TRAIN AND STATION LIGHTING.

by Arthur Hayes.

The means of providing lighting to the various applications across the railway spectrum has certainly changed over time.

Queensland Railways had used kerosene, gas, and now for some time, electricity in its various forms as technology has been developed. Like progress, advance occurred in some areas before others and took longer to arrive in other applications. I recall in 1972 showing my wife (A Sydney Girl) how to kick start the washing machine like a motor bike at Bobawaba. Yes, electricity had not reached the area. Even in the South Eastern Division around Brisbane, Yarongmulu was without power until the late sixties.

Passenger Cars:-

Yet, by 1909 all new carriages were being fitted with electric lighting. Initially, oil lamps provided lighting in passenger cars. In 1892, 102 cars were equipped with Pintsch's gas lighting. A gas plant was built at Roma Street to recharge cylinders under the carriages. This was later extended to the Rockhampton area. In early 1899, acetylene gas lighting was introduced.

However later in 1899, in the Northern Railway a carriage was fitted with Stone's electric lighting system. A generator provided power when the train was moving via a belt around a wheel axle and batteries cut in when the train was stopped. Wooden carriages in the current heritage fleet have this type of lighting. By 1923, 523 of the 1090 carriages and vans in service were fitted with electric lighting.

Progress was slow in some areas, I recall a large number of Griffiths Vans, and save weight vans (KKB's, NB's, NWB's, CB's) did not have electric light in the mid sixties; these vans were referred to as blackout vans. Kerosene side / tail lights were fitted to the vans at depots and stations and the Guard carried out his duties keeping Time & Occurrence sheets using his kero shunting light. By the late sixties a number of these vans did receive electric lights and Guards required to work blackout vans were being issued battery lantern lights.

The switching of lights on most long distance cars is from within the carriage at one end. End platform cars had a vestibule light which is located either on the end wall of the car beside the entrance door or one mounted in the centre of the ceiling. Evans Suburban Cars and dog box long distance cars (KCS) had the light switch mounted outside on one end of the carriage. Porters at Roma Street and Brunswick Street had a full time job turning on and off carriage lights for the inner city tunnels.

Of course with the introduction of the Air Conditioned Trains, carriage lighting took to a new height. Bright continuous internal lighting at all times, lights under the steps and illuminated car number boards. Baggage Cars and Vans provided lighting towards the platform to assist station staff during loading.

Train Marking:-

Over the years the marking of trains has remained relativity unchanged except for the type of lights used.

Locomotives.
The front of the train has the main head light and two white marker lights, one on each side. During the steam era the kerosene markers lights were mounted on the tender beside the steps or on the front buffer beam. The marker lights showed a full white light to the front and a smaller reduced amber white light to the rear. The Betty's and the Beyer Garratt's had electric lights under the splash plate to assist the Driver when inspecting the rods/ valve gear and for oiling. Walker's Betty's also had electric marker lights on the tender. Generally, during the steam era, locomotives ran in the daytime with the headlight extinguished.

Diesel Electric Locomotives took locomotive lighting to a new level with each builder having unique types and locations of marker lights, mounted mainly on the front of the locomotive. These lights had reversible lenses which could display both, white or red lights depending on the locomotive operating requirements. As time passed, lights were added to under steps and fuel gauges. Headstock coupler lights were added during the late seventies and ditch lights arrived on the 2800 DEL's, which now are standard for any locomotive that is rebuilt. Today, locomotives are required to run during daylight hours with the head light on as a safety function to provide easy identification of an approaching train.

Rear of Train.
Up until the removal of buffers from freight wagons in the early 1990's, the rear of the train at night and in foggy weather was marked by two red lights. Over the years, this was achieved in various forms.

