



Melbourne and Metropolitan
Tramways Board

AIR RAID PRECAUTIONS



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MELBOURNE AND METROPOLITAN TRAMWAYS BOARD

With the spread of open hostilities to the Pacific, the possibility of air raids in Australia becomes greater and lessons learned from overseas warn us that we dare not be unprepared.

The Board has for some time past been giving consideration to the protection of its personnel and plant in the event of enemy air raids. Certain key men have been trained and allotted special duties. Many others have qualified in the various aspects of civilian defence. The instructions contained in this booklet give a general account of the steps to be taken by employees in the event of an air raid alarm being sounded. They are necessarily of a general nature as it is impossible to include within the scope of this book all the instructions which must be observed by individual departments. These will be embodied in notices from Heads of Departments to the men concerned, but, here, are outlined those instructions to the various branches of the service as they affect other Departments and with which every employee should be familiar.

Carlton Control is the focal point of the Board's A.R.P. system. A special telephone line is in operation between Police Headquarters and Control so that all signals of impending raids will be automatically received and precautionary measures can be taken immediately. In the event of damage to any

be given by sirens and is the same as for an Air Raid Warning. Arrangements have been made for special "dimming" switches to be fitted to all trams and buses which will be in service at night. These "dimming" switches are installed in the following positions in the vehicles concerned—

TRAMS.—

On "W" class cars the resistance and operating switch are in the motorman's cabin at No. 1 end and are situated above the driver's head, but in some cases, to the right side, and in some cases to the left side. The operating switch is underneath the resistance and one movement of this switch will "cut in" the resistance to dim the light.

After switching on all lights in the normal way, the dimming can be effected by operating this switch.

On X1 type cars at Footscray, the operating switch is in the switch box alongside the ordinary lighting switches.

On X2 type cars at Footscray, the operating switch is over the window on the right hand side of the driver.

BUSES.—

In the buses the switch is of the rotary type and is installed in the driver's cabin. After all lights are switched on in the normal way, the dimming is effected by operating this rotary switch.

The positions of the switches in the drivers' cabins on the various types of buses which have been fitted, are as follows:—

Double Deck Buses:

In cabin, on roof, over driver's head.

Single Deck (drop-end) Buses:

Buses T.S. 8C } (Nos. 120 to 155)
T.S. 11 }

In cabin, on panel, at rear of driver's head.

Tiger Buses:

Buses T.S. 7 (Nos. 61 to 78).

In cabin, on side near main switchboard.

Tiger Buses:

Buses T.S. 8 (Nos. 91 to 119).

At entrance of cabin. Before operating this switch, one circuit of interior lights controlled by tumbler switch must be switched off.

Cub Buses:

Under dash on near side.

Bedford Buses:

Federal Buses:

Under cash tray.

Headlamps, parking and tail lamps of buses have been fitted with hoods or other devices to conform with regulations.

ALL light circuits, with the exception of one interior light circuit mentioned for buses in the group T.S. 8, Nos. 91 to 119, must be ON when the dimming switch is operated.

In the event of a defect developing in any bus during a "Black Out," either mechanical or in the lighting circuit, preventing the lights from being dimmed, the driver must pull to the side of the roadway, switch off all lights except tail light and wait until normal lighting is resumed.

Traffic Officers, as well as Drivers and Conductors, are to make themselves familiar with the position and method of operating the dimming switches and ONLY VEHICLES EQUIPPED WITH SUCH SWITCHES ARE TO BE IN SERVICE DURING "BLACK-OUT" PERIODS.

Should any tram or bus be run out from a Depot at night, special care must be taken to see that such vehicles are fitted with dimming switches so that the lights can be dimmed immediately the necessity arises.

All Drivers who will be on duty at night are to try out the dimming switches before dusk each evening and make sure they are functioning satisfactorily.

VEHICLES TO BE OPERATED AT SAFE SPEEDS.—

During "black-out" periods, trams and buses must be operated at safe speeds consistent with the conditions in the various localities.

