

ON SHED

The Journal of the 8D Association

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'On Shed' : Journal of the 8D Association

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Page

2	Index & From the Editor
3	News Round Up : <i>Chris Hollins</i>
5	AL6 / Class 86 25Kv A/c Electric Locomotives : <i>Dennis Flood</i>
15	Euston to Runcorn (via Marylebone) : <i>Chris Lewis</i>
17	Demise of the CLC Around Liverpool : <i>Phil Graham MBE</i>
27	Liverpool's Cross London Inter City Services : <i>Chris Hollins</i>
30	Member's Collection of Photographs : <i>Tony Foster</i>
32	Forthcoming 8D Events : <i>Paul Wright</i>

From the Editor

I hope that you, your family and friends are all well.

At last, there's a hint of normality ! You'll see, on the back cover, that our Chairman, Paul Wright, has set out details of 2 outdoor events for the Autumn. I hope that you feel able to participate - I know that members have missed the camaraderie and socialising that an 8D guided walk affords.

Dennis Flood's article about Class 86 electric locomotives (see pages 5-14) had me searching through my collection of photographs. I had a vague memory of spending a morning at Crewe station in the 1980s, testing a new camera lens. Success !! I found the negatives that I was looking for and have been able to contribute a 'front cover' shot. I'm grateful to Chris Hollins for his help in researching and preparing an appropriate caption (see below). I'm grateful also to those contributors who

have, again, submitted the material that goes to make up the content of this edition of 'On Shed'. Without their support, there would be no journal. That said, I recognise, of course, that preparing an article for publication is not everyone's cup of tea. Equally, I know that we have members who have an interesting tale to tell (drivers, firemen, signalmen, station staff, PW crew members etc etc), but who may be reluctant to embark upon a literary career as an 8D author ! We can get round that !

If you would like to share your story with the readers of 'On Shed', but would feel happier if you had a bit of support with its preparation, please get in touch. My contact details are shown below and I look forward to hearing from you - thank you.

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Cover photograph : Taken sometime between 1985 and 1989, Class 86/4 86421 'London School of Economics' arrives at Crewe on a southbound Inter-City Cross Country service. The locomotive acquired this number in June 1985, and was named in October of the same year. In its lifetime, it carried 5 different numbers E3157, 86021, 86321, 86421 and 86621.

See also the article **AL6 / Class 86 25Kv A/c Electric Locomotives** by Dennis Flood (pages 5 - 14) and the additional photographs on pages 14 and 30.

Photo by Tony Foster

News Round Up

Chris Hollins

Given that 'On Shed' is published quarterly, many of the items referred to in this 'News Round Up' can only be of historical interest. Nevertheless, every effort has been made to record also those changes, developments and items of interest that have occurred within the 8D area since the date that the last publication was prepared for the printer.

Chris Hollins

Special trains

On Saturday 22 May, Saphos Trains operated a Crewe to Appleby circular trip, which called at Runcorn to pick up passengers. Also stopping at Hartford, Liverpool South Parkway, Liverpool Lime Street, Broad Green, Huyton, St Helens Central and Wigan North Western. The train was routed via Blackburn and the Settle and Carlisle line, where after a five minutes stop it returned to Crewe via the outskirts of Carlisle using the freight only line from London Road Jct to Upperby Bridge Jct, enabling it to access the West Coast Main line, joining its outward route at Farington Jct, South of Preston.

The train formed of the Statesman set of carriages, was 'top and tailed' by Locomotive Services Limited Class 47's 47593 *Galloway Princess* & 47805 *Roger Hosking MA 1925-2013*.

The following day, the Northern Belle passed through Runcorn Station three times, traversing the Halton Curve twice as part of a Crewe to Blackburn and return 'Luncheon Special'. The train was routed from Crewe via Chester, Runcorn, Liverpool Lime Street, St Helens Central, Wigan North Western, Preston, Carnforth and Hellifield. The return from Blackburn was via Farington Jct, Wigan North Western, Warrington Bank Quay, Crewe, Chester and Runcorn to Liverpool Lime Street. The empty stock then again passing through Runcorn, back to Crewe. 'Top and tailed' West Coast Railways Class 57 locomotives provided the motive power throughout the journey.

Record Attempt

On Thursday 17 June, an attempt was made to break the West Coast Main line speed record held by Advanced Passenger Train power cars 49003 & 49006 set in 1984.

Newly named 9 car Pendolino 390.044 *Royal Scot* was the unit tasked with the job. Unfortunately the unit failed to beat the record by 21 seconds, but did record a time from passing Crewe to passing Warrington Bank Quay of 12 minutes 40 seconds. Is this the fastest ever train between these two places ?

New Freight Flow

A new 'as required' freight service carrying sand has commenced between Middleton Towers in Norfolk, and Ravenhead Siding, serving the Pilkington Glass Works in St Helens.

Operated by DC Rail Freight based in Derby and part of the Cappagh Group of companies, the service utilises large blue liveried box wagons, hauled by one of their own Class 60 locomotives.

Alstom Expansion

Having been awarded a contract to refurbish 26 of South Western Railway Class 458 units, additional sidings are to be laid at the Alstom Transport Tech facility in Widnes. One of the sidings will be constructed with a Ro-Rail capability, enabling carriages to be unloaded if brought in by road. This could be useful for vehicles being delivered which are involved in the Hydrogen train project, which Alstom is developing at the Widnes Plant.

Merseyrail Unit Trip

New Merseyrail EMU 777.002 made a surprise visit to the Stadler Stand at the Rail Live 2021 event, held on June 16 / 17 at the Quinton Rail Technology Centre in Long Marston, Warwickshire.

This unit has been additionally fitted with batteries, enabling it to work off the normal DC third rail system, and was able to give small demonstration rides at the event using its battery capabilities.

The proposed extension of the Merseyrail Electrics network from Kirkby to Headbolt Lane, may result in units operating the mile long extension on battery power instead of a third rail being laid.

New Trains for the Chester Service

Transport for Wales have announced that their new Class 197 CAF built Diesel Multiple Units, will be introduced on to the Liverpool Lime Street to Chester service from next year. This will be the first operation of these units in passenger service, which from 2023, is due

to be extended to Cardiff Central via Shrewsbury and Hereford.

Steam Through Runcorn

On Saturday 17 July, West Coast Railways operated the Cumbrian Mountain Express 1Z67 05.29 Crewe to Carlisle via Liverpool Lime Street. The train, which called at Runcorn, employed a Class 47 diesel and former LMS 4-6-0 46100 *Royal Scot* in 'top and tailed' mode. The outward route was over the Settle and Carlisle line, returning as 1Z69 15.18 Carlisle to Crewe via the West Coast Main Line over Shap Summit.

The following day, due to engineering works the North Wales Coast Express 1Z61 11.10 Liverpool Lime Street to Holyhead, which should have run via Warrington Bank Quay, was diverted via Runcorn. The train was hauled by Jubilee Class Locomotive 45690 *Leander*, and ran non-stop to Frodsham, where passengers from Warrington were able to join the Train. The service returned in the evening from Holyhead at 18.10 operating as 1Z62, and ran from Frodsham Jct via Warrington Bank Quay and Earlestown.



On Wednesday 26 May, GBRF Class 47 47739, passes through Runcorn Station en route from Eastleigh Depot to Widnes Alstom Transport Tech hauling South Western Railway Class 701 unit 701.008 for Traction Motor modifications.

Photograph : Chris Hollins

AL6 / Class 86 25Kv A/c Electric Locomotives

Part 2 of 3 Articles by Dennis Flood

This second article deals specifically with the AL6 / Class 86 25Kv A/c electric locomotives, and it is worth looking at the historical background of how this class of locomotive evolved and entered service with British Railways, following other members of the earlier build electric locomotives AL1 - AL5 / Class 81 to 85.

The Class 87 A/c electric locomotive entered service after the introduction of the AL6 and because of the numerous similarities between these two types of locomotive it is not relevant to discuss the Class 87 locomotive in this article. However, the fact that a great number of them have found a new lease of life in Bulgaria and are still in service in that country today, following their withdrawal from Britain's railways, shows just what a successful locomotive they were, as well as the earlier AL6/Class 86 locomotives.

There were six principal classes of locomotive built for operational use between London Euston, Birmingham, Crewe, Liverpool and Manchester as part of the 1954 / 55 British Railways 'Modernisation Plan'. They were all of a similar type in that each was equipped to transform the very high overhead line voltage down to a suitable voltage for operation of the locomotive traction motors.

Each locomotive was fitted with static A/c to D/c converters so that the traction motors on each class of locomotive operated on rectified A/c to D/c voltage. In this way the economic advantages of efficient high voltage transmission systems, whilst utilising the ideal traction characteristics of D/c series traction motors, was obtained.

The driving cab layout and driving technique for the AL1-AL6 locomotives was basically the same. The equipment located on the roof of each type was similar for all classes.

