Dakota Digital

SGI-5
UNIVERSAL SIGNAL INTERFACE UNIT

This unit can recalibrate a speedometer signal or convert a speed signal from one type to another type. The different functions it can perform are as follows:

1. Recalibrate a high speed (64,000ppm – 250,000ppm) signal for an OEM speedometer or engine/transmission computer. **Do not use this unit to adjust a signal going to an anti-lock braking system.**
2. Recalibrate a low speed (8000ppm – 4000ppm) signal for an OEM or aftermarket speedometer or fuel injection computer.
3. Convert a high-speed signal found on newer GM transmissions down to a low speed signal to run a speedometer, cruise control, or fuel injection computer.
4. Convert an 8000ppm signal from an aftermarket signal generator to a 4000ppm or 2000ppm to run an OEM cruise control or fuel injection computer.
5. Convert a 16000ppm signal from a VDO Hall Effect signal generator to an 8000ppm, 4000ppm, or 2000ppm to run a cruise control or fuel injection computer.
6. Convert a 4000ppm signal from an OEM transmission speed sensor or ECM output to an 8000ppm signal for an aftermarket speedometer.
7. Convert a signal from a flywheel gear-tooth sensor to an ignition tachometer signal (diesel tachometer application).

Customers using a Classic Instruments speedometer will use either application 3 or 6. Each of the different applications will be described in detail in the following sections. Here is a general overview of the unit functions.

The unit has 10 switches on it for setting the calibration and signal type.

Switch #	OFF	ON
1	Pull-up disable (speed output)	Pull-up enable (tach output)
2	High speed signal in	Low speed signal in
3-10	Calibration setting (see calibration table)	

The unit has 5 different outputs for speed signals. Some of the outputs are AC (a voltage output that goes above and below ground) and some are open collector (a switch that closes to ground). The output functions are as follows:

SW #2	SPD IN	OUT1	OUT2	OUT3	OUT4	OUT5
OFF	64k-256k	128k AC	128k oc	8000 AC	4000 oc	2000 oc
ON	4k-16k	8000 AC	8000 oc	4000 AC	4000 oc	2000 oc

Connect the PWR terminal to 12V accessory, GND terminal to ground.

APPLICATION #1

Recalibrate a high speed (64,000ppm – 250,000ppm) signal for an OEM speedometer or engine/transmission computer. **Do not use this unit to adjust a signal going to an anti-lock braking system.** Anti-lock braking systems may not operate correctly or behave erratically due to the signal processing done to recalibrate the speed signal.

These speed sensors have a two-pin connector that plugs into the transmission or transfer case. One of the wires will be a ground and the other will be the signal wire. The wires will usually go up under the dash and into the speedometer, vehicle speed buffer, or engine/transmission computer. The signal wire will need to be cut so the SGI-5 can recalibrate it. The sensor side of the wire will go to the SPD IN terminal. The speedometer or buffer side will go to the OUT1 terminal. If the speedometer does not operate correctly after installation of the SGI-5 you may need to switch to OUT2 instead of OUT1. Connect the PWR terminal to a 12-volt accessory wire and connect the GND terminal to a good ground location.

Begin with the switches as follows and then determine how far off the calibration is.

1	2	3	4	5	6	7	8	9	10
OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON

You can determine how far the speedometer is off by having it checked with radar or following another vehicle going at a set speed. Once you know how far it is off at a certain speed, use the following equation and then look up the switch setting in the table.

$$\frac{\text{Actual speed}}{\text{speedometer reading}} = \text{Cal ratio}$$

As an example, if you are following a vehicle going at 55 mph and your speedometer shows 60 mph, then:

$\frac{55}{60} = 0.917$ from the table: OFF-ON-ON-ON-OFF-OFF-ON-ON

APPLICATION #2

Recalibrate a low speed (8000ppm – 4000ppm) signal for an OEM or aftermarket speedometer or fuel injection computer.

