

# FLAXMACHINE

MADE IN FINLAND FROM INNOVATIVE MATERIALS, THIS FLAXWOOD GUITAR PROVIDES PAUL ALCANTARA WITH A GLIMPSE OF THE FUTURE

## GBINFO



### FLAXWOOD LIEKKI

PRICE: £1,499

BUILT IN: Finland

SCALE LENGTH: 648mm (25.5 inches)

NUT WIDTH: 41mm (1.63 inches)

STRING SPACING AT NUT: 35mm (1.38 inches)

BODY: Flaxwood wood composite material, semi-hollow

NECK: Flaxwood, set

FINGERBOARD: Flaxwood, 305mm radius (12 inches)

FRETS: 22 medium jumbo

PICKUPS: 2 x Seymour Duncan SP90-1 Vintage Soapbars

CONTROLS: 1 x volume, 2 x tone, 3-way selector

BRIDGE: Schaller LP Tremolo, chrome

STRING SPACING AT BRIDGE: 52mm (2 inches)

MACHINEHEADS: Gotoh S6360 HAPM locking tuners, chrome

FINISHES: Gold (shown), white, redburst, greenburst, orangeburst, tobaccoburst, oiled rock

WEIGHT: 3.3kg (7.2lbs)

CASE: Hard case included

LEFT-HANDERS: No

OPTIONS: With Gotoh 510UB fixed bridge (£1,399), black hardware & pickup covers (no extra charge)

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Whether it's maple, mahogany, ash or alder, wood is generally regarded as the traditional material with which to build an electric guitar. This wasn't always the case, however, and some of the earliest electric instruments were constructed from Bakelite (a synthetic resin) or aluminium. More recently Plexiglas, fibreglass, graphite, carbon fibre, polyurethane foam, phenolic resin and various other synthetics have been used to build guitars with varying degrees of success. Indeed, the use of plywood, an engineered timber created by bonding thin sheets of veneer under heat and pressure, is today so widespread that very few regard it as a wood substitute.

While we are not likely to see supplies of maple or alder dry up anytime soon, some tonewoods (Brazilian rosewood and Honduras mahogany spring to mind) are no longer available in the quantities required by large manufacturers and as a result some companies have begun to explore the use of alternative materials. Based in Finland, Flaxwood Guitars employs a moulded wood material for the bodies and necks of its instruments, and the company cites environmental issues and manufacturing consistency among its reasons for adopting this approach. We put Flaxwood's Liekki model (the term apparently means 'flame' in

Finnish) through its paces to see how it shapes up when compared to a standard wooden guitar.

## BODY & NECK

"The flaxwood material is created by breaking down the grain structure of natural wood [spruce] and combining it with an acoustically sensitive binding agent," Flaxwood's Kim Lerche explains. "Unlike other similar materials, it is not a by-product of the furniture industry but was developed specifically for the construction of musical instruments.

"The goal was to create a material that could match the finest exotic tonewoods, with a bold tone, clear harmonics and great resonance and sustain," says Kim. "The material is more uniform than wood, with no irregularities in its composition such as knots or grain lines. It is not affected by humidity and, unlike wood, doesn't require decades to reach its full potential. Flaxwood resonates with equal force in all directions lending the guitar an even dynamic response across its entire range."

All the different parts of a Flaxwood guitar – the body, neck and resonator back plate – are injection-moulded, employing the same basic processes that are used to produce the outer shell of a mobile phone, computer or iPod. Once the various components have been removed from their moulds, sanding, varnishing, fretting and assembly are carried out in the usual way. "Our guitars are a combination of high-tech industrial →

## FLAXABILITY

THIS FLAXWOOD GUITAR IS BOTH INNOVATIVE AND ECO-FRIENDLY

■ The flaxwood material was invented by Finnish industrial designer Heikki Koivurova in order to produce an injection-moulded violin.

The material has subsequently been adapted for use in electric guitar construction by Flaxwood's master-luthier Veijo Rautia. R&D took almost five years and was very costly. Kim Lerche explains: "Mould-injection allows accurate reproduction of a given shape without variation, each unit as perfect as the last and with the same intricate level of detail. The material has proven highly adaptable and we are currently involved in developing a snare drum that is built from the flaxwood material. Most importantly, we believe that we have succeeded in producing a top quality instrument without cutting



down any endangered trees. The wood used in the material is spruce, which is a readily available, heavily re-planted, non-endangered species. The material is completely recyclable – if we build guitar parts that for some reason are not 100 percent perfect, they are ground down and re-used. We try to produce our guitars with the greatest possible efficiency, with minimal waste and using the smallest amounts of energy and emissions possible. After all, this makes sense not just ecologically, but also economically."

production and centuries-old traditions," says Kim.

Vaguely PRS-like in outline with a single f-hole on the bass side, the Liekki's svelte, almost-hollow body (the interior has a thicker section that extends beneath the bridge and pickups and connects with the back plate) is smoothly rounded and contoured so that there are absolutely no straight lines or hard edges. Besides providing access to the electronics when removed, the perforated resonator back plate is designed to "open up" the sound. "We built prototypes with a closed cover," explains Kim. "The overall sound was more confined and was very soft acoustically. There is a noticeable improvement this way, even when the guitar is plugged in."

The body is immaculately finished in gold polyurethane. The glued-in neck joins the body at the 18th fret (on the treble side). There is no heel to speak of – the neck blends smoothly into the body – so that upper fret access is virtually unimpeded. Flaxwood employs different neck angles for different models – Gibson-style high (as seen here) and Fender-style low. According to the manufacturer, the flaxwood material is completely impervious to changes in humidity – reassuring for those old enough to recall the stability problems that plagued the aluminium-necked guitars built by Travis Bean and



■ The resonator back plate is designed to "open up" the sound

Kramer back in the 1970s! The truss rod, which is enclosed by a carbon fibre sheath, is installed from the body end of the neck before the guitar is assembled.

