LAN-XI Front Panels UA-2100 to -2105, UA-2107 to -2114, UA-2116 to -2121, UA-3100 to -3102, UA-3111, UA-3112, and UA-3121; LAN-XI Array Front Panel UA-2145-D

LAN-XI Module Types 3050, 3052, 3053, 3056, 3057, 3160 and 3161 have a range of front panels that can easily be interchanged. Each panel has a variety of connectors that can be used for different transducers and applications.

Interchangeable front panels let you decide which cable type to use and make swapping transducers easy, meaning less hardware is needed. This results in fewer patch panels, less cable 'spaghetti', fewer cable adaptors and faster system setup.

LAN-XI Array Front Panel UA-2145-D is an extra panel that can be connected to the front of 11 LAN-XI modules in a Type 3660-D Frame. It is intended for use with hand-held microphone arrays.

Concept

Most LAN-XI front panels can be used on more than one LAN-XI module (see the compatibility table on page 2). Switching front panels is an easy task, creating versatility in setup configurations with minimal equipment and effort. Each front panel is delivered in a case that should be used to store the front panel while not in use to protect the connectors on the backside.

Fig. 1
Front panel UA-2111-040 (left) is removed from LAN-XI Module Type 3056-A-040 (middle) and UA-2110-040 (far right) is installed in its place. Both front panels are fully compatible with the module.
# Compatibility of Front Panels

<table>
<thead>
<tr>
<th>Front Panel</th>
<th>Partly compatible</th>
<th>Not compatible</th>
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</thead>
<tbody>
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<tr>
<td>3050-A-040</td>
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<td>3156-A-042</td>
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<tr>
<td>3161-A-011</td>
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</table>

- UA-2100-060
- UA-2100-040
- UA-2100-030
- UA-2100-022
- UA-2101-060
- UA-2101-040
- UA-2101-030
- UA-2102-042
- UA-2102-022
- UA-2103
- UA-2104-031
- UA-2105-060
- UA-2107-120
- UA-2107-A-120
- UA-2108-060
- UA-2108-120
- UA-2109-120
- UA-2110-040
- UA-2111-040
- UA-2112-060
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- UA-2114-030
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- UA-2116-120
- UA-2117-011
- UA-2118-022
- UA-2119-060
- UA-2120-060
- UA-2121-030
- UA-2145-D
- UA-3100-042
- UA-3101-080
- UA-3102-042
- UA-3111-060
- UA-3112-030
- UA-3121-030

**Note:** Incompatible front panel/module combinations will stop during power-up and display an error message.

* = Increased distortion on the bottom two connectors if they are used as inputs.
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<thead>
<tr>
<th>Description</th>
<th>Product</th>
<th>Channel(s)</th>
<th>Connector(s)</th>
<th>Use</th>
<th>Info</th>
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<td>UA-2111</td>
<td>Input BNC</td>
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<td>UA-2105</td>
<td>Input SMB for amplifier</td>
<td>Charge</td>
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<td>UA-2119</td>
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<td>UA-2116</td>
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<td>200 V mic, General purpose</td>
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<td>Triaxial Accelerometer</td>
<td>UA-2108</td>
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<td>Dynamic Bridge</td>
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<td>CAN Bus Module</td>
<td>UA-3101</td>
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<td>CCLD, General purpose, AES3</td>
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<td>8-pin LEMO</td>
<td>CAN interface</td>
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</tbody>
</table>
UA-2100 is the front panel included with LAN-XI Module Types 3050 (with 4 or 6 input channels), Type 3052 (with 3 input channels) and Type 3160-A-022 (with 2 input channels and 2 generator output channels) as default. It is available in the following channel configurations:
- UA-2100-022: 2 × input and 2 × output
- UA-2100-030: 3 × input
- UA-2100-040: 4 × input
- UA-2100-060: 6 input or 4 × input and 2 × output

**Uses**
- General sound and vibration measurements
- Direct voltage
- CCLD accelerometers, microphones and tacho probes
- Charge accelerometers (using Charge to CCLD Converter Type 2647)
- Generator output

