

Transponder Gray Code (Gillham Code) Reference

This reference shows the Gray Code output of an altitude encoder (including the gray code outputs on all MGL Avionics equipment that outputs it). This can be used to trouble shoot harnesses and encoders. Some transponders will display the gray code they are receiving and testing equipment can be used to see which of the switches are working in the parallel Gray Code output.

The first digits are the altitude in feet and the second string of digits are the Gillham code outputs represented as 0's and 1's.

The numbers are in this order: D1, D2, D4, A1, A2, A4, B1, B2, B4, C1, C2, C4.

DDDAABBBCCC

ALT 124124124124

-1200 000000000001
-1100 000000000011
-1000 000000000010
-900 000000000110
-800 000000000100
-700 000000001100
-600 000000001110
-500 000000001010
-400 000000001011
-300 000000001001
-200 000000011001
-100 000000011011
0 000000011010
100 000000011110
200 000000011100
300 000000010100
400 000000010110
500 000000010010
600 000000010011
700 000000010001
800 000000110001
900 000000110011
1000 000000110010
1100 000000110110
1200 000000110100
1300 000000111100
1400 000000111110
1500 000000111010
1600 000000111011
1700 000000111001
1800 000000101001
1900 000000101011

2000 000000101010
2100 000000101110
2200 000000101100
2300 000000100100
2400 000000100110
2500 000000100010
2600 000000100011
2700 000000100001
2800 000001100001
2900 000001100011
3000 000001100010
3100 000001100110
3200 000001100100
3300 000001101100
3400 000001101110
3500 000001101010
3600 000001101011
3700 000001101001
3800 000001111001
3900 000001111011
4000 000001111010
4100 000001111110
4200 000001111100
4300 000001110100
4400 000001110110
4500 000001110010
4600 000001110011
4700 000001110001
4800 000001010001
4900 000001010011
5000 000001010010
5100 000001010110
5200 000001010100
5300 000001011100
5400 000001011110
5500 000001011010
5600 000001011011
5700 000001011001
5800 000001001001
5900 000001001011
6000 000001001010
6100 000001001110
6200 000001001100
6300 000001000100
6400 000001000110
6500 000001000010
6600 000001000011
6700 000001000001
6800 000011000001
6900 000011000011
7000 000011000010
7100 000011000110
7200 000011000100
7300 000011001100

7400 000011001110
7500 000011001010
7600 000011001011
7700 000011001001
7800 000011011001
7900 000011011011
8000 000011011010
8100 000011011110
8200 000011011100
8300 000011010100
8400 000011010110
8500 000011010010
8600 000011010011
8700 000011010001
8800 000011110001
8900 000011110011
9000 000011110010
9100 000011110110
9200 000011110100
9300 000011111100
9400 000011111110
9500 000011111010
9600 000011111011
9700 000011111001
9800 000011101001
9900 000011101011
10000 000011101010
10100 000011101110
10200 000011101100
10300 000011100100
10400 000011100110
10500 000011100010
10600 000011100011
10700 000011100001
10800 000010100001
10900 000010100011
11000 000010100010
11100 000010100110
11200 000010100100
11300 000010101100
11400 000010101110
11500 000010101010
11600 000010101011
11700 000010101001
11800 000010111001
11900 000010111011
12000 000010111010
12100 000010111110
12200 000010111100
12300 000010110100
12400 000010110110
12500 000010110010
12600 000010110011
12700 000010110001

12800 000010010001
12900 000010010011
13000 000010010010
13100 000010010110
13200 000010010100
13300 000010011100
13400 000010011110
13500 000010011010
13600 000010011011
13700 000010011001
13800 000010001001
13900 000010001011
14000 000010001010
14100 000010001110
14200 000010001100
14300 000010000100
14400 000010000110
14500 000010000010
14600 000010000011
14700 000010000001
14800 000110000001
14900 000110000011
15000 000110000010
15100 000110000110
15200 000110000100
15300 000110001100
15400 000110001110
15500 000110001010
15600 000110001011
15700 000110001001
15800 000110011001
15900 000110011011
16000 000110011010
16100 000110011110
16200 000110011100
16300 000110010100
16400 000110010110
16500 000110010010
16600 000110010011
16700 000110010001
16800 000110110001
16900 000110110011
17000 000110110010
17100 000110110110
17200 000110110100
17300 000110111100
17400 000110111110
17500 000110111010
17600 000110111011
17700 000110111001
17800 000110101001
17900 000110101011
18000 000110101010
18100 000110101110

18200 000110101100
18300 000110100100
18400 000110100110
18500 000110100010
18600 000110100011
18700 000110100001
18800 000111100001
18900 000111100011
19000 000111100010
19100 000111100110
19200 000111100100
19300 000111101100
19400 000111101110
19500 000111101010
19600 000111101011
19700 000111101001
19800 000111111001
19900 000111111011
20000 000111111010
20100 000111111110
20200 000111111100
20300 000111110100
20400 000111110110
20500 000111110010
20600 000111110011
20700 000111110001
20800 000111010001
20900 000111010011
21000 000111010010
21100 000111010110
21200 000111010100
21300 000111011100
21400 000111011110
21500 000111011010
21600 000111011011
21700 000111011001
21800 000111001001
21900 000111001011
22000 000111001010
22100 000111001110
22200 000111001100
22300 000111000100
22400 000111000110
22500 000111000010
22600 000111000011
22700 000111000001
22800 000101000001
22900 000101000011
23000 000101000010
23100 000101000110
23200 000101000100
23300 000101001100
23400 000101001110
23500 000101001010

23600 000101001011
23700 000101001001
23800 000101011001
23900 000101011011
24000 000101011010
24100 000101011110
24200 000101011100
24300 000101010100
24400 000101010110
24500 000101010010
24600 000101010011
24700 000101010001
24800 000101110001
24900 000101110011
25000 000101110010
25100 000101110110
25200 000101110100
25300 000101111100
25400 000101111110
25500 000101111010
25600 000101111011
25700 000101111001
25800 000101101001
25900 000101101011
26000 000101101010
26100 000101101110
26200 000101101100
26300 000101100100
26400 000101100110
26500 000101100010
26600 000101100011
26700 000101100001
26800 000100100001
26900 000100100011
27000 000100100010
27100 000100100110
27200 000100100100
27300 000100101100
27400 000100101110
27500 000100101010
27600 000100101011
27700 000100101001
27800 000100111001
27900 000100111011
28000 000100111010
28100 000100111110
28200 000100111100
28300 000100110100
28400 000100110110
28500 000100110010
28600 000100110011
28700 000100110001
28800 000100010001
28900 000100010011

29000 000100010010
29100 000100010110
29200 000100010100
29300 000100011100
29400 000100011110
29500 000100011010
29600 000100011011
29700 000100011001
29800 000100001001
29900 000100001011
30000 000100001010
30100 000100001110
30200 000100001100
30300 000100000100
30400 000100000110
30500 000100000010
30600 000100000011
30700 000100000001
30800 001100000001

SNIP This sequence continues thru D4 & D2 up to 126,700'