

Exminster Signal Box Preservation Society

# NEWSLETTER

Issue 9 – Winter 2004/5



GWR

EXMINSTER SIGNAL BOX

Preservation Society

[www.exminstersignalbox.org.uk](http://www.exminstersignalbox.org.uk)

# EXMINSTER SIGNAL BOX PRESERVATION SOCIETY

## Newsletter Issue 9, Winter 2004/5

[www.exminstersignalbox.org.uk](http://www.exminstersignalbox.org.uk)

### Featured Articles in this issue:

- 'Of Exminster and Boxes Round About'  
– Peter Jordan
- Mechanical Interlocking Table  
– Bob Davies
- Signal Diagrams: Silk Mill  
– Peter Chatfield
- Observations: Photographs & Timeline  
– Andrew Dickinson
- Zero Length Sections & Junction Signalling  
– Mike Hanscomb

### Front Cover Photograph:

Levers 66-80 of the frame remaining in 1982, only a few years before the box closed. David Evans.

### COMMITTEE

Chairman.....Danny Scroggins  
2 River Way, Great Shefford, Hungerford, Berkshire.  
RG17 7HX 0700 598 1986

[danny@exminstersignalbox.org.uk](mailto:danny@exminstersignalbox.org.uk)

General Secretary.....Eddie Langford  
[eddie@exminstersignalbox.org.uk](mailto:eddie@exminstersignalbox.org.uk)

0700 598 1944

Publicity & Website.....Luke Cartey  
West Lodge, Hungerford Park, Hungerford, Berkshire.  
RG17 0UP. 0700 598 1939

[luke@exminstersignalbox.org.uk](mailto:luke@exminstersignalbox.org.uk)

The editor extends his thanks to all those who contribute to the publication of this newsletter, through assistance with articles, design, printing, folding, enveloping, posting, etc, etc, etc. Thank you.

This publication can be viewed online at [www.exminstersignalbox.org.uk](http://www.exminstersignalbox.org.uk).

## EDITORIAL

**Danny Scroggins**

As I write this, Eddie (the General Secretary) is busy writing to the Heritage Lottery Fund. They have returned our initial application, unfortunately with a negative answer, but with a lot load of feedback. It seems that almost all of their concerns come from a lack of understanding of our project, not necessarily the Project's shortcomings. I suppose they can't get many applications from this type of venture very often, and it must be difficult for an 'outsider' to get his head around the ethos of what we are trying to achieve, especially if that person is not a railway-

or preservation-minded person. However, we are still confident, we know we meet the criteria for funding, we just need to persuade the people who hold the cash!

The committee members visited the box again in November. Photographs and video reel were taken and these will undoubtedly appear in this publication at some point.

Speaking of committee members, please see that we are looking to recruit a Membership Secretary and a Newsletter Editor. Having someone to

specifically look after the membership side of things would help, as Eddie has a lot of work to do as the General Secretary. We believe it would make a better quality of publication if someone had specific responsibility for organising this newsletter, whereas at the moment the existing committee are trying to fit it in around everything else (hence it is often late!).

It is worth noting that neither of these posts require someone who lives near Swindon. With the wonders of e-mail communication it is quite feasible for the Membership Secretary and Newsletter Editor to live far away, a good opportunity for those who want to support the Society but live too far away to visit Swindon.

Anyway, I hope you enjoy this newsletter, there are several interesting features inside this issue:

Full mechanical interlocking table, 'Of Exminster and Boxes Round About' an article from Peter Jordan, and 'Silk Mill Crossing' the latest in Peter Chatfield's series of Signal Diagrams. In order to fit in so many interesting articles we have reluctantly had to make the text-size smaller, but hopefully the separation of the text into two columns will stop the small type from being too difficult to read.

Also in this issue, we have an excellent set of pictures taken by Mr David Evans during a visit by the Exeter West Group to Exminster Box in 1982. Many thanks to David (and Peter Jordan) for passing these on to me.

Kind regards from all the Committee,

Danny, Eddie & Luke.

## OF EXMINSTER AND BOXES ROUND ABOUT

by Peter Jordan

During the early 1980's I was a regular visitor to Exeter. This was partly due to my involvement with the Exeter West preservation project, but also because I had got to know Mike Hayman, who was a Signaller at Cowley Bridge Junction. Cowley Bridge was a wonderful box – to quote what Jim Spinage once said to Adrian Vaughan regarding Challow Box, 'I'd go back there tomorrow if I could, if it was just the way it was.' But it's gone, leaving behind some wonderful memories.

But I'm not going to tell you about Cowley – we might do that another day. I want to look at my slight involvement with Exminster and the boxes either side – Exeter City Basin and Dawlish Warren.

When I began my regular visits to Exeter, Exminster had been reduced to a shadow of its former self. It was basically just a break-section box (although one loop remained) rather awkward to access without a car and I didn't know anyone who worked there. With time to

be spent at more interesting places it didn't feature high on my list of priorities, but I was determined to get a visit one day and add it to my list of boxes 'griced.' The opportunity came about in a rather unexpected way.

One day I attended, along with the other members of the 'Exeter West Group' committee, a meeting with BR officials to discuss our proposals for the preservation of Exeter West. The meeting was held in the offices at St. David's Station and, while it was clear that the BR representatives were sympathetic, they also expressed concern about the difficulty of removing the box from its location in the 'V' of the junction.

'Have you considered Exminster?' said one of the BR reps - of course we hadn't and had no intention of so doing. But I sensed an opportunity presenting itself. The BR man went on to explain how it would be much easier to remove because it was sited well back from the running line and that machinery might be used with much greater ease than on the West Box site.

‘Would it be possible to go and have a look at it?’ I enquired, realising that this might be the chance to get my hoped-for visit.

‘Yes, I should think so,’ came the reply. ‘Let’s have a break for lunch and then if you come back we’ll take you down there.’

Our party adjourned for lunch at the ‘Penny Farthing,’ a nice little restaurant that existed at the time by the clock tower at the end of Queen Street (I believe it’s now an Indian restaurant) and afterwards some of us presented ourselves back at St. David’s where the BR officials took us to Exminster in the famous yellow vans (remember them?) As we were, ostensibly, viewing the box as a potential purchase I was allowed access both upstairs and down, and gave a suitably convincing impression of being seriously interested in the proposal. Of course, I wasn’t really – but never mind! I had got my box visit and could add Exminster to my list!

Several years went by before my next visit, which happened after Exeter West had closed. While I still had friends working in mechanical boxes I was determined to visit as often as possible in order to take advantage of what little time was left before the boxes were swept away. My friend Mike Hayman had moved, after Cowley closed, to Exeter City Basin – this had become the temporary ‘fringe’ to Exeter PSB (in circumstances I will describe later) and so was now open continuously, while a Relief Signaller I had got to know, Eddie Guerin (with whom I spent much time up West Box) could now sometimes be found at Exminster.

