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The Scan

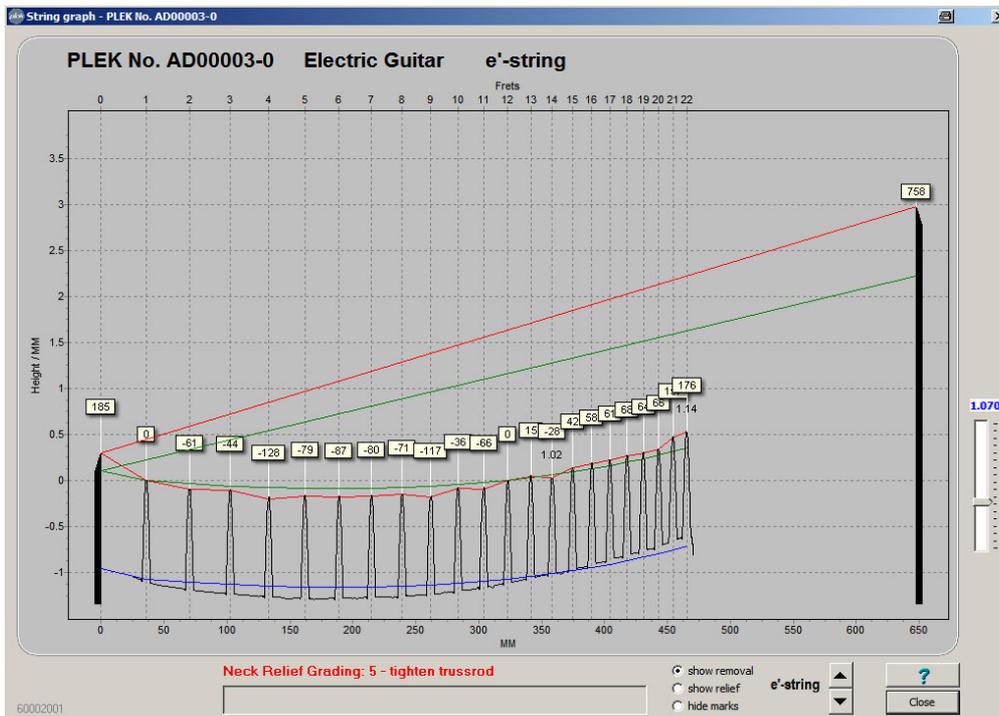
The first basic step in the Plek process is the initial scan.

The instrument - strung and tuned to pitch in the case of the Plek Station, or placed under simulated string tension in the case of the Plek Pro - is strapped into the machine.

The fingerboard is then analyzed using the Sensor Module to produce a scan. That scan provides detailed information about the instrument nut, string action, fingerboard and frets.

The Plek machine then produces various representations of that scan that are accurate down to about a thousandth of an inch.

One of those representations might look a bit like this:



So what are we looking at here?

First of all, these are the scan results for the top E string of the guitar. Each string gets its own set of results, at all fret positions. The results can be grouped together to give an overall picture .

So, from bottom to top. The blue line represents the recommended relief for the fingerboard and a guide for trussrod adjustment. Here we can see that the neck needs to be brought up a little in the middle, i.e. the trussrod needs to be tightened up a bit.

The jagged line of "skyscrapers" represents the frets, (magnified and distorted for easier viewing). The wavy red line represents current fret heights.

The green curve represents the recommended fret curve for optimal string action. The straight green line represents the optimal string action. The straight red line represents

current string action.

Already we can see that there are a few problems with this particular fingerboard. Some of the frets are way above optimal heights and are probably going to cause buzzing problems when the string is played in those positions.

So, in effect, a Plek scan is a three-dimensional, greatly magnified view of the fingerboard, that provides some very specific information about potential problem areas.