Either two wire or three wire sensors can be recalibrated with this unit. Two wire sensors will typically have one wire as a ground and the other as the signal. Three wire sensors will have an additional power wire. You must first determine which wire is the signal. The signal wire will need to be cut so the SGI-5 can recalibrate it. The sensor side of the wire will go to the SPD IN terminal. The speedometer or computer side will go to the OUT1 terminal. If the speedometer does not operate correctly after installation of the SGI-5 you may need to switch to OUT2 instead of OUT1. Connect the PWR terminal to a 12-volt accessory wire and connect the GND terminal to a good ground location.

Begin with the switches as follows and then determine how far of the calibration is.

1	2	3	4	5	6	7	8	9	10
OFF	ON	OFF	ON	ON	ON	ON	ON	ON	ON

You can determine how far the speedometer is off by having it checked with radar or following another vehicle going at a set speed. Once you know how far it is off at a certain speed, use the following equation and then look up the switch setting in the table.

$$\frac{\text{Actual speed}}{\text{speedometer reading}} = \text{Cal ratio}$$

As an example, if you are following a vehicle going at 55 mph and your speedometer shows 60 mph, then:

$\frac{55}{60} = 0.917$ from the table:

3	4	5	6	7	8	9	10
OFF	ON	ON	ON	OFF	OFF	ON	ON

APPLICATION #3

Convert a high-speed signal found on newer GM transmissions down to a low speed signal to run a speedometer, cruise control, or fuel injection computer.

These speed sensors have a two-pin connector on the transmission or transfer case. One of the pins will be a ground and the other will be the signal. The ground pin will go to the GND terminal along with the ground wire. The signal pin will go to the SPD IN terminal. It is best to twist the signal and ground wires from the sensor around each other. This helps eliminate any electrical interference. If nothing else is connected to the speed sensor it does not matter which pin is used as the ground. Connect the PWR terminal to accessory power. The output connections will depend on your particular application. Here are some typical examples:

OUT3, 8000ppm AC: most aftermarket speedometers and cruise controls
OUT4, 4000ppm oc: most TPI computers and some OEM cruise controls
OUT5, 2000ppm oc: most TBI computers and some OEM cruise controls

Begin with the switches as follows and then determine how far off the calibration is. If you are using an adjustable speedometer, then you can skip the SGI-5 calibration and use the speedometer's calibration routine.

1	2	3	4	5	6	7	8	9	10
OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON

You can determine how far the speedometer is off by having it checked with radar or following another vehicle going at a set speed. Once you know how far it is off at a certain speed, use the following equation and then look up the switch setting in the table.

$$\frac{\text{Actual speed}}{\text{speedometer reading}} = \text{Cal ratio}$$

As an example, if you are following a vehicle going at 55 mph and your speedometer shows 60 mph, then:

$$\frac{55}{60} = 0.917$$ from the table: OFF-ON-ON-ON-OFF-OFF-ON-ON

APPLICATION #4

Convert an 8000ppm signal from an aftermarket signal generator to a 4000ppm or 2000ppm to run an OEM cruise control or fuel injection computer.

Either two wire or three wire sensors can be recalibrated with this unit. Two wire sensors will typically have one wire as a ground and the other as the signal. Three wire sensors will have an additional power wire. You must first determine which wire is the signal. The signal wire will be tapped into so the SGI-5 can read it. The sensor signal wire will go to the SPD IN terminal. Connect the PWR terminal to a 12-volt accessory wire and connect the GND terminal to a good ground location. If nothing else is connected to a two wire sensor, then connect one wire to the GND terminal also. The output connections will depend on your particular application. Here are some typical examples:

OUT3, 4000ppm AC: most TPI computers and some OEM cruise controls
OUT4, 4000ppm oc: use this if OUT3 does not provide a good signal
OUT5, 2000ppm oc: most TBI computers and some OEM cruise controls

Begin with the switches as follows. You may not need to change the calibration from this initial setting. If you want to adjust the calibration ratio, see application #2.

