



THE COMPLETE ILLUSTRATED BOOK OF THE
**ELECTRIC
GUITAR**



LEARNING TO PLAY • BASICS • EXERCISES • TECHNIQUES
GUITAR HISTORY • FAMOUS PLAYERS • GREAT GUITARS

TERRY BURROWS AND TED FULLER

LORENZ BOOKS

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Introduction

The electric guitar is arguably the single most important musical instrument of the modern age. At the forefront of much popular musical innovation since the 1940s, it has taken centre stage across genres and decades, from 1950s rock 'n' roll through to present-day pop and indie. Evoking rebellion, youth and glamour, the electric guitar's popularity shows no sign of waning.

History

Acoustic guitars and their ancestors have existed for hundreds of years, but it was only in 1924 that Gibson engineer Lloyd Loar first attached an electric pickup to an instrument – a viola – translating the vibrations of the strings into an electrical signal which could be amplified. The first purpose-built electronic instrument wasn't produced for a further seven years – the Ro-Pat-In 'Frying Pan'. Over the next decade the amplified hollow-bodied guitar slowly grew in popularity, particularly among jazz guitarists who needed to be heard during ensemble playing. Then, in 1940, Lester William Polsfuss, or Les Paul, took the design of the electric guitar a step further, creating the first ever solidbody electric guitar: 'the Log'. By 1950 a young electronics hobbyist, Leo Fender, had designed and begun manufacturing the Fender Broadcaster, the first mass-produced solidbody guitar.

How a guitar works

In an acoustic guitar, sound is produced when the vibrations of the strings are amplified by air resonating in the hollow cavity of the body. On an electric guitar, the vibration of the strings is sensed by a magnetic pickup mounted on the body, and converted into an electric signal. This is passed through the guitar's circuitry to the amp, which converts the electrical signal back into vibrations, or soundwaves, at a volume that is loud enough for us to hear.

The electric guitar phenomenon

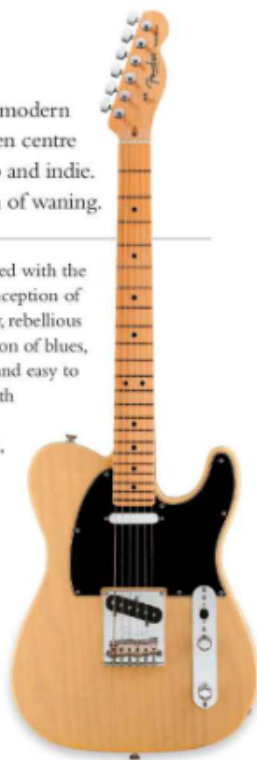
More than any other instrument, the electric guitar defines the sound of rock music, a vastly diverse musical genre which in turn has influenced and characterized much of popular culture over the latter half of the 20th and the early 21st century. In the 1950s, the advent of

rock 'n' roll in America coincided with the rise of the 'teenager'; a new conception of adolescence as a distinct, stormy, rebellious stage of life. Rock 'n' roll, a fusion of blues, country and jazz, was fast, fun, and easy to dance to. The electric guitar, with its versatility, and its inherent melodic and rhythmic potential, was perfectly suited to this groundbreaking new musical style.

Early electronic amplification of the guitar generated unintended but pleasing sonic side effects. Being low on output, the sound produced by early amps would often distort when played at full volume, giving a pleasant, 'warm' tone. Artists began deliberately recreating the distorted sound by damaging their amplifiers. Eventually, in the early 1960s, the first purpose-built distortion effects circuits came to market. From that point on, the technology surrounding the electric guitar became increasingly important, and the effects available to players proliferated. Present-day guitarists have an astonishing level of electronically generated sonic possibility available to them, with the newest guitars featuring sophisticated onboard computer technology.

Back in the 1960s, wielding electric guitars and making use of the instrument's cutting-edge capabilities, The Beatles burst onto the international scene. The best-selling band in history, their

ABOVE: A Custom Shop Fender Snake Head Telecaster – an exact reproduction of the prototype that Leo Fender would take around clubs for artists to try.



