

WORKING ON THE FOOTPLATE

Recordings made on the footplate of four different types of locomotive and edited to give an impression of the varied sounds, heard from the cab, of engines at work on passenger and goods trains. The recordings were made on a '5MT' class 4-6-0 with a Swansea–Shrewsbury passenger train on the Central Wales line; on a 'V2' class 2-6-2 with a freight train between Kinross Junction and Milnathort and crossing the Tay Bridge to Dundee; on an '8F' class 2-8-0 with a Shrewsbury–Llanelli freight train on the Central Wales line; on an 'A4' class 'Pacific' running light from the sheds at St Rollox and heading an Aberdeen–Glasgow express out of Stonehaven.

The sounds heard in the closely confined cab of a locomotive are quite different from those heard on the train. The sound of the engine's exhaust is, in general, much less sharp than it is when heard from the train, tending at times to be felt rather than heard and the whistle, being mounted just in front of the cab, except in the case of the 'A4 Pacifics', drowns nearly all other sounds when it is used.

Among sounds unfamiliar to passengers are the sharp hiss as the vacuum brake is applied and the more gentle and prolonged sighing hiss of the injectors feeding water to the boiler.

Perhaps the most characteristic of all footplate sounds are those of the fireman at work: the clink and scrape of the shovel and the clanging of the firebox door, the rattle of coal being brought forward from the tender and the sound of the coal hammer used to break up the larger lumps.

Apart from the general hiss of steam from various points, there is also a great deal of vibration which, at times, creates various metallic sounds. The general level of sound on the footplate of a moving locomotive is very high and at times quite deafening. Consequently this record should be played at a reasonably high volume level in order to create the correct impression.

SIDE ONE

Band One

'5MT' class 4-6-0 No. 45283 with a Swansea–Shrewsbury passenger train on the Central Wales line which, from Llandovery, climbs for some four miles on gradients of between 1/80 and 1/200 to Cynghordy, then on an unbroken gradient of 1/60 for a further four miles to Sugar Loaf Summit, 820ft above sea level. The line is single throughout.

No. 45283 stands in Llandovery Station with the train of three coaches and a van. It is raining hard, but this does not dampen the spirit of the fireman who, finishing his song, comments on the 'bits and pieces' of coal which he has just uncovered on the tender.

The driver sounds the whistle and gently eases the engine forward to the signal box where the fireman calls out "good morning" as he collects the single line token from the signalman.

No. 45283 slips a little on the wet rails but soon settles down and the beat of the exhaust quickens as the engine accelerates on the rising gradients, curving up the valley away from Llandovery.

Soon the driver sounds the whistle as a warning to the signalman at Cynghordy. The train is not booked to stop at the little station, but must slow down so that the fireman can collect the single line token for the next section. Catching the token the fireman turns to the driver, saying "right, away we go". The driver sounds the whistle to show that all is well and No. 45283 accelerates again, over a high viaduct, then twisting through narrow, steep-sided cuttings on the continuous 1/60 rising gradient.

The fireman is constantly busy as the train climbs on, skirting the desolately barren slopes of Bryn Nichol while approaching the entrance to Sugar Loaf Tunnel, tucked into the mountainside ahead.

Whistling a warning, the engine plunges into the 1,000 yard long tunnel, inside which the driver gently applies the brake, finally bringing the train to a stop for adverse signals, just outside the tunnel, at the lonely Sugar Loaf Summit Signal Box. The signalman comes down to apologise for the delay, caused by a “goods train down at Llanwrtyd”.

This particular turn is a very tough one for the engine crew who, after a half-hour break at Shrewsbury, will work the next passenger train back to Swansea.

Band Two

‘V2’ class 2-6-2s: No. 60931 with a 270-ton Edinburgh (Millerhill) –Perth afternoon freight train and No. 60822 with a 220-ton Edinburgh (Millerhill) –Dundee evening freight train.

It is late afternoon as No. 60931, beset by signal checks on the journey towards Perth, stands at signals near Kinross Junction. The driver is anxious to get a move on and the fireman, anticipating some hard work with the shovel, remarks on the effect that this exercise will have on his figure.

“We’re away this time”, says the driver, opening the regulator as the signal clears. Then, as the engine moves slowly forward on rising gradients, the hollow ‘off beat’ sound of the exhaust is heard through the open firebox door.

The fireman is busy with the shovel as yet another adverse signal is sighted. No. 60931 whistles and clanks on towards the signal box where the driver calls out details of the train, identifying it to the signalman, then turns to the fireman with a pessimistic comment on the chances of now getting a clear run.

Passing Kinross Junction the metallic sounds of the motion and valve gear are reflected from surrounding buildings. Then, as the train gathers speed, the rhythmic thump of a bearing blends with the rhythm of the exhaust, hollow-sounding when heard through the open firebox door.

