The method of this invention takes full advantage of
10 precisely determining knowledge of the period of the data.
The data is resampled at a new sample rate proportional to
the desired change in pitch. In the case of making the pitch
sharper (larger sample spacing than the input data), the
output data pointer will occasionally move ahead of the
15 input data pointer, in which case exactly one cycle period
will be subtracted from the output pointer. This allows a
cycle of data to be repeated. In the case of making the pitch
flatter (smaller sample spacing than the input data), the
output data pointer will occasionally fall significantly behind
20 the input data pointer, in which case exactly one cycle period
will be added to the output pointer. This causes a cycle of
data to be dropped from the output. This resampling
approach generates extremely high quality output.

Column 6, Lines 9:23

The details