However, whilst the locomotives were all of one basic design the equipment for each class was supplied by numerous different manufacturers. The layout of equipment, and its detailed design located between the cab bulkheads, differed from each other in some ways.

The locomotives manufactured by the various manufacturers, including British Railways themselves, were originally identified thus :-

Class AL1

Numbers E3001 - E3023
British Thomson Houston

Numbers E3096 and E3097
Birmingham Carriage & Wagon

Class AL2

Numbers E3046 - E3055
Metropolitan Vickers and
Beyer Peacock Works

Class AL3

Numbers E3024 - E3035
E3098, E3099

The English Electric Company / Vulcan Foundry Works.

Class AL4

Numbers E3036 - E3045
The General Electric Company and
North British Locomotive Company

Class AL5

Numbers E3056 - E3095
Associated Electrical Industries / BR

Class AL6

Numbers E3100
Vulcan Foundry Works.

Numbers E3101 - E3200
Associated Electrical Industries
EE / VFW / BR

Each of these manufacturing companies were known generically within British Railways simply by their initials BTH, BRCW, MV, BP, EE, VFW, GEC, NBL, AEI, BR and AEI, EE, BR.

There were several changes made to selected locomotives during their development trials and this was recognised by their different numbering such as `E33...` instead of `E30...`.

The bogies fitted to each class of locomotive were fitted with two wheelsets (axles) and each was powered by an individual traction motor. The drive from the traction motor to the road wheels on each wheelset was either through an Alstom or Brown Boveri flexible drive arrangement on the AL1 to AL5 locomotives, or by means of a resiliently mounted gear wheel arrangement driven by axle hung traction motors in the case of the AL6 locomotives.

The locomotive underframe was a welded steel assembly made up of box sections to support the locomotive superstructure with the buffers and draw gear mounted on underframe headstocks. The locomotive main transformer complete with its associated tap changing equipment, oil conservator, radiators, oil pump and pipework was centrally positioned on the locomotive superstructure and was fitted below the sole bars into a well in the underframe of the locomotive. Other electrical equipment was then positioned around the transformer and elsewhere within the locomotive interior.

The layouts in each driving cab – No.1 or No.2 end – are identical to each other. The layouts of the driving and braking controls

within the driving cabs are also identical, as are the automatic brake valve and straight air brake valves, brake gauges, traction motor ammeters, notch indicators, push button controls and switches. The locomotive can be fully controlled from either driving cab.

The driving cabs are interconnected by a corridor through the body of the locomotive. Situated along this corridor are various cupboards and equipment frames which contain low tension electrical and pneumatic equipment, fuses and miniature circuit breakers.

Locomotive Electrical Features

Each driving cab is fitted with a master controller for regulating the movement and running of the locomotive. The master controller has three operating controls (i) a reversing lever to control the forward and reverse movement of the locomotive, (ii) a notching lever to control acceleration and (iii) a control key which locks the controls on the driving desk when the locomotive is not being driven from that driving cab or when it is shut-down and stabled.

The notching movement controls the movement of the tap changer, which has 38 voltage positions (increments) being available to the locomotive traction motors.

The power output to the traction motors is controlled by specific tap changing either on the high or low voltage windings of the locomotive main transformer. Movement of the notching lever on the power controller operates various switches and contactors to control the voltage output from the transformer. When starting, the voltage to the rectifier and then to the traction motors, is gradually increased step by step.

The tapping contactors, reverser and other high voltage equipment is contained within high tension compartments and the doors through which access is gained are inter-

locked with an isolating and earthing switch mechanism to prevent entry when the pantograph on the locomotive is raised.

In the initial stages of starting away, the supply voltage to the four traction motors must be kept to a low value to limit the initial traction motor current to a value which is just adequate to produce sufficient tractive effort to overcome the `static` train resistance.

As the train starts to move, the traction motor speed and thus the increased rotational voltage generated in the traction motor armatures increases to oppose this applied voltage. The current for a given voltage `tap` will fall steadily as the speed increases so to maintain a high tractive effort to increase speed further, the voltage to the traction motors must be gradually increased by the driver taking progressively higher transformer `taps`.

All classes of locomotive use D/c series type traction motors which, along with rectifiers and transformer radiators, are forced air cooled by blowers mounted inside the body of the locomotive. The air is drawn into ducting through bodyside `louvres` by the motor driven blowers. It is this arrangement which gave these locomotives that `loud roar` which could be heard from some distance when the blower motors were running and providing this forced air to cool the locomotive electrical equipment.

Auxiliary machines on the locomotives such as exhausters and compressors, for example, were fed from a tertiary winding on the main transformer. A low tension supply for control lighting and other electrical circuits is obtained from a 110v battery, which itself was charged either by a rectified electrical supply or by a motor driven generator fed from the transformer tertiary winding.

One pantograph was fitted at No.2 end of the

locomotive (some locomotives were originally fitted with two pantographs but this practice was subsequently discontinued) on the recessed roof which runs the full length of the locomotive between the driving cab bulkheads.

The pantograph is controlled by springs which are released to raise or lower the pantograph by operation of an air motor.

The main circuit breaker for the locomotive is an air blast operated circuit breaker (ABCB or ACB) and this is also mounted on the recessed roof of the locomotive situated next to a 25Kv A/c lead-in insulator. This can be seen quite easily on the roof of the locomotive.

The initial air supply for raising the locomotive pantograph and closing the air blast circuit breaker when it is stabled and electrically `dead` is provided by an auxiliary compressor which runs off the locomotive batteries when the battery switch is put in the `On` position. This machine supplies main air pressure which is sufficient to raise the pantograph by use of the `pan-up` button in the selected driving cab when the locomotive is electrically `dead`.

Once the pantograph has been raised and the air blast circuit breaker is `closed`, the main compressors will start to charge the locomotive main air reservoirs which, in turn, provide the main air requirements for all the pneumatically controlled equipment on the locomotive. The auxiliary compressor stops once the pantograph has been raised since its only function is to provide sufficient air pressure to raise the pantograph.

The white `line light` in the driving cab will be illuminated on the driving desk showing an `L` once the pantograph has been raised to indicate that the locomotive is `live` and operational.

Brake Systems

The motor driven compressors produce compressed air to charge the locomotive main air system which supplies air for operating the locomotive brakes and various other components which are pneumatically operated. The AL6 locomotive, unlike the AL1-AL5 classes, was built with two air compressors to give its main reservoir system greater capacity when working air braked trains. It could also work vacuum braked, partially braked and unbraked trains.

The dual-braked (*air and vacuum*) AL6 class was fitted with two exhausters for operation of the brakes on vacuum fitted trains and this arrangement meant that the locomotive was, in effect, employing an air operated vacuum brake. This was achieved by the operation of a VA1 / VA2 Control Valve (very slight differences in operation between the two valves – hence different design numbers given to them) which determined brake pipe pressure, and which is supplied from the locomotive main air system via the locomotive compressors in proportion to train pipe vacuum created by the exhausters on the locomotive, and thus to the train as well.

The function of a VA1/VA2 Control Valve was an ingenious way of allowing a dual braked locomotive to work a vacuum braked train. This was a remarkable piece of brake equipment and I made it my business to understand exactly how it worked when I conducted air and vacuum brake training courses myself during my time with BR.

The AL6 locomotive was fitted with a rheostatic brake which operated whenever the drivers brake valve was used and operated contactors via a micro switch by movement of the brake valve itself. The restriction in friction braking when rheostatic braking was in operation reduced brake block wear on the locomotive.

When the train speed dropped below about 20mph `normal` braking became operational and rheostatic braking ceased.

The AL1 - AL5 locomotives were originally built as conventional vacuum braked only locomotives, whereas the AL6 was built with a dual-braking facility which meant it could work both air and vacuum braked trains when required. The Class 87 locomotive class were built for air brake train operation only.

AL6 Locomotive Power Circuit Equipment

When the air blast circuit breaker is `closed`, electric current at 25kV/c is collected by the pantograph.

The supply from the overhead contact wire then energises the locomotive main transformer. Tap changing is performed either on the transformer high or low voltage windings which, in turn, gives a variable voltage output from the transformer.

The current is converted to D/c via rectifiers and the output from the rectifiers is then fed through `smoothing chokes` to reduce any current `ripple` remaining during its transition from A/c to D/c and this current then passes through traction motor contactors to the traction motors.

Pantograph

The locomotive pantograph is a collapsible framework of tubular steel construction and is normally held down by a spring-loaded air cylinder. However, if compressed air is supplied to this cylinder a set of springs are then released to raise the pantograph.

Mounted on linkages and springs at the top of the pantograph framework is a collector head which slides along the underside of the overhead contact wire as the locomotive moves and collects the electric current via carbon strips. The complete pantograph structure is mounted and secured on insula-

tors on the roof of the locomotive. The current is fed from the pantograph to the air-blast circuit breaker.

Air-Blast Circuit Breaker.

This circuit breaker is situated in the centre of the locomotive roof and the high voltage portion comprises an interruptor head and isolator arm. When the circuit breaker is operated a sharp blast of compressed air forces open the contacts in the interruptor head `blowing out` the resultant electric arc to interrupt the high voltage circuit.

