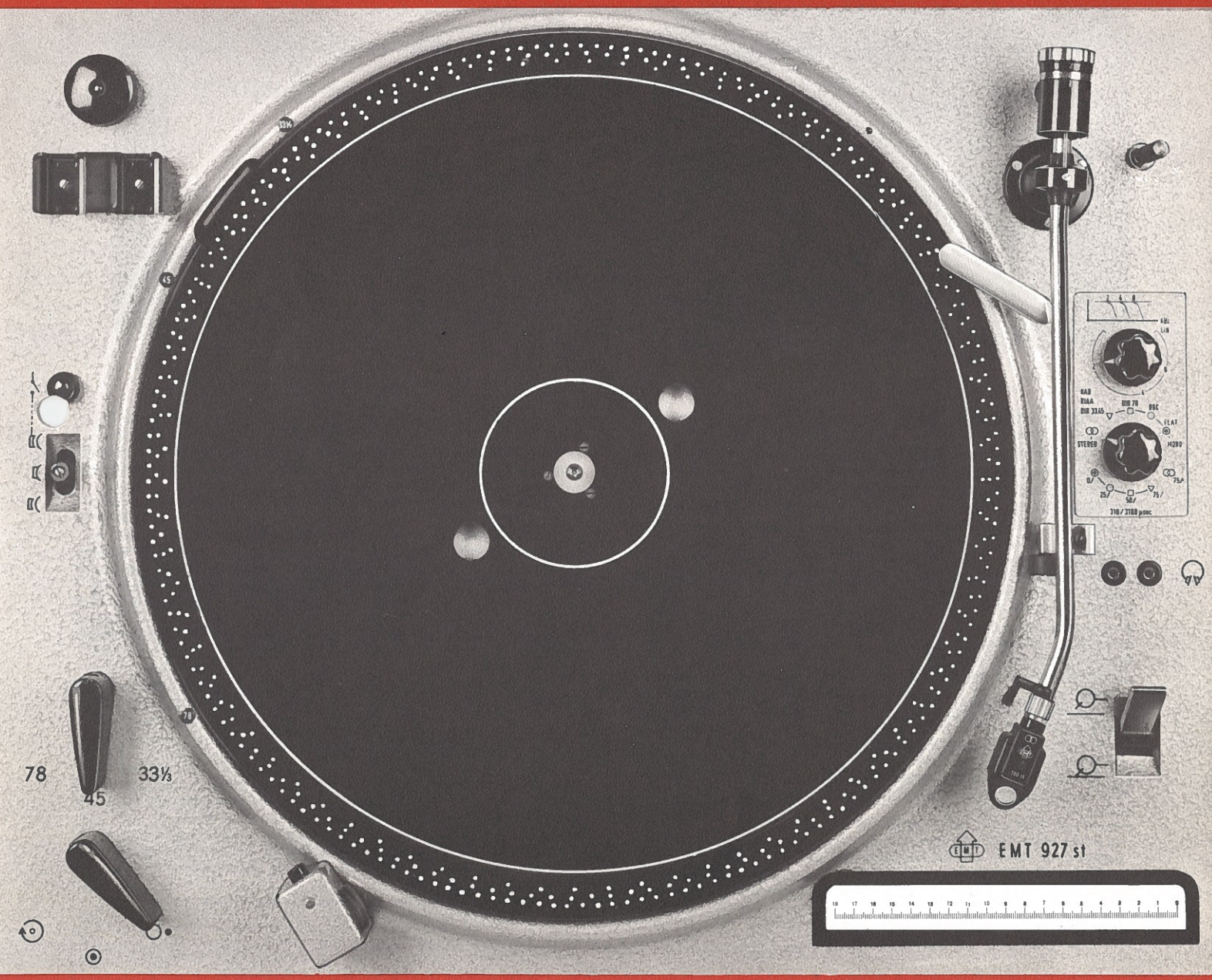
Professional turntables

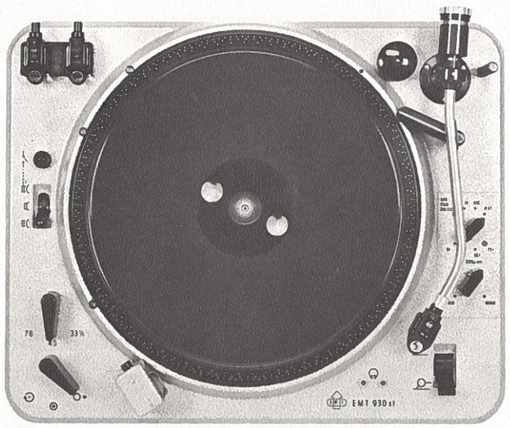
EMT 927
EMT 930



EMT 927
EMT 930 PROFESSIONAL TURNTABLES

Proven
in studios
all over the world
for many years

Turntable mechanism

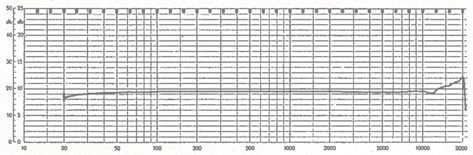


The EMT professional turntables are designed for the exacting demands of professional studios. Their chief characteristics are:

