Model RS-96/24 and RS-120148 Rollalong Switch

Operating Manual

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Important Note:

Read this page if you read nothing else!

Your adaptor cables may look identical-they are not! Read the labels on the wires and be sure that the input and output adaptor cables are connected to the proper socket on the rollalong switch.

Do not force the switch beyond the mechanical stop (which is intended to prevent the switch from making a full revolution).

On models with an adjustable gap, it is possible to turn the gap adjustment beyond the 180 degree range marked. If the gap adjust is turned a full revolution, the channel groups will become out of sequence. To re-synchronize the channels, **just** connect up a set of geophones and adjust the gap until there are no dead geophones when the gap is set to zero.

On RS-120/48 models, do not altempt to turn the small gap indicator knob. To position the switch, turn the large knob. To set the gap, pull up on the large knob and then turn it unlil the pointer shows the proper amount of gap.

This switch is manufactured in two versions. In version 1, the correct switch position is at the stronger of two stops. In the other version, the correct position of the switch is between the mechanical stops. Feel the clicks and position the switch between them. Use the noise monitor on your seismograph **lo** conlirm the proper switch position.

1. Introduction

A rollalong switch is a special type of switch used in Common Depth Point (also known as CDP, or Common Midpoint, or CMP) seismic surveys. An array of geophones is placed on the ground before starting the survey. The number of geophones in the array is substantially larger than the number of channels on the seismograph. The rollalong switch is used to select a group of geophones (usually the same as the number of channels in the seismograph) from the array on the ground.

As the switch is rotated, the active array will move along the ground, adding new geophones on one end and disconnecting those on the other. The shotpoint is normally moved by the same amount, so that the geometric relationships in the seismic survey remain constant, but they roll along the ground (hence the name).

This manual covers the operation of Geostuff Models RS-96/24 and RS-120/48 Rollalong Switches. Model RS-96/24 is designed to select 24 geophones from an array of up to 96 geophones (or geophone groups). Model RS-120/48 will select 48 geophones from an array of up to 120 geophones (or geophone groups).

Model RS-120/48 also provides for recording with a "gap" between channels 24 and 25 for "split-spread" surveys.

2. Operation

Operation is quite simple, although the arrangement and type of geophone cables may vary. The switch has 96 positions, labeled 1 through 96 on the dial. In position 1, the first 24 geophone groups are connected to channels 1 through 24 on the seismograph. When the switch is set to position 2, geophone groups 2 through 25 are connected to the seismograph. The sequence continues until switch position 73, which connects groups 73 through 96 to the seismograph.

The switch will not rotate as far as position 96. Depending on the number of geophones connected, the last geophones on the end of the line will be connected at a much lower switch position number and the switch should not be moved further. For example, with an RS-96/24 with 96 geophones on the ground, switch position 73 will connect stations 73 through 96 to the seismograph. When the cables are re-positioned, those which were formerly 73-96 will now be l-24. If you start in position 1, you will be connecting the same geophones that were connected at the end of the last solun. So. make your last shot at posilion 72 and re-star; at position 1, or finish at position 73 and restart at position 2.

There is a mechanical stop to prcvcnt the switch from making a full revolution. Do **not force the switch beyond this stop.**

If the survey is to be continued, the seismograph and rollalong switch are re-positioned ıo the end of the line, the cables re-arranged, and the process resumes with the switch in the initial position.

Model RS-120/48 operates in a similar manner. When the switch is in position 73, then the switch connects the geophones at station 73 to 120 to the seismograph.

The RS-120/48 system can also record with a gap (an extra space between groups of gcophone). There is a pointer which indicates the gap bctwccn the two groups of channels. When in position "O", the space between channels 24 and 25 is equal to one standard group interval. This is a gap of "zero", or no gap at all. The effect is the same as a continuuus, equally-spaced line of gcophoncs.

To set a gap, pull up on the large knob, and turn it. The gap indicator will rotate to a diffcrcnt position on the dial. When the dial indicates the dcsircd amount of gap, lower the knob. it may be necessary to gently move the knob back and forth to properly mesh the **gears. Do not try to turn the small knob which serves as the gap indicator.** When the gap is set to "l", then the space between gcophoncs 24 and 25 will be equal to two normal group intervals. The pattern continues for larger gaps.

The RS-120/48 may also be used with a 24-channel seismograph to record with a gap hctwccn channels 12 and 13. The output adaptor cahlcs must he wired so that output channels 13 through 24 of the rollalong switch are directed to channels 1-12 on the seismograph, and output channels 25 through 36 of the rollalong switch arc dircctcd ıo channels 13-24 of the seismograph. This is done to position the gap between channels 12 and 13. A diffcrcnt wiring scheme is also required for the input adaptor cables.

3. Cable Configurations

There are at least three suitable combinations of cable types usable with the RS-96/24 rollalong switches:

- Two or more 24-channel refraction cables

- Three or more 1Zchannel refraction cables
- CDP cables with up to 96 takeouts.

For the RS-120/48, we recommend CDP cables with up to 120 takeouts or four 24-channel refraction cables (or 3 if not recording with a gap).

Each of these possibilities is discussed below.

In general, the types of connectors used on the geophone cables will be different than those on the rollalong switch, and a set of adaptor cables will be required. It is common to mount the seismograph and rollalong switch in a vehicle, and to install the adaptor cables so that the seismic cable connectors are on the outside of the vehicle (the common name for this is an "input panel").

Most users purchase a set of input adaptor cables already wired for the cables used. Geostuff can provide suitable adaptor cables as a separate item. For systems purchased without cables, a set of mating connectors is supplied with the rollalong switch. Unless purchased with the system, you will need to supply a pair of connectors to mate with your particular cable types. Appendii 1. contains wiring diagrams for several popular adaptor cables.

We will use a convention that geophone group 1 is located on the far left end of the cables, and group 96 (or 120) located on the far right end (left and right are relative, depending on the position of the operator).

3.1 Using 24-Channel Refraction Cables

Refraction cables with 24 takeouts can be used. These cables should be reversible and interchangeable, meaning that the wiring connections are the same from either end of the cable. Consider Figure l., the wiring diagram for a refraction cable with 24 takeouts. The column of mubers on each side represent the pin numbers used in the connector. The W and N indicate the wide and narrow takeouts (or positive and negative, or red and black).

Notice that on either end of the cable, the closest (near) takeouts are wired to pins 1 and 2, and the far takeouts arc wired to pins 47 and 48. Some cables use connectors with alphabetic pin designations, but the principle is the same. No matter which end of the cable is connected to the seismograph, it looks the same. 12-channel refraction cables are wired in a similar manner.

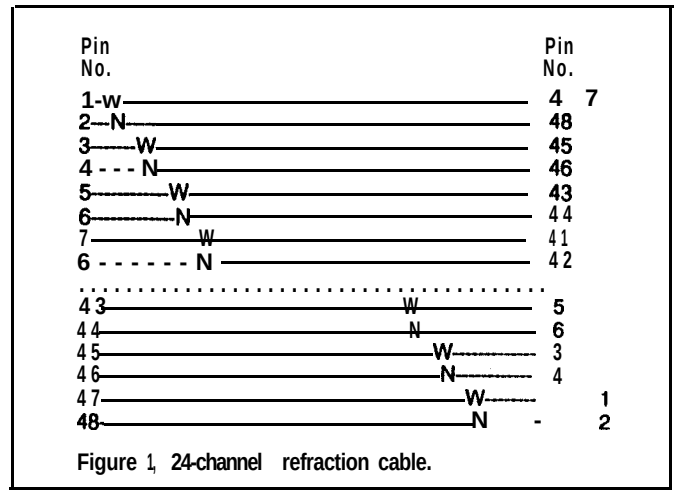


Figure 1, 24-channel refraction cable.

For CDP surveys, you need at least two of these cables and at least 48 geophones (or groups of geophones). The rollalong switch is located in the center of the line, as in Figure 2.

The output cable assembly from the rollalong switch is connected directly to the seismograph (the connectors are labeled channels 1-12 and 13-24, **do** not interchange them).

In the case of a 48-channel seismograph (with **up to** 120 input stations), the optimum configuration is **to** have four 24-channel cables plus two extension cables. You can work with just three cables, but not while recording with a gap.

The rollalong switch is set to position'& which connects stations 1 through 24 (or 1 through 48) to the

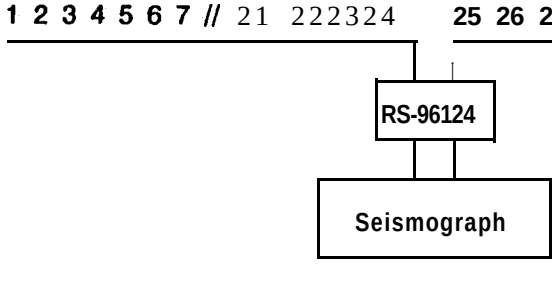


Figure 2, Cable arrangement with two 24-channel refraction cables.

