example, at position **P3**, the ratio-metric measurement is 1.13 at light pressure and 1.12 at heavy pressure, and at position **P4**, the ratio-metric measurement remains a constant 1.07. The sum of the pulse counts, however, does change dramatically depending upon pressure. For example, at position **P3**, the sum is 5047 at light pressure and 4998 at heavy pressure, and at **P4** the sum is 5107 at light pressure and 5019 at heavy pressure. Thus, the finger position can accurately be determined by the ratio of the pulse counts, and the pressure can be determined by the sum of the pulse counts or, still better, by both the sum and ratio.

[**0049**] A lookup table or database may be stored in a memory (for instance, coupled to the microprocessor IC**1** in **FIG. 3A**, or as part of the personal computer **370** in FIG. **3**B) that contains data associating sample finger positions along the touch slider with expected sums and ratios of the pulse counts. For instance, where the touch slider generates a ratio of about 1.19 and a sum of about 5095, then it may be determined with great confidence that the finger is located at about position **P2** and is pressing with light pressure. Such a table may be similar to Table 1. Although Table 1 contains only 5 sample position points **P1**-**P5**, a table may include any number of sample position points, such as between fifty and one hundred positions or more, for greater accuracy. Such a table may further include more than two variations in pressure amount, such as five different pressures. Interpolation may also be used to determine expected ratio and sum values for points in between those contained in the table or database. For instance, referring to Table 1, where the measured ratio and sum equal 1.16 and 5071, respectively, it may be determined through linear interpolation that the position is halfway between **P2** and **P3** with light pressure.

[**0050**] In further embodiments, the touch slider may enter a calibration phase utilizing known auto-calibration features such as a leaky integrator. Also, the touch slider may default at power-up to the assumption that no touch is being applied by a finger anywhere on the finger groove. Where the microprocessor stores peak values of ClkA and ClkB over some time period (e.g., approximately 30 minutes), a continuous or periodic calibration may be realized. In such a configuration, it may be reasonably assumed that sometime during this time period no finger was present. In the present embodiment, the values of ClkA and ClkB would peak at the moment that no finger was present. In this way, the zero-finger-pressure ClkA and ClkB values may be continuously regenerated during touch slider use.

[**0051**] Further techniques may be implemented to reduce any remaining effects of finger pressure on the reported finger position along the touch slider. Such techniques may preferably compensate for the effects of finger pressure in real time. An example of such a technique is as follows. In this exemplary embodiment, the following constants may be defined:

TouchThreshold	=>	The fraction of SumMax at which to assume finger is present (in this embodiment, Sum decreases as finger pressure increases).
PressureFactor	=>	A factor (a function of Pressure) to include in SlideValue calculation to compensate for variations in finger pressure. Without this, SlideValue will make the apparent finger position move further away from midpoint with increasing finger pressure.

[**0052**] The following calibration values may be determined at startup/power-up of the touch slider, during an explicit calibration phase, or constantly during use:

SumMax=*ClkA+ClkB* with no finger present

RatioMax=Ratio with finger in top-most finger position of slider

RatioMin=Ratio with finger in bottom-most finger position of slider

MidSliderValue=value of RawSlideValue with finger at midpoint of slider (probably a constant)

[**0053**] Using the above calculations, the following algorithm may be implemented in the following order during use of the touch slider:

(get ClkA and ClkB oscillator count values)	
Sum = ClkA + ClkB	sum of slider values gets smaller as finger pressure increases
Pressure = SumMax − Sum	Pressure as a function of Sum, usually 0 < Pressure < 2000
Ratio = ClkA / ClkB	Take ratio of Slider values
RawSlideValue = (Ratio − RatioMin) / (RatioMax − RatioMin)	0 < RawSlideValue < 1 for slider area only, not including end buttons.
SlideValue = RawSlideValue − (Pressure * PressureFactor * (RawSlideValue − MidSlidervalue))	pressure compensation
IF Sum < (SumMax * TouchThreshold) THEN	is slider touched?
TouchFlag = 1	slider is touched
ELSE	
TouchFlag = 0	slider is not touched
ENDIF	
IF PreviousTouchFlag = 0 and TouchFlag=1 then	detect an initial touch
InitialTouchFlag = 1	
ENDIF	

[**0054**] Thus, using the above technique, which may be repeated in real time, any interaction between finger pressure and finger location as determined by the touch slider may be further reduced. Of course, the above technique is only exemplary, and variations on this technique may be implemented without departing from the scope of the invention.

[**0055**] The conductors **101**, **102**, **201**-**212**, **301**, **302** may be embodied as conductive plates, foils, layers, sheets, or members, and/or may be etched as tracings on a circuit board or other substrate. The conductors may be made of any suitable conductive material such as metal. The conductors preferably may be covered, coated, or encased with a thin plastic or other insulating material for protection of the conductors from a human finger or contact with other elements. Preferably the insulating material should be thin enough at the area defined by the conductors such that the finger position may be sensed. For instance, as discussed above, the insulating material may be LEXAN or any other insulating material and may be between approximately 0.001 to 0.01 mm thick, approximately 0.01 to 0.1 mm thick, approximately 0.1 to 0.5 mm thick, or approximately 0.5 to 1 mm thick, over the area defined by the capacitive nodes. The insulating material may be formed from a strong non-flexible material or may be a flexible material in the form of a sheet or layer. The finger groove and/or insulating