

# City Talk



New technology is mated to 'old-fashioned' Chinese orchestras in the double-sided qin, the use of water vessels in percussions and the upright guqin.

## TECHNOLOGY GIVES CHINESE ORCHESTRAS MODERN VIBES

Some people perceive instruments used in Chinese orchestras as old-fashioned and repetitive, but readers may remember that

I have described the use of artificial membranes for the erhu and other string instruments in Hong Kong that eliminates the environmental and ecological impact without degrading the quality of the sounds produced.

The pursuit of modernizing Chinese musical instruments continues with great success, with a recent concert by the Hong Kong Chinese Orchestra seeing the debut of a range of novel musical instruments.

Developed by composer Chan Ming-chi in collaboration with the Xinghai Conservatory of New Music Media Team, they exemplify the culture of the Lingnan region of the Greater Bay Area.

Notable is the double-sided qin used in *Prelude of Wind and Thunder*.

The guqin, a seven-string plucked instrument played since the Song dynasty, is known for its slightly sad but melodious notes through vibrations of sound boxes made from selected hard woods.

But its sound volume is regarded as low for inclusion in an orchestra.

The double-sided qin is visually modern and carries the seven strings on both its faces, echoing a yin-yang vibe.

The top face plays classical notes, but the flip side can add acoustic effects for a fuller sound.

It is pivoted to allow rotation, supported by two end pieces that resemble Lingnan-style roofs.

LED lights add glamour.

Like an electric guitar, a transducer attached to the wood base provides high fidelity amplification of sound levels that match those of other instruments in an orchestra without the need for a microphone, while preserving the authentic rich and mellow nature of the notes.

Other modern derivatives used include water vessels for percussion instruments, supplementing drums.



### Nuts and bolts

Edmund Leung

When struck, they emit softer and mellow sounds, complementing the common drum, and reflect with the addition the "five principles" of metal, wood, water, fire and earth.

An orchestra's visuals are also important.

Another derivative of the guqin is an upright version that can be played while embraced by a musician, dispensing with the need to use a wooden frame that can take up a large space in a congested stage.

It can be played like a pipa, but the mellow and pitiful notes are a good complement to the plucked instruments normally used in an ensemble or orchestra.

Additional visual effects are provided by models of sheep and fish in motion.

They are equipped with LED lights and can follow the notes and beats of an orchestra to enhance viewing pleasure.

Sheep and fish, again, pay respect to the Chinese character of fresh taste, formed with these two words.

With arts tech, these modern versions of traditional instruments can provide an extra dimension to concerts and attract younger audiences.

The extra visual effects using innovative technology are related closely to their preferences and enhance enjoyment.

Art is different from physics in that audiovisual enjoyment is often subject to interpretation without the set boundaries of finite measurements based on physics.

Engineers and technicians must be innovative in designing and making equipment that not just suit original functions but also provide aspects that help open up listeners' imagination. This is what makes technology interesting to the public.

**Veteran engineer Edmund Leung Kwong-ho casts an expert eye over features of modern life**