

PTC *Operating Practices Topics*

Functional Enhancements to PTC Onboard Software ver. 6.3.21

Effective: 09/02/2021



On 09/02/2021, BNSF will begin phased deployment of new iETMS onboard software (version 6.3.21.3) to PTC-ready locomotives using an auto-install procedure. This document outlines key operational enhancements incorporated in the new software build.

Key functional changes outlined within this communication:

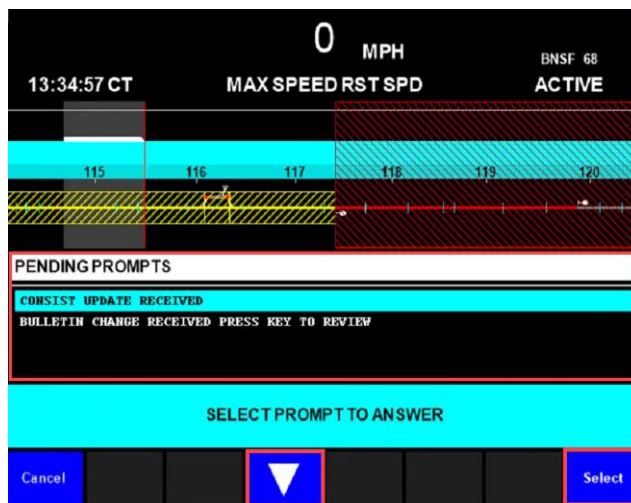
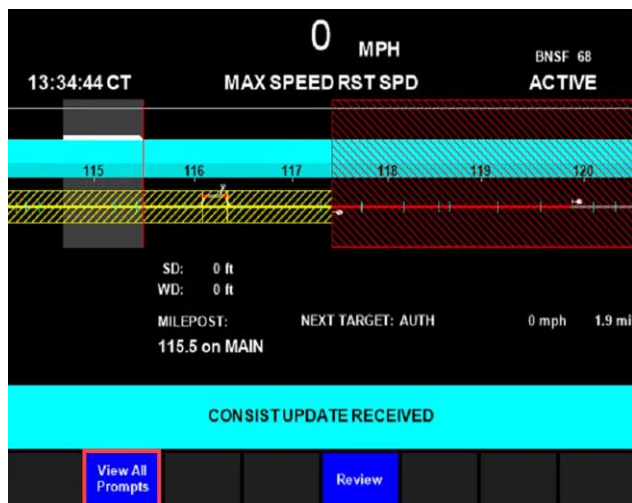
- Viewing multiple prompts
- Crossing Warning Device prompt and soft-key changes
- Reverse Movement prompting

Viewing Multiple Prompts

When multiple prompts have been received, the engineer may select which prompt will be answered first. When the [View All Prompts] key is pressed (left screen-shot), a list of all pending prompts will be displayed (right screen-shot).

Pending prompts are listed in priority order based on distance ahead of the train (nearest to farthest). By default, the highest priority prompt is highlighted. Select the prompt to be answered using the arrow keys, then press the [Select] key.

If the prompt is not answered within 60 seconds, the pending prompts box is removed, and the highest priority prompt is displayed.



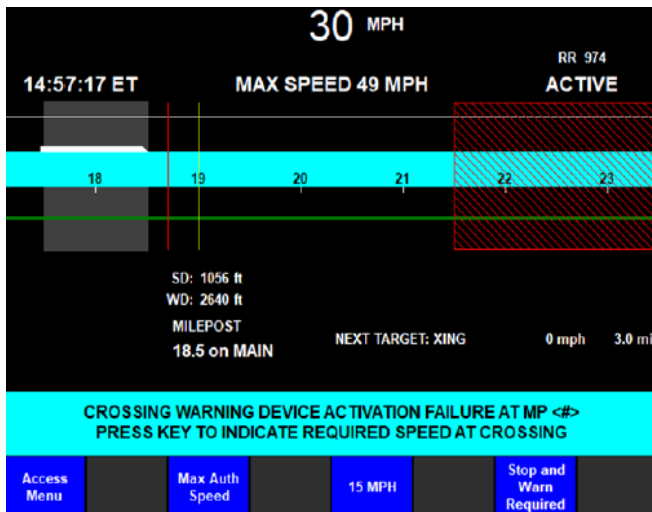
Crossing Warning Device Prompt Updates

Previously, when prompted for a Crossing Warning Device, the engineer would select the number of flaggers at the crossing to determine the maximum authorized speed at the crossing.

