

8X Series

100
200
400

BITTNER
AUDIO

*Intelligent
Power*

Fixed Installations
Cinema & Live Theaters
Boardrooms
Signal Processing



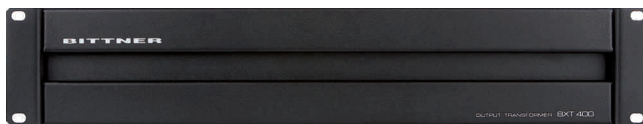
Setting the Standard

Customer wishes and requirements are the only standard for Bittner. It is our pride to realise them in the most innovative way imaginable.

Confidence is good - two separate power supplies are better. And wear-free digital potentiometers, an integrated Noise Gate per channel, sequential remote power on, alive contacts for every channel pair, computer control - how much intelligent power fits into such a compact design?

8X - that's multiple reliability. For the highest demands in sound and flexibility.

To handle a complete installation with only one dense power package - well, that's what we call a standard.



8XT - The Ideal Pair!

Simply connect an 8X amplifier to an 8XT multi-channel output transformer and you'll be ready to meet our European norms and standards.

- Up to 8x 400 W @ 4 in only 2 RU
- 4 separate amplifier modules
- Ideal for fixed installations:
Controls from the back panel only
- High Tech SMT Design
- Protection Circuits: DC, LF, HF, Thermal, Short Circuit, Current Limiter, 3 ms Muting Delay
- All inputs and outputs pluggable with PHOENIX connectors
- 2 High-End toroidal transformers
- 2 separate power supplies
- LED indicators for SIGNAL, CLIP, PROTECT, POWER
- Temperature controlled, variable speed low noise fans
- Softstart
- Sequential Remote Power On
- 4 Alive Contacts
- Digital wear-free Volume Controls (can be operated manually)
- SXL Dataport
- Noise Gate (switchable)
- 3 Years Warranty

8X Series



Connectors and Controls of the rear panel

- Audio Inputs 12-pin PHOENIX connector for channels 1-4 and 5-8 each
- Loudspeaker Outputs 8-pin PHOENIX connector for channels 1-4 und 5-8 each
- Volume Controls 8 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 5-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.
- Alive Contacts 1 contact for 2 channels each (1+2, 3+4, 5+6, 7+8). 3-pin PHOENIX connectors, function can be used as open or closed contact.
- DIP Switch with 4 switches Switch 1 + 2: Sets the address of amp if connected to an SXL.
Switch 3 + 4: Function of Noisegates:
OFF, ON (Threshold -54 dBu), ON (Threshold -48 dBu)
- SXL Dataport 15-pin Sub-D Connector
- Power Power switch, pluggable 230 V cord
- Power fuses 1 fuse for the channels 1-4 und 5-8 each

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 (immission).

All Specifications Subject to Change Without Notice
All Specs under www.bittner-audio.com

		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	
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	
Signal-to-Noise Ratio	dB	>	102	103	103	103	103	105	103	103	103	103	103	103	100	
Channel Separation	dB	>	85	85	85	85	85	85	80	80	80	80	80	75	75	
Input Sensitivity	dBu		-1	0	+3	+6	+2	+3	+6	+6	+6	+6	+6	+4	+4	
Input Clipping	dBu		22	22	22	22	22	22	22	14	14	14	14	20	20	
Input Impedance	kΩ		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	34	34	
Damping Factor		4 Ω	400	400	400	500	500	500	750	900	750	900	900	1200	700	
Cooling Fans (temperature)		front	0	0	0	0	0	0	0	0	2	2	2	2	2	
		back	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	
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	
		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	
		2 Ω	---	---	---	---	---	---	6.0	6.7	5.1	6.1	7.0	7.8	11.0	
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	
		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	
		2 Ω	---	---	---	---	---	---	10.5	12.6	10.1	10.7	11.2	16.7	21.5	
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	
		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	
		2 Ω	---	---	---	---	---	---	23.0	27.2	21.3	23.0	27.6	>30	>30	
Heat Dissipation (Idle)	W*		12	17	22	22	15	20	40	40	55	55	55	80		
Heat Dissipation 1/8 Load (Speech)	W*	8 Ω	145	225	360	555	285	395	465	555	385	465	555	585	995	
		4 Ω	205	330	565	890	375	640	740	870	595	745	880	920	1515	
		2 Ω	---	---	---	---	---	---	1130	1250	945	1150	1320	1390	1965	
Heat Dissipation 1/3 Load (compressed Music)	W*	8 Ω	180	290	480	730	355	495	835	1020	775	835	995	1305	1810	
		4 Ω	280	445	735	1220	470	825	1325	1525	1235	1345	1540	2090	2850	
		2 Ω	---	---	---	---	---	---	1745	2115	1715	1785	1800	2755	3435	
Heat Dissipation Full Power	W*	8 Ω	215	340	535	845	415	630	1190	1380	1095	1145	1365	1700	2210	
		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					
SXL Dataport			no				no				I ² C and RS485					
Remote Power On			no				yes				yes					
Alive Contact			no				yes				yes					
Backup Power	24 VDC		no				no				no					
Height	RU		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		
Weight (net)	kg		10	12	13	15	12	13	13	14	14	14	14	16		
Power Requirements	V		210-240				210-240				210-240					
	Hz		50-60				50-60				50-60					

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

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	---	---	---	---	---	---	---	---	---
		100 V	---	---	---	---	---	100	200	300	500	800	250	500	250	500
Output Power per Chan. 1 kHz / 1% THD	W	8 Ω	240	310	90	130	200	---	---	---	---	---	---	---	---	---
		4 Ω	320	420	110	200	350	---	---	---	---	---	---	---	---	---
Output Power bridged 20 Hz - 20 kHz / 0.1% THD	W	16 Ω	460	600	160	260	360	---	---	---	---	---	---	---	---	---
		8 Ω	620	820	200	320	460	---	---	---	---	---	---	---	---	---
Frequency Response Full Power	dB	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	
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		

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