- solid precision engineering
- sturdy and convenient operating controls
- special operating functions to suit studio requirements.

The heavy cast non magnetic turntable with its high moment of inertia ensures excellent wow and flutter characteristics over long periods of heavy duty operation. It runs extremely quietly because of the hardened precision made spindle, running in a special bearing. The turntable is brought to its nominal speed of rotation in less than one second by the low vibration, self starting, synchronous motor via a friction drive. The motors were specially developed for the EMT professional turntables and are made in our own factory. The shaft which is artificially aged, has three precision ground steps, for the three turntable speeds, and friction drives the rubber intermediate wheel. The intermediate wheel is controlled by the turntable speed selector switch and is retracted in the rest position. To render the machine foolproof the main switch locks the turntable speed selector switch when the turntable is running.
The turntable speed fine adjustment enables each of the nominal speeds to be set up accurately. The speed is checked by means of the stroboscopic divisions on the turntable rim which are illuminated by a pulse fed neon lamp which makes them appear very clear and sharp.

Pick up arms
Pick up cartridges





Type RMA 229 for studio record players EMT 930
Type RMA 297 for studio record players EMT 927.
The new S-shaped pick-up arms of the RMA series are statically as well as dynamically balanced and the mounting position of the studio record player is therefore uncritical.
The S-shaped tube of the pick-up arms of the RMA series ensures a low rumble level (stereo) and they are particularly insensitive to floor vibrations and acoustic feed-back (monitor loudspeaker).
The horizontal bearing of the pick-up arm runs in pivots free of play, a precision ball bearing forms the vertical bearing. An elastic link de-couples the counterweight from the pick-up arm tube.
The pick-up playing weight can be adjusted from 0 to 7 g by means of a precision adjustment ring on the counterweight which is easy to set. The pick-up cartridges can be exchanged rapidly: they are plugged into the pick-up arm and locked by turning a ring.

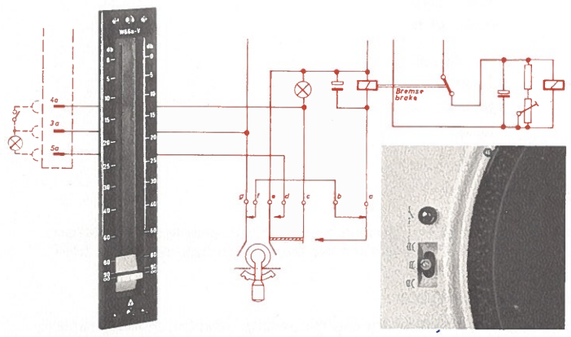
Pick up Cartridges

To fit the RMA pick-up arms EMT suplies the cartridges of the T-series:

- TSD 15 for stereo records
- TMD 25 for micro-groove records
- TND 65 for standard groove records

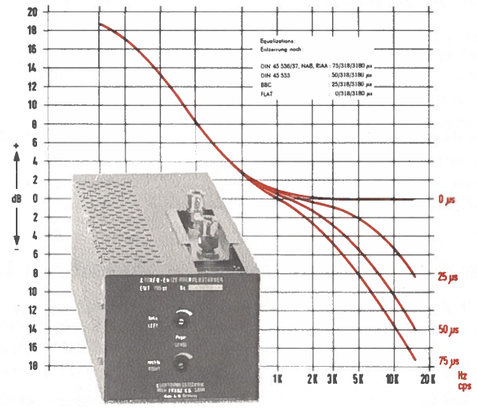
The pick-up cartridges of the T series for the different types of grooves can be interchanged rapidly without re-setting the playing weight or rebalancing the arm. They are all fitted with diamond tips. The figure in the type number indicates the tip radius of the diamond in µ.
The EMT T-series cartridges comply with the latest gramophone record standards as regards the tip radii and the vertical trailing angle of 15°. Their quality meets the ultimate requirements of recording studios.
We shall be glad to send you technical details upon request.