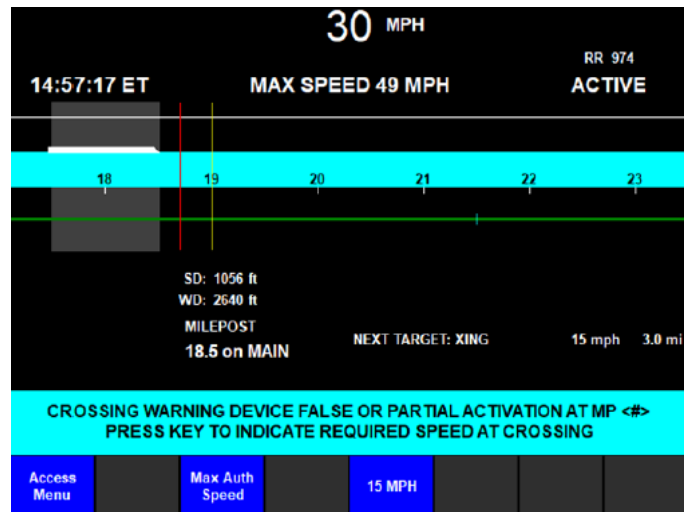
With this new software version, when prompted for a Crossing Warning Device, the PTC system will prompt the engineer to indicate action required at the crossing based on current rules outlined in GCOR 6.32.2.

Important Note: Operation of the whistle at any location where a Crossing Warning Device procedure is in effect remains the responsibility of crew members on the lead locomotive.

Procedure 1



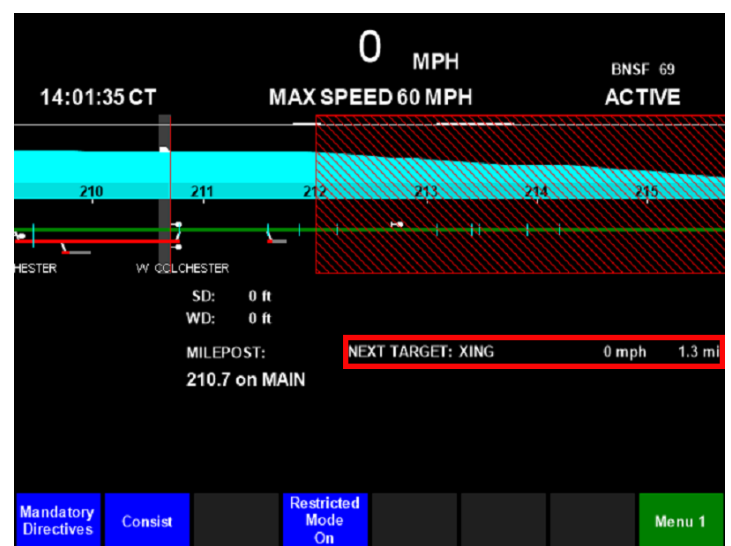
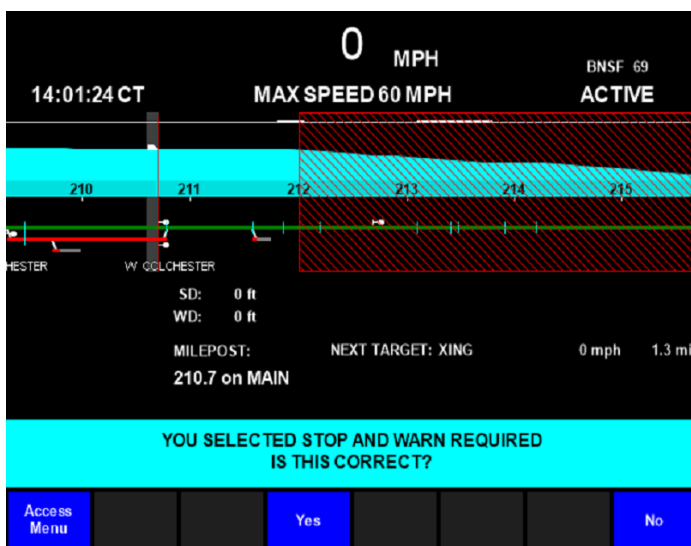
Procedure 2



[Stop and Warn Required] Selected

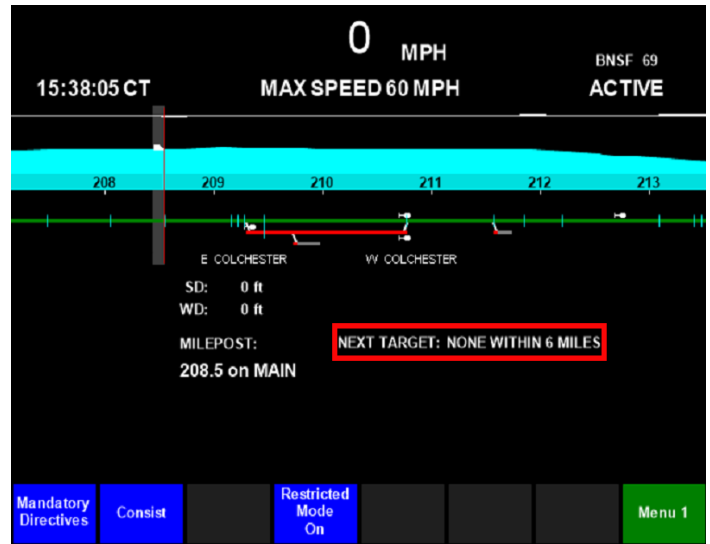
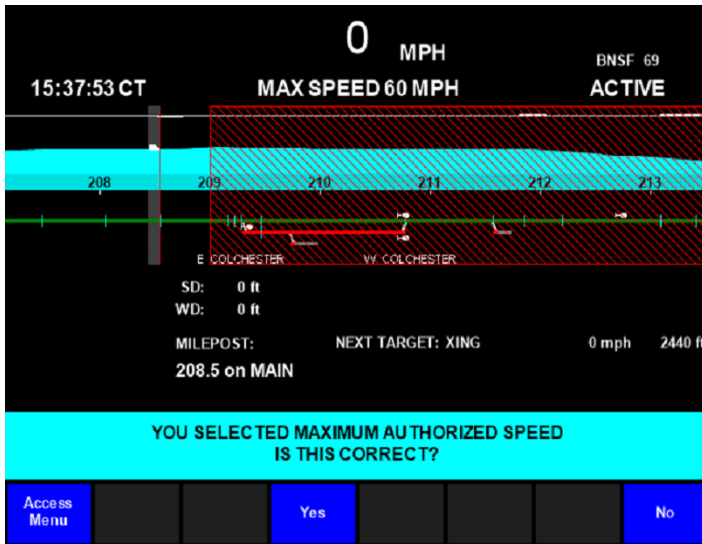
When the [Stop and Warn Required] key is selected, the engineer must confirm (left screen-shot), then the red stop fence remains, and Next Target will indicate "XING – 0 MPH in X.X miles" (right screen-shot).

