

U n d e r g r o u n d
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CROWD CONTROL EXPERIMENTS

One of London Transport's biggest problems is the control of crowds, and during November 1962, as reported in NF 92 in our December issue, two experimental systems were installed at Holborn station, both intended in their different ways to help in the handling of passengers. Holborn, on the Central and Piccadilly Lines, has been equipped with closed-circuit television and a new 'talk back' passenger information system. About 18 million passengers start or end their journeys at Holborn, while a further 14m interchange between Central and Piccadilly Lines or to and from the Aldwych branch of the Piccadilly; it is, therefore, an excellent place to try out the new equipment, and the results of this experiment will assist in planning similar installations for stations on the new Victoria Line.

Television Installation

For this experiment a special 'crow's nest' observation room has been built on the rear wall of the circulating area at the foot of the main flight of escalators, 77 feet below street level. From this room the main escalators can be seen directly through the one-way glass windows and the arches leading to the Piccadilly Line escalators and to the Central Line platforms can be seen on the left and right respectively. The floor of the crow's nest is 7 ft above the floor level of the circulating area, so that the new structure does not impede passenger movement.

Three monitor screens on a desk in front of the observer enable him to see what is happening on all the main platforms, in the ticket hall, and in the circulating area 125 ft below ground at the foot of the Piccadilly Line escalators. The monitor screens can be switched individually to any of eight strategically sited cameras. Three of the cameras are fitted with 'pan and tilt' equipment to give the widest possible field of view. The pan and tilt apparatus can be operated remotely from the viewing desk by any of three joysticks, one in front of each screen. Movement of the joystick to one

side or other causes the camera to turn, panning across its complete field of view, and backwards or forwards movement of the stick causes the camera to tilt up or down. In the head of the joystick there is also a control for focussing the camera.

One of the pan and tilt cameras is mounted in the street-level ticket hall, where it can swing to look at either the Kingsway or High Holborn entrances or across four escalators. Another is mounted over the foot of the Piccadilly Line escalators, where it can see the subways leading to and from the eastbound and westbound Piccadilly Line platforms. The third camera of this type is mounted over the eastbound Piccadilly Line platform. The remaining five, fixed, cameras are all fixed above platforms. There is one at each end of the westbound Piccadilly Line platform, two on the eastbound Central Line platform and one on that for the westbound Central Line trains. There is no camera on the platform used by the two-car peak hour shuttle service between Holborn and Aldwych.

When action is needed, the observer in the crow's nest has a microphone by means of which he can use the public address loudspeakers anywhere in the station. He also has a compact telephone switchboard which enables him to speak to the staff throughout the station, as well as to other points on the railway system.

Talk-back Information Service

A new type of passenger information service is also being tried out at Holborn. On each of the main platforms and in the lower, Piccadilly Line, circulating area there is a microphone built into an acoustic booth, which will reduce extraneous noises. The passenger will be able to put his head into the hood and press a button to call the attention of the official on duty. When he answers, the sound from the loudspeaker passes through an acoustic labyrinth in the sides of the booth and is heard behind or at the side of the passenger's head. The passenger then asks his question via the microphone and is answered through the loudspeaker.

The information official sits in the crow's nest and has a small switchboard to connect any of the information points to his microphone and amplifier system when his attention is called by a passenger pressing the call button. If he wishes, he can see the person making the enquiry via the closed-circuit television equipment - all of which equipment is by Peto-Scott (Electrical Instruments) Limited.

MODIFICATION OF THE OO GAUGE TRIANG MOTOR BOGIE

P.W.Bradley

TO SUIT TUBE LOADING GAUGE STOCK

It was pointed out some time ago by Joe Brook Smith that the Triang OO gauge motor bogie is correct for the Metropolitan electric locomotive, but that its wheelbase (scale 9'3") is too long for other LT stock.