The isolator arm then opens so that the `live` equipment on the locomotive remains isolated from the pantograph whilst it is `open`. This operation occurs, for example, during passage of the locomotive through a Neutral Section.

Main Transformer.

The main transformer which is fitted to an AL6 / Class 86 locomotive is a `Step-down` transformer. The current which flows through the `primary` winding within it induces a current to flow within the `secondary` winding. Therefore, the ratio between the two windings is such that the `secondary` output voltage is reduced compared with the `primary` value. It is, therefore, said to be `Stepped Down`. This arrangement is essential for locomotive traction purposes.

The transformer is arranged for `tap changing`, which is a means of varying the output voltage from the transformer for locomotive and train speed control. The locomotive `Tap Changer` has 38 individual values of output voltage which can be increased in steps across each traction motor. The `Tap Changer` works like a rotary cam and it responds directly to the driver operating the power controller on the locomotive. It `runs-up` during powering and `runs-down` when power is reduced or shut off.

The Tapchanger.

The output voltage from the main transformer supplies the traction motors via rectifiers and enables variable speed and power control to be obtained by the driver. The voltage is increased or decreased `step by step` as the driving cab power controller notching lever is notched up or down. This is achieved by the Tapchanger which carries out the switching procedures on one of the main transformer windings to give the required output voltage which corresponds to the selected notch position selected by the driver's use of the power controller in the driving cab.

The Tapchanger is, basically, a camshaft and was driven by an electric motor on all types of AL class 25kV/c electric locomotives except the AL3 type. The AL3 class was fitted with an air motor to drive the Tapchanger instead of it being done electrically.

For a driver to be able to `run back` the Tapchanger to the `OFF` position from high tap positions using the power controller takes about 35/40 seconds since the Tapchanger needs to run down through all 38 tap positions from full power to zero.

The best way to imagine what is happening during this action is to assume that the Tapchanger has been run-up to 100 per cent taps by the driver's use of the power controller and the locomotive is running at full speed and the driver then requires to close the power controller through `Run Down` and then `OFF` to make a signal or station stop, for example. This needs to be done in a very controlled manner – under normal circumstances – to allow for a smooth reduction in power.

100 per cent taps equates to notch 38 on the Tapchanger, and zero taps is when power has been shut off and the Tapchanger has run back completely.

With reference to the attached diagrams accompanying this article, it is worth having a look at the driving cab layout of an AL6 / Class 86 locomotive. These give an indication of the driving and braking controls and indications used by a driver. All driving cab diagrams were drawn by David Gibbons, who was the British Railways Board Technical Illustrator, and give an excellent perspective of the driving cab controls on these wonderful locomotives.

David is, sadly, no longer with us but his legacy lives on through his excellent diagrams – 8D Association members and friends can view them and judge for themselves their high quality after many years have passed since he first drew them.

The drawings of the overhead line masts and differing catenary shown in the Part 1 article were produced by the British Railways Board during the initial planning stages of the 25Kv OLE introduction.

Driver’s Controls (Figure 1)

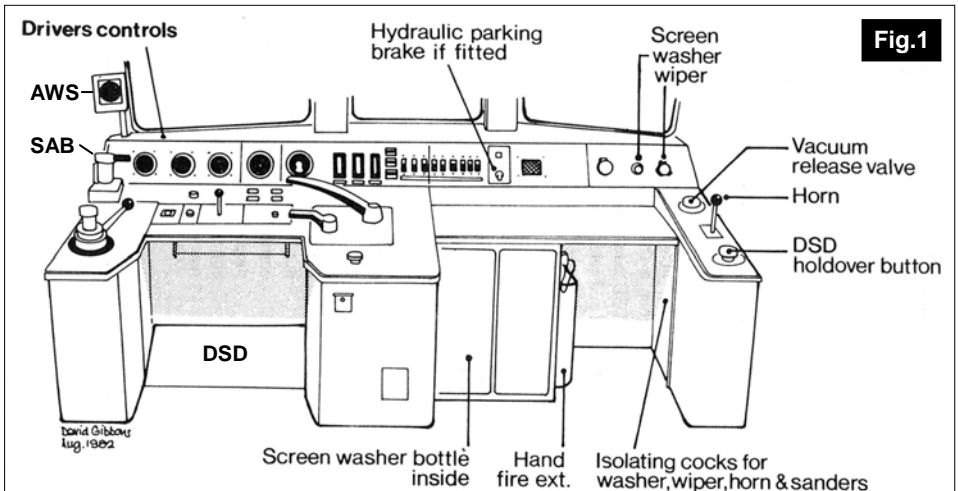
The Automatic Warning System Visual Indicator situated above the locomotive straight air brake (black handle). The SAB was used to control the movements of the locomotive.

The automatic brake valve can be seen with the black knob on it below the straight air brake. In the centre of the drawing can be seen the locomotive power controller and master ‘Forward and Reverse’ selector switch. The power controller is the larger of the two.

On the right can be seen the vacuum release valve and this was used when the locomotive had been working a vacuum braked train and required the ‘chamber side’ vacuum to be destroyed in readiness for stabling the locomotive or prior to changing over to air brake operation of the locomotive, for example.

The DSD (Driver’s Safety Device) holdover button was used to allow a driver to cross the cab floor after vacating his seat – and removing his feet from the DSD foot pedal – during shunting movements when working ‘single manned’. The pressing of this button kept the DSD energised and avoided a brake application from occurring, which would happen after about 3-5 seconds of the driver releasing his feet from the DSD foot pedal.

The DSD pedal can be seen at floor level on the drawing and is located between the automatic brake valve and power controller.



It is shown, as drawn, on a slight inclined plane.

DSD holdover buttons serve no purpose on traction units still fitted with them today as a driver should not leave the driving seat in the above circumstances any longer. The use of 'back-to-back' radios for shunting purposes between the individual in charge of the shunting movement and the driver of the traction unit has made their use entirely superfluous.

Driver's Controls (Figure 2)

This drawing is self-explanatory and shows the Automatic Warning System Indicator (AWS), the straight air brake and automatic air brake valve handles. Also clearly visible is the power controller and master 'Forward and Reverse' selector switch. The driving cab instrument panel, indicators and specific buttons are also shown.

Power Controls (Figure 3) Overleaf

This is an excellent drawing. It shows the master 'Forward and Reverse' selector switch and the push button for the master switch. A master key must be placed in the driving cab desk to release the below-desk interlocking mechanism, and then the push button must be pressed to enable the master switch to be moved away from the central 'locked' position, as shown in the drawing. This avoids the master switch being moved from 'Forward' to 'Reverse' whilst the locomotive is in motion. Once a master key has been inserted in the driving desk and this button pressed 'Forward or Reverse' can be selected prior to movement.

The power controller is shown in the centre of the drawing. It shows the various positions which can be selected during driving. Explanations of each will be given in due course.

