



THE PLEK STATION

THE WORLD'S MOST
ADVANCED GUITAR TOOL

plek[®]
FOR OPTIMAL PLAYABILITY

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"We wanted to lift our guitar to be a serious world-class instrument, and we felt that this was one way that we could really make a difference. Since we've done this, the Plek has made it into an absolute premium product that people just love. The actions are absolutely impeccable, the nut work is impeccable, and it's lifted us absolutely to the next level."

Miles Jackson, CEO Cole Clark Guitars

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/ THE PLEK STATION

THE PLEK STATION IS A HIGH-END TOOL SYSTEM FOR PROFESSIONAL LUTHIERS, GUITAR REPAIR EXPERTS AND TECHNICIANS.

Its ingenious scan mechanism gives you a way of looking at a guitar's fingerboard and frets in microscopic detail, as well as a way of working with that information.

All scans performed on the machine are undertaken under string tension, either real or simulated. This shows you the contours of the neck and frets under actual playing conditions.

In addition to fret and fingerboard analysis, the software embedded in the Plek Station can:

COMPARE current neck and fret-plane relief with an optimum relief curve calculated from current and target instrument specs

INDICATE how much fret material needs to be removed to eliminate the risk of buzzing and maximize playability for the given specs

DRESS AND CROWN the frets according to the instructions of the luthier

PLANE OPTIMUM RELIEF and fall-off into a fingerboard

INTERPOLATE FRET DRESS requirements to achieve a smooth compound radius transition along the neck

CALCULATE AND COMBINE optimal fret-plane relief contours below individual strings

CUT FRET SLOTS

CUT NUT POCKETS

CUT NUT SLOTS at precise angles and depths to achieve optimal string action

CUT SADDLES and saddle slots

AND MUCH MORE BESIDES

One thing that the Plek Station can't do however, is to replace the skill, experience and craftsmanship of the luthier behind the machine. We see the Plek Station as a tool to enable you to take your guitar building skills to the next level.



/ USE SCENARIOS

There is no one single way of using a Plek Station. The Plek Station is a versatile tool system that fulfils a wide variety of roles, and as such, can be found in a broad range of different contexts. These include:

SETUP AND REPAIR

Setup and Repair is probably one of the most common scenarios for a Plek Station.

A repair shop typically brings a number of specific requirements to the Plek machine. The repair tech needs to be able

- to quickly analyze the customer's instrument, and identify problem areas
- to feed customer-specific requirements (action, string gauge, attack) into the mix
- to visualize the effects of proposed changes to the instrument
- to have a basis for informed discussion with the customer and share intuitive visual insight to aid in cooperative decisions and best practices
- to implement the agreed changes precisely and quickly
- to save, recover and compare invaluable customer and instrument histories

The Plek Station is the perfect partner in all of these requirements. The machine's scanning capabilities make it an incredibly accurate diagnostic tool. Scan results can be discussed with the instrument owner to highlight problem areas. Possible solutions can be talked through in Virtual Fret Dress mode before being implemented. Final

scans give clear proof of the state of the instrument after the work has been carried out. Additional functionality such as board planing or nut cutting rounds off the palette of typical repair tools.

From trussrod adjustment through to setup, buzz elimination or a complete refret, the Plek Station covers all aspects of neck-related setup and repair tasks.

CUSTOM BUILDING

For the custom builder, the Plek Station not only provides a great way to deal quickly and effectively with tasks where there is a risk of repetitive strain injury - such as fret dressing or fingerboard planing - but also gives you a whole new way of approaching questions of fingerboard design. The accuracy of the Plek scan, coupled with the design capabilities of the Virtual Fret Dress, makes it possible for you to precisely create fingerboards to any specifications of your choosing. Necks can be planed for a continuity of individual relief under each string; frets can be dressed to comply with any radius or compound radius measurements that you specify. The Plek helps you to achieve optimal neck relief and playability for any combination of string gauge and action, and to implement any fall-off in the upper ranges that you might require. On top of that, fret slot, nut pocket and nut slot cutting can all be dealt with quickly, accurately



and effectively. All the data produced while working on individual instruments is saved for future reference, just in case you need it for your next masterpiece!

SMALL MANUFACTURERS

For small manufacturers with one or more standard models and an output of less than 400 guitars per month, the Plek Station is an ideal alternative to our larger mass-production unit, the Plek Pro. The main focus of a Plek Station, in this scenario, would not only be to automate otherwise strenuous physical tasks, but also to ensure consistency, accuracy and accountability in instrument processing. Model-specific guitar templates can be created to quickly load standardized instrument specifications and to speed up processing in a manufacturing environment. Additional templates can be created for individual models to take variations into account, such as different fret size, string gauge or target setup.

The use of templates also helps to reduce the need for operator input. Typical standard Plek processes for small manufacturers are fret-work and nut work, and may also include board planing, and fret and nut slot cutting.

For small manufacturers wanting to streamline production, an On-Instrument String Tension Simulator – oiSTS – can also be custom-built for your instrument models. This enables the work processes to happen prior to tuner and string installation but with the exact same applied force as with strings. This reduces cycle



Our Standard HFS Cutter Bits, clockwise from top:
Ball 1.0, Shaft 2.0 downcut, Shaft 0.6 downcut, Cone 0.3

times significantly since scans and work are done without string de-tuning, relocation and re-tuning. In addition, it also reduces handling of buffed and assembled components.

