

Date: Mar 24, 1994 12:11 PM  
From: OIC  
To: BB  
Copies:  
Attach: trip#1.field.test  
Subject: Completion of trip #1 for the ABS field test.

Message ID: Havre0006300

FYI

\*\*\*\*\* FORWARDED MESSAGE \*\*\*\*\*

Date: Mar 24, 1994 1:29 PM  
From: D.Hartley/EECENnl  
To: CDR D Taggart/G-NRN, C.Justice/G-NRN, LT N Mason/G-NRN, J.Miller/G-T03  
Copies: OIC/LorSearchLt, OIC/LORSTAHavre, OIC/LorBoiseCity, W.Rardon/G-T03, C.Watanabe/ATL, L.Skorupa/PACAREA, L.Chandler/PACAREA, CWO E Arnett/ATL, D.Larson/MLCpt, M.Jones/MLCpt, R.Bartlett/MLCpt, CDR K Hay, CDR C Teaney, LCDR G Kmiecik, B.Paulus, PO K Montgomery, R.Imler/EECENr, E.Szotak/EECENr, A.Bisceglie/EECENr  
Attach: trip#1.field.test  
Subject: Completion of trip #1 for the ABS field test.

Message ID: ECNnl-009304

Attached is a summary of significant accomplishments during our pre-site trip to LORSTA Searchlight, Boise City & Havre in preparation for the ABS field test.

Overall the trip went extremely well. The EECEN team appreciates the efforts put forth by the LORSTA crew during our visit. From our side of the house Kirk Montgomery & Bud Paulus took care of business from start to finish.

A couple items that I would like to get G-NRN support/policy on.

1. Looking at the work required for EECENs 2nd ABS installation, it would be a big time saver if each LORSTA planned for the ABS field test already installed FC 13/10 (power supply modification) to the timers and FC 12/9 to the TSC (circuit breaker modification) prior to our arrival. In addition to the time savings, installing FC 12/9 would eliminate the need for EECEN to take an off-air to perform this mod. If no one has a problem with this, I suggest the following:

(a) FC 13/10: The technical work is complete and within a couple of days the documentation should be ready to go out for camera ready copy. Repair Division has agreed to obtain from SUPCEN 5 FC kits that will be sent out to Searchlight, Boise City and Havre accompanied with a local copy of the FC instructions; 2 kits marked for Searchlight & Boise and 1 for Havre. This FC will take approximately 6 hours per timer to complete and no authorized off-air will be required.

(b) FC 12/9: The technical work is complete and R is presently in the process of implementing this field change. The approach they are using is to modify the TSC at R and have the station exchange TSCs. Repair Div has agreed to provide our shop with 3 modified for FC 12/9 TSC which we will in turn modify for the ABS field change that provides a BNC jack for OP RF. The ABS modification added is minor and will have no impact on normal LORSTA operations. Once the TSC is thoroughly tested in our baseline equipment we will ship 2 modified TSC to Searchlight and 1 to Havre; FC 12/9 has already been installed at Boise City. The ABS & 12/9 field change documentation will accompany each shipment. Exchanging TSCs will approximately take 1.5 hours of authorized off-air.

2. The alarm structure for ABS is to provide a RED, YELLOW, & BLINK alarm for each rate. The plan is to connect these alarms to the spare RED & YELLOW SAU alarm contacts (TB2-1 thru 4) & connect the ABS blink alarm to the MBLNK alarm contact (TB1-2). To allow for this alarm logic it was necessary to modify the Status Compiler board. Presently, Searchlight utilizes a spare alarm to monitor Generator power and Havre monitors loss of power to their ARU. Technically, no damage will result if ABS alarms are connected in parallel to these alarms. In this case, the only consideration is the spare alarms will have multiple meanings. Do you want the installation team to connect ABS alarms in parallel or disconnect these alarms?

