

3.1.1. Connector Wiring (Extracted from the Geode/NZ manual)

Two different types of connectors are typically used to input signals from the geophones. The section following details the two configurations.

3.1.1.1. Geophone Connector

On some 12 and 24 channel StrataVisor™ seismographs, the inputs from the geophones connect to a 27-pin connector manufactured by Cannon. The mating connector (used on the geophone cables) is a Cannon NK-27-21C, Geometrics part No. 21-133-027. See the following table for the pin assignments.

Input Wiring for Systems with Cannon NK 27 Style Connectors			
3 to 12 Channels		13 to 24 Channels	
Channel	Pin	Channel	Pin
+1	23	+13	1
-1	24	-13	2
+2	21	+14	3
-2	22	-14	4
+3	19	+15	5
-3	20	-15	6
+4	17	+16	7
-4	18	-16	8
+5	15	+17	9
-5	16	-17	10
+6	13	+18	11
-6	14	-18	12
+7	11	+19	13
-7	12	-19	14
+8	9	+20	15
-8	10	-20	16
+9	7	+21	17
-9	8	-21	18
+10	5	+22	19
-10	6	-22	20
+11	3	+23	21
-11	4	-23	22
+12	1	+24	23
-12	2	-24	24
NC	25	NC	25
NC	26	NC	26
GND	27	GND	27

A geophone extension cable can be constructed with the above connector on one end and a Cannon NK-27-22C (Geometrics part No. 21-133-037) on the other end.

The Geode as well as the 48 and 60-channel StrataVisor™ seismographs use 61-pin Bendix connectors. The mating connector is Bendix PT06-24-61S(SR) Geometrics P/N

21-206-070 or an equivalent connector from another manufacturer. The wiring scheme is shown below.

Geophone Connector Pin Assignments for Geode 3 to 24 Channel Systems and For StrataVisor NZ 3-48 Channel Systems Using Bendix Style Connectors				
Bendix Connector 1		Bendix Connector 2		Pin Configuration For Cannon NK27 Adapter Cable
Channel	Pins	Channel	Pins	Pin
1	z/AA	25	A/B	23/24
2	x/y	26	C/D	21/22
3	v/w	27	E/F	19/20
4	t/u	28	G/H	17/18
5	r/s	29	J/K	15/16
6	p/q	30	L/M	13/14
7	m/n	31	N/P	11/12
8	j/k	32	R/S	9/10
9	h/i	33	T/U	7/8
10	f/g	34	V/W	5/6
11	d/e	35	X/Y	3/4
12	b/c	36	Z/a	1/2
13	Z/a	37	b/c	1/2
14	X/Y	38	d/e	3/4
15	V/W	39	f/g	5/6
16	T/U	40	h/i	7/8
17	R/S	41	j/k	9/10
18	N/P	42	m/n	11/12
19	L/M	43	p/q	13/14
20	J/K	44	r/s	15/16
21	G/H	45	t/u	17/18
22	E/F	46	v/w	19/20
23	C/D	47	x/y	21/22
24	A/B	48	z/AA	23/24
GND	PP		PP	27

Notes:

1. Each channel has two inputs, the first listed in the table goes to the + input, second to the – input.
2. Pins BB through NN are not used in the StrataView/Visor 48 channel system

Geophone Connector Pin Assignments for StrataVisor NZ Seismographs with 49 to 60 Channels			
Bendix Connector 1		Bendix Connector 2	
Channel	Pins	Channel	Pins
1	z/AA	31	MM/NN
2	x/y	32	KK/LL
3	v/w	33	HH/JJ
4	t/u	34	FF/GG
5	r/s	35	DD/EE
6	p/q	36	BB/CC
7	m/n	37	A/B
8	j/k	38	C/D
9	h/i	39	E/F
10	f/g	40	G/H
11	d/e	41	J/K
12	b/c	42	L/M
13	Z/a	43	N/P
14	X/Y	44	R/S
15	V/W	45	T/U
16	T/U	46	V/W
17	R/S	47	X/Y
18	N/P	48	Z/a
19	L/M	49	b/c
20	J/K	50	d/e
21	G/H	51	f/g
22	E/F	52	h/i
23	C/D	53	j/k
24	A/B	54	m/n
25	BB/CC	55	p/q
26	DD/EE	56	r/s
27	FF/GG	57	t/u
28	HH/JJ	58	v/w
29	KK/LL	59	x/y
30	MM/NN	60	z/AA
GND	PP	GND	PP

