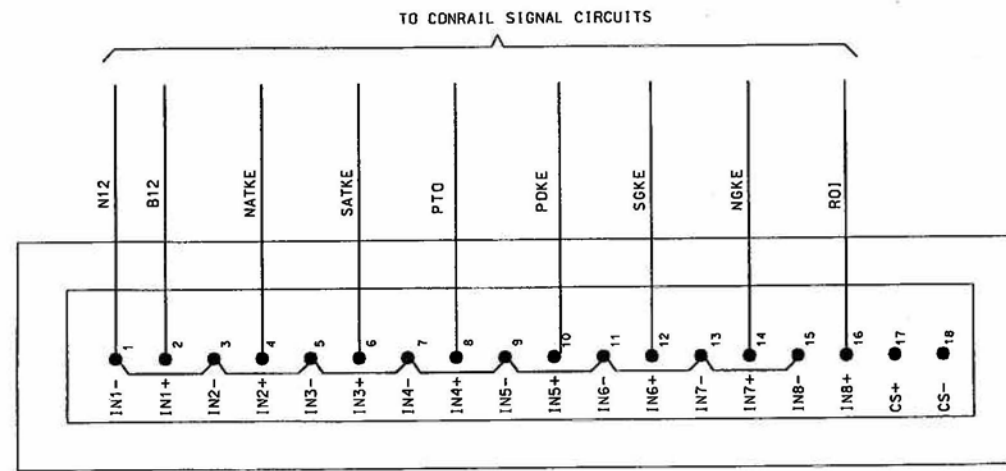


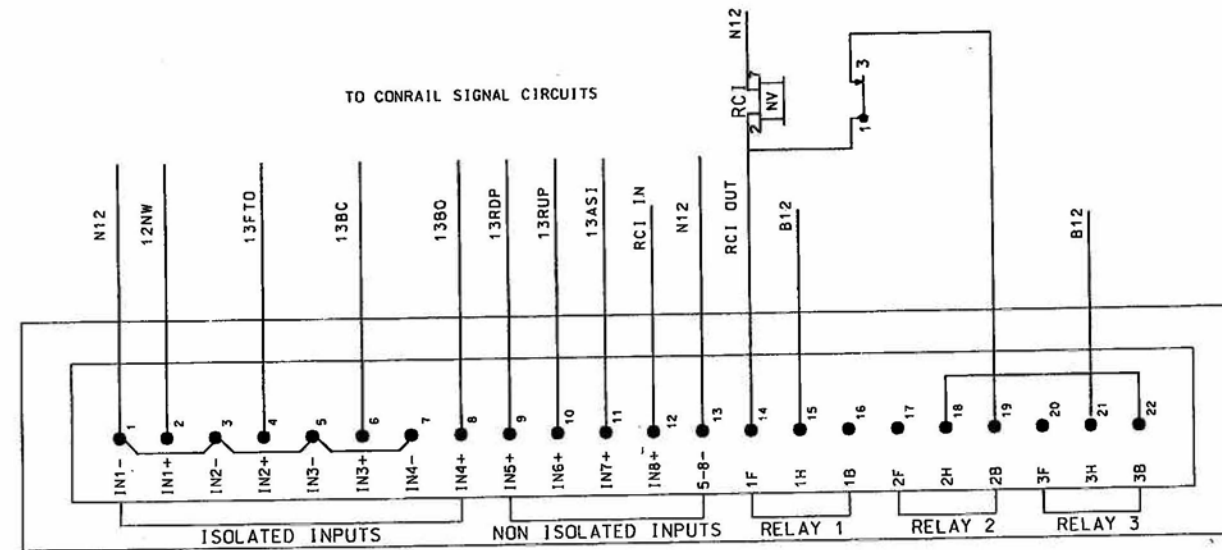
DCA-13-MR-002
Derailment/Hazardous Materials Release
Paulsboro, NJ
November 30, 2012

ATTACHMENT 20

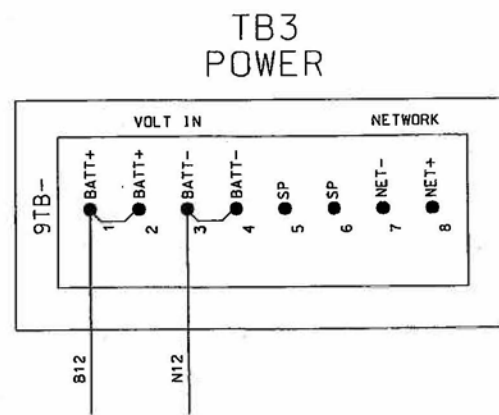
Micro Data Analyzer Circuit Detail



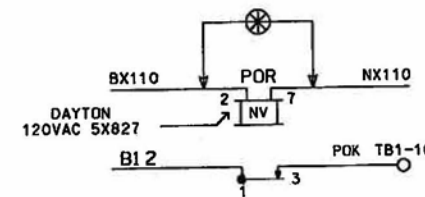
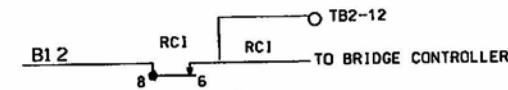
TB1
ANALOG INPUTS