Custom-made fretcutter heads can also be supplied that are precisely matched to your instrument model fretwire specs.

The Plek Station, configured for small manufacture, is a production ready tool that can also be used for service and completed-instrument R&D without any modification.

QUALITY CONTROL

One of the great strengths of a Plek machine is its ability to provide precise and reliable data about the state of a guitar neck. In this respect, the Plek machine becomes an invaluable tool for quality control in any scenario. The data that the Plek machine produces during scanning and processing can be accessed remotely by final inspection and quality control persons to enhance final setup. In addition, the Plek machine can be used to provide feedback to earlier parts of the production

process, such as neck blank manufacture, fingerboard assembly, fret seating and specs for nut and saddle heights. For custom builders and repair experts, a final QC scan is a quick and easy way of ensuring that all target specs have been met. Later post-production scans can aid in understanding of long term stability.

An optional online database of all guitar processing information is also available for further enhancement of final QC checks.

RESEARCH & DEVELOPMENT

The Plek Station is the perfect tool for anyone looking to push the boundaries of guitar playability. Its remarkable three-dimensional analysis of the fingerboard and fret-plane, which factors in data about fret radiuses with measured and projected optimal relief under individual strings, makes it possible to achieve what has been described as an "hybrid parabolic radius". In essence, the Plek provides a tool for fingerboard design which allows the builder to investigate the effects of any envisaged changes before putting them into action. In addition, different string actions, gauges and setups can be implemented and analyzed with a minimum of changes to the actual guitar itself.

DISTRIBUTION

For wholesale instrument distributors, the Plek Station offers a reliable means of ensuring consistent and optimal setup for all instruments that pass through your company, as well as providing an invaluable resource when dealing with returns.

/ PLEK STATION TOOL MODULES

THE PLEK STATION IS DELIVERED WITH A SCANNING MODULE AND TWO CUTTING MODULES.

SCANNING MODULE

The scanning module consists of a sensor finger combined with a high-resolution magnetic linear encoder. This sensor is able to measure all the relevant parameters of instrument playability: action, fingerboard relief, fingerboard contours, fret height and fret spacing. The Plek Station's software analyzes and displays all measurements numerically and as intuitive graphics.

CUTTING MODULES

For fret dressing, the Plek Station makes use of a specially manufactured carbide cutting wheel contoured to simultaneously cut the fret height and round the fret crown. Each fretcutter comes with 3 crown shapes and can last for between 50-500 guitars per shape. Since the Plek can dress stainless, EVO (copper alloy) and titanium wire, actual cutter life depends on fret hardness, fret height and width, and the amount of fret material to be removed.

The Plek Station's second cutting module is a High Frequency Motor Spindle (HFS) - a 5,000 - 50,000 rpm tool which is used for cutting nut string slots and saddle slots as well as for a range of further features such as fingerboard planing and fretboard slotting.

The Plek software selects the appropriate bit from a menu of precision rotary bits (ball-end, shaft or cone type) which are supplied with the Plek Station.

The HFS can create a precisely calibrated nut slot for even the smallest string gauge. For wider slots the bit can cut in multiple stepped passes or be changed to a larger bit if preferred. All nut slot specs are fully adjustable in 3 dimensions. The nut spacing and style can be selected from a menu of spacing formats, break angles and splay angles as desired to reproduce any look and feel. The HFS can also trim an acoustic bridge saddle to exact height, automatically achieving the target action when re-strung.