TRAFFIC SIGNAL LIGHTS.—

All Traffic Signal Lights, with the exception of those at the intersection of Swanston and Flinders Streets, Swanston and Collins Streets and Swan-

ston and Bourke Streets, will be switched off.

At all junctions and intersections Drivers and Conductors must exercise special care during "black outs" and where two cars are at a junction or intersection at the same time (except where Traffic Signal Lights are in operation) the car on the RIGHT is to have the "right-of-way."

TRAMWAY SIGNAL LIGHTS.—

Signal Cabin Lights and Signal Lights operated from such cabins are to be switched off during "black out" periods and signalmen will signal cars by hand signal lamp from the roadway.

SINGLE LINE OPERATION.—

On all single lines now governed by Signal lights, Staff Working or Signalling by Hand Signal Lamps will be put into operation.

EMPLOYEES ON ROAD DUTY.—

All Inspectors, Signalmen, Conductors and other employees on road duty should wear a white band, such as a handkerchief, on the arm or around the neck.

BUNDY CLOCK LIGHTS.—

Lights in Bundy Clocks will be switched off and the clocks need not be registered during "black outs."

SMOKING PROHIBITED.—

SMOKING, either in the streets or in trams, buses and other vehicles, is prohibited between the "Prepare for Air Raid" signal and the "All Clear" signal.

DEPOTS.—

Depot Masters, Inspectors and Depot Starters will be responsible for seeing that all exterior lights are switched off, that lights in offices and mess rooms which have been "blacked out" are not visible from the outside, that the gas is turned off at the meter, and that qualified men are ready to carry out A.R.P. duties. Between midnight and 6 a.m. on week days and 8 a.m. on Sundays the Running Shed staff will be responsible for seeing that the restrictions re Depot lighting are observed and for A.R.P. duties.

OPERATION OF TRAMS AND BUSES UNDER AIR RAID CONDITIONS.

The following action is to be taken immediately the first signal "Prepare for Air Raid" is received—

TRAMS.—

The emergency dimming switches must be operated so that all headlights and interior lighting are "DIMMED" in accordance with the Lighting Restriction regulations, and SERIES speed is to be observed.

Trams will, as far as practicable, clear the City proper; if necessary, shunting at the nearest cross-overs and turning back. On amalgamated routes, however, trams in the City will continue, if possible, and clear the City without turning back.

At junctions and intersections cars must not bunch together but spread out with at least two car lengths between each car.

When the second signal "Air Raid Impending" is given, all trams are to be brought to a standstill clear of intersections, the handbrakes must be firmly applied, the air brakes placed to the FULL ON position and handles left in that position, the controllers left in the OFF position and the reverse keys removed and placed on the ledge in the driver's cabin, after which ALL lights must be SWITCHED OFF.

The crews will then take shelter in the nearest shelter available, assisting passengers to do so, when necessary.

BUSES.—

Buses will also endeavour to clear the City proper on receipt of the first warning "Prepare for Air Raid" and dimming switches must be immediately operated. Buses on City routes may turn back if this will facilitate them getting out more quickly, but on amalgamated routes they should continue, if possible, and clear the City without turning back.

On the second signal "Air Raid Impending" buses must be driven to the side of the roadway and brought to a standstill. Brakes are to be applied, engines and all lights, except tail lights, switched off, and crews and passengers to take shelter in the nearest shelter available.

Other employees on outside traffic duty should also proceed to the nearest shelter.

On the sounding of the third signal "All Clear" employees will return to their vehicles and nor-

mal services will be restored as soon as possible, as local conditions permit.

DAMAGE TO OVERHEAD, PERMANENT WAY, ROADS, BRIDGES, DEPOTS, ETC.—

In the event of damage or fire affecting services being caused to any of the above during an Air Raid, Carlton Control (F2488 and F3279) must be notified immediately, giving location and type of damage.

In the absence of Traffic Officers, the information must be given by tram and bus crews.

DEPOTS.—

Between the hours of 6.0 a.m. and midnight on weekdays, and between 8.0 a.m. and midnight on Sundays the Traffic staff will be responsible for seeing that all lighting of Depot premises conforms to the Lighting Restriction ("Black Out") Regulations.

