REVOX PR 99 SERIES



REVOX PR99 Series

Professional design and the unique precision of Swiss craftsmanship have earned Revox recorders an exceptional measure of international recognition. In this tradition, the Revox PR99 has been built to ensure long-term stability and reliability under the most severe operation conditions, while meeting the highest quality standards for recording and reproduction.

APPLICATIONS

Designed for the multiple needs of the broadcast studio, the PR99 will find equal application in TV and film production, in theater control rooms, in schools and institutions, and in industry. Ease of operation and maintenance have been stressed in an overall design that provides:

- 1/4-inch half-track stereo, with Revodur heads
- 15–7½ ips (NAB or CCIR) or 7½–3¾ ips (NAB) speed/equalization options
- Two-way Self-Sync and complete editing facilities
- Automatic Sync/Input switching
- Balanced (XLR) line-in/line-out with calibrated/uncalibrated level adjustments
- Manual, remote control, or fader-start operation
- Full editing facilities
- Tape dump facility
- 10½-inch reel capacity
- 19-inch rack or case mounting

A vari-speed remote control unit with 7-semitone coarse and 1-semitone fine adjustment is available as an option, as are balanced (XLR) microphone inputs.
Mono, playback-only, and monitor amp. versions are in preparation.

1.
Optimum layout for ease of operation



Transport
Editing Convenience



2.
Sound heads easily accessible for professional editing

TRANSPORT

A heavy (2,0 mm), hardened aluminum front plate, together with die-cast chassis braces, form a rigid, stable reference plane for all motor axes, tension arms, and for the removable die-cast head assembly block.

Brushless AC-motors, with direct-drive, servo-controlled capstan and electrically-controlled spooling motors ensure tension and wind with either large or small diameter reel hubs.

All tape motion is logic-controlled, and an infra-red tape sensor is provided.

EDITING CONVENIENCE

In the edit mode the playback head shield is open for easy marking access. The normal latching mechanism of the fast-winding buttons is defeated, allowing quick shuttling in either direction with monitoring.

A tape dump switch is provided that locks the take-up reel. Editing via either the playback or record ("sync") head is permitted, and the large head cover provides a convenient location for a splicing block.

