



Turnout Curve Tables for 0 Coarse Standard (**)

The tables are based on Code 200 bullhead rail and Code 220 Flat bottomed rail, both having a railhead

width of 2.35mm and on the turnout curve continuing to the gauge line intersection.

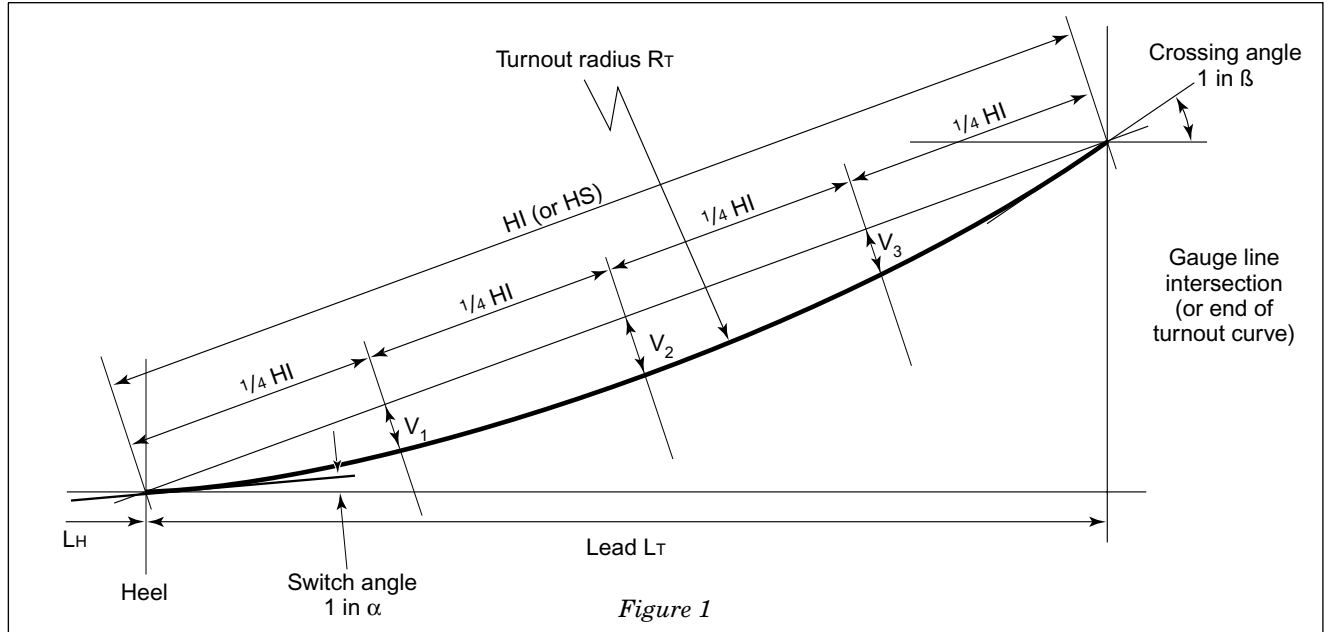


Figure 1

Offsets for Straight Switches

Straight switches were laid in bullhead rail and mainly occurred in the pre-grouping period although many lasted well into BR days. A few flat bottom versions

appeared in industrial locations. Switch details are shown on data sheet D2.2.1.1, which includes location of timbers and slide chairs.

Switch		12ft	12ft	12ft	12ft	12ft	12ft
Crossing angle	β	3.5	4	4.5	5	5.5	6
Switch angle	α	18.5	18.5	18.5	18.5	18.5	18.5
Turnout radius mm	RT	697	921	1182	1481	1822	2209
Turnout radius ft	RT	2.3	3.0	3.9	4.9	6.0	7.2
Heel divergence mm	hd	4.55	4.55	4.55	4.55	4.55	4.55
Heel length mm	LH	84	84	84	84	84	84
Lead mm	LT	160	180	198	215	232	248
Nose distance mm	LN	1.5	1.8	2.0	2.2	2.4	2.6
Full lead mm	L	246	265	284	301	318	335
Offsets V1 and V3 mm		3.5	3.3	3.1	3.0	2.8	2.6
Offset V2 mm		4.7	4.4	4.2	3.9	3.7	3.5
Switch		15ft	15ft	15ft	15ft	15ft	15ft
Crossing angle	β	4.5	5	5.5	6	6.5	7
Switch angle	α	23.1	23.1	23.1	23.1	23.1	23.1
Turnout radius mm	RT	1156	1440	1761	2119	2519	2962
Turnout radius ft	RT	3.8	4.7	5.8	7.0	8.3	9.7
Heel divergence mm	hd	4.55	4.55	4.55	4.55	4.55	4.55
Heel length mm	LH	105	105	105	105	105	105
Lead mm	LT	206	225	243	261	278	294
Nose distance mm	LN	2.0	2.2	2.4	2.6	2.9	3.1
Full lead mm	L	313	332	351	368	386	402
Offsets V1 and V3 mm		3.5	3.3	3.2	3.0	2.9	2.8
Offset V2 mm		4.6	4.4	4.2	4.0	3.8	3.7