1	2	3	4	5	6	7	8	9	10
OFF	ON	OFF	ON	ON	ON	ON	ON	ON	ON

APPLICATION #5

Convert a 16000ppm signal from a Hall Effect VDO signal generator to 8000ppm, 4000ppm, or 2000ppm to run a cruise control or fuel injection computer.

The Hall Effect sensor will have three wires. The white wire is the signal. The signal wire will be tapped into so the SGI-5 can read it. The sensor signal wire will go to the SPD IN terminal. Connect the PWR terminal to a 12-volt accessory wire and connect the GND terminal to a good ground location. The output connections will depend on your particular application. Here are some typical examples:

OUT1, 8000ppm AC: most aftermarket cruise controls
OUT3, 4000ppm AC: most TPI computers and some OEM cruise controls
OUT4, 4000ppm oc: use this if OUT3 does not provide a good signal
OUT5, 2000ppm oc: most TBI computers and some OEM cruise controls

Set the switches as follows.

1	2	3	4	5	6	7	8	9	10
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

APPLICATION #6

Convert a 4000ppm signal from an OEM transmission speed sensor or ECM output to an 8000ppm signal for an aftermarket speedometer.

The speed sensors have a two-pin connector on the transmission or transfer case. One of the pins will be a ground and the other will be the signal. The ground pin will go the GND terminal along with the ground wire. The signal pin will go to the SPD IN terminal. It is best to twist the signal and ground wires from the sensor around each other. This helps eliminate any electrical interference. If nothing else is connected to the speed sensor it does not matter which pin is used as the ground. If you are picking up a signal coming out of the ECM there will be only one wire to the SPD IN. Connect the PWR terminal to accessory power and the GND terminal to ground. Connect OUT1 to your aftermarket electric speedometer.

Set the switches as follows. Any calibration adjustment should be done at the speedometer.

1	2	3	4	5	6	7	8	9	10
OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON

APPLICATION #7

Convert a signal from a flywheel gear-tooth sensor to an ignition tachometer signal (diesel tachometer application).

For using a standard 4-6-8 cylinder tachometer on a diesel engine, the SGI-5 can convert a flywheel sensor signal into an 8-cylinder gas ignition signal. Calibration is accomplished by counting the number of teeth on the flywheel or using another tachometer as a reference. An inductive, gear-tooth sensor such as VDO part #340 020 should be mounted so the teeth pass by the end of the sensor. The GND terminal on the SGI-5 should be connected to a good ground as well as to one of the terminals on the gear-tooth sensor. The SPD IN terminal will connect to the other terminal. Connect the PWR terminal to 12V accessory power. OUT4 will provide the signal to the tachometer. Set the programming switches as follows:

1	2	3	4	5	6	7	8	9	10
ON	OFF	See calibration table							

Switch #1 provides a 10k pull-up to 12 volt for the ground switch output of OUT4. This will allow most tachometers to work correctly. If your tachometer does not show any reading after installing the SGI-5, use a voltmeter to check the voltage at OUT4 with it connected to the tachometer and the engine running. Once you have done this, contact a Dakota Digital technical service representative for assistance.

A zero switch value represents an ON position. A one switch value represents an OFF position.

