

**PHILIPS**

**Meet  
the  
PRO'12**







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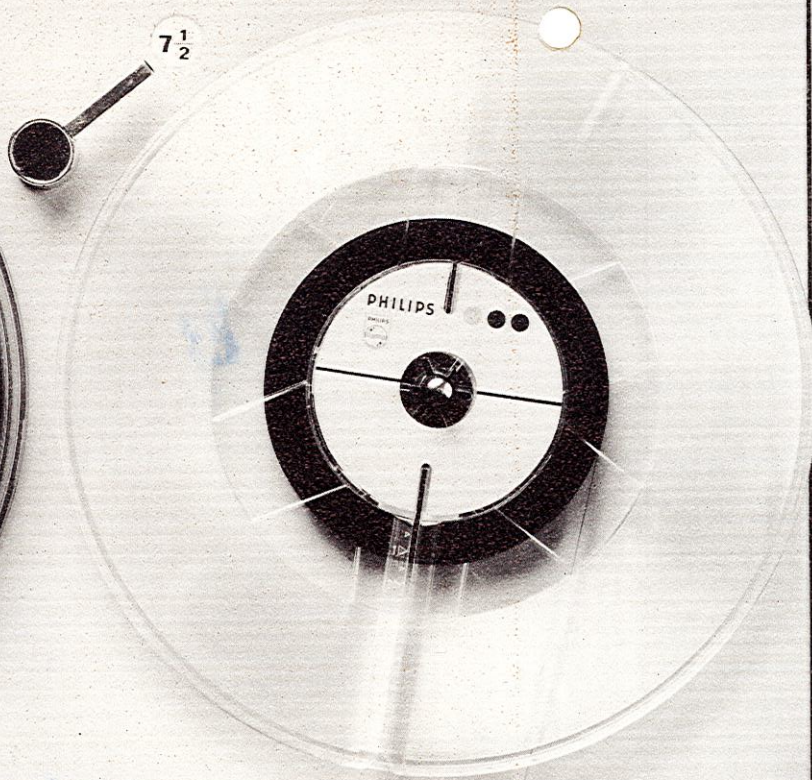
**Meet  
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3<sup>3</sup>/<sub>4</sub>

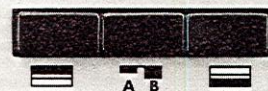
7<sup>1</sup>/<sub>2</sub>



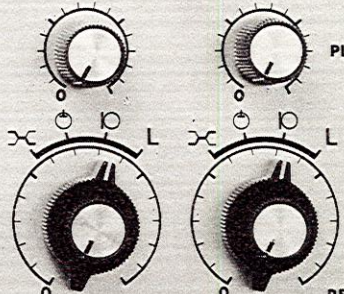
PRO 12



0dB 10dB



MONITOR



PLAY BACK

RECORDING

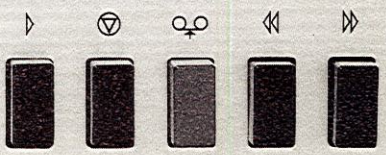


80



CUE

0 3 7 5





**For studio quality performance and facilities and a life time of at least 10 000 hours from a compact tape recorder you need Philips PRO'12.**

**The PRO'12 is small and fully transistorised. It is specifically designed for broadcasting stations, recording and film studios, and outside broadcast vans.**

Its features :

1. Suitable for twin-track mono, dual-track mono, and twin-track stereo
2. Special version for four-track mono and stereo
3. Electro-magnetic speed control
4. Three inputs for each channel
5. Built-in facilities for mixing two inputs
6. dB Switch for lining-up purposes
7. Multi-play and sound on sound
8. Permits check of recorded signal during recording (Before and After tape)
9. Built-in monitor amplifier with loudspeaker
10. Socket for headphone monitoring
11. Cue and dubbing facilities, with tape lifting devices
12. End-of-tape switch
13. Pause button
14. Remote control facilities

Why the PRO'12 is a real studio recorder.

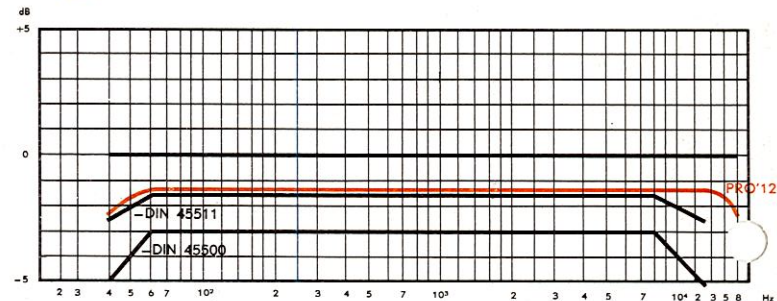
1. Performance meets studio standards (DIN 45511)
2. Three separate motors for individual drive of the capstan and tape reels
3. Correction filters for both speeds, automatically selected and independently adjustable
4. Independently adjustable bias current for both speeds
5. Correction filters to CCIR standard (NAB optional)
6. Line input, line output and microphone transformers (optional)
7. Diode input-output and extra monitor output
8. VU meter for each channel
9. Extra connection for stereo headphone
10. Very low crosstalk between the two channels
11. Operation by means of relays
12. Electro-mechanically operated pressure roller
13. Pilot tone head (optional)