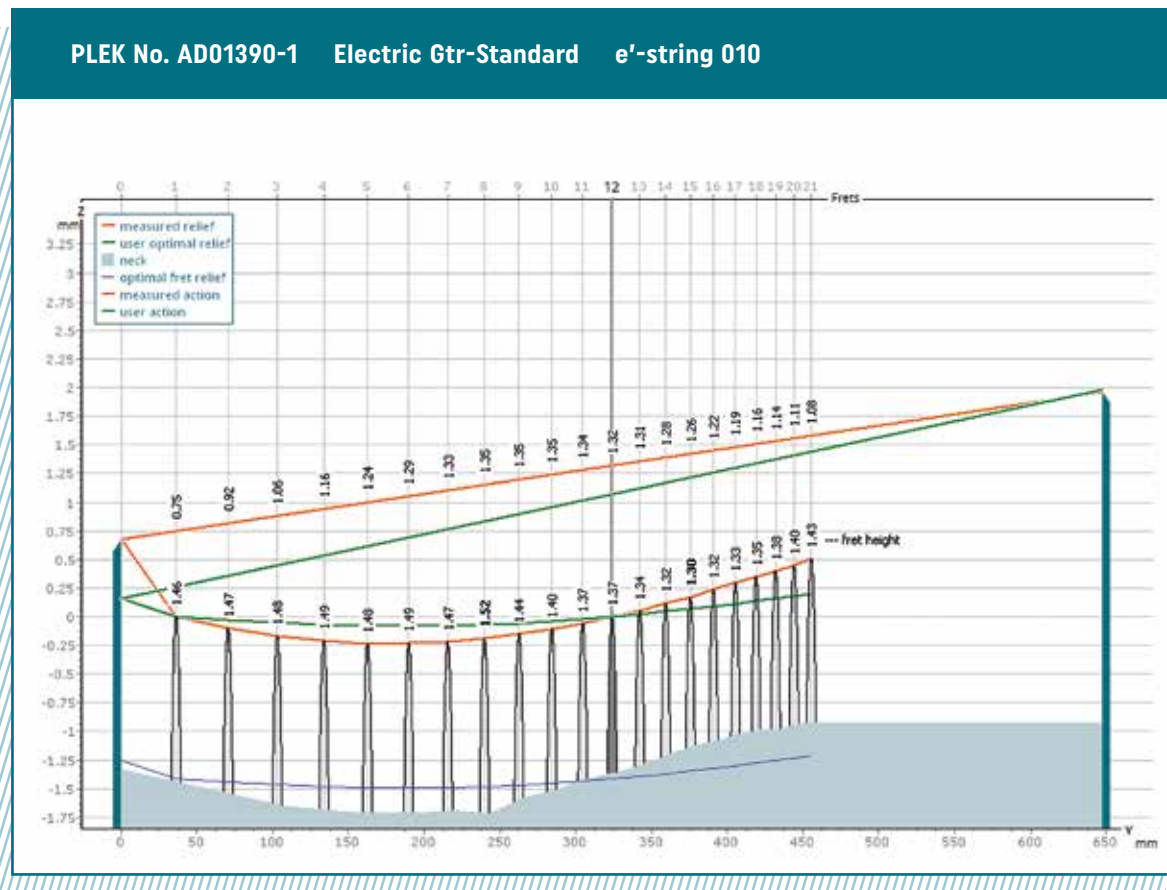
HFS Module
HFS 50,000 rpm
interchangeable
precision cutter bit

**Scanning
Module**

**Fret
Cutter
Module**

THE BASIC PLEK PROCESS

To give you an idea of the Plek machine in action, let's now take a look at the basic Plek process.



PREPARING THE INSTRUMENT

The operator places the instrument - strung to pitch - in the cradle door and aligns it with a simple positioning device. String gauge, fret width measurements and some basic info are entered into the Plek software. The cradle door is then closed and the operator starts the program sequence.

THE SCAN

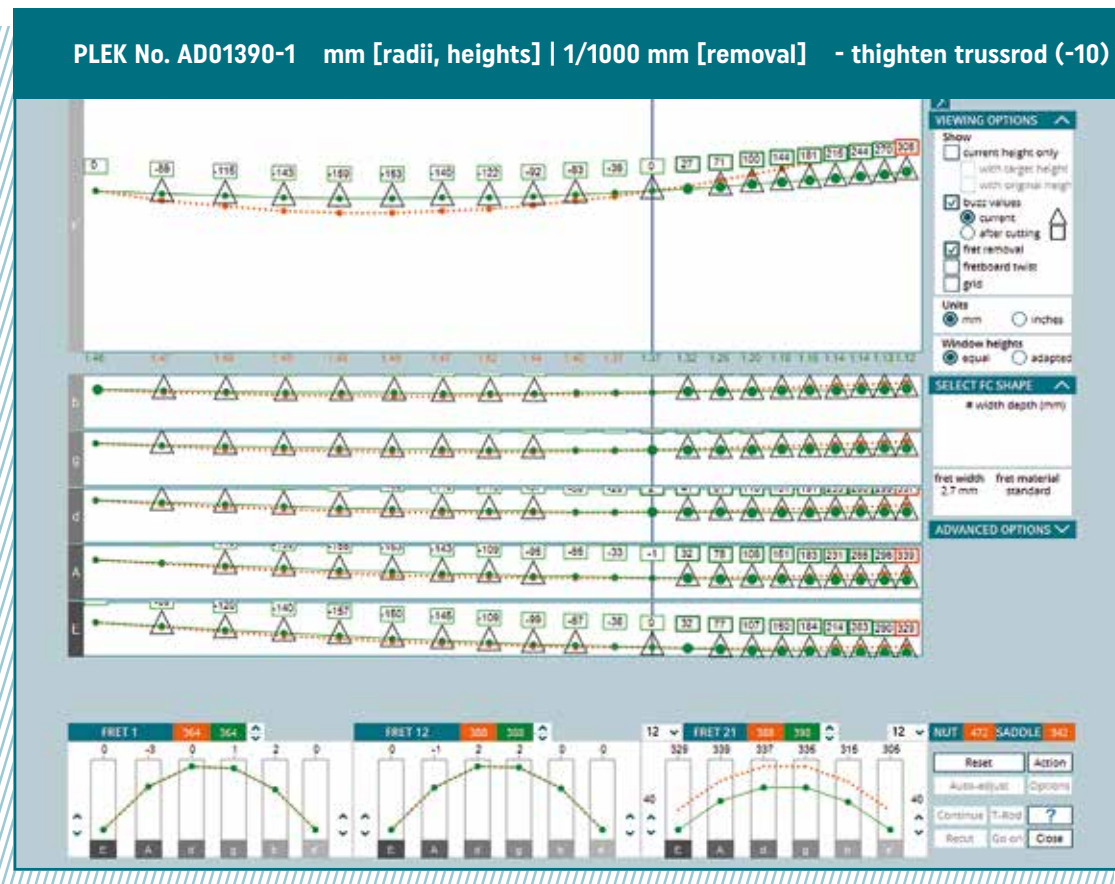
The scan is the first basic step in the Plek process. The Plek Station analyzes the fingerboard and frets and produces a mass of detailed information about the instrument nut, target string action, fingerboard and frets.