No of Channels	Phones on ground	last switch position	stations
12	24	12	12-23
24	36	12	12-35
24	48	24	2447
24	72	36	36-59
24	96	48	48-71
24		24	72-95
48	72	48	24-71
48	Qa		48-95
48	120	72	72-119

Figure 3, Switch position combinations for different systems.

seismograph. The first seismic shot is fired off the end of the cable, and the fist record is taken.

The next shotpoint is located one shot interval down the line' (in some cases, the second shot may be at station l's **actual** position). The switch is rotated to position 2, and the shot fired. The data from geophone stations 2 through 25 (or 2 through 49) is coupled to the seismograph.

This sequence continues until the switch is in the last position for the spread. Figure 3 lists the last switch position for several possible combinations.

At the last position, the cables are relocated, and the process continues with the switch in position 1 again.

The sequence becomes even more complicated when you record with a gap (available only with Model RS-120/48).

3.2 Using 12-Channel Refraction Cables

In the case of a 24-channel seismograph, a similar procedure can be performed with four (or even three) 12-channel refraction cables and two (or one) geophonc **cxtension** cables. It is less elegant, but many operators making the transition from rcfraction surveys **lo rcflection surveys** may already own servcral 12-channel refraction cables (They will bc different lengths, but the long ones can be shortened to make up a set of matching cables).

A pair of input adaptor cables is rcquired, each with two Cannon NK-27-22C connectors. These can be constructed or purchased from Geostuff (see the Appendix).

Once you are set up as in Figure 4, the proccdurc is the same as with two, 24-channel refraction cables. Once you have rolled off of Cable #l, that cable, extension, and geophones can be moved, by a mcmber of the crew, to the end of the line, to begin preparation for the continuation of the survey.

It is clear that the same procedure can be performed with 36 geophones, three **geophone** cables and one extension cable. Just set up cables # 1, #2, and #3, and Extension #l, with 36 gcophoncs connected. Once you roll off cable #1 (switch position 13), move cable #l, its 12 geophoncs, and the cxtension cable to the cable #4 position. Rcconnccl the extension cable from the left input adaptor to the right adaptor.

3.3 Using CDP Cables

A true CDP cable is different than a refraction cable. A CDP cable will have a smaller number of geophone takeouts, but many more pairs of con-

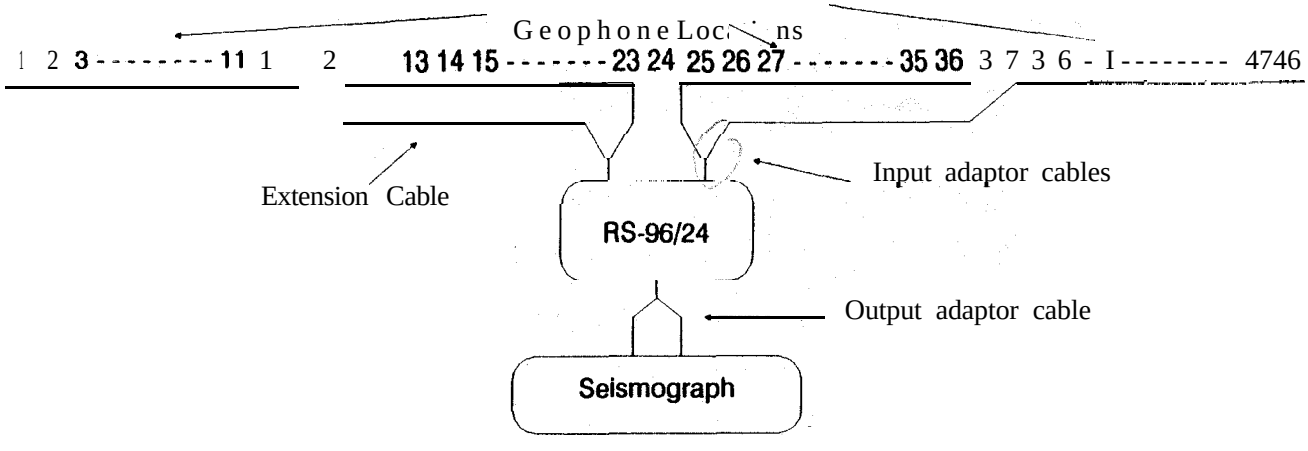


Figure 4, wiring diagram for system with four 12channel refraction cables.

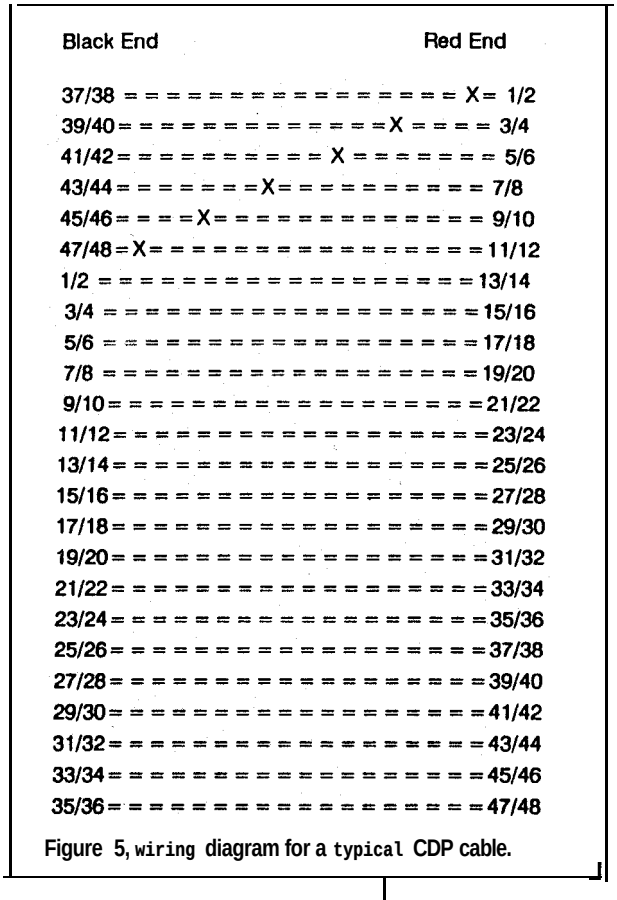


Figure 5, wiring diagram for a typical CDP cable.

ductors. There are a wide variety of connectors used for CDP cables, always with a large number of contacts. Some CDP connectors are hermaphroditic, which means that rather than having a male and female connector, they are split into half male and half female. The ends arc identical and can be connected to each other. The cables are interchangeable and reversible, which makes them easy to handle in the field.

CDP cables can be ordered with different numbers of takdouts and different numbers of conductor pairs.

CDP cables are wired with the connections staggered, so that the cables can be connected end-to-end to construct a cable with many takeouts. Consider the example in Figure 5 of a CDP cable, with 24-pairs of wires, a 48-pin connector on each end, and six geophone takeouts indicated by the "x". The cable is wired so that pins 1 and 2 on the red end are connected to pins 37 and 38 on t hc other. The offset continues through the **sequence.** The result is that any cable may be connected to any other to construct a cable on the **ground with more takeouts. Similar patterns foollow for cahlcs** with more conductors and more or fewer takeouts. How this works in the field is not obvious.

To illustrate, let's consider just the **even numbers (since all wires come in odd/even pairs).** Let's rearrange the positioning of the wires in **the** cable drawing (the cable does not change, just the **arrangement** of wires in the drawing), and **string four** cables together, as in Figure 6.

This combination of four cables makes a cable with 24 takeouts, similar to our 24-channel rcfraction cable. Note that you could pick up the lcft cable, reposition it on the right side, even **reverse** it end-for-end, and have exactly the same pin connections. This is quite remarkable, and **extrcmcly** convenient.

