

# Accuphase C-200

STEREO CONTROL CENTER

A good control center must be able to preamplify program source signals faithfully without changing their characteristics. It must also be able to provide compensation, when required, for room acoustics or deficiencies in program source signals. To satisfy the first requirement of fidelity, a good control center must have excellent characteristics such as wide dynamic range, flat frequency response, low noise and low distortion, as well as the ability to amplify and deliver a true replica of the input pulse signal. As for its second function of supplying compensation, it must have excellent equalization and other circuitry that can be finely adjusted, as well as efficient filters to cut off noise.

Moreover, a good control center must have plenty of input connectors, and its controls should be well laid out to avoid complexity.

The Accuphase C-200, which was designed to serve as a top class control center, easily meets all these requirements, and more. Every stage is push-pull driven and powered by dual power supplies. Input voltages up to 400 mVrms can be handled, a maximum for equalizer amplifiers. Its 10 inputs and 7 outputs, and a total of 28 controls attest to its functional diversity. Yet it is simple to operate. Excellent design and full utilization of its front and front-sub panels have made this possible.

## ORIGINALITY MARKS EQUALIZER CIRCUITRY

(a) Differential amplification—push-pull circuitry throughout  
Direct-coupled, complementary symmetrical circuit in every stage assures very excellent fidelity and outstanding stability.

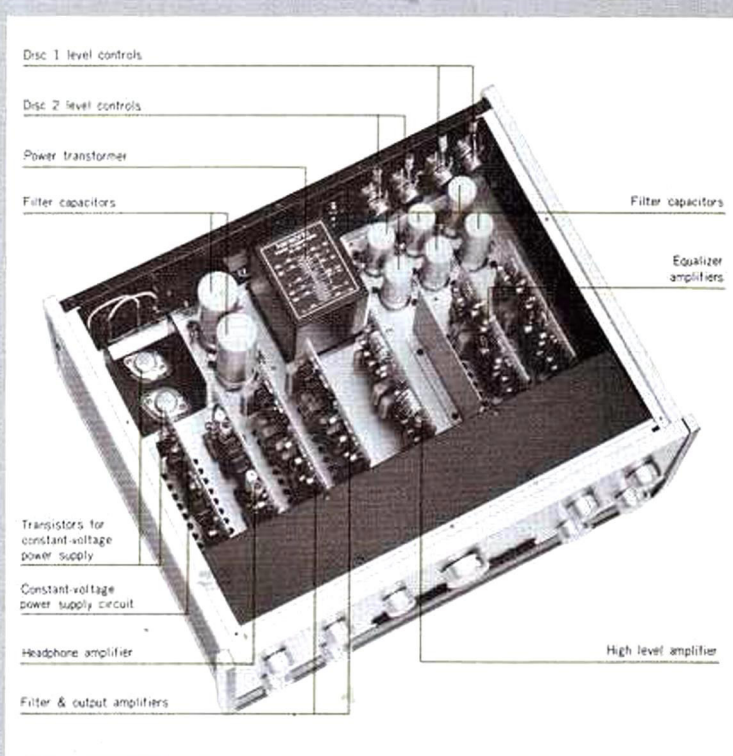
(b) Easily handles dynamic range inputs  
Employment of complementary-symmetry Class A driver amplifier in the final stage and use of plus, minus dual power supplies enable the C-200 to handle wide dynamic range inputs as large as 400 mVrms at 1 kHz with distortion ratio less than 0.05%. This rating applies with the equalizer amplifier gain set at 40 dB. If it is set to 30 dB, input voltages up to 1.2 Vrms can be handled.

(c) Low enhancement circuit has fine adjustment of "presence"  
The C-200 is equipped with a LOW ENHANCE switch which accentuates rich bass tones that add to music enjoyment. This switch offers selection of 0, +0.5 and +1 dB change against the RIAA characteristic curve at 100 Hz.

(d) Disc input level control has 10 dB variation  
A 10 dB continuously variable attenuator is available to attenuate cartridge output, when excessive, to a suitable level. It also permits comparison of cartridges connected to DISC 1 and DISC 2, and equalization of their levels.