#3	#4	#5	#6	#7	#8	#9	#10	cal ratio	tach	#3	#4	#5	#6	#7	#8	#9	#10	cal ratio	tach	#3	#4	#5	#6	#7	#8	#9	#10	cal ratio	tach	#3	#4	#5	#6	#7	#8	#9	#10	cal ratio	tach
0	0	0	0	0	0	0	0	2.0000	64	0	1	0	0	0	0	0	0	1.3333	96	1	0	0	0	0	0	0	0	1.0000	128	1	1	0	0	0	0	0	0	0.6667	192
0	0	0	0	0	0	0	1	1.9845	65	0	1	0	0	0	0	0	1	1.3264	97	1	0	0	0	0	0	0	1	0.9922	129	1	1	0	0	0	0	0	1	0.6632	193
0	0	0	0	0	0	1	0	1.9692	65	0	1	0	0	0	0	1	0	1.3196	97	1	0	0	0	0	0	1	0	0.9846	130	1	1	0	0	0	0	1	0	0.6598	194
0	0	0	0	0	0	1	1	1.9542	66	0	1	0	0	0	0	1	1	1.3128	98	1	0	0	0	0	0	1	1	0.9771	131	1	1	0	0	0	0	1	1	0.6564	195
0	0	0	0	0	1	0	0	1.9394	66	0	1	0	0	0	1	0	0	1.3061	98	1	0	0	0	0	1	0	0	0.9697	132	1	1	0	0	0	1	0	0	0.6531	196
0	0	0	0	0	1	0	1	1.9248	67	0	1	0	0	0	1	0	1	1.2995	99	1	0	0	0	0	1	0	1	0.9624	133	1	1	0	0	0	1	0	1	0.6497	197
0	0	0	0	0	1	1	0	1.9104	67	0	1	0	0	0	1	1	0	1.2929	99	1	0	0	0	0	1	1	0	0.9552	134	1	1	0	0	0	1	1	0	0.6465	198
0	0	0	0	0	1	1	1	1.8963	68	0	1	0	0	0	1	1	1	1.2864	100	1	0	0	0	0	1	1	1	0.9481	135	1	1	0	0	0	1	1	1	0.6432	199
0	0	0	0	1	0	0	0	1.8824	68	0	1	0	0	1	0	0	0	1.2800	100	1	0	0	0	1	0	0	0	0.9412	136	1	1	0	0	1	0	0	0	0.6400	200
0	0	0	0	1	0	0	1	1.8686	69	0	1	0	0	1	0	0	1	1.2736	101	1	0	0	0	1	0	0	1	0.9343	137	1	1	0	0	1	0	0	1	0.6368	201
0	0	0	0	1	0	1	0	1.8551	69	0	1	0	0	1	0	1	0	1.2673	101	1	0	0	0	1	0	1	0	0.9275	138	1	1	0	0	1	0	1	0	0.6337	202
0	0	0	0	1	0	1	1	1.8417	70	0	1	0	0	1	0	1	1	1.2611	102	1	0	0	0	1	0	1	1	0.9209	139	1	1	0	0	1	0	1	1	0.6305	203
0	0	0	0	1	1	0	0	1.8286	70	0	1	0	0	1	1	0	0	1.2549	102	1	0	0	0	1	1	0	0	0.9143	140	1	1	0	0	1	1	0	0	0.6275	204
0	0	0	0	1	1	0	1	1.8156	71	0	1	0	0	1	1	0	1	1.2488	103	1	0	0	0	1	1	0	1	0.9078	141	1	1	0	0	1	1	0	1	0.6244	205
0	0	0	0	1	1	1	0	1.8028	71	0	1	0	0	1	1	1	0	1.2427	103	1	0	0	0	1	1	1	0	0.9014	142	1	1	0	0	1	1	1	0	0.6214	206
0	0	0	0	1	1	1	1	1.7902	72	0	1	0	0	1	1	1	1	1.2367	104	1	0	0	0	1	1	1	1	0.8951	143	1	1	0	0	1	1	1	1	0.6184	207
0	0	0	1	0	0	0	0	1.7778	72	0	1	0	1	0	0	0	0	1.2308	104	1	0	0	1	0	0	0	0	0.8889	144	1	1	0	1	0	0	0	0	0.6154	208
0	0	0	1	0	0	0	1	1.7655	73	0	1	0	1	0	0	0	1	1.2249	105	1	0	0	1	0	0	0	1	0.8828	145	1	1	0	1	0	0	0	1	0.6124	209
0	0	0	1	0	0	1	0	1.7534	73	0	1	0	1	0	0	1	0	1.2190	105	1	0	0	1	0	0	1	0	0.8767	146	1	1	0	1	0	0	1	0	0.6095	210
0	0	0	1	0	0	1	1	1.7415	74	0	1	0	1	0	0	1	1	1.2133	106	1	0	0	1	0	0	1	1	0.8707	147	1	1	0	1	0	0	1	1	0.6066	211
