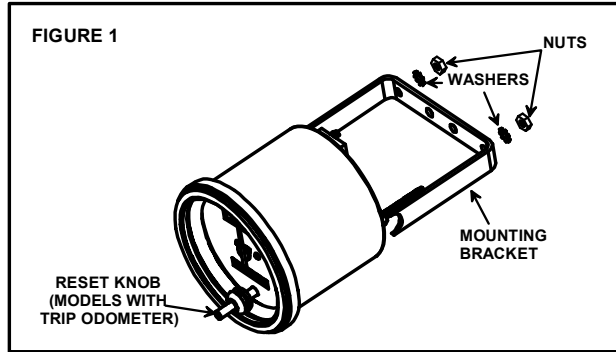


MICRO -CONTROLLED VEHICLE SPEEDOMETERS



5) Fit “U” bracket from hardware package over mounting studs on back of gauge (See Figure 1). Legs of bracket may be shortened if required.

These instructions for installing, wiring, and programming the Teleflex Micro-controlled Speedometer with Odometer should be kept with the vehicle. (Installation is the same for models with or without Resettable Trip Odometer.)

CAUTION:

Read these Instructions thoroughly before proceeding with installation. Do not deviate from wiring instructions. Incorrect wiring could cause electrical short and possible fire. Always disconnect battery before making any electrical connections.

NOTE: This Speedometer is intended for use in 12 vdc systems only.

ADDITIONAL SUPPLIES REQUIRED FOR INSTALLATION:

- Connector - AMP P/N 1-480706-0
- Terminals - AMP P/N 350550-1
- Wire - #18 AWG, SAE J1128 Type GPT recommended

PREPARATION FOR INSTALLATION

- 1) Speedometer requires a speed signal to operate. This may be supplied by a Pulse Generator, a Magnetic Proximity Sensor, or ECM Module. Ascertain that such a device is installed on the vehicle, or obtain and install such a device.
- 2) Select a mounting location for gauge which provides easy readability from the operating position. Check behind mounting panel for sufficient installation clearance.
- 3) Depending on Speedometer model, cut either a 3.395" +/- .032" (86 mm) or 4.625 (118mm) diameter hole through the panel at the desired location.
- 4) Insert gauge into mounting hole and check for fit.

INSTALLATION OF GAUGE
 After checking fit of gauge and “U” bracket, insert gauge into panel and install bracket over mounting studs. Install a washer and nut onto each mounting stud as shown in Figure 1.

CAUTION:
MAKE SURE THAT ELECTRICAL WIRING IS DRESSED AWAY FROM MOVING OR HOT VEHICLE COMPONENTS.

See Figure 2. Connect wiring to Gauge Connector Plug using mating Connector (AMP P/N 1-480706-0) and Terminals (AMP P/N 350550-1) with #18 AWG wire (SAE J1128 Type GPT recommended). Use wire colors conforming to vehicle's existing color code. Refer to Figure 2, Page 2, for Terminal Pin locations in Connector. Required connections are: System Ground, 12vdc (switched off when engine is stopped), 12vdc from Panel Lighting Switch (if lighting is desired), and pulsed signal from sensor/sender.

FOR SPEEDOMETERS USING MAGNETIC PROXIMITY SENSORS OR PULSE GENERATORS:

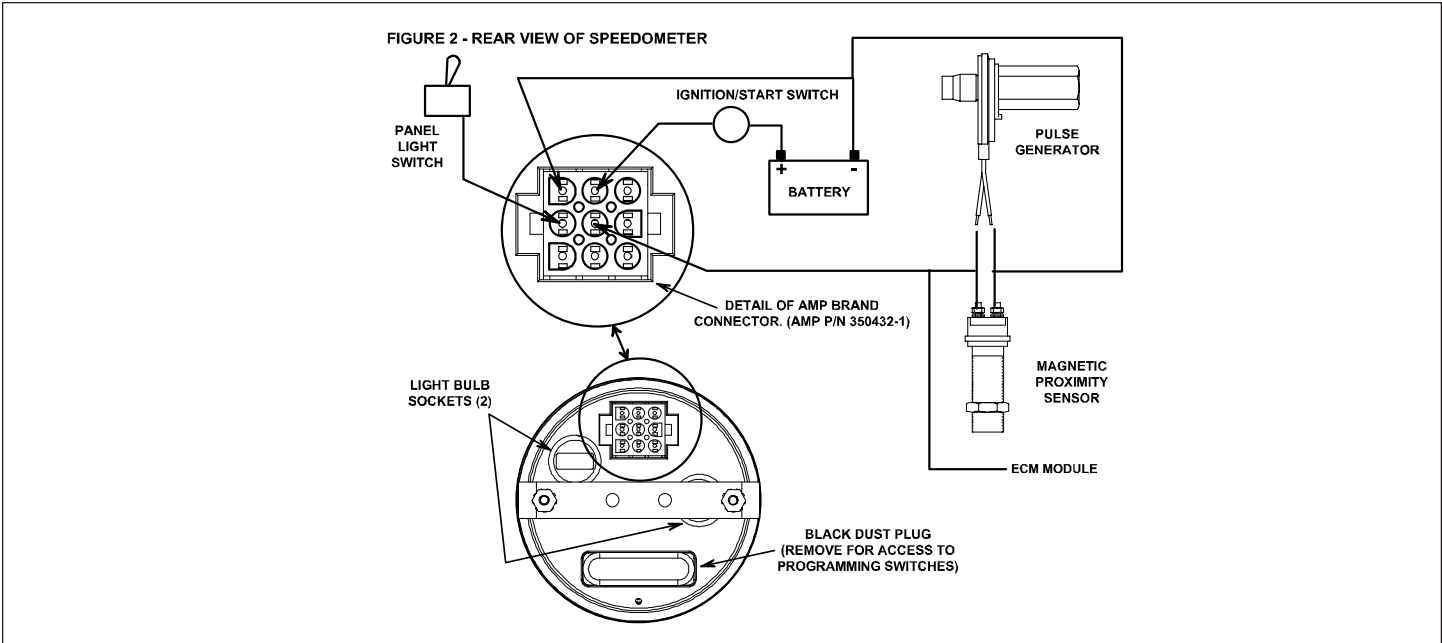
Run a wire from the “SEND” terminal in gauge connector to one terminal on Proximity Sensor (or lead from Pulse Generator). Run a wire from the “GND” (ground) terminal in gauge connector to remaining terminal on Proximity Sensor (or remaining lead from Pulse Generator). This is the preferred method. Simply grounding this terminal (or lead) to a common chassis ground may introduce electrical "noise" into the signal.

When wiring is complete, connect power. Operate vehicle and check gauge for proper operation.

-
- **Operation Note:** Each time the speedometer is powered up, a self-diagnostic check will be performed. The pointer will move first to "Zero", then to full scale, and back to "Zero".
-

IMPORTANT:
Before proceeding with installation and final wiring, Speedometer must be properly programmed to operate with your equipment. Refer to the Programming section of these Instructions before proceeding.