(e) Disc input has impedance matching switch  
The C-200 is equipped with an impedance matching switch which provides selection of 30 K, 47 K and 100 Kohms input impedances at DISC 1. This makes impedance matching easy, especially to moving coil cartridges connected through step-up coupling transformers that require different optimum impedances depending on the make. It eliminates mismatching impedances at disc input connections which deteriorate sound quality.

(f) Subsonic filter prevents intermodulation distortion  
Subsonic vibrations of the turntable motor, etc., when playing records, should be cut before they can enter the input since they may otherwise cause intermodulation distortion. The C-200 has a subsonic filter that provides this sharp cut-off at 25 Hz.



## WIDE CHOICE OF TONE VARIATION

(a) 10-step bass control, plus two turnover frequencies  
Every shade of bass tone variation is at your fingertips with the C-200 which offers 10-step rotary switch control for each channel, plus a choice of 200 Hz or 400 Hz turnover frequencies. These turnover frequencies provide a variation range of  $\pm 10$  dB (at 100 Hz for 400 Hz turnover, at 50 Hz for 200 Hz turnover).

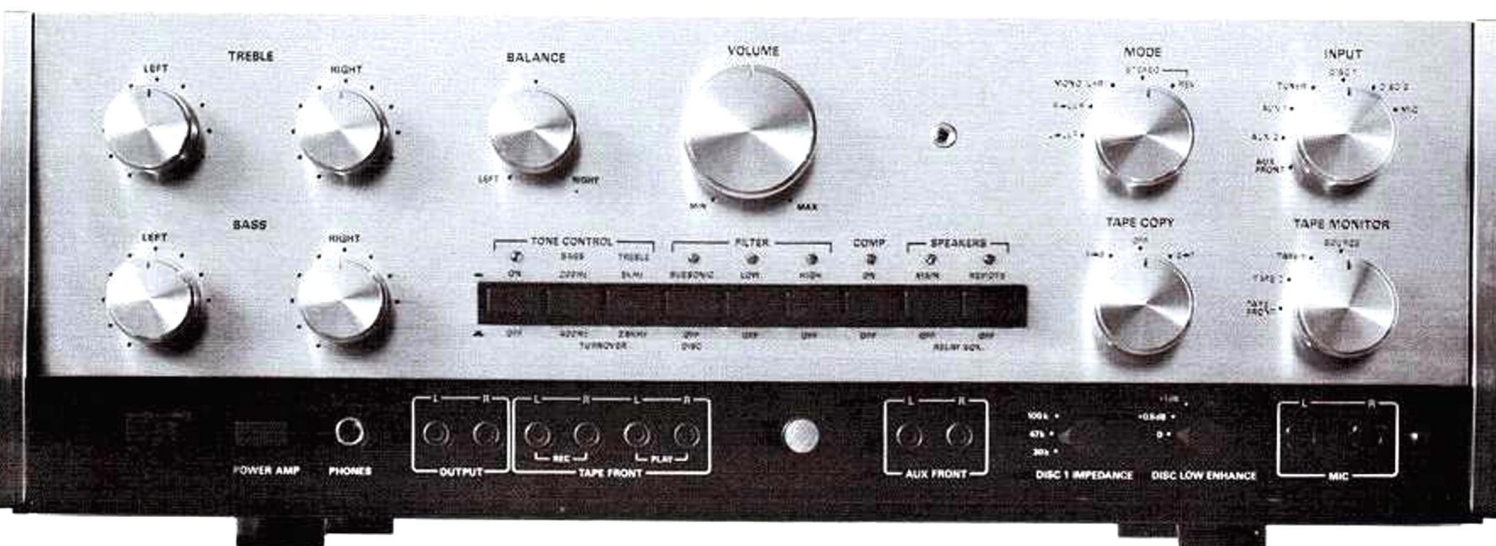
(b) 10-step treble control, plus two turnover frequencies  
Likewise every shade of treble control is also available through 10-step selection for each channel, plus choice of 2.5 kHz and 5 kHz turnover frequencies that provide a variation range of  $\pm 10$  dB (at 10 kHz for 2.5 kHz turnover, 20 kHz for 5 kHz turnover).

