Hints for Operating on the Mystic Mountain Railroad

South Providence Yard
South Providence is the largest yard on the railroad with three long, double-ended classification tracks, car storage tracks, and the Outrageous Oil company spur. The scheduling software labels the storage area as "Storage 1, 2, 3" - you can put any car on any storage track. Just keep the directional crossover clear. Finally, the track from Park Junction up to the train storage shed can be used for classification/storage (caboose track, maybe); be alert to the steep grade here.

Sawmill area
The sawmill area has a "Logs In" track, a "Lumber Out" track, a run-around track, and the *ACME mfg*. spur. The *Logs In* track is quite long and can be useful during switching. The "Lumber Out" track may also serve for equipment and supplies deliveries to the sawmill.

Outaluck area (plus Union Junction)
Outaluck serves as the end point of some locals from both South Providence and North End. There is a wye here to turn engines/trains (across the lift bridges). The Outaluck area has a Team track, the "4M mine" spur, and a run-around/passing siding. Just across the lift bridges is Union Junction which has a Team track and the interchange with the Union Pacific RR. When using the wye or switching the UP interchange, be aware of the possibility of trains inside the mountain. For the time being, the mine will not be included in switching operations due to the difficulty of reaching it.

North End area
North End yard has three tracks for classification, storage, and run-arounds. The turntable (manually turned) can, or course, be used to turn engines. Car storage is on the "N.E. back track" The turntable also has a "thru track" which may also be used to store cars. North End has a freight station track, a spur onto the wharf, and a spur to the Sierra Club Logging Camp.

Mystic
In addition to the Team track, Mystic has a balloon track that can be used to turn the locomotive or train and also be used for switching operations. Lastly, the balloon track could be used as a staging track.

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Coupling/Uncoupling
The Mystic Mountain has standardized on hook-and-loop (aka "LGB") couplers. These proved most reliable at staying coupled when they are supposed to and being easy to uncouple. Uncoupling is by passing a thin "blade" of an uncoupling tool between couplers while pulling them apart. When coupling, ensure that both hooks engage with the opposite loop.

Radio Controls

Train Engineer Throttle	**Revolution Throttle**
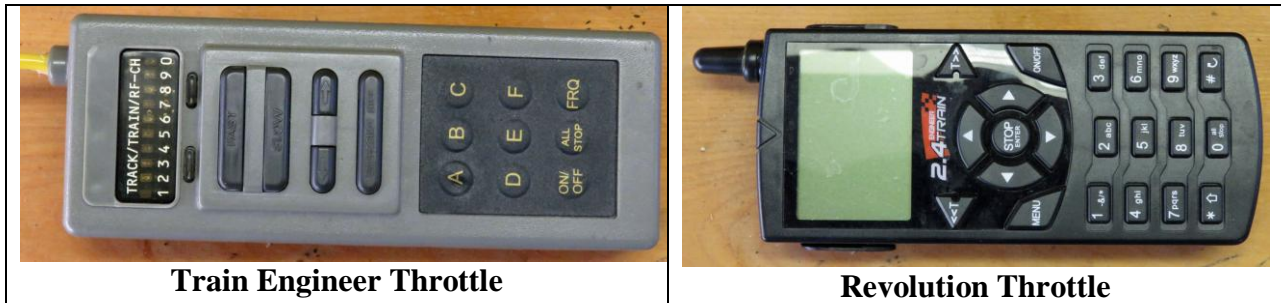
Engines are all battery powered with radio control and sound. Radio control is a mix of Aristo Train Engineer and Aristo Revolution. On either, select the train to control by engine number. On *Train Engineer* both direction arrow buttons <u>reverse</u> the direction, not set the direction. On *Revolution* the direction buttons select forward or reverse. For sound: #1 is the whistle, #2 is the bell, and #3 is steam blow down. Some engines blow grade crossing whistles when #1 is pressed (also when passing a station); on others the whistle blows as long as the #1 button is pressed. On some engines, the #2 (bell) button turns the bell ringing on and off; on others the bell will ring for 5-10 seconds and then stop. Some engines have self-contained batteries; others have batteries in a trailing car which must remain connected to the engine and is not called out in switch lists or included in car counts. Batteries usually will have enough energy for a complete operating session. If a blue light under the engine, tender, or battery car begins flashing, a new battery will soon be necessary (It is much better to change batteries at your convenience rather than when the train stalls inside a tunnel.)
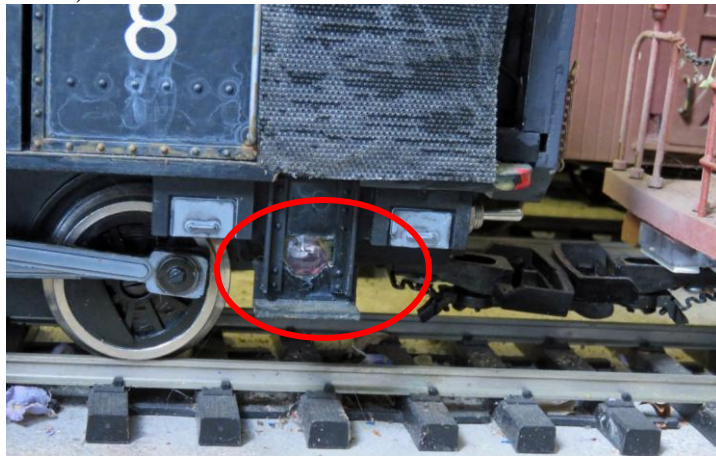
With both systems, *Emergency Stop* only stops your train. Most engines have some momentum. *Revolution* systems have bi-directional radios; if out-of-range, trains will respond when they come back in range. *Train Engineer* systems are unidirectional; if the engine is out of range, it does not receive the signal; the command needs to be repeated when the train is back within range.

Turnout Control

Most turnouts are controlled with hand throws. The exceptions are: a) three switches at Outaluck, b) switches at North End that are hard to reach, c) the upper and lower balloon tracks inside Mystic Mountain, and, d) the wye at Outaluck (also hard to reach). Outaluck switches are

controlled electrically (using Tortoise motors) via a small control box to the left of the flagstone bench. Remote turnouts at North End are air controlled via a panel on one of the posts. A small compressor under the mountain at North End will cycle on and off as needed for air pressure.

Outaluck Switch Control

North End Switch Control

Both wye switches at Outaluck are controlled by air via a single control at the right side of the lift bridges.

Outaluck Wye Switch Control

The Mystic Mountain balloon tracks (aka reverse loops) are setup to throw automatically via a magnet under each engine as it approaches. A control box on one of the posts allows manual control of both upper and lower balloon track switches for switching operations. A second set of buttons under the Mystic Team track provides duplicate control of the upper balloon track loop to support switching operations at Mystic for people standing behind the Team track.

Mystic Mountain Loop Switch Control

Upper Loop Switch Control Under Mystic

Mainline dispatching

The Mystic Mountain RR doesn't use dispatching or time tables to control mainline traffic. Engineers should just be aware of other trains coming their way and be cooperative. You could consider that the whole railroad is operating within yard limits. Passenger trains have priority over freight (nostalgic, huh?). Local switching jobs should try to clear the mainline as quickly as possibly when a passenger train or express freight approaches.

Miscellaneous

The number one cause of derailments is forgetting to throw a switch, so check turnout alignment as you approach. Early in the session, be alert that point throw completely - there may be dirt or grit in the point area. There may also be gravel in the frog and guard rails. And please return turnouts to the mainline when done switching.