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Blackrock 64-CH SR Splitter Box Cable

PN-9545, 10989



Table of Contents

What This Manual Covers	3
Intended Use and Indications for Use	3
Contradictions, Warnings, Precautions	3
Symbols	3
Product Specific Content.....	4
Specifications	5
<i>PN-9545 64-CH SR Splitter Box Cable</i>	5
Cleaning, Disinfection, and Disposal.....	10
Magnetic Resonance	10
Troubleshooting	10
Return Merchandise Authorization.....	10
Warranty.....	11
Support.....	11
<i>Complaints</i>	11

What This Manual Covers

This manual covers the instructions on how to connect a Nihon Kohden cable to the Blackrock Jackbox.

Intended Use and Indications for Use

The 64-CH SR Splitter Box Cable is designed to allow simultaneous connection of the Blackrock NeuroPort BioPotential Monitoring System and The CereStim Neural Stimulator System with a Nihon Kohden recording systems to clinical macro-electrodes.

Part number 9545 is intended to be used when the Nihon Kohden system is configured in software to utilize channels 5 and 6 for ground and reference signals.


Part number 10989 is intended to be used when the Nihon Kohden system is configured in the software to utilize the Com and Z inputs on T-bar A for ground and reference signals.

Contradictions, Warnings, Precautions

When using this cable, do not pull on the cable to disconnect it from the system. Use the connector housing to disconnect the cable. If the cable is pulled to disconnect the connector, you may tear wires from their contacts.

When using more than one NeuroPort Amplifier, the ground and reference must be provided to the both amplifiers as Nihon Kohden T-bars carrying channels 65-256 will not have reference or ground for the Splitter Box Cable to carry.