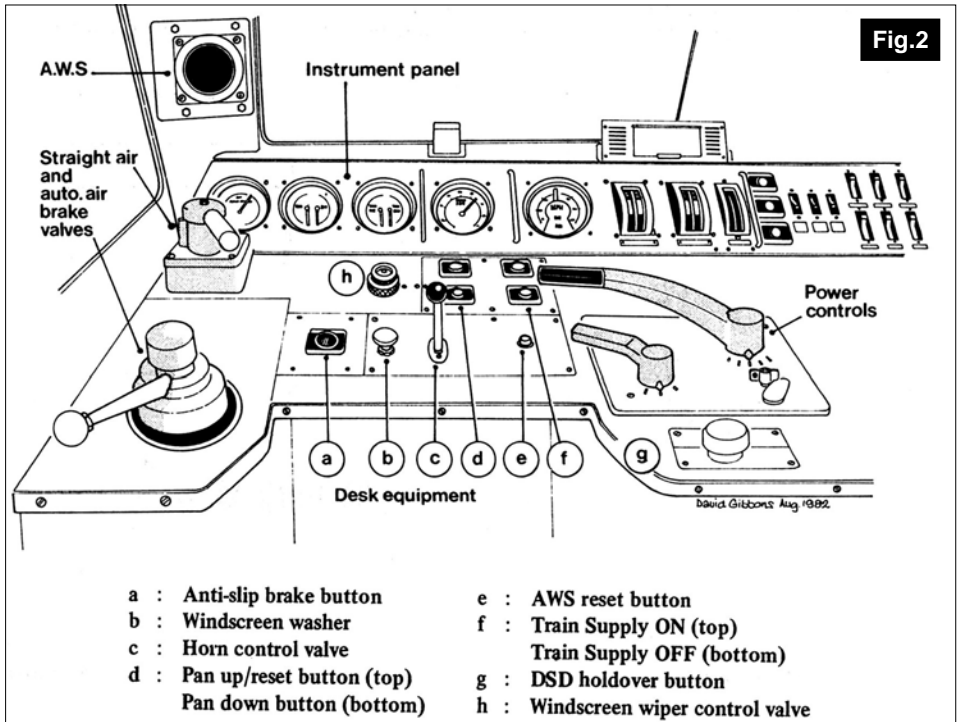
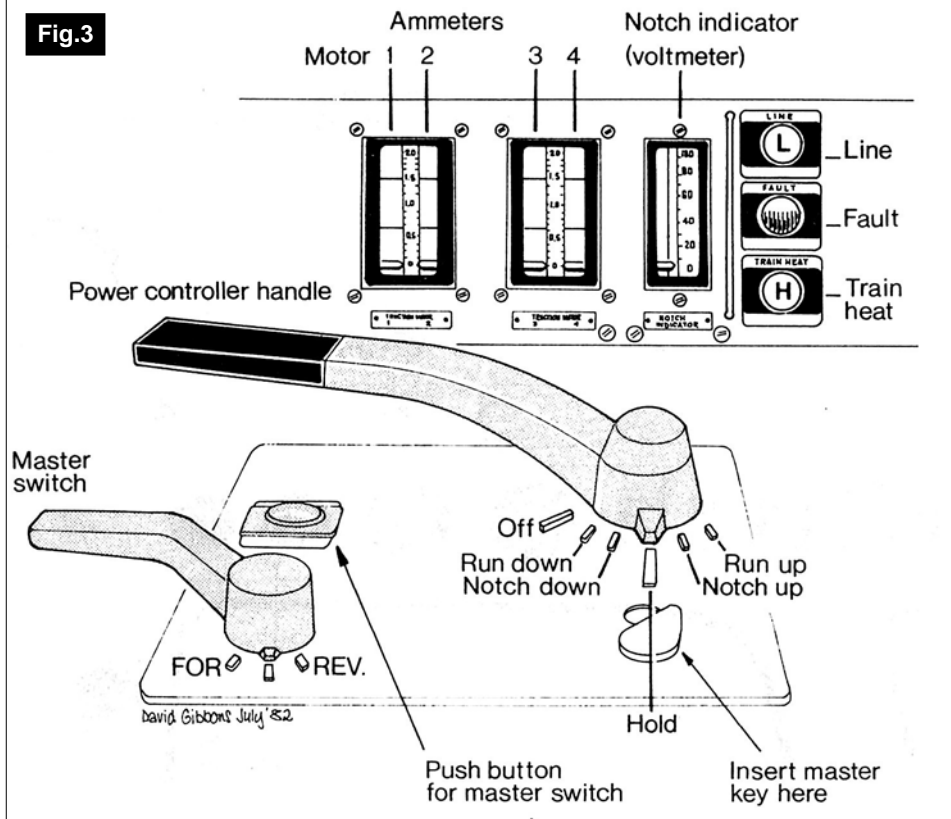


Fig.3



The four traction motor ammeter gauges are shown above the power controller and are numbered 1-4. These indicate output from the locomotive traction motors when it is in use. The Tapchanger Notch indicator shows the needle of it at 0 (Zero). This indicator starts to move upwards when the driver starts to 'Notch up' whilst taking power, and can rise to 100 per cent taps when the locomotive is under full power. It indicates the status of the 38 notch Tapchanger as the locomotive is powered up, power is reduced or shut off completely.

Instrument Layout (Figure 4)

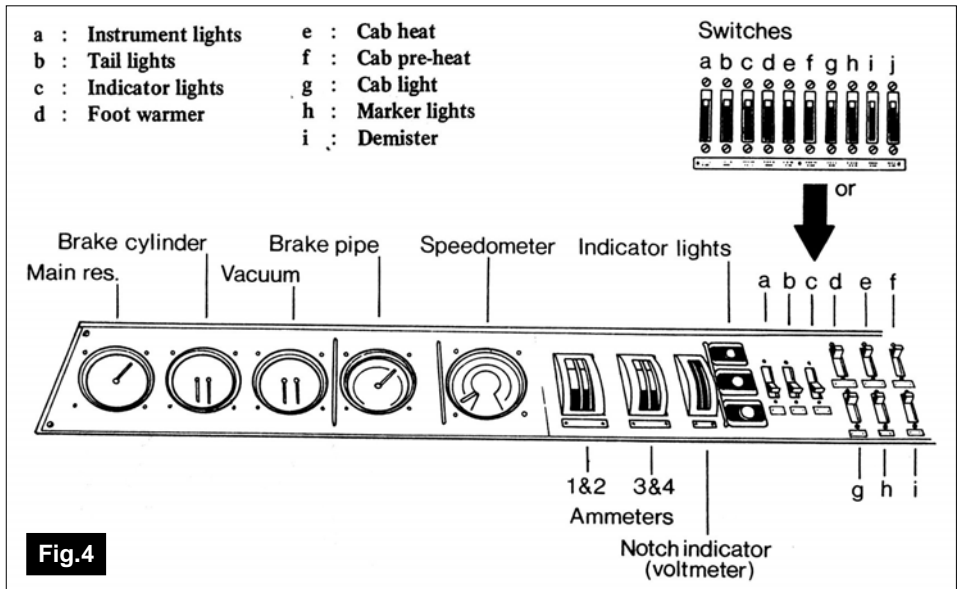
This diagram is also self-explanatory and shows the specific switches within the driving

cab with indications for each of them. With reference to the 'Power Controls' diagram shown above as Fig.3, herewith is an explanation for each function of the power controller on an AL6/ Class 86 locomotive.

Hopefully, this will also help the reader to further understand the relationship between the Tapchanger and the power controller on the locomotive - it is most significant.

Master Switch

As previously stated, this switch allows movement of the locomotive in either 'Forward' or 'Reverse' direction. It has three positions which are **FOR** (Forward), **REV** (Reverse) and **OFF** (Not in use).



A modification was carried out on the AL6 locomotive when it became designated as a Class 86 later in their working lives during the 1980s by the introduction and fitting on the locomotive of Speed Sensing Fitted electrical equipment. (SSF).

If a master switch was inadvertently moved to the 'OFF' position whilst the locomotive was moving in either 'Forward' or 'Reverse' direction, or before it has been at a stand for about 3-4 seconds, a brake application via the Driver's Safety Device (DSD) would occur and, in recent years with the fitting of Data Recorders to locomotives and traction units permitted to use the national railway network – including Class 86s – this 'event', as it is called, would be recorded.

The brakes on the locomotive could only be released by resetting the DSD equipment by way of depressing the DSD foot pedal and then selecting 'Forward' or 'Reverse' by use of the master switch.

The push button previously mentioned only

stopped the master switch from being inadvertently moved from 'Forward' to 'Reverse' whilst the locomotive was in motion. The 'OFF' position could still be selected without operating this button. This was to facilitate switching out the driving desk prior to removal of the master key or a driver needing to change ends on the locomotive.

With the master switch in the 'OFF' position the traction motor contactors are 'open' and, therefore, no power can be supplied to the locomotive traction motors. The driving controls are locked.

POWER CONTROLLER POSITIONS
Run Down

The 'Run-Down' position is used to quickly reduce notch positions prior to reducing power once the desired speed has been obtained or in preparation of moving the power controller to the 'OFF' position. This action by the driver avoids a sudden 'chopping off' of power as both the secondary and traction motor contactors 'open' which could produce

drawbar `shocks` along the train. I suspect some 8D Association members will have felt these `longitudinal` shocks in the past when travelling on a train hauled by a 25kV/c electric locomotive at some time when the driver has returned the power controller to the `OFF` position too quickly – I certainly have !

Notch Down

The `Notch-Down` position is used to reduce power by one notch at a time by a `to and fro` movement of the power controller handle between `Hold` and `Notch Down` positions. Each complete movement reduces the Tapchanger position by one notch.

Hold Position

The `Hold` position is used to retain the applied notch once the required number of notches have been taken and the desired locomotive speed has been attained.

Notch-Up

The `Notch-up` position is used for gradual application of power when starting away trains from rest or to increase power by small amounts whilst the train is in motion. Moving the power controller `to and fro` between `Hold` and `Notch-Up` means that the position of the Tapchanger can be increased one

notch at a time over the whole of the notching range. During `Notching-Up` the traction motor ammeters need to be carefully observed. This is to ensure that the ammeter needles **DO NOT** remain in the **RED** sector for long periods, and that they remain approximately level with each other.

Run-Up

The `Run-Up` position is used to increase power rapidly when, for example, power has been reduced or shut off for coasting at speed by notching up the Tapchanger automatically. The power controller is spring loaded in this position and will return to the `Notch-Up` position when it is released.

The `Run-Up` position **MUST NOT** be used when starting a train away from a standstill to avoid overloading the locomotive traction motors.

In Part 3 (the final part of these articles), I will deal with other items within the driving cab. Pan Up/Reset, Train Heat ON/OFF, Anti-Slip buttons, Ammeter indications and Tapchanger notch positions and the external operation of Automatic Power Cut-off control (APC) and the operation of the Rheostatic Brake.

