

THE PULSE OF DCC

Hosted by Mark Juett

Using DecoderPro

article and photographs by Mark Juett

One of the great features of DCC standards is that the people on the committee and working group who developed, designed, and set the standards gave us great flexibility. For their volunteer work, we are all indebted. Previous command control systems did not have the level of sophistication or flexibility that we have today. The foundation of much of that flexibility is the concept of configuration variables (CVs) — so-named because the variables in these fields configure how the DCC decoder works. As an example, changing CV 02 changes at what point any locomotive will start as the speed step on the throttle is increased. Thereby, any decoder with any locomotive can be set such that as the throttle is increased to the first speed step, the locomotive just begins to move. That eliminates jump-starts and a dead space in the throttle range. Likewise, CV 05 sets the maximum voltage applied at full throttle such that one can limit the maximum speed at full throttle. There are many CVs used

to setup and configure any decoder and a great number of functions. The complete list of CVs and their descriptions are found in NMRA Standard 9.2.2, which you can access on the NMRA website.

I have heard some folks talk about programming their decoders. I'm not being deliberately picky when I say the people who design and manufacture the decoders have done the programming. What we as users are doing are changing and setting the Configuration Variables that the decoder program reads and acts upon. It is a little akin to your microwave. You key in some numbers to instruct the microwave how long and at what intensity to cook or warm your food. The manufacturer of the microwave has written a program to act upon the instructions you have given it through the numbers delivered via the keypad (apologies to all of you who are programmers for the poor analogy).

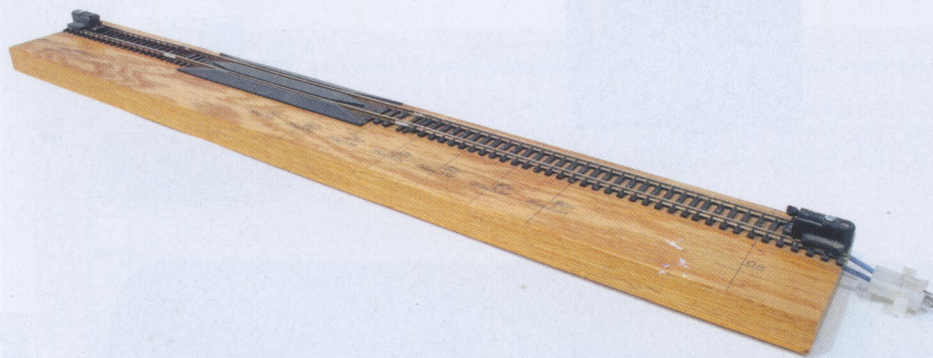
I was first introduced to Java Model Railroad Interface (JMRI) at the 1998 NMRA National Convention. I download-

ed a copy but did not do much with it for many years. Several years later, I downloaded a current version for the expressed purpose of using DecoderPro. Let me take a moment to thank the league of volunteers who donate their time to JMRI so that you and I may reap the benefit of their work. This article is focused on DecoderPro, but JMRI has so much more in PanelPro and OperationsPro that is of benefit. I have started using OperationsPro to set up a car forwarding system and generate a switch list. It is relatively easy to use, is very flexible, and it is *free!* In addition, there are features in PanelPro to create control panels right on your computer screen that can control many functions on your model railroad. It also interfaces to C/MRI and Layout Command Control (LCC), which has recently been introduced.

DecoderPro is an extensive program; there is much to it and it does a lot. The learning curve is not steep — it is easy to understand and use. I am going to give you an introduction and overview.

DecoderPro is used to help us set CVs to get the decoder to perform as we desire. Each time a manufacturer introduces a new decoder, this team of volunteers writes new software to give us the functionality to set up and change the CVs for the new decoder. After reading this article, go to <http://jmri.sourceforge.net/> to learn more about DecoderPro.

Key advantages that I find in DecoderPro are the organization of func-



DecoderPro 3: All Entries

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ID	Model	Icon	Road Number	Road Name	DCC Address	Manufacturer	Owner	Decoder Model
AMTK 251	E8		251	Amtrak	251	Walthers	Stephen Priest	E8
AMTK 303	F40PH		303	AMTK	303 ?		Stephen Priest	TSU-KT1000 Kato F40PH
ATSF 1150	GP20		1150	ATSF	1150	Walthers	Stephen Priest	P2k GP20
ATSF 119	Slug		119	ATSF	1312	HALLmark	Stephen Priest	MC2H104P9
ATSF 1239	SW8		1239	ATSF	1239	Walthers	Stephen M. Priest	P2k SW8
ATSF 1241	SSB 1200		1241	ATSF	1241	Walthers	Stephen M. Priest	P2k SW8
ATSF 1312	GP7		1312	ATSF	1312	Hallmark	Stephen Priest	SD45-2
ATSF 1510	S4		1510	ATSF	1510	Atlas	Stephen Priest	ATLS4
ATSF 19	F7A		19	ATSF	19	Athearn	Stephen Priest	TSU-GN1000 EMD 645 (Non-Turbo)
ATSF 200C	F3A		200C	ATSF	200	Walthers	Stephen M. Priest	P2k F3A
ATSF 201	F3A		201	ATSF	201	Athearn	Stephen Priest	F3
ATSF 2061	GP7u		2061	ATSF	2061	Athearn	Stephen Priest	GP7
ATSF 21B	F3B		21B	ATSF	21	Athearn	Stephen Priest	F3
ATSF 2230					2230		Stephen Priest	GP9
ATSF 2233	GP7		2233	ATSF	2233	Walthers	Stephen Priest	GP7
ATSF 2257	GP9u		2257	ATSF	2257	Athearn	Stephen Priest	GP9