**Features**
- BNC connectors for easy connection
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
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<tbody>
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<td>3160-A-022</td>
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<td>3052-A-030</td>
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<td>UA-2100-040</td>
<td>3050-A-040</td>
</tr>
<tr>
<td>UA-2100-060</td>
<td>3050-A-060 3160-A-042*</td>
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</tbody>
</table>

* UA-3100-042 is the preferred (BNC) front panel for Generator Module Type 3160-A-042
UA-2101 is designed to be used in conjunction with microphones that require 200 V polarization voltage.

However, Adaptor Cable AO-0091 allows this front panel to be used with a host of other signals and transducers including direct voltage, CCLD accelerometers, CCLD microphones, CCLD tacho probes, and DC responding accelerometers.

**Uses**
- Microphones requiring 200 V external polarization
- General sound and vibration measurements
- Direct voltage
- CCLD accelerometers, microphones and tacho probes
- DC responding accelerometers

**Features**
- 3, 4 and 6 × LEMO (7-pin) connectors
- LED indicators: input, overload, cable break

Return to Overview.

### Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
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</thead>
<tbody>
<tr>
<td>UA-2101-030</td>
<td>3052-A-030</td>
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<td>UA-2101-040</td>
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<tr>
<td>UA-2101-060</td>
<td>3050-A-060</td>
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</tbody>
</table>

### Related Information

![7-pin LEMO connector pinout](image)
Generator, for 200 V Microphones: UA-2102

**Fig. 4**
**UA-2102 family**

**Uses**
- 200 V microphones
- General sound and vibration measurements
- Direct voltage
- Generator output
- CCLD sensors: accelerometers, microphones and tacho probes (using Adaptor Cable AO-0091)
- Charge accelerometers (using Converter Type 2647 and AO-0091)
- DC responding accelerometers (using Adaptor Cable AO-0091)
- Microphone preamplifiers

**Features**
- 2 and 4 × LEMO (7-pin) microphone connectors
- 2 × BNC output connectors
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

<table>
<thead>
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<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
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</thead>
<tbody>
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<td>3160-A-022</td>
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<tr>
<td>UA-2102-042</td>
<td>3050-A-060 3160-A-042*</td>
</tr>
</tbody>
</table>

* UA-3102-042 is the preferred (LEMO) front panel for Generator Module Type 3160-A-042

**Related Information**

- **7-pin LEMO connector pinout**
- **TEDS**
- **Power Supply Negative**
- **Power Supply Positive**
- **Calibration Output**
- **Signal Ground**
- **Signal Input**
- **Housing = Chassis**
Front Panel UA-2103 is primarily intended for backward compatibility with certain Brüel & Kjær array acoustic systems.

**Uses**
- Array acoustics
- General sound and vibration measurements with user-customized cables
- Direct voltage
- Generator output
- CCLD transducers: accelerometers, microphones and tacho probes
- Charge accelerometers (using Converter Type 2647)
- Microphone preamplifiers

**Features**
- 1 x D-sub connector (37-pin)
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

<table>
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<th>Front Panel/Order No.</th>
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<td></td>
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</table>

**Related Information**

Acoustic Holography
For further related information please see the ‘Acoustic Holography’ page on bksv.com.
Front Panel UA-2104 is intended for use with Sound Intensity Probe Kit Type 3599.

Uses
- Sound intensity measurements
- Selective intensity measurements using third input for reference signal
- Building acoustics and leak detection measurements, for example, sealing in vehicles using generator output

Features
- 3 × LEMO (7-pin) input connectors
- 1 × D-sub connector (9-pin)
- 1 × BNC generator output connector
- LED indicators: input, output, overload, cable break

Compatibility

<table>
<thead>
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<th>Front Panel/Order No.</th>
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<td>UA-2104-031</td>
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<tr>
<td></td>
<td>3160-A-042</td>
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</tbody>
</table>

* Only compatible with serial numbers above 3050-101213

Related Information

Sound Intensity Probe Kit
For further related information please see the 'Sound Intensity Probe Kit – Type 3599' page on bksv.com.
Charge Accelerometer: UA-2105

Front Panel UA-2105 is intended for use with charge accelerometers. It features six slots for direct mounting of Charge to CCLD Converter Type 2647.