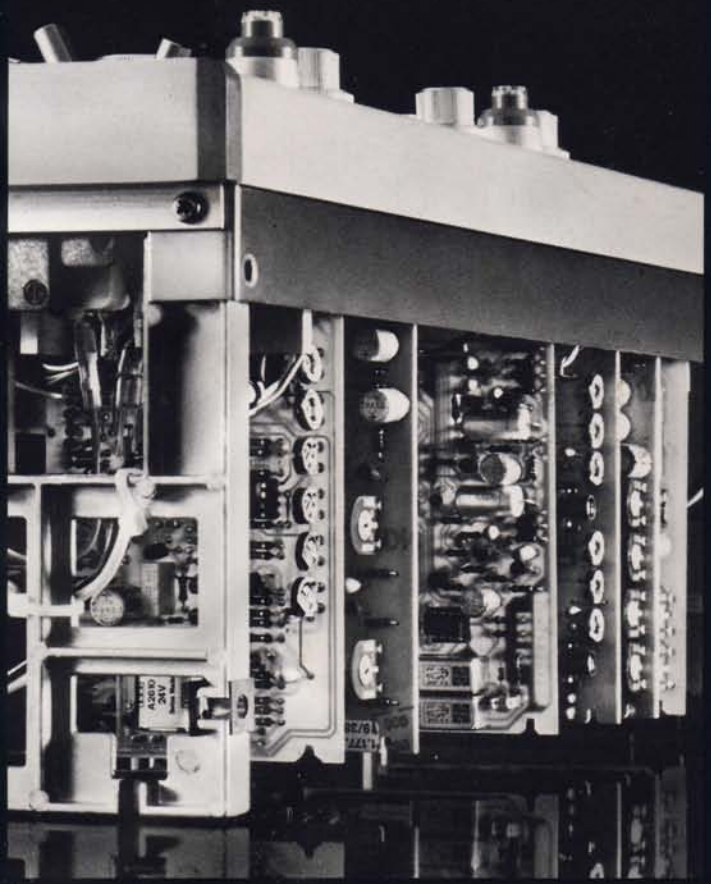
STUDER REVOX

ELECTRONICS

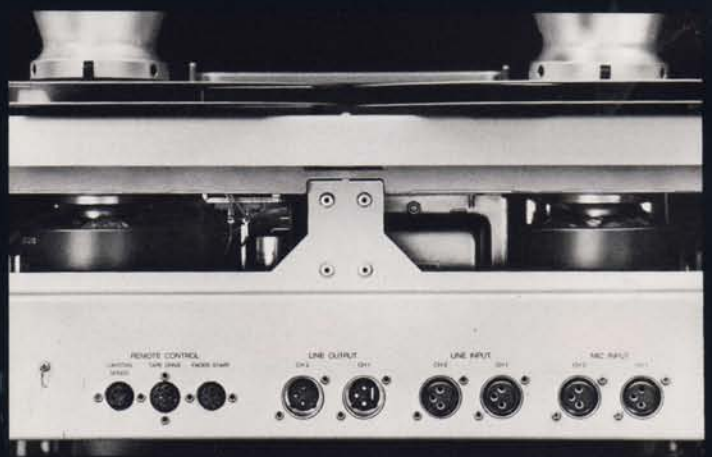
Input and output controls are clearly separated to prevent operator error, and all audio boards use plug-in module construction for quick service access. Internal bias, equalization, and level calibration controls are all mounted on a single plane, as are the various in/out and accessory connectors.

Unbalanced microphone and headphone jacks are located on the front panel.





4.
Professional construction pluggable pc board easy access to audio adjustments



3.
Easy access to XLR connectors for balanced inputs and outputs (Microphone optional)

Input Selection/Output Selection
Level indicators

INPUT SELECTION

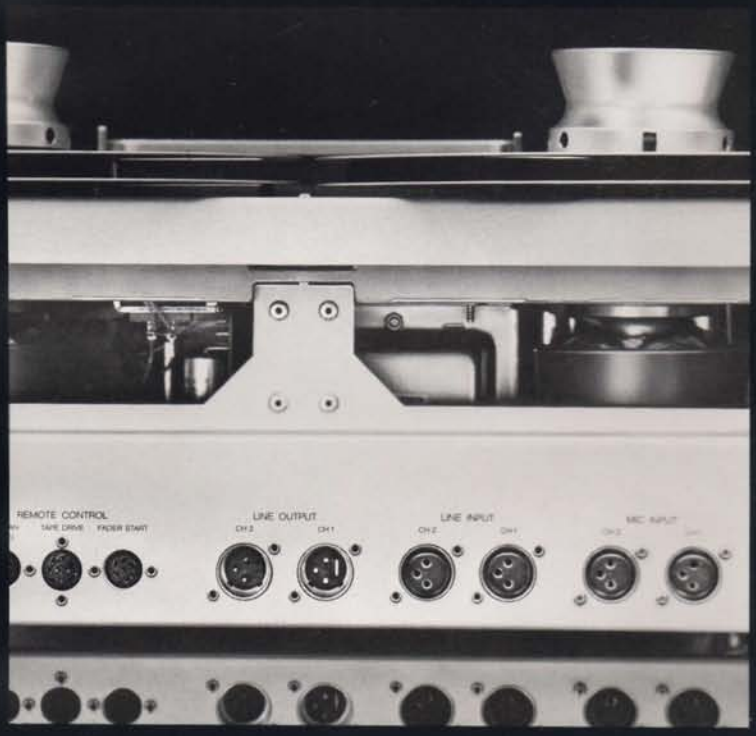
Input Selection is between hi-Z or lo-Z microphones (balanced operation is an option) or balanced line-level. In Self-Sync mode the recording channel is automatically switched to input. Calibrated line levels are internally adjustable from –10 dBu to +10 dBu, and an additional 10 dB gain is available in the uncalibrated position. Each channel is provided with an "off" position (amplifier input shorted) as well as with an individual record safe/ready switch.

OUTPUT SELECTION

Output Selection provides calibrated or uncalibrated outputs in stereo, mono, reverse-channel stereo, channel 1, or channel 2. Calibrated output line level is internally adjustable from –20 dBu to +9 dBu, with an additional 10 dB gain available in the uncalibrated switch position. In the Self-Sync mode, record-head playback monitoring is provided on the recorded track, with input monitoring on the track being recorded.
Headphone-output 1/4" phone jack on front panel, adjustable also in calibration mode.