0	0	0	1	0	1	0	0	1.7297	74	0	1	0	1	0	1	0	0	1.2075	106	1	0	0	1	0	1	0	0	0.8649	148	1	1	0	1	0	1	0	0	0.6038	212
0	0	0	1	0	1	0	1	1.7181	75	0	1	0	1	0	1	0	1	1.2019	107	1	0	0	1	0	1	0	1	0.8591	149	1	1	0	1	0	1	0	1	0.6009	213
0	0	0	1	0	1	1	0	1.7067	75	0	1	0	1	0	1	1	0	1.1963	107	1	0	0	1	0	1	1	0	0.8533	150	1	1	0	1	0	1	1	0	0.5981	214
0	0	0	1	0	1	1	1	1.6954	76	0	1	0	1	0	1	1	1	1.1907	108	1	0	0	1	0	1	1	1	0.8477	151	1	1	0	1	0	1	1	1	0.5953	215
0	0	0	1	1	0	0	0	1.6842	76	0	1	0	1	1	0	0	0	1.1852	108	1	0	0	1	1	0	0	0	0.8421	152	1	1	0	1	1	0	0	0	0.5926	216
0	0	0	1	1	0	0	1	1.6732	77	0	1	0	1	1	0	0	1	1.1797	109	1	0	0	1	1	0	0	1	0.8366	153	1	1	0	1	1	0	0	1	0.5899	217
0	0	0	1	1	0	1	0	1.6623	77	0	1	0	1	1	0	1	0	1.1743	109	1	0	0	1	1	0	1	0	0.8312	154	1	1	0	1	1	0	1	0	0.5872	218
0	0	0	1	1	0	1	1	1.6516	78	0	1	0	1	1	0	1	1	1.1689	110	1	0	0	1	1	0	1	1	0.8258	155	1	1	0	1	1	0	1	1	0.5845	219
0	0	0	1	1	1	0	0	1.6410	78	0	1	0	1	1	1	0	0	1.1636	110	1	0	0	1	1	1	0	0	0.8205	156	1	1	0	1	1	1	0	0	0.5818	220
0	0	0	1	1	1	0	1	1.6306	79	0	1	0	1	1	1	0	1	1.1584	111	1	0	0	1	1	1	0	1	0.8153	157	1	1	0	1	1	1	0	1	0.5792	221
0	0	0	1	1	1	1	0	1.6203	79	0	1	0	1	1	1	1	0	1.1532	111	1	0	0	1	1	1	1	0	0.8101	158	1	1	0	1	1	1	1	0	0.5766	222
0	0	0	1	1	1	1	1	1.6101	80	0	1	0	1	1	1	1	1	1.1480	112	1	0	0	1	1	1	1	1	0.8050	159	1	1	0	1	1	1	1	1	0.5740	223
0	0	1	0	0	0	0	0	1.6000	80	0	1	1	0	0	0	0	0	1.1429	112	1	0	1	0	0	0	0	0	0.8000	160	1	1	1	0	0	0	0	0	0.5714	224
0	0	1	0	0	0	0	1	1.5901	81	0	1	1	0	0	0	0	1	1.1378	113	1	0	1	0	0	0	0	1	0.7950	161	1	1	1	0	0	0	0	1	0.5689	225
0	0	1	0	0	0	1	0	1.5802	81	0	1	1	0	0	0	1	0	1.1327	113	1	0	1	0	0	0	1	0	0.7901	162	1	1	1	0	0	0	1	0	0.5664	226
0	0	1	0	0	0	1	1	1.5706	82	0	1	1	0	0	0	1	1	1.1278	114	1	0	1	0	0	0	1	1	0.7853	163	1	1	1	0	0	0	1	1	0.5639	227
0	0	1	0	0	1	0	0	1.5610	82	0	1	1	0	0	1	0	0	1.1228	114	1	0	1	0	0	1	0	0	0.7805	164	1	1	1	0	0	1	0	0	0.5614	228
0	0	1	0	0	1	0	1	1.5515	83	0	1	1	0	0	1	0	1	1.1179	115	1	0	1	0	0	1	0	1	0.7758	165	1	1	1	0	0	1	0	1	0.5590	229
0	0	1	0	0	1	1	0	1.5422	83	0	1	1	0	0	1	1	0	1.1130	115	1	0	1	0	0	1	1	0	0.7711	166	1	1	1	0	0	1	1	0	0.5565	230
0	0	1	0	0	1	1	1	1.5329	84	0	1	1	0	0	1	1	1	1.1082	116	1	0	1	0	0	1	1	1	0.7665	167	1	1	1	0	0	1	1	1	0.5541	231
0	0	1	0	1	0	0	0	1.5238	84	0	1	1	0	1	0	0	0	1.1034	116	1	0	1	0	1	0	0	0	0.7619	168	1	1	1	0	1	0	0	0	0.5517	232
0	0	1	0	1	0	0	1	1.5148	85	0	1	1	0	1	0	0	1	1.0987	117	1	0	1	0	1	0	0	1	0.7574	169	1	1	1	0	1	0	0	1	0.5494	233
