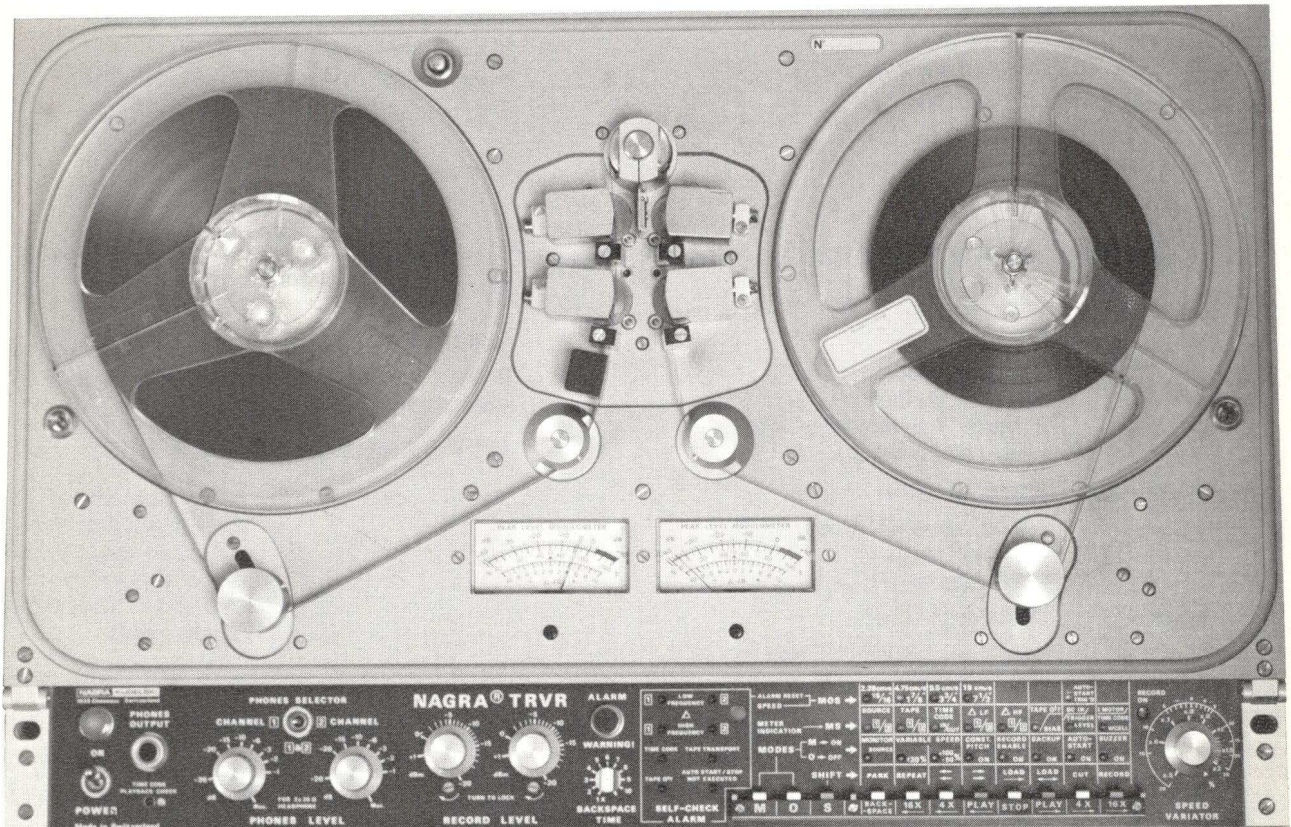


# NAGRA TRVR

reel-to-reel tape recorder  
for automatic long recording



- \* Rack mounted
- \* Two channels plus one reference track, four speeds
- \* AC / DC operation
- \* Excellent signal to noise ratio and response curve at lowest speed
- \* Long recording time (more than 12 hours)
- \* Continuous recording self-check by comparison of input signal and playback signal
- \* Tape transport designed to protect and handle tape gently
- \* Autostart by input signal
- \* Full remote control with positive operation display facilities
- \* High working security due to keyboard locking device
- \* Bi-directional servo-controlled tape drive
- \* End of tape sensing
- \* Multiple tape processing facilities
- \* Built-in time compressor / expander
- \* Built-in time code generator (IRIG B)
- \* Cascade starting of supplementary stand-by recorders on alarm signal
- \* Numerous maintenance facilities

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provisonnaal sheet

KUDELSKI S.A.