The Depot Starter (or Meal Room attendant) is responsible for the observance of the arrangements generally and, in particular, will be required to—

Operate lighting switches as required.

Draw blinds.

Place shutters in position.

Lock unnecessary doors, and

Close ventilators and fanlights where necessary,

If the Starter is not available, it will be necessary to obtain the services of an Inspector or reliable driver or conductor for the purpose.

Outside the hours stated above the Running Shed staff is responsible for seeing that the restrictions on lighting are observed.

AIR RAID WARNING SIGNAL.—

On the "Prepare for Air Raid" signal, irrespective of "black out" arrangements, all unessential lights, both internal and external, are to be switched off.

SAFETY OF CASH, ETC.—

On receipt of the above signal, the receiving of Conductors' returns is to cease and all Cash and Value Tickets are to be locked in the strongroom.

On the "All Clear" signal, strongrooms are to be re-opened and the receipt of cash proceeded with.

In the event of office buildings being damaged to the extent that the security of the premises or contents is affected, the Revenue Staff on duty at the time must remain on duty until relieved or until otherwise instructed.

In the event of an Air Raid occurring outside office hours, Depot Masters will, where practicable, be expected to attend at their respective Depots.

ROLLING STOCK DEPARTMENT.

ELECTRIC RUNNING SHED BRANCH.—

The following instructions shall be observed at Electric Tram Depots where there are both Traffic and Rolling Stock employees and when A.R.P. duties may overlap:—

Switching of Lights:

During the hours from 12.0 midnight to 6 a.m.

(8 a.m. on Sundays) the Running Shed staffs will be responsible for the switching on and off of all depot lights either in the sheds, yards, or offices.

During the hours from 6 a.m. (8 a.m. Sundays) to 12.0 midnight, the Traffic staff will be responsible for switching on or off lights in yards, traffic offices, messrooms, revenue offices, etc. The Running Shed Staff will be responsible for lights in the shed, workshops, messroom, etc., used by the Running Shed Staffs.

A.R.P. Duties:

During the hours from 12.0 midnight to 6 a.m. (8 a.m. Sundays) the Running Shed staffs will be responsible for carrying out any A.R.P. duties and fire control work for which they are equipped in any location on the depot premises, whether in traffic offices or running shed or yard.

During the hours from 6 a.m. (8 a.m. Sundays) to 12.0 midnight the Running Shed Staffs will be responsible for carrying out any A.R.P. or fire work in the running sheds or rooms used by this staff whilst the Traffic Department will be responsible for the yards and traffic offices, but the staffs of the two departments are to co-operate in all cases of emergency.

ACTION ON HEARING A.R.P. SIRENS.—

“Prepare for Air Raid”—Running Shed staff will check location of A.R.P. and fire fighting equipment, lights will be switched as set out in directions, and gas is to be turned off at the meter.

“Raid Impending”—Running Shed staff will switch lights as directed and will then take shelter in the front end of centre pit in running shed and will be ready for any A.R.P. or fire fighting work required.

A.R.P. Damage or Fire:

In the event of damage or fire, a telephone call must be sent immediately to Tramway Control (F2488 and F3279), giving name of depot and type of damage.

Operating Sirens:

At Glenhuntly Depot a police siren is to be operated by the Running Shed staff. Upon receipt of a Police A.R.P. code message, the revenue office staff must give priority to the telephone switch to the Running Sheds and maintain this line free for the expected following code calls. The running shed staff will stand by the shed telephone and operate the siren as set out in directions.

ROLLING STOCK EMERGENCY WAGGON.—

During air raids, the Rolling Stock Emergency Waggon will remain at Hanna Street on call for normal rolling stock use and will not be turned out for A.R.P. calls at Depots. The A.R.P. Emergency Van will attend depots if called out by Control.

PRESTON WORKSHOPS.—

In the event of an air raid during working hours, the following action will be taken after the A.R.P. sirens are heard:—

“Prepare for Air Raid”—Those members of the staff previously notified for duty will take up stations as directed.

"Raid Impending"—The whole of the staff will disperse to the grassed open area or trenches to the north of the shops and away from brick walls and macadam or concrete surfaces.