In the 'tube' field, the modelling situation is even worse. But for the benefit of anyone prepared to tolerate an overscale wheelbase, as I am (temporarily, at least) in a projected model representing DEL 120, it may be worth passing on the fact that the Triang motor bogie can easily be reduced in height to a considerable extent - enough to mean that an OO model can be practically to scale in the matters of height and roof contour for the LT tube loading gauge.

It will be understood that no alteration to the wheels is contemplated. So far as the visible parts are concerned, the method involves the sawing away of the die-cast false sides, and the addition of new fabricated ones 'to taste'. These are attached to a pair of crossmembers secured by the screws which retain the collector assembly. I shall use brass for these parts, but polystyrene would serve very well in the hands of anyone who can work it neatly. Of whatever material, the new sides are of scale height, and at scale height above rail level; they and the main frame of the vehicle conceal the oversized wheels.

The removal of the die-cast false sides means the loss of anchorage of the pole pieces to the chassis diecasting. This is overcome by the use of 10 B.A. screws passing upwards into tapped holes in the poles, their heads being countersunk. Both metals are easily drilled; the poles are of comparatively soft iron and can be worked readily if the drill and tap are soaped. The holes should be deliberately positioned so as to break through into the 'tunnel'; this does no harm, and nobody likes tapping blind holes!

The height reduction is achieved three-fold:-

a. The projecting tongue of Tufnol above the armature is eliminated, so that the magnet can sit directly on the ledges formed on the poles just above the armature.

b. The magnet is turned on its side; i.e., so that its greatest dimension is along the length of the vehicle.

c. The massive diecast 'bridge' across the magnet assembly is replaced by a shallower equivalent.

A few practical hints on the implementation of the above may be useful.

The attachment of the poles to the diecasting with 10 B.A. screws requires care in marking-off, to ensure that the armature remains central in the tunnel. Triang do however allow a considerable tunnel gap, so absolute precision is not required. When dismantling the magnet assembly, the usual 'keeper' precaution must of course be taken.

Grinding of magnets is always best avoided, and in any case is totally unnecessary on this job. Using the magnet, positioned as in (b) above, as a marking jig (but not as a drilling jig!) fresh 8 B.A. clearance holes are drilled in the iron poles, to take a long 8 B.A. brass screw. Each pole is then 'angled off' with a junior hacksaw so as to retain maximum face contact with the magnet and yet give maximum clearance for the vehicle's roof curvature. A bent strip of brass or other non-magnetic metal forms the replacement 'bridge'; it is drilled centrally for the desired form of pivot, and at its ends to suit the 8 B.A. screw. One nut on this screw secures everything (magnet, poles, bridge, and suppressor earth tag). It is essential that magnet and poles are in close contact; any burrs on the poles caused by the drill break-through must be removed.

An alternative mounting of the cutdown Tufnol brush carrier is required; and so that standard Triang brushes can be used unaltered, this piece should be fitted at exactly its original level - easily found by reference to the pole pieces' ledges. A variety of mountings are possible. I built a little supporting platform over the worm. This is carried on two 'pillars', of 10 B.A. studding tapped into the diecasting; and the actual platform is a drilled strip of brass, set to height on nuts and then soldered, the top surface being filed flush. Holes drilled centrally in this brass strip and in the Tufnol enable a fixing to be made by one nut and bolt. Triang's metal strip on the Tufnol is discarded, and the 'uninsulated' brush is earthed to the chassis by a strand of fine, soft wire.

My own bogie, converted as above, measures 35 millimetres, (scale 8'9") from rail level to the top of the bridge strip; and there is no apparent change in the performance.

Note Triang Motor Bogie X 3120, priced at 28/-

*In view of the subject matter of the present, and of projected, articles, the original title proves to be unduly restrictive. (On the authority of C.Hamilton-Ellis, a saloon is not a coach).

We must now retrace our steps to 1892, when, on September 1st the main line was opened between Chalfont Road and Aylesbury. The new station at Wendover was conveniently sited for easy access from Halton, the country seat of Alfred Rothschild. That gentleman, previously obliged to travel by the London & North Western Railway via Tring, now transferred his patronage to the Metropolitan. It would seem that, for a time, he was content to reserve a first class compartment, but in June 1895 tenders were sought for the construction of one or two saloon carriages for his use; the contract was ultimately awarded to the firm of Brown, Marshalls for two vehicles at £660 each.