Dennis J Flood



Above : *In the early 1980s, an unidentified Class 86 prepares to leave Crewe for the north. See also page 30.*

Euston to Runcorn (via Marylebone ?)

Chris Lewis

Some of you may use Realtime Trains and Opentime Trains to track trains and to see what is going on anywhere on railways in the UK. So what are these two means of finding trains for those who don't know ?

Realtime Trains is a programme (now called an App) that takes information from Network Rail computers that know the position of all trains on its networks and the planned services for up to 180 days in advance. It enables any train to be looked at, and its complete schedule shown, including all passing places even though it may not stop. When the train commences its journey, its actual passing times are compared with its schedule. Within a few seconds of trains passing a 'passing point' it shows up. If more than double track, it will specify which track it is scheduled to be on and the one it actually uses.

For many railway companies it will give the number of the locomotive / unit on the train. The London - Liverpool train discussed below was Pendolino 390148, though I never saw it.

Both of these Apps can be used on a mobile phone - so handy when travelling as well.

<https://www.realtimetrains.co.uk/>

<https://www.opentraintimes.com/>

Opentrain Times shows track layouts, the signal aspects - red or green. Cautions are shown as green. Routes set up are shown. The positions of trains are shown by their reporting number. The train referred to below was 1F22.

On Friday May 21 our younger son was booked with a reserved seat to catch the 17.00 train from Euston to Runcorn, due

there at 19.03. We had booked a table at the Society Bar under the railway arches at Runcorn for 18.00 and Adrian would join us when he arrived. I could follow the train on my mobile using Realtime Trains and Jennifer would pick him up when he arrived and we could all eat in the Society.

Earlier that afternoon, Adrian sent me a text saying there were awful problems with trains at Euston. I found that there was a total signalling failure at Cheddington and trains were two hours (and more) late into Euston. Many northbound trains were cancelled. I suggested he head to Marylebone for a train to Birmingham, then another to Runcorn. He arrived at Marylebone and checked with me at about 16.30 that this was still the best option. I checked on Realtime Trains and found that the 17.00 was actually at platform 6 waiting. So I told him get himself to Euston quick ! He had to wait 10 minutes for a Circle Train to Euston Square and ran to Euston and found a queue at platform 6 with many staff and policemen stopping entry to the platform. At about 17.10 they were allowed on the train and the staff were saying that only 300 were to be allowed on the train. (589 seats available.) Whether they were brave enough to enforce that who knows !!

I could see on my mobile the train set off at 17.17. I found that the previous Pendolino service that left Euston for Liverpool was at 10.07 and no others managed it later that day. As it left Euston, I could use Opentrain Times to see the first red signal was at Hemel Hempstead about 24 miles away. I could also see that all the lights around Cheddington were red and there were two trains waiting to pass through the area on the fast line and

one on the slow line. The one on the slow line was a Manchester train that had departed Euston at 16.52 instead of 16.20. From its passing times, the 17.00 was obviously running at line speed to Watford Junction but then slowed down. Perhaps the driver had been told he was going to have to wait at Cheddington so slowed down to save energy.

As it approached Hemel Hempstead, I could see the route had been set for it to cross onto the slow line - and it did. I could also see that the few trains immediately in front of it had taken 60 mins to get through the failed signalling area, so I sent a text message to Adrian to expect to arrive Runcorn 20.15 instead of 19.02. It went through Milton Keynes on the slow line and crossed back to the fast at Hanslope Junction 78 minutes late and it arrived at Runcorn 77 minutes late at 20.20 - so I wasn't far out. As a consolation, while his train was crawling along, I told him

he would get all his train fare refunded automatically.

I have tried looking on the Internet as to how a complete signalling failure is handled but I couldn't find anything. Are pilot men used or are mobile phones used at the end of the section to tell someone at the beginning of the section that the line is clear ?

Also, what speed is allowed over the affected section ? I am sure someone in 8D will know. I asked a signalman standing outside his box not far from here. He said there are no simple rules, made even more complicated since the derailment near Stonehaven last year.

I must say the customers in the Society bar, including my wife, were not that impressed with my running commentary regarding the train's progress. However, the lateness of the train gave me the excuse of staying later in the bar. Every cloud has a silver lining !

Just a 'filler' photo !

From the Roy Gough Collection



Demise of the CLC around Liverpool : (Part 4)

Phil Graham MBE



Above : The 16.00 from Liverpool Central to Gateacre calls at Mersey Road Station on 15 May 1971.

Mersey Road and Aigburth Station

1 Jun 1864 – Mersey Road Station opened to passengers and a signalbox was opened.

4 Jul 1912 - a Down Goods Line was brought into use between Mersey Road and Otterpool, built in a separate cutting to that which housed the Main lines. The signalbox received a 29 lever frame when the Down Goods Line was commissioned.

24 May 1933 – Mersey Road Signalbox was abolished. With this abolition, the Down Goods Line was renamed the Down Goods Loop



Above : Mersey Road Booking Office – 29 February 1972 – closure not yet announced, but



..... seemingly not enough cash was raised !

15Apr1972– Mersey Road Station was closed to passengers.

Mar 1975 – the Down and Up platforms were shortened by 25 feet at the Brunswick end and lengthened by 33 feet at the Garston end.



Left (Upper) :
6M34 18.50 Brunswick – Drakelow passes a closed Mersey Road Station running (OTWS) on the wrong line during the Dingle Tunnel repair work – September 1975.



Left (Lower)
Mersey Road becomes Aigburth in the summer of 1977.

3 Jan 1978 – the station was re-opened; renamed simply as “Aigburth”.

Cressington and Grassendale Station



Above : *The cramped site of Cressington station, sandwiched between two road overbridges. Dispensation on minimum platform width requirements was needed to extend the platforms under the northern-most bridge and into the cutting after the station reopened.*

1 Jun 1864 – Cressington Station opened to passengers.

15 Apr 1972 – Cressington Station closed to passengers.

3 Jan 1978 – the station re-opened, renamed simply as “Cressington”.

1979 / 1980 - the Up and Down platforms were lengthened at the Liverpool end to enable services formed of six coaches to be introduced. This was necessary to enable the service on the line to be an extension of the Southport services, many of which were formed by 2 x 3 car units, instead of the Kirkby services which were all formed of single 3 car units.

Cressington Signalbox

5 Mar 1873 – the first signalbox was commissioned at Cressington when the location became a junction, with the opening of the CLC Main line to Manchester. Previously trains had run from Manchester London Road Station (now Piccadilly), to Cressington using running powers over the L&NWR low level route through Lymm. Passenger services to Cressington on this route were totally withdrawn in May 1874, but the original lines were to be retained as Through Sidings / Goods lines (surviving until 1977) to connect the CLC with the L&NWR system at Garston Church Road, and to serve Garston Central Goods Station.

1 Mar 1891 – the second and final (26 lever) Cressington Signalbox was commissioned to replace the earlier one.

The junction here was strange in that, while the Down Through Siding (the Down Main before the junction was created) made a normal trailing connection with the Down Main line, this was the only connection with the Main lines. Up traffic from Brunswick for the Up Through Siding had to be drawn forward, passed the Section signal, shunting into forward section towards Garston, and then set back through the Main to Main crossover to the Down Main, to reverse into the Down platform and then draw forward, via the Down Through Siding to the Up Through

Siding.

Presumably this layout was initially laid out like this in order to avoid having a facing point in the Up Main line, when such connections were avoided wherever possible. Initially these movements were probably confined to local trip services, with most freight traffic passing along the CLC Main line or being staged in the CLC yards at Halewood, but by the mid-1960s, most of the freight trains originating (or reversing) at Brunswick were routed via the former L&NWR lines and had to make these complicated shunting movements at Cressington.

15 Jun 1963 – the Down Home 1 signal (No. 22) and Section signal (No. 19) were replaced by four aspect colour lights. Down Home 2 (No. 21) was taken away.

No alterations made to Up Main line signals.

26 Oct 1964 – the bolt-locked (No. 15) facing connection in the Up Through Siding which led to Garston Central Goods Yard was secured out of use pending removal.

Wed / Thur 12 and 13 Dec 1973 – the Up and Down Main lines re-designated as Up and Down Goods lines.

Absolute Block working by telephone to the Chargeman at Brunswick was introduced and the Stop boards at Brunswick (as mentioned under Brunswick) were introduced. (According to the WTTs a train staff was also carried by all trains between Cressington and Brunswick).

The electrical release for Fulwood Siding Ground Frame was transferred to Cressington from the abolished Otterspool Box. The Up Goods Home signal (No. 2 signal) was fitted with an SPT.

The Up Goods Distant signal, previously carried under Otterspool's Up IB Home signal was moved to the top of the post and was fixed at Caution.

Tue 17 Jul 1973 – the Up and Down Through Sidings to Garston Church Road were re-designated as Up and Down Branch Goods lines.