An independent switch is provided to turn the tone control circuit ON or OFF.

## LOW, HIGH FILTERS

(a) Low Filter with 18 dB/oct cut-off at 30 Hz  
The C-200 has a built-in low filter which can cut off at 18 dB/oct, all subsonic vibrations below 30 Hz which are likely to cause intermodulation distortion.

(b) High Filter with 12 dB/oct cut-off at 5 kHz  
It also has a 12 dB/oct cut-off High Filter for 5 kHz which very effectively cuts high frequency noise without essentially affecting music quality.



## PLENTY OF INPUT/OUTPUT CONNECTORS

A total of 10 inputs and 7 outputs are available, which should meet the needs of any assortment of program sources or sound equipment test connections. Of these, 3 inputs MIC, AUX and TAPE PLAY, and three outputs, TAPE REC, MAIN OUTPUT, and HEADPHONE are conveniently available on the front sub-panel.

## THREE TAPE RECORDERS CAN BE CONNECTED

Inputs and outputs for connecting three tape recorders are available, of which two can be used for tape copying from one tape deck to the other. This function can be carried on while simultaneously listening to a different program source, since an independent tape copy switch is provided.

## COMPLEMENTARY-SYMMETRY CIRCUIT HEADPHONE AMP.

A direct-coupled, complementary-symmetry circuit amplifier, made available exclusively for headphone use, upgrades the quality of headphone reproduction that is available through the C-200.

## WELL REGULATED POWER SUPPLY

The well-regulated power supply is fully capable of supplying steady, non-fluctuating voltages to all amplifier stages and it is totally unaffected by any kind of input signal. This power supply is also capable of well-regulated performance even against reasonable AC line voltage fluctuations.

## SPEAKER SWITCHING THROUGH OPTIONAL RELAY BOX

In installations where the power amplifier may not be close at hand, speaker selection is possible through the C-200's front panel Speaker Selector switches when a Relay Box (optional equip.) is connected.

## GUARANTY SPECIFICATIONS

### PERFORMANCE GUARANTY:

Products of Accuphase guarantee specifications stated.

### FREQUENCY RESPONSE:

High level input: +0, -0.2 dB 20 Hz to 20,000 Hz  
Low level input: +0.2, -0.2 dB 20 Hz to 20,000 Hz

### DISTORTION:

Lower than 0.05% at rated output level, 20 Hz to 20,000 Hz

### INPUT SENSITIVITY AND IMPEDANCE:

Disc 1: 2-6mV\*; 30 k ohms, 47 k ohms, 100 k ohms  
Disc 2: 2-6mV\*; 47 k ohms  
Mic: 2mV; 47 k ohms  
Tuner: 200mV; 130 k ohms  
Aux 1, 2, FRONT: 200mV; 130 k ohms  
Tape Play 1, 2 FRONT: 200mV; 130 k ohms  
(\* 2-6mV Variable)

### MAXIMUM INPUT FOR DISC INPUT:

400mV RMS at disc level control maximum for 1 kHz  
1.2V RMS at disc level control minimum for 1 kHz  
400mV - 1.2Vrms distortion 0.05% at 1 kHz

### OUTPUT LEVEL AND IMPEDANCE:

Main Output: 2.0V\*; 200 ohms  
Headphones: 0.4V\*; 0.3 ohms  
Tape Rec. 1, 2, FRONT: 200mV; 200 ohms  
Mono Output: 0.42V; 38 k ohms  
(\*at rated input, volume control maximum)

### MAXIMUM OUTPUT LEVEL:

10 Volts at 0.05% distortion

### VOLTAGE AMPLIFICATION IN DECIBELS:

Tuner, Aux, Tape Play input:  
to Main Output: 20 dB  
to Tape Rec.; 0 dB  
to Headphones; 6 dB  
Disc 1, Disc 2 and Mic Input (at 1 kHz):  
to Main Output; 60 dB  
to Tape Rec.; 40 dB  
to Headphones; 46 dB

### HUM AND NOISE:

Tuner, Aux, Tape Play: 90 dB below rated output.  
Disc, Mic: 74 dB below 10mV input.