CAUTION:
BEFORE RECONNECTING BATTERY TO ELECTRICAL SYSTEM, RECHECK WIRING TO ENSURE ALL CONNECTIONS ARE PROPERLY MADE. INCORRECT CONNECTIONS OR ELECTRICAL SHORTS COULD CAUSE DAMAGE OR FIRE IN SYSTEM. ELEMENTS OF ELECTRICAL SYSTEMS SHOULD HAVE PROPER FUSES INSTALLED.



PROGRAMMING THE SPEEDOMETER:

The speedometer is accurate on any system having a frequency at full scale from 133 - 20,000 Hz.

Programming the speedometer is accomplished in three steps:

1. Determine the Full Scale Frequency. (F.S.F.)
2. Determine the DIP Switch Settings.
3. Program the DIP switches.

STEP 1: CALCULATE FULL SCALE FREQUENCY (F.S.F)

NOTE: The tire revs/Unit* (see Note below) may be obtained from the tire manufacturer; the number of pulses per generator revolution may be obtained from the pulse generator supplier; the rear axle ratio may be obtained from the chassis manufacturer; and the number of drive and driven gear teeth may be obtained from the transmission or chassis manufacturer.

***NOTE:** Depending on Speedometer model, "Unit" refers to either mile or kilometers. Use Unit as shown on major scale of Speedometer's dial.

A. IF USING WHEEL MOUNTED MAGNETIC PROXIMITY SENSOR:

$$\text{Tire Revs/Unit}^* \times \# \text{ of Teeth (or Slots) on wheel} \times \text{Constant}(f) = \text{F.S.F.}$$

DIAL RANGE:	CONSTANT(f):
0-85	0.02361
0-100	0.02778
0-120	0.03333
0-140	0.03889
0-160	0.04444

EXAMPLE: 0-85 MPH Model

$$\begin{matrix} \text{Tire Revs/Unit}^* & \times & \# \text{ of Teeth (or Slots)} & \times & \text{Constant}(f) & = & \text{F.S.F.} \\ (988.7) & \times & (90) & \times & (0.0236) & = & (2100 \text{ Hz.}) \end{matrix}$$

B. IF USING TRANSMISSION MOUNTED PULSE GENERATOR: (You must ascertain the number of pulses per revolution produced by the Pulse Generator used. Teleflex P/N 9604276 is 8 pulse/rev, P/N 57010 is 30 pulse/rev.) If not one of the numbers listed above, contact Pulse generator manufacturer, or Teleflex Technical Service.

$$\begin{matrix} \text{Tire Revs/Unit}^* \times \text{Rear Axle Ratio} \times (\# \text{ of Drive Gear Teeth}) \div (\# \text{ of Driven Gear Teeth}) = \text{Pulse Gen.Revs/unit}^* \\ \text{Pulse Gen.Revs/Unit}^* \times \text{Constant}(f) = \text{F.S.F.} \end{matrix}$$

DIAL RANGE:	CONSTANT(f) with:		
	8 pulse/rev	16 pulse/rev	30 pulse/rev
0-85	0.1888	0.3777	0.7083
0-100	0.2222	0.4444	0.8333
0-120	0.2667	0.5333	1.0000
0-140	0.3111	0.6222	1.1667
0-160	0.3556	0.7111	1.3333

EXAMPLE: 0-85 MPH Model, 8 pulse/rev. generator

$$\begin{array}{ccccccccc} \text{Tire Revs/Unit*} & \times & \text{Rear Axle Ratio} & \times & (\# \text{ of Drive Gear Teeth}) & \div & (\# \text{ of Driven Gear Teeth}) & = & \text{Pulse Gen.Revs/Unit*} \\ (988.7) & \times & (3.01) & \times & (4) & \div & (5) & = & (2380.79) \end{array}$$

$$\begin{array}{ccccccc} \text{Pulse Gen.Revs/Unit*} & \times & \text{Constant(f)} & = & \text{F.S.F.} \\ (2380.79) & \times & (0.1888) & = & (447.59 \text{ Hz}). \end{array}$$

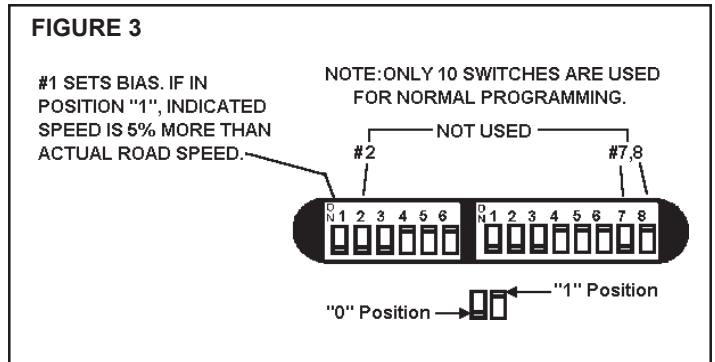
STEP 2: Determine DIP Switch Settings: Use table on Pages 4 - 8. Find Full Scale Frequency, read Switch Settings to right. (If number overlaps two switch settings, either setting may be used).

STEP 3: Program DIP Switches

On the rear of the speedometer there is an oval shaped black plug (See Figure 3). Upon removal of this plug, two multi-position DIP switch assemblies with a total of 14 switches will come into view. For normal programming, only ten switches are used - #3, 4, 5, & 6 in the left switch assembly, # 1, 2, 3, 4, 5, & 6 in the right switch assembly. Switch #1 in the left assembly offers optional biasing of indicated speed. Setting this switch to the "1" position will cause indicated speed to read 5% greater than actual road speed. Odometer mileage will not be affected. The balance of the switches are not functional - their position has no effect on the Speedometer's functioning. Carefully set the switches to the Full Scale Frequency determined above.

Replace the oval shaped black plug. The speedometer is now fully adjusted and can be used without any additional adjustment.

Models with Resettable Trip Odometer: To reset Trip Odometer to zero, simply push the black reset knob.



SPECIFICATIONS

Specification	Scale Range (Typical)	85 mph
Operating Temperatures		40° to 185° F
Voltage Range		12 - 16 VDC
Shock		per SAE J 1226
Vibration		per SAE J 1226
Transient Voltage		per SAE J 1226
Accuracy @ 70°		18.9 - 22.4 mph 39.5 - 43 mph — SAE J 1226 55 - 58.4 mph
Accuracy @ -40° and 185° F		within +/- 2% of readings at 70°F
Current Draw		500 mA (typical)
Panel cutout		3.395 +/- .032 in.(86mm) or 4.625 in.(118mm) diameter
Frequency range		133 - 20,103 Hz @ 85 mph
Odometer range		999999.9
Odometer accuracy		Per SAE J 1226
Illumination		2 x 2 candlepower bulbs and sockets.

Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number		
From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456
133.5	134.0	00	0000	0000	180.0	181.0	00	0011	1100	240.0	241.0	00	0111	1000
134.0	134.5	00	0000	0001	181.0	182.0	00	0011	1101	241.0	242.0	00	0111	1001
134.5	135.0	00	0000	0010	182.0	183.0	00	0011	1110	242.0	243.0	00	0111	1010
135.0	135.5	00	0000	0011	183.0	184.0	00	0011	1111	243.0	244.0	00	0111	1011
135.5	136.0	00	0000	0100	184.0	185.0	00	0100	0000	244.0	245.0	00	0111	1100
136.0	136.5	00	0000	0101	185.0	186.0	00	0100	0001	245.0	246.0	00	0111	1101
136.5	137.0	00	0000	0110	186.0	187.0	00	0100	0010	246.0	247.0	00	0111	1110
137.0	137.5	00	0000	0111	187.0	188.0	00	0100	0011	247.0	248.0	00	0111	1111
137.5	138.0	00	0000	1000	188.0	189.0	00	0100	0100	248.0	249.0	00	1000	0000
138.0	138.5	00	0000	1001	189.0	190.0	00	0100	0101	249.0	250.0	00	1000	0001
138.5	139.0	00	0000	1010	190.0	191.0	00	0100	0110	250.0	251.0	00	1000	0010
139.0	139.5	00	0000	1011	191.0	192.0	00	0100	0111	251.0	252.0	00	1000	0011
139.5	140.0	00	0000	1100	192.0	193.0	00	0100	1000	252.0	253.0	00	1000	0100
140.0	140.5	00	0000	1101	193.0	194.0	00	0100	1001	253.0	254.0	00	1000	0101
140.5	141.0	00	0000	1110	194.0	195.0	00	0100	1010	254.0	255.0	00	1000	0110
141.0	141.5	00	0000	1111	195.0	196.0	00	0100	1011	255.0	256.0	00	1000	0111
141.5	142.0	00	0001	0000	196.0	197.0	00	0100	1100	256.0	257.0	00	1000	1000
142.0	142.5	00	0001	0001	197.0	198.0	00	0100	1101	257.0	258.0	00	1000	1001
142.5	143.0	00	0001	0010	198.0	199.0	00	0100	1110	258.0	259.0	00	1000	1010
143.0	143.5	00	0001	0011	199.0	200.0	00	0100	1111	259.0	260.0	00	1000	1011
143.5	144.0	00	0001	0100	200.0	201.0	00	0101	0000	260.0	261.0	00	1000	1100
144.0	144.5	00	0001	0101	201.0	202.0	00	0101	0001	261.0	262.0	00	1000	1101
144.5	145.0	00	0001	0110	202.0	203.0	00	0101	0010	262.0	263.0	00	1000	1110
145.0	145.5	00	0001	0111	203.0	204.0	00	0101	0011	263.0	264.0	00	1000	1111
145.5	146.0	00	0001	1000	204.0	205.0	00	0101	0100	264.0	265.0	00	1001	0000
146.0	146.5	00	0001	1001	205.0	206.0	00	0101	0101	265.0	266.0	00	1001	0001
146.5	147.0	00	0001	1010	206.0	207.0	00	0101	0110	266.0	267.0	00	1001	0010
147.0	148.0	00	0001	1011	207.0	208.0	00	0101	0111	267.0	268.0	00	1001	0011
148.0	149.0	00	0001	1100	208.0	209.0	00	0101	1000	268.0	269.0	00	1001	0100
149.0	150.0	00	0001	1101	209.0	210.0	00	0101	1001	269.0	270.0	00	1001	0101
150.0	151.0	00	0001	1110	210.0	211.0	00	0101	1010	270.0	271.0	00	1001	0110
151.0	152.0	00	0001	1111	211.0	212.0	00	0101	1011	271.0	272.0	00	1001	0111
152.0	153.0	00	0010	0000	212.0	213.0	00	0101	1100	272.0	273.0	00	1001	1000
153.0	154.0	00	0010	0001	213.0	214.0	00	0101	1101	273.0	274.0	00	1001	1001
154.0	155.0	00	0010	0010	214.0	215.0	00	0101	1110	274.0	275.0	00	1001	1010
155.0	156.0	00	0010	0011	215.0	216.0	00	0101	1111	275.0	276.0	00	1001	1011
156.0	157.0	00	0010	0100	216.0	217.0	00	0110	0000	276.0	277.0	00	1001	1100
157.0	158.0	00	0010	0101	217.0	218.0	00	0110	0001	277.0	278.0	00	1001	1101
158.0	159.0	00	0010	0110	218.0	219.0	00	0110	0010	278.0	279.0	00	1001	1110
159.0	160.0	00	0010	0111	219.0	220.0	00	0110	0011	279.0	280.0	00	1001	1111
160.0	161.0	00	0010	1000	220.0	221.0	00	0110	0100	280.0	281.0	00	1010	0000
161.0	162.0	00	0010	1001	221.0	222.0	00	0110	0101	281.0	282.0	00	1010	0001
162.0	163.0	00	0010	1010	222.0	223.0	00	0110	0110	282.0	283.0	00	1010	0010
163.0	164.0	00	0010	1011	223.0	224.0	00	0110	0111	283.0	284.0	00	1010	0011
164.0	165.0	00	0010	1100	224.0	225.0	00	0110	1000	284.0	285.0	00	1010	0100
165.0	166.0	00	0010	1101	225.0	226.0	00	0110	1001	285.0	286.0	00	1010	0101
166.0	167.0	00	0010	1110	226.0	227.0	00	0110	1010	286.0	287.0	00	1010	0110
167.0	168.0	00	0010	1111	227.0	228.0	00	0110	1011	287.0	289.0	00	1010	0111
168.0	169.0	00	0011	0000	228.0	229.0	00	0110	1100	289.0	291.0	00	1010	1000
169.0	170.0	00	0011	0001	229.0	230.0	00	0110	1101	291.0	293.0	00	1010	1001
170.0	171.0	00	0011	0010	230.0	231.0	00	0110	1110	293.0	295.0	00	1010	1010
171.0	172.0	00	0011	0011	231.0	232.0	00	0110	1111	295.0	297.0	00	1010	1011
172.0	173.0	00	0011	0100	232.0	233.0	00	0111	0000	297.0	299.0	00	1010	1100
173.0	174.0	00	0011	0101	233.0	234.0	00	0111	0001	299.0	301.0	00	1010	1101
174.0	175.0	00	0011	0110	234.0	235.0	00	0111	0010	301.0	303.0	00	1010	1110
175.0	176.0	00	0011	0111	235.0	236.0	00	0111	0011	303.0	305.0	00	1010	1111
176.0	177.0	00	0011	1000	236.0	237.0	00	0111	0100	305.0	307.0	00	1011	0000
177.0	178.0	00	0011	1001	237.0	238.0	00	0111	0101	307.0	309.0	00	1011	0001
178.0	179.0	00	0011	1010	238.0	239.0	00	0111	0110	309.0	311.0	00	1011	0010
179.0	180.0	00	0011	1011	239.0	240.0	00	0111	0111	311.0	313.0	00	1011	0011

Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number		
From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456
433.0	435.0	00	1111	0000	553.0	555.0	01	0010	1100	779.0	783.0	01	0110	1000
435.0	437.0	00	1111	0001	555.0	557.0	01	0010	1101	783.0	787.0	01	0110	1001
437.0	439.0	00	1111	0010	557.0	559.0	01	0010	1110	787.0	791.0	01	0110	1010
439.0	441.0	00	1111	0011	559.0	561.0	01	0010	1111	791.0	795.0	01	0110	1011
441.0	443.0	00	1111	0100	561.0	563.0	01	0011	0000	795.0	799.0	01	0110	1100
443.0	445.0	00	1111	0101	563.0	565.0	01	0011	0001	799.0	803.0	01	0110	1101
445.0	447.0	00	1111	0110	565.0	567.0	01	0011	0010	803.0	807.0	01	0110	1110
447.0	449.0	00	1111	0111	567.0	571.0	01	0011	0011	807.0	811.0	01	0110	1111
449.0	451.0	00	1111	1000	571.0	575.0	01	0011	0100	811.0	815.0	01	0111	0000
451.0	453.0	00	1111	1001	575.0	579.0	01	0011	0101	815.0	819.0	01	0111	0001
453.0	455.0	00	1111	1010	579.0	583.0	01	0011	0110	819.0	823.0	01	0111	0010
455.0	457.0	00	1111	1011	583.0	587.0	01	0011	0111	823.0	827.0	01	0111	0011
457.0	459.0	00	1111	1100	587.0	591.0	01	0011	1000	827.0	831.0	01	0111	0100
459.0	461.0	00	1111	1101	591.0	595.0	01	0011	1001	831.0	835.0	01	0111	0101
461.0	463.0	00	1111	1110	595.0	599.0	01	0011	1010	835.0	839.0	01	0111	0110
463.0	465.0	00	1111	1111	599.0	603.0	01	0011	1011	839.0	843.0	01	0111	0111
465.0	467.0	01	0000	0000	603.0	607.0	01	0011	1100	843.0	847.0	01	0111	1000
467.0	469.0	01	0000	0001	607.0	611.0	01	0011	1101	847.0	851.0	01	0111	1001
469.0	471.0	01	0000	0010	611.0	615.0	01	0011	1110	851.0	855.0	01	0111	1010
471.0	473.0	01	0000	0011	615.0	619.0	01	0011	1111	855.0	859.0	01	0111	1011
473.0	475.0	01	0000	0100	619.0	623.0	01	0100	0000	859.0	863.0	01	0111	1100
475.0	477.0	01	0000	0101	623.0	627.0	01	0100	0001	863.0	867.0	01	0111	1101
477.0	479.0	01	0000	0110	627.0	631.0	01	0100	0010	867.0	871.0	01	0111	1110
479.0	481.0	01	0000	0111	631.0	635.0	01	0100	0011	871.0	875.0	01	0111	1111
481.0	483.0	01	0000	1000	635.0	639.0	01	0100	0100	875.0	879.0	01	1000	0000
483.0	485.0	01	0000	1001	639.0	643.0	01	0100	0101	879.0	883.0	01	1000	0001
485.0	487.0	01	0000	1010	643.0	647.0	01	0100	0110	883.0	887.0	01	1000	0010
487.0	489.0	01	0000	1011	647.0	651.0	01	0100	0111	887.0	891.0	01	1000	0011
489.0	491.0	01	0000	1100	651.0	655.0	01	0100	1000	891.0	895.0	01	1000	0100
491.0	493.0	01	0000	1101	655.0	659.0	01	0100	1001	895.0	899.0	01	1000	0101
493.0	495.0	01	0000	1110	659.0	663.0	01	0100	1010	899.0	903.0	01	1000	0110
495.0	497.0	01	0000	1111	663.0	667.0	01	0100	1011	903.0	907.0	01	1000	0111
497.0	499.0	01	0001	0000	667.0	671.0	01	0100	1100	907.0	911.0	01	1000	1000
499.0	501.0	01	0001	0001	671.0	675.0	01	0100	1101	911.0	915.0	01	1000	1001
501.0	503.0	01	0001	0010	675.0	679.0	01	0100	1110	915.0	919.0	01	1000	1010
503.0	505.0	01	0001	0011	679.0	683.0	01	0100	1111	919.0	923.0	01	1000	1011
505.0	507.0	01	0001	0100	683.0	687.0	01	0101	0000	923.0	927.0	01	1000	1100
507.0	509.0	01	0001	0101	687.0	691.0	01	0101	0001	927.0	931.0	01	1000	1101
509.0	511.0	01	0001	0110	691.0	695.0	01	0101	0010	931.0	935.0	01	1000	1110
511.0	513.0	01	0001	0111	695.0	699.0	01	0101	0011	935.0	939.0	01	1000	1111
513.0	515.0	01	0001	1000	699.0	703.0	01	0101	0100	939.0	943.0	01	1001	0000
515.0	517.0	01	0001	1001	703.0	707.0	01	0101	0101	943.0	947.0	01	1001	0001
517.0	519.0	01	0001	1010	707.0	711.0	01	0101	0110	947.0	951.0	01	1001	0010
519.0	521.0	01	0001	1011	711.0	715.0	01	0101	0111	951.0	955.0	01	1001	0011
521.0	523.0	01	0001	1100	715.0	719.0	01	0101	1000	955.0	959.0	01	1001	0100
523.0	525.0	01	0001	1101	719.0	723.0	01	0101	1001	959.0	963.0	01	1001	0101
525.0	527.0	01	0001	1110	723.0	727.0	01	0101	1010	963.0	967.0	01	1001	0110
527.0	529.0	01	0001	1111	727.0	731.0	01	0101	1011	967.0	971.0	01	1001	0111
529.0	531.0	01	0010	0000	731.0	735.0	01	0101	1100	971.0	975.0	01	1001	1000
531.0	533.0	01	0010	0001	735.0	739.0	01	0101	1101	975.0	979.0	01	1001	1001
533.0	535.0	01	0010	0010	739.0	743.0	01	0101	1110	979.0	983.0	01	1001	1010
535.0	537.0	01	0010	0011	743.0	747.0	01	0101	1111	983.0	987.0	01	1001	1011
537.0	539.0	01	0010	0100	747.0	751.0	01	0110	0000	987.0	991.0	01	1001	1100
539.0	541.0	01	0010	0101	751.0	755.0	01	0110	0001	991.0	995.0	01	1001	1101
541.0	543.0	01	0010	0110	755.0	759.0	01	0110	0010	995.0	999.0	01	1001	1110
543.0	545.0	01	0010	0111	759.0	763.0	01	0110	0011	999.0	1,003.0	01	1001	1111
545.0	547.0	01	0010	1000	763.0	767.0	01	0110	0100	1,003.0	1,007.0	01	1010	0000
547.0	549.0	01	0010	1001	767.0	771.0	01	0110	0101	1,007.0	1,011.0	01	1010	0001
549.0	551.0	01	0010	1010	771.0	775.0	01	0110	0110	1,011.0	1,015.0	01	1010	0010
551.0	553.0	01	0010	1011	775.0	779.0	01	0110	0111	1,015.0	1,019.0	01	1010	0011

Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number		
From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456
1,391.0	1,399.0	01	1110	0000	1,871.0	1,879.0	10	0001	1100	2,455.0	2,471.0	10	0101	1000	3,415.0	3,431.0	10	1001	0100
1,399.0	1,407.0	01	1110	0001	1,879.0	1,887.0	10	0001	1101	2,471.0	2,487.0	10	0101	1001	3,431.0	3,447.0	10	1001	0101
1,407.0	1,415.0	01	1110	0010	1,887.0	1,895.0	10	0001	1110	2,487.0	2,503.0	10	0101	1010	3,447.0	3,463.0	10	1001	0110
1,415.0	1,423.0	01	1110	0011	1,895.0	1,903.0	10	0001	1111	2,503.0	2,519.0	10	0101	1011	3,463.0	3,479.0	10	1001	0111
1,423.0	1,431.0	01	1110	0100	1,903.0	1,911.0	10	0010	0000	2,519.0	2,535.0	10	0101	1100	3,479.0	3,495.0	10	1001	1000
1,431.0	1,439.0	01	1110	0101	1,911.0	1,919.0	10	0010	0001	2,535.0	2,551.0	10	0101	1101	3,495.0	3,511.0	10	1001	1001
1,439.0	1,447.0	01	1110	0110	1,919.0	1,927.0	10	0010	0010	2,551.0	2,567.0	10	0101	1110	3,511.0	3,527.0	10	1001	1010
1,447.0	1,455.0	01	1110	0111	1,927.0	1,935.0	10	0010	0011	2,567.0	2,583.0	10	0101	1111	3,527.0	3,543.0	10	1001	1011
1,455.0	1,463.0	01	1110	1000	1,935.0	1,943.0	10	0010	0100	2,583.0	2,599.0	10	0110	0000	3,543.0	3,559.0	10	1001	1100
1,463.0	1,471.0	01	1110	1001	1,943.0	1,951.0	10	0010	0101	2,599.0	2,615.0	10	0110	0001	3,559.0	3,575.0	10	1001	1101
1,471.0	1,479.0	01	1110	1010	1,951.0	1,959.0	10	0010	0110	2,615.0	2,631.0	10	0110	0010	3,575.0	3,591.0	10	1001	1110
1,479.0	1,487.0	01	1110	1011	1,959.0	1,967.0	10	0010	0111	2,631.0	2,647.0	10	0110	0011	3,591.0	3,607.0	10	1001	1111
1,487.0	1,495.0	01	1110	1100	1,967.0	1,975.0	10	0010	1000	2,647.0	2,663.0	10	0110	0100	3,607.0	3,623.0	10	1010	0000
1,495.0	1,503.0	01	1110	1101	1,975.0	1,983.0	10	0010	1001	2,663.0	2,679.0	10	0110	0101	3,623.0	3,639.0	10	1010	0001
1,503.0	1,511.0	01	1110	1110	1,983.0	1,991.0	10	0010	1010	2,679.0	2,695.0	10	0110	0110	3,639.0	3,655.0	10	1010	0010
1,511.0	1,519.0	01	1110	1111	1,991.0	1,999.0	10	0010	1011	2,695.0	2,711.0	10	0110	0111	3,655.0	3,671.0	10	1010	0011
1,519.0	1,527.0	01	1111	0000	1,999.0	2,007.0	10	0010	1100	2,711.0	2,727.0	10	0110	1000	3,671.0	3,687.0	10	1010	0100
1,527.0	1,535.0	01	1111	0001	2,007.0	2,015.0	10	0010	1101	2,727.0	2,743.0	10	0110	1001	3,687.0	3,703.0	10	1010	0101
1,535.0	1,543.0	01	1111	0010	2,015.0	2,023.0	10	0010	1110	2,743.0	2,759.0	10	0110	1010	3,703.0	3,719.0	10	1010	0110
1,543.0	1,551.0	01	1111	0011	2,023.0	2,031.0	10	0010	1111	2,759.0	2,775.0	10	0110	1011	3,719.0	3,735.0	10	1010	0111
1,551.0	1,559.0	01	1111	0100	2,031.0	2,039.0	10	0011	0000	2,775.0	2,791.0	10	0110	1100	3,735.0	3,751.0	10	1010	1000
1,559.0	1,567.0	01	1111	0101	2,039.0	2,047.0	10	0011	0001	2,791.0	2,807.0	10	0110	1101	3,751.0	3,767.0	10	1010	1001
1,567.0	1,575.0	01	1111	0110	2,047.0	2,055.0	10	0011	0010	2,807.0	2,823.0	10	0110	1110	3,767.0	3,783.0	10	1010	1010
1,575.0	1,583.0	01	1111	0111	2,055.0	2,063.0	10	0011	0011	2,823.0	2,839.0	10	0110	1111	3,783.0	3,799.0	10	1010	1011
1,583.0	1,591.0	01	1111	1000	2,063.0	2,071.0	10	0011	0100	2,839.0	2,855.0	10	0111	0000	3,799.0	3,815.0	10	1010	1100
1,591.0	1,599.0	01	1111	1001	2,071.0	2,079.0	10	0011	0101	2,855.0	2,871.0	10	0111	0001	3,815.0	3,831.0	10	1010	1101
1,599.0	1,607.0	01	1111	1010	2,079.0	2,087.0	10	0011	0110	2,871.0	2,887.0	10	0111	0010	3,831.0	3,847.0	10	1010	1110
1,607.0	1,615.0	01	1111	1011	2,087.0	2,095.0	10	0011	0111	2,887.0	2,903.0	10	0111	0011	3,847.0	3,863.0	10	1010	1111
1,615.0	1,623.0	01	1111	1100	2,095.0	2,103.0	10	0011	1000	2,903.0	2,919.0	10	0111	0100	3,863.0	3,879.0	10	1011	0000
