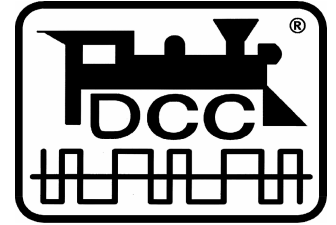


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## Minutes

The fall DCC meeting was held Friday, October 18<sup>th</sup>, at 10:00 am, in Durango, Colorado.

### 1.1. Review of Summer Meeting

No corrections.

### 1.2. Topic 9910241 – Analog Output Instruction

Steve did not have enough time to prepare a demonstration. Tabled till Toronto.

### 1.3. Topic 0106171 – Equipment Control Instruction (ECI)

(was Power Station Control Instruction)

Discussion centered around using Ops Mode Programming (Programming on the Main) to specific CVs for ECI. Experimental CVs were assigned, and Karl Kobel wrote the attached definitions.

### 1.4. Topic 02062001 - Decoder Identity

Bob Jacobsen's report on Decoder Identity was discussed thoroughly. Bob suggested adding two more CVs to be used with CV 7 and CV 8. These new CVs would define the model and features set of a decoder, and identifies the minor version or build number. During the discussion, it became clear that this is the same information that different manufacturers put in CV 7. After some discussion, it became clear that no manufacturer was willing to change their present use of CV 7. Bob's proposal was accepted and approved with the following compromise:

**CV 8** – Manufacturer ID

**CV a** – Decoder Type (SW features and CVs supported)

**CV b** – Model Number (HW features)

**CV c** – Build Number (HW or SW)

**CV 7** – for compatibility, it must contain the same value as one of the following: CV a, CV b, CV c.

### 1.5. Topic 02101401, RP-9.1.1 Decoder Space

A proposal was received from Reinhard Mueller for better fit of decoders into rolling stock *[including locomotives]*. This proposal will be discussed in detail at the Spring meeting.

### 1.6. Bi-Directional Communications

During testing, two manufacturers existing decoders failed to respond when using the present form of bi-directional communications.

#### 1.6.1. Standard S-9.2 & Existing Decoders

As a result of the research and experimentation, a change to the wording of S-9.1 is required. In the table at line 20, S-9.2 states that the packet ends with the 'packet end bit'. The corollary of this is that a different protocol can be sent immediately after the 'packet end bit'. Research has shown that most decoders require at least 25 mS of the next preamble bit to properly detect the packet end bit. That is, it takes 25 mS to recognize the packet end bit.

### 1.6.2. Change to S-9.1 for Bi-Directional Decoders

The minimum time a decoder must operate with out power needs to be defined. The purpose of this is twofold, first, to allow consistent operation over dirty track, and second, to allow proper operation in bi-directional mode.

### 1.6.3. Changes to RP-9.3.1

In Line 30 of RP-9.3.1, strike “allows detector...”

### 1.6.4.Changes to RP-9.3.2

Possible fields for bi-directional data: Sand Remaining, Air Pressure, Resigor Pressure, Line Pressure  
Load definition needs sign bit  
Distance (Units)

*A motion was made to move Draft RP-9.3.1A to a Tech Note*

Unanimous

*A options were made on how to proceed with Bi-directional Communications if Backward Compatibility is not possible. The third was made into a motion*

- A. Move forward anyway
- B. Abandon Bi-directional communications
- C. Selectively enable and disable bi-directional communications Aye – 6, Nay – 0, Abs – 2

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The following topics are for reference only (so I don't forget them.)

## **1.7. Topic 0107122 – User Defaults**

Jim Scorse to implement use. (demonstration in Toronto).

## **1.8. Topic 0104191 – CV Table Structure Proposal**

Tabled till Toronto meeting (Summer 2003)

# Equipment Control Instruction Experimental CVs

## **Configuration Variable 100**                      **Track Voltage**

*This Configuration Variable is used in Power Stations Only.*

Track Voltage value in tenths of a volt.

Range: 5.0 to 22.0 Volts. A value of 5 represents 0.5V, and a value of 220 represents 22.0V.

Two identical programming packets are needed before the device shall modify this configuration variable.

These two packets need not be back to back. However any other packet to the same device will invalidate the write operation. (This includes broadcast packets.) If the device successfully receives this second identical packet, it shall perform the write operation and provide an audible or visual feedback.

Documentation will state the actual range and resolution. Any voltage setting not in the range or resolution will be rounded to the nearest actual setting.

## **Configuration Variable 101**                      **Maximum Track Current**

*This Configuration Variable is used in Power Stations Only.*

Maximum Track Current value in tenths of an Amp.

Range: 0.5 to 25.0 Amps (OK, maybe 12.0). A value of 5 represents 0.5A, and a value of 250 represents 25.0A.

Two identical programming packets are needed before the device shall modify this configuration variable.

These two packets need not be back to back. However any other packet to the same device will invalidate the write operation. (This includes broadcast packets.) If the device successfully receives this second identical packet, it shall perform the write operation and provide an audible or visual feedback.

Documentation will state the actual range and resolution. Any voltage setting not in the range or resolution will be rounded to the nearest actual setting.

## **Configuration Variable 102**                      **Short Circuit Recovery Delay**

*This Configuration Variable is used in Power Stations Only.*

Delay value in tenths of a second.

Range: 0.0 to 25.0 seconds. A value of 0 represents zero seconds, and a value of 250 represents 25.0 seconds

Two identical programming packets are needed before the device shall modify this configuration variable.

These two packets need not be back to back. However any other packet to the same device will invalidate the write operation. (This includes broadcast packets.) If the device successfully receives this second identical packet, it shall perform the write operation and provide an audible or visual feedback.

Documentation will state the actual range and resolution. Any voltage setting not in the range or resolution will be rounded to the nearest actual setting.

## **Configuration Variable 103**                      **Short Circuit Shutdown Delay\***

*This Configuration Variable is used in Power Stations Only.*

Delay value in hundredths of a second.

Range: 0.01 to 2.50 seconds. A value of 1 represents 0.01 seconds, and a value of 250 represents 2.5 seconds.

Two identical programming packets are needed before the device shall modify this configuration variable.

These two packets need not be back to back. However any other packet to the same device will invalidate the write operation. (This includes broadcast packets.) If the device successfully receives this second identical packet, it shall perform the write operation and provide an audible or visual feedback.

Documentation will state the actual range and resolution. Any voltage setting not in the range or resolution will be rounded to the nearest actual setting.

## **Configuration Variable 104**                      **Power Station Configuration.**

*This Configuration Variable is used in Power Stations Only.*

Bit 0 = Power: "0" = off, "1" = on.

Bit 1 = Auto Reverse (if equipped): "0" = on, "1" = on.

Bit 2 = Output Polarity: "0" = Normal, "1" = Reverse polarity.

Bit 3 = Audible Alarm (if equipped): "0" = off, "1" = on.

Bit 4 = Advanced feedback track cutout: "0" = No cutout, "1" = Cutout enabled.

Bit 5 = Reserved

Bit 6 = Reserved

Bit 7 = Reset to Factory Defaults: "0" = Do not reset to factory defaults, "1" = Reset to factory defaults.

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\* Short Circuit Shutdown Delay is the time between the short circuit detection and the shutdown of the Power Station

Two identical programming packets are needed before the device shall modify this configuration variable. These two packets need not be back to back. However any other packet to the same device will invalidate the write operation. (This includes broadcast packets.) If the device successfully receives this second identical packet, it shall perform the write operation and provide an audible or visual feedback.