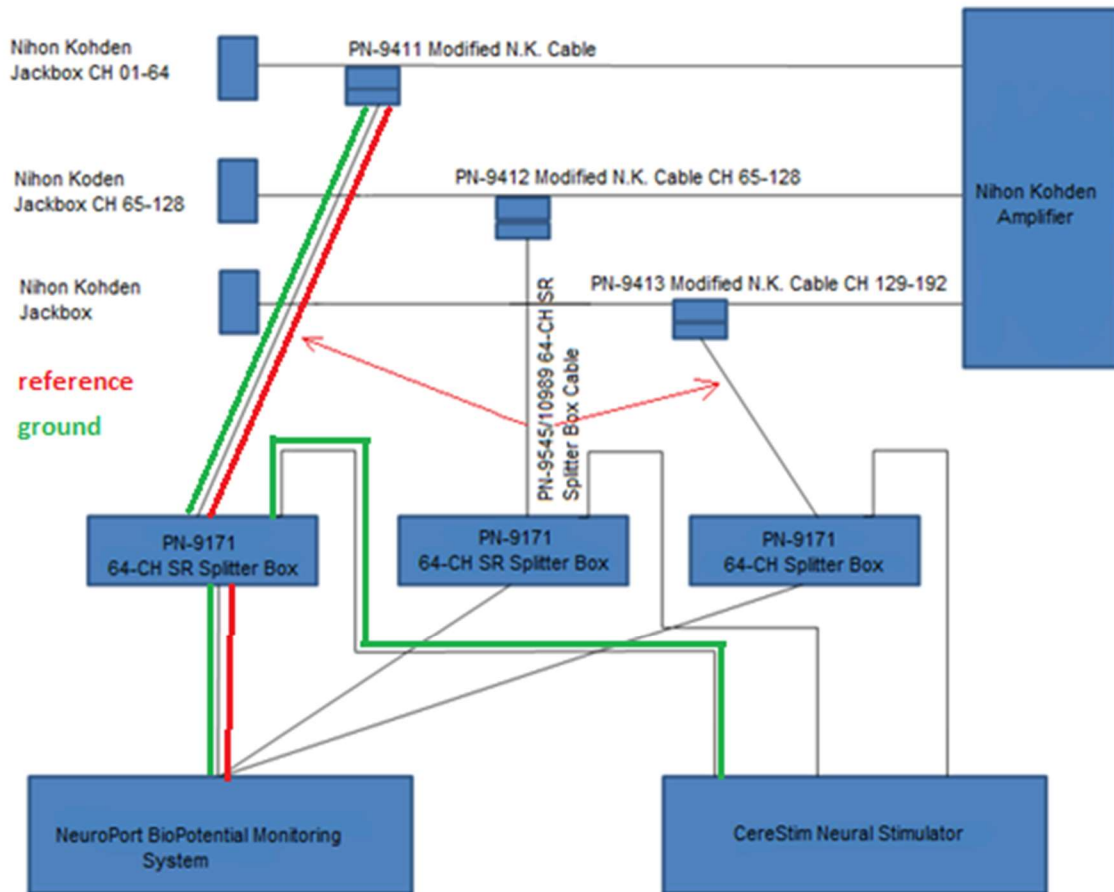
Symbols

	IEC60101-0102	Danger of Electrostatic Discharge (ESD)
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In order to reduce the likelihood of ESD, use antistatic or electrostatic discharge (ESD) safe gloves when connecting the Adapter.

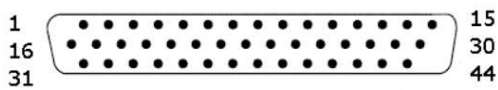
Product Specific Content

A system level connection diagram for all of the components in the systems is shown in the figure below.

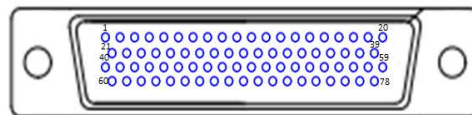


Specifications

PN-9545 64-CH SR Splitter Box Cable



Male DB44 connector pinout



Male DB78 connector pinout

64-CH SR Splitter Box Cable Pinout Pins 1-32

For PN – 9545

Male DB78 Connector For pn 9545	Male DB44 Connector (1-32) For pn 9545	Blackrock Signal	Nihon Kohden Signal
56	36	Gnd	Z
56	35	Gnd	Z
36	34	Ref	CH-5
36	33	Ref	CH-5
9	32	CH-32	CH-32
10	31	CH-31	CH-31
11	30	CH-30	CH-30
12	29	CH-29	CH-29
13	28	CH-28	CH-28
14	27	CH-27	CH-27
15	26	CH-26	CH-26
16	25	CH-25	CH-25
17	24	CH-24	CH-24
18	23	CH-23	CH-23
19	22	CH-22	CH-22
20	21	CH-21	CH-21
21	20	CH-20	CH-20
22	19	CH-19	CH-19
23	18	CH-18	CH-18
24	17	CH-17	CH-17
25	16	CH-16	CH-16
26	15	CH-15	CH-15
27	14	CH-14	CH-14
28	13	CH-13	CH-13
29	12	CH-12	CH-12
30	11	CH-11	CH-11
31	10	CH-10	CH-10
32	9	CH-9	CH-9
33	8	CH-8	CH-8
34	7	CH-7	CH-7
35	6	CH-6	CH-6
36	5	CH-5	CH-5
37	4	CH-4	CH-4
38	3	CH-3	CH-3
39	2	CH-2	CH-2
40	1	CH-1	CH-1
1	-	N/C	A GND
2	-	N/C	A GND
43	37,38	N/C	SHIELD
44	37,38	N/C	SHIELD
45	-	N/C	BIP 4CH-
46	-	N/C	BIP 4CH+
47	-	N/C	BIP 3CH-
48	-	N/C	BIP 3CH-
	AGND = Analog Ground	Ref = Reference	

