

PRODUCT DATA

NEXUS Setup and Control Software — Type 7749 for the NEXUS Range of Conditioning Amplifiers Types 2690, 2691, 2692, 2693



NEXUS™ Setup and Control Software Type 7749 is a PC-based software package for setup and control of the NEXUS range of conditioning amplifiers and runs under Windows NT®.

The software automatically detects IEEE P1451.4 capable transducers with standardised Transducer Electronic Data Sheets.

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7749

- USES**
- Setup and control of the NEXUS range of conditioning amplifiers
 - Storage of frequently used setups
 - Monitoring overloads

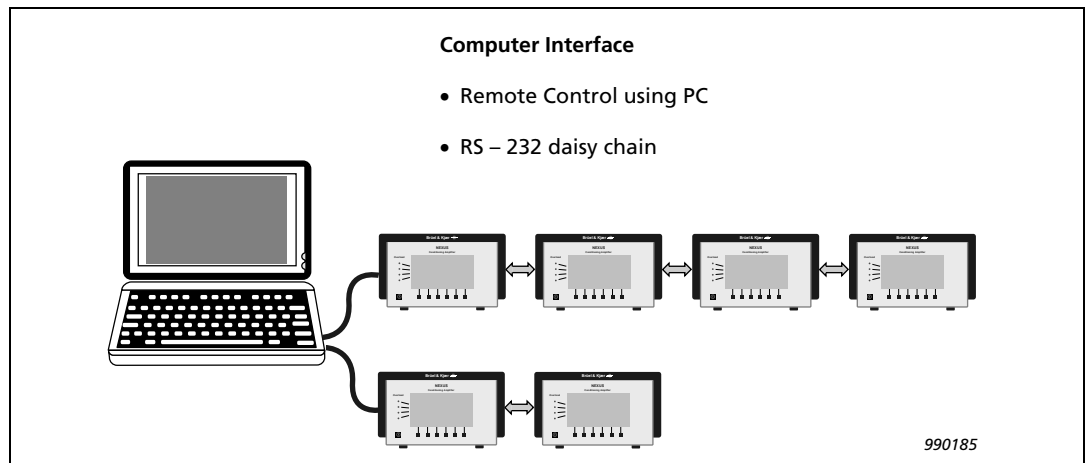
- FEATURES**
- Setup and control of up to 99 channels of amplifiers
 - Automatic detection of IEEE P1451.4 capable transducers with standardised TEDS
 - Storage of frequently used setups
 - On screen peak level meter while measuring
 - Advanced overload monitoring

NEXUS and PC Configurations

NEXUS Setup and Control Software Type 7749 is a PC-based software package for setup and control of the NEXUS conditioning range of amplifiers. The software runs under Windows NT.

The range of NEXUS conditioning amplifiers is connected with the PC via the RS-232 serial port. Several amplifiers can be daisy-chained on one or more serial ports. See Fig. 1.

Fig. 1
NEXUS conditioning amplifiers can be daisy-chained to a maximum of 99 channels

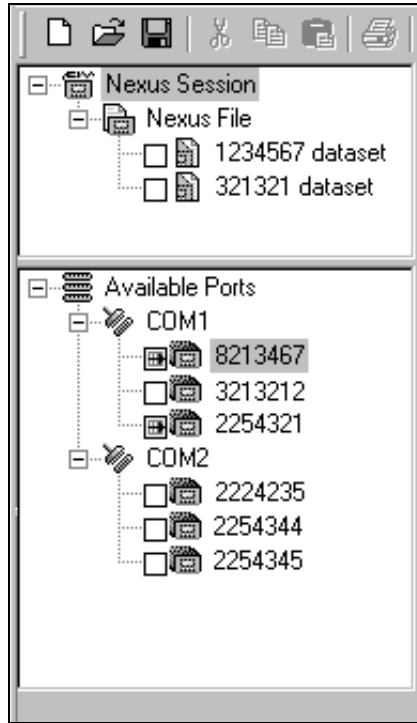


Setting up the NEXUS Amplifiers

The NEXUS conditioning amplifiers are automatically detected by the software and displayed in the “File & Link view” (Fig. 2). You designate the port(s) used for the range of NEXUS conditioning amplifiers. You can select or de-select each NEXUS amplifier for specific tests, which can be convenient in fixed test setups.