Side lights were attached to both sides of the rear vehicle which displayed a red light to the rear and a white light towards the front of the train. Guard's Van and carriage stock that could be used as the last vehicle on a train then fitted with electric light had side lights fitted at both ends. The position of the lights varied with each vehicle. Some of these lights also contained a small kerosene system in the even of a failure of the electric light system. Vehicles not fitted with electric light had kerosene lights prepared by station staff, which were then placed on brackets on the rear vehicle of the train. Some freight wagons and Baggage Cars trailed on passenger services (QLXP's, MLBC's, MPCW's, QPS's) had brackets fitted for tail lights.

Things commenced to change in 1971. Trains on the new Goonyella system were operated without Guard's Vans, the Guard rode on the second locomotive. A target (something like a pair of Micky Mouse ears) with flashing battery lights was placed on the top of the last wagon to mark the end of the train during both daylight and in the hours of darkness.

With the introduction of Two Man Crews in the early 1980's, a rear of train light (BOG, Battery Operated Guard) was developed to sit on the buffers and display a red/white flashing light on each side of the rear vehicle.

When the buffers were removed from freight wagons in the early 1990's, a single red flashing light was placed on the auto coupler.

Today, on the QR System the rear of the Passenger Trains is marked by two red lights fitted within the last vehicle profile. On Coal Trains a single or double red flashing light can be used and a single red flashing light is used on Freight Trains. The lights used on the Mt Isa line are different to the rest of the state.

Shunt Locomotives.
Currently, Shunting locomotives working within a yard should display two white marker lights on each end of the locomotive.

During the steam era, shunting engines in yards had a head light to the front and a red light on the rear of the tender.

Special Trains.
During the steam era, an engine assisting at the rear of the train had one red light on the rear of the tender between sunset and sunrise and in daylight during foggy weather.

Also when a train ran without notice, the preceeding train displayed additional boards during daylight hours and lights at night. A third red light was displayed in the centre of the van to indicate a special train was following. An additional red light was attached to the buffer beam of assisting engines at the rear of a train.

Station Lights.
Station lighting is much the same as above for carriages and varied from location to location.

I recall in coming to Coopers Plains, Brisbane in 1974, platform lighting was about five or six horse shoe necked steel posts along the platform with a single 40 watt bulb in each providing the light for passengers. A few years later they were replaced with twin 20 watt fluorescent tubes in a cover showing the station name. Today, our suburban stations look like sporting fields with bright lights the full length of the station.

Lights in stations offices were much the same, some remote locations in the sixties were generating their own power or using oil lights. Even in the early seventies, some Station Masters were of the opinion that electricity was something out of this world. They issued instructions on how the lights were to be used and the maximum number of lights that could be on at any one time. Some even went to the trouble of taking station heater home to prevent night staff using them when a coat could be used instead.

At stations where train staffs were handed to trains, a light was provided near the office door off the awning, a 100 watt bulb was generally allowed for this application, but could only be turned on when a train was approaching the station.

Various forms of lighting are also provided around shunting yards, bigger yards have light towers with strong lights. At smaller stations a single light attached a pole would be located at keys areas in the yard.

Signal Lamps.
Semaphore Signals at night were lit with oil lamps to provide early detection of the signals aspect to the drivers of approaching trains. This was the standard ever in the Brisbane Area up to electrification in the early 1980's. Today, most mechanical signals are lit by low voltage power.

Semaphore Signals also showed an indication from the rear to the Signalman, a back light (a small white light) was visible when the signal was in the stop position.

Smaller ground signals found around station yards and sidings were also similarly lit with oil lamps.

Queensland Railway Cleaner's Handbook 1965

Train signals

ENGINES AND MOTOR CARS

SIGNALS SHOWING TOWARDS FRONT OF TRAIN

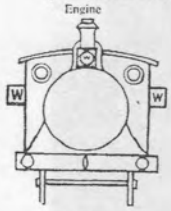
"W" signifies white light.

"R" signifies red light.

