

SAFE Notice *2020* 1038

Telegram

SYDNEY

25 NOVEMBER

08:00 HOURS

TO:

SYDNEY TRAINS

Deputy Executive Director Network
Operations
Head of Service Delivery
Area Operations Managers Signal Box
Operations
Duty Control Manager ROC
Signal Box Operations
Deputy Executive Directors Train Crew
Crew Managers Train Crew
Shift Managers Train Crew

NSW TRAINS

Associate Director Network Coordination
Principal Manager Centralised Station & Crew
Support
Standards Officers Centralised Station & Crew
Support

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

Effective from 08:00 hours, Monday, 30 November 2020, this SAFE Notice Telegram cancels and replaces:

TOM Notice 015 2020 Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

Introduction

Use of the Automatic Train Protection (ATP) system on Oscar trains in passenger service has commenced.

Oscar Drivers who are qualified in using ATP must act in accordance with the requirements and procedures in *TWP 190 Automatic Train Protection* or *NTTWP 190 Automatic Train Protection*, including setting the ATP Bypass switch to **NORMAL**, and are exempt from other requirements in this TOM Notice.

Oscar Drivers not qualified in using ATP must run with the system bypassed, and act in accordance with the requirements and procedures in this TOM Notice. They are exempt from the requirements of *TWP 190 Automatic Train Protection (ATP)*, *NTTWP 190 Automatic Train Protection (ATP)* and *TWP 246 OSCAR Automatic Train Protection*.



NOTE

All Oscar Drivers must do train preparations with the Bypass switches set to **NORMAL**.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

ATP onboard equipment description

The ATP onboard equipment in each 4 car set includes:

- in each crew compartment:
 - a display unit, known as the Driver machine interface (DMI), which replaces the left-hand side train operating system screen (DDU1)
 - an ATP system circuit-breaker (ATPCB)
 - a circuit-breaker for the DMI (DMICB)
 - an ATP control panel in Locker 7 (see Figure 1)
- an ATP system computer in a dedicated new compartment in the number 2 end vestibule of the odd-numbered control trailer car of each four car set (not accessible to Train Crew)
- external components including radar units, antennas and tachometers.



NOTE

The DMI circuit-breaker is not accessible by Train Crews.

The system also has connections to the Driver Safety System (DSS) penalty valves at both ends of each four car set.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

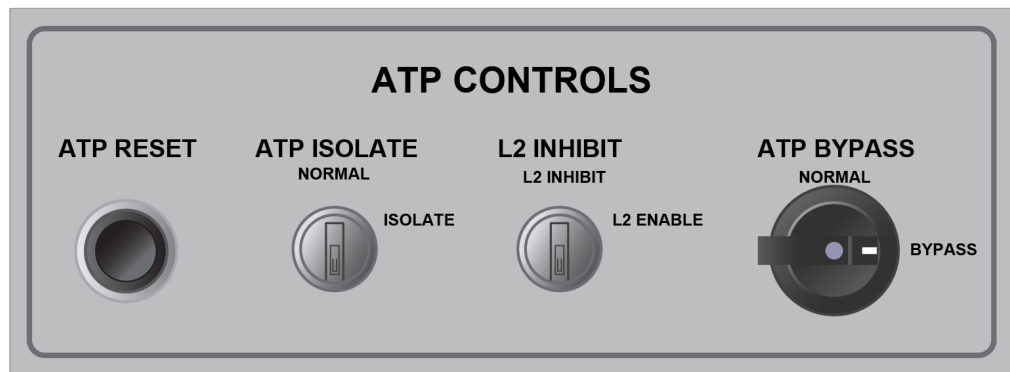


FIGURE 1: ATP controls



NOTE

The L2 INHIBIT switch cannot be used by Train Crews.

To allow the installation, the following equipment has been removed:

- the left-hand side Drivers display unit (DDU1)
- the DDU1 circuit-breaker (TDDU1CB).

Normal operation

Each time that a Driver enters a cab, they must make sure that:

- the ATP BYPASS switch is set to BYPASS
- the ATP ISOLATE switch is set to NORMAL.

After a cab is cut-in, the TOS display might show an ATP BYPASS alarm bar. Touch the bar to clear it. The ATP BYPASS warning tile will still be shown on the Drivers and Guards display units.

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When a cab is cut in, the DMI might show some information while it is warming up. If the message EVC CONNECTION or Wait_Power-up test in progress is shown, do not move the train until the message clears.

The DMI (see Figure 2) usually shows just a speedometer, a menu for volume and brightness adjustment and screen cleaning, up and down scroll buttons (⬆) and a digital clock.