With a profile that is slender rather than skinny, the neck feels extremely comfortable beneath the left hand. Close your eyes and it could be wood. Its graphite-like grey finish displays the occasional brown splodge, an attempt perhaps to create a more organic look (the finish is called 'natural rock'). Unfortunately 'mud-spattered' comes closer to describing the overall effect. Imagine a large and rather muddy dog shaking itself down while standing next to your guitar and you'll get the general idea!

There's no separate fingerboard, and the 22 medium jumbo frets are fitted directly to the face of the neck. The Flaxwood company describes the neck material as being "very ebony-like", and when the time comes, a luthier can refret the instrument in the usual way. Small pearl position dots are interspersed with two large 'f'-engraved oval celluloid inlays.

The three-a-side headstock is fitted with a set of chrome-plated Gotoh locking tuners. These are positioned so that the bass-side tuners are above those on the treble side, an arrangement that provides virtually straight string pull at the nut (this is important for tuning stability, particularly on a guitar equipped with a whammy bar). In terms of shape, the headstock is almost a mirror image of that found on the old Ampeg/Dan Armstrong Plexiglas guitars and basses.

## HARDWARE &amp; PARTS

At the other end of the guitar, the strings anchor to a Schaller LP Tremolo. Developed as a direct replacement for the Tune-o-matic bridge on a Les Paul, this vibrato unit incorporates six individual roller saddles that allow intonation adjustments to be made on a string-by-string basis. Overall height is set via the posts on which the unit sits. The metal vibrato arm is secured by a threaded collar, and loosening this collar slightly will allow the arm to swing out of the way when not in use, should you wish.

Six small springs concealed underneath the unit counteract the pull of the strings, which are anchored in slots along the rear. Pushing down the arm tilts this rear section forward, lowering the pitch of the strings, while the front section housing the roller saddles remains stationary. The vibrato action is quite light but it functions efficiently, returning correctly to pitch, and despite the absence of a Strat-style inertia block, it doesn't appear to have any adverse effect on the guitar's overall tone or sustain.

All Flaxwood guitars come equipped with a Tune-X Tuning System nut. This has a scalloped appearance on the fingerboard side and is designed to provide accurate intonation at all positions on the fingerboard. Unlike the Buzz Feiten system, a specially calibrated tuner is not required – you can tune up as you would normally.

In contrast with the Liekki's innovative construction, the guitar's electronics are fairly

**DETAILS**

AN ECO-FRIENDLY DESIGN THAT DARES TO BE DIFFERENT



■ The Schaller LP Tremolo bridge unit incorporates six-individual roller saddles



■ Removing the Liekki's back plate provides complete access to the electronics



■ The smoothly contoured body has a single stylish f-hole on the bass side



**GBCONCLUSION**

FLAX TO THE FUTURE!

■ The Flaxwood company has succeeded in building an electric guitar from environmentally friendly materials that plays as well and sounds just as good as (if a little different from) a traditional wooden instrument.

Having said that, guitarists remain stubbornly resistant to new ideas and, as many a manufacturer will tell you, it is all but impossible to get a new product accepted if it doesn't come dressed up as a Stratocaster, Telecaster or Les Paul. Ironically, Leo Fender and Gibson's Ted McCarty had little time for nostalgia. Were it not for their willingness to take risks, the above-mentioned solidbodies would have never got off of the drawing board! We reckon that companies like Flaxwood are to be commended for pushing the envelope and exploring new materials and methods of construction. And who knows, guitar players may some day complain that they just don't make engineered wood composite like they used to! **GB**

**GBOPINION**

**FLAXWOOD LIEKKI**

**GOLD STARS**

- ★ Innovative design
- ★ Excellent build and playability
- ★ Eco-friendly credentials

**BLACK MARKS**

- We're not keen on the 'splattered' neck finish

**IDEAL FOR...**

Anyone looking for a distinctive electric capable of handling most styles

straightforward – a pair of Seymour Duncan SP90-1 Vintage Soapbar single-coil pickups with cream plastic covers (black covers are also available) are wired to individual tone controls, a master volume control and a three-way blade style selector switch. The master volume is set close to the bridge pickup for pinky-operated volume swells, and all three controls are fitted with easy-to-grip black plastic knobs. The side-mounted jack socket is recessed into the body.

**SOUNDS**

Unplugged, the Liekki gets off to a good start with a sound that is lively and resonant. Despite the guitar's relatively light weight (around 3.3kg), there's plenty of sustain too. Through an amp, the Duncan Soapbars are warm and sweet with a higher output and ballsier mid-range than single-coil Fender-style pickups.

Although the guitar produces some very credible distorted tones, with plenty of P-90-style grit and bite, it's in the clean department that it really excels. There's plenty of detail and an overall evenness to the frequency

range that flatters complex chords and Andy Summers-style jazz-tinged riffs.

In spite of its hollow body, which makes a positive contribution to both resonance and sustain, the Liekki doesn't appear to be particularly prone to feedback, though the Flaxwood company suggests that those who favour high-gain amplification should probably test the guitar at full performance volume.

The three-way selector switch delivers the usual options of bridge pickup, neck pickup or both together. Intriguingly, a fourth 'mystery' sound lurks between positions two and three, and can be easily obtained by lodging the switch between these settings (as one is obliged to do on a vintage three-way-switch Stratocaster).

**GBRATINGS**

**FLAXWOOD LIEKKI**

BODY & NECK:	★★★★
HARDWARE & PARTS:	★★★★
PLAYABILITY:	★★★★
SOUNDS:	★★★★
VALUE FOR MONEY:	★★★★
<b>GBVERDICT</b>	★★★★