SINGLE AND DOUBLE LINES

AT NIGHT AND IN FOG

Engine



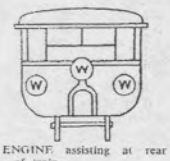
ENGINE AT HEAD OF TRAIN, Light Engine and MOTOR CAR (running as a train)—

One headlight.

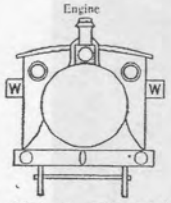
One white light on the driver's right side.

One white light on the driver's left side.

Motor Car



Engine



ENGINE assisting at rear of train—

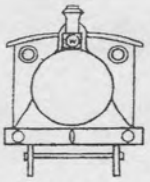
Headlight extinguished.

One white light on the driver's right side.

One white light on the driver's left side.

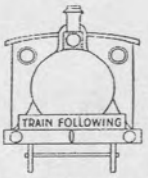
When two engines are hauling a train or two or more light engines are running attached on single or double lines, the headlight and side lights showing towards the front of the train shall be carried by the leading engine only, and the headlight and sidelights of the attached engines shall be extinguished.

Engine



SHUNTING ENGINES employed exclusively in station yards and sidings—

One headlight only by night or in daylight during foggy weather.

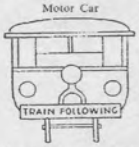


SPECIAL TRAIN FOLLOWING SIGNALS

DURING DAYLIGHT

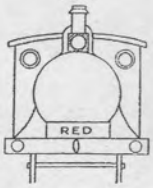
A board lettered "Train Following" in front of an engine or rail motor car indicates a special train or division or engine is following.

Motor Car

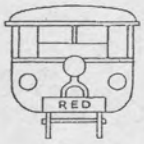


NOTE.—If a "Train Following" board is not available a green flag must be exhibited in place of the board.

Engine



Motor Car



SPECIAL TRAIN RUN ON SHORT NOTICE

When a special train has to be run on short notice and the preceding train in the same direction has not carried the special "Train Following" signal, a "red board" by day shall be placed in front of the engine or motor car proceeding in the opposite direction until it meets the special when the board shall be removed. This shall notify that a special train is to be run in the opposite direction to the train carrying the signal in front.

D

SIGNALS SHOWING AT REAR OF TRAIN

When two or more engines are running attached the signals shown for light engines shall be exhibited on the rear engine only.

SIDE AND TAIL LIGHTS—TAIL BOARDS AND DISCS

EVERY TRAIN and MOTOR CAR (running as a train)—

White triangle at rear of last vehicle in daylight.

Two side lamps at rear of last vehicle between sunset and sunrise or in daylight during foggy weather one on each side showing a white light to the front and red light to the rear.

At night and during foggy weather between sunrise and sunset.

During Daylight

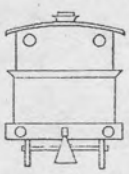
NOTE.—These side lights show a white light forward and red light to the rear.

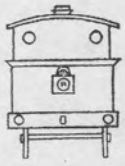
EVERY LIGHT ENGINE OR ENGINES ASSISTING AT REAR OF TRAIN

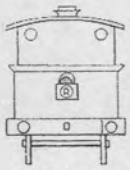
At rear of engine—

A white triangle in daylight.

One red light between sunset and sunrise and in daylight during foggy weather.







SHUNTING ENGINES EMPLOYED EXCLUSIVELY IN STATION YARDS AND SIDINGS.

One red light at rear of engine by night or in daylight during foggy weather.

During Daylight

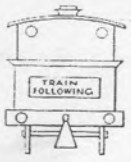
SPECIAL TRAIN OR DIVISION OR ENGINE TO FOLLOW IS INDICATED BY:—

During daylight—

A board lettered "Train following"

On rear of last vehicle of a train in addition to the white triangle.

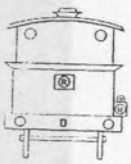
On rear of light engine, or engine assisting at rear of train in addition to white triangle.



At night and in daylight during foggy weather—

A red tail light on rear of last vehicle of a train, in addition to the two red side-lights.