After the train stops within 1,000 feet of the crossing, the PTC system will prompt the crew to acknowledge, then confirm, that warning is provided (not depicted).



[Max Auth Speed] Selected

When the [Max Auth Speed] key is selected, the engineer must confirm (left screen-shot), then the red stop fence is removed and PTC will permit maximum speed through the crossing (right screen-shot).



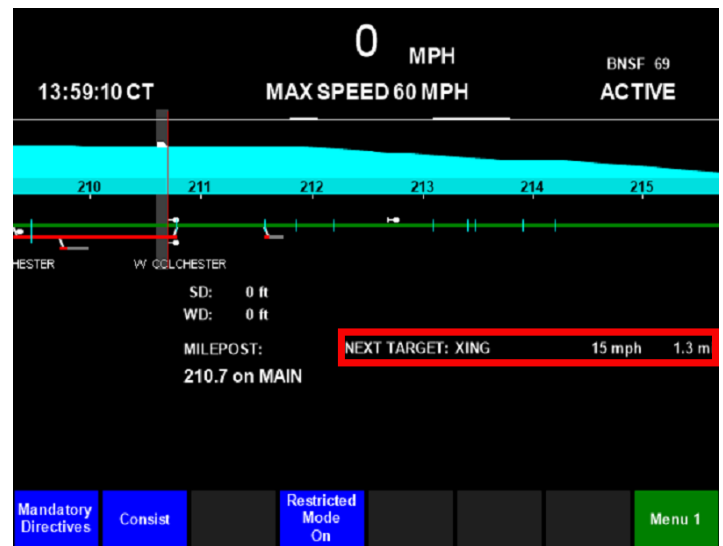
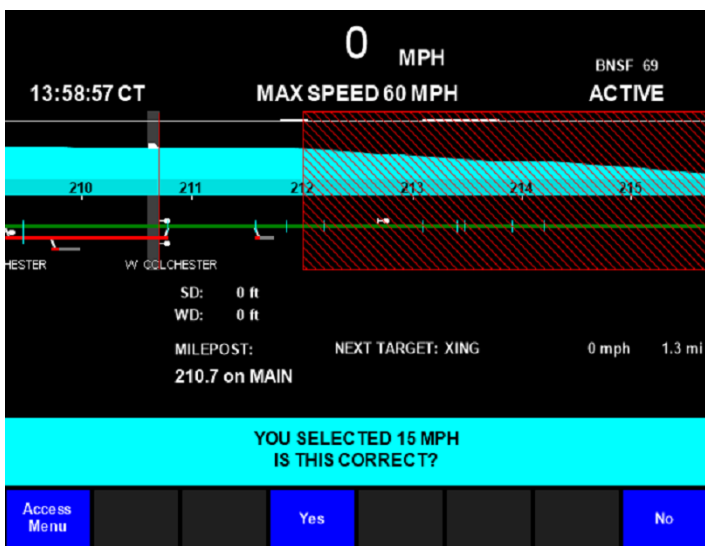
Note:

When **Procedure 4 (Automatic Horn System Failure)** is in effect, the “*Crossing Warning Device Malfunction at...*” prompt will be displayed. Crew members must confirm that a more restrictive crossing procedure is not in effect at that location by viewing the Mandatory Directives list. Once confirmed no other restriction is in effect, the engineer may press [Max Auth Speed] to allow the train to proceed through the location without stopping.

[15 MPH] Selected

When the [15 MPH] key is selected, the engineer must confirm (left screen-shot), then the red stop fence will be removed and Next Target will display “XING – 15 MPH in X.X miles” (right screen-shot).

PTC will restrict the head-end of the train to 15 MPH through the crossing.



Reverse Movement Protection

When a train changes direction in a CTC signaled block, the PTC system will prompt for permission to make a reverse movement into the next signaled block. After all applicable reverse movements rules have been met and the [Received] then [Confirmed] keys have been pushed, the stop target will be removed (right screenshot).

