

YAMAHA CPX1200 £1,219
ELECTRO-ACOUSTIC



PHOTOGRAPHY BY PHILIP SOWELS



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Yamaha debuts its first acoustic mic-modelling system – SRT. But how will it fare against other companies that got there first? *by Jim Chapman*

Electro-acoustic under-saddle-based blender systems – whether partnered by an internal mic, body transducer or magnetic pickup – are nothing new. Those involving digital mic ‘modelling’, however, are a much more recent development, coming to prominence with the launch five years ago of Fishman’s Onboard Aura (itself preceded by the company’s eponymous outboard pedal unit). The Onboard Aura and subsequent variants such as the sound-hole-mounted Ellipse Aura, are now widely specified as OEM systems, not least by Martin.

The latest company to enter the fray is Yamaha, which having successfully established its innovative ART under-bridge transducer systems over the last four years, has now introduced SRT (Studio Response Technology), initially on three new instruments including this CPX1200 cutaway mini-jumbo.

Developed as a three-year collaboration between the company’s digital and guitar divisions, the underlying concept seems not dissimilar to Fishman’s, in that the system centres on digitally processed pro-studio acoustic recordings of the actual guitars, using

high-grade microphones. In this case, they are a Neumann U87 large diaphragm condenser, Neumann KM56 vintage small diaphragm condenser and a Royer R122 ribbon; the six virtual images within SRT representing two of each mic, in close and distant versions. In parallel to developing SRT, Yamaha has come up with a new pickup, which is built into the saddle, rather than sitting underneath, as on most piezo-based systems including its own previous ones. The company claims not

only a ‘really clean, clear tone to drive the DSP mic models’ but a ‘better straight tone than a regular piezo pickup’.

The interface for SRT is an all-new System 62 preamp rim-mounted, as usual, forward of the waist. On a clearly laid-out, semi-recessed panel are all the controls one would expect to find: rotaries for volume, three-band EQ and pickup/mic blend and a mini-switch for selecting images one to three, adjacent to which is a push/push button to select ‘focus’ or ‘wide’ (that is, near or distant mic’ing) for

each. There’s also an auto-chromatic tuner that works efficiently and, praise be, mutes the system when activated, unlike on Yamaha’s other tuner-loaded preamps. The tuner can be used either plugged in or not.

Beyond all this, the preamp has tricks up its sleeve. First is a resonance rotary. Dedicated purely to the mic signal – it has no effect on the pickup sound – it’s loosely described as a kind of presence control where “turning it up emphasises the natural tone of the guitar”. If presence suggests high-end tailoring, that’s misleading, because in practice it subtly adds lower-end warmth and body to the images. SRT’s neatest ancillary facility is AFR (Auto-Feedback Reduction). Not content to hunt and destroy one offending frequency, this incorporates five filters that dynamically search the ‘hot spots’, so if one press of the



The SRT system is the major innovation in the CPX1200

The rivals

Martin’s OMC-16GTE (£1,799) makes use of Roland’s AP-1 modelling system, including three body-variable sounds, seven-band programmable EQ, anti-feedback and digital reverb. **Baden’s A-Style Rosewood Ellipse Aura** (£1,549) offers four blendable Fishman images, anti-feedback, phase and bass boost. The **Adamas CVT2080** bowlback (£2,299) carries the VIP5 blender preamp providing five virtual images and three-band EQ. The AP-1 and VIP5 both include a tuner.



The ebony-tipped tuners and rosewood edging add a real touch of class

button doesn't do the job, you can press again, if necessary up to five times, to hopefully completely kill any remaining feedback. The preamp's display accordingly indicates one to five, and if you absent-mindedly try for a nonexistent sixth filter, the display comes up with 'F', meaning 'Filters Full'. To clear AFR, the button is held down for a second or two, whereupon 'C' appears in the display. Nifty, or what?

