

XR Series

1500
2000
2500
4000

BITTNER
AUDIO



Fixed Installations
Touring
Cinema & Live Theaters
Signal Processing



New Horizons:

A lightweight with enormous power output. Combined with digital signal processing. That's what we call flexibility! Locally controlled or completely networked. No matter what the requirements are.

The integrated powerful digital signal processor (DSP) and controller allows for a troublefree and easy adjustment to any acoustical environment.

With wear-free digital potentiometers, sequential remote power on, alive contacts for easy supervision, computer controlled monitoring.

XR - the new definition of Intelligent Power.

Easy Connection



The NA-1 USB to RS-485 converter allows control and monitoring of Bittner XR amplifiers with Bittner's DSP Software by a PC. No additional driver is needed. Galvanic isolation between the amplifiers and the PC provides potential-free signal transduction.

- High Tech SMT Design
- Digital Signal Processor
- Excellent sound and superior impulse response
- Protection Circuits: DC, LF, HF, Thermal, Short Circuit, Current Limiter, 3 ms Muting Delay
- PHOENIX/Speakon
- High-End Switched Power Supply with Power Factor Correction
- LED Indicators for SIGNAL, CLIP, PROTECT, POWER
- Temperature controlled, variable speed low noise fans
- Digital wear-free Volume Controls (can be operated manually)
- Stereo/Bridged/Parallel Mode
- Softstart
- Sequential Remote Power On
- Alive Contact
- Paging Input
- Monitor Output
- SXL Dataport
- Perfect Weight-to-Power ratio
- 3 Years Warranty

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Connectors and Controls of the rear panel

Audio Inputs	XLR with 1/4" mono jack (Neutrik Combo) Contact 8 to 12 of a 12-pin PHOENIX connector
Loudspeaker Outputs.....	SPEAKON and high current 4-pin PHOENIX connector
Alive Contacts.....	Contact 1 to 3 of a 12-pin PHOENIX connector. Function can be used as open or closed contact.
Volume Controls.....	2 digital potentiometers with 16 steps each: -90, -78, -66, -54, -42, -30, -24, -18, -15, -12, -9, -6, -3, -2, -1, 0 dB
Remote Power On.....	Contact 4 to 7 of a 12-pin PHOENIX connector. +12V switches the amp on, -12V switches it off. The incoming voltage is forwarded to the next amp after a delay to create a daisy chain.
DIP Switch with 8 switches.....	Switch 1 to 3: Sets the address of amp if connected to an SXL. Switch 1 to 6: Sets the address of amp if connected to RS485. Switch 7 to 8 set the mode of amplifier channels: STEREO, PARALLEL or BRIDGED
SXL Dataport.....	15-pin Sub-D Connector
DSP Dataport	RS-485, 2 RJ-45 jacks (8-pin) paralleled 2 LEDs Rx and Tx
Power	Power switch, 230 V cord, fuse

DECLARATION OF CONFORMITY

We declare that this product is in accordance with EMC regulation 89/336/EEC and meets the requirements of the product norm EN-55013 (emission), and EN-55020 (immision).