During other hours the watching staff will be augmented and, in addition, two emergency groups of employees living in the vicinity of the shops will be available on alternate weeks. These groups will proceed as promptly as possible to the workshop following any "Prepare for Air Raid" signal.

The Police air raid siren at the workshops will be operated by the watching staff as set out in the directions.

In the event of damage or fire, the watchman on telephone duty will advise Tramway Control F2488 or F3279 as promptly as possible.

PERMANENT WAY DEPARTMENT.

Stations for the storage of materials and plant and to serve as the assembly places for the men to be engaged on repair work have been selected at five convenient points in the tramway system, viz.—

Victoria Parade.
Hawthorn Depot.
Hanna Street Depot.
Footscray Depot.
Brunswick Depot.

Two of the above stations, viz., Victoria Parade and Hanna Street Depot, will be manned throughout the night or the situation met with an equiva-

lent emergency arrangement, such as a gang already working on night duty.

At an air raid signal outside normal working hours, the remaining three stations are to be manned, each with a complete repair unit of ganger and 15 men, and all necessary equipment and tools for immediate service on any part of the system.

Upon advice from the Control Room that damage has occurred to the track, the Permanent Way Engineer or Assistant Permanent Way Engineer shall issue the necessary instructions to cover the following:—

1. The assigning of important duties to responsible officers.
2. Issue instructions to the Station or Stations as to the unit or units that shall proceed to any given point for the purpose of undertaking repairs.
3. Take all necessary measures to ensure that repairs will be effected expeditiously.
4. Make personal inspection of repairs and direct passage of first tram over temporary line.

DISTRIBUTION BRANCH.

A.—Control and Sub-station Staff.

Control Room. A special telephone line between Control and Police Headquarters is in service and all signals will be automatically received. Upon receipt of the "Yellow" verbal code signal, Control

will immediately advise the Chairman, Manager, and the activities specified hereunder.

As the duties of Control Room will be greatly increased during an air raid, every effort should be made to reduce their duties and no one should ask Control to do what they can do themselves.

SUB-STATIONS.—

The following conditions should be observed by those concerned:—

1. Control will not call individuals for service, but one in a group such as a foreman; the foreman will then call the crew he requires.
2. In reporting at a station for duty the men should report as a group when the majority arrive and not individually.
3. Those men not having a defined duty should report to their foreman or Senior Inspector.

DUPLICATING CONTROL ROOM STAFF.—

One Supervisor and one Assistant Supervisor will endeavour to get to Control Room as soon as possible after an air raid alert. As these are not the men required for the next shift, all others must report by 'phone and the Supervisor will call those considered to have the best chance of getting to Control Room quickly. Those not called should then remain available to man substitute control rooms if required.

STAFF FOR AUTO SUB-STATION PROTECTION.—

When an air raid alert is given during working hours Control will endeavour to call a man to each

of the following sub-stations—South Melbourne, St. Kilda, Crombie Lane and Richmond to operate fire protection devices against incendiary bombs.

After working hours Control will inform Senior Inspector King (J3068) or Inspector Norden (LF2992) who will endeavour to staff the above sub-stations.

When time permits, Mr. Parris (Haw. 4269) is to be kept informed of events.

B.—Control Instructions to Other Branches.

1.—PERMANENT WAY DEPARTMENT.

A standby is available at Victoria Parade and Hawthorn Depot all night. In the event of an air raid alert being received Control will ring both:—

Northern Per. Way Standby—Victoria Parade.

H.O. 33 or 113—J2107.

Southern Per. Way Standby—Hawthorn. H.O. 25

—Haw. 303.

When time permits, Control will keep Mr Cass (WF9368) and Mr H. H. Bell (WF5600) informed of events.

2.—ARCHITECT'S DEPARTMENT.

On an alert being received during Workshop hours, Control will ring the A.R.P. Emergency Van, Building Department, Bank Street. Telephone—H.O. 10 or MX4291.

After working hours Control will ring Truck Driver C. G. Anson (Haw. 5789) or Senior Foreman B. S. Thompson (WF7436).