### STONE Controls:

10-step Rotary Switch for each channel with turnover frequency Switches.

### BASS:

Turnover frequency 400 Hz: ±10 dB (2 dB step) at 100 Hz  
Turnover frequency 200 Hz: ±10 dB (2 dB step) at 50 Hz

### TREBLE:

Turnover frequency 2,500 Hz: ±10 dB (2 dB step) at 10,000 Hz  
Turnover frequency 5,000 Hz: ±10 dB (2 dB step) at 20,000 Hz

### DISC LOW ENHANCEMENT (for Disc input):

0 dB, +0.5 dB, +1 dB at 100 Hz to RIAA standard characteristics.  
Bass tone becomes richer when switched to +0.5 dB or 1 dB.

### COMPENSATOR:

ON position boosts low frequencies for low level listening.  
+9 dB at 50 Hz (at volume control -30 dB)

### FILTERS:

Disc Subsonic Filter: 25 Hz cutoff 6 dB/oct  
Low Filter: 30 Hz cutoff 18 dB/oct  
High Filter: 5,000 Hz cutoff 12 dB/oct

### VOLUME CONTROL:

Less than 1 dB tracking error control down to -60 dB.

### POWER REQUIREMENT:

Voltage selector for 100V, 117V, 220V, 240V 50/60 Hz operation  
Consumption: 36 Watts

### SEMICONDUCTOR COMPLEMENT:

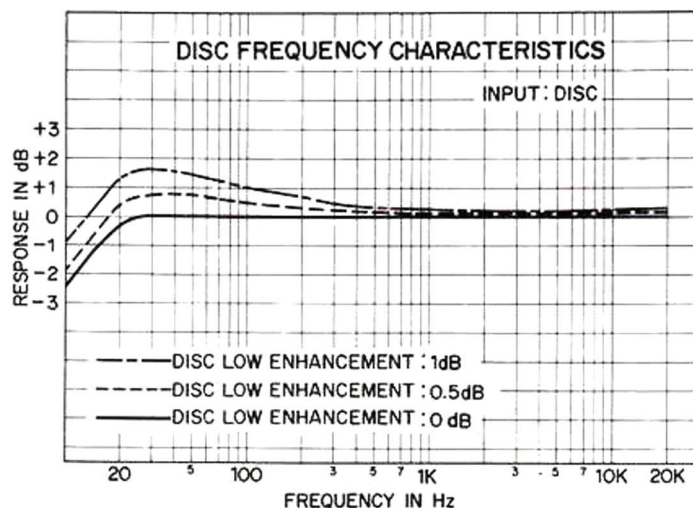
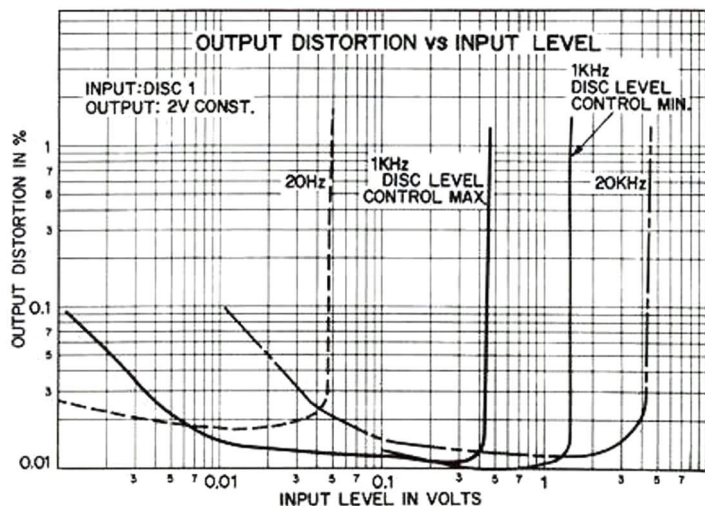
80 Transistors, 35 Diodes

### DIMENSIONS:

445mm (17½ inches) wide, 152mm (6 inches) high, 355mm (14 inches) deep

### WEIGHT:

14 kgr. (30.8 lbs.) net, 18.3 kgr. (40.6 lbs.) in shipping carton.