Before assessing SRT's performance, we shouldn't of course overlook the CPX1200 itself, the latest of a familiar and popular Compass Series design first introduced in the late nineties. Offering an upmarket specification, the guitar has a body of all-solid spruce and rosewood, bound in multi-purpled mahogany with a matching rosette inlay. The bridge and fingerboard are both ebony, the latter sumptuously edged in coachlined rosewood binding, which continues around the headstock, itself totting gold tuners with what look and feel like real ebony buttons. Diamond fretboard markers of pearl and padauk are an elegant inclusion, and

presentation of the whole instrument is first rate, employing Yamaha's usual arrangement of gloss body and satin neck. As we've come to expect with the CPX series, the neck is of comfortable mainstream width and profile and is an easy, fast player.

Sounds

Acoustically the guitar has a quite typically Yamaha sound: precise and long-sustaining with a pleasant, sweetly sparkling timbre. Helped by the fairly large and deepish body design, dynamics are good, with a decent, warmish low-end footing.

Powering up, one of the most noticeable things about SRT is the quality and usability of the mic sounds, which allow higher ratios of mic-to-pickup than this reviewer would have been happy with from, say, any of the Aura systems he's tried. Inevitably, one hundred per cent mic selections sound a tad artificial, with some of that slightly honky, unsympathetic swirl that tends to creep in, but even these might be practicable with suitable outboard manipulation. That said, most

of the time players will probably opt for something around a 50/50 mix or even just use the straight pickup sound. As to which mic type you choose, well, that's down to individual preference, though it has to be said that the differences between each are pretty subtle whether simulating near or far mic'ing.

On a more general note, the system performs ably as a conventional piezo-saddle system, with the promised good, clear tone. To this pair of ears, the EQ needs some mid and treble cut as a starting point, while the bass band, though responsive, does tend to warm up just the low-end rather than imbue the whole sound. Should you purposely provoke feedback – not actually that easy given the preamp's fairly low gain – you'll discover that AFR is very effective in tackling it. The one downside is a faint, low-frequency background rumble that becomes more noticeable the more filters that are added. Hit 'clear' and it disappears.

Verdict

Digital 'imaging', 'modelling', call it what you will – Yamaha purposely calls it neither – on electros, whether in conjunction with a saddle-placed pickup or even as a sole signal source, is here to stay, and based on this writer's experience Yamaha's SRT system stands to be judged as one of the best to date. It's not perfect, but as far as ease of use, versatility and overall sound fidelity are concerned, it's going to give existing competitors a decidedly strong run for their money, and the CPX1200 is an excellent vehicle to help Yamaha kick things off. **G**

The bottom line

We like: Quality of modelled images and their degree of blendability on offer

We dislike: AFR rumble; the preamp could do with some more gain

Guitarist says: Three years in gestation, but worth the wait – Yamaha's SRT looks set to impress



Yamaha CPX1200

PRICE: £1,219 (inc case)

ORIGIN: China

TYPE: Cutaway mini-jumbo electro-acoustic

TOP: Solid spruce

BACK/SIDES: Solid rosewood

MAX RIM DEPTH: 115mm

MAX BODY WIDTH: 395mm

NECK: Mahogany

SCALE LENGTH: 650mm

TUNERS: Gold, die-cast with ebony buttons

NUT/WIDTH: Urea/43mm

FINGERBOARD: Rosewood-bound ebony, 356mm radius

FRETS: 20, thin

BRIDGE/SPACING: Ebony with urea saddle/54.5mm

ELECTRICS: Saddle-mounted pickup; System 62 SRT preamp with volume, low, mid, high EQ, three SRT mic presets, focus and wide select (close/distant mic'ing), pickup/mic blend, resonance, five-band AFR anti-feedback reduction, auto-chromatic tuner, separate quick-release battery holder

WEIGHT (kg/lb): 2.2/4.85

OPTIONS: APX1200 (£1,219) and Handcrafted LJX26CPT cutaway jumbo (£3,575). Both all-solid spruce/rosewood with same System 62 SRT powering. Both include case

LEFT-HANDERS: No

FINISH: Gloss vintage sunburst body, satin natural neck (also available in translucent black)

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Test results

Build quality ★★★★★
Playability ★★★★★
Sound ★★★★★
Value for money ★★★★★

GUITARIST RATING ★★★★★



Rick Kuroki – the man behind SRT's impressive sounds

What's behind SRT?

