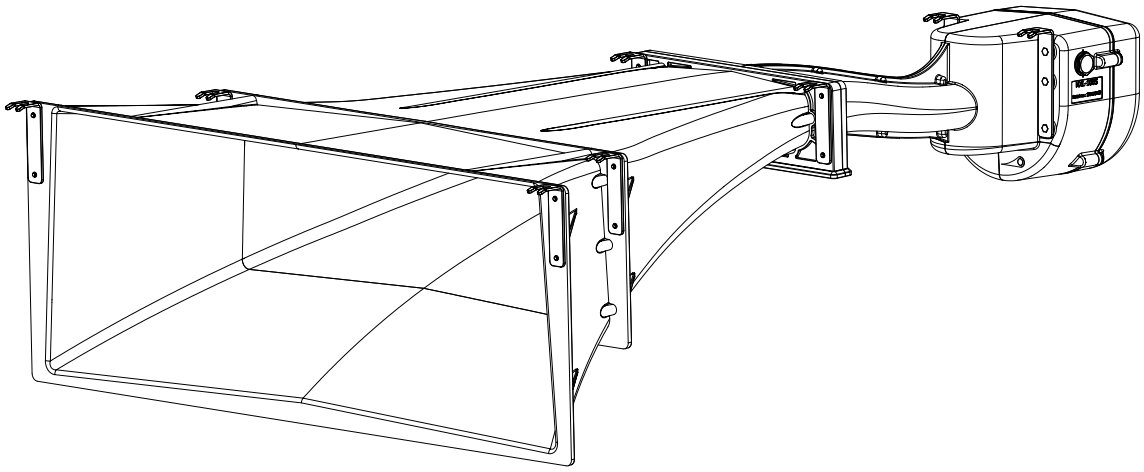
MANUAL

Product	NXL-100S NXL-100S-RH	**Part numbers**	0200201, 0200202, 0200203, 0200204, 0200205 and 0200206
Document version	1.0	**Document status**	Release
Notes	Full Height and Reduced Height (RH) product variants 0200201 = Standard with cable gland on left side (front view) 0200202 = RH variant as 0200201 0200203 = Optional Hirschmann CA 3 GD* on left side (front view) 0200204 = RH variant as 0200203 0200205 = Optional Hirschmann CA 3 GD on right side (front view) 0200206 = RH variant as 0200205		

MAINTENANCE INSTRUCTIONS

This document describes the general maintenance and service instructions for the NXL-100S and NXL-100S-RH advanced tunnel horn loudspeaker.



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* Product names such as Hirschmann CA 3 GD mentioned in this document are the property of their respective owners. The use of these names is solely for identification and reference purposes. NXD-Audio BV does not claim any ownership of the trademarked names mentioned.

Regular Preventive Maintenance

Regular preventive maintenance intervals

1.	Interval	Once per 12 months (on-site). - Interval is depending on the environmental classification with respect to dust deposit. - After assessing initial inspection results, the interval might be adapted according to the actual dust deposit.

Regular preventive maintenance details

1.	Filter inspection	Inspect the pollution of the internal filter, either
		- Optically:
		  - Inspect after disassembly of the filter, or
		  - In-situ inspection with camera from front.
		- Measuring:
		  - Detailed impedance vs. frequency measurement, or
		  - Nearfield SPL vs. frequency measurement.

2.	Filter cleaning or replacement	Clean or replace the filter mesh assembly or replace the complete filter assembly. - Refer to the *NXL-100S Filter Service* instruction video or manual available on nxd.audio/downloads for further details. - Always replace the filter mesh assembly in case of damage to the mesh or the gaskets. - Always replace the filter cover in case of damage to the cover or gasket. - Always replace the filter frames in case of damage to the frames or gaskets. - Always replace the filter mesh assembly at least every 2 years. - Do not apply lubricants to the gaskets.
3.	Mechanical inspection	Mechanical/safety inspection. - Inspect the enclosure for general damage and replace any seriously damaged parts. - Stress cracking optical inspection at/near mounting points, see section Important Inspection Points on page 5. - Remove any excessive dust or objects from the front/horn mouth. Use a soft brush, cloth or vacuum cleaner.

Major Preventive Maintenance

Major preventive maintenance (refurbishment) intervals

1.	Interval	Once per 10 years (refurbishment at factory).

Major preventive maintenance (refurbishment) details

1.	Preparation on-site	- Removal of the device. - Initial cleaning.
2.	Preparation	- Disassembly of the filter cover and filter assembly. - Disassembly of the rear cover and subframe assembly (compression driver/electronics module).
3.	Cleaning and inspection	- High-pressure cleaning of the enclosure. - Enclosure inspection for damage/cracks. - Inspection of the electronics and transformer.
4.	Refurbishment	- Compression driver disassembly, parts inspection and cleaning. - Compression driver assembly and performance check on Plane Wave Tube (PWT). - Verifying the performance of the subframe assembly on PWT (frequency response, impedance, protection operation/calibration etc.). - Inspection/replacement of the filter frames. - Replacement of the filter mesh assembly. - Replacement of the filter gaskets/seals. - Replacement of the rear cover gasket. - Inspection/replacement of gland and vent. - Replace fasteners when significantly degraded. - Cleaning of connector pins for Hirschmann variants. - Inspection/replacement of O-ring for Hirschmann variants. - Verifying the performance of the total device (frequency response, impedance, protection operation etc.).
5.	Finalization on-site	- Mounting of the device. - In-situ performance testing.

