

TABLE OF HYPERBOLIC FUNCTIONS OF PROPAGATION CONSTANTS
NON-LOADED 26 GAUGE AST CABLE AT 1000 CPS
(Propagation Constant, $\gamma = .3071 + j .3106$ Per Mile)

Miles (l)	$\text{Sinh } \gamma l$	$\text{Cosh } \gamma l$	$\text{Tanh } \gamma l$	$\text{Coth } \gamma l$
0	$0 + j 0$	$1 + j 0$	$0 + j 0$	$\infty - j \infty$
1	$.2970 + j .3202$ $.4367 / 47.2^\circ$	$.9974 + j .0953$ $1.0020 / 5.5^\circ$	$.3255 + j .2898$ $.4358 / 41.7^\circ$	$1.7136 - j 1.5259$ $2.2945 / 41.7^\circ$
2	$.5315 + j .6953$ $.8751 / 52.6^\circ$	$.9714 + j .3804$ $1.0433 / 21.4^\circ$	$.7174 + j .4347$ $.8388 / 31.2^\circ$	$1.0196 - j .6179$ $1.1922 / 31.2^\circ$
3	$.6306 + j 1.1681$ $1.3275 / 61.6^\circ$	$.8679 + j .8487$ $1.2139 / 44.3^\circ$	$1.0443 + j .3246$ $1.0936 / 17.3^\circ$	$.8732 - j .2714$ $.9144 / 17.3^\circ$
4	$.5036 + j 1.7552$ $1.8260 / 74.0^\circ$	$.5980 + j 1.4781$ $1.5945 / 68.0^\circ$	$1.1389 + j .1200$ $1.1452 / 6.0^\circ$	$.8684 - j .0915$ $.8732 / 6.0^\circ$
5	$.0394 + j 2.4291$ $2.4294 / 89.1^\circ$	$.0432 + j 2.2138$ $2.2142 / 88.9^\circ$	$1.0972 + j .0035$ $1.0972 / 0.2^\circ$	$.9114 - j .0029$ $.9114 / 0.2^\circ$
6	$.8882 + j 3.0980$ $3.2228 / 106.0^\circ$	$-.9339 + j 2.9463$ $3.0908 / 107.6^\circ$	$1.0423 - j .0288$ $1.0427 / 1.6^\circ$	$.9586 + j .0265$ $.9590 / 1.6^\circ$
7	$-2.4019 + j 3.5813$ $4.3122 / 123.9^\circ$	$-2.4680 + j 3.4854$ $4.2707 / 125.3^\circ$	$1.0094 - j .0255$ $1.0097 / 1.4^\circ$	$.9901 + j .0251$ $.9904 / 1.4^\circ$
8	$-4.5861 + j 3.5881$ $5.8229 / 142.0^\circ$	$-4.6539 + j 3.5358$ $5.8448 / 142.8^\circ$	$.9962 - j .0139$ $.9963 / 0.8^\circ$	$1.0037 + j .0140$ $1.0038 / 0.8^\circ$
9	$-7.4306 + j 2.7019$ $7.9066 / 160.0^\circ$	$-7.4899 + j 2.6805$ $7.9551 / 160.3^\circ$	$.9939 - j .0052$ $.9939 / 0.3^\circ$	$1.0061 + j .0053$ $1.0061 / 0.3^\circ$
10	$-10.7517 + j .3845$ $10.7586 / 178.0^\circ$	$-10.7982 + j .3829$ $10.8050 / 178.0^\circ$	$.9957 - j .0003$ $.9957 / 0^\circ$	$1.0043 + j .0003$ $1.0043 / 0^\circ$

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."