7 Sep 1975 – to facilitate repair work to the Up side of Dingle Tunnel, the One Train Working - OTW(S) - Regulations were introduced on the former Down Goods line to Brunswick, and the former Up Goods line was taken out of use.

A temporary buffer stop was erected on the former Up Goods line 180 yards on the Brunswick side of Cressington Box.

The Down Goods Section signal was taken temporarily out of use.

Mon 2 Feb 1976 – repair work in Dingle Tunnel was switched to the Down side and the OTW(S) Regulations were transferred to the former Up Goods line to Brunswick which was brought back into use and the temporary buffer stops were removed.

The Down Section signal was brought back into use for Down direction trains on the single (former Up) line.

A temporary buffer stop was provided on the Down Goods line 22 yards ahead of the Down Goods Section signal.

Mon 5 Jul 1976 - the Down Goods line was brought back into use and the “Up and Down” Goods line was restored as the Up Goods line. The OTW(S) Regulations were withdrawn and Absolute Block conditions were re-introduced; although only engineer’s trains in

connection with the “Loop and Link” project would now be run.

Sun 12 Dec 1976 – Removable (swing) stop blocks were provided on the Down and Up Goods lines 950 yards on the Brunswick side of Cressington Box.

The Down and Up Goods lines beyond the stop blocks became Engineer’s Sidings 2 and 1 respectively.

The colour light Down Goods Home signal from the Hunts Cross West direction was taken away and replaced by a semaphore Down Goods Home signal, fixed at Danger, adjacent to the box. A miniature arm shunting signal was provided on the same post applying to movements along the Down Goods line.

The Down Goods Section signal was taken away.



Above : The complex shunting movement at Cressington Junction is made for one of the last times, as an engineer’s train returns to Garston L&NWR from work on the “Link” in August 1977.

Mon 15 Aug 1977 – the Down and Up Goods lines from Church Road were severed 20 yards on the Church Road side of Dock Road Crossing and stop blocks were provided.

Garston Dock Road Gate Box was abolished and all signals taken away.

The facing crossover 60 yards on the Church Road side of Dock Road was secured out of use, pending removal.

All connections worked from Cressington Box were secured out of use, pending removal and the associated shunting signals were taken away.

Until these connections were taken away, what were to be the last regular commercial freight movements at this end of the CLC continued to make shunting movement at Cressington Junction to egress the Down Goods Branch to access the Up CLC and to egress the Down CLC to access the Up Branch. They were:

4H62 23.35 SX Garston Freightliner Terminal to Tilbury, via Trafford Park FLT (Cressington 00.21 – 00.31) and 4M68 22.20 SX Millbrook to Garston Freightliner Terminal (Cressington 05.03 – 05.13). Both these services made these movements with the aid of a Class 08

drawback locomotive, which detached at Cressington from the outward train and attached to the inward working there. After 15th August, these trains were diverted via Garston Junction and Allerton Junction, where these reversing movements and attachments and detachments of the Class 08 now took place.

Sun 4 Sep 1977 - Cressington Box was abolished and all signals taken away. The stop blocks on the Down and Up Goods lines, 950 yards on the Brunswick side of the box were taken away.

The Down Goods line from Hunts Cross West became an Engineer's Siding.

Garston Station

Apr 1874 – Garston passenger station opened and signalbox opened.

1891 – Garston Central goods station opened (at a different site from the passenger station of course).





Above : *Garston Station in 1970. The signal is Cressington's Down Distant, which was moved to the top of the post when Garston Signalbox closed and the Section signal was taken away.*

Sep 1960 – Sep 1963 – Garston Up Passenger Loop (of 20 SLU) was used to stable a four car (Class 115) DMU from 10.00 until 15.40 SX. This unit arrived there as 3H98 09+50 SX ECS from Liverpool Central, after having formed the front four cars of 1K01 08.30 from Manchester Central to Liverpool Central. It left the loop as 3H01 15+40 SX ECS to Liverpool Central, to form the rear set on 1H01 16.30 Liverpool Central to Manchester Central.

Until 1964 – the Up Passenger Loop at Garston (platform 3) was used for the departure of the 2H78 07.58 SX to Manchester Central (then the only passenger use of platform 3). This steam hauled train started at Garston, using coaches shunted there after the arrival of 2K78 18.02 SX Warrington Central to Garston on the previous day. This train arrived at Down Main platform 1 at 18.34 SX. These trains (still steam hauled) ran ECS to and from Liverpool Central from 15th June 1964, presumably as the loop was taken out of use then.

23 Jul 1967 – the 20 lever signal box was abolished and all points were secured out of use, pending removal and all signals were taken away.

Cressington's Down Main Distant signal that had been carried below the Down Main Home / Section signal was moved to the top of the post.

Hunts Cross West's Up Inner Distant signal 1 and 2 were taken away and Up Outer Distant signal, which had been carried below the Up Main Home 1 signal was moved to the top of the post and was renamed the Hunts Cross Up Main Distant signal.

15 Apr 1972 – Garston Station closed to passengers.

Mar 1975 – the Down and Up platforms were extended at the Liverpool end.

4 Sep 1977 – the Up Goods line between Garston Station and Hunts Cross West Junction was taken out of use and Hunts Cross West's Up Goods Home and Distant signals were taken away.

The Down Goods line between Hunts Cross West Junction and Garston became an Engineer's Siding.

Immediately on the Cressington side of Garston Station, the Down Goods line was slued across to the Up Goods line and the former trailing crossover was used to give access back to the Down Goods line.

The portion of the Down Goods line between the slue and the trailing crossover was taken away.

31 Oct 1977 – the recently installed conductor rails from Liverpool Central Low Level to the Down Goods platform at Garston Station were energised at 750v dc.

20 Nov 1977 – the "Link Line" was extended beyond Liverpool Central Low Level to Garston Station Down platform and the former Up and Down Goods lines were re-designated

as Up and Down Main lines.

The Track Circuit Block Regulations were introduced between Liverpool Central (James St. PSB) and Garston (Hunts Cross West Signalbox).

Road learning commenced using empty Class 502 and Class 503 EMUs.

3 Jan 1978 – the passenger service was introduced with a 20 minute interval service from Garston to Kirkby using 3 car Class 502 / 503 EMUs. (These services later ran to and from Southport (instead of Kirkby), at a 15 minute interval and were formed by Class 507 and Class 508 EMUs).

16 May 1983 – with the extension of the service from Southport to Hunts Cross, Garston again became a through station. The Up Main line to Hunts Cross West Junction was brought back into use and the Down Main line from Hunts Cross West, which had been designated as an Engineer's siding again became the Down Main line.

The former Up platform was brought back into use, linked to the Down platform and station entrance by a ramped and stepped, covered footbridge.

10 Jun 2006 – Garston Station closed for the second and final time. It was replaced by platforms 5 and 6 at the new Liverpool South Parkway Station about 300 yards to the east. In effect, it was combined with the former L&NWR's Allerton Station, which made up platforms 1 – 4 of the new facility.

Hunts Cross West Junction

2 Dec 1956 – the 48 lever signalbox, dating back to 12 Apr 1883 was replaced by a 65 lever BR LMR standard flat roofed signalbox.

9 Sep 1963 – the Sunday passenger trains from Warrington, Manchester, Sheffield and Hull were diverted over the Goods lines to Allerton Junction, to serve Allerton (if the equivalent service had been booked to call at

Garston) and Liverpool Lime Street Stations instead of Garston and Liverpool Central. (Cressington, Mersey Road and St. Michael's stations had all been closed on Sundays for many years).



Above : Hunts Cross West Junction box in early 1983 – decommissioned and awaiting demolition.

10 Jan 1965 - the Up and Down Goods lines between Allerton Junction and Hunts Cross West Junction were re-designated as the Up and Down Passenger lines.

The trap points in the connection of the former Up Goods line to the Up Main line were clipped and secured out of use, pending removal.

The stencil type route indicator exhibiting the letter "C" for calling-on to the Down Goods line, fixed to the left hand side of the Down Fast to Down Main colour light Inner Home Signal was taken away.

The subsidiary signal together with the stencil type route indicator exhibiting the letter "C" for calling-on to the Down Goods, positioned below the Down Fast to Down Main colour light Home signal was taken away.

15 Feb 1970 – following the abolition of Hunts Cross East Junction box, the Up Slow line from Hunts Cross West to Hunts Cross East was renamed the Down Branch line, and the Down Slow line from Hunts Cross East to Hunts Cross West was renamed the Up

Branch line.

The Down Fast Inner Distant was taken away and the Outer Distant was renamed the Down Main Distant and was fixed at Caution.

8 Sep 1973 – following the abolition of Gateacre box, a buffer stop with a white light was erected on the Up Branch line 350 yards before reaching the trailing crossover between the Down and the Up Branch at Hunts Cross West.

The portion of the Up Branch line from Gateacre to this buffer stop was taken out of use.

The Down Branch line beyond the Down Section signal for Hunts Cross West became a single line.