All Specifications Subject to Change Without Notice

All Specs under www.bittner-audio.com

Datatable



			Basic				XB				XR				4Xi / 4Xe	
			200	400	800	1200	400	800	1600	2500	1500	2000	2500	4000	1200	2000
Channels			2	2	2	2	2	2	2	2	2	2	2	2	4	4
Class			AB	AB	AB	AB	AB	AB	H	H	H	H	H	H	H	H
Burst per Channel 1 kHz	W	8 Ω	100	180	290	500	230	350	570	700	530	590	700	850	630	820
		4 Ω	130	250	490	840	360	530	960	1130	880	985	1130	1360	1000	1300
		2 Ω	---	---	---	---	---	---	1250	1570	1220	1340	1570	1950	1400	2000
Output Power per Chan. 20 Hz - 20 kHz 0.1% THD	W	8 Ω	80	125	230	380	170	270	460	570	420	460	570	720	540	700
		4 Ω	105	170	330	610	270	410	760	930	680	730	920	1130	890	1160
		2 Ω	---	---	---	---	---	---	1020	1200	940	1030	1170	1700	1150	1650
Output Power per Chan. 1 kHz / 1% THD	W	8 Ω	85	130	240	400	180	290	490	620	440	490	610	780	600	770
		4 Ω	115	180	350	650	290	430	820	1020	740	790	1000	1230	980	1280
		2 Ω	---	---	---	---	---	---	1120	1310	1020	1130	1290	1810	1260	1820
Output Power bridged 20 Hz - 20 kHz 0.1% THD	W	16 Ω	160	250	460	760	340	540	890	1120	840	920	1040	1440	1030	1350
		8 Ω	210	340	660	1220	540	800	1500	1850	1360	1460	1840	2220	1710	2160
		4 Ω	---	---	---	---	---	---	2000	2400	1880	2060	2340	3300	2270	3140
Frequency Response Full Power	dB	20 Hz	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		20 kHz	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
THD 20 Hz - 20 kHz 10 dB below Full Power	%	<	0.06	0.05	0.06	0.02	0.03	0.03	0.01	0.01	0.02	0.02	0.02	0.03	0.02	0.02
THD 1 kHz Full Power	%	<	0.08	0.06	0.08	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.03
Signal-to-Noise Ratio	dB	>	102	103	103	103	103	105	103	103	103	103	103	103	100	100
Channel Separation	dB	>	85	85	85	85	85	85	80	80	80	80	80	80	75	75
Input Sensitivity	dBu		-1	0	+3	+6	+2	+3	+6	+6	+6	+6	+6	+6	+4	+4
Input Clipping	dBu		22	22	22	22	22	22	22	22	14	14	14	14	20	20
Input Impedance	kΩ		20	20	20	20	20	20	20	20	12	12	12	12	20	20
Voltage Gain	dB		28.8	31.4	34.1	36.4	32.4	34.2	30.5	30.5	30.5	30.5	30.5	30.5	34	34
Damping Factor		4 Ω	400	400	400	500	500	500	750	900	750	900	900	1200	700	700
Cooling Fans (temperature)		front	0	0	0	0	0	0	0	0	2	2	2	2	2	2