0	0	1	0	1	0	1	0	1.5059	85	0	1	1	0	1	0	1	0	1.0940	117	1	0	1	0	1	0	1	0	0.7529	170	1	1	1	0	1	0	1	0	0.5470	234
0	0	1	0	1	0	1	1	1.4971	86	0	1	1	0	1	0	1	1	1.0894	118	1	0	1	0	1	0	1	1	0.7485	171	1	1	1	0	1	0	1	1	0.5447	235
0	0	1	0	1	1	0	0	1.4884	86	0	1	1	0	1	1	0	0	1.0847	118	1	0	1	0	1	1	0	0	0.7442	172	1	1	1	0	1	1	0	0	0.5424	236
0	0	1	0	1	1	0	1	1.4798	87	0	1	1	0	1	1	0	1	1.0802	119	1	0	1	0	1	1	0	1	0.7399	173	1	1	1	0	1	1	0	1	0.5401	237
0	0	1	0	1	1	1	0	1.4713	87	0	1	1	0	1	1	1	0	1.0756	119	1	0	1	0	1	1	1	0	0.7356	174	1	1	1	0	1	1	1	0	0.5378	238
0	0	1	0	1	1	1	1	1.4629	88	0	1	1	0	1	1	1	1	1.0711	120	1	0	1	0	1	1	1	1	0.7314	175	1	1	1	0	1	1	1	1	0.5356	239
0	0	1	1	0	0	0	0	1.4545	88	0	1	1	1	0	0	0	0	1.0667	120	1	0	1	1	0	0	0	0	0.7273	176	1	1	1	1	0	0	0	0	0.5333	240
0	0	1	1	0	0	0	1	1.4463	89	0	1	1	1	0	0	0	1	1.0622	121	1	0	1	1	0	0	0	1	0.7232	177	1	1	1	1	0	0	0	1	0.5311	241
0	0	1	1	0	0	1	0	1.4382	89	0	1	1	1	0	0	1	0	1.0579	121	1	0	1	1	0	0	1	0	0.7191	178	1	1	1	1	0	0	1	0	0.5289	242
0	0	1	1	0	0	1	1	1.4302	90	0	1	1	1	0	0	1	1	1.0535	122	1	0	1	1	0	0	1	1	0.7151	179	1	1	1	1	0	0	1	1	0.5267	243
0	0	1	1	0	1	0	0	1.4222	90	0	1	1	1	0	1	0	0	1.0492	122	1	0	1	1	0	1	0	0	0.7111	180	1	1	1	1	0	1	0	0	0.5246	244
0	0	1	1	0	1	0	1	1.4144	91	0	1	1	1	0	1	0	1	1.0449	123	1	0	1	1	0	1	0	1	0.7072	181	1	1	1	1	0	1	0	1	0.5224	245
0	0	1	1	0	1	1	0	1.4066	91	0	1	1	1	0	1	1	0	1.0407	123	1	0	1	1	0	1	1	0	0.7033	182	1	1	1	1	0	1	1	0	0.5203	246
0	0	1	1	0	1	1	1	1.3989	92	0	1	1	1	0	1	1	1	1.0364	124	1	0	1	1	0	1	1	1	0.6995	183	1	1	1	1	0	1	1	1	0.5182	247
0	0	1	1	1	0	0	0	1.3913	92	0	1	1	1	1	0	0	0	1.0323	124	1	0	1	1	1	0	0	0	0.6957	184	1	1	1	1	1	0	0	0	0.5161	248
0	0	1	1	1	0	0	1	1.3838	93	0	1	1	1	1	0	0	1	1.0281	125	1	0	1	1	1	0	0	1	0.6919	185	1	1	1	1	1	0	0	1	0.5141	249
0	0	1	1	1	0	1	0	1.3763	93	0	1	1	1	1	0	1	0	1.0240	125	1	0	1	1	1	0	1	0	0.6882	186	1	1	1	1	1	0	1	0	0.5120	250
0	0	1	1	1	0	1	1	1.3690	94	0	1	1	1	1	0	1	1	1.0199	126	1	0	1	1	1	0	1	1	0.6845	187	1	1	1	1	1	0	1	1	0.5100	251
0	0	1	1	1	1	0	0	1.3617	94	0	1	1	1	1	1	0	0	1.0159	126	1	0	1	1	1	1	0	0	0.6809	188	1	1	1	1	1	1	0	0	0.5079	252
0	0	1	1	1	1	0	1	1.3545	95	0	1	1	1	1	1	0	1	1.0119	127	1	0	1	1	1	1	0	1	0.6772	189	1	1	1	1	1	1	0	1	0.5059	253
0	0	1	1	1	1	1	0	1.3474	95	0	1	1	1	1	1	1	0	1.0079	127	1	0	1	1	1	1	1	0	0.6737	190	1	1	1	1	1	1	1	0	0.5039	254
0	0	1	1	1	1	1	1	1.3403	96	0	1	1	1	1	1	1	1	1.0039	128	1	0	1	1	1	1	1	1	0.6702	191	1	1	1	1	1	1	1	1	0.5020	255

