Accuphase

6-CHANNEL POWER AMPLIFIER

PX-600

● Power amplifier with six identical channels ● Parallel push-pull output stages rated for 100 W x 6 (8 ohms) or 150 W x 6 (4 ohms) ● Bridged operation yields 300 W x 3 (8 ohms) ● Current feedback principle combines excellent sound quality with stable operation ● 700 VA Super Ring toroidal transformer

The solution for high-end multi-channel surround sound — six totally separate power units with identical performance deliver ample power: 150 W × 6 (4 ohms), 100 W × 6 (8 ohms). Robust power supply with large 700 VA toroidal transformer. Current feedback topology assures excellent high-frequency characteristics. Bridged mode produces stunning 300 W × 3 (8 ohms).

The CX-260/PX-600 is the long-awaited preamplifier/power amplifier combination from Accuphase designed from the ground up for multi-channel surround systems that aim for absolute top quality in picture and in sound. Accuphase's extensive experience in the realm of pure audio is in evidence everywhere in these components. Finally, the true audiophile can move beyond two-channel stereo and build a system that provides audiovisual enjoyment without making any sacrifices when it comes to sonic accuracy. Discover a new world where sound and image blend to form a home theater with true high-end performance.

The Power Amplifier PX-600 incorporates six identical high-performance amplifiers, making it possible to reproduce six channels with top-notch quality. The amazingly realistic sound stage and dynamic scale that can be created with the PX-600 go far beyond the limitations of conventional surround sound. The capability for bridged mode operation allows further upgrading of the unit to sustain, for example, three high-output channels. Various configurations ranging from one to six channels can be realized, combining flexibility with superb sonic performance.

Six totally separate power units with identical performance allow operation in one to six channels

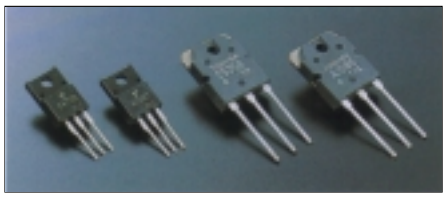
Figure 1 shows a block diagram of the PX-600. The six high-quality power units can reproduce for example the 5.1ch sound from a DVD player source with unprecedented realism and authority. It is also possible to bridge two blocks each, and to combine normal mode and bridged mode operation. This results in utmost flexibility, covering a range from 1 to 6 channels. For example, you can enjoy two-channel stereo in pure audio fashion or realize a high-class bi-amping setup. In combination with a multi-channel divider, 2-way or 3-way systems as well as subwoofer enhanced systems can also be configured.

∗ Do not stack the CX-260 and PX-600.

Parallel push-pull output stages for ample power

6-channel operation: 150 W × 6 (4 ohms), 100 W × 6 (8 ohms)
2-channel operation: 220 W × 2 (4 ohms), 130 W × 2 (8 ohms)

The output stage uses high-power transistors rated for a collector dissipation of 150 watts and collector current of 15 ampere. These devices offer extraordinarily wide and flat frequency response, and their forward-current transfer ratio linearity as well as their switching characteristics are excellent. These devices are arranged in a parallel push-pull configuration (Figure 2) and mounted to very large aluminum diecast heat sinks for efficient cooling.



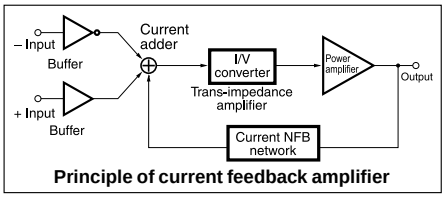
Bridged mode generates even more output muscle

3-channel bridged operation: 320 W × 3 (6 ohms), 300 W x 3 (8 ohms)
2-channel bridged operation: 420 W × 2 (6 ohms), 350 W x 2 (8 ohms)

For bridged mode, two amplifiers with opposite polarity are driven with a reverse-phase input signal, and the output of both amplifiers is combined before being sent to the speaker. This allows upgrading to even higher power, providing ample reserves even with very demanding source material.

Current feedback circuit topology prevents high-range phase shifts

The PX-600 uses the signal current rather than the more conventionally used voltage for feedback. The impedance at the current feedback