64-CH SR Splitter Box Cable Pinout Pins 33-64

For PN – 9545

Male DB78 Connector For PN 9545	Male DB44 Connector (33-64) For PN 9545	Blackrock Signal	Nihon Kohden Signal
56	36	Gnd	Z
56	35	Gnd	Z
35	34	Ref	CH-6
35	33	Ref	CH-6
57	32	CH-64	CH-64
58	31	CH-63	CH-63
59	30	CH-62	CH-62
60	29	CH-61	CH-61
61	28	CH-60	CH-60
62	27	CH-59	CH-59
63	26	CH-58	CH-58
64	25	CH-57	CH-57
65	24	CH-56	CH-56
66	23	CH-55	CH-55
67	22	CH-54	CH-54
68	21	CH-53	CH-53
69	20	CH-52	CH-52
70	19	CH-51	CH-51
71	18	CH-50	CH-50
72	17	CH-49	CH-49
73	16	CH-48	CH-48
74	15	CH-47	CH-47
75	14	CH-46	CH-46
76	13	CH-45	CH-45
77	12	CH-44	CH-44
78	11	CH-43	CH-43
53	10	CH-42	CH-42
54	9	CH-41	CH-41
41	8	CH-40	CH-40
42	7	CH-39	CH-39
3	6	CH-38	CH-38
4	5	CH-37	CH-37
5	4	CH-36	CH-36
6	3	CH-35	CH-35
7	2	CH-34	CH-34
8	1	CH-33	CH-33
49	-	N/C	BIP 2CH-
50	-	N/C	BIP 2CH+
43	37,38	N/C	SHIELD
44	37,38	N/C	SHIELD
51	-	N/C	BIP 1CH-
52	-	N/C	BIP 1CH+
55	-	N/C	COM
	AGND = Analog Ground	Ref = Reference	

64-CH SR Splitter Box Cable Pinout Pins 1-32

For PN – 10989

Male DB78 Connector For PN-10989	Male DB44 Connector (1-32) For PN-10989	Blackrock Signal	Nihon Kohden Signal
56	36	Gnd	Z
56	35	Gnd	Z
55	34	Ref	COM
55	33	Ref	COM
9	32	CH-32	CH-32
10	31	CH-31	CH-31
11	30	CH-30	CH-30
12	29	CH-29	CH-29
13	28	CH-28	CH-28
14	27	CH-27	CH-27
15	26	CH-26	CH-26
16	25	CH-25	CH-25
17	24	CH-24	CH-24
18	23	CH-23	CH-23
19	22	CH-22	CH-22
20	21	CH-21	CH-21
21	20	CH-20	CH-20
22	19	CH-19	CH-19
23	18	CH-18	CH-18
24	17	CH-17	CH-17
25	16	CH-16	CH-16
26	15	CH-15	CH-15
27	14	CH-14	CH-14
28	13	CH-13	CH-13
29	12	CH-12	CH-12
30	11	CH-11	CH-11
31	10	CH-10	CH-10
32	9	CH-9	CH-9
33	8	CH-8	CH-8
34	7	CH-7	CH-7
35	6	CH-6	CH-6
36	5	CH-5	CH-5
37	4	CH-4	CH-4
38	3	CH-3	CH-3
39	2	CH-2	CH-2
40	1	CH-1	CH-1
1	-	N/C	A GND
2	-	N/C	A GND
43	37,38	N/C	SHIELD
44	37,38	N/C	SHIELD
45	-	N/C	BIP 4CH-
46	-	N/C	BIP 4CH+
47	-	N/C	BIP 3CH-
48	-	N/C	BIP 3CH-
AGND = Analog Ground	Gnd = Ground	Ref = Reference	

64-CH SR Splitter Box Cable Pinout Pins 33-64

For PN – 10989

Male DB78 Connector For PN 10989	Male DB44 Connector (33-64) For PN 10989	Blackrock Signal	Nihon Kohden Signal
56	36	Gnd	Z
56	35	Gnd	Z
55	33,34	Ref	COM
55	33,34	Ref	COM
57	32	CH-64	CH-64
58	31	CH-63	CH-63
59	30	CH-62	CH-62
60	29	CH-61	CH-61
61	28	CH-60	CH-60
62	27	CH-59	CH-59
63	26	CH-58	CH-58
64	25	CH-57	CH-57
65	24	CH-56	CH-56
66	23	CH-55	CH-55
67	22	CH-54	CH-54
68	21	CH-53	CH-53
69	20	CH-52	CH-52
70	19	CH-51	CH-51
71	18	CH-50	CH-50
72	17	CH-49	CH-49
73	16	CH-48	CH-48
74	15	CH-47	CH-47
75	14	CH-46	CH-46
76	13	CH-45	CH-45
77	12	CH-44	CH-44
78	11	CH-43	CH-43
53	10	CH-42	CH-42
54	9	CH-41	CH-41
41	8	CH-40	CH-40
42	7	CH-39	CH-39
3	6	CH-38	CH-38
4	5	CH-37	CH-37
5	4	CH-36	CH-36
6	3	CH-35	CH-35
7	2	CH-34	CH-34
8	1	CH-33	CH-33
49	-	N/C	BIP 2CH-
50	-	N/C	BIP 2CH+
43	37,38	N/C	SHIELD
44	37,38	N/C	SHIELD
51	-	N/C	BIP 1CH-
52	-	N/C	BIP 1CH+
55	33,34	REF	COM
AGND = Analog Ground	Gnd = Ground	Ref = Reference	