The former Up Branch Home and Distant signals then applied to the single line. The single line between Hunts Cross West and Huskisson Goods was worked by Pilotman. (Working by Pilotman had actually been implemented after a fire had forced the closure of Gateacre Signalbox several months before this 'official' date).

30 Sep 1973 – the catch points in the Up Main line situated 505 yards before reaching the Home signal were repositioned 805 yards from the Home signal.

28 Apr 1974 – the trailing crossover between the Down and Up Goods lines, 330 yards on the Huskisson side of the box was secured out of use, pending removal.

The four arm shunting signal at the points of this crossover in the Down Goods Branch line and the two arm shunting signal near the points in the Up Goods Branch were taken away.

A new shunting signal was provided outside the Down Goods Branch line at the points of the facing connection from the Up Main line and was applicable to movements along No. 2 road.

The Down Goods Branch Section signal was taken away.

A new semaphore Down Goods Branch Home 2 signal, with diamond sign, and a Down Goods Branch Section signal were provided, 14 feet ARL, situated 577 yards and 919 yards, respectively, from the box. An SPT was provided at the Down Branch Section signal.

The Up Goods Branch Distant and Home Signals were taken away.

A new semaphore Up direction Home 1 signal was provided, 16 feet ARL, 1,118 yards from the box, with a miniature arm, bracketed out to the right and applying to movements to the Down Goods line. An SPT was provided.

A new, fixed semaphore Up Distant signal was provided, 12 feet ARL, 1,090 yards before reaching the new Up direction Branch Home 1 signal. AWS was provided (not suppressed for Down trains).

A new 2 arm shunting signal, with diamond sign, was provided outside the Up Goods Branch line at the points of the connection from the single line applying to movements from the Up Goods Branch line: the top arm read to the single line (the former Down Branch), the bottom arm read to the neck (the former Up Branch). The LOS adjacent to the neck (the former Up Branch) was taken away. A new shunting signal was provided at the exit from the neck applying to movements to the Up Goods Branch line.

The shunting signal situated at the points in the single line of the connection to the Up Goods Branch line became 2 arm and it was provided with a diamond sign: the top arm read to the Up Goods Branch line, the bottom arm read to the Down Goods Branch line.

Pilot working was withdrawn and the One Train Working - OTW(S) - Regulations were

introduced with a staff lettered "Hunts Cross West – Huskisson Goods.

16 Jun 1975 – Huskisson Goods Yard closed due to the threat of an ASLE&F strike. It was never to reopen.

20 Nov 1977 – the Track Circuit Block Regulations were introduced from Liverpool Central (Low Level) (James St box) to a fixed Red (HC 112) at the Hunts Cross end of the Down platform at Garston Station (Hunts Cross West box).

The crossover points to access Garston Station were worked by rail clamp locks and operated from No. 9 lever in Hunts Cross West Junction Signalbox. The signal controlling the entrance to the platform, a 2 aspect (R/Y colour light was operated by No. 8 lever, and the exit signal, a three aspect colour light was operated by No 10 lever.

Sleeper buffer stops were provided on the former Down Goods line (now designated as an Engineer's Siding) on the Hunts Cross West side of Garston Station.

11 Feb 1979 – the "Down and Up" Goods line to Huskisson Goods Yard was severed and a stop block with a red light was provided opposite the stop block in the neck. The "Down and Up" Goods line Up direction Home and Distant signals were taken away. The Down Goods Branch line Home and Section signals were taken away.

The trailing crossover between the Down and Up Goods Branch lines became hand-worked and the associated shunting signals were taken away.

The Down and Up Goods Branch lines were re-designated Up sidings 1 and 2 respectively. The shunting signals which previously applied to movements to the Branch lines now applied to the sidings.

The diamond signs on the Up siding 1 Home signal and on the shunting signal on Up siding 2 were taken away.

An SPT was provided at the Down Main Home signal.

The position 1 junction indicator at the Up Passenger line Home signal was taken away and a subsidiary signal, bracketed to the left was provided.

24 Feb 1979 – An SPT was provided at the Up Main Section Signal.

30 Jan 1982 - with the abolition of Halewood East box, the Absolute Block section became Hunts Cross West to Hough Green.

11 Jul 1982 – the connection between the Up Main line and Up siding No. 2 (200 yards from the box) was secured out of use, pending removal.

The shunting signal situated outside Up siding No. 2 applicable to set back movements through this connection was taken out of use. The Hough Green end of the trailing connection from the Up Main line to Up siding No. 1 was secured out of use, pending removal. The 2 aspect colour light signal with a position 4 junction indicator and position light signal with stencil indicator below the main aspects, situated 373 yards from the box, controlling movements from Up siding No. 1 was taken out of use.

The diamond sign on the shunting signal outside Up siding No. 2, 185 yards from the box was taken away.

11 Sep 1982 - A new facing crossover was provided between the Down and Up Main lines, 100 yards on the Hough Green side of Hunts Cross Station and a new trailing connection was provided in the Up Main line, 100 yards on the Garston side of the station. Until further notice these connections were secured out of use and were to be hand-worked in connection with engineering operations and all movements over them were hand-signalled. This applied until the points were commissioned onto the new signalbox. The trailing connection was to give access to

a new stabling siding (to be known as the “DMU siding”) and a new running line, to be known as the “Up and Down Electric line”, which was parallel to the Up Main line and linked up to the existing Up siding No. 1.

28 Sep 1982 – the Hunts Cross end of the trailing connection from the Down Main line to Up siding No. 1; 140 yards on the Hough Green side of the box was secured out of use in the Normal position, pending removal and the associated slip connection to the Up Main line was taken away.

The shunting signal situated outside Up siding No. 1; 130 yards on the Hough Green side of the box and applicable to movements along Up siding No. 1 was taken away.

Sat 4 – Mon 6 Dec 1982 – Hunts Cross West Junction box was abolished and a new signal-box, known as “Hunts Cross box” was provided immediately beyond the Hough Green end of the Up Main platform at Hunts Cross Station.

The Track Circuit Block Regulations were introduced between Hough Green and Hunts Cross and between Hunts Cross and Allerton Junction.

The Down and Up Main lines were renamed the “Down and Up Cheshire lines”.

A new track and signalling layout was brought into use.

The former Down Main Section signal (HC 59)

was taken away.

The Down and Up Passenger lines were renamed the “Down and Up Hunts Cross Chord lines”.

The catch points at 0m 34ch from Allerton in the Down Chord line were taken away.

The catch points on the Down Cheshire at 8m 28ch and those on the Up Cheshire at 9m 76ch were taken away.

The Down Chord line Home signal at Allerton (AN 55) was re-sited 120 yards nearer Hunts Cross.



Above : Hunts Cross West Junction. Decommissioned and awaiting demolition in early 1983.



In the next edition -
Hunts Cross Station, Halewood North Jct, Gateacre, Childwall, Knotty Ash & Stanley



Above : Sunday at Allerton Depot - seen from Hunts Cross West Junction Signalbox in early 1983.

Liverpool's Cross London Inter City Services

Chris Hollins

Today due to what has happened with privatisation, it's not possible to travel directly by train from Liverpool to the South Coast resorts of Brighton and Eastbourne.

In the Beginning

In 1904, the London and North Western Railway and the London, Brighton and South Coast Railway collaborated to operate a new daily direct service from Liverpool Lime Street and Manchester Piccadilly to Brighton and Eastbourne. The train would include a restaurant car from Manchester, with the Liverpool portion being attached at Crewe. The service was given the name '*Sunny South Special*'. The LNWR provided the Motive Power to Kensington Addison Road, where a LBSCR locomotive took over for the run to the South Coast. Stops would be made at Stockport, Wilmslow, Crewe, Nuneaton, Willesden Junction, Kensington Addison Road, East Croydon and Brighton Central. Shortly after its introduction, a Birmingham portion was added to the service and was attached to the main train at the newly added stop of Northampton Castle.

After the First World War, the Manchester main train and both the Liverpool and Birmingham portions gained additional through carriages to Ramsgate Harbour. These were detached at Kensington Addison Road, where a South Eastern and Chatham Railway engine was provided to take them to the Kent Coast.

Journey Timing

In the July 1922 Bradshaws Guide, the Manchester portion left London Road Station at 10.40am arriving in Eastbourne at 5.33pm. The return run departed Eastbourne at 11.35am arriving in Manchester London Road

at 6.28pm. The Liverpool portion departed Lime Street at 10.35, the carriages being attached to the Liverpool to Plymouth service, calling at Edge Hill and Acton Bridge, arriving in Crewe at 11.30. On the return, the carriages were attached at Crewe to the 2.30pm London Euston to Liverpool Lime Street service, calling at Mossley Hill and Edge Hill, arriving in Lime Street at 18.35.