Some CDP connectors will have alphabetic characters rather than numbers to designate **pins.**

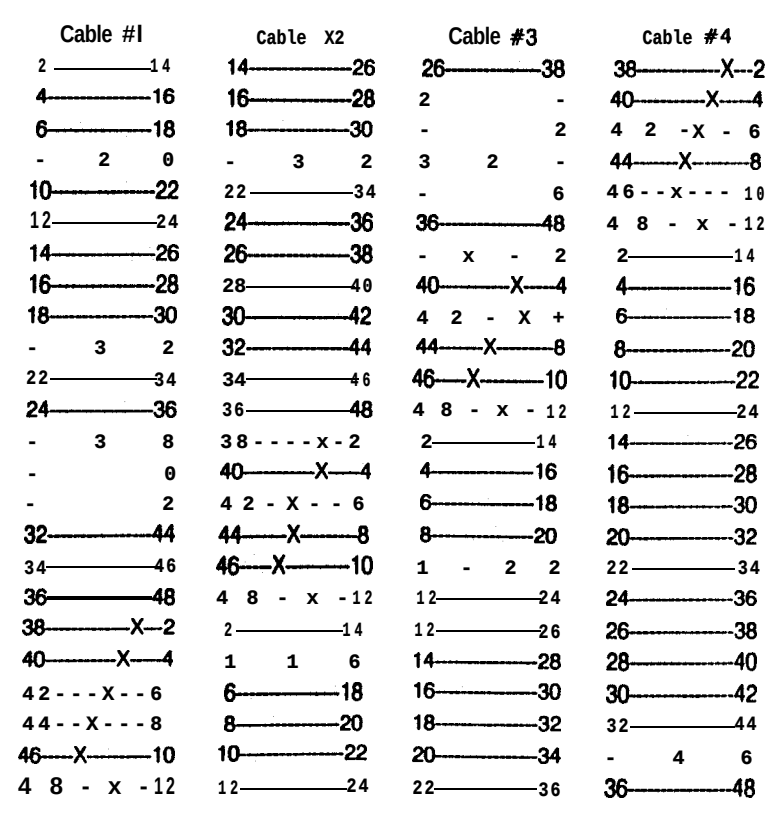


Figure 6, Wiring diagram for a group Of four CDP cables.

When you order CDP cables from the manufacturer, he will take care of the pin connections. But, understanding how they work will be necessary when the input adaptor cable is constructed (see later section).

If your siring of CDP cables makes a cable with a tolal of 24 takeouts, they will be arranged in the field just like the earlier example with two 24-channel refraction cables. It is also possible to order CDP cables to construct 48 or 60 (or more) takeout cables, so that the rollalong switch could be positioned on either end of the line. Or, with multiple sets of these cables, you can position at the center of the line and have a full 96 or 120 inputs. Usually, the limiting factor is the weight and length of cable, and combinations are chosen to make the cables easy to handle (normally a function of overall length and number of conductors). One popular combination for shallow surveys is 12 takeouts and 48 pairs of conductors, but many others are common.

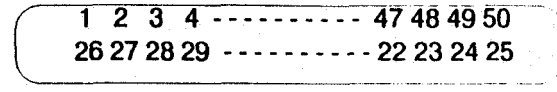
4. Constructing Input Adaptor Cables

Because of the wide variety of connectors used on geophone cables, the rollalong swilch does not include input adaptor cables. They arc avililablc as a special order. Consult factory for pricing and availability.

The wiring diagram for the inpul connectors is rclatively simple.

There are 4 (or 5) 50-pin input connectors, and one (or two) identical output connectors. Each is labeled on the case with the gcophonc or channel number groups.

The connector pins are arranged with the following number sequence pattern:



The fust channel in each group of 24 chnnncls is connected to pins 1 and 26. The last channel is connected to pins 24 and 49. Pins 25 and 50 arc not used (see Figure 7).

The Appendix includcs diagrams for some common adaptor cables.

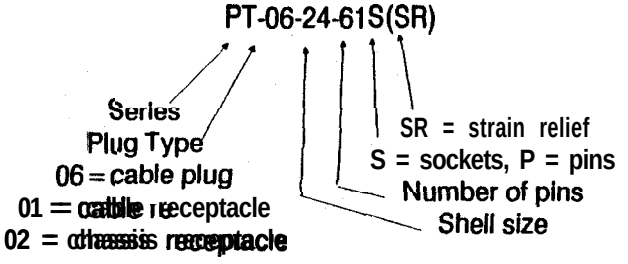
----Input Connectors ---						Outputs .	
Pin Nos.	Station 1-24	Station 25-48	Station 49-72	Station 73-96	Station 97-120	Channel 1-24	Channel 25-48
1/26	1	25	49	73	97	1	25
2/27	2	26	50	74	98	2	26
3/28	3	27	51	75	99	3	27
4/29	4	28	52	76	100	4	28
5/30	5	29	53	77	101	5	29
6/31	6	30	54	78	102	6	30
7/32	7	31	55	79	103	7	31
8/33	8	32	56	80	104	8	32
9/34	9	33	57	81	105	9	33
10135	10	34	58	82	106	10	34
11/36	11	35	59	83	107	11	35
12/37	12	36	60	84	108	12	36
13138	13	37	61	85	109	13	37
14/39	14	38	62	86	110	14	36
15/40	15	39	63	87	111	15	39
16/41	16	40	64	88	112	16	40
17/42	17	41	65	89	113	17	41
16/43	18	42	66	90	114	18	42
19/44	19	43	67	91	115	19	43
20/45	20	44	68	92	116	20	44
21/46	21	45	69	93	117	21	45
22/47	22	46	70	94	118	22	46
23/40	23	47	71	95	119	23	47
24/49	24	48	72	96	120	24	48

Figure 7, Input and output wiring table for Models RS-96/24 and RS-12O/48 switches.

4.1 Connectors

Virtually all **12** and 24-channel seismographs use ITT Cannon NK-27 connectors. These have 27 pins, numbered 1 to 27. The input connector mounted on the seismograph panel is a Cannon NK-27-32C. The geophone cable uses a Cannon NK-27-21C (followed by 112 or 5/8 to designate the size of the cable clamp). The cable mounted mate for the NK-27-21C is an NK-27-22C, so a geophone extension cable has a -2lC on one end and a -22C on the other.

When 27 pins is not enough, another popular connector type is the quick-disconnect Mii-C-26482 series, available from a number of manufacturers including Bendix (PT prefix) and ITT Cannon (KPT prefix). They are commonly referred to as "Bendix" connectors, even when produced by other manufacturers. The numbering scheme follows this pattern:



Typically sockets (S) are used on geophone cables (because pins (P) are more susceptible to damage) resulting in part numbers like PTO6-22-55S(SR) **and** PTO6-24-61S(SR). The corresponding panel connectors are PTO2-22-55P and PTO2-24-61P. Cable equivalents (used on extension cables and roilalong switch input adapters) are PTOl-22-55P(SR) and PTOl-24-61P(SR).

the connector used to mate with the rollalong switch is a 50-pin D-ribbon connector (not a D-sub-miniature, which has pins). This connector is sometimes called a SCSI connector (because it is used on computers for SCSI interface connections) and is widely available. There are many manufacturers, including Amphenol (part number 57-30500).

5. Troubleshooting

The rollalong switch should be relatively trouble free. No regular maintenance is required, and the system is designed to be reliable. However, keeping it clean will extend the life of the contacts.

Trouble shooting in the field is an exercise in logic and experimentation. As a general rule, initial setups have problems with the cable arrangement. Channels may be out of sequence, or on the wrong end of the line. Much of this manual has dealt with the issues of cable wiring and correcting for those problems. That doesn't make it easy, and time and effort are required for the commissioning of your system.

The most common problem is that geophones appear on the wrong channels of the seismograph. The normal cause is mixing up the adaptor cables. Each adaptor cable (input and output) is wired differently from the others. If your adaptor cahics were supplied by Geostuff, each one should have the proper designation molded into the rubber on the wire. For example the connector marked CH l-12 with go to the connector used for channels 1 through 12 on the seismograph. The input adapters are similarly marked, corresponding to the **labels** on the connectors on the rollalong switch.

Once the cables are connected properly, USC logical trouble shooting to isolate the problem. Start with the roilalong switch in Position 1, with your cables spread on the ground and the geophones connected. Using the noise monitor on the seismograph, locate geophone 1 by tapping on it. You may fmd it on the other end of the line from where you expect it.

Rotate the switch to position 2. Geophone **1 should** be completely disconnected at this point, and its signal should not appear on any trace. Geophone 2 should appear where geophone 1 was previously. Have someone walk the line and watch the noise monitor traces follow the person. Experiment with different positions and familiarize yourself with the pattern of movement. It is often opposite from your fust expectation.

If there are dead traces, find the problem by substitution. The natural tendency is to blame the rol-Ialong switch, but more often, the problem will be in the geophone, cable, or even the seismograph.

To check the geophone, just substitute one that you know to be good. To check the cable, exchange any two of them. If the bad channel moves, the probicm

is in the cable (or the geophone if you haven't eliminated that). If the bad channel does not move in the prior test, try reversing the output cable to the seismograph. If the bad channel still doesn't move, then the problem is in the Seismograph.

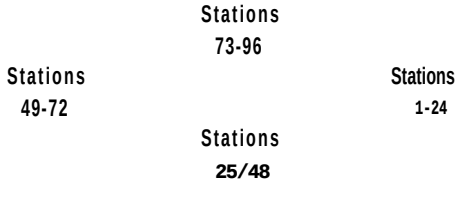
If you have isolated the problem to the rollalong switch (or the adaptor cables), notice whether the bad channel moves when you change the switch position. If it moves, the problem is on the input side. If the problem channel does not move, the problem is on the output side or output cable.