Cleaning, Disinfection, and Disposal

The case of the Splitter Box Cable may be cleaned with distilled water, isopropyl alcohol (70%), or 96% ethanol. The connectors of the cable may be cleaned using isopropyl alcohol (70%). If cleaning the connectors, ensure that the connector has dried completely before connecting the cable to the system.

All devices, both used and unused, should not be disposed with household waste. Return to a recycling point for electric and electronic devices.

Magnetic Resonance

64-CH SR Splitter Box Cable has not been evaluated for safety and compatibility in the MR environment. 64-CH SR Splitter Box Cable has not been tested for heating, migration, or image artifact in the MR environment.

Troubleshooting

Confirm that the Nihon Kohden system and the Blackrock system are utilizing the same electrode contacts for ground and reference. This may be COM/Z or Channels 5,6

If the signal from the cable is noisy, make sure the system is properly grounded or the connections are secure.

If the system is not giving the correct signal or there is signal loss, try using a different Jack Box with the Splitter cable. If there is still no signal or noisy signal, please contact our support team (support@blackrockmicro.com) for an RMA.

Return Merchandise Authorization

In the unlikely event that your adapter needs to be returned to Blackrock for repair or maintenance, do not send any equipment back without a Return Merchandise Authorization Number. An RMA number will be issued to you by a Blackrock representative. If you need to obtain an RMA number, you may contact a product support representative at (866) 806-3692, or by emailing support@blackrockmicro.com.

Once an RMA number has been issued, it is important to safely pack the returned item for shipping back to Blackrock. It is preferred that you save the original boxes and packing materials that your system arrived in for return shipment. Please address the package as follows:

Blackrock Microsystems
ATTN: RMA#
630 Komas Drive, Suite 200
Salt Lake City, UT 84108 USA
Tel: +1 (801) 582-5533

Warranty

Blackrock Microsystems (“Blackrock”) warrants its products are free from defects in materials and manufacturing for a period of one-year from the date of shipment. At its option, Blackrock will repair or replace any product that does not comply with this warranty. This warranty is voided by: (1) any modification or attempted modification to the product done by anyone other than an authorized Blackrock employee; (2) any abuse, negligent handling or misapplication of the product; or (3) any sale or other transfer of the product by the original purchaser.

Except for the warranty set forth in the preceding paragraph, Blackrock provides no warranties of any kind, either express or implied, by fact or law, and hereby disclaims all other warranties, including without limitation the implied warranties of merchantability, fitness for a particular purpose, and non-infringement of third-party patent or other intellectual property rights.

Blackrock shall not be liable for special, indirect, incidental, punitive, exemplary or consequential damages (including without limitation, damages resulting from loss of use, loss of profits, interruption or loss of business or other economic loss) arising out of non-compliance with any warranty. Blackrock’s entire liability shall be limited to providing the remedy set forth in the previous paragraph.

Support

Blackrock prides itself in its customer support. For additional information on this product or any of our products, you can contact our Support team through the contact information below:

Manuals, Software Downloads, and Application Notes

www.blackrockmicro.com/technical-support

Complaints

When filing a complaint, please provide the product description, product number, software version, lot number, complainant’s name and address, and the nature of the complaint.

Issues or Questions

www.blackrockmicro.com/technical-support

support@blackrockmicro.com

U.S.: +1 (801) 582-5533

Notice to the user and/or patient that any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the member state in which the user and/or patient is established.

CAUTION

Limited by Federal (United States) law to investigational use