Notes:

1. Each channel has two inputs, the first listed in the table goes to the + input, second to the – input.

3.1.1.2. Power Connector

The power connector on a StrataVisor NZ is a 3-pin connector manufactured by Cannon. The mating connector used on the power cable is a Cannon WK-3-21C (Geometrics part no. 21-133-032).

<u>Pin</u>	<u>Use</u>
1	+12 Volts
2	common
3	not used

Pin

The Geode uses a waterproof connector made by Brad Harrison (41307N, 5 pin/16), Geometrics part number 60-201-001. It is wired as follows:

<u>Pin</u>	<u>Use</u>
1	not used
2	+12 V DC
3	Chassis Ground
4	Not Used
5	Common

Some versions of the Geode may have a different, completely waterproof 5 pin connector. Contact the factory for an updated wiring pattern.

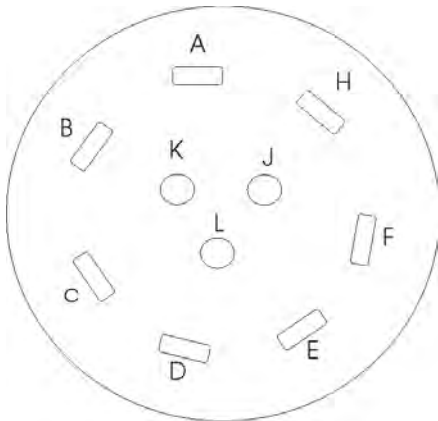
3.1.1.3. Start Connector

The start or trigger connector is a 3-pin connector manufactured by Bendix and others. The mating connector, used on the standard hammer switch, HVB-1 blasters, and the hammer switch extension cable is a PT06A-8-3P(SR) (Geometrics part no. 21-206-003).

<u>Pin</u>	<u>Use</u>
A	Trigger input
B	common
C	not used

The other end of the hammer switch extension cable uses PT01A-8-3S(SR) (Geometrics part no. 21-207-038) wired with the same pin assignments.

3.1.1.4. Digital Interface Connector



The digital interface cable is pinless and is considered a network ‘crossover’ cable since it is wired between two similar network devices. Cables are constructed using Belden 1752A cable. Follow the table below and make sure that the correct color coding is followed as specific pairs of wires are wrapped together to control capacitance in the cable to ensure long distance operation.

Pin Connection		Color	Function
J	K	WHITE/ORANGE	TX+ to RX+
K	J	WHITE/GREEN	TX- to RX-
H	B	ORANGE	RX+ to TX+
B	H	GREEN	RX- to RX-
C	C	BROWN	Remote Power Up+
D	D	BLUE	Trigger A
E	E	WHITE/BLUE	Trigger B
F	F	WHITE/BROWN	Power Up -
A n/c	L n/C		A and L are not connected

Note that Geometrics manufactures a digital cable tester (P/N 28143-01) to verify all conductors in the digital cable are connected.

Geode digital interface cables are available as either lightweight, or with an abrasion resistant coating. Maximum digital cable lengths are as follows:

- 250 m length between Geodes
- 250 m between the first Geode and an NZ with internal channels on the same line
- 100 m between network connections on NZ’s with no channels
- 100 m between the first Geode(s) and an NZC
- 100m between a laptop and the first Geode