We catch up with Rick Kuroki, the man responsible for Yamaha's all new Studio Response Technology
by Dave Burrluck

This is all a bit cloak and dagger. Guitarist is meeting Yamaha's Julian Ward and engineering manager Ryuichiro 'Rick' Kuroki at a secret location in west London. We're shown into an office block, up stairs and along corridors until finally we enter a small room equipped with a well-spec'd studio, some examples of Yamaha's latest Studio Response Technology-equipped guitars and, thankfully, a coffee machine.

As our review states this Studio Response Technology (SRT) is currently available on the new CPX1200 (as reviewed) and the similarly priced APX1200 along with the higher-end LJX26CP. These guitars, or rather their pickup and preamp systems, are the fruit of some three years of labour by Yamaha's SRT design team headed by Kuroki. It seems a lot of work and no doubt involved substantial cost. So, why didn't Yamaha simply partner with Fishman – like many other companies – who had already pioneered a similar technology, the Aura?

"There's a project to make Yamaha the number one

company for electro-acoustic guitar," explains Kuroki. "That project has a technology resource so we can develop the guitars by ourselves. The combination of digital and acoustic is a key factor for the future of Yamaha guitars and that was the start point. Our target is an electro-acoustic guitar that [when plugged in] sounds like an acoustic guitar – this kind of system is a key factor for our future products. That's why we wanted to develop it ourselves."

If the concept is simple, creating SRT was more drawn out, not least in capturing a great recording of the guitars before the model could be created. "First, we tried to record the sound of the guitars in our 'laboratory'," says Kuroki, "but we found it's very difficult because we're not professional recording engineers. So, firstly we went to a studio in Tokyo, and after a few sessions, we found the [SRT] technology was working very well so long as we could record a really good sound. Then we decided to go to the United States. After an initial recording session in Los Angeles,

the concept was fixed – if we recorded great acoustic sounds, SRT worked perfectly. Nashville is a key place in the history of recorded acoustic guitar sounds, so we found some great studios there and went back to LA and Tokyo a few more times to get amazing recorded acoustic sounds to use as the basis for SRT."

"In Nashville we used Warner Chappell and Ocean Way studios," adds Ward, "and in LA we used East West and NRG." "And ABS Studios in Tokyo," interjects Kuroki, "the sounds you hear are a mixture of different studios."

As we play the SRT sounds through the pristine studio monitoring system, we hear more 'information' and subtlety than you'd hear through just an acoustic amp, or indeed an average live PA. It's no surprise when we're told that SRT was designed to be plugged into a PA, less so an acoustic amp. And what about the SRT's very neat auto feedback reduction feature, we ask? "That's taken from the Yamaha AG-Stomp," says Kuroki. "Actually, if we add the body resonance, of course, it enhances certain frequency

How it works

Clearly, SRT is designed to play a big part in Yamaha's acoustic strategy. However, due to the complexity of the unit, it might be the preserve of higher-end models for the time being, as Kuroki admits: "It may be hard to develop it at a lower cost."

SRT uses a sound modelling technique that utilises data from extensive analysis of four acoustic elements that Yamaha believes are missing from conventional pickup systems: string and body resonance, ambience, vintage microphone characteristics, and professional mic'ing techniques. These four are said to enable SRT to deliver a natural, studio-quality tone.

points and as a result this may cause feedback. So, we decided to add the feedback reduction – we had the technology so it wasn't so difficult."

Again Fishman crops up. "The Fishman Aura concept is close to ours, but Yamaha is the only company developing guitars and pickup systems like this together," considers Ward. "For Yamaha, it's all about getting the most natural amplified sound for this guitar out of its jack socket – and because we know our guitars, and we know audio and pickup technology, we're in a unique position to do just that. So don't look at SRT as, I've now got one guitar that sounds like five. It's, I've got one guitar and now I can get a really natural mic'd sound from its pickup. It's certainly a similar technology and I think Fishman's Aura is the closest thing to SRT, but it's a different philosophy. So, when you blend in the mic on the Neumann U-67 setting on SRT it sounds like a CPX1200 as recorded by a U-67: it's about being more realistic, faithful and specific to that guitar."

"Yes," concludes Kuroki, we decided that SRT should just concentrate on reproducing the sound of the specific guitar really well." ■

For more: www.yamaha.co.jp/english/product/guitar/srt