Principle of current feedback amplifier

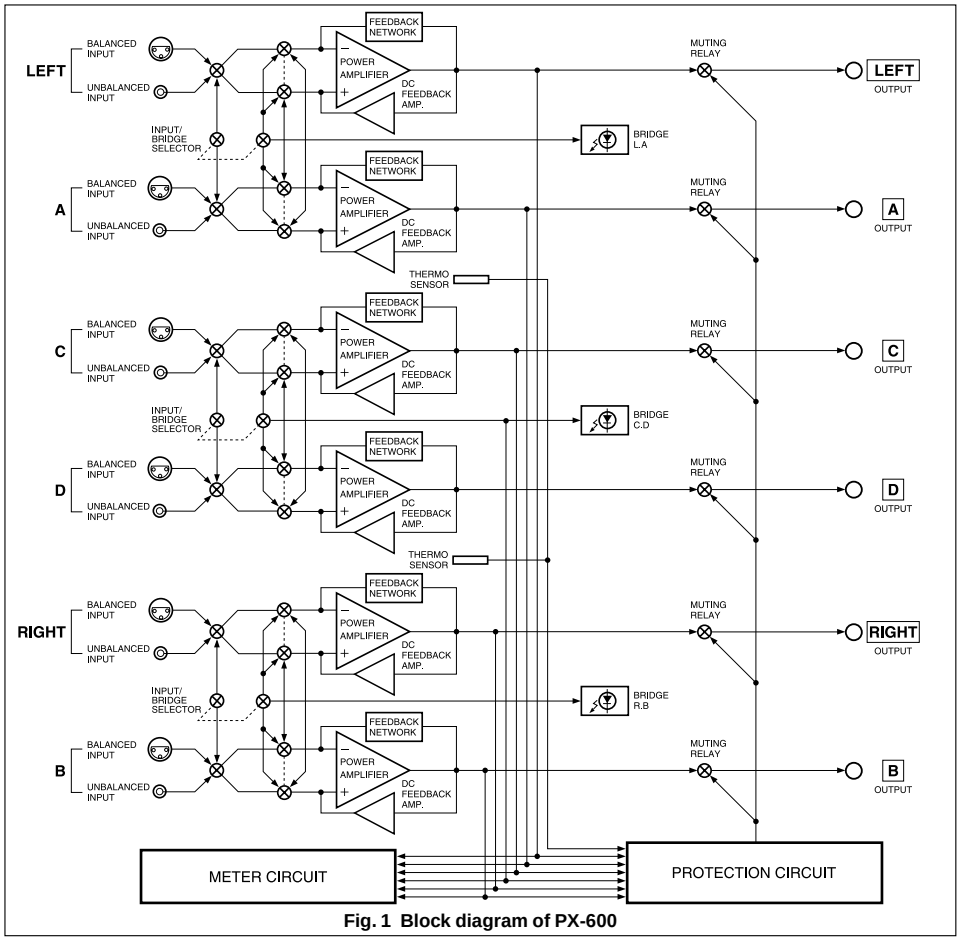


Fig. 1 Block diagram of PX-600

point is kept very low, which means that there is almost no phase shift. Phase compensation via negative feedback can therefore be kept to a minimum, resulting in excellent transient response and superb sonic transparency. Figure 3 shows frequency response for different gain settings of the current feedback amplifier. The graphs demonstrate that response remains uniform over a wide range.

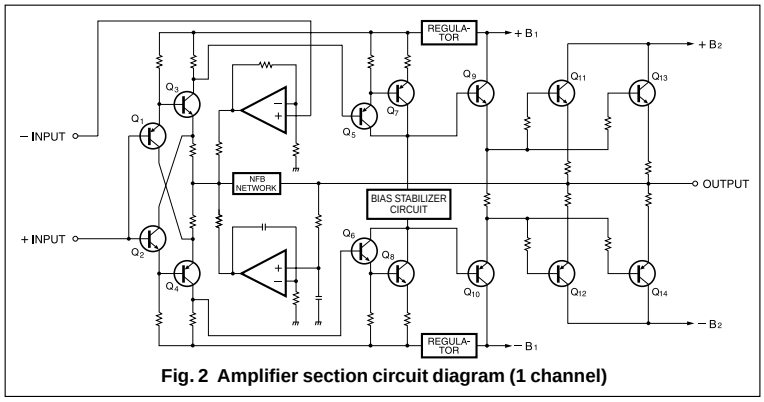


Fig. 2 Amplifier section circuit diagram (1 channel)

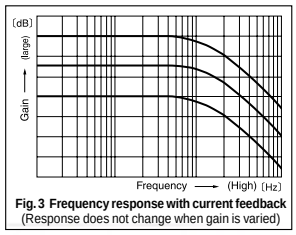
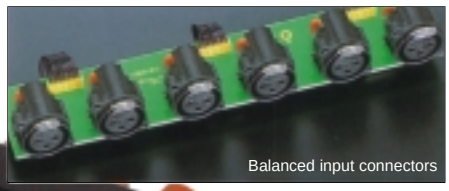


Fig. 3 Frequency response with current feedback
(Response does not change when gain is varied)

Robust power supply with large "Super Ring" toroidal power transformer and high filtering capacity

In any amplifier, the power supply plays a vital role as the source of energy for the entire unit. The PX-600 spares no efforts in this regard thanks to its large, highly efficient 700 VA toroidal power transformer. The transformer is housed in a non-resonant aluminum enclosure filled with damping material that has excellent heat transfer characteristics. This transformer type is ideal for high-power amplifiers, since it is characterized by very low impedance, compact size, and very high conversion efficiency. In addition, two enormous 47,000 µF electrolytic capacitors provide more than ample filtering capacity for the rectified current.