At Searchlight and Havre (?) Master Blink alarm is connected. From what I understand at Searchlight master blink operation is periodically tested. Is this alarm used anymore? If not, can this alarm be disconnected & used for an ABS blink alarm? I don't suggest this alarm be connected in parallel.

I am waiting for your answer on the operation ?s before marching on.

Dave H.

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ABS FIELD TEST INSTALLATION #1

ABS Team members: Mr. Hartley  
Mr. Paulus  
PO K Montgomery

DATES: 3/9-11 LORSTA Searchlight; 3/14-15 LORSTA Boise City; 3/16-17 LORSTA Havre

PURPOSE: To perform a thorough pre-site of LORSTA Searchlight, Boise City and Havre in preparation for the ABS field test (Ref. E-mail ECNnl-006802. Also, perform several ABS field changes that will be transparent to normal LORSTA operations.

SIGNIFICANT ACCOMPLISHMENTS:

1. Both the Operate and Standby timers for each rate were modified to interface with the blink gate from ABS. To accomplish this, the stations Error Sense and DRINT cards were exchanged with ABS modified boards. In addition, a BNC connector was added to the back of each timer that is wired to the timers card nest. All modified boards, including those left as spares, were burned in for several hours to ensure proper operation.
2. The SAU was modified to accept the alarm logic output from ABS. To accomplish this the stations Status Compiler board was exchanged with an ABS modified board. One additional change made to this board was to replace the terminating impedance on the tertiary 5 Mhz line to allow an external 50 ohm load to terminate this signal. Functional alarm tests and the threshold limits for deviations in the standby and tertiary oscillator drifts were checked to ensure proper operation of the modified board.
3. The DC interface was exchanged with a modified version that has greater capacity ammeters to handle the additional output current required for ABS and the eventual addition of FC 13/10. Along with this change the DC power distribution was re-routed slightly to more evenly balance the current loading between the DC backup units. DC interface cables were re-labeled accordingly and the interface unit checked for proper operation.
4. The four way 5 MHz splitters that will be used to connect the operate, standby and tertiary 5 MHz signals to ABS was installed at LORSTA Boise City and Havre. At Searchlight the mounting brackets inside the FSN-2 rack were set back too far to allow installation. As a result, we opted to install the splitter assembly during the 2nd trip. Two strips of angle iron will be used to mount the splitter assembly inside the FSN-2 rack.
5. The following are some items of significance from our Pre-site survey:

(a) The ABS printers will be located in the corner of the OPs room at LORSTA Searchlight. At LORSTA Boise City and Havre the ABS printers will be located in the AN/FSN-1 rack.

(b) AC power distribution in the AN/FPN54A/65 rack will be re-configured to add a power strip that will be mounted across the back of the rack. Both timers, the ABI, DC backup unit and ABS will be plugged into this outlet strip. The addition of FC 13/10 eliminates the need to backup the operate timer with a UPS.

(c) At LORSTA Searchlight the SAU spare alarm TB2-4 is used for loss of generator power. At LORSTA Havre the SAU spare alarm TB2-1 is used to monitor loss of power to the ARU. Unless directed otherwise, these alarms will be connected in parallel to ABS alarms.

Master blink alarm is connected at LORSTA Searchlight & Havre. Assuming approval from G-NRN or the AREAs this alarm will be removed and the ABS blink alarm put in its place.

**DOCUMENTATION:**

Each LORSTA was provided a copy of the draft field change instruction and their affected drawings were redlined.

**PROBLEMS:**

At Boise City and Havre the ABS modified spare Status Compiler board did not function properly. Not sure why this happened since the boards tested good

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at EECEN. Once we get these boards back from the station we will determine what the problem is and ship Boise and Havre a working spare. That is about it as far as problems.

LESSENS LEARNED:

Bring more money when you go to Las Vegas, steer away from the 72 ounce challenge at the "Big Texan Steak Ranch" in Amarillo TX, and Chief Boutwell can grill up some great burgers.

Till our next trip. Delta H

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