These saloons, ever since associated with their first distinguished patron, were 32'-0" long by 8'-3" wide (not 8'6" as quoted by the present writer in a letter published in the Railway Magazine, October 1960) and were unique among Metropolitan vehicles in having six wheels, equally spaced over a base of about 22'-0". Each was equipped in a manner common to many family saloons of the period. At one end was a compartment, differing from the rather beggarly accommodation afforded personal servants on other lines in that it measured 6'1" between partitions and was upholstered in first class style. A short vestibule, on either side of which were to be found a lavatory and W.C. respectively, connected to the saloon proper. This was equipped with two settees fixed along the sides, a matching pair of built-in armchairs at the far end and probably a central drop-leaf table, the whole set against polished paneling and a lincrustaed roof. The far end of the body was taken up by a small double-doored luggage compartment. Pintsch gas lighting was provided, and Laycock's steam heating may be safely presumed, while the vacuum brake was standard equipment.

Natural lighting in the saloon was afforded by one drop light and two fixed lights in each side, in addition to the drop light in the door. The door opening, incidentally, was of the remarkably generous width of 2'6", but - alas for any 'broad-gauge' occupant who availed himself fully of this provision - the structure gauge of the entry to the throne room was but 1'9". Acid-etched fixed lights were common to this, and to the complementary accommodation opposite, while the usual

30 arrangement of quarter lights was to be found in the end compartment.

A special train, the first on the Metropolitan to have narrow waist panelling, and the only one built since 1868 to have square-topped swing doors, was made up comprising these two saloons and the two rebuilt first class brake carriages - Nos 41 & 45 - previously described. On the latter, plain panelling had replaced the old top-lights while long louvred vents supplemented them in the design of the saloons themselves. A unique feature of this train was the provision of Spagnoletti's electrical passenger communication system. This did not fully meet the requirements of the Board of Trade for such equipment, obligatory on trains exceeding 20 miles between stops. As Wendover is $33\frac{1}{2}$ miles from Baker Street, conformity with the law was achieved by the introduction of an unadvertised stop at Rickmansworth - ostensibly for water. A proposal of 1901, to fit the more orthodox system operating through the vacuum brake, does not appear to have been implemented.

At some time after the opening of Marylebone station to passenger traffic, possibly when the Uxbridge services were electrified in January 1905, arrangements were made with the Great Central Railway for these 'Rothschild Specials' to be diverted from Baker Street into the latter's terminus. In the October of that year Selbie reported that the saloons, which had been in constant use since their introduction, were in need of a thorough overhaul. He feared that when the General Working Agreement between the two companies came into force, giving the G.C.R. entire control south of Harrow, the latter company would seek to substitute their own special trains, with the consequence that the Metropolitan would lose a traffic which they valued at £600 per annum. Accordingly he recommended a thorough modernisation, including the splicing of the two bodies upon a common underframe, at an estimated cost of £220.

The reconstructed saloon emerged from the Neasden shops early in 1907, resplendent in the current livery - white waist and cant-rail panelling, lined in gold, against the dark varnished teak of the remainder. The old bodies, the luggage compartments having been cut away, were butted together to form a double saloon divided by a bulkhead with a central door. Mounted on a new steel underframe supported on Fox's 7'0" wheelbased pressed-steel bogies set at 38'1" centres, the new vehicle was 55'10" long over mouldings and 58'3 $\frac{1}{2}$ " over buffers. Opportunity had been taken to enlarge the side lights at the expense of the panelling, and to substitute Stone's electric lighting for the original illuminant. The saloons were return-

ished by Maple and Co with free-moving settees and an assortment of mahogany easy chairs and occasional tables. Specially made Wilton and Saxony carpets were provided and the furniture covered in the one saloon in red tapestry, and in the other blue and yellow, the corresponding compartments being reupholstered to match. Formerly Saloons Nos 1 & 2, the combined vehicle became 1.