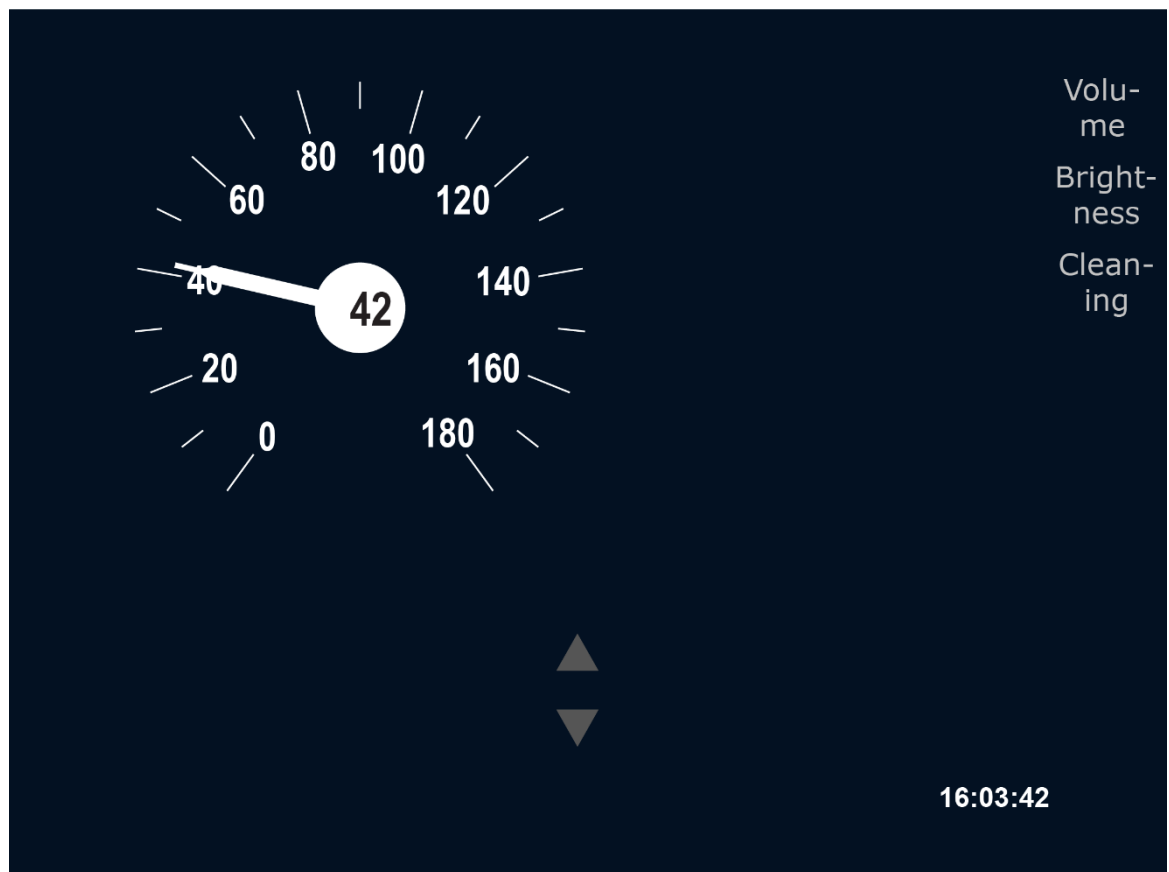



FIGURE 2: DMI appearance with ATP bypassed.

To change the volume or screen brightness:

1. Select Volume or Brightness.

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2. Use the + and – buttons to change the setting.
3. Press the confirmation bar (see Figure 3) to confirm the change and return to the normal screen, or press the  symbol to return to the normal screen without saving your change.

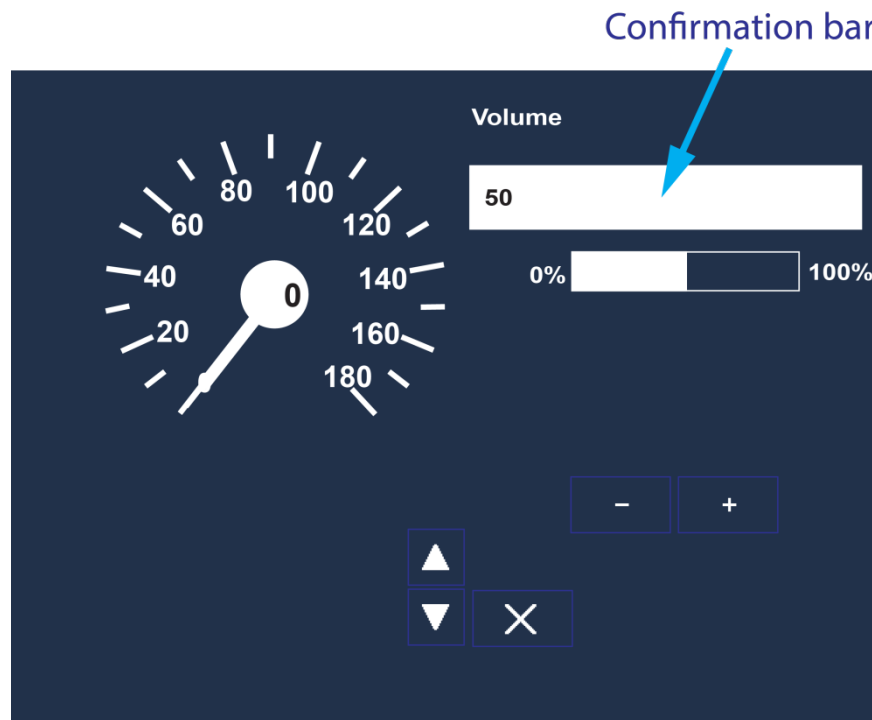


FIGURE 3: DMI volume adjustment screen

Guards should not have to interact with the ATP onboard equipment.