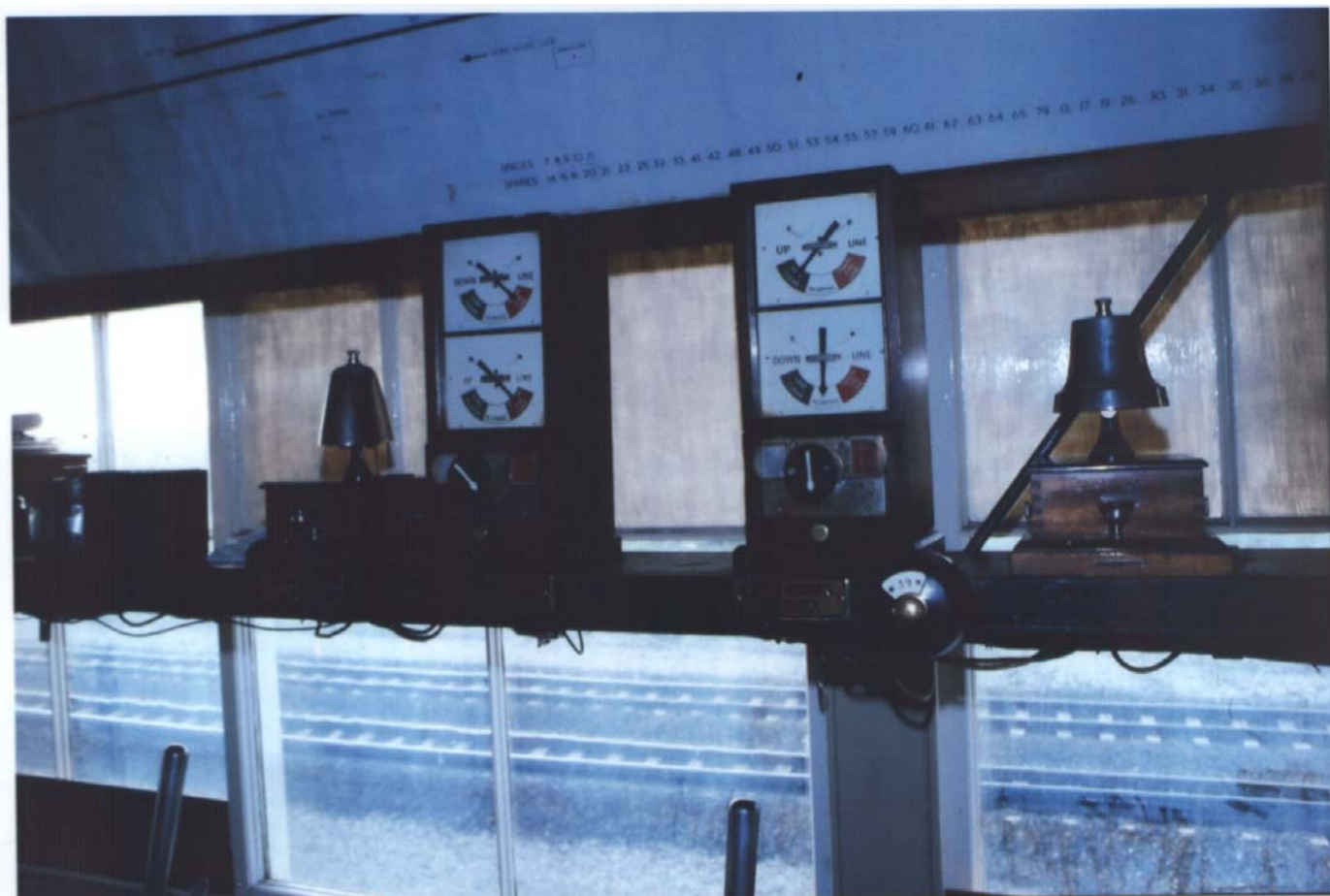
One day I discovered that Eddie was rostered for the early turn at Exminster and in the afternoon it would be another Relief Signaller I knew, Dave (‘Basher’) Northcott. It was a funny thing but, around Exeter every signaller seemed to have a nickname – they all knew this and would usually be referred to by those names in normal conversation. Mike Hayman was known as ‘Budgie’ from his propensity for being rather talkative and Dave was ‘Basher’ because he was inclined to be rough with the block bells.

Incidentally a young Relief Signaller, Phil Mann, came up with a wonderfully descriptive term for all the ‘old boys’ who were going to have to get to grips with the new technology in the PSB – he christened them ‘whizz-fossils!’

As I had nothing better to do I decided that a morning spent with Eddie, followed by an hour or two in ‘Basher’s’ company could be quite pleasant. So I sought out details of the ‘bus services to Exminster and, later, duly alighted at the end of the lane leading towards the old station. I walked up the lane and over the bridge, standing for a few minutes to survey the scene. The old station house was undergoing renovation, but the railway scene was rather desolate. Vast expanses of empty ballast showed where the once-extensive track layout had been and, as it stood so far back from the track, it was difficult to believe that the box actually had anything to do with the passing trains.

I carried on down the lane, turned into the railway approach and walked down to the box. Eddie’s car was parked outside – I knocked the door, went in and walked up the stairs to be greeted, not only by Eddie, but his two dogs as well! Eddie’s dogs were well-known on the railway – I don’t know what exact breed they were, a bit like a large black and grey spaniel with a long tail. Eddie and his wife Bet had them since they were pups. Originally they only intended to have one but, when they collected the pup they had chosen and put him in the car, his brother jumped in beside him and snuggled up. They couldn’t bear to part them and so one pup became two. If ever Eddie was rostered at a box where things would be reasonably quiet then the dogs would often go along as well.

Of course it wasn’t long before I was handed the duster, and it was interesting to see the contrasting reactions of the two dogs to signal box life. It didn’t matter what was going on, the one dog was quite content to lie and let the world go by. However, as soon as you started to pull levers, the other dog would jump up, come over and stare intently down through the slots between the quadrant plates. I have no idea what it was looking at, or what it expected to happen, but it was quite amusing.



*Block instruments in Exminster.*

*David Evans*

The morning with Eddie passed pleasantly enough and around 1350hrs 'Basher' arrived. He was quite happy for me to stay so we settled down for what we expected to be an uneventful afternoon. But it didn't quite turn out that way.