The machine then produces various greatly magnified representations of that scan that will tell you all you need to know about the work that needs to be done on the instrument.

"I was thrilled to discover the Plek machine is more amazing than I could have imagined. It does much more than just dress frets. It can repeatably and reliably execute a long list of complex operations that allow me to better meet the special needs of my most demanding clients... It's a game changer."
 TJ Thompson, US guitar repair expert

VIRTUAL FRET DRESS (VFD)

The Virtual Fret Dress is one of the key elements of the Plek software. Simple drag and drop functionality lets you change target fret heights on-screen to simulate the results of any fretdress that you intend to undertake. From the data previously acquired during the scan, and the instrument specs that you have entered, the Plek software can calculate optimal fret heights and fret-plane relief for the instrument in question. This means that you can know beforehand what your best possible results for that instrument will be. Once you have decided on a course of action, the machine will then perform the instructions you have given it. The Plek software is an extremely user-oriented program that makes it possible to perform any preferred dress for any action, and to implement any compound radius and/or upper end fall-off. Neck and fret relief can be implemented on a blended



"The Plek machine has been amazing. It makes our dress, our fret jobs, very consistent. A human would probably take a whole day to get that level of consistency and quality. The Plek machine really saves us a lot of time in terms of getting an impeccable fret job for our instruments."

Hozen, Head Luthier at Maestro Guitars

string-by-string basis, radius can be set at the 1st and 12th frets and at the last fret on the fingerboard. The great advantage of this approach is that many different fret “solutions” can be studied in a virtual mode before any work is done on the actual guitar.

PROCESSING

Once you have decided on a course of action, it's time to let the machine do its work. All you need to do is to loosen the strings and fasten them back so that they don't impede the fretcutter's access to the fingerboard. A reference scan is then performed to match the data from the strung and de-strung instrument. Processing - i.e. leveling and crowning the frets - can take between 4 and 15 minutes, depending on the number of frets, the amount of material to be removed and the hardness of the fret material itself - hard fret wire such as stainless steel is cut at a lower speed.

The machine is also able to undertake nut work, such as cutting fresh slots in a new blank and trimming the top. Nut slotting takes approx. one minute and nut surfacing between two and three, depending on nut size. 12-string nuts can be cut quickly using a fully flexible menu of preferences.

FINAL QC/PROOF SCAN

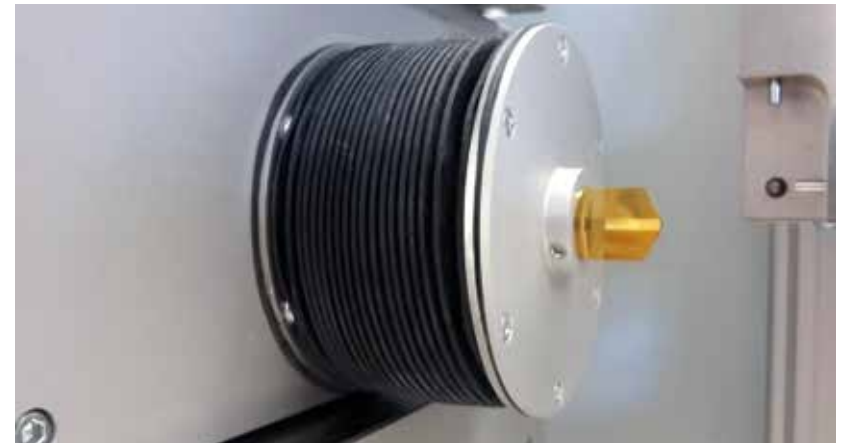
It's good practice to bring the strings back to pitch and perform a final scan to ensure that all target specs have been met during the processing and for future reference.

CLEANUP

All that now remains is to clean the instrument to remove any dust or fret filings, polish the frets, and to check setup and intonation before returning it to the customer.

DATA STORAGE

The Plek machine saves all the data relating to a specific instrument and the work that has been done on, stored as an easily accessible computer file. This makes it possible to review the instrument before and after processing, to see each step of the way, and to create a complete history of all specs and timeline of work done.



Plek Station Scanning Module

/ PLEK SOFTWARE FUNCTIONS

Every Plek machine comes with core functions which are included in the initial purchase price. Beyond the core functions, additional add-ons are available from the add-on store in the Plek software, either for purchase, or on a subscription basis.

CORE FUNCTIONS

SCANNING

The fretboard, frets and string positions are measured under real or simulated string tension along each string. The scan results are then displayed on-screen as intuitive graphics.

VIRTUAL FRET DRESS

The Virtual Fret Dress lets the operator see the measured fret heights, buzz values, current and recommended fingerboard and fret-plane relief, as well as providing a way to adjust the amount to be leveled off the frets, while controlling the remaining fret height.

