

## Plek Station performance

Generally, the performance of the Plek Station machine depends on various factors, such as the type of use (guitar repair, guitar building), number of frets and strings, the amount of material removal, finger board dimensions and the general condition and functioning of an instrument.

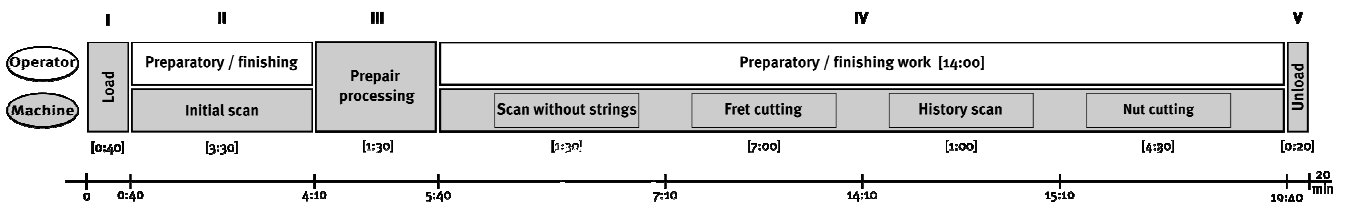
In a typical repair shop every guitar requires unique handling - instrument and customer data need to be entered, process data may need to be adjusted and work decisions need to be made individually. Used guitars typically cause longer process times due to worn out frets, not properly working truss rods, or other problems and damages which hold up the work flow.

In production the Plek machine cycle times can be optimized by using software templates for guitar and process data, special fixturing for recurring instrument models and an improved pre-production, based on the analysis of the scanned instrument data.

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

- Number of strings / neck width
- Number and width of frets/ fret material (hardness)
- Accuracy of fretting and neck work / required amount of fret removal
- Truss rod operation
- Size of nut and saddle blanks / required amount of removal
- Operator skill level

## Workflow examples



## Cycle time examples

### Preparatory work:

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

Average process times		Repair shop (min:sec)	Small Production (min:sec)	
I	Loading a guitar	0:25	0:25	<b>TOTAL PREPARATION AND SCANNING</b> 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	
	Loosening strings	1:30	1:30	
IV	Scan (without strings)	1:30	1:30	
	Fret cutting Typical processing times range from ~ 6:00 to ~ 12:00 min.	9:00	7:00	
	History Scan	1:00	1:00	
	Nut surface cutting	2:40	2:40	
	Nut string slot cutting	1:50	1:50	<b>NUT WORK</b> 4:30 min.
	<i>Restringing and tuning</i>	1:30	1:30	<b>RESCAN FOR QC (optional)</b> 3:00 – 5:00 min.
	<i>Optional: Rescan</i>	3:30 (1:20 w/out nut/saddle work)	3:30 (1:20 w/out nut/saddle work)	
V	Unload guitar	0:20	0:20	<b>UNLOAD GUITAR</b>

### Finishing work:

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

Average process time - 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