Prior to reconstruction, the saloons had appeared, with their attendant brakes and two other coaches of the same type, to inaugurate the Uxbridge service in July 1904. With advancing age Rothschild used the railway less, and the train was given over, to some extent, to the use of private parties. Then in 1912 it became necessary to withdraw the Pullman cars for overhaul, and no suitable substitutes were available. Selbie agreed, therefore to hire the saloon to the Pullman Car Company, at £3 per week, to maintain the traffic. New green carpet was laid, and sixteen leather chairs and hassocks and eight tables were sent from the Pullman depot at Battersea for incorporation at Neasden. One of the lavatories was converted to a kitchen with gas and water supplies, a sideboard being constructed in the adjacent compartment in the place of the transverse seat. To complete the effect the four long waist panels were embellished with paper labels 15'0" x 7" bearing the name 'PULLMAN', while shorter labels on the outer panels announced that the use of the car was 'Available to holders of First Class tickets on payment of a small supplement - refreshments obtainable'.

Thus equipped, No 1 understudied 'Mayflower' from March 11th 1912 until relieved in mid-May, when the original fittings were restored for the conduct of the Metropolitan's 'excursion traffic'. A similar metamorphosis was instituted later in the year, when, from September 16th until November, 'Galatea' went to Brighton for refurbishing. Thereafter the Pullman seating was returned to its owners, but the kitchen equipment was retained.

It would seem that there was still some demand for this type of accommodation in the post-war years, for when the Pullman people sought further assistance in 1920, their request was refused.

In 1925 the saloon conveyed distinguished guests to the opening of the Watford branch, being hauled in the midst of a set of 'Dreadnought' coaches by an electric locomotive. Now in decline, its next airing was in all probability the occasion of the opening of the Stanmore branch in the closing days of 1932. The inaugural train on this occasion was of multiple-unit compartment stock; this created a difficulty, since, al-

32 though both the saloon and the accompanying Pullman were fitted with through bus-lines, neither was equipped with a control cable, and it would seem that some improvisation was necessitated.

On these high occasions lavish provision was made for the meet celebration of the Bacchic rites; unfortunately, Lord Aberconway, the Chairman, was teetotal, and none durst raise an elbow out of turn. Back at Neasden there were no such inhibitions, and the esteem in which alike were held the Company's generosity and his Lordship's foibles was demonstrated in a very practical manner.

A sadder occasion, and probably its last important duty, was the conveyance, on July 23rd 1935, of a party of officers of the newly-constituted London Passenger Transport Board on a tour of inspection of the Brill branch. This formal visit (17 minutes only was allowed between Quainton Road and Brill) could but have confirmed a previous decision, for the branch closed for ever on November 30th of the same year.

The L.P.T.B. allocated the number S 900, but if it was ever borne it could have been but briefly, for the saloon, with other, contemporary, vehicles, was consigned to Valhalla when Neasden was reconstructed in the late thirties.

By Metropolitan to Verney Junction

Part IV. Epilogue by Eric J.S.Gadsden.

A final page in the history of the Aylesbury & Buckingham will be turned on March 2nd, when local services north of Aylesbury will be withdrawn. The most notable effect being the closure of Quainton Road, the surviving example of the Metropolitan stations north of Aylesbury. No doubt it will soon be demolished, only the platforms remaining as elsewhere, and soon local trains, if not all passenger services, will be but a memory.

There are still many people who can remember the coming of the Metropolitan to the Vale of Aylesbury, for within a lifetime, the Met & G.C. has come and gone, and on March 2nd, railways will cease to be of importance to an area which thrived around them.

In concluding this series, I would like to express my thanks to Peter Davis, John Reed and Ken Benest for their help, and to the County Archivist at Aylesbury for the many hours he has given up towards these researches. With two visits and many articles to its credit, it cannot be said that the Society has neglected the lines north of Aylesbury, which is, no doubt, as the Metropolitan would have wished in its centenary year.

