

STATE ELECTRICITY COMMISSION OF VICTORIA  
ELECTRICITY SUPPLY DEPARTMENT  
GEE LONG BRANCH.

18th May, 1949.

6 VOLT TAIL LAMPS ON TRAMS:

Approximate cost of installing 6 volt tail lamps on  
trams - red lamps at rear end and white lamp at driving end.

31'6" Tram	..	£13. 0. 0.	per tram.
35' "	..	£14. 0. 0.	" "
Bogie	..	£15. 0. 0.	" "

CHARGING BATTERIES:

Rheostat fitted on trams for charging + £7/-/- per tram.

Battery charger in Depot for charging 6 volt batteries.  
(Cost of battery charger received in Garage July 1946 = £14/4/8.

Wiring installation of battery charger = £5/-/-

Lead covered bench for charging batteries = £5/-/-

Four spare, 120 amp, 6 volt batteries £3/-/- ea. = £12/-/-.

Time taken attending to, charging, and changing batteries -  
4 hours daily = 1 man = £4/-/- weekly.

*Wiring £15-0-0*  
*charger £20-0-0*  
*Rheostat £7-10-0*  
*Bench £5-10-0*  


---

*£32-0-0*  


---

*3*  


---

*90*

15th June, 1949.

PROPOSED TAIL LIGHTS ON TRAMS

1. 6 volt lamps to be supplied by car battery on tram, one at each end.
2. Battery to be charged in-situ from the 550 volt trolley wire supply through a resistance and protecting fuse.
3. Change-over switch to provide for charging during the day time and for closing the battery circuit at night time.
4. A small amperage only would be required, not more than 0.5.

In connection with our track signal lines we have for years used a 1,000 Ohm resistance coil in circuit with the trolley wire.

Had a discussion with Mr. Jewett on 15-6-49. & he cannot see anything wrong with charging through a resistance as suggested, except that of voltage.



# ELECTRICITY SUPPLY DEPARTMENT 2766

Copy for Departmental Tramways Superintendent

DEPARTMENTAL TRAMWAYS SUPERINTENDENT

ACTING ENGINEER & MANAGER

9th June, 1949.

## TRAMWAYS TAIL-LIGHTS:

The following are some notes in connection with the point raised by the Manager in his letter of the 21st April, 1949, regarding the statement that "automatic charging (of batteries) cannot easily be arranged."

Three means of recharging the batteries will be dealt with briefly hereunder and these three means are -

1. By a suitable generator installed on trams.
2. By removal from the tram to charger in garage.
3. By utilising the 500 volt supply through a suitable resistance.

Regarding (1.) above, this should probably be ruled out at the outset, due to the high cost involved, (2.) Recharging at the garage should be reasonably satisfactory except that the work would have to be done mainly at night when the trams are in the depot. The necessary inspection and the recharging would probably occupy the greater part of one man's time and the possibility on occasions of there being too many to be charged in one night can be visualised. (3) The utilisation of resistance to provide a low amperage and also a double pole switch in order to change over at night from the charging to the lighting circuit, would probably be the simplest arrangement and by keeping the amperage down to a low figure, reasonably good results might be obtained with an occasional topping up from the depot charger when required.

Any one of the above three suggestions would be costly not only in the installation, but also for the maintenance and I still feel that the reflectors would satisfactorily meet the requirements of the case. However, should it be decided to use electric lamps supplied from batteries, the third suggested scheme would require less attention and is the one worthy of recommendation. The cost of installation per tram would be approximately £15/-/- or for the fleet of 76, £1,140. The cost of charger rheostat and bench would be an additional cost of approximately £100/-/- for the three cities.



## Red Tail Lamps on Tram Cars

### Discharging Battery

2-6 Volt 2-CP Lamps = 1-21 amps  
in use 2 hrs am 6 1/2 hrs pm Winter average 8 1/2 hrs = 10.57 amps  
" " 4 1/2 hrs pm Summer " 4 1/2 hrs = 5.89 amps

### Charging Battery

Rheostat 1.7 amps

Winter = 9 hrs = average 14.6 amps  
Summer = 13 " = 22.1 "

### Rheostats

4 panels .84 amps 3 panels = 1.1 amps (2 panels 1.7 amps) Panel = 3.2 amps  
(unsafe to use too hot)

In use 2-6 Volt 21-CP Lamps = 4.7 amps

" " 2-6 " 3-CP " = 1.21 "