FRET CUTTING

The frets are leveled and crowned by a specially Plek designed fret-cutter head (FCH).

NUT CUTTING

The nut cutting function covers the string slots and optional cutting of the surface of the nut top. All angles involved in the cutting process (e.g. headstock, splay and nut surface angles) are fully adjustable.

SOFTWARE ADD-ONS

AUTOMATED VIRTUAL FRET DRESS ADJUSTMENT (AVFA)

An automated version of the Virtual Fret Dress which can automatically suggest a setting according to operator-defined tolerances. The system then either waits for manual confirmation or can be configured to continue automatically. A major time saver for production.

BOARD PLANING

Fingerboard planing can be undertaken based on scan results and required parameters (compound radius, falloff etc).

BRIDGE PINHOLE MARKING

This add-on for acoustic guitars is based on the Plek instrument scan, resulting in perfectly placed pin hole markings.

FRET SLOT CUTTING

Fret slot cutting can be specified in terms of width and depth to follow the fretboard radius. The machine can be instructed to perform a "natural binding" by not cutting through the entire board.

NUT POCKET CUTTING

A "pocket" for the nut can be cut into the fingerboard.

SADDLE CUTTING

The saddle is placed in a vise and cut according to the defined string action and radius. Options include cutting of the top and/or bottom of the saddle.

SADDLE SLOT CUTTING

This add-on makes it possible to cut a slot into acoustic bridges. The cut is based on the Plek scan to ensure correct string spacing and precise scale length compensation.

SERIAL NUMBER READER

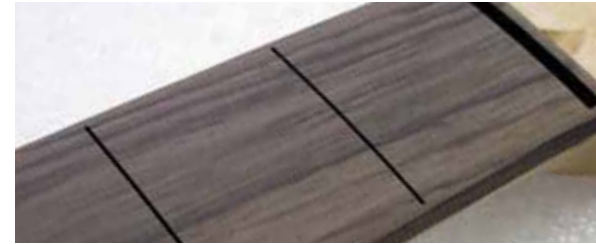
A serial number reader is available which enables the integration of a barcode scanner into the manufacturing process.

PAIRS

Nut slot cutting for instruments with "paired" strings, e.g. 12-string guitars or mandolins.

TEMPLATES

Our software templates make it possible to define the recurring properties of instrument models and also set parameters of the Plek processes to be performed for a given model.



**Fret slots
with natural
bindings and
nut pocket**

MULTISCALE PROCESSING

The Plek machine can be used to scan multiscale instruments and to cut multiscale frets, as well as multiscale nuts, fret slots, saddle slots and nut pockets. Multiscale frets must be crowned by hand.

FINGERBOARD MARKING

An add-on to engrave generic position markers such as dots and blocks.

DATA ADD-ONS

CLOUD DATA BACKUP

Guitar processing data and machine configuration data can be backed up to cloud storage to help ensure against data loss and provide a basis for further applications.

MACHINE PROTOCOL DATABASE

Suitable for small manufacturers, the Machine Protocol Database can be used to gather invaluable information about the quality of guitar processing, as well as machine and operator performance, and cycle times. The database can be accessed from any computer with an Internet connection.

REMOTE FILE VIEWER

The Plek Remote File Viewer makes it possible to monitor individual guitar quality - with complete access to scan records - from any location. This is ideal for high-level production monitoring and quality control.

/ CONFIGURING YOUR STATION

It takes time and planning to work out the best configuration for your Plek Station. The following table is intended as a rough guide to optimal configurations in typical use scenarios. You can, of course, purchase additional software add-ons or test them in pay-per-use mode, any time you wish.

PLEK MODULES & ADD-ONS	SETUP & REPAIR	CUSTOM BUILDING	SMALL MANUF.	QC	R&D	DISTRIBUTION
CORE						
Scan / Fret & Nut Cutting	X	X	X	X	X	X
Standard Fret Cutter	X			X	X	X
Custom Fret Cutter Shape Combinations		X	X			
Custom HFS Cutter Set		X	X			X
O P T I O N A L						
SOFTWARE						
Templates			X			
AVFA			X			
Board Planing	X	X	X			
Fret Slot Cutting	X	X	X			
Nut Pocket Cutting	X	X	X			
Saddle Cutting		X	X			
Saddle Slot Cutting		X	X			
Bridge Pinhole Marking		X	X			
Multiscale	X	X	X			
Fingerboard Marking	X	X	X			
HARDWARE						
On-Instrument STS			X			
DATA						
Cloud Configuration Data Backup	X	X	X	X	X	X
Cloud Guitar File Backup	X	X	X	X	X	X
Production Protocol Database			X	X	X	X
Remote Guitar File Viewer			X	X	X	X