There was now, of course, another signaller on duty at Exeter City Basin, and at some stage during the afternoon he 'asked the road' for a 3-1. I duly gave this and waited for the 'Train Entering Section' before doing anything further. At Cowley, with the boxes so much closer together, you always 'asked on' straight away for main line trains so that a Driver didn't inadvertently get an adverse Distant. However no 'entering section' came. Instead the 'phone from City Basin rang and we were told that the train would not be coming, as the unit had failed in the station. Dispensing with the ceremony of using a now-superfluous 'Cancelling' bell code I

dropped the block needle back to 'Normal' to await the next request for 'Line Clear.'

Dave and I were sat in conversation when the City Basin bell suddenly gave two rings. We looked at each other – 'Do you think there's a train coming?' I queried, and Dave got on the 'phone to City Basin to discover that this was indeed the case! Having received 'Line Clear' from me for the 3-1 the Signaller at Basin had not bothered to replace his signals to 'Danger' when he told us it would not be coming. When West Box was there it would not have been possible for him to do this – the block controls would have prevented it. But changes as a result of the box becoming a temporary 'fringe' had introduced this anomaly.

Being advised by Dave that it was an express coming down, I turned the Basin block to 'Train On Line,' got the road from Dawlish Warren and pulled off. A short while later a Class 50 dashed

past with its train and, as I watched the passengers stare out of the windows, read their papers or relax in conversation I thought to myself. 'Yes, folks, little do you realise that until a few moments ago we didn't even know you were there.' Thanks to the carelessness of the man at Basin the train had come most of the way through the section with the block instrument at 'Normal!'

I'm glad I made this visit to Exminster, although by that time it wasn't exactly the most inspiring box to work. But my title says 'and boxes round about' so let me now tell you a bit about the adjoining boxes at Dawlish Warren and Exeter City Basin.

With due deference to seniority we will begin at Dawlish Warren. The box here was a classic GWR brick-built and hip-roofed structure dating from 1911 when the new Dawlish Warren station, with its through lines and platform loops, had been opened to replace the earlier 'Warren Halt' that was sited a little nearer to Dawlish. Things had changed very little over the years in terms of the layout, so the box retained its original 58-lever 3-bar frame. It was a nice 'traditional' box – no sequential locking, only basic block controls and a minimum of track circuiting. It retained nice brass leads on the levers and brass shelf-plates under the instruments but, sadly, the regular men at the time seemed to have little or no interest in keeping the box as it should have been. Consequently it was somewhat scruffy when a little effort could have made it a real 'showpiece.' Nevertheless it was a nice box to work and it was always a thrill to 'pull off' and watch an HST go hurtling by.

Exeter City Basin had opened in December 1962 to replace an earlier box 'City Basin Junction.' The new box was to the BR(W) standard prefabricated design, known irreverently in some quarters as a 'plywood wonder.' And while it cannot be denied that it was well-appointed to ensure the Signalman's comfort, it did lack the character of the earlier designs.

Exeter City Basin contained a 5-bar frame of 27 levers that had previously seen service at Culham and, in line with modern Western Region practice, the frame was placed at the back of the box and with the levers controlling the running signals grouped in the middle of the frame rather than at the ends, which had been standard practice for a long time.

When I first began visiting Exeter the box was only open on one shift, from about 0800 to 1600. This was because, as far as the main line was concerned, it was only a 'block post' and, with a very short section (to Exeter West) on one side, a much longer section (to Exminster) on the other and no loops, it was of limited value in regulating main-line services. However, while it was manned, 'trip' freights could call and service the network of sidings that ran from the Down Main and from the former Teign Valley branch. The facing connection from the Down Main onto the old branch was retained for the freight services for many years, but by the time I became familiar with the box there was only a branch connection into the Up Main and a 'Main to Main' trailing crossover.

It was actually on my first visit to City Basin that I made the acquaintance of Dave Northcott, who was covering for the regular Signalman. At this time the box held little attraction – the view over Alphington Road Yard and the local gasometer was not as appealing as Cowley Bridge but, when the latter box closed Mike Hayman became resident for a while at Basin and so my visits became more frequent.

Exeter City Basin actually received a 'stay of execution' in somewhat unusual circumstances. It was originally planned that the box would close at the same time as Exeter West, with Exminster becoming the temporary 'fringe' and much preparatory work was done to this end. However while this was going on, one of the regular rail customers, a firm called 'King's Asphalt' were sold out to 'Shell.' Tar tank wagons for them were a regular sight in the sidings at Basin or on the 'trip' freights to Riverside Yard, and the traffic was quite regular. 'Shell' wanted to keep this up, but there was a problem. Some time before the sale the railway had disconnected the Down Siding leading

to the Basin (this line was formerly the site of the famous 'repeater' signal) and recovered the signals, as it was not anticipated that the siding would be included in the resignalling. 'Shell' said that they wanted the siding reconnected, and hinted darkly that, if they could not run rail traffic as they wished at Exeter, this might prompt a review of their whole rail operation. This put the BR people in something of a quandary – clearly they did not want to jeopardise the future of such important traffic, but the S&T people were emphatic that plans for the MAS scheme had progressed too far to be altered at this juncture. It was left to local Assistant Area Manager Bernard Price to come up with the solution. He suggested that City Basin be made the fringe instead of Exminster, and that is what was done. This gave the S&T time to revise their plans, and the siding was duly reinstated, with ground discs replacing the previous 3-foot arm signals.

When City Basin became the fringe to Exeter PSB (from 5th May 1985) it worked to the panel with a single-stroke block bell. Few other changes were actually made to the box, the main one being that what had been the lever for the Down Distant (no. 19) became a 'slot' on the colour-light at the end of Exeter St. Thomas Down Platform. Everything worked fine and, given that the box only had a limited life left, you would have expected there would be little or no further expenditure incurred. Wrong! Although the train service had worked perfectly satisfactorily with the single-stroke bell to the Panel, some 'bright spark' decided that there should be a proper four-character describer provided. This was duly installed, and almost immediately delays to Down trains began to

occur. The signalmen at City Basin were getting the blame for being slow in 'pulling off' until it was realised that, although the panel man had entered the description into the system, the description didn't actually appear in City Basin box until the train hit a certain track circuit. Unfortunately by this time the train was in sight of the signal on the end of St. Thomas platform still, of course, showing a single yellow. The solution to the problem was as simple as it was astonishing – an instruction was issued to say that trains must be signalled using the describer AND the single-stroke bell. I feel sure that further comment is unnecessary!

And so City Basin continued to fulfil its role as 'fringe' box until that fateful weekend in November 1986 when another stage of the Exeter PSB scheme was commissioned. City Basin closed along with Exminster, Dawlish Warren and Teignmouth, and the once-mighty Newton Abbot East became temporary 'fringe' until May 1987. (Just in case anyone is wondering, Dawlish Box had closed a few weeks previously, on 5th October 1986.) The happy days of box visiting in the area had finally come to an end – but then a certain large signal box from Exeter St. David's was demanding much of my spare time anyway. But the memories remain green – not only of the fine boxes but also the wonderful men who were so kind as to allow me into a world that, in such a short space of time, has gone for ever.

