

Five Minute Tomy DT Timer

The timer shown twice size to the right is built from a clockwork from TOMY toys of series numbered 2540. Stock clockworks unwind 6.5 turns in about 22 sec., but torque drops off markedly after 5.5 turns. The winding shaft extends from both sides of the case, allowing use of right-hand cams.

Cam is cut from stock 1/4-20 Nylon bolt. A #52 drilled hole will provide a tight fit with shaft. Cut the end of the last thread clean. Leave enough shaft on far side for emergency removal of cam.

The tabs that retain trigger and DT release wires are bent with face plate in a vise. Bend outer ends first, move face plate and make second bend. Insert a piece of wire and correct fit. Support the tabs with pliers when making final bend of wires.

The wire arms and brass weights sufficiently lower the natural frequency of the escapement without any pendulum effect. Bend the hook of the straight pin after soldering to the pre-bent .025 wire. The hook must be worked in behind the shaft of the escapement. The hook adds strength to the joint and allows the pin and wire to be held in proper position with wood wedges between the wire and the case while the epoxy hardens. Crimp the brass weights for a tight fit on the wire. Adjust positions equi-distant from pivot for 1 RPM of shaft when fully wound.

Always fully wind, then continue winding until cam is in desired index position. Over winding will not damage clockwork--ratchet pawl will slip on shaft before spring or gear damage. Do not wind backwards. Not recommended for power models.

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