PLEK STATION PERFORMANCE

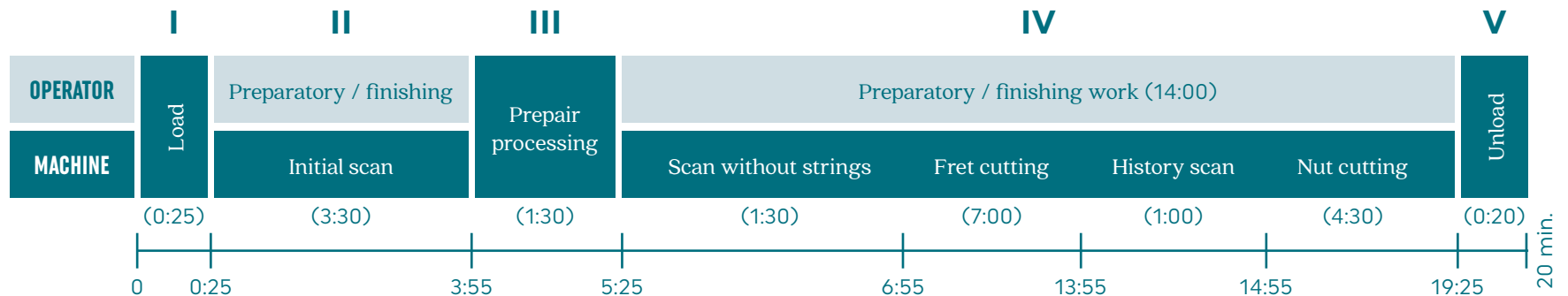
Generally, the performance of the Plek Station depends on various factors, such as the type of use, number of frets and strings, amount of material to be removed, fingerboard dimensions and general condition of the instrument. In a typical repair shop, every guitar requires unique handling; instrument and customer data need to be entered, process data may need to be adjusted and work decisions need to be made individually. Used guitars typically cause longer process times due to worn out frets, unpredictable trussrods, etc. In production, machine cycle times can be optimized by using software templates for guitar and process data, special fixtures for recurring instrument models and by improved pre-production procedures.

Independent of the type of use, the main factors determining the cycle time are:

- Number of strings
- Neck width
- Number and width of frets, material hardness
- Accuracy of fretting and neck work
- Truss rod operation
- Size of nut and saddle blanks
- Amount of nut and fret material to be removed
- Operator skill level

WORKFLOW EXAMPLE

Operator interaction is required only for loading/unloading instruments and setting work parameters. The machine operation time can be used for finishing and preparing instruments.



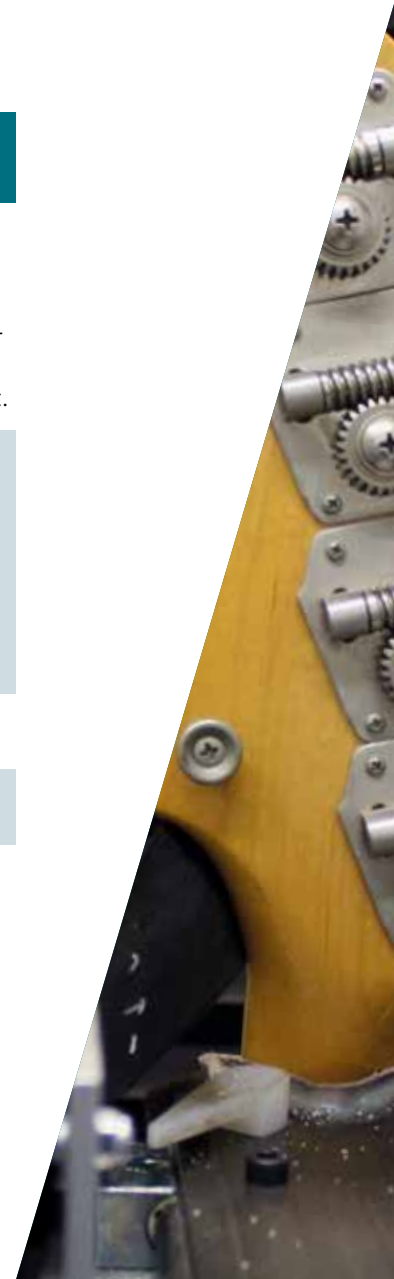
CYCLE TIME EXAMPLES

Preparatory work: For machine processing the instrument has to be strung up to pitch.

Finishing work: Strings are loosened for polishing the frets which takes 1 to 5 minutes if a Plek recommended procedure is used.

	AVERAGE PROCESS TIMES	REPAIR SHOP (min:sec)	SMALL PRODUCTION (min:sec)	
I	Loading a guitar	0:25	0:25	TOTAL PREPARATION AND SCANNING 7:00 – 9:00 min. Repair shop 4:00 – 6:00 min. Small Production It takes 4-9 minutes to have a complete graphic and numeric evaluation of the fretboard at your disposal: scale length, relief, fret positions, fret heights, nut data, and saddle height.
	Data entry / Load template	2:30	0:15	
II	Initial scan / Checking number of frets / Spacing measurement: neck width, spacing, action / Fret scan	3:30	3:30	
	<i>Optional: Truss rod adjustment and rescan</i>	2:00	2:00	
III	Setting parameters (Virtual Fret Dress) / Automated Virtual Fret Dress adjustment	0:30	0:00	TOTAL FRETBOARD WORK 10:00 – 19:00 min. Repair shop 8:00 – 15:00 min. Small production Optimal truss rod adjustment and fret dressing takes 8-19 minutes in average.
	Loosening strings	1:30	1:30	
	Scan (without strings)	1:30	1:30	
IV	Fret cutting Typical processing times range from ~ 6:00 to ~ 12:00 min.	9:00	7:00	NUT WORK 4:30 min. RESCAN FOR QC (optional) 3:00 – 5:00 min. (1:20 w/out nut/saddle work)
	History Scan	1:00	1:00	
	Nut surface cutting	2:40	2:40	
	Nut string slot cutting	1:50	1:50	
	<i>Restrings and tuning</i>	1:30	1:30	
V	<i>Optional: Rescan</i>	3:30	3:30	UNLOAD GUITAR
	Unload guitar	0:20	0:20	

