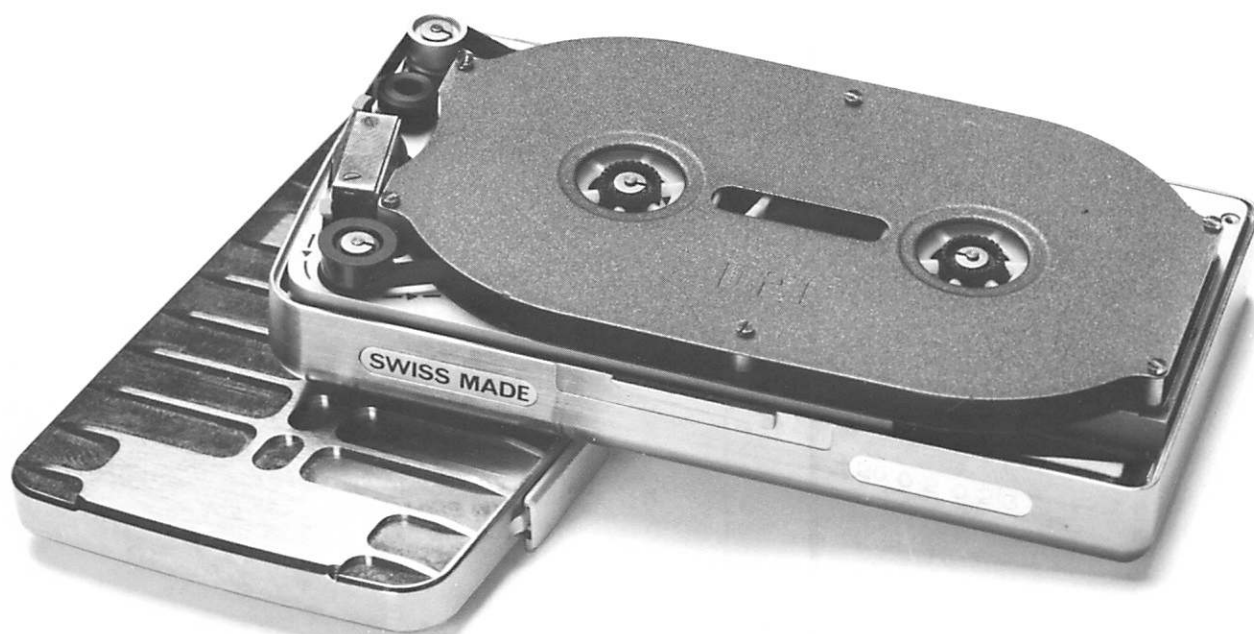


**NAGRA**

# NAGRA JBR

**SUBMINIATURE RECORDER**



## JBR RECORDER

The JBR recorder is a device intended for speech recording in security applications. This stereo recorder has two independent channels and a centre-track to record a 5.461 Hz signal. This signal is used as a reference by the playback system to correct possible speed variations.

The recording speed is 15/16 ips (2.38 cm/s). It is regulated by means of an optical encoder system. The JBR has no erase head in order to lower detectable radiation to a minimum and to reduce power consumption. For the same reasons, no playback facilities are provided.

Special Kudelski cassettes ensure 2 hours of uninterrupted recording. One set of 3 "N" size batteries provides 10 hours of operation.

Although the radiation is very low and can hardly be detected, the bias frequency was set at 32 kHz, thus corresponding to that of a quartz watch.

The JBR weighs less than 200 g with cassette and batteries and is a truly pocket size recorder. Miniature microphones and remote controls are available with various cable lengths.

### SPECIFICATIONS

#### SIZE (L x W x H)

with cover	110.2 x 62.6 x 20.8 mm 4.34" x 2.46" x 0.82"
with cover and plugs	110.2 x 64.3 x 20.8 mm 4.34" x 2.53" x 0.82"

#### WEIGHT

Recorder with cover	143 g
Cassette with 2 h tape	22 g
Batteries, 3 pcs	29 g
Microphones, 4 ft cable, 2 pcs	30 g
Remote control, 3 ft cable	18 g
Total weight:	242 g

#### OPERATING CONDITIONS

Position	any
Temperature range	0°C to 40°C (32°F to 104°F)
Humidity	20% to 95% non-condensing

#### POWER SUPPLY

Supply voltage	2.7 to 5 V DC, nominal 4.5 V
"Batt OK" indicator threshold	3.4 V
Battery type	ASA "N", ANSI "L20", IEC "LR1"
Power consumption: - beginning of tape	40 mA typical
- end of tape	50 mA typical

#### TAPE

Tape transport	without capstan, constant speed
Tape type	chromium dioxide in special cassette
Tape width	3.81 mm (0.150")
Tape thickness (total)	9 µm (0.35 mil) 120 min. 12 µm (0.48 mil) 90 min.
Maximum recording time	2 hours
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	better than ± 2%
Wow and flutter	typ. 2.5% peak-to-peak, NAB (= DIN 45507) weighted
Start time	less than 4 seconds

#### INPUTS

Maximum input level	60 mV RMS
Audio indicator threshold	30 mV RMS input -3 dB on tape
Input impedance	80 kOhms
Microphone sensitivity	10 mV/Pa (1 Pa = 10 µbar)
Maximum SPL	110 dB (0 dB SPL = 20 µPa)
Signal-to-noise ratio, unexpanded	better than 51 dB ASA A weighted
Frequency response	170 Hz to 4.5 kHz ± 3 dB
Total harmonic distortion	less than 3%
Compression ratio	2:1 in dB
Compressor operating range	80 dB

#### ACCESSORIES

SAM-4	Microphone (cable length 120 cm)
SCAM	Remote control switch (from 0.1 to 10 m)
SCVJ	Line input interface

(all information is subject to change)

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