TABLE OF HYPERBOLIC FUNCTIONS OF PROPAGATION CONSTANTS

NON-LOADED 22 GAUGE ASA, BSA, CSA CABLE AT 1000 CPS

(Propagation Constant, γ = .2071 + j .2128 Per Mile)

Miles (ℓ)	Sinh $\gamma\ell$	Cosh $\gamma\ell$	Tanh $\gamma\ell$	Coth $\gamma\ell$
0	0 + j 0	1 + j 0	0 + j 0	∞ − j ∞
1	.2039 + j .2158 .2968 /46.6°	.9985 + j .0441 .9994 /2.5°	.2133 + j .2066 .2970 /44.1°	2.4188 − j2.3426 3.3673 /44.1°
2	.3881 + j .4488 .5934 /49.2°	.9901 + j .1759 1.0056 /10.1°	.4582 + j .3719 .5901 /39.1°	1.3157 − j1.0680 1.6946 /39.1°
3	.5317 + j .7147 .8907 /53.4°	.9631 + j .3945 1.0408 /22.3°	.7331 + j .4416 .8558 /31.1°	1.0009 − j .6030 1.1685 /31.1°
4	.6106 + j1.0252 1.1933 /59.2°	.8985 + j .6968 1.1370 /37.8°	.9770 + j .3832 1.0495 /21.4°	.8870 − j .3479 .9528 /21.4°
5	.5974 + j1.3865 1.5097 /66.7°	.7697 + j1.0760 1.3230 /54.4°	1.1151 + j .2424 1.1411 /12.3°	.8563 − j .1862 .8763 /12.3°
6	.4602 + j1.7961 1.8541 /75.6°	.5438 + j1.5199 1.6142 /70.3°	1.1437 + j .1064 1.1486 /5.3°	.8669 − j .0807 .8706 /5.3°
7	.1633 + j2.2408 2.2468 /85.8°	.1824 + j2.0070 2.0152 /84.8°	1.1147 + j .0201 1.1149 /1.0°	.8968 − j .0162 .8969 /1.0°
8	− .3315 + j2.6931 2.7134 /97.0°	− .3565 + j2.5040 2.5293 /98.1°	1.0726 − j .0203 1.0728 /1.1°	.9320 + j .0176 .9322 /1.1°
9	−1.0625 + j3.1081 3.2847 /108.9°	−1.1149 + j2.9621 3.1650 /110.6°	1.0373 − j .0320 1.0378 /1.7°	.9631 + j .0297 .9636 /1.7°
10	−2.0641 + j3.4199 3.9946 /121.1°	−2.1308 + j3.3129 3.9390 /122.7°	1.0137 − j .0289 1.0141 /1.6°	.9857 + j .0281 .9861 /1.6°

Note: The data in this table are furnished for use with formulae such as those on Page 35 of Section AB92.075, "Introduction to Telephone Transmission Theory."