Remember that the last geophone in the array is not used until after you relocate the seismograph and rollalong switch for the next series. When you lose or break a geophone, you can omit this one from the survey.

Take note of the gap adjustment warning on the front page.

There are a number of adjustments to synchronize the switches and indicators. These will not normally be required unless the switch is disassembled for service, or if the knob is forced at the stop.

On Model RS-96/24, the only adjustments required are the positions of the indicator dial and of the detent. Open the case by removing the screws from the sides. Examine the rotating switch mechanism and locate the contact pins, Notice that the stationary part of the switch (called the stator) has four 50-pin connectors which are coupled to the inputs by flat cables. Looking at the top, the inputs are organized as follows:



Turn the switch so the contacts are centered at the 3 o'clock position over stalions l-24.

Look carefully under the pins and see that the contacts are centered on the station l-24 pads on the stator circuit board. This corresponds to position 1 on the dial.

Loosen the two Allen screws on the large red gear. Turn the dial until the "1" is under the cursor, and re-tighten the set screws.

Check to see that the switch detents occur when the contact pins are centered exactly over the pads. If not, loosen the two set screws in the small red gear and adjust its position. Re-tighten the set screws.

On Model RS-120/48, there arc a number of synchronization adjustments.

Start by adjusting the dial cursor position as described above.

When the upper rotor is rotated to the at the 3 o'clock position and the gap is set to "0", the lower rotor should be at the 6 o'clock position (conncct-ing stations 25-48).

If not, loosen the set screws on the center small gear on the side. Position the IWO stalors (lop over stations l-24 and bottom over stations 25-48) so the pins are exactly over the center of the contact pads. Ignore the gap indicator knob. Tighten the set screws.

Without moving the rotors, adjust the large knob so that the line for gap 6 is vertical when in position 1. Adjust the gap knob to position "0".

Appendix: Adaptor Cable Drawings

The following section includes drawings for several popular input and output adaptor cables. In each case, the connector on one end is the 50-pin D-ribbon connector (Amphenol or equivalent), The lengths of the adapters are not specified, but should be selected to fit the installation or use.

CDP cables vary widely in the connector type and wiring, and it is impossible here to include all the possibilities. The general approach is to redraw the CDP cable as a grouping of cables (as in Figure 6). Then, find the connector pin numbers on the right side (of the drawing) which go through the string to the most distant takeout. This takeout is defmed at ground station 1. The input adaptor will be wired to connect these wires to pins 1 and 26 on the input connector (for stations l-24 on the rollalong switch. Likewise). Then, the second farthest station goes to pins 2 and 27. The process continues until you have used all the wires in the CDP cables to all the stalions.

It is possible in some arrangements that additional CDP cables will go off to the right. For example, if you have 120 geophonc stations, you would probably have 60 (or 72) to the left, and 60 (or 48) to the right. Use the principles developed here to construct those adapters.

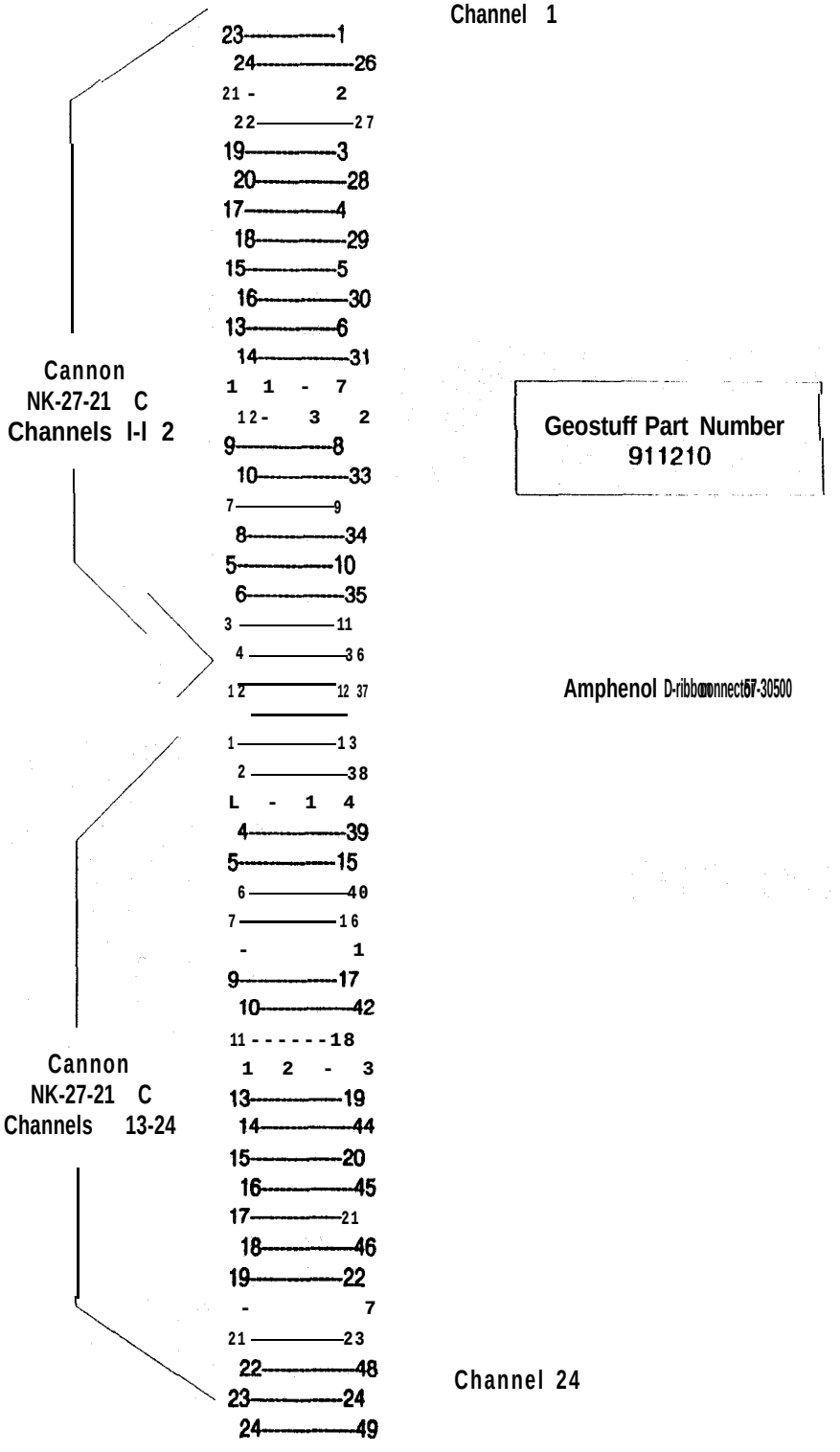
24-channel Output Adaptor Cable

For use with: 24-channel seismograph with dual Cannon NK-27 connectors (can be used with a 12-channel seismograph).

Note: This adaptor is a Y shape with two Cannon NK-27-21C connectors.

This adaptor is available from Gcostuff as Part Number 911210.