Setup tips:

- If, without the interface, your speedometer reads much too fast, then you will most likely need to use application 3.
- If, without the interface, your speedometer reads about ½ what it should, then you will most likely need to use application 6.
- If your speedometer reads, but is just off, you will probably need application 1 or 2.

Trouble shooting guide

Problem	Possible Cause	Solution
Speedometer will not work at all.	Wrong output type.	Try switching from an oc to AC output or from an AC to oc output.
	No input signal.	Test for 1-20 volts AC at the signal in terminal with the wheels spinning.
	Grounding interference.	Make sure both the speed sensor and SGI-5 are grounded at the same point.
	No power to SGI-5.	Check the power and ground terminals on the SGI-5. Should be 11-15 V dc.
Speedometer will not read at low speeds	SGI-5 set for wrong input type.	If switch #2 is off, turn it on.
	Speed signal is too low.	Check speed connections for ground problems or shorts. Test the ground connection between SGI-5 and sensor. Check for another device loading down the sensor.
Speedometer will read OK up to a certain speed and then stops.	SGI-5 set for wrong input type.	If switch #2 is on, turn it off.
Speedometer will read when the vehicle is sitting still.	Tach wire too close to speed signal wire.	Route the speed signal and tachometer wires away from each other to avoid interference.
	Signal In and OUT wires routed too close.	Route the input and output wires away from each other to avoid feedback.
	Ground interference.	Make sure the speed sensor and SGI-5 are grounded together.