**Uses**
- Charge accelerometers

**Features**
- 6 x slots for Charge to CCLD Converter Type 2647
- LED indicators: input, output, overload

Related Information

**Charge to CCLD Converter Type 2647**
For further related information please see the 'Charge to CCLD Converter – Type 2647' page on bksv.com.

12-channel High Density: UA-2107

LAN-XI Front Panels UA-2107-120 and UA-2107-A-120 feature 12 compact connectors. Both panels are fully compatible with LAN-XI Module Type 3053 with 12 input channels. Note that UA-2107-120 is supplied with Type 3053 as default.

**Uses**
- General purpose sound and vibration measurements
- Direct voltage
- CCLD transducers: accelerometers, microphones and tacho probes
- Charge accelerometers (using Charge to CCLD Converter Type 2647)

**Features**

*UA-2107-120*
- 12 x SMB connectors
- LED indicators: input, overload, cable break

*UA-2107-A-120*
- 12 x Microdot (F) connectors
- LED indicators: input, overload, cable break

**Compatibility**

<table>
<thead>
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<th>Front Panel/Order No.</th>
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<td>UA-2107-A-120</td>
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</table>
Triaxial Accelerometer: UA-2108

The UA-2108 family features 4-pin connectors for use with Triaxial Cable AO-0528.

Using this front end/cable combination reduces the number of cables by two thirds when working with triaxial CCLD accelerometers.

**Uses**
- CCLD triaxial accelerometers

**Features**
- 2 or 4 × triaxial accelerometer connectors (4-pin)
- LED indicators: input, overload, cable break

Return to Overview.

**Compatibility**

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**Related Information**

Triaxial Accelerometers
For further related information please see the 'Accelerometers' page on bksv.com.
Front Panel UA-2109 features a 50-pin D-sub connector; it is primarily to be used for applications where customized, non-standard cables are required.

**Uses**
- General purpose sound and vibration measurements
- Direct voltage
- CCLD sensors: accelerometers, microphones and tacho probes
- Charge accelerometers (using Type 2647)

**Features**
- 1 x D-sub connector (50-pin)
- LED indicators: input, overload, cable break

Return to **Overview**.

**Compatibility**

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<th>Front Panel/Order No.</th>
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<tbody>
<tr>
<td>UA-2109-120</td>
<td>3053-B-120</td>
</tr>
</tbody>
</table>

**Related Information**

Note: Do not connect unused pins; they are for internal use only.

---

**Fig. 16**
UA-2109

**Fig. 17**
50-pin D-sub connector pinout
Auxiliary Connectors with 200 V Microphone Input: UA-2110

UA-2110 is an auxiliary front panel designed for applications combining auxiliary data with microphones that require 200 V polarization voltage.

It features four 7-pin LEMO connectors for 200 V microphones and/or angle encoders for high-speed tacho signals. It also has two 10-pin LEMO connectors for 8-channel auxiliary signal input.

The auxiliary channels are connected using aux. cable AO-0738-D-010.

**Uses**
- Low-frequency auxiliary data
- 200 V microphones
- General sound and vibration measurements
- Angle encoders/high-speed tacho signal

**Features**
- 4 × LEMO (7-pin) connectors
- 2 × LEMO (10-pin) auxiliary connectors
- LED indicators: input, overload, cable break

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
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**Related Information**

**Fig. 19**
7-pin LEMO connector pinout

**Fig. 20**
10-pin LEMO Aux. connector pinout
Auxiliary Connectors: UA-2111

UA-2111 is the default front panel on LAN-XI Module Type 3056-A-040. It features four BNC connectors for general purpose sound and vibration measurements and/or angle encoders for high-speed tacho signals. It also has two 10-pin LEMO connectors for 8-channel auxiliary signal input.

