

Legacy with Vintage Gilbert S-gauge track Layout

- a. My track layout is 3 concentric loops of 1950s era Gilbert tubular track on Gilbert rubber roadbed. The layout is on a 10ft x 10ft raised platform that I built. All curves are R20.
- b. Each loop is connected by a set of Gilbert 720A remote control switches and each loop is electrically isolated at those switches via fiber pins.
- c. Each loop has its own through-siding connected to the loop via Gilbert 720A switches.
- d. I use a single 14 gage common ground bus wire around the layout connected to each loop at four equidistant locations via 20 gage feeder wires
- e. I use 3 separate 16 gage powered bus loops around the layout to feed each of the 3 track loops at four equidistant locations on each loop via 20 gage feeder wires.
- f. I use two Z4000 transformers. The Z4000 transformers are in phase. I set one of the outputs to 18 volts to power my 20 Gilbert 720A switches. I use the other 3 outputs to power track. I use an Atlas 215 SPDT switch set to route the three other Z4000 power outputs amongst the 3 loops. So, I can power all loops with one Z4000 output. Or I can power each loop via a dedicated Z4000 power output. Or combinations thereof.
- g. I use a single bus terminal strip to connect all grounds together ... layout ground bus wire, transformer grounds, and Gilbert 720A switch grounds, Legacy signal from Legacy Command Base.
- h. For variable AC outputs to run my conventional AC engines independently on the 3 loops, I set the Atlas 215 SPDT switches to route each of the three Z4000 power outputs to individual loops. Or run one conventional engine on all loops using just one Z4000 output.
- i. For constant 18-volt track operations I can set the Atlas 215 to use only one Z4000 power output or, for larger current train consists, I can set the Atlas 215 to power individual loops with dedicated Z4000 power outputs.
- j. I have 2 reversing loops. One on the inside loop. One on the outside loop. I use Atlas 200 snap relays wired to my Gilbert 720A switches to change track polarity in the loops.
- k. As a result of OGR forum reading, I added transient voltage suppression (TVS) diodes at all of my track power lock-on's ... 4 per loop. I also added inline 5-amp fuses to each of the Z4000 track power outputs between the transformer and the Atlas 215.
- l. I plug the Legacy Command Base into a home wall outlet other than the one the transformers are plugged into.
- m. I do not plan to run my conventional locos via Legacy Command Set or the DCS ... too cumbersome running variable voltage conventional locos with constant voltage Legacy/TMCC/DCS locos. When I want to run conventional loco, I'll just isolate one of my loops via the Atlas 215 and power them directly via Z4000 throttle.