

TABLE OF HYPERBOLIC FUNCTIONS OF PROPAGATION CONSTANTS  
NON-LOADED 19 GAUGE ANB, DNB CABLE AT 1000 CPS  
(Propagation Constant,  $\gamma = .1282 + j .1375$  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	$.1273 + j .1382$ $.1879 / 47.3^\circ$	$.9987 + j .0176$ $.9989 / 1.0^\circ$	$.1299 + j .1360$ $.1881 / 46.3^\circ$	$3.6717 - j 3.8444$ $5.3161 / 46.3^\circ$
2	$.2495 + j .2805$ $.3754 / 48.4^\circ$	$.9942 + j .0704$ $.9967 / 4.1^\circ$	$.2695 + j .2630$ $.3766 / 44.3^\circ$	$1.9002 - j 1.8543$ $2.6550 / 44.3^\circ$
3	$.3611 + j .4309$ $.5622 / 50.0^\circ$	$.9847 + j .1580$ $.9973 / 9.1^\circ$	$.4260 + j .3692$ $.5637 / 40.9^\circ$	$1.3405 - j 1.1618$ $1.7739 / 40.9^\circ$
4	$.4566 + j .5929$ $.7484 / 52.4^\circ$	$.9671 + j .2799$ $1.0068 / 16.1^\circ$	$.5994 + j .4395$ $.7433 / 36.3^\circ$	$1.0849 - j .7955$ $1.3453 / 36.3^\circ$
5	$.5300 + j .7695$ $.9344 / 55.4^\circ$	$.9371 + j .4352$ $1.0332 / 24.9^\circ$	$.7790 + j .4595$ $.9044 / 30.5^\circ$	$.9524 - j .5617$ $1.1057 / 30.5^\circ$
6	$.5750 + j .9628$ $1.1214 / 59.2^\circ$	$.8894 + j .6224$ $1.0856 / 35.0^\circ$	$.9425 + j .4229$ $1.0330 / 24.2^\circ$	$.8833 - j .3963$ $.9681 / 24.2^\circ$
7	$.5845 + j 1.1738$ $1.3113 / 63.5^\circ$	$.8174 + j .8393$ $1.1716 / 45.7^\circ$	$1.0657 + j .3418$ $1.1192 / 17.8^\circ$	$.8508 - j .2729$ $.8935 / 17.8^\circ$
8	$.5512 + j 1.4025$ $1.5069 / 68.5^\circ$	$.7138 + j 1.0829$ $1.2970 / 56.6^\circ$	$1.1366 + j .2406$ $1.1618 / 11.9^\circ$	$.8421 - j .1782$ $.8607 / 11.9^\circ$
9	$.4670 + j 1.6469$ $1.7118 / 74.2^\circ$	$.5702 + j 1.3488$ $1.4644 / 67.1^\circ$	$1.1600 + j .1441$ $1.1689 / 7.1^\circ$	$.8490 - j .1055$ $.8555 / 7.1^\circ$
10	$.3236 + j 1.9036$ $1.9309 / 80.4^\circ$	$.3776 + j 1.6314$ $1.6745 / 77.0^\circ$	$1.1511 + j .0681$ $1.1531 / 3.4^\circ$	$.8657 - j .0512$ $.8672 / 3.4^\circ$

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."