15 CP.

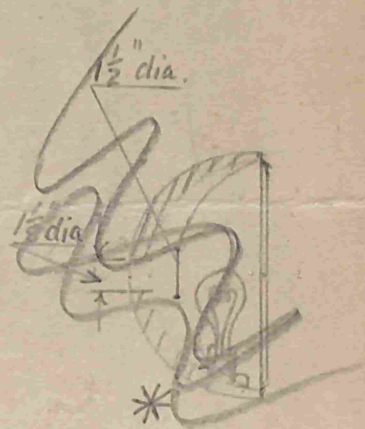
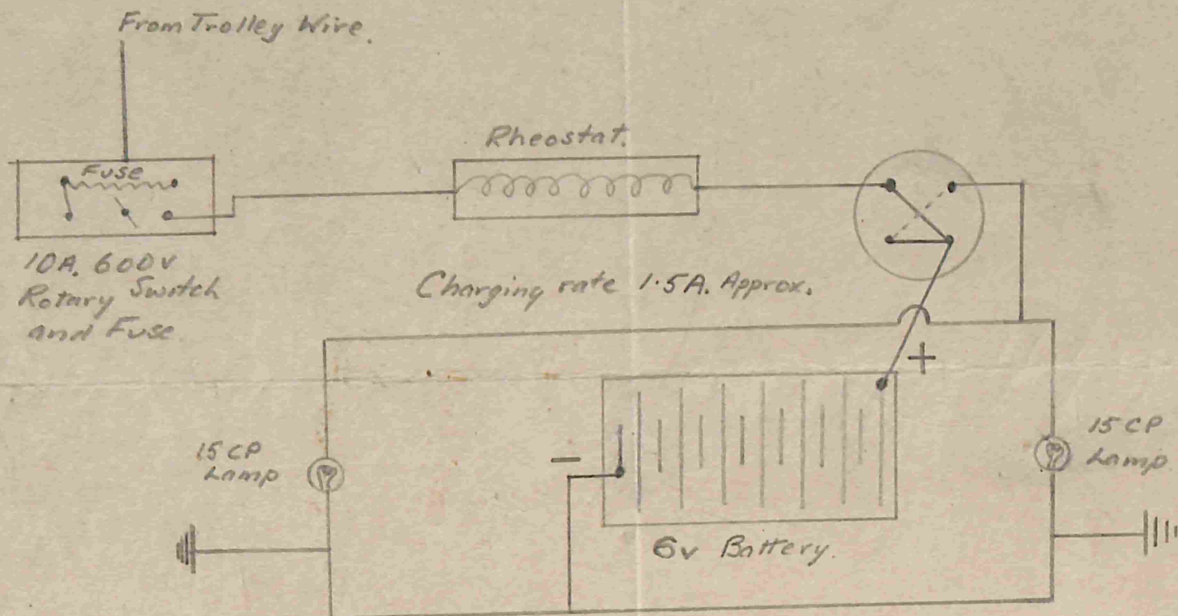
3.35 ampt.

4-8-'149.

51  
102

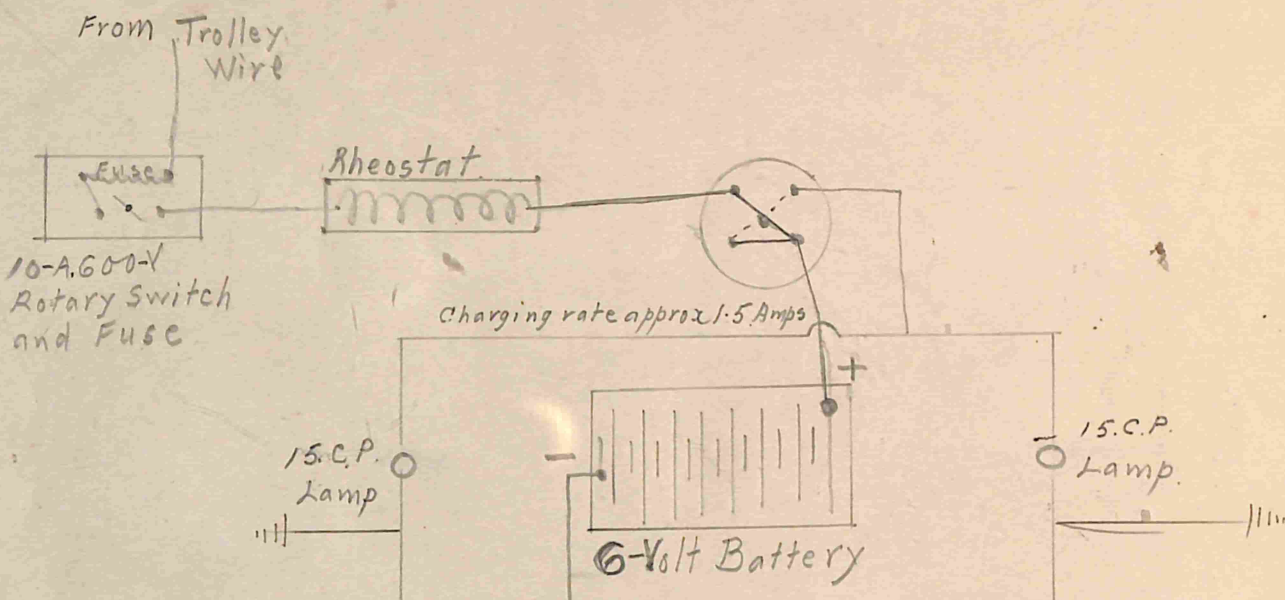
26  
2/5  
102

# Tail Light and Battery Charging arrangement on Commission Trucks



- \* 1 Hole 1 1/2" dia to be cut in Headlight Casting to accommodate 15 CP Lamp.
- \* 1 Hole 1 1/2" dia to be cut in Headlight Reflector.

# Tail Light and Battery Charging Arrangement on Commission Trucks.





4-8-49.