	AVERAGE PROCESS TIMES - SUMMARY	REPAIR SHOP (min:sec)	SMALL PRODUCTION (min:sec)
	Fret cutting only (without optional scans)	19:00	15:00
	Fret and nut cutting only (without optional scans)	24:00	19:00
	Complete (including all optional scans)	29:00	24:00



/ PLEK SERVICES

for Plek machines, we also offer a wide range of services to ensure optimal machine performance with minimum downtime and long-term investment protection for our customers. Our expert interdisciplinary support team is on hand to help solve any problem which might occur. Different service plans meet the different needs of smaller and larger companies.

INFRASTRUCTURE AND RESOURCES

SETUP AND TRAINING Machine setup and on-site operator training by experienced Plek experts is included when you purchase a machine. Further/advanced training is also available on request.

GLOBAL SUPPORT AND MONITORING Our global support and monitoring network is available to help you with any questions relating to your Plek machine. Support is available in 3 different service areas: USA/Canada, Europe and Asia Pacific. A service technician will be ready to help you immediately if the request comes in from 10am to 5pm Central European Time, or within a maximum of 24 hours after your request has been posted.

ERROR SIMULATION The hardware of all supported machine generations is on hand at Plek so that errors and problems can be simulated and solutions found quickly.

SOFTWARE UPDATES Plek Pro software is constantly being updated and developed further, normally at the rate of one major release per year.

Service is a key part of the Plek system and ranges from support to software updates, from fretcutter blade sharpening, machine tuning and maintenance, to operator training and consulting. In addition to our 2-year warranty

DATA HANDLING Let us take care of your data. Regular automated data back-ups of machine configuration and guitar data in ensure that your machine will be back up and running quickly after any unforeseen computer outage or data loss. Our machine monitoring services include the provision of monthly process overviews as well as performance and quality reports.

SPARE AND REPLACEMENT PARTS Plek machines are built to last. However, the nature of guitar building and repair can mean a lot of wear and tear for moving parts. That is why we offer a full range of spare parts that can be kept on-site and replacement parts for quick delivery. The modular design of the machine makes it easy for operators to replace parts or even whole modules, with remote guidance via Plek online support.

LIFETIME MODULE EXCHANGE CYCLE FOR FRETCUTTERS AND HFS MODULES We offer a Lifetime Module Exchange Cycle for specific, intensively used modules, such as fretcutters heads (FCH) and high frequency spindles (HFS). Replacement standard modules are shipped immediately on request, even before you send us the old module. All machine modules are tested prior to shipping. Refurbished modules are guaranteed to function as new. Fretcutter heads can be resharpened by

sending them to our service centers in the USA or Germany. Users of our standard fretcutter for guitar repair benefit from a pool of pre-sharpened FC heads, ensuring immediate shipping-on-demand.

MAINTENANCE, ON-SITE LABOR A minimum four-year maintenance cycle is recommended for Plek machines, although shorter maintenance intervals are preferable for intensively-used production machines. A qualified Plek technician will be available to service your Plek machine on-site. Further repairs or modifications can be performed if needed.

PARTS CUSTOMIZATION, FURTHER SERVICES New fretcutter shape combinations for any fret wire sizes, instrument fixtures etc. can be custom built to your specifications.

CONSULTING SERVICES Further consulting services are available to deal with all your Plek-related requirements.

SERVICE PLAN OPTIONS

A choice of four different service plans are available, starting from on-demand services (ODS) with no fixed monthly fee at list prices, a basic plan (BSC) with minimum fixed costs, a standard plan (STD) for medium sized businesses, up to a premium package (PRM) with a generous level of free services included. While subscribing to a service plan with a fixed monthly fee is recommended for most businesses, the services on demand option will be the default plan, if no other decision has been made.

ON-DEMAND SERVICES (ODS) As the name suggests, services are provided on demand when needed, with no fixed monthly costs.

Billing is based on the current list prices. Support time is billed in 15-minute blocks, plus a ticket fee for each newly registered service case. If a software version that is no longer supported is installed on the customer's machine, it may be necessary to update the machine before support can be provided.

BASIC (BSC) SERVICE PLAN The Basic Service Plan is designed for smaller businesses with no frequent need of services and support, in order to minimize the cost. A small monthly base fee ensures the availability of discounted prices on software, support and most of the available services. Stocked wear parts are discounted by 2%.

STANDARD (STD) SERVICE PLAN This service plan is designed for small and medium-sized companies with a high production volume and an increased need for service and support. Software updates are free of charge, there is a monthly quota of free telephone and online support, a free subscription to the "Builders Toolkit" software add-on package and significantly reduced prices for FC resharpening and other services. Stocked wear parts are discounted by 5%.