The auxiliary channels are connected using aux. cable AO-0738-D-010.

Uses
- Low-frequency auxiliary data
- General sound and vibration measurements
- Direct voltage
- Generator output
- CCLD sensors: accelerometers, microphones and tacho probes
- Charge accelerometers (using Type 2647)
- Angle encoders/high-speed tacho signal

Features
- 4 × BNC general purpose connectors
- 2 × LEMO (10-pin) auxiliary connectors
- LED indicators: input, overload, cable break

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
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<td>UA-2111-040</td>
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</tbody>
</table>

Related Information

Fig. 21
UA-2111

Fig. 22
10-pin LEMO Aux. connector pinout
The UA-2112 family features one and two multi-pin connectors for six array microphones. They are primarily intended for use with our array acoustic systems.

**Uses**
- Array acoustics

**Features**
- 1 or 2 × LEMO (7-pin) microphone array connectors
- LED indicators: input, overload, cable break

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2112-060</td>
<td>3050-A-060</td>
</tr>
<tr>
<td>UA-2112-120</td>
<td>3053-B-120</td>
</tr>
</tbody>
</table>

**Related Information**

For further related information please see the ‘Noise Source Identification’ page on bksv.com.
6-channel Input with Monitor Output: UA-2113

Front Panel UA-2113 provides buffered monitor output channels in parallel to the input channels. It allows input signals to be simultaneously fed into both the LAN-XI system and also a second system, for example, a recorder.

**Uses**
- Monitor outputs
- General sound and vibration measurements
- Direct voltage
- CCLD sensors: accelerometers and microphones

**Features**
- 6 × SMB connectors: general purpose input
- 6 × SMB connectors: monitor output
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2113-066</td>
<td>3050-A-060</td>
</tr>
</tbody>
</table>

**Related Information**

Note:
At input voltages greater than $10V_{\text{peak}}$, the monitor output will be clipped. You should therefore avoid using the monitor output when the LAN-XI module is in its extended $31.6V_{\text{peak}}$ input range.
The UA-2114 family is designed for use with Kulite® bridge transducers such as the LQ-080 series and the LQ-125 series, used in the aerospace industry for dynamic measurements on aircraft and in wind tunnels.

UA-2114 is supplied from ±5 V and delivers ±5 V excitation to the Kulite transducers. This gives the possibility of DC-coupling of the UA-2114 input amplifier, resulting in good noise performance at low frequencies (typically 8 nV/√Hz).

The lower frequency is set by the high-pass filters of the LAN-XI modules. DC-coupling down to zero is possible, but any DC offset from the transducers must be taken into account. A DC offset greater than about 10 mV will force the Dyn-X input into its upper range, resulting in loss of dynamic range.

The gain in the front-panel amplifier is 30 dB – optimized for the LAN-XI modules.

Note:
- The 30 dB gain has to be manually entered in the transducer database.
- UA-2114 is only intended for use with bridge transducers, and only with transducers that are self-powered.

Uses
- Kulite bridge transducers

Features
- 3, 4 or 6 × LEMO (7-pin) input connectors
- 2 × BNC generator output connectors on UA-2114-042
- Provides ±5 V excitation voltage to Kulite transducers
- Gain 30 dB – optimized for LAN-XI modules
- LED indicators: input, output, overload

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2114-030</td>
<td>3052-A-030</td>
</tr>
<tr>
<td>UA-2114-060</td>
<td>3050-A-060</td>
</tr>
<tr>
<td>UA-2114-042</td>
<td>3160-A-042 3050-A-060</td>
</tr>
</tbody>
</table>
Related Information

