HD recorder, you can assign which input goes to which bus, pre- or post-fade. You have to learn the system of switching towards the line for post-pan post-fade, or switching away from the line for pre-fade, but what you are not doing is poking around at the back of the mixer in a dark corner of the set, re-plugging direct outputs to recorder tracks when there is a last minute change. I just enable the track on my recorder and use a routing switch to route the audio to it. Absolutely perfect.

The switching system towards the line and away from the line maintains the stereo integrity of the mixer. Should you have a music shoot – and my SX-ST was ideally suited to a choir recording I made before Christmas - there are no compromises: it is a very neat stereo mixer. In addition to the 8 bus outputs there are 4 aux outs which can be switched to pre- or post-fade or, indeed, turned off. I use two aux feeds regularly, have two available for more complicated set-ups and as the comms and boom feeds are self-contained they do not tie up any of the aux outputs.

The output section consists of four stereo rotary faders controlling the 8 buses. This is a big space and cost saver compared with 8 linear faders and for the production sound mixer, where the main faders are always fully up, rotary faders can be seen as an advantage. There are P/A buttons so that any pair can be soloed with switches beneath each master fader enabling tone and talkback to each pair. The four aux outs each have a rotary fader, a P/A button, tone and talkback switching. There are 8 returns, switchable left and right and a master return level. Monitoring and metering are as comprehensive as you would imagine. There are two EBU PPMs that can be used in stereo but when working in mono, the lower meter switches to phase. The main monitoring selects its source by a rotary switch and the type of monitoring (mono, stereo, MS etc) with a second rotary switch. These selectors are repeated for two sets of private line comms so that any source can be selected for (in my case) either of the Boom-Ops who each have their own feed and duplex comms. There are also individual level adjustments for the comms mic and for the two comms returns.

The other distinctive element of the SX-ST is the optional eight bus digital module. This is a set of A/D converters giving AES/EBU output of 44.1, 48, 88.2, 96, 176 or 192kHz at 24-bit. The source for the A/D converters can be

switched from either an input or an analogue bus. An internal 8 track 16/24 bit recorder, similar to the MiniR82 can also be fitted. This records to a 1.8" HD and also to a CF card. Future software updates will enable all 8 tracks to be recorded to the CF card but, currently, just the one pair of tracks can be recorded. The main record and playback functions are controlled by push buttons on the mixer and there is a remote control with an LCD display which controls the detailed set-up such as routing, file naming, timecode and sync functions. A useful additional feature is that if the recorder is installed, a 0.1 % pull up/pull down becomes available to those working in an NTSC environment.

Pierre's demonstration of the SX-ST was the major part of the meeting but he went on to show us the MiniR82 recorder, the SX-BD1 boom mixer and some of the other products due out this year.

The MiniR82 recorder is an interesting addition to the recording armoury. It is an 8-track recorder which records to a 1.8" HD and a CF card in much the same way as the recorder built into the SX-ST. It has two mic/line inputs and two line only inputs but all 8 tracks are also recordable from the AES inputs. The MiniR82 is housed in metal shell milled from solid aluminium and is a little smaller than a Pro Walkman. Analogue connectors are a pair of 8-pin Binders and a mini-jack for the headphones. The other connections are via a multiway connector which carries the AES inputs, timecode and word clock/video sync. At one end there are two rotary level controls but control over the set-up is via four input buttons and an LCD display which functions similarly to the remote control of the SX-ST recorder.

Pierre showed a mock up of another recorder, the SX-R4. This used the same recorder module as the SX-ST and the MiniR82 but was packaged more conventionally, like an SQN. It has 4 mic/line inputs controlled by four rotary faders positioned on the top panel and once again, all 8 tracks can be input digitally. On the right of the top panel is the LCD screen and recorder controls, similar to the MiniR82. I can imagine the SX-R4 becoming a popular piece of kit as it is a comprehensive recorder with full size connectors making it, in my view, much easier to integrate into a recording package than the MiniR82.

The most eagerly awaited product shown to us was a mock-up of the SX-62R that comes close to being the 'SQN with a record button' many have been calling for. This is an

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ENG-style six-into-two analogue mixer with comprehensive inputs and outputs and featuring Sonosax's high quality pre-amps. It comes with the recorder module integrated so being a six into two mixer, the 8 track record module is ideal for recording both the mix and up to 6 iso tracks. Initially many of us thought that the SX-62R lacked any kind of multipin output connector that this type of mixer would need to gain universal acceptance but Pierre explained that there is a user panel on the side that can be fitted with a connector of the user's choice such as a 10 pin Hirose or a 12 pin Tajimi.

Record and playback buttons are more akin to the controls on the SX-ST and the menu accessed items are controlled with the joystick control that was first seen a few years back on the Stelladat. The LCD display is substantially bigger on the SX-62R than the other recorders and probably indicates the size of display that might be available on a future remote for the SX-ST. There was a lot of interest from the floor. AMPS member, Jonathan Mitchell questioned the size of the fader knobs saying that they should be of a larger diameter. He said that the ones shown would have to be griped between thumb and forefinger rather than the one-finger operation, on the edge of the knob, that is the way of the short-handed recordist, and this will be even more the case when you have six faders to control. There was also some discussion about whether a disc burner would be available for the SX-62R. Despite concern from the floor, Pierre was of the view that with memory prices falling, CF cards would become the way to deliver rushes in the future but if discs were needed, they could be burnt using a laptop. After the presentation, when the products were being handled, it was clear that the equipment presented had kindled a lot of interest, particularly so in the SX-62R. This will enter the market head-to-head with the physically much larger Nagra 6 but is beaten there by the recently released Sound Devices 788T. It will be interesting to see which, if any, of the three qualify as the much requested 'SQN with a record button'.

It was an enlightening meeting and Pierre gave us a good insight into his many 'alternatives' to well-established products. With Cooper Sound ceasing manufacture and other significant changes in the mixer market, only time will tell whether the tried and tested set-up of mixer *and* recorder remains king or if new combinations such as the Deva / Mix-12 or the Cantar / CantaRem become a more accepted approach in the future.

There were a lot of facts and figures to digest but from my point of view, the more choice we have, the better we can match the equipment available to our ever changing ways of working.

Tim White AMPS

The small wired remote that controls the functions of the internal recorder of the SX-ST - there are bigger record and play controls on the mixer itself.