# GUARANTY SPECIFICATIONS

## PERFORMANCE GUARANTY:

All Accuphase product specifications are guaranteed as stated.

**FREQUENCY RESPONSE:** High level input: +0, -0.2 dB 20 Hz to 20,000 Hz  
Low level input: +0.2, -0.2 dB 20 Hz to 20,000 Hz

**DISTORTION:** Lower than 0.01% at rated output level, 20 Hz to 20,000 Hz

## INPUT SENSITIVITY AND IMPEDANCE:

Disc 1: 2-6mV\*; 30k ohms, 47k ohms, 100k ohms  
Disc 2: 2-6mV\*; 47k ohms  
Mic: 2mV; 47k ohms  
Tuner: 200mV; 130k ohms  
Aux 1, 2, FRONT: 200mV; 130k ohms  
Tape Play 1, 2, FRONT: 200mV; 130k ohms  
(\*2-6mV Variable)

## MAXIMUM INPUT FOR DISC INPUT:

400mV RMS at disc level control maximum for 1kHz  
1.2V RMS at disc level control minimum for 1kHz  
400mV - 1.2Vrms at 0.01% distortion, 1kHz

## OUTPUT LEVEL AND IMPEDANCE:

Main Output: 2.0V\*; 200 ohms  
Headphones: 0.4V\*; 0.3 ohms  
Tape Rec. 1, 2, FRONT: 200mV; 200 ohms  
(\* at rated input, volume control maximum)

**MAXIMUM OUTPUT LEVEL:** 10 Volts at 0.01% distortion

## VOLTAGE AMPLIFICATION IN DECIBELS:

Tuner, Aux, Tape Play input: to Main Output; 20 dB  
to Tape Rec.; 0 dB  
to Headphones; 6 dB  
Disc 1, Disc 2 and Mic input (at 1kHz):  
to Main Output; 60 dB  
to Tape Rec.; 40 dB  
to Headphones; 46 dB

## HUM AND NOISE:

Tuner, Aux, Tape Play: 105 dB below rated output, IHF-A weighted  
Disc, Mic: 94 dB below 10mV input, IHF-A weighted

## TONE CONTROLS:

10-step Rotary Switch for each channel with turnover frequency Switches.

**BASS:** Turnover frequency 400 Hz: ±10 dB (2 dB step) at 100 Hz  
Turnover frequency 200 Hz: ±10 dB (2 dB step) at 50 Hz

**TREBLE:** Turnover frequency 2,500 Hz: ±10 dB (2 dB step) at 10,000 Hz  
Turnover frequency 5,000 Hz: ±10 dB (2 dB step) at 20,000 Hz

## DISC LOW ENHANCEMENT (for Disc input):

0 dB, +0.5 dB, +1 dB at 100 Hz to RIAA standard characteristics  
Bass tone becomes richer when switched to +0.5 dB or 1 dB.

**COMPENSATOR:** ON position boosts low frequencies for low level listening.  
+9 dB at 50 Hz (at volume control - 30 dB)

**FILTER:** Subsonic Filter: 17 Hz cutoff 6 dB/oct  
Low Filter: 30 Hz cutoff 18 dB/oct  
High Filter: 5,000 Hz cutoff 12 dB/oct

**VOLUME CONTROL:** Less than 1 dB tracking error control down to -80 dB

**POWER REQUIREMENT:** Voltage selector for 100V, 117V, 220V, 240V 50/60 Hz  
Consumption: 36 watts

**SEMICONDUCTOR COMPLEMENT:** 80 Transistors, 2 FET's, 33 Diodes

**DIMENSIONS:** 445mm (17 1/2 inches) wide, 152mm (6 inches) high,  
355mm (14 inches) deep

**WEIGHT:** 14 kgs. (30.8 lbs.) net, 18.3 kgs. (40.6 lbs.) in shipping carton