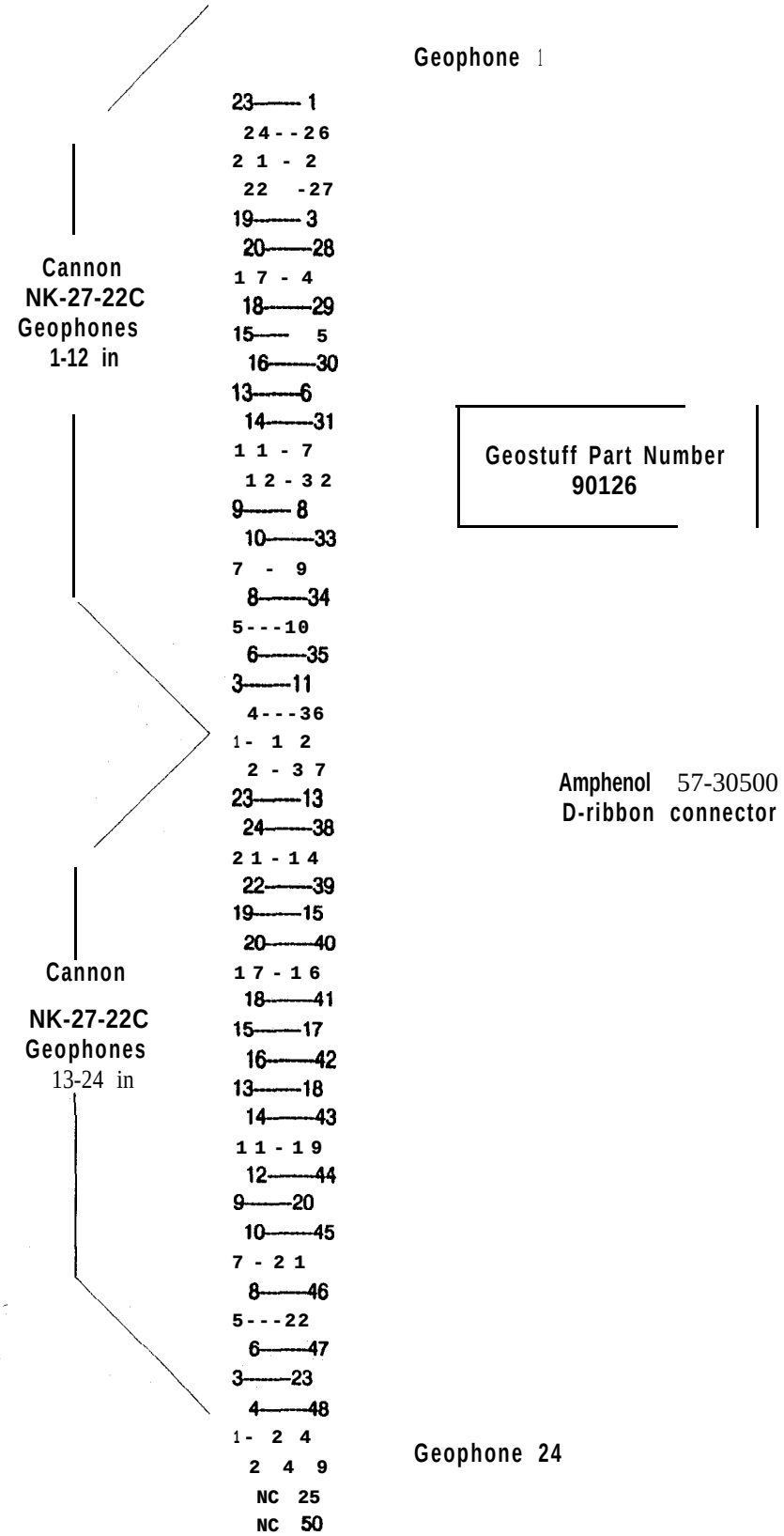
The strain reliefs on the Cannon connectors should be different colors with the channel numbers embossed.



Input Adaptor Cable for 12-Channel Refraction Cables (Stations I-24)

For use with: standard 12-channel refraction cables with Cannon NK-27-21C connectors, wired with nearest takeout to pins 1 & 2.

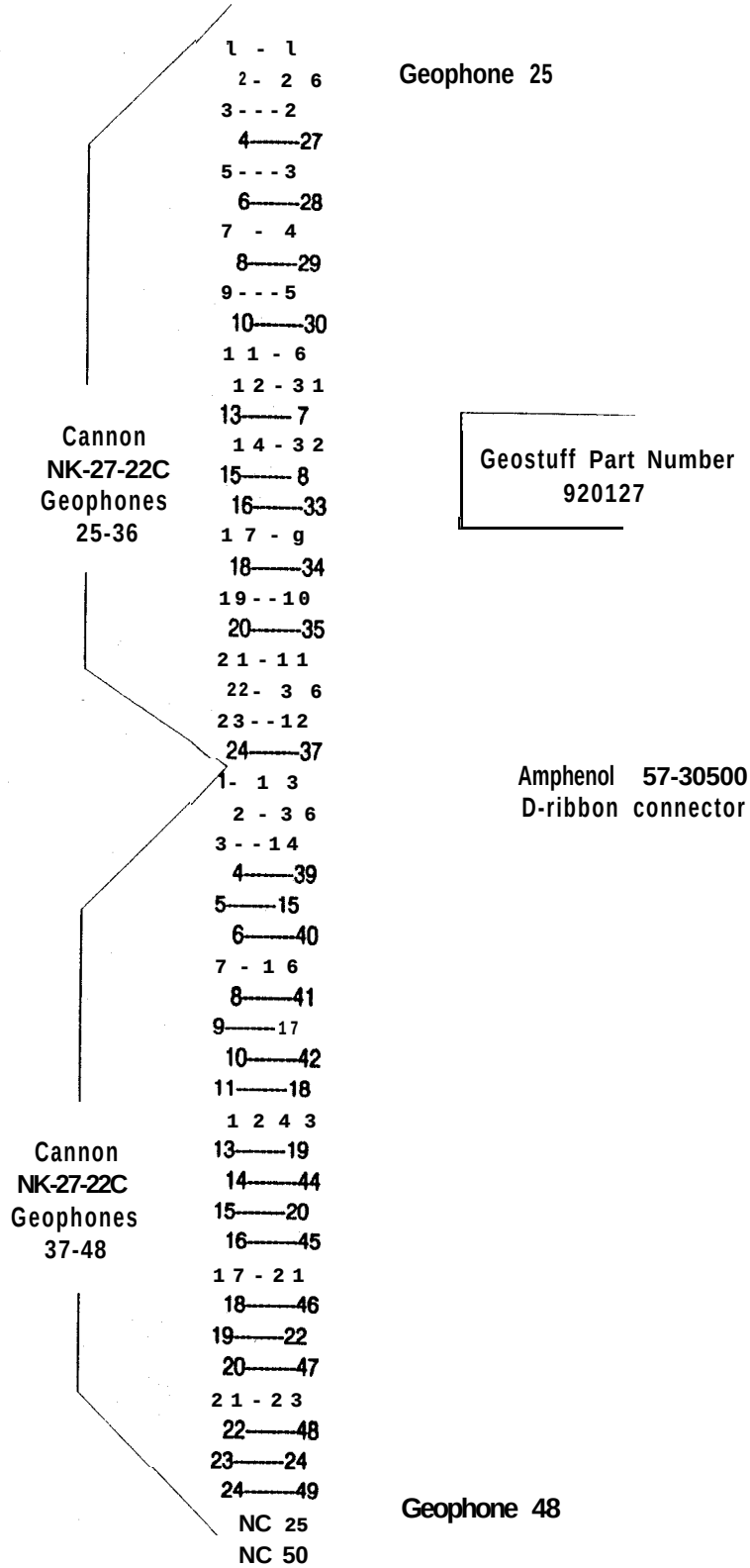
Note: These adapters are used in pairs. This is the one which connects the rollalong switch to stations 1-12 and 13-24. This adaptor is available from Geostuff as Part Number 920126. The strain reliefs should be marked "GEOPHONES l-12" and "GEOPHONES 13-24".



Input Adaptor Cable for 12-Channel Refraction Cables (Stations 25-48)

For use with: standard 12-channel refraction cables with Cannon NK-27-21C connectors, wired with nearest takeout to pins 1 & 2.

Note: These adapters are **used** in pairs. This is the one which connects the rollalong switch to stations 25-36 and 37-48. This adaptor is available from Geostuff as Part Number 920127. The strain reliefs should be marked "GEOPHONES 25-36" and "GEOPHONES 37-48".



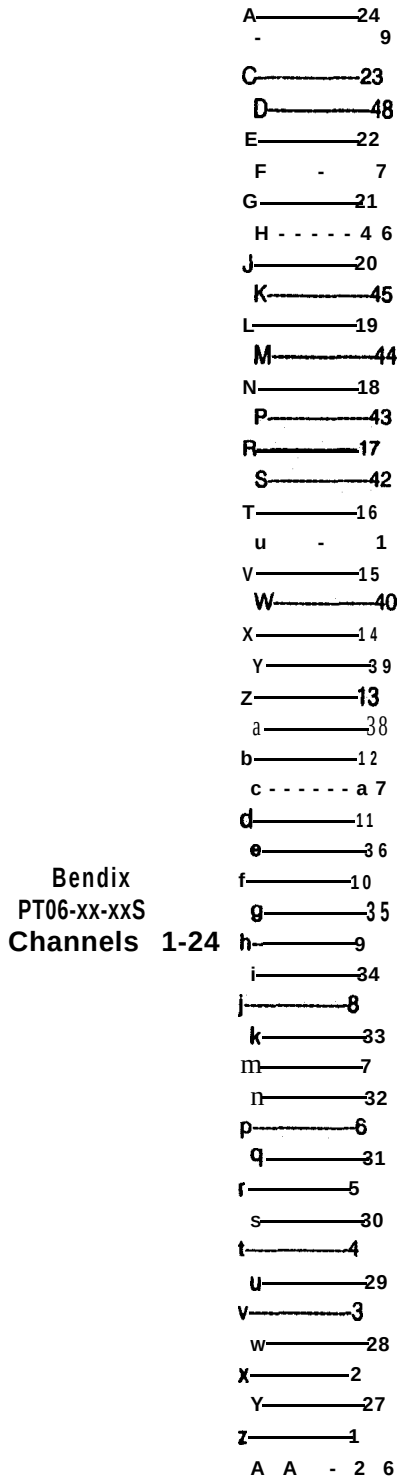
Output Adaptor Cable for 48-Channel Seismograph (Chan l-24) ,

For use with: 48-channel seismograph **with** 55-pin (Bendix PT-02A-22-55P) or 61-pin (Bendix PT-02A-24-61P) typc connectors.