RIGHT: The electric guitar was so popular during the 20th century that the available repertoire of music created for the instrument is now unimaginably vast. Aspiring players can learn music in a hugely diverse range of genres and styles.

FAR RIGHT: A large part of the appeal of the electric guitar in comparison with the acoustic guitar is the huge variety of additional tones and musical effects that can be created, including vibrato produced by using a tremolo arm.



hugely varied output paved the way for the rock-centered pop culture paradigm of the next two decades and beyond. At the centre of it all was the electric guitar.

At the same time, virtuoso guitarists such as Eric Clapton and Jimi Hendrix established a new iconography – the guitar hero. The influence of these solo players, as well as the Beatles-esque guitar groups, propelled the popularity of the guitar to pole position, with millions of aspiring players worldwide taking up the instrument.

The seminal musical styles of the early rock pioneers have generated endless mutations and variations in the decades since, through prog rock, punk, new wave, metal, grunge, Britpop, and all the derivations thereof. However, in spite of the wide array of generic innovation, the electric guitar has remained the central component of a great proportion of popular musical output, right up to the present day.

The electric guitar as a collectible item

Many electric guitars aren't simply valued for their practical use as musical instruments. Perhaps because of their physical beauty, or their historic and cultural significance, many guitars are highly collectible as objects in themselves. Sales of particularly rare models, or instruments that belonged to musical icons, will sell at auction for large sums of money. In 2005, a Stratocaster was sold at auction to raise funds for victims of the 2004 Tsunami signed by Bryan Adams, Eric Clapton, Jimmy Page, Mick Jagger, Keith Richards, Ronnie Wood, Brian May, Liam and Noel Gallagher, Jeff Beck, Pete Townshend, Ray Davies, David Gilmour, Tony Iommi, Mark Knopfler, Angus and Malcolm Young, Paul McCartney and Sting. It reached an incredible \$2.8 million.

Learning to play

Many people learn to play guitar first on an acoustic instrument, due to budget considerations. As the basic tuning and the fingering on electric and acoustic guitars are the same, it doesn't matter whether you come to the electric guitar from the acoustic, or start on the electric as a complete beginner. However, certain styles of music are better suited to the electric guitar than the acoustic, and the greater sensitivity of an electric guitar, combined with the variety of sonic textures that can be created with electrical effects, means that electric guitarists can play around with a vast array of sounds.

In this book

This book will guide you through all the information and techniques you need to master the electric guitar, from getting your perfect setup, refining your riffing, to diverse playing styles, including grunge, indie and jazz fusion. The 'History of the Electric Guitar' section gives a detailed account of the invention and evolution of the electric guitar, and finally the photographic 'Directory of Electric Guitars' showcases over 200 beautiful and historically significant models, from the first-ever electric guitar to the newest and most technologically cutting-edge models on the market.

Famous electric guitar players

The popularity of the electric guitar has been reinforced by iconic players of the 20th century.

Guitarists

- Charlie Christian – jazz
- Scotty Moore – rock 'n' roll
- Chet Atkins – country
- Hank Marvin – rock 'n' roll
- Jimi Hendrix – rock
- George Harrison – pop/rock
- Pete Townshend – rock
- Eric Clapton – blues/rock
- Jeff Beck – rock/fusion
- Brian May – rock
- Jimmy Page – heavy rock
- Slash – heavy rock
- Johnny Marr – indie/pop
- Yngwie Malmsteen – metal
- Steve Vai – heavy rock
- Joe Satriani – heavy rock

Bassists

- Paul McCartney – pop/rock
- James Jamerson – Motown
- Marcus Miller – jazz
- Sting – pop

BELOW: Johnny Marr, guitarist with British indie band The Smiths, played a large part in reclaiming the guitar's role in pop music in the 1980s; his innovative use of multitrack recording to create a 'layered' texture has been much imitated.



RIGHT: Les Paul, musician and creator of the first-ever solidbody electric guitar, and his wife Mary Ford demonstrate two Les Paul Gibson guitars in 1952.