Corrective Maintenance

1.	Mechanical	The NXL-100S(-RH) is a highly modular product. Replace the related part(s) in case of damage, see section Spare parts on page 7.
2.	Electrical	In case of an electrical failure, the subframe driver/electronics assembly should be replaced. - The driver and electronics are a calibrated entity (related to the operation of the internal protection). - Do not replace only the driver or only the electronics without re-calibration.

Cleaning

1.	No cleaning	Apart from the maintenance related work items as described above, no further cleaning is required.
2.	Cleaning agents	Avoid the use of (aggressive) cleaning agents, these may lead to stress cracking of the enclosure material.
3.	No frontal water ingress	Avoid frontal exposure to (high-pressure or high-flow) cleaning equipment.
4.	Cleaning Filter	In case of direct exposure to (high-pressure or high-flow) cleaning equipment (front/horn mouth ingress) the Cleaning Filter should be placed during cleaning to avoid water ingress to sensitive parts of the device. - Installing the Cleaning Filter requires the removal of the existing filter and placement of the Cleaning Filter. - Refer to the *NXL-100S Filter Service* instruction video or manual available on nxd.audio/downloads for further details.

Important Inspection Points

1.	Safety related	Inspect all mounting brackets and fasteners. Inspect the enclosure for indications of stress cracking at/near the location of the mounting brackets and fasteners. Inspect the screws that mount the horn front section to the mid section. - For NXL-100S only, not for the RH variant. - Refer to the *NXL-100S Assembly* instruction video or manual available on nxd.audio/downloads for further details.
2.	Ingress related	Inspect the following for damage that could lead to water/dust ingress: - Filter mesh. - Filter cover. - Mid brackets (mid to rear joint). - Rear cover. - Gland. - Vent.

Test Procedure After Maintenance

1.	Torque	Validate torque values after removing or unscrewing fasteners. - Refer to the *NXL-100S Mounting* instruction video or manual available on nxd.audio/downloads for further details.
2.	Covers	Make sure the filter cover and rear cover are replaced properly if they have been removed during maintenance.
3.	Load monitoring	Verify that there are no loudspeaker related errors reported on the on-site monitoring system.
4.	Normal operation	Verify normal loudspeaker operation.

Fault Checking

Numbered work items for fault checking

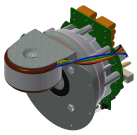
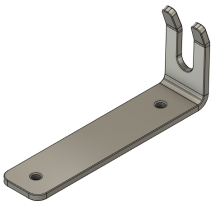
1.	Front-end	Check front-end/amplifiers and wiring/junction boxes.
2.	Internal wiring	Remove rear cover and check wiring termination. - Refer to the *NXL-100S Connect & Configure* instruction video or manual available on nxd.audio/downloads for further details.
3.	Tap	Check tap jumper (see above mentioned video/manual for details).
4.	PRAEOL	Check PRAEOL jumper (see above mentioned video/manual for details).
5.	Pollution	Check pollution of internal filter. - Refer to the *NXL-100S Filter Service* instruction video or manual available on nxd.audio/downloads for further details.
6.	Mounting	Check mounting position/environment, no acoustically blocking objects in or near horn mouth.
7.	HF levels	Check front-end/amplifiers stability or large (HF) pilot tone drive levels.
8.	Temperature	Check maximum ambient temperature.
9.	Subframe damage	Internal damage due to water/dust ingress, remove subframe and inspect.
10.	Subframe fault	Possible fault with compression driver or electronics, replace subframe.

Fault checking details and corrective actions

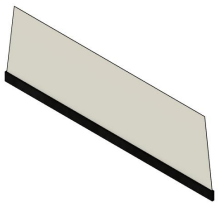
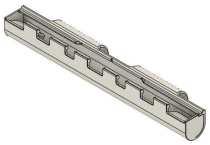
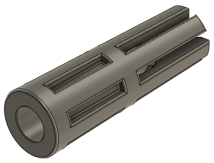
1.	No sound	Work items 1, 2, 3, 9, 10. The work items are listed in the table above.
2.	SPL/STI too low	Work items 1, 2, 3, 5, 9, 10.
3.	Load monitoring errors	Work items 1, 2, 3, 4, 10.
4.	Early excursion protection activation	Work items 6, 9, 10.
5.	Early thermal protection activation	Work items 7, 8, 10.

Recommended Spare Parts And Service Parts

Spare parts

1.		800270009	NXL-100S Filter mesh/gaskets assembly
2.		800270010	NXL-100S Filter assembly
3.		600299501	NXL-100S Driver subframe assembly
4.		301700211	NXL-100S Bracket front 88degrees SS316
5.		800270040	NXL-100S Retention strap for rear cover

SERVICE TOOLS

1.		800270045	NXL-100S Cleaning filter Mylar/gaskets assembly
2.		330100210	NXL-100S Cleaning filter cover
3.		330100201	Tool nylon for 4 mm hex key for cylinder head DIN 912 M5

Document Revision

0.1	03-03-2025	Preliminary version.
1.0	26-01-2026	Start version.

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