

Subject: Application Note #28
Beckwith Electric M-2001C Tapchanger Control
Using the Dymec models 5843 and 5844 Fiber Optic Link Repeaters

Applicable Products: M-2001C Tapchanger Control with Fiber Optic Communications

Summary:

Dymec upgraded the design of their 5843 and 5844 Fiber Link Repeaters. The new design is not drop in compatible with the old design when used in a fiber loop configuration with a Beckwith M-2001 Series Tapchanger's fiber outputs and an RS-232 null modem cable. The easiest way to differentiate the old and new design is the case and size of the repeater. The old model is referred to as "the silver bullet" and is rectangular and silver in color. The new design is square and black.

Analysis:

Dymec Models 5843HRT, 5844HRT, and variations of those models must have pin 7 removed from the null modem cable being connected to its RS-232 port to communicate correctly in a fiber loop configuration with our M-2001 Series of controls. This pin is used as a proprietary repeat enable/disable and will not allow the repeater to function correctly with our M-2001 series controls if connected to an RTU or PC. A straight through cable can be used with no modification.

Solution:

The following are the recommended settings for these models to correctly communicate in a fiber loop or daisy chain configuration with an **RS-232 null modem cable**:

- Pin 7 of the DB9 cable must be removed on the male end that connects to the Dymec Link Repeater.
- Set both of the DTE/DCE switches to the left (closest to the silkscreen on the printed circuit board). This is a DCE configuration.
- Set all other DIP switches to the right (This is the off position. These functions are not needed.)

The following are the recommended settings for these models to correctly communicate in a fiber loop or daisy chain configuration with an **RS-232 straight through cable**:

- Set both of the DTE/DCE switches to the right. This is a DTE configuration.
- Set all other DIP switches to the right (This is the off position. These functions are not needed.)