Note: These adaplers are used in pairs on a 48-channel seismograph, this is the one which connects the rollalong switch to channels l-24 of the seismograph.

This adaptor is available from Geosluff as Part Number 911208 (with the 6l-pin connector) or 920402 with the 55-pin connector

This cable should be about 4 feet long, and marked with a green strain relief with the PN and the word “CH l-24” embossed.



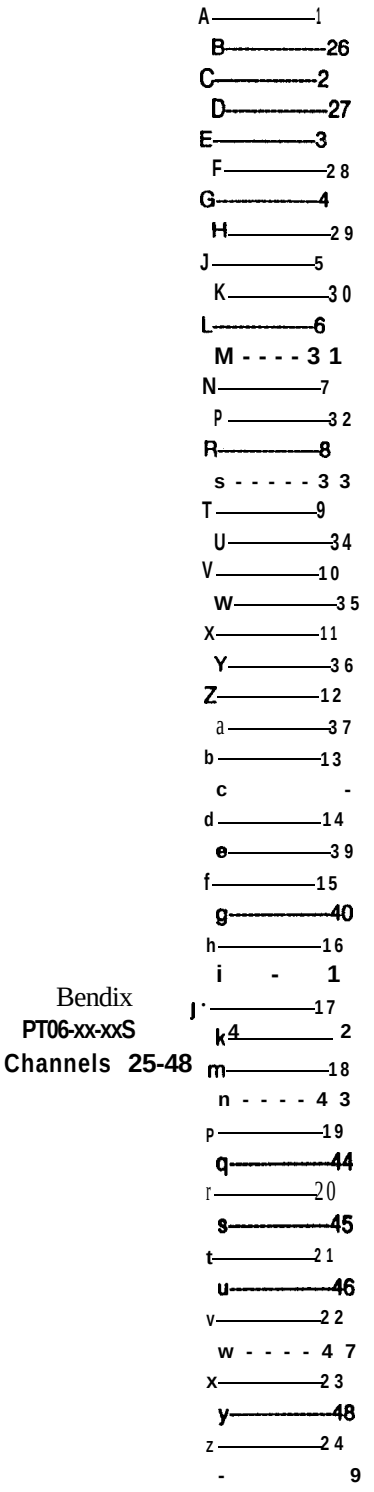
Output Adaptor Cable for 48-Channel Seismograph (Chan 25-48)

For use with: 4%channel (or 24-channel) seismographs with 55-pin (Bendix PT-02A-22-55P) or 61-pin (Bendix PT-02A-24-6lP) input conneclors.

Nole: These adapters are used in pairs on a 48 channel seismograph; this is the one which connects the rollalong switch to channels 25-48 of the seismograph.

This adaptor is available from Gcostuff as Part Number 920401 (with Bendix PT-06A-22-55s) or Part Number 911209 (with Bendix PT-MA-24-61S).

This cable should be about 4 feet long, and marked with a green strain relief with the PN and the word "CH 25-48" embossed.



Channel 25

Geostuff Part Number
911209 or 920401

Amphenol 57-30600
D-ribbon connector

Channel 48

Input Adaptor Cable for 24-Takeout Refraction Cable (Station l-24)

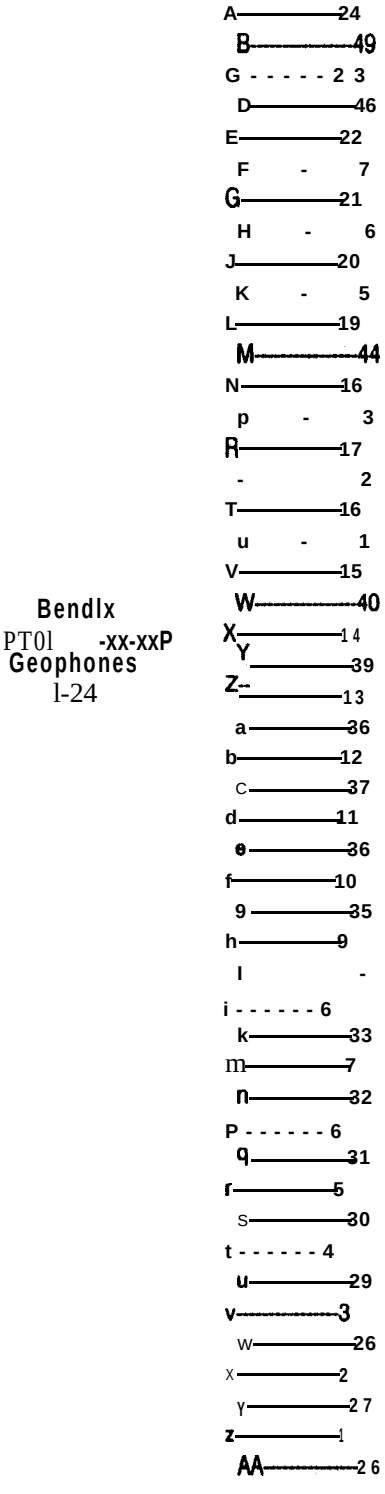
For use with: 24-takeout refraclion cable with 55-pin (Bendix PT-06A-24 55s) or 61-pin (Bendix PT-06A-24 61s) type connectors.

Note: These adapters are used in pairs, this is the one which connects cables to the left of the system (lower station numbers).

This adaptor is available from Geostuff with the 55-pin Bendix connector as PN 920517 or with the 61-pin Bendix connector as PN 911207.

The connector on the left is a Bendix PT-Ol-2455P or PT-0l-24-61P equivalent.

This cable should be about 8 feet long, and marked with a black or green strain relief with the word "LEFT" embossed.



Geophone 24

Geostuff Part Number
911207 or 920517

Bendlx
PT0l -xx-xxP
Geophones
l-24

Amphenol 57-30500
D-ribbon connector

Geophone 1

Input Adaptor Cable for 24-takeout Refraction Cable (Stations 25-48)

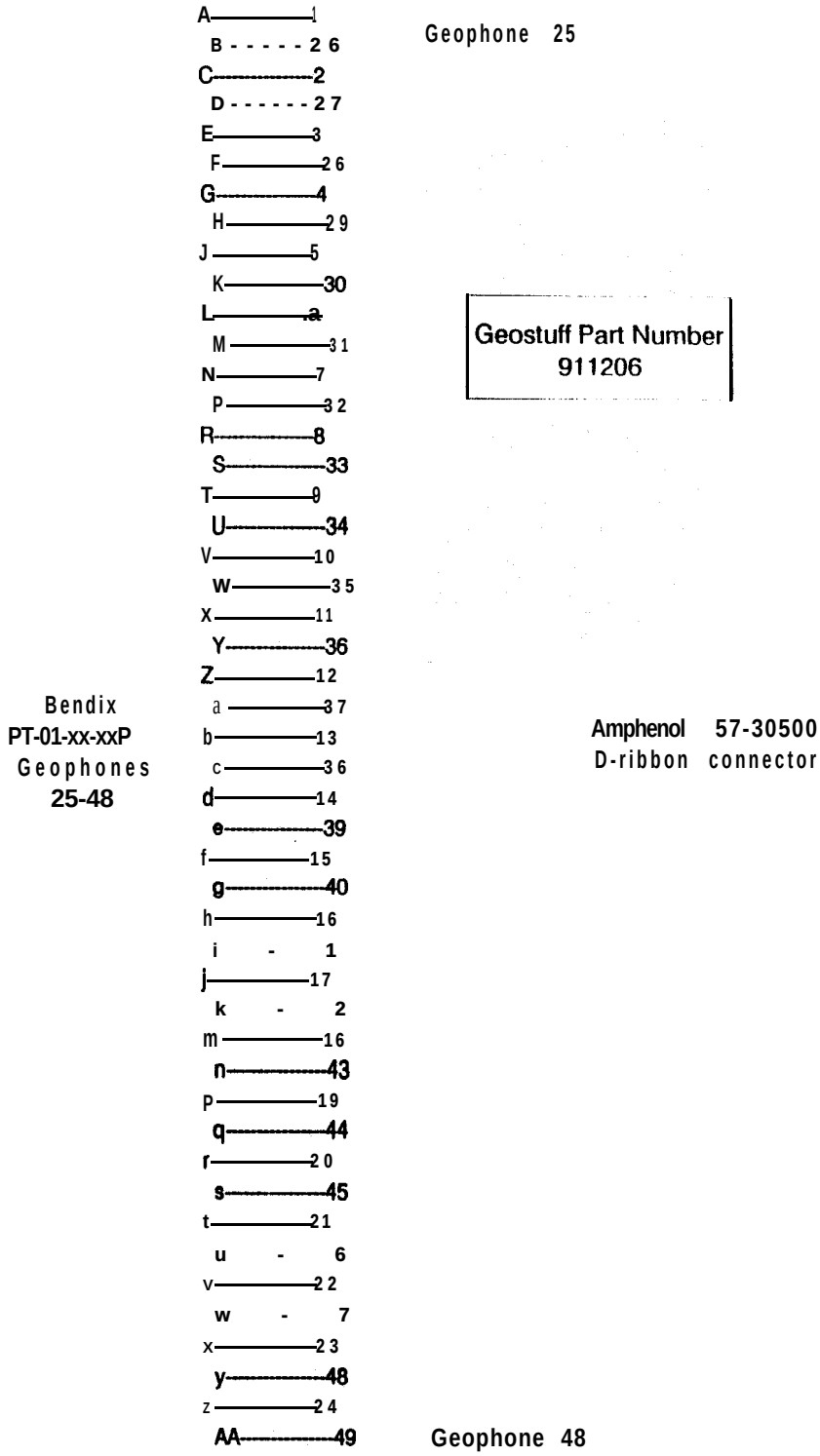
For use with: 24-takeout refraction cable with 55-pin (Bendix PT-O6A-22-55S) or 61-pin (Bendix PT-06A-24-613) connectors.