*Ed- Thank you to Pete Jordan for this article. Peter leads the Exeter West Group, the preservation project group responsible for the successful moving and restoration of Exeter West Box. More information about the Exeter West Group can be obtained from [www.studio433.co.uk/exeterwest](http://www.studio433.co.uk/exeterwest).*

## MECHANICAL INTERLOCKING

**Bob Davies**

Bob Davies has very kindly produced a comprehensive mechanical interlocking table for Exminster. This is reproduced on the following pages.

If you would like to 'play' with the interlocking, please visit the website, [www.exminstersignalbox.org.uk](http://www.exminstersignalbox.org.uk), where you can

interrogate the interlocking and set up routes etc... It's good fun!

Our thanks go to Bob and those who assisted him in the preparation of the locking table. Well done everyone.



*Repeaters on the block shelf at the Plymouth end of the frame.*

*David Evans*

Lever No	Released by	Locks in Normal Position	Locks in Either Position	Releases	Lever No
1	2,3,6				1
2	23	19,24,29,69		1	2
3		29,(30w24N),69		1	3
4	23,24,27	19,25,26,28,33,34,36	29		4
5	27,29	33,34,36			5
6		36,70,71		1	6
7		Space			7
8		Space			8
9		Space			9
10		Space			10
11		Space			11
12					12
13	19,(23w20N)	30,(22w20R),(25,26,35,36w24R), (33,34w(20Ror24R))	20	40	13
14	21	24,25,26,28,32,33,34,36			14
15		20,21,22,(33w25R),(34w26R)			15
16		22,(28,33,36w25R),(34w26R)	20,25		16
17	26	28,36,(34w26R)			17
18	27,28	34,35			18
19		2,4,44,77		13,20,30	19
20	19	15,21,24			20

# EXMINSTER

## Table of mechanical interlocking

Date:	October 2004
Produced by	RAD
Checked by	AJ, PJ
Sheet	1 of 5

Lever No	Released by	Locks in Normal Position	Locks in Either Position	Releases	Lever No
21		15,20,24		14,32	21
22		15,16,(13,44w20R)	20,25,26		22
23			24	2,4,(13w20N)	23
24		2,14,20,21,32		4,31	24
25		4,14,26,(13w24R)			25
26		4,14,25,(13w24R)		17	26
27			29	4,5,18	27
28		4,14,17,29,(16w25R)		18,35	28
29		2,3,28,69		5,36	29
30	19	13,44,(3w24N)		31	30
31	24,30				31
32	21	14,24			32
33		4,5,14,(13w(20Ror24R)),(15,16w25R)	25		33
34		4,5,14,18,(13w(20Ror24R)),(15,16,17w26R)	26		34
35	28	18,(13w24R)			35
36	29	4,5,6,14,17,(13w24R),(16w25R)			36
37	39	46,52,53,54,55,72			37
38	43	50,52,57,70,75,76			38
39		44,47,73		37,46	39
40	(13or44)	73,(50,57,70,74,75,76w44R)	44		40

<b>EXMINSTER</b>	<b>Table of mechanical interlocking</b>	Date:	October 2004
		Produced by	RAD
		Checked by	AJ, PJ
		Sheet	2 of 5

Lever No	Released by	Locks in Normal Position	Locks in Either Position	Releases	Lever No
41	50,(42or67)	53,54,55,62			41
42	57	61,62,64,75	50	41	42
43		44		38,52	43
44		19,30,39,43,77,(22w20R)		40,74	44
45			44	52,74,75	45
46	39	37			46
47		39			47
48		53,54		55	48
49		54		53	49
50		38,75,(40w44R)		41,62	50
51			50	62,75	51
52	43,45	37,38,44,53,54,55			52
53	49	37,41,48,52			53
54		37,41,48,49,52			54
55	48	37,41,52			55
56		57,59,71,78		62,67,70,75,76	56
57		38,56,59,(40w44R)		42,62,64,75	57
58			56	63,70,71,76,78	58
59		56,57,69,78		60,63	59
60	(59or68)	63,(61w59R)	56	67	60

<b>EXMINSTER</b>	<b>Table of mechanical interlocking</b>	Date:	October 2004
		Produced by	RAD
		Checked by	AJ, PJ
		Sheet	3 of 5

Lever No	Released by	Locks in Normal Position	Locks in Either Position	Releases	Lever No
61		42,79,(60w59R)		65	61
62	50,51,(56or57)	41,42,67		64,70,76	62
63	58,59	60			63
64	57,(62or75)	42			64
65	61				65
66					66
67	56,60	62,75	50	41	67
68	69	70,71		60	68
69		2,3,29,59,76,78		68,70,71	69
70	56,58,69,(62or75)	6,38,68,(40w44R)			70
71	58,69	6,56,68			71
72		37		80	72
73		39,40		80	73
74	44,45	(40w44R)			74
75	45,51,(56or57)	38,42,50,67,(40w44R)		64,70,76	75
76	56,58,(62or75)	38,69,(40w44R)			76
77		19,44		80	77
78	58	56,59,69		80	78
79		61		80	79
80	72,73,77,78,79				80

<b>EXMINSTER</b>	<b>Table of mechanical interlocking</b>	Date:	October 2004
		Produced by	RAD
		Checked by	AJ, PJ
		Sheet	4 of 5

## Assumptions:

There are no 'white light' discs

16 reads through 25 points both ways

30 only reads to the Down Main

33 has a route down the Up Platform Line

34 has a route down the Up Platform Line

36 only reads to the Up Platform Line

25,26,29,69 have (NR) locks

39,61 have (NBDR) locks

## Note:

53,54,55 have been comprehensively locked against 37,52. It is not clear whether this would have been the case in fact.

<b>EXMINSTER</b>	<b>Table of mechanical interlocking</b>	Date:	October 2004
		Produced by	RAD
		Checked by	AJ, PJ
		Sheet	4 of 5

# HOW YOU CAN HELP THE SOCIETY?

The Committee of the Society are looking to recruit two new members:

## MEMBERSHIP SECRETARY

Reporting to the General Secretary and the Chairman. Responsible for processing membership applications, distributing membership cards, maintaining the register of members. The role of Membership Secretary will require about an evening's work a month. Full support will be given where required.

The Membership Secretary position forms part of the Society Committee, and therefore can only be filled by a Society member.

## NEWSLETTER EDITOR

Reporting to the Chairman. Responsible for processing articles submitted from members, editing, typesetting where necessary, compiling Microsoft Word document. NOT responsible for organising printing or distribution. The role of Newsletter Editor will require about three or four evenings' work per issue. Full support will be given where required.

