Description
Beau Industries made a three-speed capstan motor (300/600/1200 rpm) that can be retrofitted to Ampex 350, 351, and AG-350 transports. The Ampex transport has a two-position speed switch. This bulletin shows one method of modifying motor wiring to avoid modifying the Ampex transport plate or associated wiring.

Required Parts
To perform this modification, you will need the following parts:
- DPDT toggle switch (6 amp @ 125 V_{ac} / 3 amp @ 250 V_{ac} typical)
- Small mini-box (large enough to safely house the DPDT toggle switch)
- Small length of insulated hookup wire (300V 22 AWG typical)
- Rubber insulating grommet
- Scrap aluminum or steel to make offset bracket to secure mini-box to transport
- 6-32 pan-head screws, lockwashers, and nuts

Procedure
Note that the following procedures assume familiarity with basic electronics repair and knowledge of standard safety protocols. They also require some mechanical dexterity and access to appropriate tools. Do not undertake the following procedures if you are unqualified to do so.

Part 1: Prepare mini-box
1. Drill hole for the toggle switch and another hole for the insulating grommet.
2. Install grommet.
3. Install toggle switch.
4. Prepare bracket and attach to mini-box cover (see figure 2).

Part 2: Prepare motor leads and install mini-box
1. Disconnect ac power from the Ampex transport.
2. Prepare 6-pin Cinch-Jones male motor plug (see figure 1).
3. Run 3.75 and 15 ips motor leads into mini-box through grommet. Solder motor leads to toggle switch.
4. Attach cover to mini-box and mount bracket to the transport relay box cover (see figure 2).
Ampex 350 / 351 / AG-350 modification for Beau Industries 3-speed capstan motors

Figure 1. Wiring diagram

Figure 2. Rear view of modified transport