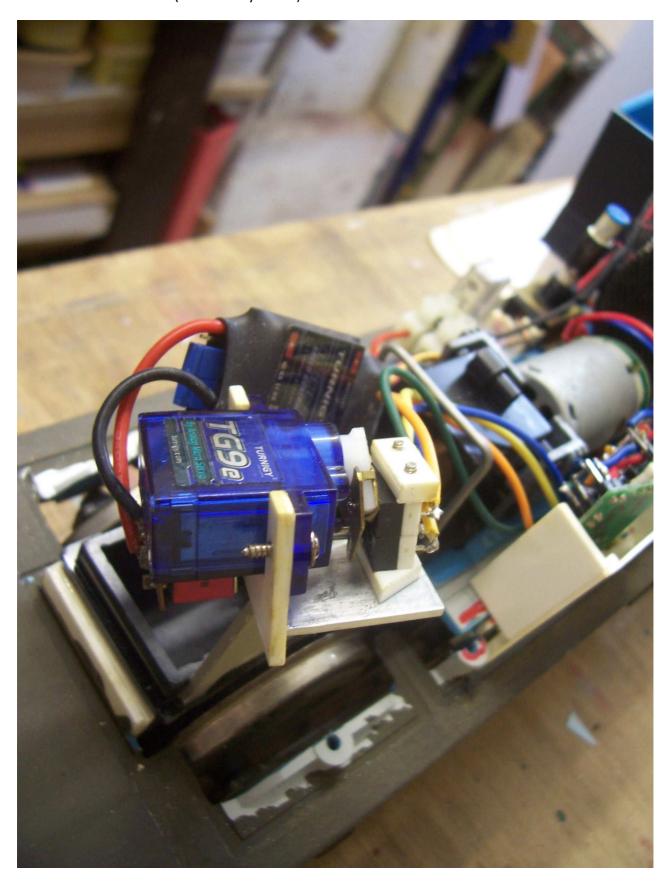
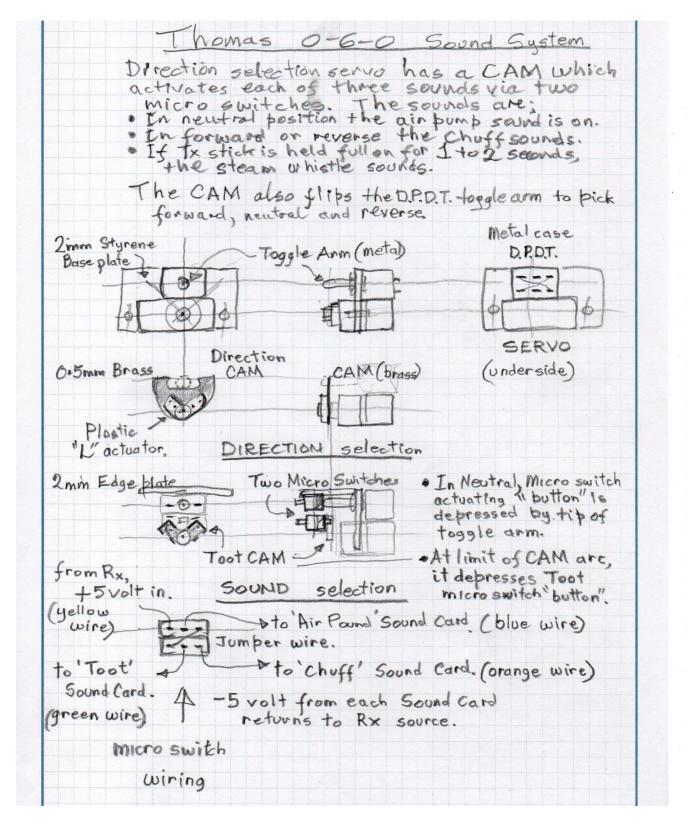
The photo below shows the Servo and hand made bracket to hold the following parts firmly. This purpose made unit includes two Brass Shim actuator CAMS that 'trip' two key parts.