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Stabling

When a train is stabled, the ATP equipment, including the DMI, will shut down:

- if the standard stabling method is used, within 20 minutes
- if the fast stabling function is used, after 5 minutes.



NOTE

If a train is left unattended, ATP will shut down after 60 minutes. It will restart when the Driver keys in.

Assisting trains

If an ATP-fitted train requires assistance:

- follow the instructions for **Isolating ATP**
- couple and operate the combined train according to existing procedures.

Precautions for people under train

Labels warning about the need to cut power to antennas are located under the crew doors and on the end of each control trailer car.



WARNING

ATP antennas generate electromagnetic radiation that can be harmful to people underneath the train.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

Train Crew

1. Before any person goes beneath a control trailer car:
 - trip the ATP system circuit-breaker (ATPCB) in the affected car
 - trip the train radio circuit-breaker (TRCB) in the affected car.



NOTE

Tripping the ATP circuit-breaker will cause the brake pipe to vent.

2. Do not reset the circuit-breakers until people are no longer beneath the train.

Fault management



Faults in the ATP onboard equipment will not normally affect train operations.

If the DMI displays a text message beginning with 'Report', the Driver must:

- tell the Signaller
- if the message relates to onboard equipment, tell Mechanical Control and follow their instructions.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

If there is a serious fault in the ATP system:

- the DMI might display a 'Report System Failed' message
- the DMI might go blank or show a red LED in the top, left-hand corner next to the DMI fault indication symbol ()
- the DMI might display a System Failure symbol ()
- the brake pipe might vent from both ends of the 4 car set via the driver safety system penalty valves (DSS)
- the speedometer might fluctuate rapidly or indicate an obviously incorrect speed.

Tell Mechanical Control and follow their instructions.

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Resetting ATP



NOTE

If the system in the rear 4 car set of an 8 car train is to be reset, a cab in the rear set must be made active (Drivers key switched to ON) before it is reset in that cab.

If directed by Mechanical Control to reset ATP:

Driver

1. Make sure that no other Drivers keys are in.
2. In either cab of the affected 4 car set:
 - (a) Make sure that the Drivers key is switched to ON.
 - (b) Press the ATP RESET button for 5 seconds:
 - if the brake pipe is charged, it will vent
 - the DMI will go blank, and should then show an EVC CONNECTION or Wait Power-up test in progress message.
3. Wait for the DMI screen to return to normal and the digital speedometer to show 0 before removing the Drivers key or operating the train.

Operation of H-Set (Oscar) trains fitted with Automatic Train Protection (ATP) equipment

Isolating ATP



NOTE

If the rear 4 car set of an 8 car train is affected, a cab in the rear set must be made active (Drivers key switched to ON) before isolating ATP from that cab.

If directed by Mechanical Control to isolate ATP:

Driver

1. Make sure that no other Drivers keys are in.
2. In either cab of the affected 4 car set:
 - (a) Make sure that the Drivers key is switched to ON.
 - (b) Use a bilock key to turn the ATP ISOLATE switch to ISOLATE.

The DMI will go blank and the Restricted Main Operation screen will be shown on the TOS displays. ATP ISOLATED alarms and an ATP ISOLATE warning tile will be shown for affected cars on the Drivers and Guards TOS displays.

3. If the DSS penalty valves at both ends of the 4 car set are not venting, the train may continue in service.
4. If the DSS penalty valves continue to vent, close the DSS isolating cocks and act in accordance with *TWP 216 Driver safety system failure*.

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Failure of Drivers TOS display (DDU)

If the Drivers TOS display (DDU) fails, train information other than the speed will not be available.

If the Drivers TOS display fails

Driver

1. Tell the Guard that you will be resetting the TOS, and their TOS screen might be affected.
2. Trip the following circuit-breakers:
 - TCUCB1,
 - TCUCB2,
 - TDDU2CB, and
 - TGDUCB.
3. Wait 30 seconds, then reset the circuit-breakers.
4. If the fault is not fixed:
 - tell the Signaller and Mechanical Control
 - work the train out of service at the first suitable location.

Minimum standards

From a Maintenance Centre or out depot

If the ATP equipment is isolated in any cab, the train must not enter service.

In service

If the ATP equipment is isolated in any cab, the train may continue in service, using the Restricted Main Operation screen.

SYDNEY, 25 NOVEMBER 2020

DIRECTOR SAFETY AND STANDARDS SYDNEY TRAINS

Returned to Controlling Manager: Date: Signed:



(Cut along this line and forward the detached receipt to your Controlling Manager)

To Controlling Manager:.....

Received SAFE Notice No. 1038 – 2020 Date:..... Signed:

Name (print): Location:

(Controlling Manager to retain this Acknowledgement of Receipt of the SAFE Notice for record purposes for 90 days)