TB2
DIGITAL IN/OUT



TB3
POWER



VOICE ANNUNCIATION

RC1 LOW TO HIGH* "CONRAIL PAULSBORO NEW JERSEY MOVEABLE BRIDGE CLOSING OVER
EMERGENCY STOP TONE 137# " CONRAIL PAULSBORO NEW JERSEY MOVEABLE BRIDGE CLOSING HALTED OVER
13BC HIGH " CONRAIL PAULSBORO NEW JERSEY MOVEABLE BRIDGE CLOSED OVER
13FTO LOW TO HIGH" CONRAIL PAULSBORO NEW JERSEY MOVEABLE BRIDGE FAILED TO OPERATE OVER
13BO LOW TO HIGH "CONRAIL PAULSBORO MOVEABLE BRIDGE OPEN OVER"
RADIO FREQUENCY 161.070

INPUTS TO BE MONITORED

- PTO PERMISSION TO OPERATE
- 13ASI INITIATE OPEN/CLOSE
- 13RUP RAILS UP
- 13RDP RAILS DOWN
- 13BO SWING SPAN FULLY OPEN
- 13BC SWING SPAN FULLY CLOSED
- 13FTO SPAN-FAILED TO OPEN
- 12NW WEDGES DRIVEN
- ROI REMOTE OPEN
- NATKE NORTH APPROACH TRACK
- SATKE SOUTH APPROACH TRACK
- 1TKE DETECTOR TRACK
- SGKE SOUTH SIGNAL CLEAR
- NGKE NORTH SIGNAL CLEAR
- POKE POWER OFF

BCR Bridge Close Relay
BOR " OPEN "

OUTPUT 1 ENERGIZED WHEN RCI ENERGIZES
5 SECONDS TIMER

OUTPUT 2 RCI RELAY STICK WILL BREAK WITH 13FTO HIGH.
13BC HIGH OR EMERGENCY TONE
REQUEST ON 10 SECOND TIMER

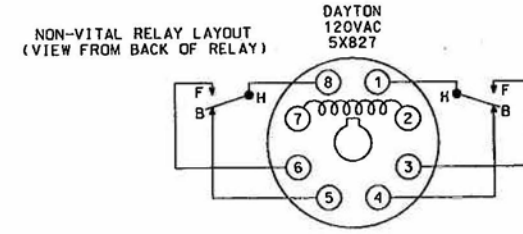
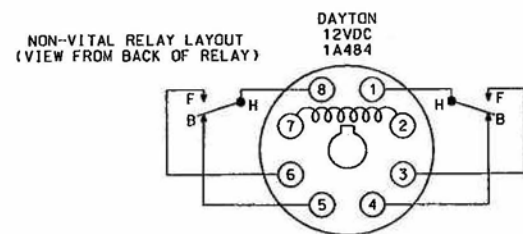
TIMER SETTING RELAY 1 5 SECONDS

OUTPUT 3 BRIDGE REQUEST OFF TONE SEQUENCE 137# 5 SECONDS

BRIDGE CLOSED TONE SEQUENCE 137#
BRIDGE STOP TONE SEQUENCE 137#

MDA SOFTWARE CONFIGURATION MANAGEMENT TABLE			
APPLICATION	FILE NAME	DATE	DESCRIPTION
CPU EXEC	LD_MICRO2.S19	5/3/02	CPU EXECUTIVE
CPU MAIN APP	RCBRIDGE3.S19	7/10/02	CPU MAIN APPLICATION
CPU LOC APP	PAULSBOR.S19	/ /02	CPU LOCATION APPLICATION

ROI R Remote Operation Relay
RCIN Radio Control Relay
FTON FAILED TO OPERATE



NEW WORK
NAS/WBY 11-01-03

The operation of any circuits and equipment shown herein must be checked by point to point breakdown and complete operational testing of the system (or sections of the system) into which they are connected.

REVISIONS	DR: NAS/WBY	NORTH AMERICAN SIGNAL INC MICRO DATA ANALYZER CIRCUIT DETAIL CONSOLIDATED RAIL PAULSBORO BRIDGE	FILE
DES: NAS/WBY	RCBRIDGE.DGN		
CHK: NAS/TPT	DRAWING NO.		
APPR:	CONRAIL-01		
DATE: 10-22-02	SCALE: NONE		SH. 1 OF 2