You can also set up NEXUS, even if no NEXUS amplifiers are attached. This can be done from NEXUS configuration files that you have previously saved to disk for later use in measurement situations. By dragging the active NEXUS into the “Setup view”, the detailed setup of the amplifier and transducer settings can be set up, Fig. 2.

Fig. 2
The NEXUS File & Link view



Alternatively, you can load stored setups from the file view and adapt them to the current configuration by dragging and dropping previously saved configurations of NEXUS amplifiers from the “File view” to the “Link view”.

Setting up Channel-dependent Parameters

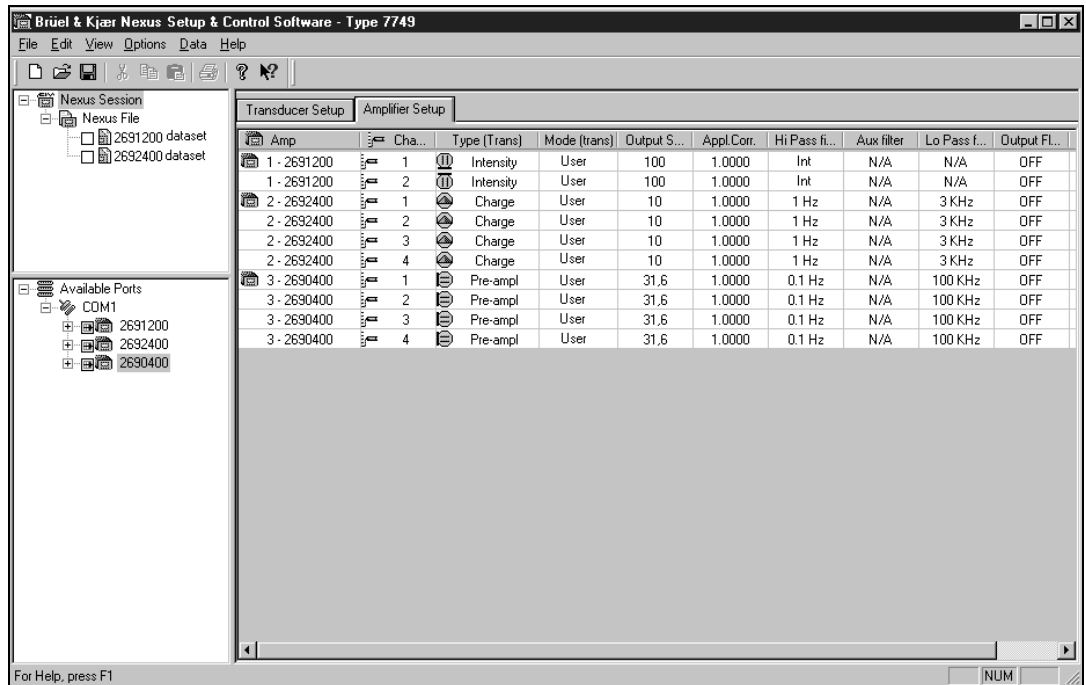
The individual parameters of the selected NEXUS amplifiers can be shown in the “Setup view”. This is shown in the amplifier setup and the transducer setup, where parameters that belong to the amplifier and transducer, respectively, are grouped. Both the amplifier and the transducer setups can be modified to include or exclude setup and monitoring parameters in any order or type of setup.

Amplifier Setup

In the amplifier setup, you can specify settings of filters and gain for each channel including Delta-Tron[®], charge, microphone and sound intensity channels. This includes low-pass filters, high-pass filters, optional filters, output sensitivity in steps

of 10 dB, and whether single-ended or floating inputs/outputs are used.