The van staff will report to Control their arrival at Bank Street and will then be available as required.

3.—OVERHEAD BRANCH.

(a) **During Working Hours:** On receipt of an alert signal all overhead waggons will be instructed by wireless to return to their respective depots.

(b) **After Working Hours:** On an alert being received, one only in the following order will be informed:—

Mr. Coffey	U 3957
Mr. Holland	WF 8955
Foreman O'Donnell ..	U 7974
Foreman Aird	FW 8768

The person informed will take all necessary steps to assemble crews at all Overhead Depots. When the men arrive at the depots they will report to Hanna Street Standby and Control will, as far as possible, give instructions by wireless or through Hanna Street Standby.

4.—LIGHTING AND TELEPHONE BRANCHES.

In the event of an alert being received:—

(a) **During Working Hours:** Notify Mr Germann, H.O. 48, or one of staff at Crombie Lane Workshop, H.O. 103 or 31.

(b) **After Working Hours:** Notify one only in the following order:—

Foreman Mornement	LF 7429
Foreman Lowe	UL 1963
Leading Hand Nowland ..	X 5383

Mr. Germann to be notified at first opportunity (LA3733).

C.—Overhead Lines Staff.

- (a) The officer called by Control (See Clause 3 (b)) will direct operations after hours.
- (b) **Control of Waggons:** If the raid occurs during working hours waggon crews and others, on the first air raid warning or instructions from Control, should return to their respective depots and await further orders.
- (c) If the raid occurs outside ordinary working hours all members of the O.H. staff off duty are expected to report at their respective depots as soon as possible and notify by service or P.M.G. 'phone O.H. Standby at Hanna Street who will report to Control. Instructions to Control will be issued direct to waggons or via O.H. Standby quarters as circumstances allow.
- (d) The transport of men to the depots or jobs after hours can be handled if and when required. Failing normal transport facilities being available, telephone communication should be made with an Officer of the O.H. Branch.

Provision has been made for sundry O.H. material to be available for emergency use, such as lengths of made up span wires and trolley wire joints and concrete material loaded on trailer.

D.—Depots.

Control must advise attendant at Head Office switchboard, whose duty it will be to advise Rolling

Stock Staff at all tramcar depots, and bus garages, using words "Prepare for Air Raid."

Mr. Robertson (X3742) to be notified at first opportunity.

E.—General.

All gas supplies are to be shut off when a building is unoccupied.

Immediate attention must be given to emergency calls where any of the Boards' buildings have been damaged.

BUS GARAGES.

In the event of an air raid warning the Foreman or Leading Hand is in charge and is responsible for the following being carried out:—

1. Men who have not been warned for duty must take cover. Do not encourage them to stand around in groups.
2. All exterior lights must be switched off; water and gas turned off and air released from fuel oil tanks and compressors. All bus lights must be out.
3. All doors which will not be used must be closed.
4. Send for extra men who will be standing by at their homes. (This applies to Central Garage afternoon shift).
5. Roof spotter or fire watcher must take up his position previously selected as the most advantageous at his Depot.

6. The Leading Hand must stand by the telephone. At Central a man may be detailed for this, if available, but the Leading Hand must remain in the vicinity, although released for other duties. Remember that a total blackout will be in force.
7. If the warning takes place at change of shift the oncoming Leading Hand takes charge.
8. The A.R.P. box must be opened and torches handed to men requiring same; other equipment must be got ready for use.
9. The Breakdown Crane must be manned and ready for a call-out.
10. The Bus Superintendent (Win. 7141) or Assistant Bus Superintendent (JU2164) must be notified and they will immediately proceed to the garage.

The Foreman or Leading Hand shall not take orders from any person unless he is quite sure that he is an officer of the Board, and, if still in doubt, he should contact Carlton Control (F3279 or F2488) and ask for advice. Care must be exercised when receiving orders by the public 'phone that the person is known to the Leading Hand.

If a call is received during a blackout, it should be ascertained, if possible, if lives are endangered or the bus is on fire or a danger on the road—if not, wait until the "all clear" before proceeding to the bus.

