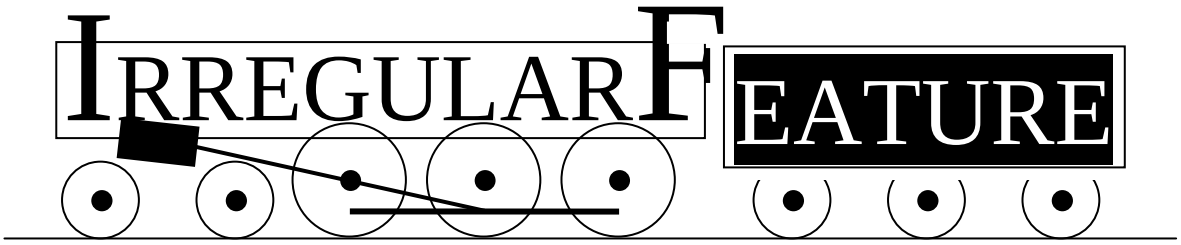

Thinking outside the square

It always amazes me how many people try to stifle ideas and experimentation from progressing with a statement along the lines of “you can’t do that” or “nobody else has done it like that so it can’t be done”. When I’m put in a situation like this I’m always willing to listen to their thoughts and reasoning but internally my usual response is to question both their credentials and evidence and award points accordingly. By credentials I mean are they experienced in the field of whatever it is that “can’t be done” or are they just relaying someone else’s misinformed beliefs or experiences? If it is the latter then a large portion of the available points are lost instantly as things can often get adapted or lost to suit their thinking in the transfer. When looking at the evidence I like to see if both the situation and the method are identical, if not then points are lost dependent on the differences, if they are the same then I will see if there is something in the method that I can modify as I am not one to give up that easily just because someone else can’t solve it. I know that most of these prophets of doom think they are doing the right thing and don’t mean to lead us astray but there are times when they should just admit that they don’t know everything.

The reason behind these comments is that over the last couple of years I have had to go through this process a few times as my thinking has been a little too radical for the likes of some. The first was the soldering of all the rail joints on Paradigm, according to the experts “the track will expand and push out of shape” of course the passing of time has sent this furphy to the wall because the frame is steel and will expand at about the same rate as the track and the between-module-joints allow for any discrepancy. I should point out here that the modern prototypes often use continuously welded rail and the old layout had soldered joints on the two end modules. These were the smoothest and most reliable tracks on the whole layout and we all know how hard it was to keep that layout running.

More recently I have been told that you can’t run DCC and analogue on the same layout at the same time because if a loco crosses the gap it will “blow up the decoder” and that “nobody does it”. Using my formula I gave full marks for credentials as this person has played with DCC for a few years and ought to know, I then went to step two, no real evidence was given only that it “can’t be done”. Believing that it could be done but heeding this advice I did some research myself. I started by searching the NMRA web site for DCC subjects and joining the DCC SIG (special interests group) and posted the question there. I got several replies, some said don’t do it others warned of the problems but said it “has been done” and “can be done”. One, Wayne Roderick, even sent me the URL for his web site with the circuit that he uses on his layout to connect 3 DCC boosters with 2 radio and 2 tethered analogue controllers together. Further investigation took me to the NMRA DCC standards pages where I found out that the transition between DCC and analogue is covered and is part of the configuration variables of the decoder! If the loco crosses to an analogue signal of 12 volts in what would be the reverse of its current direction (what the “experts” would call deadly to the decoder) the loco will come to a stop at the set deceleration rate and with all lights, sound, etc that were on at the time still working and will wait for a DCC signal or until the voltage has dropped to 0 volts for at least 500 milliseconds when it will then behave as for normal analogue control. If the analogue voltage is set for the same direction the loco will swap to analogue control and adjust to the new speed to the best of its ability at the set acceleration/deceleration rate. This method is used to stop and start locos at signals and stations and for reverse loops. So much for the “it can’t be done”.

Now for the problems, it would seem that the biggest risk is to the analogue controller as the AC signal could destroy the output transistor. A choke at the output of the analogue controller would block the AC signal and prevent this. Investigation on the net has suggested a “digital circuit breaker” for this job and typing that into a Google search took me straight to the Lenz site for their, catalogue number LT100 digital circuit breaker. So, not only is it possible but Lenz sell a product for the purpose. Funny that the “expert” who uses and recommends the Lenz system didn’t know about it and could not find it when searching the net before telling me “it can’t be done”.

Another potential problem is the old favourite, common earth return; this can wreak havoc with DCC and is probably the main cause of decoder destruction as when locos cross booster districts they can get double voltage. This will not concern us as the type of common earth already on both our layouts is what is recommended for DCC.
It just goes to show that we must learn to think outside the square more often and not just follow those who try to keep us inside.

Catch you down the track....Tony Mikolaj.