STATIONS COMPETITION

Devised by John Echlin.

Below are the clues to 12 stations on the Underground to test Members' knowledge!

- RULES
1. Entries must have Name & Address clearly written on, and only one entry per person.
 2. The Line on which the station is situated must be included in the answer.
 3. The first correct answer received will be the winner, the organiser to have the final say.
 4. Answers should be marked T.L.U.R.S. Quiz, and sent to 10 Copthall Road, Ickenham, Uxbridge, Middx., to be in by the 31st March.

A prize of a free copy of Bennett & Borley's "London Transport Railways" will be awarded; answers and winner will be in the May Edition of the Magazine.

C L U E S

1. Connected with a modern Arabian Prince.
2. Town noted for Fowls.
3. Thoroughfare in wrong country?
4. The first bank robbery took place in this town in the USA.
5. Well scrubbed citizens live here.
6. An old station which might have been connected with horse breeding.
7. Othello's Garden.
8. Planted for H.M.S. Victory?
9. Tolls were collected here.
10. Dick Turpin's mount was one.
11. Second only to Quintin's hill.
12. Always falling down.

ILLUSTRATIONS WANTED !

The Society has been asked by a well-known Railway Expert whether any of its members can supply photographs of any steam locomotives of the Metropolitan and Metropolitan District Railways. We would very much like to help, as the gentleman concerned, although not a member of the Society, has been of considerable assistance to it in the past. If you have any photograph which may be of use would you please send details or the photo itself to the Editor at 62 Billet Lane, Hornchurch, Essex.

IMPORTANT NOTICE FROM THE SECRETARY

Some confusion appears to have arisen in connection with the application for Visits, therefore, the following notes are given for Members' guidance:-

Where a visit is restricted to 20 persons or less, one s.a.e. is required for EACH visit where noted in "THE TIMETABLE". (Non-members cannot usually be accepted for these.)

A visit having a restricted number greater than 20 usually calls only for notifying your intention of joining, but not s.a.e., as these visits are not usually overfilled, therefore only unsuccessful applicants are notified.

Where you receive a "Party Full" card or note, this can be used for priority on the next visit to the same installation. This is what was meant by "refusal card" for the Neasden visit. The Secretary's apologies are given for the ambiguity on this one, the Editor will bear out that the Sec's notes are not models of perfection!

Apart from these priority applicants, where more members apply for a visit than can be accommodated, their names are put into the proverbial hat, and picked out "blind" by the Secretary's wife! The unsuccessful are notified first, the successful having to await the approval of the authority granting the visit, also as to where the party should meet their representative, this generally being to hand about a week beforehand.

London Transport and some other authorities restrict visits to persons over the age of 16, and these are noted in the Journal as "for full members only". This is the main reason for the reduced subscription by Associate Members

ITEMS AVAILABLE:Map of West London Line

We have available a few photostat copies of a map published by the Birmingham, Bristol & Thames Junction Railway about 1839; this shows all the railways into London at that date. A few members have already ordered copies - will they, and anyone else interested in receiving a copy, please send 2/- to R.E.Labrum, 134 Cranley Drive, Ilford, Essex. If you have already ordered please say so when writing.

Met Electric Loco Drawing $\frac{1}{2}$ " to 1 ft.

Copies of this drawing are available taken from that in the M.R.N., please send 2/- to R.E.Labrum as above.

LATE NOTICE: Anyone interested in a walk or trip over the Halton branch from Wendover, before it closes on 31st March, please get in touch with The Editor (address p. 33) by 7th March.

A.E.Bennett & H.V.Borley - LONDON TRANSPORT RAILWAYS; A List of Opening, Closing and Renaming Dates of Lines and Stations. 1963; Dawlish: David & Charles; 10-6d. The Society can supply - send order to R.E.Labrum, as instructions at foot of previous page.