The Newsletter Editor position does not necessarily form part of the Committee of the Society, and therefore does not necessarily have to be filled by a Society member.

**BOTH POSITIONS** require someone who is prepared to give their time for the benefit of the Society. No previous experience is necessary as full support and instruction will be given if required. However, if you are already an experienced in the field we will by no means force our methods of working and are quite willing (within the interests of the Society) to adopt the methods you are already are used to using. If you have access to e-mail this will help you in both positions.

If you might be interested in helping out, please drop me a line or an email for an informal discussion.

Danny Scroggins, [danny@exminstersignalbox.org.uk](mailto:danny@exminstersignalbox.org.uk), 07950 633 597,  
2 River Way, Great Shefford, Hungerford, Berkshire. RG17 7HX

## SIGNAL DIAGRAMS: Silk Mill Crossing

by Peter Chatfield

Silk Mill Crossing was on the western side of the complex of boxes controlling the Taunton area.

Until 1970, Norton Fitzwarren Junction Box controlled the divergence of the Minehead Branch from the Taunton – Exeter main line. This function was then inherited by Silk Mill Crossing and the Down Relief Line, which originally ran through to Norton Fitzwarren, was cut short to the Crossing Box.

I've chosen 1970 for the diagram as this was an interesting moment in the Box's history. For one year only, Silk Mill Crossing controlled both the Minehead connection (acquired March 1970) and direction lever working on the Good Loop to Taunton West Junction (abolished in February 1971 when this became a through siding).

By 1970, only minor rationalisation of the layout had occurred, although starting signals in both directions had been removed by this time.

It seems that sending a few trains from the Down Sidings to the Up Sidings could have almost been a substitute for going to the gym: assuming all routes normal and the barriers raised, 14 levers

movements were required. Two gate wheels had controlled the level crossing until 1962, and traffic was busier, so by 1970 the job was probably less heavy.

At this time the Goods Line signals were losing their rings, numbers 10/11/12 and 14/16, however, appear to have retained theirs. Number 1 Down Distant was not Taunton West Junction's but in fact belonged to Taunton West Station. Due to the proximity of the boxes and complex of running lines, level number 1 additionally controlled six other distants.

Can any members help with the following queries? First, were barrier lock levers usually green on the WR and interlocking levers brown/white – or is this incorrect? Second, I believe it was nearly 10 miles from Silk Mill Crossing to Wellington, but no intermediate block signals are shown. In understand Wellington controlled an IBS in the Exeter direction. Were there IB signals between Wellington and Silk Mill Crossing at this time and, if so, did Wellington control them on the up and Silk Mill Crossing on the down?

## OBSERVATIONS

by **Andy Dickinson**

### PHOTOGRAPH BY J.MORRIS IN ISSUE 8

The photo of the interior of Exminster SB on the front cover of Newsletter 8 was very interesting as it reveals several new facts (and also poses further questions that might not have ready answers!) but this all adds to the interest of the project!

The main points I have noted are: –

- 1) Lever 27 should be a spare lever (white) (see also Timeline comments) yet appears to be painted a 'colour' and therefore still in use (interlocking lever?)
- 2) Lever 36 appears to be painted white (spare) and yet it should surely be in use as the disc for setback moves from Up Main to Up Goods Loop
- 3) Levers 40 & 41 have been recovered and are now spaces
- 4) Lever 43 has a short handle - frame not originally installed with this lever as this
- 5) Levers 45 & 51 are painted white and are therefore spare and classed as "bolted reverse"

To expand on the above points: –

1) First off, the entry in Timeline is incorrect and does not match the Record of Amendments sheet. I downloaded and printed off the RoA sheet and the date looks more like 15.10.71 and not 15.6.71 as in Timeline. The entry should read "Up Platform Line to Up Main FPL recovered. (SRS) (FPL = 27)"

*[Apologies, that was an error and will be changed – Ed.]*

The recovery of the UPL to UM FPL 27 occurred in 1971 and so by the time John Morris took his photo in July 1975, 27 should have been white as a spare lever. Yet the photo shows that 27 has 'colour' and is not painted white. Was 27 still being used as an interlocking lever "worked to maintain locking"? The theory is that 27 although no longer connected to any ground equipment was reversed to release 5 for movements from the UPL/UGL to UM. However, 27 reversed would lock the lever working the disc for setback

moves from the UM to UPL/UGL and therefore had to be "worked to maintain locking" if all the levers working signals relevant to the moves to and from the UPL/UGL were to be operable.

*[It is likely that 27 was used in this way as it is still painted blue to this day! –Ed.]*

2) Lever 36 appears to be painted white and yet there should surely still have been Disc 36 at 69B points for setback moves from the UM to the UPL/UGL (together with Discs 70 & 71 for moves from UM to DM & DPL). The only explanation I have is that the locking on lever 70 was altered to include this move in place of Disc 36 so that Disc 70 had 2 routes. However, it would surely have been easiest to leave the locking as it was and leave the 3-way disc (36/70/71) still in place.

*[In a photograph taken on 28.10.82, (published elsewhere in this issue) 36 is recorded as a 'spare' (although by this time it was actually a space.) No changes had been made to the UGL between the time of John Morris' photo (4.7.75) and the latest one, which would imply that no changes to the operation of 36/70/71 would be called for. So we cannot find any answer to this anomaly. –Ed.]*

3) 2 of the levers at Exminster (levers 40 & 41) must have been required for a job elsewhere on the Western Region as they are quite clearly spaces by July 1975.

4) This is an interesting alteration to the frame. The handle on lever 43 has been shortened - this I would assume as part of the alterations in connection with recovery of equipment in the area of Points 43. The recovery would have been the removal of Points 43 & 44 on 23 March 1969. However, if the locking on lever 43 was not altered, it would still have to be operated reverse to permit movements along the Down Goods Loop in both directions, i.e., clearance of Signals 38 and 52, the levers for which were clearly still in use in the photo.

It was WR S&T practice to shorten the handle on levers that were "worked to maintain locking" (example at Toddington) but then this does not explain Lever 27 with its long handle.

Also not readily obvious is why lever 43 had to be "worked to maintain locking" after Points 43 were removed. This implies that when reversed, Lever 43 locked other levers and it was therefore required to be normal to permit moves elsewhere on the layout.

The only explanation I have for this is that from the days when Points 43 were still in use, for a move either 1) from the DM through Points 39, before Disc 37 could be cleared or 2) for a move towards Signal 52 before Signal 75 could be cleared - both moves required Lever 43 normal thus ensuring that the safety facility of Points 43 was in place. Once the move had passed 1) clear of Points 39 and Disc 37 had been replaced, then Points 43 could be reversed to allow the move to proceed further along the DPL/DGL or 2) by Signal 75 and that signal replaced, then Points 43 could be reversed for a move in to the Loop Siding if that move was not going through Points 44 reverse).

