



BENOÎT ROLLAND

GALLIANE BOW FROG

A frog that is designed to improve a bow's stability and traction

Boston-based bow maker Benoît Rolland has created a new form of bow frog that he believes will allow string players to perform with greater ease and clarity. The Galliane frog can be fitted to any existing bow to improve its stability and traction, and hence offer the player better control and sound power.

'As a violin player myself, I realised that when we angle the bow while playing, we're only using part of the bow hair,' Rolland says. 'Consequently, a certain amount of traction is lost.' In 2007 he designed a frog that slanted the bow hair slightly, although it remained straight at the head. 'This means the hair is slightly twisted all the way along its length, so that players can use its full width,' he explains.

Rolland's first prototype slanted the hair so much that he found he had to change his bow technique to use it.

Five years and sixteen attempts later, he believes his final prototype allows all players to use their existing technique, and is also aesthetically pleasing. 'Because there's more traction, you don't need to put so much weight on the first part of the bow, so you might want to take advantage of that,' he says. 'In principle, however, you don't need to make any adjustments at all. It also gives less tension in the wrist and fingers than a normal bow.'

The final prototype has the bow hair slanted at 15 degrees from the norm. However, the frog's design is more complicated than that: according to Rolland, it contains no symmetrical lines. Yet the design changes are so subtle that Rolland believes it is almost impossible for audience members to notice the difference during a performance: 'You'd have to have very good eyes!'

TEMPO PRODIGY CASE

A case that electronically controls its inside environment and safeguards against theft

An opera singer from the US has designed a case that can control the temperature and humidity of its interior. Gabriel Gunsberg was inspired to make the case after working with string players and gaining insight into the instrument protection issues they faced. 'It occurred to me that in the 21st century, when we have nanotechnology and robots on Mars, there should be better cases available that can control their own internal climate and give protection against theft,' he says.

Gunsberg consulted luthiers and specialist engineers, and developed a case with a built-in electronic system that automatically maintains temperature and humidity. The case keeps conditions to between set parameters: 15.5°C (60°F) to 34°C (93.5°F) for temperature and 40–60 per cent relative humidity. If the temperature falls below 15.5°C, warm air is circulated around the interior, and if it rises above, cool air is released. Similarly, if the

humidity falls below 50 per cent, the case circulates air moisture and if it rises above, air moisture is released.

As an optional extra, a GPS tracking device can be concealed in the case. Players can then log on to Tempo's online portal and see their case on a real-time map. 'You can set up text or email alerts to be notified if the case is moved from a specific location, or if it is moved from an area where it should not enter or leave,' Gunsberg explains.

The case also has built-in fail-safes to make sure that the electronics switch off if a problem arises, for example if the temperature

is too high and the case can't cool itself down sufficiently. It will notify players of this on an external waterproof LCD screen (which also displays the internal humidity and temperature), or if players have the GPS system, via email or text. ■



GABRIEL GUNSBURG

INTERVIEWS BY PETER SOMERFORD, CHRISTIAN LLOYD AND VICKY HANCOCK