1,623.0	1,631.0	01	1111	1101	2,103.0	2,111.0	10	0011	1001	2,919.0	2,935.0	10	0111	0101	3,879.0	3,895.0	10	1011	0001
1,631.0	1,639.0	01	1111	1110	2,111.0	2,119.0	10	0011	1010	2,935.0	2,951.0	10	0111	0110	3,895.0	3,911.0	10	1011	0010
1,639.0	1,647.0	01	1111	1111	2,119.0	2,127.0	10	0011	1011	2,951.0	2,967.0	10	0111	0111	3,911.0	3,927.0	10	1011	0011
1,647.0	1,655.0	10	0000	0000	2,127.0	2,135.0	10	0011	1100	2,967.0	2,983.0	10	0111	1000	3,927.0	3,943.0	10	1011	0100
1,655.0	1,663.0	10	0000	0001	2,135.0	2,143.0	10	0011	1101	2,983.0	2,999.0	10	0111	1001	3,943.0	3,959.0	10	1011	0101
1,663.0	1,671.0	10	0000	0010	2,143.0	2,151.0	10	0011	1110	2,999.0	3,015.0	10	0111	1010	3,959.0	3,975.0	10	1011	0110
1,671.0	1,679.0	10	0000	0011	2,151.0	2,159.0	10	0011	1111	3,015.0	3,031.0	10	0111	1011	3,975.0	3,991.0	10	1011	0111
1,679.0	1,687.0	10	0000	0100	2,159.0	2,167.0	10	0100	0000	3,031.0	3,047.0	10	0111	1100	3,991.0	4,007.0	10	1011	1000
1,687.0	1,695.0	10	0000	0101	2,167.0	2,175.0	10	0100	0001	3,047.0	3,063.0	10	0111	1101	4,007.0	4,023.0	10	1011	1001
1,695.0	1,703.0	10	0000	0110	2,175.0	2,183.0	10	0100	0010	3,063.0	3,079.0	10	0111	1110	4,023.0	4,039.0	10	1011	1010
1,703.0	1,711.0	10	0000	0111	2,183.0	2,191.0	10	0100	0011	3,079.0	3,095.0	10	0111	1111	4,039.0	4,055.0	10	1011	1011
1,711.0	1,719.0	10	0000	1000	2,191.0	2,199.0	10	0100	0100	3,095.0	3,111.0	10	1000	0000	4,055.0	4,071.0	10	1011	1100
1,719.0	1,727.0	10	0000	1001	2,199.0	2,207.0	10	0100	0101	3,111.0	3,127.0	10	1000	0001	4,071.0	4,087.0	10	1011	1101
1,727.0	1,735.0	10	0000	1010	2,207.0	2,215.0	10	0100	0110	3,127.0	3,143.0	10	1000	0010	4,087.0	4,103.0	10	1011	1110
1,735.0	1,743.0	10	0000	1011	2,215.0	2,223.0	10	0100	0111	3,143.0	3,159.0	10	1000	0011	4,103.0	4,119.0	10	1011	1111
1,743.0	1,751.0	10	0000	1100	2,223.0	2,231.0	10	0100	1000	3,159.0	3,175.0	10	1000	0100	4,119.0	4,135.0	10	1100	0000
1,751.0	1,759.0	10	0000	1101	2,231.0	2,239.0	10	0100	1001	3,175.0	3,191.0	10	1000	0101	4,135.0	4,151.0	10	1100	0001
1,759.0	1,767.0	10	0000	1110	2,239.0	2,247.0	10	0100	1010	3,191.0	3,207.0	10	1000	0110	4,151.0	4,167.0	10	1100	0010
1,767.0	1,775.0	10	0000	1111	2,247.0	2,263.0	10	0100	1011	3,207.0	3,223.0	10	1000	0111	4,167.0	4,183.0	10	1100	0011
1,775.0	1,783.0	10	0001	0000	2,263.0	2,279.0	10	0100	1100	3,223.0	3,239.0	10	1000	1000	4,183.0	4,199.0	10	1100	0100
1,783.0	1,791.0	10	0001	0001	2,279.0	2,295.0	10	0100	1101	3,239.0	3,255.0	10	1000	1001	4,199.0	4,215.0	10	1100	0101
1,791.0	1,799.0	10	0001	0010	2,295.0	2,311.0	10	0100	1110	3,255.0	3,271.0	10	1000	1010	4,215.0	4,231.0	10	1100	0110
1,799.0	1,807.0	10	0001	0011	2,311.0	2,327.0	10	0100	1111	3,271.0	3,287.0	10	1000	1011	4,231.0	4,247.0	10	1100	0111
1,807.0	1,815.0	10	0001	0100	2,327.0	2,343.0	10	0101	0000	3,287.0	3,303.0	10	1000	1100	4,247.0	4,263.0	10	1100	1000
1,815.0	1,823.0	10	0001	0101	2,343.0	2,359.0	10	0101	0001	3,303.0	3,319.0	10	1000	1101	4,263.0	4,279.0	10	1100	1001
1,823.0	1,831.0	10	0001	0110	2,359.0	2,375.0	10	0101	0010	3,319.0	3,335.0	10	1000	1110	4,279.0	4,295.0	10	1100	1010
1,831.0	1,839.0	10	0001	0111	2,375.0	2,391.0	10	0101	0011	3,335.0	3,351.0	10	1000	1111	4,295.0	4,311.0	10	1100	1011
1,839.0	1,847.0	10	0001	1000	2,391.0	2,407.0	10	0101	0100	3,351.0	3,367.0	10	1001	0000	4,311.0	4,327.0	10	1100	1100
1,847.0	1,855.0	10	0001	1001	2,407.0	2,423.0	10	0101	0101	3,367.0	3,383.0	10	1001	0001	4,327.0	4,343.0	10	1100	1101
1,855.0	1,863.0	10	0001	1010	2,423.0	2,439.0	10	0101	0110	3,383.0	3,399.0	10	1001	0010	4,343.0	4,359.0	10	1100	1110
1,863.0	1,871.0	10	0001	1011	2,439.0	2,455.0	10	0101	0111	3,399.0	3,415.0	10	1001	0011	4,359.0	4,375.0	10	1100	1111

Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number		
From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456
4,375.0	4,391.0	10	1101	0000	6,183.0	6,215.0	11	0000	1100	8,103.0	8,135.0	11	0100	1000
4,391.0	4,407.0	10	1101	0001	6,215.0	6,247.0	11	0000	1101	8,135.0	8,167.0	11	0100	1001
4,407.0	4,423.0	10	1101	0010	6,247.0	6,279.0	11	0000	1110	8,167.0	8,199.0	11	0100	1010
4,423.0	4,439.0	10	1101	0011	6,279.0	6,311.0	11	0000	1111	8,199.0	8,231.0	11	0100	1011
4,439.0	4,455.0	10	1101	0100	6,311.0	6,343.0	11	0001	0000	8,231.0	8,263.0	11	0100	1100
4,455.0	4,471.0	10	1101	0101	6,343.0	6,375.0	11	0001	0001	8,263.0	8,295.0	11	0100	1101
4,471.0	4,487.0	10	1101	0110	6,375.0	6,407.0	11	0001	0010	8,295.0	8,327.0	11	0100	1110
4,487.0	4,519.0	10	1101	0111	6,407.0	6,439.0	11	0001	0011	8,327.0	8,359.0	11	0100	1111
4,519.0	4,551.0	10	1101	1000	6,439.0	6,471.0	11	0001	0100	8,359.0	8,391.0	11	0101	0000
4,551.0	4,583.0	10	1101	1001	6,471.0	6,503.0	11	0001	0101	8,391.0	8,423.0	11	0101	0001
4,583.0	4,615.0	10	1101	1010	6,503.0	6,535.0	11	0001	0110	8,423.0	8,455.0	11	0101	0010
4,615.0	4,647.0	10	1101	1011	6,535.0	6,567.0	11	0001	0111	8,455.0	8,487.0	11	0101	0011
4,647.0	4,679.0	10	1101	1100	6,567.0	6,599.0	11	0001	1000	8,487.0	8,519.0	11	0101	0100
4,679.0	4,711.0	10	1101	1101	6,599.0	6,631.0	11	0001	1001	8,519.0	8,551.0	11	0101	0101
4,711.0	4,743.0	10	1101	1110	6,631.0	6,663.0	11	0001	1010	8,551.0	8,583.0	11	0101	0110
4,743.0	4,775.0	10	1101	1111	6,663.0	6,695.0	11	0001	1011	8,583.0	8,615.0	11	0101	0111
4,775.0	4,807.0	10	1110	0000	6,695.0	6,727.0	11	0001	1100	8,615.0	8,647.0	11	0101	1000
4,807.0	4,839.0	10	1110	0001	6,727.0	6,759.0	11	0001	1101	8,647.0	8,679.0	11	0101	1001
4,839.0	4,871.0	10	1110	0010	6,759.0	6,791.0	11	0001	1110	8,679.0	8,711.0	11	0101	1010
4,871.0	4,903.0	10	1110	0011	6,791.0	6,823.0	11	0001	1111	8,711.0	8,743.0	11	0101	1011
4,903.0	4,935.0	10	1110	0100	6,823.0	6,855.0	11	0010	0000	8,743.0	8,775.0	11	0101	1100
4,935.0	4,967.0	10	1110	0101	6,855.0	6,887.0	11	0010	0001	8,775.0	8,807.0	11	0101	1101
4,967.0	4,999.0	10	1110	0110	6,887.0	6,919.0	11	0010	0010	8,807.0	8,839.0	11	0101	1110
4,999.0	5,031.0	10	1110	0111	6,919.0	6,951.0	11	0010	0011	8,839.0	8,871.0	11	0101	1111
5,031.0	5,063.0	10	1110	1000	6,951.0	6,983.0	11	0010	0100	8,871.0	8,903.0	11	0110	0000
5,063.0	5,095.0	10	1110	1001	6,983.0	7,015.0	11	0010	0101	8,903.0	8,935.0	11	0110	0001
5,095.0	5,127.0	10	1110	1010	7,015.0	7,047.0	11	0010	0110	8,935.0	8,967.0	11	0110	0010
5,127.0	5,159.0	10	1110	1011	7,047.0	7,079.0	11	0010	0111	8,967.0	9,031.0	11	0110	0011
5,159.0	5,191.0	10	1110	1100	7,079.0	7,111.0	11	0010	1000	9,031.0	9,095.0	11	0110	0100
5,191.0	5,223.0	10	1110	1101	7,111.0	7,143.0	11	0010	1001	9,095.0	9,159.0	11	0110	0101
5,223.0	5,255.0	10	1110	1110	7,143.0	7,175.0	11	0010	1010	9,159.0	9,223.0	11	0110	0110
5,255.0	5,287.0	10	1110	1111	7,175.0	7,207.0	11	0010	1011	9,223.0	9,287.0	11	0110	0111
5,287.0	5,319.0	10	1111	0000	7,207.0	7,239.0	11	0010	1100	9,287.0	9,351.0	11	0110	1000
5,319.0	5,351.0	10	1111	0001	7,239.0	7,271.0	11	0010	1101	9,351.0	9,415.0	11	0110	1001
5,351.0	5,383.0	10	1111	0010	7,271.0	7,303.0	11	0010	1110	9,415.0	9,479.0	11	0110	1010
5,383.0	5,415.0	10	1111	0011	7,303.0	7,335.0	11	0010	1111	9,479.0	9,543.0	11	0110	1011
5,415.0	5,447.0	10	1111	0100	7,335.0	7,367.0	11	0011	0000	9,543.0	9,607.0	11	0110	1100
5,447.0	5,479.0	10	1111	0101	7,367.0	7,399.0	11	0011	0001	9,607.0	9,671.0	11	0110	1101
5,479.0	5,511.0	10	1111	0110	7,399.0	7,431.0	11	0011	0010	9,671.0	9,735.0	11	0110	1110
5,511.0	5,543.0	10	1111	0111	7,431.0	7,463.0	11	0011	0011	9,735.0	9,799.0	11	0110	1111
5,543.0	5,575.0	10	1111	1000	7,463.0	7,495.0	11	0011	0100	9,799.0	9,863.0	11	0111	0000
5,575.0	5,607.0	10	1111	1001	7,495.0	7,527.0	11	0011	0101	9,863.0	9,927.0	11	0111	0001
5,607.0	5,639.0	10	1111	1010	7,527.0	7,559.0	11	0011	0110	9,927.0	9,991.0	11	0111	0010
5,639.0	5,671.0	10	1111	1011	7,559.0	7,591.0	11	0011	0111	9,991.0	10,055.0	11	0111	0011
5,671.0	5,703.0	10	1111	1100	7,591.0	7,623.0	11	0011	1000	10,055.0	10,119.0	11	0111	0100
5,703.0	5,735.0	10	1111	1101	7,623.0	7,655.0	11	0011	1001	10,119.0	10,183.0	11	0111	0101
5,735.0	5,767.0	10	1111	1110	7,655.0	7,687.0	11	0011	1010	10,183.0	10,247.0	11	0111	0110
5,767.0	5,799.0	10	1111	1111	7,687.0	7,719.0	11	0011	1011	10,247.0	10,311.0	11	0111	0111
5,799.0	5,831.0	11	0000	0000	7,719.0	7,751.0	11	0011	1100	10,311.0	10,375.0	11	0111	1000
5,831.0	5,863.0	11	0000	0001	7,751.0	7,783.0	11	0011	1101	10,375.0	10,439.0	11	0111	1001
5,863.0	5,895.0	11	0000	0010	7,783.0	7,815.0	11	0011	1110	10,439.0	10,503.0	11	0111	1010
5,895.0	5,927.0	11	0000	0011	7,815.0	7,847.0	11	0011	1111	10,503.0	10,567.0	11	0111	1011
5,927.0	5,959.0	11	0000	0100	7,847.0	7,879.0	11	0100	0000	10,567.0	10,631.0	11	0111	1100
5,959.0	5,991.0	11	0000	0101	7,879.0	7,911.0	11	0100	0001	10,631.0	10,695.0	11	0111	1101
5,991.0	6,023.0	11	0000	0110	7,911.0	7,943.0	11	0100	0010	10,695.0	10,759.0	11	0111	1110
6,023.0	6,055.0	11	0000	0111	7,943.0	7,975.0	11	0100	0011	10,759.0	10,823.0	11	0111	1111
6,055.0	6,087.0	11	0000	1000	7,975.0	8,007.0	11	0100	0100	10,823.0	10,887.0	11	1000	0000
6,087.0	6,119.0	11	0000	1001	8,007.0	8,039.0	11	0100	0101	10,887.0	10,951.0	11	1000	0001
6,119.0	6,151.0	11	0000	1010	8,039.0	8,071.0	11	0100	0110	10,951.0	11,015.0	11	1000	0010
6,151.0	6,183.0	11	0000	1011	8,071.0	8,103.0	11	0100	0111	11,015.0	11,079.0	11	1000	0011

Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number			Full Scale Frequency(Hz)		Switch Number		
From	To	34	5612	3456	From	To	34	5612	3456	From	To	34	5612	3456
11,079.0	11,143.0	11	1000	0100	14,919.0	14,983.0	11	1100	0000	19,591.0	19,719.0	11	1111	1100
11,143.0	11,207.0	11	1000	0101	14,983.0	15,047.0	11	1100	0001	19,719.0	19,847.0	11	1111	1101
11,207.0	11,271.0	11	1000	0110	15,047.0	15,111.0	11	1100	0010	19,847.0	19,975.0	11	1111	1110
11,271.0	11,335.0	11	1000	0111	15,111.0	15,175.0	11	1100	0011	19,975.0	20,103.0	11	1111	1111
11,335.0	11,399.0	11	1000	1000	15,175.0	15,239.0	11	1100	0100					
11,399.0	11,463.0	11	1000	1001	15,239.0	15,303.0	11	1100	0101					
11,463.0	11,527.0	11	1000	1010	15,303.0	15,367.0	11	1100	0110					
11,527.0	11,591.0	11	1000	1011	15,367.0	15,431.0	11	1100	0111					
11,591.0	11,655.0	11	1000	1100	15,431.0	15,495.0	11	1100	1000					
11,655.0	11,719.0	11	1000	1101	15,495.0	15,559.0	11	1100	1001					
11,719.0	11,783.0	11	1000	1110	15,559.0	15,623.0	11	1100	1010					
11,783.0	11,847.0	11	1000	1111	15,623.0	15,687.0	11	1100	1011					
11,847.0	11,911.0	11	1001	0000	15,687.0	15,751.0	11	1100	1100					
11,911.0	11,975.0	11	1001	0001	15,751.0	15,815.0	11	1100	1101					
11,975.0	12,039.0	11	1001	0010	15,815.0	15,879.0	11	1100	1110					
12,039.0	12,103.0	11	1001	0011	15,879.0	15,943.0	11	1100	1111					
12,103.0	12,167.0	11	1001	0100	15,943.0	16,007.0	11	1101	0000					
12,167.0	12,231.0	11	1001	0101	16,007.0	16,071.0	11	1101	0001					
12,231.0	12,295.0	11	1001	0110	16,071.0	16,135.0	11	1101	0010					
12,295.0	12,359.0	11	1001	0111	16,135.0	16,199.0	11	1101	0011					
12,359.0	12,423.0	11	1001	1000	16,199.0	16,263.0	11	1101	0100					
12,423.0	12,487.0	11	1001	1001	16,263.0	16,327.0	11	1101	0101					
12,487.0	12,551.0	11	1001	1010	16,327.0	16,391.0	11	1101	0110					
12,551.0	12,615.0	11	1001	1011	16,391.0	16,455.0	11	1101	0111					
12,615.0	12,679.0	11	1001	1100	16,455.0	16,519.0	11	1101	1000					
12,679.0	12,743.0	11	1001	1101	16,519.0	16,583.0	11	1101	1001					
12,743.0	12,807.0	11	1001	1110	16,583.0	16,647.0	11	1101	1010					
12,807.0	12,871.0	11	1001	1111	16,647.0	16,711.0	11	1101	1011					
12,871.0	12,935.0	11	1010	0000	16,711.0	16,775.0	11	1101	1100					
12,935.0	12,999.0	11	1010	0001	16,775.0	16,839.0	11	1101	1101					
12,999.0	13,063.0	11	1010	0010	16,839.0	16,903.0	11	1101	1110					
13,063.0	13,127.0	11	1010	0011	16,903.0	16,967.0	11	1101	1111					
13,127.0	13,191.0	11	1010	0100	16,967.0	17,031.0	11	1110	0000					
13,191.0	13,255.0	11	1010	0101	17,031.0	17,095.0	11	1110	0001					
13,255.0	13,319.0	11	1010	0110	17,095.0	17,159.0	11	1110	0010					
13,319.0	13,383.0	11	1010	0111	17,159.0	17,223.0	11	1110	0011					
13,383.0	13,447.0	11	1010	1000	17,223.0	17,287.0	11	1110	0100					
13,447.0	13,511.0	11	1010	1001	17,287.0	17,351.0	11	1110	0101					
13,511.0	13,575.0	11	1010	1010	17,351.0	17,415.0	11	1110	0110					
13,575.0	13,639.0	11	1010	1011	17,415.0	17,479.0	11	1110	0111					
13,639.0	13,703.0	11	1010	1100	17,479.0	17,543.0	11	1110	1000					
13,703.0	13,767.0	11	1010	1101	17,543.0	17,607.0	11	1110	1001					
13,767.0	13,831.0	11	1010	1110	17,607.0	17,671.0	11	1110	1010					
13,831.0	13,895.0	11	1010	1111	17,671.0	17,735.0	11	1110	1011					
13,895.0	13,959.0	11	1011	0000	17,735.0	17,799.0	11	1110	1100					
13,959.0	14,023.0	11	1011	0001	17,799.0	17,863.0	11	1110	1101					
14,023.0	14,087.0	11	1011	0010	17,863.0	17,927.0	11	1110	1110					
14,087.0	14,151.0	11	1011	0011	17,927.0	18,055.0	11	1110	1111					
14,151.0	14,215.0	11	1011	0100	18,055.0	18,183.0	11	1111	0000					
14,215.0	14,279.0	11	1011	0101	18,183.0	18,311.0	11	1111	0001					
14,279.0	14,343.0	11	1011	0110	18,311.0	18,439.0	11	1111	0010					
14,343.0	14,407.0	11	1011	0111	18,439.0	18,567.0	11	1111	0011					
14,407.0	14,471.0	11	1011	1000	18,567.0	18,695.0	11	1111	0100					
14,471.0	14,535.0	11	1011	1001	18,695.0	18,823.0	11	1111	0101					
14,535.0	14,599.0	11	1011	1010	18,823.0	18,951.0	11	1111	0110					
14,599.0	14,663.0	11	1011	1011	18,951.0	19,079.0	11	1111	0111					
14,663.0	14,727.0	11	1011	1100	19,079.0	19,207.0	11	1111	1000					
14,727.0	14,791.0	11	1011	1101	19,207.0	19,335.0	11	1111	1001					
14,791.0	14,855.0	11	1011	1110	19,335.0	19,463.0	11	1111	1010					
14,855.0	14,919.0	11	1011	1111	19,463.0	19,591.0	11	1111	1011					



Error Compensation Technique (Micro Speed)

Speedometer with odometer and trip odometer.

To change an existing speedometer reading to a different reading:

Check the DIP switch setting on rear of speedometer. Compare that with the settings in the calibration table. Read to the left the frequency that relates to that setting. Place the median of that frequency range in the equation below.

$$\frac{\text{Incorrect speed reading (MPH or KPH)} \times \text{Frequency}}{\text{Actual speed (MPH or KPH)}} = \text{New Frequency}$$

Example: if the speedometer reads 45 MPH at 55 MPH actual speed and the switches are set for a frequency of 700 Hz

$$\frac{45 \times 700}{55} = 572.7 \text{ rounded up to } 572.$$

In this case the switch configuration changes from a frequency of 700 Hz (01 0101 0100) to 572 Hz (01 0011 0100) where 0 = off, 1 = on. Don't forget the switches that aren't used.