The Ramsgate Harbour carriages, after departure from Kensington Addison Road, called at Whitstable, Herne Bay, Birchington-on-sea, Margate West, Broadstairs and Ramsgate Harbour arriving at 5.57pm. Departure in the opposite direction was at 11.00am making the same stops as outward. The Birmingham portion departed New Street at 12.30pm, calling at Coventry, Rugby and Northampton Castle for attaching to the main train. The same applied in the reverse direction with arrival in New Street at 4.44pm. At certain times of the year, the Ramsgate portion ran as a separate service between Kensington Addison Road and Northampton Castle with the exchange of carriages being done there instead of at Kensington Addison Road.

After the grouping in 1923, operation of the service passed to the London Midland and Scottish Railway and the Southern Railway, with the train being renamed as the '*Sunny South Express*'. During the period up to 1939, the Ramsgate portion was discontinued, and the service ceased to run at the outbreak of World War Two.

During the 1950's and early 1960's, the West London line through Kensington Olympia which Addison Road had been renamed, continued to see many excursion trains and scheduled summer Friday night and Saturday

holiday trains from the north to the south coast. These mainly used the Great Central main line, accessing the West London line at Kensington Olympia via a link from North Acton Jct on the former Great Western Railway Paddington to Birmingham main line. One of the services that ran this way at the time was from Manchester Piccadilly to Hastings. Operating overnight from Manchester via the Woodhead and Great Central main lines, an Eastern Region locomotive usually a Sheffield Darnall B1 would be replaced at Kensington Olympia by a Southern Region locomotive.

Motorail Service

Another unusual working at the time, that occasionally used the same routing was the three days a week Motorail service that ran from Manchester Central to Dover Marine. You needed to have a car to travel on this train.

Inter-City Cross Country

In 1986, Inter City Cross Country, decided to launch a new Cross London service linking the north west to the south coast. Liverpool and Manchester were chosen as the Northern terminals, with Brighton, Dover and Newhaven as the Southern terminals.

Liverpool would have two trains a day, serving Dover and Brighton, while Manchester would have two trains a day to Brighton, with a third service to Newhaven Marine where passengers could connect after a considerable wait, to the Dieppe Maritime service night boat.

A month before the services were due to start, posters appeared at Lime Street Station advertising the service which according to them, would have an enhanced Catering Vehicle on the train. This intrigued me !

On Monday the 12th of May, I boarded the first Liverpool departure 1028 07.49 service

to Dover Western Docks calling at Runcorn, Crewe, Stafford, Milton Keynes Central, Watford Junction, Kensington Olympia, Bromley South, Tonbridge, Ashford and Folkestone Central. Motive Power was Class 86 86230 *The Duke of Wellington* with a 9 coach load. The enhanced catering vehicle turned out to be nothing more than a refurbished Mark 1 miniature buffet. They eventually appeared 6 months later when the rebuilt Mark 2 Restaurant First Open vehicles arrived.

Champagne at Dover !

My Brother joined the train at Runcorn, and we headed South to Mitre Bridge Junction which was the limit at the time of the overhead electrification on the West London line. Here, the Class 86 was removed to be replaced by Old Oak Common allocated Class 47 47484 *Isambard Kingdom Brunel* in Great Western Railway Brunswick Green livery. Upon arrival at Dover Western Docks, the train was met by the Mayor and the media. All the passengers received a glass of champagne, and I and my brother were interviewed by the local press, TV and radio stations.

We then returned to London by EMU, and made our way to Brighton in order to return back on 1M13 - the 18.26 departure to Liverpool Lime Street. Again, a 9 coach load but no catering service as the buffet car attendant failed to show up. Good job we had enjoyed some nice fish and chips in a seafront cafe. Class 47 47447 did the honours to Willesden West London Junction, where 86253 *The Manchester Guardian* took the train onto Liverpool. En route, we had passed the Manchester to Newhaven service behind 47500 *Great Western* South of Clapham Junction. It was very lightly loaded.

Under Used Routes

Unfortunately, loadings on the services didn't reach the predicted levels. The Newhaven

service lasted barely a year being re-routed to terminate at Brighton. Eventually, it was decided that all of the services would run via Birmingham and Coventry instead of the Trent Valley. This did provide an increase in the passenger figures but not enough, to keep the trains on the southern end of the West Coast Main line.

Diversions, Diversions

In 1990, it was decided to divert the services from Coventry via Leamington Spa, Oxford and the former GWR route to Old Oak Common East Junction, where they could access the West London line, at North Pole Junction. A further diversion took place later that year, when the link from Old Oak Common to North Pole Junction was closed as the land was required for the construction of the Eurostar depot. This resulted in trains diverting off the main line at Acton, then running via Acton Wells Junction, the South Western Sidings gaining the West London line at Mitre Bridge Junction.

One train on Saturdays continued to use the southern end of the West Coast Main Line, 1099 06.53 Liverpool Lime Street to Dover Western Docks. This was usually hauled there and back by the same Class 47 diesel. From Bromley South it went unusually via Chatham, Gillingham, Faversham and Canterbury East to reach Dover. In the last year the service ran, it terminated at Folkestone Central, with the empty stock being serviced at Ashford Chart Leacon depot during the afternoon.

The End of Cross London Services

During 2001, Virgin introduced Voyagers on to the Manchester to Brighton service. For two years, these units could be seen on the Cross London service at Kensington Olympia. However, the writing was on the wall for the whole of the service and in 2003, as part of the Virgin Cross Country Princess project, all Cross London services were abandoned.

I used the service on quite a few occasions

and found them to be a useful way of getting back home without the hassle of using the underground between London Terminals - especially when I had a lot of luggage. !

Listed below are details of some journeys I made on the services.

23rd August 1987

47526 *Northumbria* 1M04 13.45 Dover Western Docks to Liverpool Lime Street.

86222 *Lloyd's List* from West London Junction.

12th July 1990

90029 1099 07.59 Liverpool Lime Street to Folkestone Central. 47810 from Coventry.

27th May 1991

86255 *Penrith Beacon* 1099 07.59 Liverpool Lime Street to Folkestone Central. 47845 County of Kent from Coventry.

21st February 1992

86233 *Laurence Olivier* 1M79 14.22 Dover Western Docks to Liverpool Lime Street. Travelled from Crewe to Runcorn.

27th February 1992

47853 1S76 09.18 Brighton to Glasgow Central The Sussex Scot. Travelled from Clapham Junction to Slough.

18th May 1992

47810 1M79 14.12 Dover Western Docks to Liverpool Lime Street. Travelled from Bromley South to Runcorn.

10th of July 1992

47847 1M79 14.12 Dover Western Docks to Liverpool Lime Street. Travelled from Birmingham New Street to Runcorn.

30th of July 1993

47803 1099 06.53 Liverpool Lime Street to Dover Western Docks. Travelled from Runcorn to Dover Priory.

26th of November 2001

220.031 & 220.032 1M50 14.18 Brighton to Manchester Piccadilly. Travelled from Brighton to Reading.

From a Member's Collection

Taken at Crewe and Rainford by Tony Foster



Above : A Class 85 Electric Locomotive accelerates the Kensington Olympia to Stirling Motorail service, away from Crewe after stopping for a crew change (1980s).

Below : The Driver of a Class 81 hauled freight train, makes enquiries with the Power box from the lineside telephone, as a Class 87 awaits departure from Crewe with a northbound Inter-City service (1980s).





Above : Rainford Junction (c.2006) - the signalman hands the token via a pole to the driver of a Kirkby bound Class 142 unit approaching the down main starting signal. **Below** : Several years later (c.2016) after the signalbox had been refurbished, the driver of Manchester Victoria bound 150.228 brings his train to a stand to hand over the token to the signalman, before proceeding into the station.



We're back !

With news of events, and dates for your diary

From the 8D Chairman, Paul Wright

"The period since March 2020 to the relatively recent present has been both strange and highly disruptive to our lives. One of the pleasures in my life that I have missed is the 8D Association. I love all of our activities but especially those that give us the kind of social interaction from which we are able to learn so much from each other. It's been too long since we had that interaction and to that end, and now that we are able to, there will two outdoor events this year as shown below. I am hopeful that these events will be a precursor to the start of a full programme of walks, talks and visits in 2022. I am also hopeful that we will be able to hold our AGM in January 2022.

The first event will be a tour of the surviving sections of the Wirral Railway company's lines which form part of today's Merseyrail Wirral Line. I hope to see as many of you as possible at that event."

10.00 : Saturday 18 September 2021

The Wirral Railway - A Guided Tour

A guided tour, led by Paul Wright, of the routes of the surviving lines of the Wirral Railway company. The tour will involve travelling by train between Birkenhead Park, West Kirkby and New Brighton. Points of interest will be visited along the way.

Meet on the platform (there is now only one) at Birkenhead Park station.

10.00 : Saturday 23 October 2021

Three Birkenhead Termini and a Goods Station

A guided tour led by Paul Wright at which the sites of the three Birkenhead termini stations that have closed will be visited. Birkenhead Woodside, Birkenhead Monks Ferry, Birkenhead Grange Lane and the CLC Shore Road Goods Station will all be visited along with some other items of railway interest along the way.

Meet outside the street level entrance of Hamilton Square station.