LEVEL INDICATORS

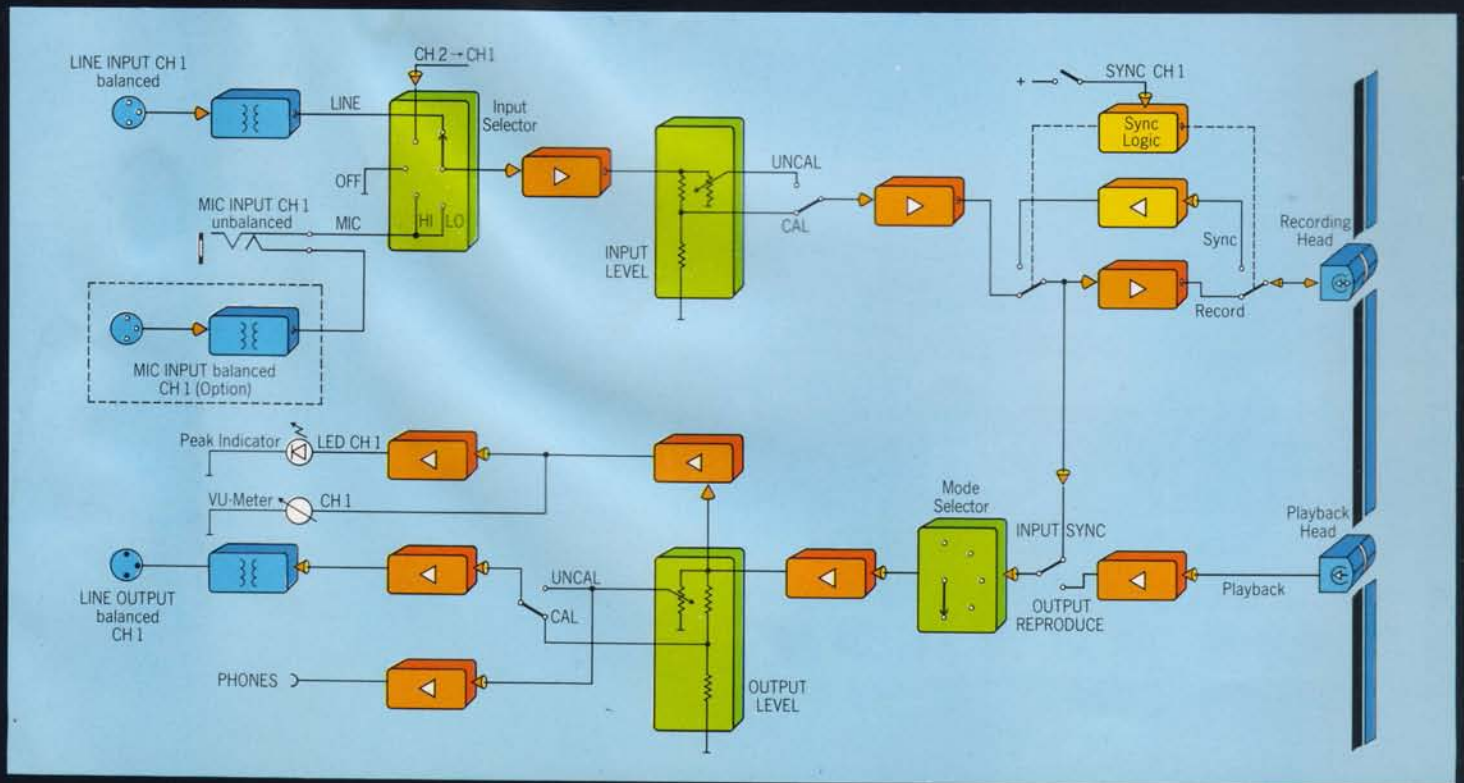
Level indicators lighted VU-Meters, according to ASA-Standard incl. LED-peak indicators. Peak-Threshold adjustable internally.