An additional red tail light on rear of light engine or engine assisting at rear of train.



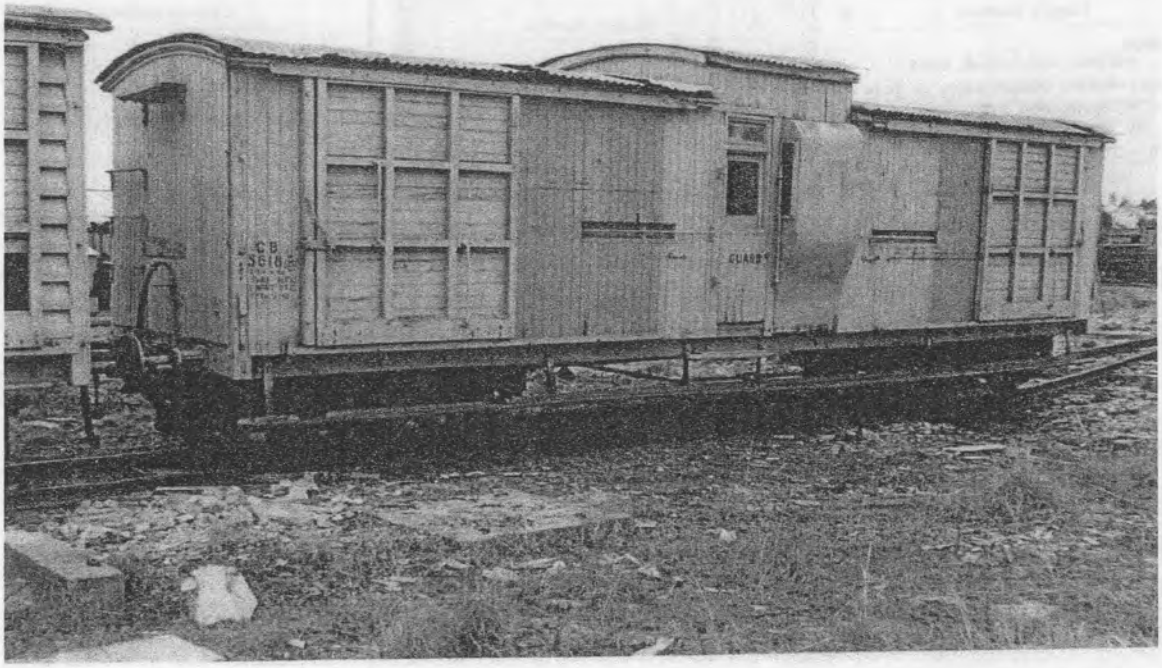


Photo 1. CB 5618 Blackout Van, Note no battery boxes or generator under the vehicle. Only lamp brackets on each end.