		back	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Idle Current	A		0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.4	0.5	0.5	0.5	0.5	0.7	0.7
Power Consumption 1/8 Load (Speech)	A	8 Ω	0.7	1.1	1.8	2.8	1.4	2.0	2.5	3.0	2.1	2.5	3.0	3.3	5.5	6.0
		4 Ω	1.0	1.6	2.8	4.5	1.9	3.2	4.0	4.7	3.3	4.0	4.8	5.2	8.5	9.0
		2 Ω	---	---	---	---	---	---	6.0	6.7	5.1	6.1	7.0	7.8	11.0	12.0
Power Consumption 1/3 Load (compressed Music)	A	8 Ω	1.0	1.6	2.7	4.2	2.0	2.9	4.9	6.0	4.5	4.9	5.9	7.7	11.0	14.0
		4 Ω	1.5	2.4	4.1	7.0	2.8	4.7	7.9	9.1	7.3	7.9	9.3	12.3	17.5	23.0
		2 Ω	---	---	---	---	---	---	10.5	12.6	10.1	10.7	11.2	16.7	21.5	26.5
Power Consumption Full Power	A	8 Ω	1.6	2.5	4.2	6.8	3.2	5.0	9.0	10.7	8.2	8.8	10.7	13.5	19.0	23.0
		4 Ω	2.4	3.7	5.6	11	5.1	7.7	15.1	17.4	13.7	14.6	17.5	22.2	>30	>30
		2 Ω	---	---	---	---	---	---	23.0	27.2	21.3	23.0	27.6	>30	>30	>30
Heat Dissipation (Idle)	W*		12	17	22	22	15	20	40	40	55	55	55	55	80	80
Heat Dissipation 1/8 Load (Speech)	W*	8 Ω	145	225	360	555	285	395	465	555	385	465	555	585	995	1035
		4 Ω	205	330	565	890	375	640	740	870	595	745	880	920	1515	1495
		2 Ω	---	---	---	---	---	---	1130	1250	945	1150	1320	1390	1965	1945
Heat Dissipation 1/3 Load (compressed Music)	W*	8 Ω	180	290	480	730	355	495	835	1020	775	835	995	1305	1810	2300
		4 Ω	280	445	735	1220	470	825	1325	1525	1235	1345	1540	2090	2850	3755
		2 Ω	---	---	---	---	---	---	1745	2115	1715	1785	1800	2755	3435	3910
Heat Dissipation Full Power	W*	8 Ω	215	340	535	845	415	630	1190	1380	1095	1145	1365	1700	2210	2520
		4 Ω	345	530	660	1360	650	1000	2000	2290	1820	1940	2225	2890	---	---
		2 Ω	---	---	---	---	---	---	3275	3900	3065	3260	4030	---	---	---
DSP			no				no				yes				no	
SXL Dataport			no				no				I ² C and RS485				RS485	
Remote Power On			no				yes				yes				yes	
Alive Contact			no				yes				yes				yes	
Backup Power		24 VDC	no				no				no				no	
Height	RU		2	2	2	2	2	2	2	2	2	2	2	2	2	2
Depth	mm		320	320	320	454	382	382	454	454	454	454	454	454	454	454
Weight (net)	kg		10	12	13	15	12	13	13	14	14	14	14	16	15	16
Power Requirements	V		210-240				210-240				210-240				210-240	
	Hz		50-60				50-60				50-60				50-60	