- 1. The toggle switch that selects Neutral, Forward or Reverse.
- 2. The 2 Micro Switches to turn ON /OFF the three sound cards as needed, Westinghouse Pump while Loco is stationary, Chuff for Forward and Reverse and Steam Whistle at extreme travel of Servo Bell Crank (momentary touch) in both Forward & Reverse.



The design requirement notes and sketches.

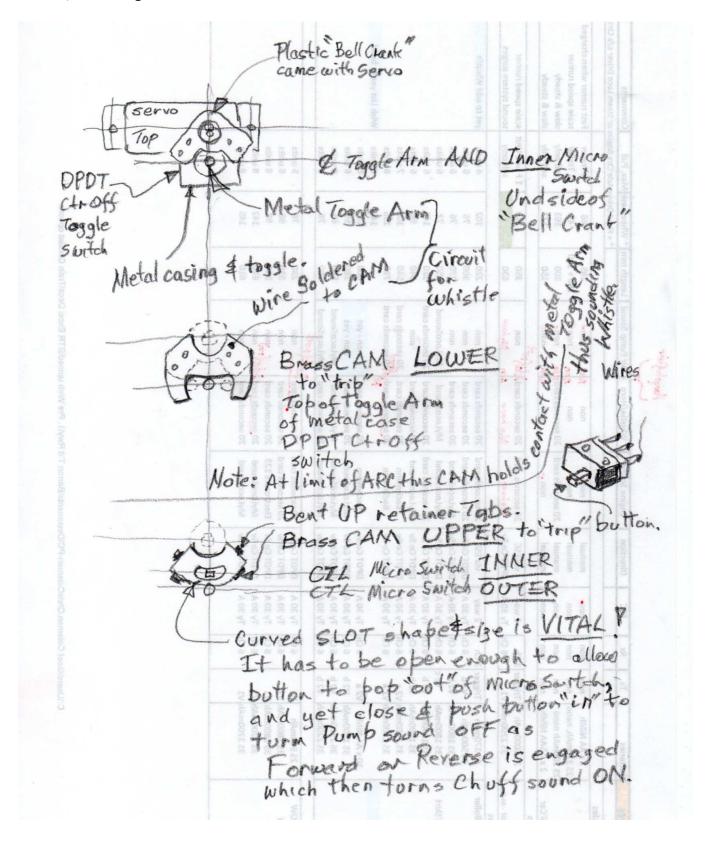


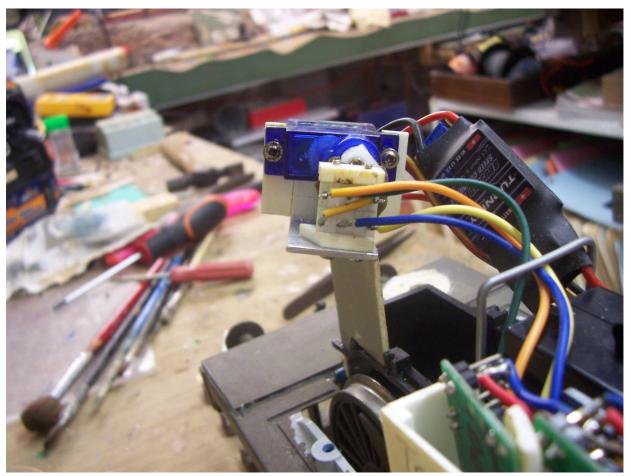
Details of the CAM arrangement consist of;

- The plastic 'Bell Crank' that comes with the Servo as purchased [cut un-needed excess off].
- Two shim Brass overlays, one attached to each face of the plastic Bell Crank.
- One DPDT Centre Off Toggle switch
- Two micro switches.
- Self fabricated 2mm styrene bracket and screws.

