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Tripod Technical Description

The mechanism discussed is an adjustable tripod made for lighter-weight point-and-shoot cameras. It consists of three main colors: red, silver, and black. Its red legs are shoed with black plastic caps, which can be pulled to reveal silver extensions. Unextended, the tripod stands 5-3/4 inches tall. With legs extended it stands at 7-3/4 inches. The legs spread outward to act as a base for the silver midsection, which houses the pivoting ball joint, onto which a camera can be threaded. The joint can pivot to a 90 degree angle by means of a small cleft in the joint housing. The joint can be locked with a black-handled tightening bolt.

Atop the tripod is a pivoting ball joint. Looking from any side when the tripod is upright, the topmost portion is a metal flat end screw shaft. Only the first half of the one inch screw shaft is threaded. The thread spacing of the 3/16 inch shaft is 1/16 inch. The middle 1/16 inch portion of the height of the shaft, between the threaded and smooth sections, has a diameter that is 1/16 inch thicker than the rest of the shaft which creates a ridge to act as a barrier so that the items screwed on cannot descend below the threaded portion. Instead of attaching to a screw head, the smooth end of the shaft is fused to a ball of the same shiny, silver metallic material, forming one single piece. The ball fits into a socket just like the ball joint of the shoulder. It cannot come out of the socket but the shaft can swivel down 90 degrees into a u-shaped cleft in the silver midsection that houses it. The purpose of the threading is to connect the bottom of a camera or camcorder to the tripod to eliminate human shakiness and produce a still shot. The ball joint allows the user to tilt the attached camera at many different angles.

A separate piece screws onto the threads of the screw shaft providing a mount for the camera. The disk mount can be moved up and down the threads to adjust for different cameras. The

diameter of the mounting disk is the same as a quarter's. A threaded hole, 3/16 inch in diameter, in the disk's center allows for easy attachment to the screw. The disk is much like a washer but about 3 or 4 times as thick. The disk top, which the camera rests on, is black rubber and has five 1/16 inch wide parallel stripes spaced 1/16 inch apart and raised 1/32 inch above the rest of the rubber. The rubber is glued into the silver plastic remainder of the disk. Excluding the raised stripes, the rubber is flush with the plastic outside edges. The 1/8 inch rim of the disk is beveled for better grip. The bottom slopes down like a funnel for an additional 1/8 inch, the diameter of the flat bottom funneled down to 7/16 inch so it can rest on the metallic ridge of the screw shaft.

The dull, silver midsection, or joint housing, is a single unit comprised of what appears to be two tapering cylinders, or cones. The smaller cone is fused on top of the larger, the 1 inch wide base of the larger forming the bottom of the joint housing. The edge of the base is chamfered, from which it tapers upward 1/2 inch to a 1/16 inch wide, round edged step along the base of the top cone. From the base of the top cone, the diameter tapers from 7/8 inch to 3/4 inch over a distance of 3/8 inch. The top surface edge is rounded, with a hole in the center. The hole is 3/8 inch in diameter, with a single cleft protruding from one side. The u-shaped cleft is 1/4 inch wide at its base, tapering downward 5/16 inch to a rounded end. Opposite the cleft, 1/2 inch from the bottom is a removable bolt. The head of the bolt is plain, except for a small pin running through it, attaching a larger, u-shaped handle for easy turning. The handle is made of black plastic, 1/2 inch long, 1/8 inch wide, and 1/8 inch thick. A clockwise turn tightens the bolt, thereby tightening the swiveling ball joint in place, and a counterclockwise turn loosens it. Though the entire joint housing is painted with a dull silver, all parts are plastic. The only exceptions are the stainless steel handle pin, 2 bolts, and corresponding nuts inside.

Looking up from beneath, the joint housing's insides are held in place with a piece of clear plastic, 3/16 inch away from the bottom edge that matches the shape and diameter of the housing. At the center of this clear plastic piece is a threaded hole, to which a metal ring coupler is attached with a Phillips-head bolt. Fused to the black ring are 3 evenly spaced prongs of the same material that protrude 3/8 inch outward from the ring. The prongs are set 1/2 inch apart at 60 degree angles, forming a triangle with circumference of 1-1/2 inches. A 1/16 inch hole in the center of both sides of each prong provides an attachment site for the legs of the tripod.

Fused to the top of each cylindrical leg along the midline is a shiny, flat stainless steel arch 1/4 inch high by 1/4 inch long by 1/16 inch thick. A 1/16 inch hole in the center of each arch attachment lines up with the holes on each respective prong thus allowing a coupler to be inserted to form a hinge whereupon leg extension can be adjusted to widen or narrow the tripod base.

The tripod has three cylindrical legs, 3-3/4 inches tall—when not extended—with a 7/16 inch diameter and a 1-1/4 inch circumference. Unextended, the legs split into 3 connected parts described from top to bottom. Part 1, covering the top 1/16 inch, is dull, black plastic. Part 2, covering the middle 3-7/16 inches, is shiny, red tin. Part 3, covering the bottom 1/4 inch is dull, black plastic. 3/16 inch from dull, black top of each leg is a circular crater, or indent, in the red tin section, 1/16 inch in diameter and 1/16 inch deep. If any leg were rotated 180 degrees along the x-axis (same axis that you would twirl along if you were dancing), an identical indent would be found in the red tin section on the opposite side with the same dimensions and placement. The indent is, in reality, a "through and through" puncture in the tin where a pin was inserted to connect the tin with the black plastic cap above, the hidden base of the cap descending inside the

tin to facilitate the connection. The puncture appears as a mere indent because of the glossy, red paint placed over it. The indent is in line with the thin side of the arch attachment.

Though the tops of the legs only swivel in place, the area of the triangular base of the tripod can easily be adjusted by pulling the legs outward from the center. The benefit of an adjustable base is that legs can be tucked in close together with a base only as wide as the top (as a human standing with feet together or a 4-legged ladder folded in) for more convenient storage or transport (never for support), and a wide base (as a 4-legged ladder unfolded) can be utilized to stabilize heavier equipment.

The height of the legs is also adjustable. Shiny, silver extensions, 2-1/16 inches high with 1-1/16 inches circumference and a 5/16 inch diameter, can be revealed by pulling down on the black plastic portion that shoes each leg. Indents identical to those found in the red portion can be located 1/16 inch from the bottom of this silver, tin extension. These 2 indents on each leg are also in line with the thin side of the arch attachment and, similarly, are the result of securing the black plastic shoe to the silver extension with an unseen internal pin. The purposes of the extensions are to obtain a more direct shot if photographing or filming a taller person or object, or to widen the base of the tripod to increase stability. With legs fully extended and pulled open on hinges, the maximum distance obtainable between legs is 5 inches providing a base that covers nearly 11 square inches. Without the silver extensions, the base could cover only 4 square inches and the camera could tip more easily if bumped. It should be noted that this cheap tripod will not actually sustain the weight of your camera. It is merely a model not intended for use.