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holes arranged in three paired sets to arrange said balls into three sets of paired balls such that each set of said paired balls supports one of said pins of said stylus mount between said paired balls when said stylus mount is inserted into said housing;

a lower plate including contact pads for each ball, said lower plate bottom of said housing for securing said balls between said lower plate and said bottom of said housing such that each ball is in contact with a contact pad, and said contact pads wired to said electronics; and wherein said housing includes a slot in said side for each pin, said slots to act as a guide for movement of said stylus mount; wherein said lower plate is a circuit board; further including a spring to provide a tension to

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force said pins against said balls; and further including a spring cap to force said spring towards said pins.

18. The touch probe of claim 17, wherein said shank comprises: a machine attachment end, a top cap and a reversed tapered boss; wherein said body includes an open ended top; wherein at least three screw holes are located on said body in relation to said reversed tapered boss when said reversed tapered boss is positioned inside said open ended top of said body; and further including at least two set screws screwed into said at least two screw holes such that said at least two set screws enter into said body and against said reversed tapered boss in order to secure said shank to said body.

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