### **EXMINSTER TIMELINE IN ISSUE 8**

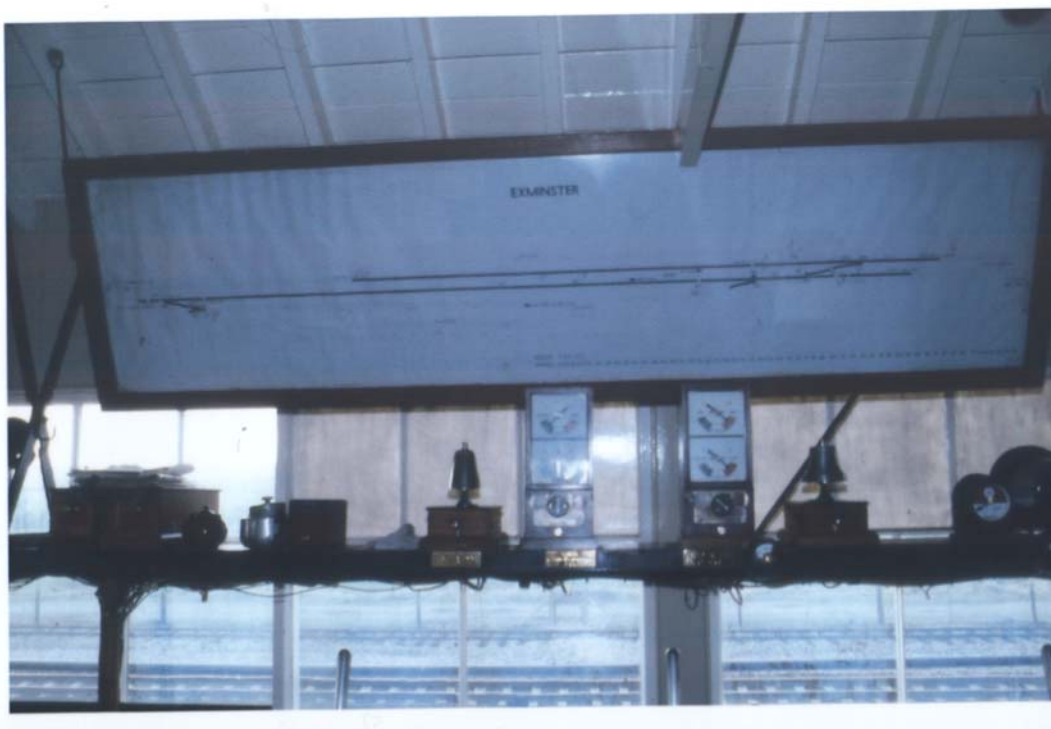
I have set out some entries from the timeline published in issue 8 that I feel should be amended or have additions. The RoA sheet letters are in a separate column to ease the process of cross-referencing between documents.

It is interesting to note that even after the removal of Points 43 & 44, the signals in the DPL/DGL associated with these points (Disc 38 and Signal 52) were not recovered even though there was no real reason to retain these signals. I assume that Signal 75 was also retained even though again there was no real reason for this after Points 50 were removed.

5) In the photo, in addition to comments above, Lever 45 has its catch handle disconnected and Lever 51 appears to have no handle at all. These levers are clearly not capable of being operated and would certainly be classed as "bolted reverse". This 'bolting' was achieved as described by a nut and bolt with large washers being fitted through the lever quadrant immediately in front of the lever(s). Once tightened (and even if the catch handles were working correctly) the lever was secured in that position and could not be moved.

*[These bolts are also still in situ to this day. Although they have been loosened and slid to the back of the quadrant plate to allow the levers to be returned almost to normal. This was carried out by the RSPB to reduce the risk of walking into the reversed levers. –Ed.]*

The Remarks column on is additional info for explanation of the entry/alteration and to increase understanding of what took place.



*Exminster Diagram, block equipment and closing switch.*

*David Evans*

**EXMINSTER TIMELINE (FROM NEWSLETTER 8)**

<u>DATE OF EVENT</u>	<u>AMENDMENT</u>	<u>TIMELINE ENTRY</u>	<u>REMARKS</u>
March 1941	-	Signal Box reframed to 80 levers; 5-bar VT locking, 80 levers at 4" centres. Down loop line laid behind signal box. Additional water tank added (Down Side). Down refuge siding converted to Goods Loop. (Levers 67, 68, 69, 70, 71 as we know them were all spaces. Date of introduction into use unknown.)	New 80-lever frame installed. The frame would certainly have been installed with 67 - 71 as spaces
????? 1942	-	1941 Sidings extended south.	(At the same time? - Provision of additional Mains crossover and associated disc signals? The lack of an East Crossover must have proved to have been very restrictive from the operational side and this must have been noticed when the signalman was carrying out shunting or 'running round' movements. The new crossover would also permit northbound departures from the sidings and setback moves from the Up Main to the sidings)
February 1951	-	TC 23T provided. (SRS)	Additional equipment installed - 23 (R)L; Block Shelf - [either 23 TK (TC indicator) or 23 LK (Lock indicator - faceplate reading 'Locked/Free)]; 23 LN (lock plunger) and 23 ELN (emergency release plunger)
February 1952	-	46AT recovered. Approach locking on <??> signals made through 39T occupied. <Record incomplete>	The approach locking on would be on Signals 46/47 and 39T occupied would provide the (B) lock release function on 46 (NB)L or 47 (NB)L
November 1954	A	Loop Siding to Down Platform Line Backing Signal renewed as disc. (Drawing Date Only) (SRS) (Signal No 38)	Entry states that Signal 38 was renewed as a disc. (Entry for 23 March 1969 also states this but Nov. 1954 is correct as stated in Record of Amendments (RoA))
November 1957	C	N & R detection fitted to Down Main to Down Goods Loop facing points. (SRS) (Drawing Date Only)	Refers to Motor Points 61. Detection of Points 61 by Signals 65/79 (as installed in 1941) would have been provided by a mechanical detector assembly (as per similar installation at Cowley Bridge Junct.). This assembly was removed and the operating wires to these signals connected through i//o. Detection of Points 61 by Signals 65/79 was then effected electrically at SB. 65 & 79 (NB) L's control circuits rewired to include 61 KR (61 Points Indication Relay) contacts in (N) L circuits. RoA entry is somewhat vague here
November 1960	E	TCs provided between Down Main Inner Homes and Down Main Starting. FPL bar recovered (SRS) (Drawing Date Only) (FPL = 58?)	FPI = 58. TC's would be identified as 58T and 78T. Additional equipment installed - 58 (R) L; 78 (N) L#; Block Shelf - 58 & 78 TK's (TC indicators); 58 LN & 78 LN# (lock plungers); 58 ELN (emergency release plunger) (visible in photo). # - if not already fitted. 78 (N) L now controlled by 58T & 78T
<b>10 June 1963</b>	-	<b>Down Goods Loop clipped OOU</b>	Doubtless carried out in the time-honoured method with usual clip and fishplate & chairscrew into the sleeper securing the closed (LH) switchblade. No other work carried out at this date