Fig. 29
Left: Kulite Bridge transducer
Right: 7-pin LEMO connector

Fig. 30
Block diagrams of:
Left: UA-2114-042
Right: UA-2114-060

Specifications – Dynamic Bridge Transducer UA-2114, Input

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0 – 102.4 kHz (–0.15 dB @ 20 kHz, –0.5 dB @ 102.4 kHz), typical</td>
</tr>
<tr>
<td>Bridge Supply</td>
<td>±5 V DC ± 4.5% @ max. 10 mA per channel</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>&gt;3 MΩ, protection against transients</td>
</tr>
<tr>
<td>Differential Gain</td>
<td>30.04 dB ± 0.05 dB @ 1 kHz</td>
</tr>
<tr>
<td>Max. Input without Overload</td>
<td>±0.15 V peak</td>
</tr>
<tr>
<td>Max. Input without Damage</td>
<td>±5 V peak</td>
</tr>
<tr>
<td>Noise Floor</td>
<td>Typical 8 nV/√Hz</td>
</tr>
<tr>
<td>Excitation Voltage Overload Indication</td>
<td>If excitation voltage on one of the channels is overloaded (too much current drawn), all channels will be indicated as overloaded as the excitation voltage is common for all channels. Overload indication for signal overload as for LAN-XI modules</td>
</tr>
</tbody>
</table>

With associated LAN-XI module:
UA-2116-120 allows up to 12 charge-type transducers to be mounted directly to the LAN-XI front end, simplifying the setup and performance.

Ideal for high-channel-count charge accelerometer applications; in power-train applications; and for combustion-pressure monitoring on up to 12-cylinder engines.

The charge input front panel has 12 integrated charge amplifiers each with a fixed gain of 0 dB (–1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Using this front panel with Brüel & Kjær analysis software will require additional set up in the software, as when using an external charge to CCLD converter, such as Type 2647.

**Uses**
- Charge type sensors: accelerometers, pressure sensors, hydrophones
- Combustion-pressure monitoring on up to 12-cylinder engines
- High-channel-count charge accelerometer applications

**Features**
- 12 × Microdot (F) connectors
- Built-in charge amplifiers 0 dB (–1 mV/pC) with 0.1 Hz high-pass filter
- LED indicators: input, overload

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2116-120</td>
<td>3053-B-120</td>
</tr>
</tbody>
</table>

**Related Information**

With associated LAN-XI module:
1-channel Input with 1-channel Output: UA-2117-011

**Fig. 33**

UA-2117-011 is the default front panel for 200 kHz LAN-XI Module Type 3161-A-011.

**Uses**
- High-frequency sound and vibration measurements
- Underwater acoustics applications
- High-energy impact measurements
- High-frequency system excitation and transducer calibration

**Features**
- Input connectors:
  - 1 x BNC (F) for direct/CCLD
  - 1 x 7-pin LEMO for 200 V mic
  - 1 x TNC (F) for charge
- Output connectors: 2 x BNC (F) for generator and monitor
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2117-011</td>
<td>3161-A-011</td>
</tr>
</tbody>
</table>

**Related Information**

With associated LAN-XI module:
Figure 35
UA-2118-022 is a dedicated analogue interface for headphone testing allowing simultaneous testing of left and right earphones. A three-position switch on the front panel sets the output of Generator 1 to left, right or both earphones.

**Uses**
- Testing of headphones, small loudspeakers and receivers

**Features**
- Integrated $2 \times 100$ mW amplifier for direct drive of headphones and small loudspeakers
- $0$ dB output gain eliminates the need to take external gain factor into account
- Integrated load impedance feedback ($1$ V/A) on channels 3 and 4
- Simultaneous testing of left and right headphones
- $2 \times$ LEMO (7-pin) input connectors
- $1 \times 6.35$ mm ($1/4''$) TRS(F) connector (three-contact phone/headphone stereo jack connector)
- LED indicators: input, overload

**Return to Overview.**

### Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2118-022</td>
<td>3160-A-042</td>
</tr>
</tbody>
</table>

**Related Information**

Please note that the serial impedance of a jack connector can be significant, and depends heavily on the build quality of the connector. When including such a connector in the measurement path, the measurements should be compensated for the influence of the added impedance of the connector.