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## Technical data

	<i>7 1/2 and 15 in/s (19 and 38 cm/s)</i>
Tape speed	<i>3 3/4 and 7 1/2 in/s (9 1/2 and 19 cm/s)</i>
Tape width	1/4 inch (6.35 mm)
Tape	longplay (1800 ft — 540 m), doubleplay (2400 ft — 730 m)
Number of tracks	two, optional: four-track instead of two-track heads
Number of heads	three, optional pilot tone head according to DIN 15575, erasing frequency 120 kHz
Reels	Cine type, max. 7 in (18 cm) min. 3 in (8 cm)
Deviation on absolute tape speed	less than 0.8%
Tape slip (measured between beginning and end of the tape)	less than 0.3%
Wow and flutter (peak values)	0.1% at 7 1/2 in/s, 0.13% at 3 3/4 in/s
Starting time	less than 0.3 s to reach normal speed, less than 1 s to reach normal wow and flutter level
Stopping time from normal play from fast winding	within 0.25 s within 2 s
Fast forward and rewinding time	less than 75 s for 1800 ft (540 m) tape (long- play tape on a 7-inch reel)
Frequency response	according to DIN 45511
playback at 7 1/2 in/s	60 to 12 000 Hz 0 — 1.5 dB 40 to 18 000 Hz 0 — 2.5 dB
at 3 3/4 in/s	60 to 10 000 Hz 0 — 1.5 dB 40 to 15 000 Hz 0 — 2.5 dB
overall response at 7 1/2 in/s	60 to 12 000 Hz 0 — 3 dB 40 to 18 000 Hz 0 — 5 dB
at 3 3/4 in/s	60 to 10 000 Hz 0 — 3 dB 40 to 15 000 Hz 0 — 5 dB
Signal-to-noise ratio	Measured acc. to DIN 45405 at 7 1/2 in/s : -56 dB (weighted); at 3 3/4 in/s: -52 dB (weighted)
Crosstalk rejection	better than -52 dB Note : Measured at 1000 Hz when recording one track at full level (3% third harm.) and HF bias on the second track. After recording, the second track is reproduced.
Total harmonic distortion	Recording amplifier : less than 0.5% (measured at a level of +6 dB at full modulation) Playback amplifier : Less than 0.5% at a level of +6 dB
Power supply	110-117-127-220-245 V AC by means of volta- ge adapter; 50 or 60 Hz version
Power consumption	70 W



Inputs	Each of the two channels has the following in- puts, selectable by means of a switch a. line : 100 mV, 100 k $\Omega$ b. microphone : 1 mV (unbalanced), suitable for microphones from 50 to 2000 $\Omega$ c. diode : 2 mV, 20 k $\Omega$ In addition, the following inputs are optional : d. microphone input with microphone transfor- mer (balanced) for 0.2 mV at 50 $\Omega$ micro- phones 0.4 mV at 200/500 $\Omega$ (taps) e. in the line input a transformer may be added for 0.775 V, > 10 000 $\Omega$
dB-Switch	0 dB — 10 dB for lining-up purposes
Outputs	Each channel has : a. a line output; nom. level : 0.775 V; max. level : 4 V; load 10 000 $\Omega$ b. a line output transformer may be optional; level : nom. 0 dBm, peak +6 dBm c. a separate stereo monitor output for direct connection to separate amplifiers. Nom. level : 0.775 V; max. level : 4 V; load : 10 000 $\Omega$
Monitor amplifier	Nominal output 0.5 W via built-in speaker; fre- quency response from monitor socket 40 to 15 000 Hz $\pm$ 2 dB. Distortion 1%
Headset	Headset impedance : 2 x 400 $\Omega$ ; nom. output 2 x 1 V, acc. to IEC, the headset is connected and isolated via a transformer.
VU meters + amplifiers	40 up to 15 kHz within 2 dB with respect to a 1000 Hz signal applied to the inputs
Permissible temperature	Suitable for tropical climate up to 45 $^{\circ}$ C.
Dimensions and weight	Weight : approx. 23 kg (50.6 lb). Dimensions : 52 x 34 x 24 cm (20 5/8 x 13 3/4 x 9 3/8 inch)
Chassis	Suitable for 19 inch rack mounting