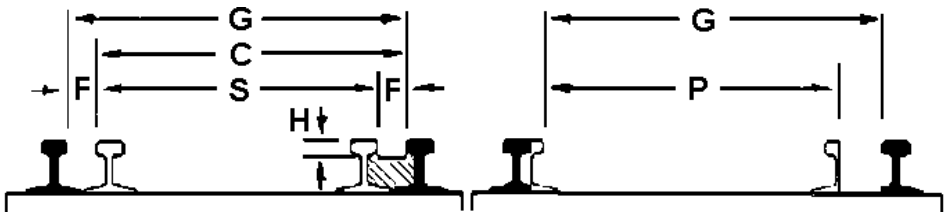
NMRA STANDARDS
S-3.2 Standard Scale Trackwork

Trackwork

Standard Scales

Approved: July 2004 | S-3.2



Name of Scale	G Track Gage (Min./Max.)	C Check Gage (Min.)	S Span (Max.)	F Flangeway (Max.)	H Flange Clearance (Min.)	P Switchpoint Spread (Max) (Elec/Mech)
1”	4.750* (120.7 mm) 4.910 (124.7 mm)	4.581 (116.4 mm)	4.429 (112.5 mm)	.220 (5.59 mm)	.156 (3.96 mm)	- 4.536 (115.2 mm)
¾”	3.500* (88.9 mm) 3.605 (91.6 mm)	3.349 (85.1 mm)	3.212 (81.6 mm)	.181 (4.60 mm)	.125 (3.18 mm)	- 3.312 (84.1 mm)
F	With the exception of the minimum Flange Clearance, F uses the same track geometry as Proto 20.3 Gauge track (see S-3.1)				(see Note 2) .090 (2.29 mm)	
Fn3	Fn3 uses the same track geometry as #1 Gauge track					
# I	1.766* (44.85 mm) 1.793 (45.5 mm)	1.660 (42.16 mm)	1.563 (39.69 mm)	.106 (2.68 mm)	(see Note 2) .064 (1.63 mm)	1.634 (41.5 mm) 1.639 (41.63 mm)
#In3	1.125* (28.6 mm) 1.167 (29.6 mm)	1.058 (26.9 mm)	.997 (25.3 mm)	.079 (2.00 mm)	.047 (1.19 mm)	1.037 (26.4 mm) 1.042 (26.5 mm)
O	1.250* (31.8 mm) 1.285 (32.6 mm)	1.179 (29.9 mm)	1.115 (28.3 mm)	.079 (2.01 mm)	.047 (1.19 mm)	1.159 (29.4 mm) 1.164 (29.6 mm)
On3	.750* (19.1 mm) .778 (19.8 mm)	.705 (17.9 mm)	.664 (16.9 mm)	.053 (1.35 mm)	.030 (0.76 mm)	.690 (17.5 mm) .695 (17.7 mm)
On30	On30 uses the same track geometry as HO Gauge track					
On2	.500* (12.7 mm) .522 (13.3 mm)	.455 (11.6 mm)	.414 (10.5 mm)	.050 (1.27 mm)	.028 (0.71 mm)	.440 (11.2 mm) .445 (11.3 mm)
S	.883* (22.42 mm) .905 (22.99 mm)	.839 (21.32 mm)	.798 (20.27 mm)	.050 (1.27 mm)	.030 (0.76 mm)	.814 (20.68 mm) .819 (20.80 mm)
Sn3	.563* (14.3 mm) .585 (14.9 mm)	.519 (13.2 mm)	.478 (12.1 mm)	.050 (1.27 mm)	.030 (0.76 mm)	.494 (12.55 mm) .499 (12.68 mm)
OO	.750* (19.1 mm) .772 (19.6 mm)	.705 (17.9 mm)	.664 (16.9 mm)	.050 (1.27 mm)	.028 (0.71 mm)	.690 (17.5 mm) .695 (17.7 mm)

Name of Scale	G Track Gage (Min./Max.)	C Check Gage (Min.)	S Span (Max.)	F Flangeway (Max.)	H Flange Clearance (Min.)	P Switchpoint Spread (Max) (Elec/Mech)
HO	.649* (16.5 mm) .672 (17.1 mm)	.605 (15.4 mm)	.564 (14.3 mm)	.050 (1.27 mm)	028 (0.71mm)	.590 (15.0 mm) .595 (15.1 mm)
HOn2	.276* (7.01 mm) .290 (7.37 mm)	.246 (6.25 mm)	.219 (5.56 mm)	.033 (0.84 mm)	.022 (0.56 mm)	.235 (5.97 mm) .240 (6.10 mm)
TT	.471* (12 mm) .483 (12.3 mm)	.437 (11.1 mm)	.406 (10.3 mm)	.036 (0.91 mm)	.026 (0.66 mm)	.425 (10.8 mm) .430 (10.9 mm)
N	.353* (8.97 mm) .367 (9.32 mm)	.323 (8.20 mm)	.296 (7.52 mm)	.030 (0.76 mm)	.022 (0.56 mm)	.312 (7.92 mm) .317 (8.05 mm)
Nn3	.250* (6.35 mm) .260 (6.61 mm)	.228 (5.78 mm)	.207 (5.26 mm)	.025 (0.63 mm)	.020 (0.51 mm)	.218 (5.53 mm) .224 (5.66 mm)
Nn2	.177* (4.50 mm) .189 (4.80 mm)	.147 (3.74 mm)	0.117 (2.97 mm)	.030 (0.76 mm)	.020 (0.51 mm)	.219 (5.56 mm) .224 (5.69 mm)
Z	.257* (6.53 mm) .270 (6.86 mm)	.236 (5.99 mm)	.217 (5.51 mm)	.025 (0.64 mm)	.020 (0.51 mm)	.226 (5.74 mm) .231 (5.87 mm)

* Denotes Preferred Dimension for Tangent Track (see Note 4)

NOTES:

1. For information on both minimum and maximum manufacturing limits please see NMRA Tech Note: TN-1.2.1
2. For maximum interchange the minimum flange clearance (H) should be increased to 3mm. This allows all models that operate on 45 mm track to operate with no problems. It is also much easier to fill in a deep flange as needed rather then making a small flange depth deeper.
3. The F limit applies only to the wing rail, and the C limit applies only to the guard rail. Both apply to the same rail only in special work such as a crossing.
4. For Gauge widening in curves for long wheelbase equipment see RP-8.
5. For a full discussion of minimum radius, minimum turnout and radius equivalents of degrees of curvature. etc., see S-8 and RP-11.
6. Guard and wing rails shall be flared to a minimum dimension across the flared flangeway end of 1.5 x Fmax. Flare angle shall not exceed 10 degrees, and the Flare must disappear before reaching the working area of its rail.
7. P electrical is only needed if the points are electrically connected together. If the points are electrically connected to their corresponding stock rail and are thus electrically isolated from each other (the preferred approach) then P electrical does not apply.