This booklet does not need a lengthy review; it is similar in format to the same publisher's L.N.W.R. Chronology 1900-1960, and will obviously prove as valuable to the enthusiast. Containing 32 pages including a route diagram, and a folding map of the system, it is bound in thin card covers. The information given is very comprehensive regarding lines and stations on the entire LT railway system, but it should be pointed out that the services run are not within the scope of the work. It is felt that the Society's members will find that the book, once bought, will be constantly referred to. Thoroughly recommended.

G.Daniels & L.Dench - PASSENGERS NO MORE 1952-1962; Closures of Stations and Branch Lines. A Glo Publication; December 1962; 34 pages, quarto, duplicated; price 4/-. Obtainable for this price, post free, from G.Daniels, 87 Balsdean Road, Woodingdean, Brighton 7, Sussex; or from L.A.Dench, 54 Southdown Avenue, Brighton 6, Sussex.

Another very useful 'list' type of publication, which gives full details of closures in Great Britain and Ireland from 1st January 1952 to 31st December 1962, and is intended to serve as a sequel to H.C.Casserley's 'Service Suspended'. Information given includes dates (of course), parent company, region, and map references to the Ian Allan PREGROUPING Gazetteer. The work is in two sections, Great Britain first, and then the Irish lines, and deals with all closures to passengers; openings and reopenings (and there have been some!) are also listed. Useful, and neatly presented.

BOOK NOTES.

The Felthams This Dryhurst book, reviewed last month, is now obtainable through the Society; please send orders to R.E.Labrum, price is 5/-. All other Dryhurst Books may also be ordered. Tube Stock Till 1939 by B.J.Prigmore, 1/6d., plus supplement, Tube Stock Analysis, 1936-51, also by B.J.Prigmore, 2/- inclusive; supplement by itself, 9d. Early Tube Tickets and Ticket Office Development, by W.H.Bett, 1/-. All post free from Electric Railway Society Sales, 14 Sopwell Lane, St. Albans, Hertfordshire.

NF 126 Local passenger services are being withdrawn from the Great Central line north of Aylesbury this month. Last trains will be Saturday 2nd March for Quanton Road, etc.

Saturday 16th March, 10 a.m. Visit to West Ruislip L.T. Depot. Names to the Secretary at 4 Southcombe St., W.14, by 6th March, enclosing a s.a.e. Restricted visit - Full Members.

Friday 5th April. Members Colour Slide Evening - Time and place to be announced in the April Journal. Will members who have offered their slides for this show please bring them along on the night.

Saturday 20th April, 10 a.m. Visit to Neasden L.T. Depot. Names to Secretary by 6th April, accompanied by a s.a.e., and, if you were unsuccessful on our previous visit to this depot, the refusal card - restricted visit also.

Sunday 21st April, Approximately 9.45 a.m. Paddington. Great Western Railway Preservation Society, Thames-side rail Tour; this will last until about 5.00 p.m. at a fare of 25/- . Various Branches will be visited, including Uxbridge & Brentford and full details are obtainable from G.W.P.S., 1 Warwick Rd., Southall, Middx.

Saturday 27th April, 2.30 p.m. Walk "Over The Top" of the Metropolitan Route from Aldgate to Ray Street. Meet in the Booking Hall Aldgate Station; open to all and no applications necessary.

Friday 3rd May, 7.45 p.m. A Tape Recording and Colour Slide Evening at the Old Oak Tea Rooms, Pinner.

Saturday 18th May. We hope for a brake-van trip on this date - details to follow.

THE ASSISTANCE BOARD

Information is sought on the following subjects, and if anyone can help would they please write to the Modelling Secretary, J.S.Brook Smith, 34 Barnehurst Rd., Barnehurst, Kent.

Met. Railway 'K' Class 2-6-4T Locos. Drawings if possible, chimney in particular. Large size photos (for copying) or any other aids to modelling these locos.

L.T. Service and Goods Trains Formation (type and order) of these trains to assist provincial members in obtaining authenticity.

Met. 'T' Stock Can anyone loan official drawings particularly motor and trailing bogie details, with view to commercial production.