Fig. 3
The amplifier setup

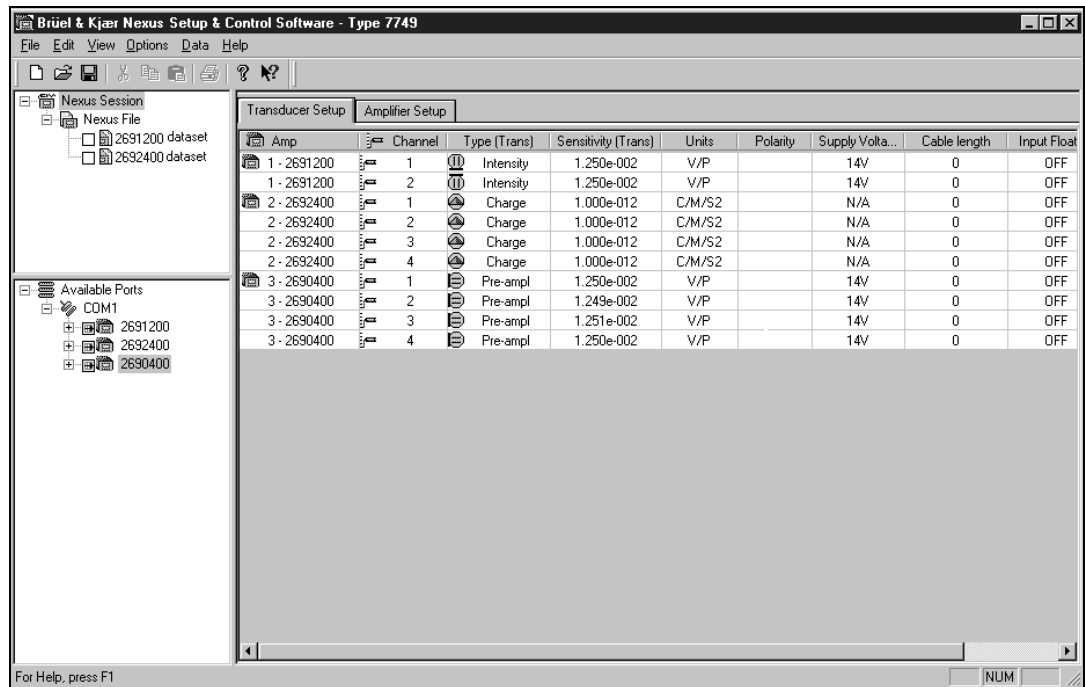


During measurement the amplifier setup monitors peak and overload in a peak level meter and overload indicator.

Transducer Setup

In the transducer setup, you can key in transducer sensitivities and transducer types, or they can be read automatically for IEEE P1451.4 capable transducers with standardised TEDS. This includes transducer type number and sensitivity. You can also specify the type of transducer power supply, polarization voltage and cable length in this setup. Corrections to the sensitivity can be added in the application correction factor and the type of input/output floating can be also be specified.