HEAD OFFICE.

In the event of air raid warnings, the alarm will be given by means of the building alarm bell and the staff will proceed to the corridors on the various floors as already instructed. First aid squads will be stationed on each floor where employees are sheltering and the Medical Officer's rooms on the ground floor will be the main First Aid base for treatment of any serious cases. Fire fighting parties and stretcher parties will be located on each floor.

As it is desirable to maintain communications as far as possible, the telephone room is reinforced against blast and splinters and the operators will remain at their posts until the danger of a raid is imminent.

REMEMBER:

Panic is contagious and can be a direct cause of death. Each person should set an example of calmness.

The mouth should be kept open to protect the lungs and ear-drums against the action of blast, and for this purpose it is useful to grip a piece of soft wood, india-rubber or a tightly rolled handkerchief tightly between the teeth.

A small pad of loosely packed cotton wool placed in the ears will afford some protection for the ear-drums.

If possible, DO NOT REMAIN IN THE OPEN DURING AN AIR RAID. If no shelter of any form is available, the person should throw himself flat, preferably in the gutter or depression in the ground, face downwards, supporting the head on the folded arms.

Attack from the air does not always mean bombs. Machine gun fire from low-flying aircraft can be a most serious menace to the civilian population. The whiteness of the human face is one of the easiest of all targets to see from the air. Never turn your face toward the attacking planes either by day or night. If caught in the open do not run. Avoid movement of all kind. Lie down with the face pressed to the ground and keep perfectly still.

INCENDIARY BOMBS.

Method of dealing with the Magnesium (Electron) Incendiary Bomb and resultant fires:

There are two main methods:

1. Water Method.
2. Sand Method.

1. Water Method.—

This involves the use of the following equipment:
One hand stirrup pump with 30ft. of hose and an adjustable nozzle giving a stream of 30ft. and a spray of 15ft.
Eight gallons of water.
A pair of dark glasses.

A shield of asbestos fibre 40in. long and 20in. wide, fitted with a carrying handle fixed to the back. If a shield is not available, an up-turned table or door could be used to provide some degree of cover.

Owing to the fact that all kilo incendiary bombs are to be treated as containing an explosive charge **NO ATTEMPT MUST BE MADE TO DEAL WITH A BOMB UNTIL AT LEAST TWO MINUTES AFTER IT HAS STARTED TO BURN.** In cases where there is danger of a serious fire, however, the risk that the bomb may be of the explosive type must be accepted and the bomb attacked at once.

The bomb should be approached in as near to the prone position as possible, with the shield protecting the body. With a stream of water from the stirrup pump first extinguish any fire which has started. Following this the nozzle of the hose should be changed to a spray and directed on the bomb. This will cause the magnesium to burn more rapidly and burn itself out in 4 to 5 minutes. At the same time the spray will be keeping the surrounding area wet and preventing the spread of the fire.

ON NO ACCOUNT SHOULD WATER BE PLAYED ON A BOMB EXCEPT IN THE FORM OF A SPRAY.

2. Sand Method.—

This involves the use of the following equipment:
One long-handled shovel or scoop.

One hoe.

A bucket of sand; and
Dark glasses.

Except in the special circumstances mentioned above, this method should not be used until at least 2 minutes have elapsed. By this time a bomb, if of the explosive type, would have exploded and should then be dealt with in the following manner:

Smother the bomb or any burning particles by placing sand on them. Then, by means of a hoe, place the bomb on a long-handled shovel; place it in the bucket containing sand; cover with sand and remove to a safe place where it can burn itself out.

BOMBS IN THE OPEN.—

When an incendiary bomb has fallen in the open and can be dealt with immediately it falls and starts to burn, a sandbag three parts full may be placed (not thrown) upon it without danger. The sand should NOT be poured out of the sandbag on to the bomb. If the bomb cannot be tackled in this way within half a minute from the time it falls, it should in general be left for two minutes; it then may be covered with a sandbag or loose sand and left to burn out.

If incendiary bombs in the open are allowed to burn out uncovered, there is always the risk that the light emitted will serve as a guide to raiders.