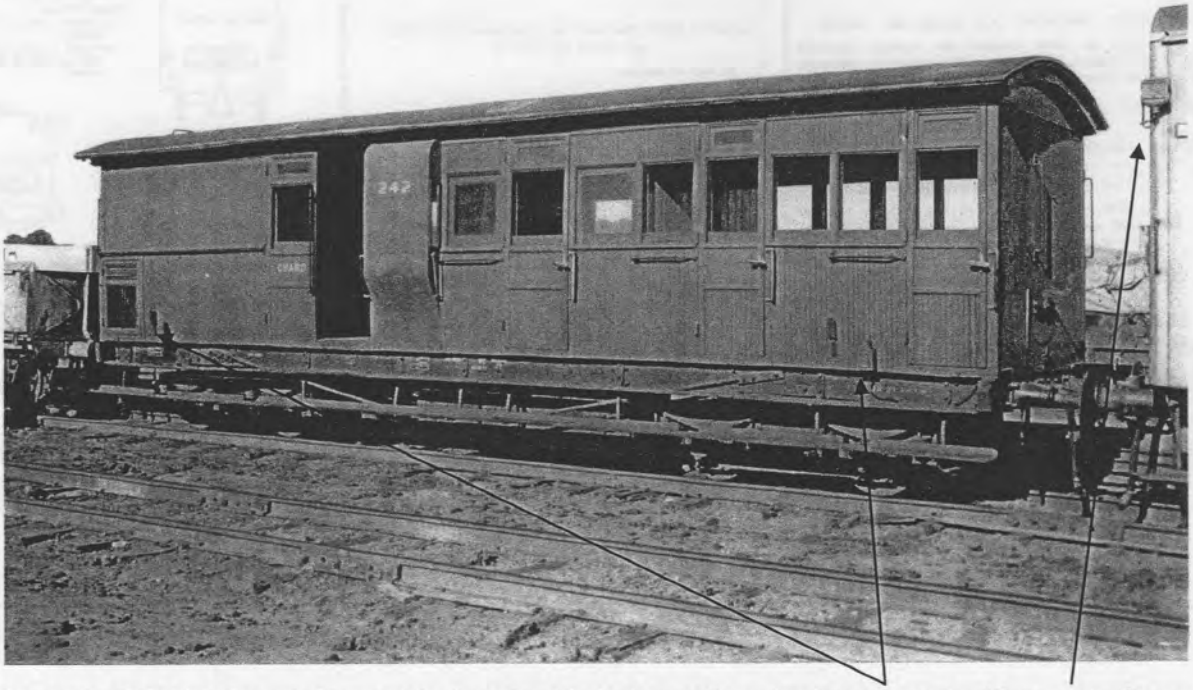


Photo 2. CV 242 Guards Van with electric side lights at floor level both ends. Newer steel van with side lights near the roof. Van 242 is also fitted with brackets for kero lamps.