29 December 1963	H	Down Goods Loop abolished. Points 57, 59 & 61; Signals 63, 64, 65 & <del>79</del> ; Discs 42 & 60 all removed. Levers made spare. Track Circuits 61T & 79T combined as 79T (between Signals 79 & 76/78). (Loop was clipped OOU 10 June 1963).	(Revised entry). Signal 79 & Track Circuit 79AT would remain in use until Amendment K on 21 February 1965
21 February 1965	K	Down Main Distant renewed as c/light. Down Main Home recovered. <b>TC 79AT abolished.</b> TC in rear of Down Main Inner Home ( <b>79T</b> ) shortened to 200 yds. <b>and renamed 78AT.</b>	Signal 79 did hang on until now. I would suggest that Signals 76/78 were renamed Down Main Homes (previously Down Main Inner Homes) at same time and new pull plates were fitted
12 November 1965	L	Down Sidings 1, 2 & 3 all spotted off at north end. Signals 53, 54, 55 & 62; Points 48, 49 & 50; FPL 51; Disc 41 all abolished. Levers all made spare. (GAP), except FPL 51 which was either <b>"worked to maintain interlocking" or "bolted reverse"</b> .	Lever 51 would be classed as "bolted reverse" as it was painted white and was therefore a spare lever, not one that was "worked to maintain locking". Photo in any case appears to show lever as not having a catch handle
23 March 1969	N	Points 43 & 44; FPL 45; Signal 74; Disc 40 all removed. <b>Signal 38 replaced by disc.</b> Down Platform Line now Down Goods Loop. Also, Spur Removed, abolishing Points 28; Signal 18 & Disc 35. Levers all made spare (GAP & SRS agree), except 45 which was <b>either "worked to maintain interlocking" or "bolted reverse"</b> . <b>(Also, 3 ft. arm fitted to Down Main to Down Goods Loop Home Signal) (Signal 78)</b>	Same comments apply as to 12 November 1965 (L). Lever 45 would be classed as "bolted reverse". Photo shows catch handle disconnected. I would suggest at this time that a 3 ft. arm was fitted to Signal 78 (standard WR practice) and that the pull plate on Lever 78 was changed to read Down Goods Loop (formerly Down Platform Line)
16 October 1971	P	Up Platform Line to Up Main FPL recovered. (SRS) (FPL = 27)	Date from Record of Amendments sheet on ESB website appears to 16 October 1971 but my print is not very clear. Also this states that it is Up Platform Line to Up Main FPL that was recovered i.e. FPL = 27. Lever 27 appears to be painted a colour in A Vaughan print (i.e. not white) and therefore still in use (as interlocking lever?)
15 October 1972	(P)	Up Platform Line now Up Goods Loop <b>(3 ft. arms fitted to Up Main to Up Goods Loop Home; Up Goods Loop Starting Signal) (Signals 4 &amp; 5)</b>	Fitting of these arms would be standard WR practice as 4 ft. arms would not be correct for a goods only line
17 October 1972 & January 1973	R	Interlocking alteration	Could the alteration have been in connection with lever 43? Noted from print that it now has a short handle (although painted white and therefore a spare) denoting either having temporarily controlled power operated function (unlikely) or was temporarily an interlocking lever (see comments elsewhere) that was "worked to maintain locking". Could alteration have been the removal or amendment of locking to eliminate the use of 43 as interlocking lever?
July 1974	S	AWS i//o ATC	ATC is the correct term for the GWR & BR (WR) ramp. ATP is a very recent system installed on the GWR main line in the '90's  <b>[Sorry, my fault! –Ed.]</b>
28 May 1976	T	Down Main Starting (77) and Down Goods Loop Starting (52) recovered. (SRS) [We are not sure about this - ESB Ed]	I would say that this makes complete sense and can be taken as set out in the RoA sheet and in SRS. There was no longer any pointwork ahead of these 2 signals (Points 19 & 44) and Signals 52 & 77 would be viewed as being surplus and unnecessary by this time. RoA sheet states "TC in Down Main extended". This implies that 78T was extended up to Signal 73 on removal of Signal 77 and

			that there was no TC between Signals 77 & 73 prior to this alteration. However, your Control Table states that there was a 77T. Is there positive proof that such a TC existed at Exminster? If it did, then on removal of Signal 77, I would have expected the RoA entry to state "TC's combined" i.e., 77T & 78T combined as 78T (running from adjacent Disc 67 up to Signal 73). I would suggest that Signal 73 was renamed Down Main Starting (previously Down Main Intermediate Starting) at same time and a new pull plate was fitted
July 1981	V	Block release modernised. Interlinking provided. [ESB Ed - No idea what this was]	<p>Another interesting entry and one that is not completely clear as to what work was carried out or indeed what equipment/functions were present before the work was carried out due to the somewhat vague and imprecise wording.</p> <p>However, I would suggest that the "Block release modernised" could refer to 'Provision of "One Line Clear - One Pull" on section signals (6 &amp; 72). Prior to this work, Signals 6 &amp; 72 could be pulled more than once after a LC had been given by City Basin &amp; Dawlish Warren SB's. This had the potential for more than one train in section if the signaller did not comply with the correct procedures. The alteration carried out here would be the installation of normal (N) contacts on levers 6 &amp; 72 (achieved by either fitting a replacement electric lock with integral N contact or a separate contact box under the existing electric lock itself) and a Stick Relay for each signal (identified as either 6 BSR &amp; 72 BSR or UM BSR &amp; DM BSR). Once a LC had been received, Signals 6 &amp; 72 could be pulled either 1) once only or 2) once only after the 'approach' TC was occupied (3T or 73T). Method 2) allowed a signaller to fully replace the lever if due to the expansion of the wire in hot weather they had to use the wire adjuster and then this allowed them to pull the lever again without having to obtain another LC. The (N) contact, the BSR (together with 3T &amp; 73T Repeat Relays for 2)) provided the 'One Operation' function.</p> <p>The term "Block release modernised" could however also apply to the LC given by Exminster to release the section signals at adjacent SB's. The term 'Interlinking' would certainly refer to these controls and the functions concerned are summarised in your Control Table under LC UM (Powderham) &amp; LC DM (Cotfield).</p> <p>However, I am surprised that the entry reads "Interlinking provided" as this implies that no interlinking was present before the work was carried out. This is highly unlikely as even in 1941, the GWR had a book of standard wiring diagrams for Block Interlinking and I would have expected as a minimum that the Distant/Homes would have been wired into the LC circuits through interlinking relays. A DM LC would have required if the basic circuitry had been provided – Signals 65, 79, 80 - ON; Levers 65, 79 - NORMAL; TC - 79AT CLEAR. It may have been the case that only the Distant were in the Block Control circuits (unlikely) and that the Homes were added in at this late stage in the life of the SB. These additions would then have been – UM LC - Lever 2 - NORMAL; DM LC - Signals 76/78 - ON; Levers 76/78 - NORMAL; TC - 78AT CLEAR. However, the WR were usually very hot on altering the circuitry correctly if signals were removed to ensure that the same level of functions were still provided in the new setup.</p> <p>This one is a bit of a puzzler because the entry is so vague</p>
17 November 1982	W	Up Siding, Mains Crossover recovered. (Signal 5; Points 29 & 69; Discs 36?, 68, 70, 71 all removed). Levers made spare	There is a comma after Siding in the entry on the RoA sheet and so the entry effectively reads "Up Siding & Mains X/over recovered". Query on Disc 36 here