Note: These adapters are used in pairs, this is the one which connects cables to the right of the system (higher station numbers).

This adaptor is available from **Geostuff as** Part Number 911206 (with 61-pin Bendix) or Geostuff Part Number 920516 (with 55-pin Bendix).

The connector on the left is a Bendix PT-Ol-24-55P or PT-Ol-24-61P equivalent.

This cable should be about 8 feet **long, and marked with a red strain** relief with the word "RIGHT" em**bossed.**



Output Adaptor Cable Pair for 24-Channel Seismograph with Gap.

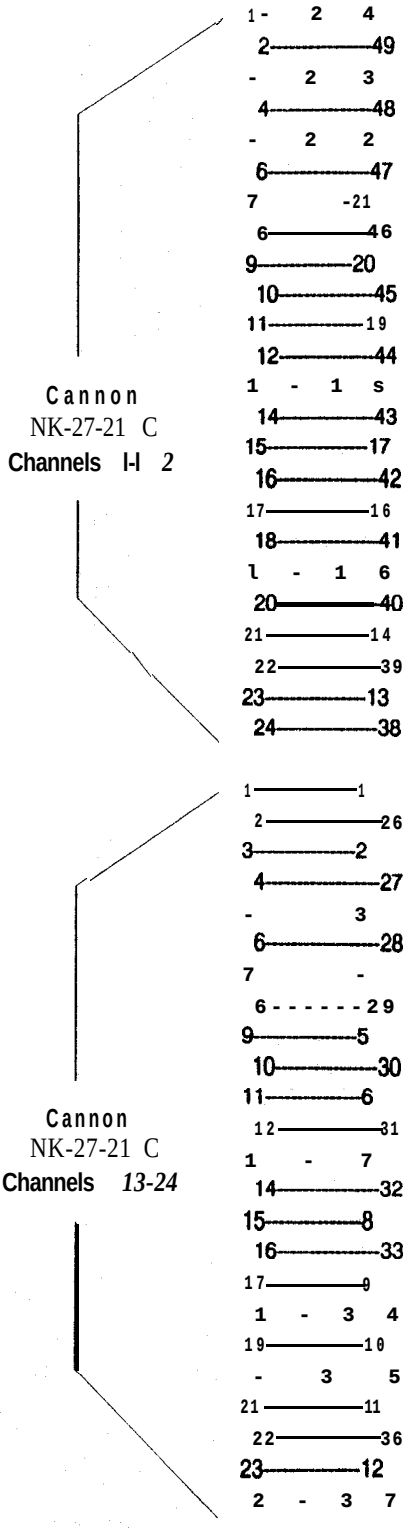
For use with: Model RS-120/48 rollalong switch and 24-channel seismograph with dual Cannon NK-27 conneclors.

Note: This is a set of two cables used when the 48-channel tollalong switch is feeding a 24-channel seismograph with provision for a gap between channels 12 and 13.

The **cable** set actually feeds what would normally **be** channels 13-24 and 25-36 on the rollalong switch. Because ***of*** this offset, ***the starting position for rhe rollalong switch is position 85***

These Iwo adapters arc available from Gcostuff as Part Numbers 920701 and ***920702.***

The strain reliefs on the Cannon connectors should be different colors with the channel numbers embossed.



Geostuff Part Number 920701

Amphenol 57-30500 D-ribbon connector

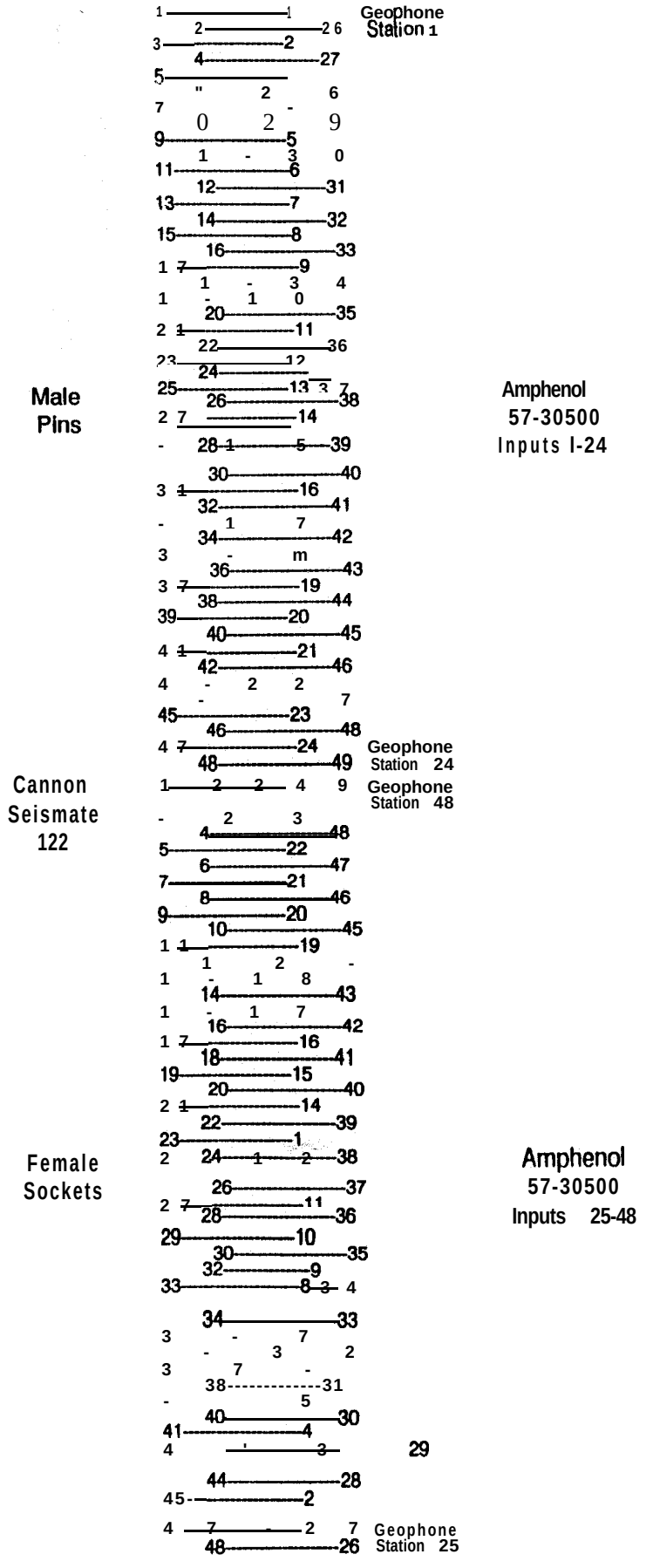
Amphenol 57-30500 D-ribbon connector

Geostuff Part Number 920702

Input Adaptor Cable for CDP cable with Cannon Seismate-122 connector (Stations I-48)

This adaptor is used with CDP cables with 48-pairs of wires. The number of takeouts per cable may vary, but this wiring diagram has not been checked with combinations other than 24 takeouts per cable.