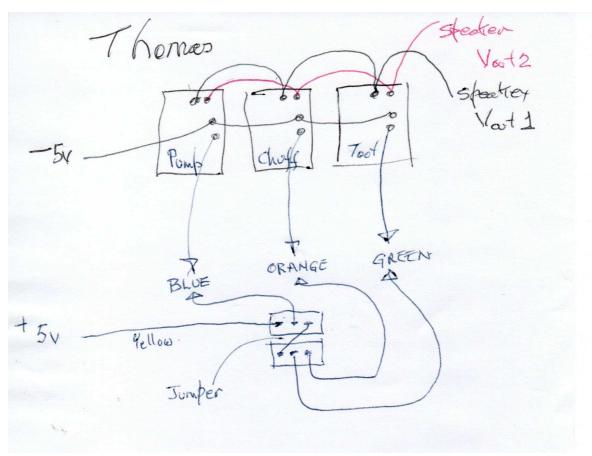
Below is the concept sketch for fretting out the Brass CAMS; Upper and LOWER.

Further, the arrangement of the two Micro Switches

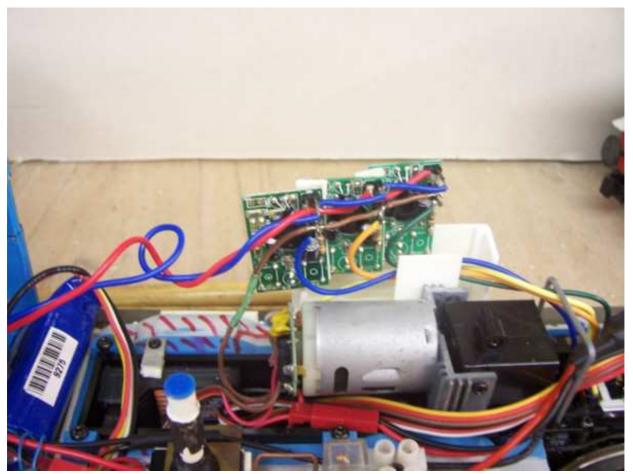




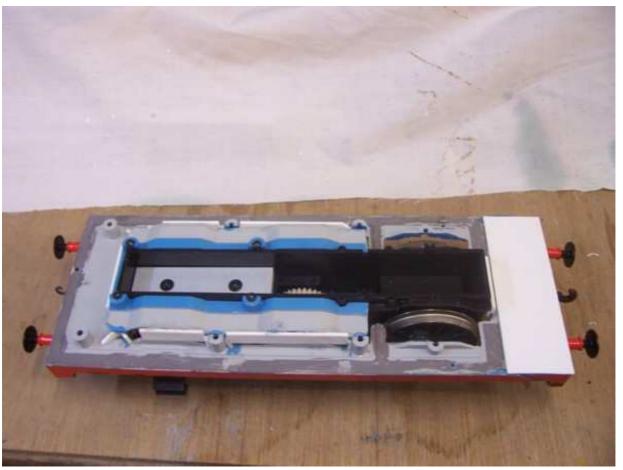
The Unit as built.



The rudimentary circuit diagram, three 20 second duration sound cards interconnected (top of sketch), Two Micro Switches 'cascading' to enable switching when activated by the CAMS.

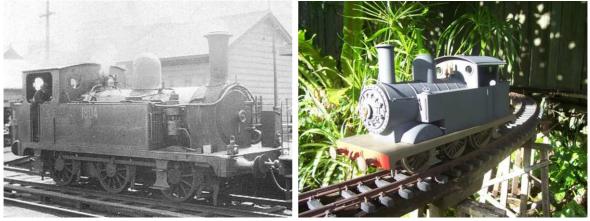


The photo above shows the three Sound Cards.



I inherited a Bachmann THOMAS THE TANK Engine that had been reworked by a fellow modeler.

The Loco No. 1804 was filthy dirty toward the end of her working life, so a weathered finish is appropriate.



Compromises made during this 'look-alike' re-build can be seen in these comparison photos.



Now to start adding the dirty, grime, wear and tear look to this road-ready shunter for the BTR.