REVOX PR99 Block Diagram

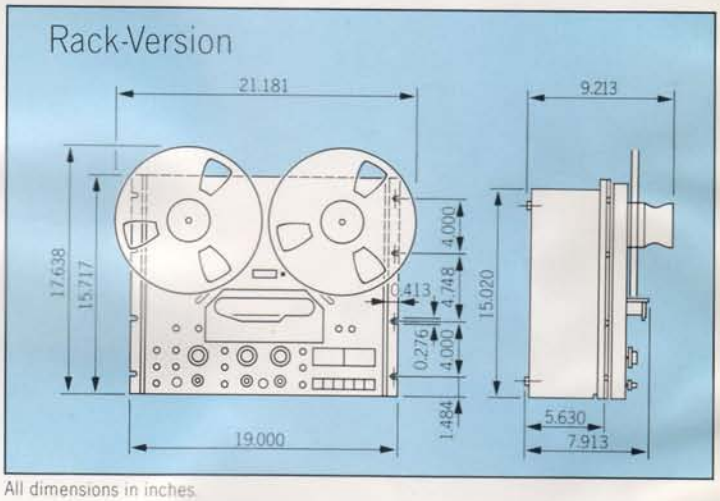


Technical Data/Dimensions
REVOX PR99

	PR99 3¾–7½ ips, NAB	PR99 7½–15 ips, NAB
Tape transport mechanism:	3 motor tape drive. 2 AC driven spooling motors. 1 AC driven capstan motor, electronically regulated	
Tape speeds: Tolerance from nominal: With external accessory, speed variable:	**3¾ ips** and **7½ ips** electronic change-over ±0.2 % from: 2½ ... 11 ips	**7½ ips** and **15 ips** electronic change-over ±0.2 % from: 5 ... 22 ips
Wow and flutter: (DIN 45507/consistent with IEEE standard 193–1971)	**at 3¾ ips** less than 0.1 % **at 7½ ips** less than 0.08 %	**at 7½ ips** less than 0.08 % **at 15 ips** less than 0.06 %
Tape slip:	max 0.2 %	
Reel size:	up to 10.5 inch diameter (min. hub diameter 2.36 inches), tape tension switchable (for small hub diameters)	
Winding time:	approx. 120 sec for 2500 ft of tape	
Tape transport control:	Integrated control logic with tape motion sensor provides for any desired transition between different operating modes. Contactless electronic switching of all motors. Remote control of all functions and electric timer operation are possible. Faderstart facilities. Tape dump mode.	
Equalization:	**3¾ ips:** NAB 90–3180 µsec **7½ ips:** NAB 50–3180 µsec	**7½ ips:** NAB 50–3180 µsec **15 ips:** NAB 50–3180 µsec
Frequency response: (measured via tape, at –20 VU)	**at 3¾ ips:** 30 Hz ... 16 kHz +2/–3 dB 50 Hz ... 10 kHz ±1.5 dB **at 7½ ips:** 30 Hz ... 20 kHz +2/–3 dB 50 Hz ... 15 kHz ±1.5 dB	**at 7½ ips:** 30 Hz ... 20 kHz +2/–3 dB 50 Hz ... 15 kHz ±1.5 dB **at 15 ips:** 30 Hz ... 22 kHz +2/–3 dB 50 Hz ... 18 kHz ±1.5 dB
Frequ. response of Guide Track reproduction:	**at 15 ips:** 100 Hz ... 12 kHz +2/–3 dB **at 7½ ips:** 100 Hz ... 8 kHz +2/–4 dB	
Operating level:	250 nWb/m 0 VU	
Level metering:	VU meter in accordance with ASA standard plus LED peak level indicators (6 dB above operating level, adjustable)	
Distortion:	at 0 VU (nWb/m): (250) at 3¾ ips: <1 % at 7½ ips: <0.6 % at 0 VU +6 dB (nWb/m): (500) at 3¾ ips: <2.5 % at 7½ ips: <1.5 %	at 0 VU (nWb/m): (250) at 7½ ips: <0.6 % at 15 ips: <0.6 % at 0 VU +6 dB (nWb/m): (500) at 7½ ips: <1.5 % at 15 ips: <1.5 %
Signal to noise ratio: (measured via tape, ASA-A weighted referred to 500 nWb/m)	**Half track:** at 3¾ ips better than 63 dB at 7½ ips better than 66 dB	**Half track:** at 7½ ips better than 66 dB at 15 ips better than 66 dB
Crosstalk: (at 1000 Hz)	Stereophonic: better than 45 dB Monophonic: better than 60 dB	
Erase depth:	at 7½ ips better than 75 dB (1 kHz)	
Inputs per channel: (0 dBu ≙ 0.775 V)	**Line inputs balanced** (input impedance ≧ 5 kohms): **CAL:** +4 dBu (adjustable –10 ... +10 dBu, referred to operating level) **UNCAL:** Sensitivity ext. variable up to 10 dB above CAL input Max. Line Input Level: +22 dBu (> 40 Hz) **Microphone inputs unbalanced** (input impedance 100 kohms): **MIC LO:** –70 dBu (max. –24 dBu) **MIC HI:** –42 dBu (max. + 4 dBu)	
OPTION:	**Microphone inputs balanced** (input impedance > 1.2 kohms; 40 Hz ... 15 kHz): **MIC LO:** –82 dBu (max. –36 dBu) **MIC HI:** –54 dBu (max. – 7 dBu)	
Outputs per chanel: (0 dBu ≙ 0.775 V)	**Line outputs balanced** (source impedance 50 ohms): **CAL:** +4 dBu (load 600 ohms) (adjustable –20 ... +9 dBu, referred to operating level) **UNCAL:** Output level ext. variable up to 10 dB above CAL output Max. Line Output Level: +22 dBu/600 ohms +20 dBu/200 ohms **PHONES:** max. 5.6 V, internal resistance 220 ohms, short-circuit proof.	

Connectors for:	Remote control of tape transport functions. Remote control of variable tape speed. Faderstart.
Electric current supply: (voltage selector)	100 V, 120 V, 140 V, 200 V, 220 V, 240 V 50 Hz ... 60 Hz, max. 90 watts
Primary power fuse:	100 V ... 140 V: 1A slow-blow 200 V ... 240 V: 0.5A slow-blow
Weight:	40 lbs. 12 oz. (18.5 kg)
Ambient Temp. Range:	+40° F (+7° C) to +104° F (+40° C)
Working position:	Any, between horizontal and vertical

All figures quoted are minimum performance values as measured with 3M 250 tape normally exceeded by all units.
We reserve the right to make alterations as technical progress may warrant.



All dimensions in inches.

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