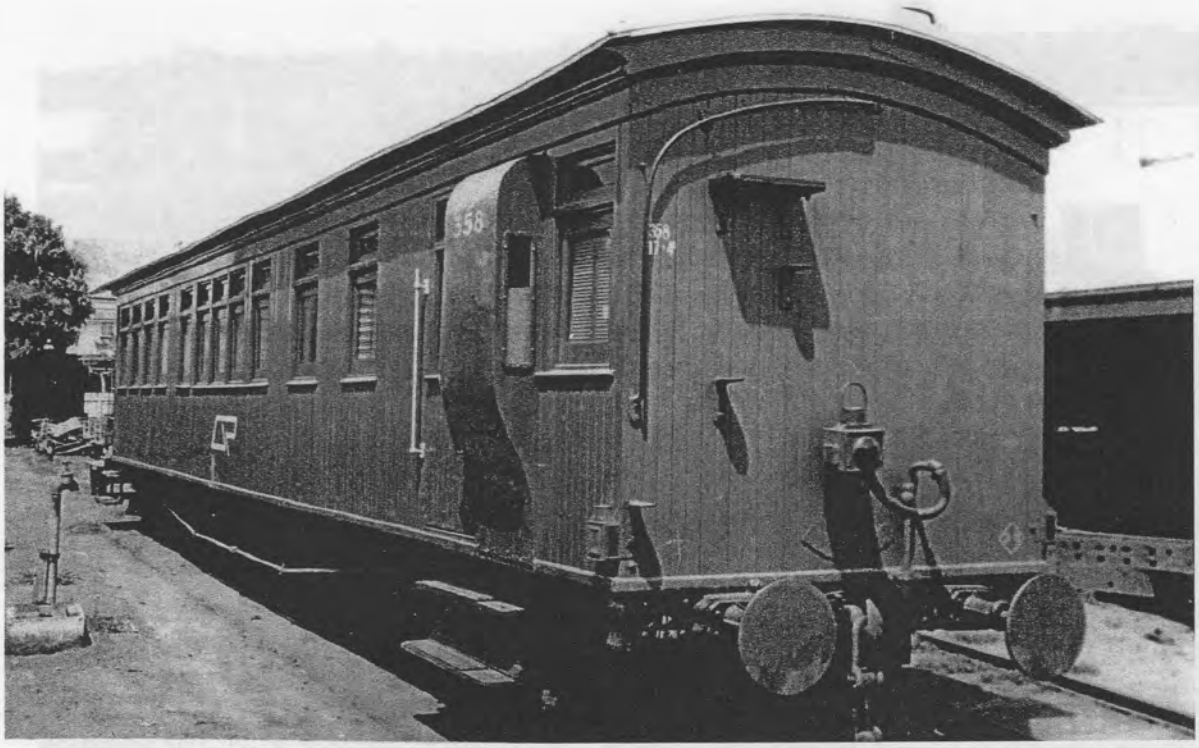


Photo 3. Van / Special Purpose Car 358 at Maryborough with the third (Kero) light to indicated a special train is following ? No, the additional light is on the van to indicating the end of the siding. The DS didn't want shunting staff smashing up this Inspection Car more to the point.

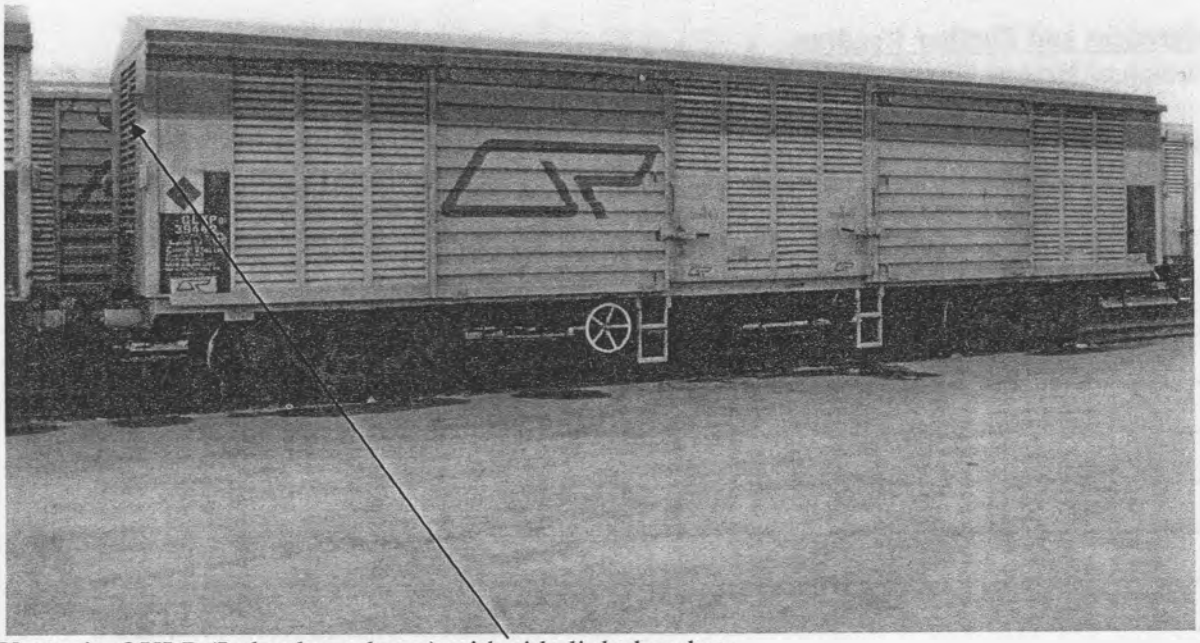


Photo 4: QXLP (In lander colours) with side light brackets.

Photo 5. Locomotive 1204 hauls a Pinkenba suburban service through Coopers Plains. Note the platform lighting towards the end of the 1970's

Conclusion.

Trust you have found the information of assistance and will help you in you modelling projects.

References and Further Reading.

Triumph of Narrow Gauge John Kerr

Notes.