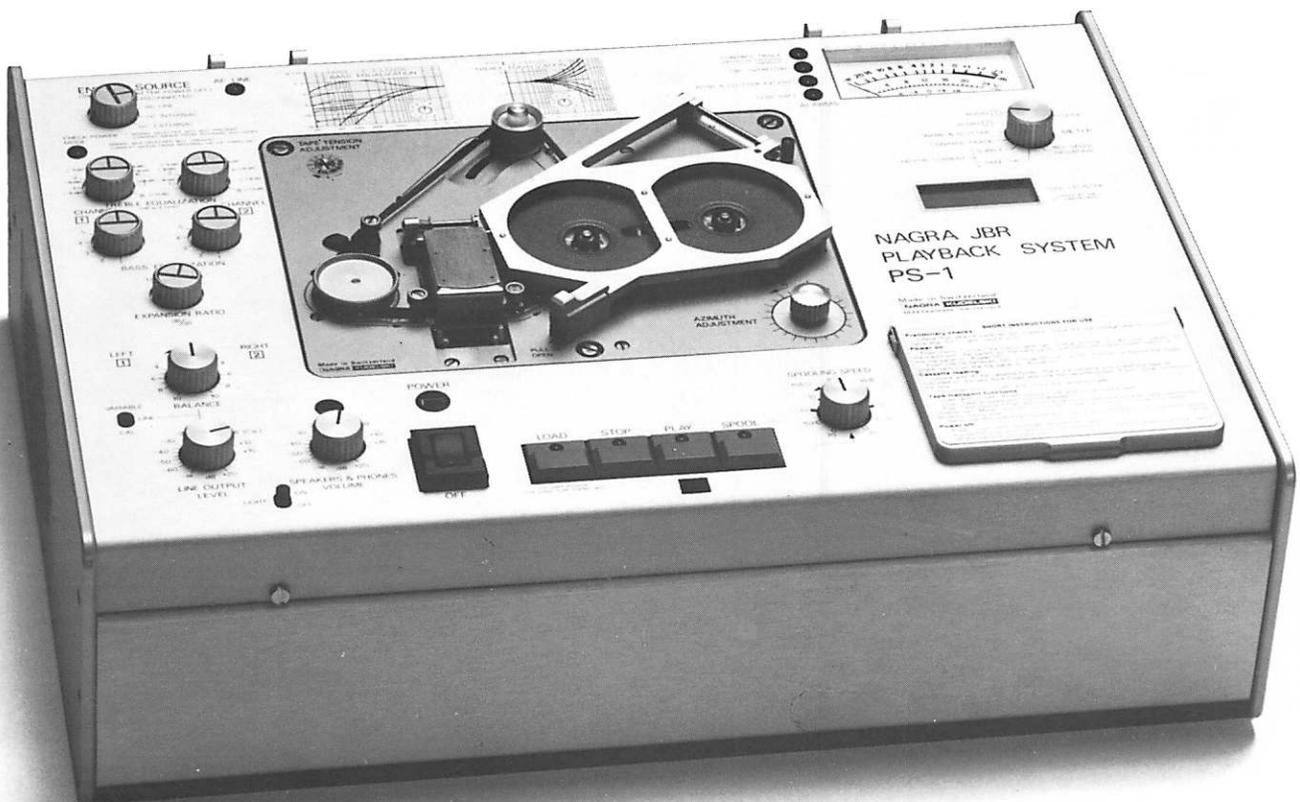


NAGRA

PLAYBACK SYSTEM

NAGRA PS-1



PLAYBACK SYSTEM PS-1

The PS-1 is a highly sophisticated playback system for the JBR's miniature cassettes: it corrects speed fluctuations, expands the signal compressed when recording, and offers fast forward and rewind functions for the easy location of a particular recording.

Two servo control systems operate in series:

- the first one controls the tape speed and compensates for slow variations
- the second one is a time base corrector with a delay line.

The overall performance reduces peak variations of $\pm 10\%$ to $\pm 0.35\%$.

Separate adjustable filters allow fine tuning of each audio channel to fit curves displayed on the machine itself. The PS-1 is also provided with an adjustable expansion ratio, with a real time counter, with automatic counter reset, go to functions, etc. A numerical keyboard for sophisticated commands is located under a small cover, in order to avoid unintentional use. The output signal is fed either to headphones, built-in loudspeakers or line.

The PS-1 operates either on internal batteries, external 12 V DC or 220/110 V AC. Automatic back-up in case of mains power failure.

SPECIFICATIONS

SIZE

Size with cover (L x W x H)

(typical values)

340 x 243 x 120 mm

WEIGHT

Weight with cover

5.2 kg

Weight with cover and batteries

6.0 kg

OPERATING CONDITIONS

Position

any

Temperature range

0°C to 40°C

Humidity (non condensing)

20% to 95%

POWER SUPPLY

AC line voltage

115 V or 230 V $\pm 15\%$

AC line power consumption

28 VA max.

AC line frequency

47 Hz to 63 Hz

DC supply voltage

11 V to 20 V

DC power consumption (in play)

440 mA

Type of batteries

12 size C alkaline cells (IEC type LR 14)

TAPE

Tape transport

without capstan

Tape type

chromium dioxide in special cassette

Tape width

3.81 mm (0.150")

Tape thickness (total)

9 μm (0.35 mil) 120 min.

Tape thickness (total)

12 μm (0.48 mil) 90 min.

Audio tracks

1.20 mm x 2

Control track (centre)

0.40 mm

Track spacing

0.50 mm

Nominal tape speed

2.38 cm/s (15/16 ips)

Tape speed accuracy

$< \pm 0.5\%$

Wow and flutter on calibration tape

$< \pm 0.35\%$ peak-to-peak

NAB (= DIN 45507) weighted

Wow and flutter on JBR recording

$< \pm 0.35\%$ peak-to-peak

NAB (= DIN 45507) weighted

AUDIO

Reference level on tape

0 dB for 250 nWb/m

Reference frequency

500 Hz

Playback equalization

150 μs nominal (internally switchable

to 100, 150, or 200 μs)

Frequency response

170 Hz to 4.5 kHz ± 3 dB

Signal to noise ratio, unexpanded (*)

≥ 59 dB ASA A weighted

Signal to noise ratio, expanded 2 x (*)

≥ 77 dB ASA A weighted

Second harmonic distortion

0.5% at reference level

Third harmonic distortion

1.0% at reference level

Expansion ratio (selectable)

1.0 x, 1.3 x, 1.6 x, 2.0 x

Nominal line output level (cal. 0 dB)

775 mV rms ($Z_L \geq 5$ k Ω)

Maximum line output level

2.0 V rms ($Z_L \geq 5$ k Ω)

Nominal phones output level

900 mV rms into 25 Ω

(*) Playback of a tape with only the control track recorded

ACCESSORY

PFS - Foot switch remote control

(all information is subject to change)