## LETTERS TO THE EDITOR

Thanks to Mike Hanscomb, who responds to some of the questions raised in the last issue.

**by Mike Hanscomb**

### Zero-Length Block Sections

I recall a zero-length section between Hawkeridge Junction and Westbury North. I am not an operator and I never knew how the Block Regulations were applied there. However, I recently visited Westbury Panel and was reminded that the last “Westbury” Signal Box diagram survives, mounted on a wall near the panel. Westbury lever 1 controlled the Down Distant signal on the approach to Hawkeridge Junction’s bracket home signals. Lever 2 was the slot on Hawkeridge’s Home to Westbury (the other Home being to Heywood Road Jnc.) Usually, Hawkeridge Jnc. S.B. was switched out and Westbury worked to Bradford Junction. In this situation, if Westbury had not had any control over the Hawkeridge Home signal, it being off all the time, the only way to achieve the full ¼-mile acceptance would have been by “tying up” Westbury North Junction, being less than ¼-mile in advance of the next Stop Signal, the Inner Home. In discussion with one of the Signalmen, I was reminded of the bell code “Take off slot, train waiting” 3 – 4 and it seems this was used when Hawkeridge was switched in and the Signalsman there was unable to signal the train forward due to Westbury having failed to pull lever 2. Having written this, I’m not sure that this example helps. After all, I’m an engineer, not an operator! The Panel signalsman suggested trying to find a copy of any Signalbox Footnotes relating to the Hawkeridge / Westbury situation. (Incidentally, I still have a paper copy, in poor condition but readable, of the Locking Chart for Westbury’s 99 levers, featuring my red-work alterations dated 10/3/78, when I was in the Design Office at Reading!)

### Junction signalling

This is a very complex subject, so it is difficult to give a succinct answer to “A question from Mr. James of Frilford”, but I’ll try.

Approach Control / Approach Release (same thing) of junction signals ensures that a train approaching a junction, which is set for a route requiring a reduction of speed\*, slows down sufficiently to

take the divergence safely. This is done by arranging that the junction signal remains at red until the driver has reached a position where, by virtue of the braking curve for a train stopping at that signal, his speed had been reduced appropriately. The train has to occupy the berth track circuit (last before the signal) to allow the signal to step up. To ensure that the driver does not get used to the signal stepping up when his leading wheels go “di-dum” over the block joint, it is placed further back than the braking curve suggests. When this track is occupied, a timer starts. If the driver is slowing down correctly, the timer will provide an output, causing the junction signal to step up, when the train gets to the place where the block joint would have been fitted if there were no timer. In this way, the driver never gets used to the signal stepping up at the same place every journey. It is a sort of psychological feedback. Too little braking and the driver finds himself getting closer to the signal before it steps up. Unnecessarily heavy braking results in the signal stepping up sooner. The junction signal remains showing yellow until the front of the train has passed over the AWS magnet, which gives the Driver a “Caution”. Now the signal can step up to an aspect appropriate to the state of the sections ahead. This was the principle pre-1988. After that date, (but non-retrospectively if Westbury Platform 3 “starting” to Up Patney is anything to go by!) this principle was eased in the sense that, if the junction indicator can be seen by the driver before or at the same time as the main aspect, it is left to the driver to regulate his speed accordingly. The junction signal remains at red, until the train has passed the previous signal at yellow, but can then step up to an aspect appropriate to the state of the sections ahead. This is not the whole story, but may serve to clarify part of it!

(\*If the reduction required for the divergence is not more than 10mph below the “main” speed, no form of junction control is applied.)

On the matter of Flashing Aspects, this, too, is a complex subject. The original reason for their introduction was to overcome a problem when the HSTs were introduced. An HST travelling at 125mph can stop in the same distance as that

required for a conventional train doing 90mph. This means that when slowing from full speed to a stand, the HST is going faster than the conventional train at all points on the braking curve until it has stopped. This lays a trap for the HST driver where approach-controlled junctions exist. He is going faster than the conventional train along the whole

braking curve and could easily find himself launched in to a diverging junction at an unsafe speed. This is a slightly simplified version of the original reason but I hope it helps.

Yours confusingly?

M. B. Hanscomb.

---

**NOTICE TO NEWSLETTER CONTRIBUTORS:**

**The press date for the Spring 2005 Issue of this newsletter (Issue 10) is  
FRIDAY 18TH MARCH 2005.**

Articles are always welcomed from readers and supporters. If you would like to contribute, or would like more details please don't hesitate to get in touch.

For those who regularly contribute, please submit or advise me by this date.

Thank you for your continued support.

---



**EXMINSTER SIGNAL BOX**

Preservation Society

© Exminster Signal Box Preservation Society and its contributors.  
*No part of this publication may be reproduced without written permission from the relative author. For articles that are the property of the ESB Society this will usually not be a problem provided that it is not for profitable use. Permission cannot be given on behalf of outside authors for articles that are not property of the ESB Society. However, the relative author can be contacted via us.*

Exminster Signal Box Preservation Society is a Registered Charity: Number 1102237

**MAKE THIS SPACE WORK FOR YOU!**

Advertise here and help your business and the Exminster Signal Box Project.

Contact [admin@exminstersignalbox.org.uk](mailto:admin@exminstersignalbox.org.uk) for more information.



The EWG Group inspect Exminster Box.

David Evans.