Fig. 4
Transducer setup
parameters



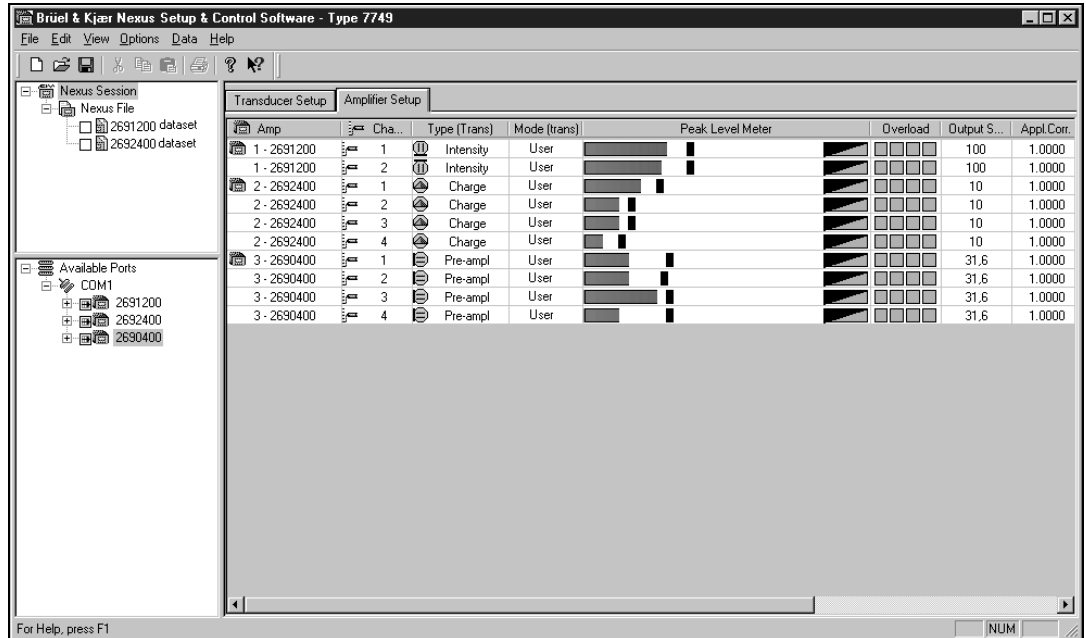
Storage of NEXUS Setups in NEXUS

For field testing where use of a PC is not convenient, you can load up to 5 setups from the software into the internal storage of the NEXUS to quickly switch setup on the spot. These settings can be stored with or without transducer information.

Controlling NEXUS when Measuring

During measurements, the software can monitor the quality of the measurement through a peak level meter that can indicate various overload conditions. This is by default displayed in the amplifier setup. The extensive overload capabilities of NEXUS can be displayed directly in the control software. This includes transducer current (DeltaTron and microphones), transducer voltage (DeltaTron), common mode input, signal and common mode output overloads. In the event of an overload, the software indicates the overload visually in the link view at the user's preference.

Fig. 5
The software features advanced indication of overloads during measurement



Additional Settings and Information Provided

The software can monitor on-line battery capacity, whether or not the batteries are recharging, and the remaining change time in minutes. It can also switch NEXUS back lighting on and off and set the contrast of the NEXUS display.

Specifications – NEXUS Setup and Control Software Type 7749

PC Requirements

PCs capable of running Windows NT 4.0, service pack 5 or later
Internet Explorer 5.0 or later

NEXUS Supported

NEXUS Hardware: Type 2690, 2691, 2692, 2693
NEXUS Software: Version 1.3
Support for IEEE P1451.4 Capable Transducers ("Smart Transducers): Version 2.0 or later

General

Automatic detection on the NEXUS range of amplifiers up to 99 channels
Selection and de-selection of NEXUS to be active in current test setup
Setup of off-line NEXUS amplifiers and download when connected
Reads manually entered, locally stored setups in NEXUS
Local storage and recall of setup in NEXUS
Note: The following functions are not supported by Type 7749:
• Transducer tests (CIC and MRT) and reference signal
• Self-test

RS-232 COMMUNICATION
2400, 4800, 9600 Baud

Channel Dependent Setup Parameters

AMPLIFIER SETUP
Low pass filters
Optional filters
High pass filters
Output sensitivity
Output floating

TRANSDUCER SETUP

Transducer type
Transducer sensitivity
Application correction
Power supply
Polarization voltage
Cable length
Input floating
Type number and transducer sensitivity for IEEE P1451.4 transducers (only for NEXUS software Version 2.0)

USER-DEFINABLE FIELDS

Transducer position

Monitoring Facilities

PEAK LEVEL METER

Peak hold
Instantaneous peak

OVERLOAD

Transducer voltage overload
Transducer current overload
Common mode Input overload
Common mode output
Internal signal overload

NEXUS Frame Setup Parameters

LOCAL STORAGE OF SETUP

1 – 5 user-defined setups including or excluding transducer setup

CONTROL OF NEXUS DISPLAY

Back light
Display contrast

BATTERY SETUP

Capacity left
Charge function
Charge time left

Ordering Information

Type 7749 NEXUS Setup and Control Software
Includes the following accessories
BE 1148 Getting Started
BZ 5289 NEXUS Control Software CD-ROM
AO 1440 Serial interface cable
JP 0918 Shorting Adaptor

Optional NEXUS Conditioning Amplifiers

All valid system numbers and ordering numbers as shown in the associated NEXUS Order Form (BA 0287) of the types:
• 2690 NEXUS Microphone types
• 2691 NEXUS Intensity types
• 2692 NEXUS Charge types
• 2693 NEXUS DeltaTron types
Please also refer to the NEXUS PD (BP 1702)

Brüel & Kjær reserves the right to change specifications and accessories without notice