* 1 Watt = 3.412 BTU/Std. = 3600 Joule/Std.

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Datatable



			4X DUAL		8X			XV					XV DC		4DXV	
			400	600	100	200	400	200	400	600	1000	1600	500	1000	250	500
Channels			4	4	8	8	8	2	2	2	2	2	2	2	4	4
Class			AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	H	H	D	D
Burst per Channel 1 kHz	W	8 Ω	290	380	100	180	270	---	---	---	---	---	---	---	---	---
		4 Ω	450	630	130	250	490	---	---	---	---	---	---	---	---	---
Output Power per Chan. 20 Hz - 20 kHz 0.1% THD	W	8 Ω	230	290	80	120	190	---	---	---	---	---	---	---	---	---
		4 Ω	310	370	100	180	330	---	---	---	---	---	---	---	---	---
Output Power per Chan. 1 kHz / 1% THD	W	100 V	---	---	---	---	---	100	200	300	500	800	250	500	250	500
		8 Ω	240	310	90	130	200	---	---	---	---	---	---	---	---	---
Output Power bridged 20 Hz - 20 kHz / 0.1% THD	W	4 Ω	320	420	110	200	350	---	---	---	---	---	---	---	---	---
		16 Ω	460	600	160	260	360	---	---	---	---	---	---	---	---	---
Frequency Response Full Power	dB	8 Ω	620	820	200	320	460	---	---	---	---	---	---	---	---	---
		20 Hz	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		20 kHz	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
THD 20 Hz - 20 kHz 10 dB below Full Power	%	<	0.03	0.03	0.02	0.03	0.03	0.05	0.03	0.04	0.04	0.05	0.02	0.02	0.02	0.02
THD 1 kHz Full Power	%	<	0.04	0.04	0.03	0.04	0.04	0.07	0.06	0.06	0.06	0.07	0.03	0.03	0.03	0.03
Signal-to-Noise Ratio	dB	>	103	103	101	103	103	101	103	103	105	107	101	101	100	100
Channel Separation	dB	>	80	80	85	85	85	75	75	75	70	70	65	65	96	92
Input Sensitivity	dBu		+6	+6	-1	0	+2	-1	0	+2	+3	+6	+6	+6	0	0
Input Clipping	dBu		21	21	22	22	22	22	22	22	22	22	22	22	21	21
Input Impedance	kΩ		20	20	20	20	20	20	20	20	20	20	20	20	12	12
Voltage Gain	dB		31.4	32.4	28.8	31.4	34.1	42.3	42.3	42.3	42.3	42.3	42	42	42.2	42.2
Damping Factor		4 Ω	800	800	400	400	400	---	---	---	---	---	---	---	---	---
Cooling Fans (temperature)		front	2	2	0	2	2	0	0	0	0	0	1	1	3	3
		back	2	2	2	2	2	2	2	2	2	3	2	2	1	1
Idle Current	A	230 V	0.3	0.3	0.3	0.4	0.5	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5	0.5
		24 V DC	---	---	---	---	---	---	---	---	---	---	1.5	1.7	2.9	3.0
Power Consumption 1/8 Load (Speech)	A	8 Ω	2.1	2.6	2.9	4.4	7.0	---	---	---	---	---	---	---	---	---
		4 Ω	2.9	3.8	4.2	6.4	11.0	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	1.1	1.9	3.1	3.9	5.9	1.4	3.0	1.8	2.8
		24 V DC	---	---	---	---	---	---	---	---	---	---	8.7	19.1	11.8	18.6
Power Consumption 1/3 Load (compressed Music)	A	8 Ω	4.9	6.3	4.4	6.5	10.2	---	---	---	---	---	---	---	---	---
		4 Ω	6.9	8.9	6.4	9.5	16.3	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	1.6	2.8	4.7	5.8	9.0	3.2	4.7	3.3	6.0
		24 V DC	---	---	---	---	---	---	---	---	---	---	21.2	39.0	22.8	41.6
Power Consumption Full Power	A	8 Ω	8.4	11.0	6.7	9.5	14.7	---	---	---	---	---	---	---	---	---
		4 Ω	11.9	16.0	10.0	13.9	21.1	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	2.5	4.5	7.4	9.3	14.1	6.0	12.4	7.9	15.5
		24 V DC	---	---	---	---	---	---	---	---	---	---	38.6	84.0	49.7	78.6
Heat Dissipation (Idle)	W*		50	50	50	58	74	13	16	18	19	19	22	25	73	76
Heat Dissipation 1/8 Load (Speech)	W*	8 Ω	330	400	520	795	1270	---	---	---	---	---	---	---	---	---
		4 Ω	460	600	770	1145	1965	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	205	350	575	695	1040	235	510	260	355
Heat Dissipation 1/3 Load (compressed Music)	W*	8 Ω	630	800	650	870	1270	---	---	---	---	---	---	---	---	---
		4 Ω	875	1120	940	1345	2510	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	270	460	795	900	1385	515	675	385	645
Heat Dissipation Full Power	W*	8 Ω	875	1160	740	1030	1600	---	---	---	---	---	---	---	---	---
		4 Ω	1310	1800	1280	1440	1850	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	340	575	990	1025	1480	795	1670	735	1410
DSP			no			no				no			no		no	
SXL Dataport			I ²			I ²				no			no		no	
Remote Power On			yes			yes				yes			yes		yes	
Alive Contact			no			yes				yes			yes		yes	
Backup Power		24 V DC	no			no				no			yes		yes	
Height	RU		2	2	2	2	2	2	2	2	2	2	2	2	2	2
Depth	mm		454	454	454	454	454	382	382	382	382	382	454	454	454	454
Weight (net)	kg		19	20	18	20	22	15	17	19	33	38	15	18	14	14
Power Requirements	V		210-240		210-240		210-240					210-240		210-240		
	Hz		50-60		50-60		50-60					50-60		50-60		

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