- **Three large analog power meters can be switched to show direct power readings for 6 channels. A meter operation/light on/off switch is also provided.**
- **Large speaker terminals**
- **Balanced connection protects against externally induced noise.**



Balanced input connectors

- Total of six channel power amplifier units (with parallel push-pull output stage and current feedback) mounted to large aluminum diecast heat sinks.

PX-600 Connection Examples

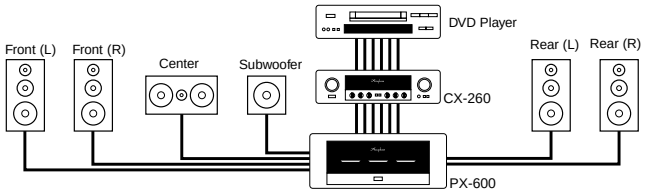
★ Use speakers with an impedance between 4 and 16 ohms.
★ In bridged mode, use speakers with an impedance between 6 and 16 ohms.

6-channel surround playback

Connect a source with 5.1ch analog output, such as a DVD player or external decoder, to the CX-260, and connect the output from the CX-260 to the PX-600.

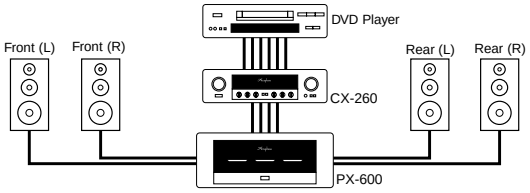
6-channel (5.1ch) surround sound playback

★When using a subwoofer with built-in amplifier (active subwoofer), connect the "D" output of the CX-260 directly to the subwoofer input, using audio cables with plugs.



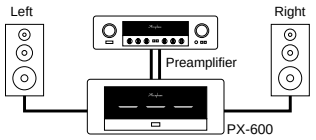
4-channel (mixdown) playback

Playback using 2 front and 2 rear channels. No center speaker or subwoofer is required. (Set "DOWN MIX" button of CX-260 to ON.)



2-channel (stereo) playback

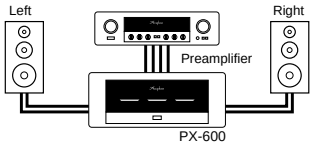
❶ Stereo playback using 2 channels of PX-600
❷ Stereo playback using 4 channels of PX-600 in bridged mode



Bi-amp system for stereo playback

In a bi-amped system, the LOW and HIGH range speaker units are driven by separate full-range amplifiers, which can result in better sound quality.

★A preamplifier with two outputs is required. A speaker type with built-in network but separate LOW/HIGH inputs is required.

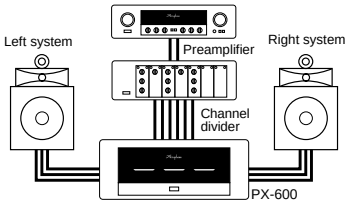


Multi-amp or subwoofer system

Using the six power amplifier channels effectively, a high-quality multi-amp system can be configured with a single PX-600.

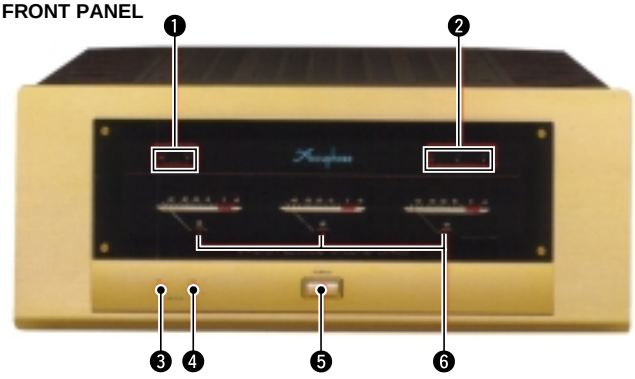
★A Multichannel Divider (F-20, F-25V, DF-35 or similar) is connected.
★Use a subwoofer without built-in power amplifier (passive subwoofer).