Nagra Tape Recorder Manufacture

CH-1033 Cheseaux-sur-Lausanne

SWITZERLAND

# SPECIFICATIONS

## GENERAL CHARACTERISTICS

|                   |                                      |
|-------------------|--------------------------------------|
| Size              | 19 ins x 12.25 ins x 12.5 ins        |
| Mounting          | standard 19ins rack                  |
| Weight            | 16 kg                                |
| Power supply      | 20 to 30V DC                         |
| Power consumption | about 800mA<br>(without accessories) |
| Operating temp.   | -20 to + 70° C                       |

## TAPE TRANSPORT CHARACTERISTICS

|                                |  |
|--------------------------------|--|
| Tape transport                 | single capstan without pinch-wheel   |
| Heads                          | 2 stereo heads for audio record and playback<br>2 heads for reference signal record and playback |
| Audio track width              | 2 mm. (0.08ins)  |
| Tape speed                     | 4 bi-directional speeds, 2.38 cm/s to 19cm/s<br>(15/16ips to 7½ips)                              |
| Tape width                     | 6.25mm (1/4ins)  |
| Tape thickness                 | 18μ to 50μ (0.5mil to 1.5mil base)   |
| Recording time                 | up to 12h 30min at 2.38 cm/s, 18μ tape on 17.8 cm reel   |
| Max. reel diam.                | 17.8cm (7ins)  |
| Speed accuracy                 | better than ±0.1%  |
| Start time                     | less than 0.1sec. at all speeds  |
| Winding time                   | about 10 minutes for 1'100m. (3'600 ft)  |
| Wow and flutter (peak flutter) | at 3 3/4ips < 0.07%<br>at 1 7/8ips < 0.09 %<br>at 15/16ips < 0.15 %                              |

## LINE INPUT

|                 |                                |
|-----------------|--------------------------------|
| Sensitivity     | 77.5mV                         |
| Input impedance | AC > 1,5M Ω 250Hz<br>DC > 39MΩ |

### Autostart activation characteristics :

- DC signal, by threshold level adjustment from 0 to 60V
- AC signal, by internal adjustment from 7 to 200 mV, adjustable stop time delay (0.5 s. to 4 min)

Common rejection mode ratio: 60dB at 60Hz

## OUTPUTS

|                   |   |
|-------------------|---|
| Assymetrical line | 0.775V on 600 Ω load                                      |
| Headphones        | Adjustable<br>0,3V max on 2 x 25 Ω<br>2V max on 2 x 400 Ω |

## RECORD / PLAYBACK

|                       |  |
|-----------------------|--|
| Reference level       | 0dB = 250nWb or 25mM                                     |
| Response curve        | ± 3dB at -20dB   |
| at 15/16ips           | from 170Hz* to 5'000Hz                                   |
| at 1 7/8ips           | from 170Hz* to 10'000Hz                                  |
| at 3 3/4ips           | from 170Hz* to 15'000Hz                                  |
| at 7 1/2ips           | from 170Hz* to 17'000Hz<br>*can be extended to 30Hz      |
| Distortion            | H3 < 2% at 0dB<br>H3 < 3% at +2dB                        |
| Built-in compressor   | accomodating peaks of 8dB over +2dB                      |
| Erase efficiency      | better than 75dB   |
| Signal to noise ratio |  |
| ASA A weighted        | 50dB at 15/16ips<br>55dB at 1 7/8ips<br>58dB at 3 3/4ips |
| Crosstalk at 3 3/4ips |  |
|                       | at 1 kHz > 50dB<br>at 10 kHz > 40dB                      |

## THIRD TRACK

Input sensitivity adjustable from 25mV to 10V  
Built-in time code clock in accordance with IRIG B standard optional

## SELF - CHECK ALARM FEATURES

|                |  |
|----------------|--|
| Audio tracks   | by comparison of record and playback signal levels over two frequency ranges, LF centered on 1kHz and HF on 3 kHz. Alarm is given if the difference is outside ± 5dB |
| Third track    | alarm is given if the playback signal level is outside +10dBm, -20dBm  |
| Tape transport | capstan servo-motor out of its capture range or tape slippage exceeding ± 4%   |
| Tape quantity  | by comparison of supply spool speed and counter roller speed. (internal adjustment from 4% to 86%)   |

Autostart not executed: Autostart function failure  
Alarms condition or failure of main functions automatically initiates start code to back up TRVR.

## METER FUNCTIONS

Two meters give the following indications:

- input and output signal level (dB)
- time code input or output signal level (dB)
- difference between recorded and playback signal
- HF bias level (for bias adjustment)
- Remaining tape quantity on supply spool (%)
- Chosen DC start level and effective DC input level (V)

KUDELSKI S.A.

Nagra Tape Recorder Manufacture  
CH-1033 Cheseaux/Lausanne  
Switzerland

phone (021) 91.21.21. telex 24392 nagrach

**NAGRA KUDELSKI**