**Distortion (All Harmonics) – Typical Values**

<table>
<thead>
<tr>
<th>$\Omega$</th>
<th>$100 \text{ mW}_{\text{peak}}$</th>
<th>$10 \text{ mW}_{\text{rms}}$</th>
<th>Unclipped Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4$</td>
<td>$&lt;-65$ dB</td>
<td>$&lt;-80$ dB</td>
<td>$0.65 \text{ V}_{\text{peak}}$</td>
</tr>
<tr>
<td>$8$</td>
<td>$&lt;-70$ dB</td>
<td>$&lt;-90$ dB</td>
<td>$1.5 \text{ V}_{\text{peak}}$</td>
</tr>
<tr>
<td>$16$</td>
<td>$&lt;-75$ dB</td>
<td>$&lt;-90$ dB</td>
<td>$2.5 \text{ V}_{\text{peak}}$</td>
</tr>
<tr>
<td>$32$</td>
<td>$&lt;-80$ dB</td>
<td>$&lt;-90$ dB</td>
<td>$2.5 \text{ V}_{\text{peak}}$</td>
</tr>
<tr>
<td>unloaded</td>
<td></td>
<td></td>
<td>$3.5 \text{ V}_{\text{peak}}$</td>
</tr>
</tbody>
</table>

**Typical Output Impedance:** $< 0.05 \Omega$
UA-2119-060 allows up to six differential charge accelerometers, such as Type 8347-C, to be connected directly to the LAN-XI front end.

The front panel has six integrated differential charge amplifiers each with a fixed gain of 0 dB (–1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Using this front panel with Brüel & Kjær analysis software will require additional set up in the software, as when using an external charge to CCLD converter, such as Type 2647.

**Uses**
- Differential charge accelerometers
- Environments with high levels of electromagnetic noise
- Applications where good ground connections are difficult to achieve

**Features**
- 6 × 2-pin TNC (M) connectors
- Built in differential charge amplifiers 0 dB (–1 mV/pC) with 0.1 Hz high-pass filter
- High immunity to electromagnetic interference (EMI)
- LED indicators: input, overload

Return to Overview.

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2119-060</td>
<td>3050-A-060</td>
</tr>
</tbody>
</table>

**Related Information**

![Diagram of UA-2119-060 with associated LAN-XI module]

Note: Inverts signal

With associated LAN-XI module:
UA-2120-060 allows up to six charge type transducers to be connected directly to the LAN-XI front end, simplifying the setup and the performance.

The front panel has six integrated charge amplifiers each with a fixed gain of 0 dB (–1 mV/pC) and a fixed high-pass filter of 0.1 Hz. Using this front panel with Brüel & Kjær analysis software will require additional setup in the software as when using an external charge to CCLD converter, such as Type 2647.

**Uses**
- Charge-type sensors: accelerometers, pressure sensors, hydrophones

**Features**
- 6 × TNC (F) connectors
- Built-in charge amplifiers 0 dB (–1 mV/pC) with 0.1 Hz high-pass filter
- LED indicators: input, overload

Return to Overview.

### Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2120-060</td>
<td>3050-A-060</td>
</tr>
</tbody>
</table>

**Related Information**

Fig. 40
Block diagram of UA-2120-060

With associated LAN-XI module:
Bridge Sensors: UA-2121-030

UA-2121-030 is the default front panel for LAN-XI Bridge Module Type 3057-B-030. It features 15-pin D-sub connectors which allow individual configurations of completion resistors to be made directly on the cable plug.

Uses
- Bridge sensor measurements:
  - 1/1, 1/2, 1/4 bridge strain gauges
  - Strain gauge based sensors (force, mass, torque)
  - Piezoresistive accelerometers and pressure sensors
  - Variable capacitance accelerometers
- General sound and vibration measurements:
  - CCLD sensors: accelerometers, microphones, and tacho probes
  - Direct voltage signals

Features
- 3 x 15-pin D-sub connectors
- LED indicators: input, overload, cable break

Return to Overview.