Offsets for Fully curved B switches

Fully curved B switches laid in bullhead rail were used by the GWR and many lasted well into BR days. Switch

details are shown on data sheet D2.2.1.3, which includes location of timbers and slide chairs.

Switch		B	B	B	B	B
Crossing angle	β	6	6.5	7	7.5	8
Switch angle	α	19.01	19.01	19.01	19.01	19.01
Turnout radius mm	RT	2093	2504	2967	3487	4071
Turnout radius ft	RT	6.9	8.2	9.7	11.4	13.4
Heel divergence	hd	5.83	5.83	5.83	5.83	5.83
Heel length mm	LH	157.5	157.5	157.5	157.5	157.5
Lead mm	LT	238	253	267	281	294
Nose distance mm	LN	2.6	2.9	3.1	3.3	3.5
Full lead mm	L	398	413	428	442	455
Offsets V1 and V3 mm		2.6	2.4	2.3	2.1	2.0
Offset V2 mm		3.4	3.2	3.0	2.8	2.7

Offsets for semi-curved switches in flat bottom rail

The tables are based on Code 220 Flat bottomed rail having a railhead width of 2.35mm.

switches. Switch details are shown on data sheets D2.2.1.2 and D2.2.1.3, which include location of timbers and slide chairs.

BR Flat bottom switches can be either semi-curved or fully curved. Note that there are no A semi-curved

Switch		B	B	B	B	B
Crossing angle	β	6	6.5	7	7.5	8
Switch angle	α	15.77	15.77	15.77	15.77	15.77
Turnout radius mm	RT	2010	2431	2914	3472	4116
Turnout radius ft	RT	6.6	8.0	9.6	11.4	13.5
Heel divergence mm	hd	8.12	8.12	8.12	8.12	8.12
Heel length mm	LH	189	189	189	189	189
Lead mm	LT	207	219	231	242	253
Nose distance mm	LN	2.6	2.9	3.1	3.3	3.5
Full lead mm	L	398	411	423	434	445
Offsets V1 and V3 mm		2.0	1.9	1.7	1.6	1.5
Offset V2 mm		2.7	2.5	2.3	2.1	2.0

Offsets for fully curved switches in flat bottom rail

Switch		A	A	A	A	A	A	A	B	B	B	B	B
Crossing angle	β	4	4.5	5	5.5	6	6.5	7	6	6.5	7	7.5	8
Switch angle	α	13.24	13.24	13.24	13.24	13.24	13.24	13.24	15.77	15.77	15.77	15.77	15.77
Turnout radius mm	RT	824	1071	1364	1710	2119	2604	3182	2010	2431	2914	3472	4116
Turnout radius ft	RT	2.7	3.5	4.5	5.6	7.0	8.5	10.4	6.6	8.0	9.6	11.4	13.5
Heel divergence mm	hd	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.12	8.12	8.12	8.12	8.12
Heel length mm	LH	172	172	172	172	172	172	172	207	207	207	207	207
Lead mm	LT	143	156	169	181	192	203	214	207	219	231	242	253
Nose distance mm	LN	1.8	2	2.2	2.4	2.6	2.9	3.1	2.6	2.9	3.1	3.3	3.5
Full lead mm	L	316	330	343	355	367	378	388	416	428	440	452	463
Offsets V1 and V3 mm		2.4	2.2	2.0	1.8	1.7	1.5	1.4	2.0	1.9	1.7	1.6	1.5
Offset V2 mm		3.1	2.9	2.6	2.4	2.2	2.0	1.8	2.7	2.5	2.3	2.1	2.0

Note: If a number of identical turnouts are to be built, it is worth considering making a curved template based on the curved closure rail radius. This can be used both

for making the drawings and testing the accuracy of the curves when laid during construction.