PREMIUM (PRM) SERVICE PLAN The Premium Service Plan is ideal for larger companies that use multiple Plek machines and require optimal performance with full cost control. This plan includes not only free software updates and an unlimited contingent of telephone and online support, but also free maintenance and the optional setup of a customer-specific online database that records machine performance. A reduced per-machine base fee is also available for customers with more than one machine, as well as preferential service pricing and a 10% discount on stocked parts. Monitoring and analysis of machine performance and achieved instrument quality is facilitated with the help of online reports.



FRETCUTTERS: COMPOSITION, OPTIONS AND RESHARPENING CYCLE

One special aspect of the Plek system is our fretcutter service. Each fretcutter blade has 3 separate fret shapes which can be identical or different from each other. This means that you can choose between different shape combinations, i.e. 3 identical, 2 identical and one different shape, or 3 different shapes. One shape can process between 50 and 500 instruments, depending on a range of factors such as number of frets, neck width, fret material, and "pre-Plek" neck quality and fret seating. Typically a fretcutter head used in production lasts longer than one used in guitar repairs, since the processes of neck/fingerboard preparation and fret installation are more consistent and controlled when building new instruments.



Plek Service Cutter with 3 different shapes

PLEK SERVICE CUTTER As standard, the Plek Station comes equipped with our Service Cutter, which is suitable for repair work. The Service Cutter has 3 different shapings for maximum flexibility in the repair context. Plek provides a pool of these standardized fretcutter heads, so that they can be shipped immediately on ordering, thus minimizing any interruption to your working process.

PLEK CUSTOM CUTTERS Custom Cutters can be any combination of shapes. However, because they are custom-made, we cannot maintain a pool of reserve cutters. We therefore recommend that customers buy 2 identical Custom Cutters, i.e. one in active service, and one in reserve. In order to prepare a Custom Cutter, Plek will need your fretwire specs. The shape combinations of customized fretcutter heads can be adapted to meet any fret wire specifications you may have.

SERVICE OR CUSTOM? CHOOSING THE RIGHT CUTTER FOR YOUR NEEDS Choosing the right fretcutter depends strongly on your requirements. If you do mainly repair, we recommend our Service Cutter. If you do mainly production, we recommend a Custom Cutter. If you do both, we recommend that you have both a Service Cutter and a Custom Cutter, and change between the two as necessary. Changing a fretcutter takes around 15 minutes.

SHAPE COMBINATIONS: ADVANTAGES AND DISADVANTAGES

- Using 3 identical shapings per cutter blade:
 - The advantage: most efficient fretcutter use.
 - The disadvantage: the fretcutter needs to be exchanged when processing instruments with different fret wire.
 - Recommended for production machines.
- Using a fretcutter with different shapings per cutter blade:
 - Can be either 2 same plus 1 different, or 3 different.
 - The advantage: Full flexibility regarding the sequence of instrument/fret wire types, no need to exchange the fretcutter between processing instruments with different fret wire.
 - The disadvantage: Not as efficient as using a fretcutter with 3 identical shapes, because one shape will be dull before the other.
 - Recommended for service/repair work.

/ CALCULATING TOTAL COST OF OWNERSHIP

When budgeting for a Plek machine, it is important that you should be aware of the total cost of ownership. This is quite easy to calculate from a current Plek price list.

■ COST OF MACHINE PLUS SETUP, TRAINING AND TRANSPORT COSTS

Take the basic price of the Plek machine and factor in setup, training and transportation costs. Normally we will include these in any quote for a machine that we send you.

■ ADD-ON COSTS

Software add-ons can be purchased outright, or booked as a daily or monthly subscription. If you require additional hardware, such as an on-instrument STS, you should include these costs in your calculations.

■ SERVICE COSTS

We recommend that you opt for a service plan to keep service costs to a minimum. If you opt for service-on-demand, software updates and support, for example, become significantly more expensive.

■ FRETCUTTER RESHARPENING

The frequency of fretcutter resharpening depends on the number of instruments you process plus several other factors. A useful assumption for a repair shop is to budget for one to two resharpenings per year.

■ MAINTENANCE COSTS

The Plek comes with a standard 2-year warranty. We recommend that maintenance take place 2 years after that, and thereafter at 4-yearly intervals. You should budget for the maintenance procedure plus travel and accommodation costs for your nearest technician.

/ CONTACT

The best way to decide on the optimum Plek Station for your requirements is to contact us. Our team has many years of experience working with a wide range of luthiers, guitar repair experts and custom guitar builders, and can provide expert advice on how to incorporate a Plek Station into your business.

Of course, don't hesitate to contact us about any aspect of the Plek process. We pride ourselves on our customer service and our close contact with our customers. We know that the decision to purchase and install a complex, customized, state-of-the-art machine can only be the result of a dialogue between you, the guitar expert, and us here at Plek.

Phone **+49 (0)30 536 963-39**

Email **sales@plek.com**

Internet **www.plek.com**

"I think that the Plek is one of the most valuable tools that we have, as luthiers, to be able to get the best quality of sound and setup possible."

Richard Hoover, CEO Santa Cruz Guitars

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