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2121-030</td>
<td>3057-B-030</td>
</tr>
</tbody>
</table>

Related Information

1. Cal1 (floating)  Shunt calibration resistor, terminal 1
2. Exc–            Bridge excitation return
3. Exc+            Bridge excitation output
4. Not used
5. In+             Non-inverting input
6. TEDS            TEDS communication
7. RS–             Remote sense low side
8. RS+             Remote sense high side
9. For future use
10. In–            Inverting input
11. Cal2 (floating) Shunt calibration resistor, terminal 2
12. QB midpoint     Midpoint of quarter bridge completion (tied to 3 via completion resistor when enabled)
13. Mon–           Monitor return
14. Mon+           Monitor output
15. GND            Analogue ground
Shield             Analogue ground

With associated LAN-XI module:
Array Front Panel UA-2145-D for 11 LAN-XI modules is intended for use with hand-held microphone arrays together with a LAN-XI Frame Type 3660-D.

**Uses**
- Noise source identification using mapping techniques in conjunction with acoustic holography calculations, conformal mapping calculations and a 3D positioning system
- Hand-held arrays such as Type 3662-A-001 (single layer, without microphones, $8 \times 8$, 25 mm spacing, 5 m cable) and Type 3662-A-002 (double layer, without microphones, $8 \times 8$, 25 mm spacing, 5 m cable)
- One to eleven, 12-channel input modules Type 3053-B-120

**Features**
- Enables up to 132 signal channels to be connected to a LAN-XI D-frame in seconds by means of a single (zero insertion force) connector
- $4 \times$ BNC sockets and $8 \times$ SMB sockets for reference signals on the eleventh module
- LED indicators: input, output, overload, cable break

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-2145-D</td>
<td>One to eleven Type 3053-B-120 modules (and Battery Module Type 2831-A)</td>
</tr>
</tbody>
</table>

**Related Information**

*Noise Source Identification with Acoustical Array*

For details of hand-held arrays see the table in the specifications of BP 2144. For further related information please see the ‘Noise Source Identification with Acoustical Array’ page on bksv.com.
Generator, General Purpose: UA-3100-042

Fig. 46
UA-3100-042

UA-3100-042 is designed for use with LAN-XI Module Type 3160-A-042 with four input channels and two generator output channels.

Uses
- General sound and vibration measurements
- Direct voltage
- CCLD transducers: accelerometers, microphones and tacho probes
- Generator output

Features
- 4 × BNC input connectors
- 2 × BNC output connectors
- Output silent on start-up
- LED indicators: input, output, overload, cable break

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-3100-042</td>
<td>3160-A-042</td>
</tr>
</tbody>
</table>

CAN Bus Module Front Panel: UA-3101-080

Fig. 47
UA-3101-080

UA-3101-B-080 is the default front panel for LAN-XI Module Type 3058-B-080, which has two independent CAN Bus input connectors. This front panel is ideal for automotive noise, vibration and harshness (NVH) applications.

Uses
- CAN Bus applications
- Sound quality metrics
- General sound and vibration measurements
- CCLD sensors: accelerometers, microphones and tacho probes

Features
- 8 × SMB (M) connectors for transducer signal input
- 2 × 8-pin LEMO (F) connectors for CAN Bus input
- Supports HATS (head and torso simulator) with AES3 balanced input using two channels (3 + 7 and 4 + 8, SMB connectors)
- LED indicators: input, overload, cable break

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-3101-080</td>
<td>3058-B-080</td>
</tr>
</tbody>
</table>
Generator, for 200 V Microphone: UA-3102-042

UA-3102-042 is designed for use with LAN-XI Module Type 3160-A-042 with four input channels and two generator output channels.

**Uses**
- Microphones requiring 200 V external polarization
- General sound and vibration measurements
- Direct voltage
- CCLD sensors: accelerometers, microphones and tacho probes
- DC responding accelerometers

**Features**
- 4 × LEMO (7-pin) input connectors
- 2 × BNC output connectors
- Output silent on start-up
- LED indicators: input, output, overload, cable break

Return to Overview.