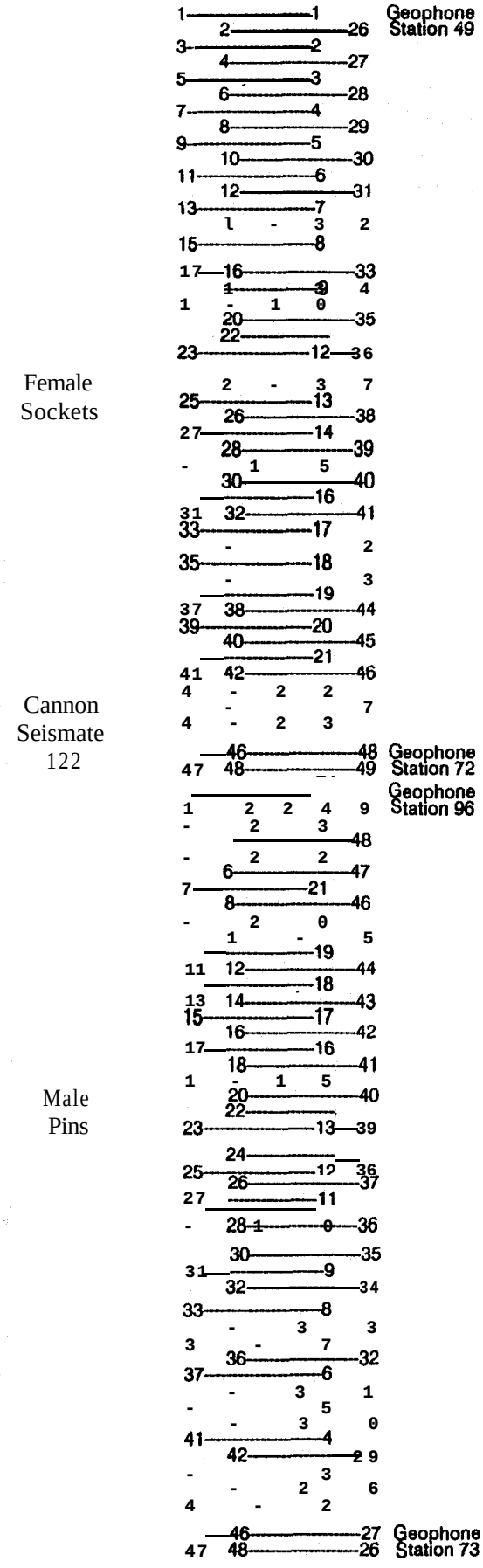
This adaptor is available from Geostuff as Part Number 921211. This adaptor has two cables from the Cannon connector, each with an Amphenol 57-30500 connector. The two cables should be marked "l-24" and "25-W to indicate which input connector on the rollalong switch to use.



Input Adaptor Cable for CDP cable with Cannon Seismate-122 connector (Stations 49-96)

This adaptor to use with CDP cables with 48-pairs of wires. The number of takeouts per cable may vary, but this wiring diagram has not been checked with combinations other than 24 takeouts per cable.

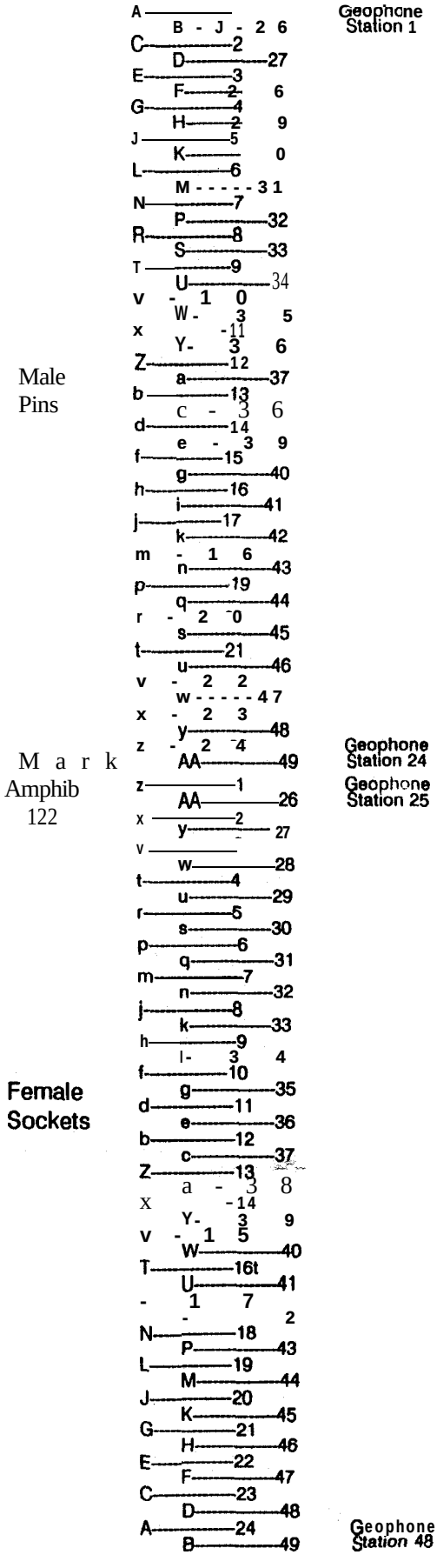
This adaptor is available from Gcostuff as Part Number 921212. This adaptor has two cables from the Cannon connector, each with an Amphenol 57-30500 connector. The two cables should be marked "49-72" and "73-96' to indicate which input connector on the rollalong switch to use.



Input Adaptor Cable for CDP cable with Mark Products Amphib-1 22 connector (Stations I-48)

This adaptor to use with CDP cables with 48-pairs of wires. The number of takeouts per cable may vary, but this wiring diagram has not been checked with combinations other than 12 takeouts per cable.

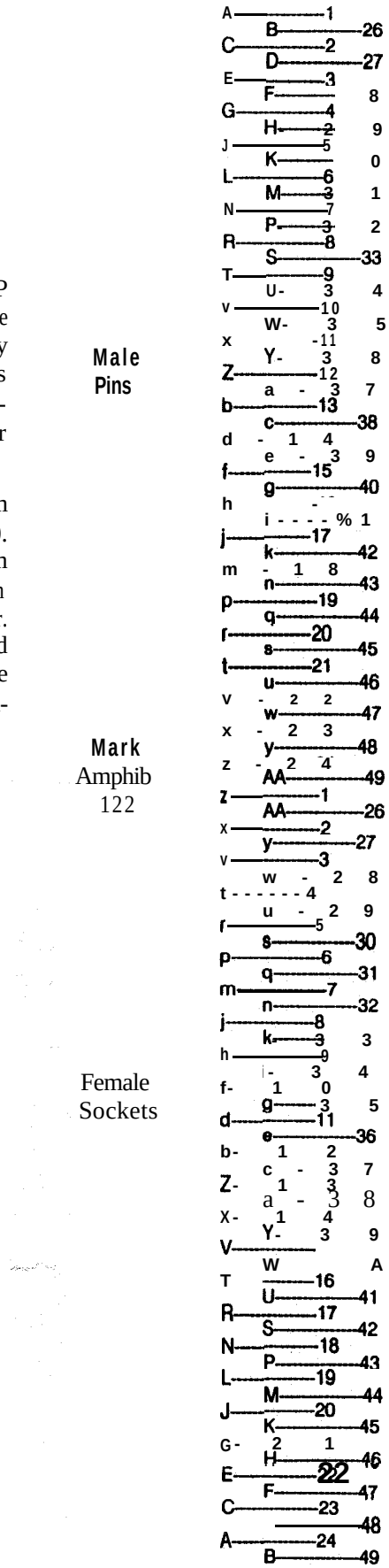
This adaptor is available from Geostuff as Part Number 931009. This adaptor has two cables from the Cannon connector, each with an Amphcnol 57-30500 connector. The two cables should be marked "l-24" and "25-48" to indicate which input connector on the rollalong switch to use.



Input Adaptor Cable for CDP cable with Mark Products Amphib-122 connector (Stations 49-96)

This adaptor to use with CDP cables with 48-pairs of wires. The number of takeouts per cable may vary, but this wiring diagram has not been checked with combinations other than 12 takeouts per cable.

This adaptor is available from Geostuff as Part Number 931010. This adaptor has two cables from the Cannon connector, each with an Amphenol 57-30500 connector. The two cables should be marked "49-72" and "73%" to indicate which input connector on the rollalong switch to use.



Guarantee

Geostuff Rollalong Switches are guaranteed for a period of one year after shipment. During that period, we will repair or replace any switch returned to our facility at no charge for parts or labor. This guarantee does not apply to damage caused by misuse. In the event of, any problem, contact us at:

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