❶ 3-way multi-amplifier system
❷ 2-way multi-amplifier system
❸ Stereo + subwoofer system
❹ 2-way multi-amplifier + subwoofer system



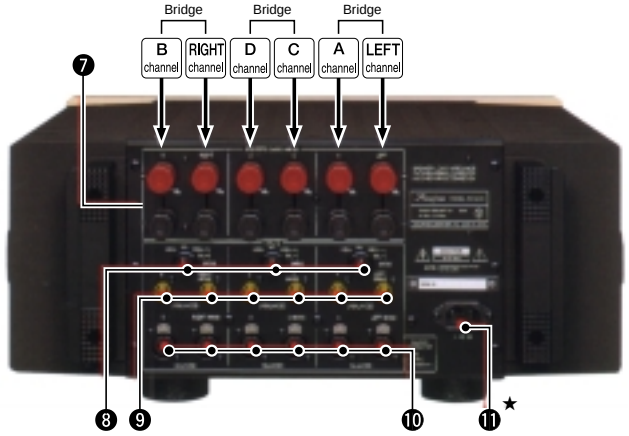
(3-way multi-amp system example)

■ FRONT PANEL



■ REAR PANEL

- **The 6 channels (LEFT, RIGHT, A, B, C, D) have identical specifications and are totally separate from each other.**
- **The LEFT/A, C/D, and RIGHT/B pairs can be individually bridged.**



❶ Meter display indicators
❷ Bridging indicators
❸ Meter on/off switch
❹ METER selector: L, C, R/A, D, B
❺ Power switch
❻ Power meters (switchable for 3 channels)
❼ 6-channel speaker outputs
❽ Mode selectors (input type and bridge mode)
❾ 6-channel unbalanced inputs
❿ 6-channel balanced inputs
⓫ AC power supply connector★

PX-600 Guaranteed Specifications

Guaranteed specifications are measured according to EIA standard RS-490.

● **Continuous Average Output Power (20 ~ 20,000 Hz)**

Note: Load ratings marked ✻ apply only to operation with music signals.

		B	RIGHT	D	C	A	LEFT
6ch	4 Ω	150 W	150 W	150 W	150 W	150 W	150 W
	6 Ω	125 W	125 W	125 W	125 W	125 W	125 W
	8 Ω	100 W	100 W	100 W	100 W	100 W	100 W
3ch	4 Ω	160 W	160 W	160 W	-	-	-
	6 Ω	140 W	140 W	140 W	-	-	-
	8 Ω	120 W	120 W	120 W	-	-	-
3ch (Bridged)	6 Ω (✻)	320 W		320 W		320 W	
	8 Ω	300 W		300 W		300 W	
2ch	4 Ω	-	220 W	-	-	-	220 W
	6 Ω	-	160 W	-	-	-	160 W
	8 Ω	-	130 W	-	-	-	130 W
2ch (Bridged)	6 Ω (✻)	420 W		-		420 W	
	8 Ω	350 W		-		350 W	

Note: The 3ch, 2ch, and 2ch (Bridged) output in the chart is the value for any arbitrary channel.

● **Total Harmonic Distortion**	Six-channel operation		0.15%, with 4 ohm load 0.1%, with 6 to 16 ohm load
	Three-channel operation (bridged mode)		0.05%, with 6 to 16 ohm load
● **Intermodulation Distortion**	0.003%		
● **Frequency Response** (for all channels):	At rated output:	20 - 20,000 Hz	+0, –0.2 dB
	At 1 watt output:	0.5 - 160,000 Hz	+0, –3.0 dB
● **Gain** (for all channels)	28.0 dB		
● **Output Load Impedance**	Six-channel operation:		4 to 16 ohms
	Three-channel operation (bridged mode):		6 to 16 ohms
	Note: In bridged mode, 6-ohm loads are permissible for music signals only.		
● **Damping Factor**	100 (Normal mode)	50 (Bridged mode)	
● **Input Sensitivity** (with 8 ohm load)	Six-channel operation		1.12 V for rated output 0.11 V for 1 watt output
	Three-channel operation (bridged mode)		1.95 V for rated output
	Two-channel operation		1.28 V for rated output
	Two-channel operation (bridged mode)		2.10 V for rated output
● **Input Impedance**	Balanced:		40 kilohms
	Unbalanced:		20 kilohms
● **Signal-to-Noise Ratio** (A-weighted, input shorted)			120 dB at rated output
● **Output Level Meters**	–40 dB to +3 dB Logarithmic scale, with OFF switch		
● **Power Requirements**	AC120 V/230 V (Voltage as indicated on rear panel) 50/60 Hz		
● **Power Consumption**	166 watts idle, 690 watts in accordance with IEC-65		
● **Dimensions**	Width 475 mm (18-11/16"), Height 211 mm (8-5/16"), Depth 459 mm (18-1/16")		
● **Weight**	31.2 kg (68.8 lbs) net, 38.0 kg (83.8 lbs) in shipping carton		

Remarks

★ *This product is available in versions for 120/230 V AC. Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.*
★ *The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.*

Supplied accessories: • AC power cord

● Specifications and design subject to change without notice for improvements.

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