**Compatibility**

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<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
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</thead>
<tbody>
<tr>
<td>UA-3102-042</td>
<td>3160-A-042</td>
</tr>
</tbody>
</table>

**Related Information**

Fig. 48
UA-3102-042

Fig. 49
7-pin LEMO connectors, seen from front of panel
UA-3111-060 allows up to six CVLD accelerometers to be connected directly to the LAN-XI front end, simplifying setup and optimizing performance. Note that using this front panel with Brüel & Kjær analysis software will require additional set up.

**Uses**
- CVLD accelerometers
- Environments with high levels of electromagnetic noise
- High immunity to electromagnetic interference (EMI)

**Features**
- $6 \times 2$-pin TNC (M) connectors
- LED indicators: input, overload

**Compatibility**

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-3111-060</td>
<td>3050-A-060</td>
</tr>
</tbody>
</table>

**Related Information**

*Fig. 50 UA-3111-060*

*Fig. 51 Block diagram of UA-3111-060*

*Fig. 52 2-pin TNC pinout*
Front panel UA-3112-030 extends the use of LAN-XI Bridge Module Type 3057, enabling measurements with CCLD transducers.

For each input channel, there is a buffered monitor output in parallel so input signals can be simultaneously fed into both the LAN-XI system and a second system, for example, a recorder.

Uses
- General purpose sound and vibration measurements
- Direct voltage
- CCLD sensors: accelerometers, microphones and tacho probes

Features
- 3 × BNC connectors: general purpose input
- 3 × SMB connectors: monitor output
- LED indicators: input, output, overload, cable break

Return to Overview.

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>UA-3112-030</td>
<td>3057-B-030</td>
</tr>
</tbody>
</table>

Related Information

With associated LAN-XI module: ⚡ ⚡ ⚡ 🌐 🌐 🌐
UA-3121-030 is for use with LAN-XI Bridge Module Type 3057. It features 15-pin D-sub connectors which allow individual configurations of completion resistors to be made directly on the cable plug.

UA-3121-030 has three input channels with buffered monitor output channels in parallel. Each input channel has a 15-pin D-sub connector for bridge sensor input and two Microdot connectors for differential charge input. As both inputs are connected to the same channel, you cannot use them simultaneously.

Uses
- Bridge sensor measurements
  - 1/1, 1/2 and 1/4 bridge strain gauges
  - Strain gauge based sensors (force, mass and torque)
  - Piezoresistive accelerometers and pressure sensors
  - Variable capacitance accelerometers
- General sound and vibrations measurements using:
  - CCLD sensors
  - Direct voltage signals
  - Charge accelerometers
  - Differential charge accelerometers
- Environments with high levels of electromagnetic noise
- Applications where good ground connections are difficult to achieve

Features
- 3 channels, each with:
  - 1 × 15-pin D-sub connector: bridge sensor input
  - 2 × Microdot (F) connectors: differential charge input
  - 1 × SMB connector: monitor output
- High immunity to electromagnetic interference (EMI)
- LED indicators: input, output, overload, cable break

Compatibility

<table>
<thead>
<tr>
<th>Front Panel/Order No.</th>
<th>Fully Compatible LAN-XI Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA-3121-030</td>
<td>3057-B-030</td>
</tr>
</tbody>
</table>

Related Information

The pinout for the D-sub connector is shown in Fig. 42, and the pin connections of adaptor UA-0275 are shown in Fig. 43.

With associated LAN-XI module:
Compliance with Standards

Where stated the front panels and associated LAN-XI modules comply with the following standards:

- The CE marking is the manufacturer’s declaration that the product meets the requirements of the applicable EU directives.
- WEEE mark indicates compliance with the EU WEEE Directive.
- RCM mark indicates compliance with applicable ACMA technical standards – that is, for telecommunications, radio communications, EMC and EME.
- China RoHS mark indicates compliance with administrative measures on the control of pollution caused by electronic information products according to the Ministry of Information Industries of the People’s Republic of China.