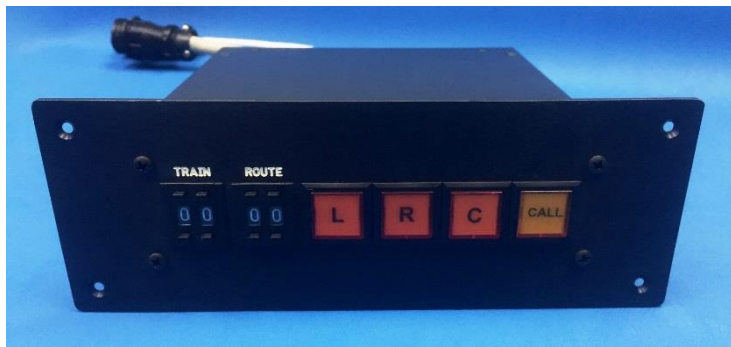




## VETAG CODE CONTROL BOX P/N 6950 0000 5503



### Features

- Relay output with “Over Loop” status
- Relay output with “Health CCB” status
- Opto-coupler input for CCB test function
- Opto-coupler input for CCB Lamp test
- External software download connector
- Push Buttons with LED indicators
- Programmable CCB software configuration

### Benefits

- Compact housing
- Customized Front Plate based on Customer needs
- Input Voltage 19-42VDC
- EN 50155 and IEC 61373 complaint

### Introduction

The Code Control Box 5503 is part of the VETAG Vehicle Set. The other components of this vehicle set are the Transponder and Connector Assembly, the Transponder to CCB Cable and the CCB Input/Output Cable. Due to the new design of the housing with dimensions of 6.6” x 2.1” x 6.5” (WxHxD), this unit is compliant with today’s limited available space in the dashboard of the LRV cab.

### Basic Functionality

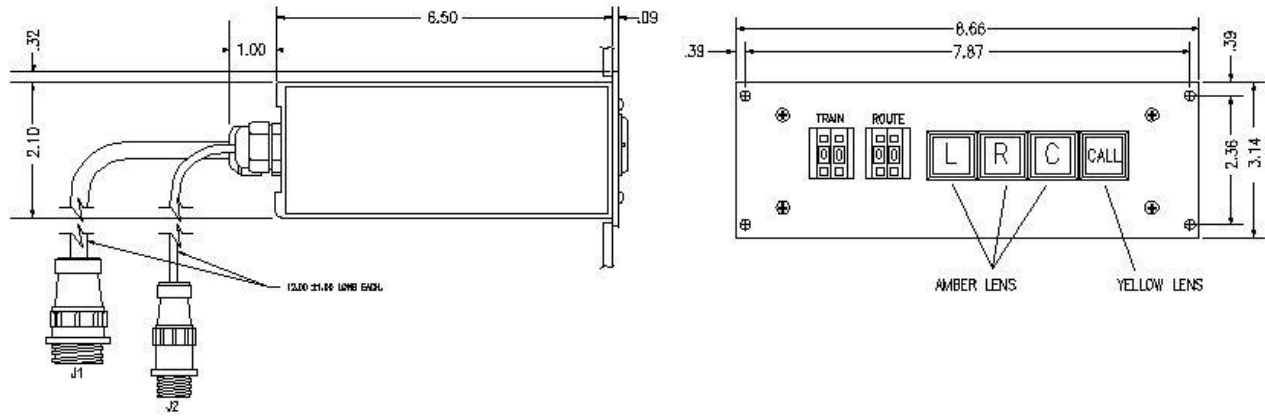
The Code Control Box Logic Card is basically an Electronic Data Switch with 32 Inputs and 32 Outputs. This Logic Card processes up to three types of data messages referred to as “packets” to be transmitted to the Transponder. Which “packet(s)” is to be transmitted depends on the location of the Code Control Box in a train consist as well as the position of the “Operator’s Key”. When the “Operator’s Key” is placed in the “Operate” position, the Code Control Box located in that cab is assigned as “Lead CCB”. In this case, the CCB Logic Card transmits a pre-defined “packet(s)” to the Transponder. When the CCB is not the “Lead Cab” a different pre-defined “packet” is transmitted to the Transponder.

### Software Configuration

The Code Control Box Application Software is configured according to the VETAG Data Truth Table. This table is defined by the end-user of the VETAG System. Should the configuration change, we have developed a programmable CCB software configuration which enables our engineers to configure/change the Code Control Box Application Software as needed. The software upload connector located on the rear panel of the CCB housing enables easy access to update the new CCB configuration file.

### Installation

The rear panel of the Code Control Box contains three (3) connectors. Connector X1 is a 28 pin CPC female connector on a cable end for connecting the Code Control Box to the Transponder. Connector X2 is a 9 pin CPC connector on a cable end for connecting the Code Control Box to the vehicle power and input/output signals. Connector X3 is a 9 pin Sub-D connector for connecting the Portable Test Unit (PTU) when the Code Control Box Application Software needs to be updated.



### Code Control Box Specifications: P/N 6950 0000 5503

Outputs to Transponder	19x Parallel Outputs
Inputs from Transponder	1x Parallel Input (VX, over-loop signal)
Outputs to Vehicle	2x Relay Contact Outputs (free configurable per end-user requirements)
Inputs from Vehicle	3x Opto-coupler inputs (free configurable per end-user requirements)
Interfaces	RS-232 for downloading firmware and debug monitor functions
	RS-485-Interface with ESD and transient protection
Optional Add-On Modules	IBIS-Interface, Ethernet-Interface, Can Bus-Interface, Data Logging Unit
Power Requirements	Power Consumption 24 VDC 600mA while Transponder is transmitting
	Input Voltage 19 ~ 42 VDC
Environment	Temperature -13 ~ +158 °F (-25 ~ +70 °C), Operating
	Humidity -95% @ 104 °F (40 °C) (non condensing), Operating
	Vibration Resistance 1 Grms, IEC 60068-2-64, Random, 5 ~ 500 Hz, 1 Oct/min, 1 hr/axis, Operating
	Shock Resistance 20 G, IEC 60068-2-27, half sine, 11 ms, Operating
Physical Characteristics	Construction Aluminum housing
	Mounting Flush mounted in vehicle dashboard
	Dimensions (WxHxD) 6.6" x 2.1" x 6.5"
	Weight 2.4 lb (1.08 kg)

### Ordering Information

Part Number	Description
6950 0000 5503-xx	VETAG Code Control Box