The train is soon checked again and the injector is turned on as No. 60931 clanks slowly past Milnathort Station. The fireman deals with a large lump of coal and the safety valves lift as the train is brought to a stand at the signals.

Now on the footplate of No. 60822 with the Edinburgh–Dundee train, standing at signals near Wormit. Another ‘V2’ comes off the Tay Bridge and, as it roars past into the darkness with an Edinburgh-bound freight train, the signal clears. No. 60822 whistles and moves slowly forward to squeal round the curve before rumbling onto the Tay Bridge. Having cheerfully invited his mate to “jump off”, the fireman looks down at the lights on the river, speculating on the effect that the new road bridge will have on the old Tay Ferry.

Checked again on the bridge, No. 60822 squeaks to a stop. The signal soon clears and the train moves off, rattling and rumbling over the central spans towards the end of the bridge and Dundee Esplanade, near where the train is again stopped by signals.

SIDE TWO

Band One

Class ‘8F’ 2-8-0 No. 48020 with a 400-ton Shrewsbury–Llanelly freight train, on the Central Wales line, from Knighton.

Torrential rain falls from a sullen morning sky as No. 48020 stands in Knighton Station having taken water in readiness for the hard six-mile climb to Llangunllo. The driver and fireman chat to the inspector as they wait for the 'right away'. The driver sounds the whistle and No. 48020 moves out of the station, driving wheels slipping slightly on the wet rails. As the train gathers speed on the 1/194 rising gradient along the valley of the Teme, the driver again sounds the whistle in acknowledgement of the guard's hand signal.

The fireman is busy with the shovel as the train heads towards the tiny Halt at Knucklas. Here the gradient stiffens to 1/60 which continues, without a break, for the next three miles. From the Halt the single line curves round to cross the valley on the stately 75ft high Knucklas Viaduct, beautiful even in the rain.

The rain cascades off the cab roof and the sound of the exhaust and clanking side rods is flung back from rocky cutting sides as No. 48020 thrusts on, up the twisting single track through the narrowing valley where each change of curvature affects the resistance of the train and accordingly slightly alters its speed.

The fireman frequently tends the fire, then turns his attention to the injector, clears the loose coal from the footplate and takes a final look at the fire as the engine, whistling twice, plunges into the damp darkness of Llangunllo Tunnel which, for 640 yards, burrows under 1,800ft high Beacon Hill.

Inside the tunnel the line curves to the South East and continues to climb, though on an easier gradient of 1/100, to the summit, 980ft above sea level, just beyond the tunnel mouth.

Once over the summit the engine is eased to clank through the station at Builth Road, 19 miles further down the line, where gentle brake applications bring the train to a halt at signals. Taking advantage of the stop, the crew decide to take water in order to save time for the relief crew who will be taking over at Llandovery to continue the journey to Llanelly.

Band Two

Class 'A4 Pacifics' on the Aberdeen–Glasgow express service: No. 60010 *Dominion of Canada* running light from St Rollox to take over a train at Buchanan Street Station, Glasgow and No. 60012 *Commonwealth of Australia* leaving Stonehaven on an Aberdeen–Glasgow express.

On the footplate of No. 60010, which has been checked at signals while running, tender first, from St Rollox towards Buchanan Street. The signals clear and No. 60010 moves off, clanking down the 1/70 gradient, over points and crossings, as the driver sings softly to himself, thinking perhaps of a fast run on this fine spring evening. Approaching the tunnel the driver sounds the whistle, sounding it again inside. Before the train leaves the tunnel the whistle is sounded again as the engine is slowed, to back gently down towards the coaches of the 5.30pm 'St Mungo' waiting in the platform at Buchanan Street.

Now on the footplate of No. 60012, the fireman is busy while the engine stands in Stonehaven Station at the head of the 250-ton 'Bon Accord', the 7.10am Aberdeen–Glasgow express. As he gets the 'right away' the driver opens the regulator and No. 60012 moves smoothly out of Stonehaven Station on the 1/149 rising gradient. Suddenly the driving wheels slip violently, but the slip is expertly controlled and, to the accompaniment of the fireman's busy shovel, the engine steadily accelerates on the rising gradients which stiffen from 1/149 to 1/103, 1/85 to 1/92. On this journey No. 60012 passed mile post 220, five uphill miles from the start, at 60mph, eight minutes after leaving Stonehaven.

Finally, on the footplate of No. 60010, the whistle is sounded as the engine approaches Forfar, to stop there with the 'St Mungo' express on the Glasgow–Aberdeen journey.

Notes:

'A4' No. 60012 is fitted with a deep-toned whistle, similar to that of 'A4' No. 60013. The whistle of No. 60012 is not heard on this record. 'A4s' No. 60010 and No. 60012 are both fitted with a double chimney.

The recordings on the Central Wales line were made during March 1964 and the recordings in Scotland were made during April 1964.