Remote control



The remote control start-stop facility of the EMT studio record players revolutionises the possibilities in the production of programs with gramophone records. A light perspex auxiliary turntable rests on the heavy cast main turntable. It is linked to the main turntable with a slipping clutch and can be stopped by means of a brake while the main turntable continues running at the nominal speed of revolution. For the instantaneous start this electromagnetic brake is released by means of a switch. Due to its low mass the auxilliary turntable on which the record rests will revolve immediately. The run-up time, until sufficiently low wow-and-flutter figures are achieved, is less than 500 ms. During the run-up time, the signal output lines are muted thereby suppressing any starting howl or clicks. Only then is the signal line switched through by means of a relay without any click.
The turntable is turned backwards from the required starting point through a specific angle which is marked on the turntable rim and the required point on the record will then be under the cartridge at the moment that the relay ‚makes' the signal line.
The required passage is thereby started with complete accuracy without any undesirable noise.
Furthermore the remote control enables the machine which has been cued for a particular bar or a certain word to be remote started from a fader contact on the control desk.
The stand by condition of the machine is indicated on the control desk and the fader position on the control desk is indicated on the machine by pilot lamps.
The EMT studio record players contain the entire remote control circuitry and power supply for the remote control.

Equalizer amplifier



The equalizer amplifier has the purpose of amplifying the small output voltages from the dynamic pick-up cartridges to the standard studio line level. At the same time it equalizes the cutting characteristic of the record. The mono version of the EMT studio record players is equipped with the single channel equalizer amplifier EMT 155, the stereo version with the two channel equalizer amplifier EMT 155st. Both types of amplifiers exclusively use silicon-planar-transistors.
The amplifier cassette is plugged into the lower half of the machine and obtains its supply voltages from the power supply unit via a knife contact strip.
The equalization of the amplifier can be switched to the four internationally used cutting characteristics.
The stereo equalizer amplifier EMT 155st can also be used for mono operation – in conjunction with a mono cartridge. For this purpose the equalization selector switch of the EMT 155st has the additional switch position ‚MONO'.
Both the EMT 155 and the EMT 155st are equipped with a scratch filter. It provides a continuously variable attenuation of the groove hiss. The operating knobs for the equalization selector switch and the scratch filter are placed on top of the record player chassis and they are therefore accessible during operation. The gain control, which is pre-set once and for all is mounted on the front panel of the amplifier below the chassis.
The new equalizer amplifiers EMT 155 and EMT 155st have an exceptionally high signal to noise ratio and very low distortion which is largely independent of the load impedance. The output is designed to enable the amplifier to feed any of the internationally used line impedances and levels.

Technical Data of Equalizer Amplifier EMT 155 and 155 st

Equalization characteristics (can be switched during operation)		
DIN 45 536 / 37	75/318/3180/µs	mono and stereo
NAB, RIAA		
DIN 45 533	50/318/3180/µs	mono
BBC	25/318/3180/µs	mono
FLAT	0/318/3189/µs	mono
Input Level		
EMT 155	10 mV	
EMT 155 st	1 mV	
Output Level matched load impedance 600 ohms	+ 15 db (4.4 V)	
Harmonic distortion (full load)		
40 cps	less than .4 %	
from 200 cps to 12 kc/s	less than .2 %	
Intermodulation distortion (full load) test frequencies 50 cps and 4 kc/s voltage ratio 4 : 1	better than 1 % (average value .5 %)	

Signal-to-noise ratio referred to 1.55 V output input matched with 200 ohms	
unweighted (r. m. s.)	better than 60 db
weighted (peak)	better than 70 db
Cross-talk figure (EMT 155 st) from 30 cps to 16 kc/s referred to 4.4 V output	better than 50 db
Scratch filter cutoff frequencies adjustable	treble attenuation (10 db/octave) from 2 kc/s to 20 kc/s
Supply of current	from the power supply of the professional turntables EMT 927 and 930

Technical Data of turntable mechanisme

	EMT 927	EMT 930
Turntable diameter	44 cm	33 cm
Turntable speeds	78, 45, 33⅓ r. p. m.	78, 45, 33⅓ r. p. m.
Wow and flutter at 33⅓ rpm measured with EMT 420A, weighted in accordance with DIN 45 507	max. ± .05 %	max. ± .075 %
Rumble referred to a peak velocity v=10 cm/s at 1 kc/s	Mono Stereo	Mono Stereo
unweighted	45 db 42 db	42 db 40 db
weighted in accordance with DIN 45 539	60 db 58 db	60 db 58 db
Mains voltages 50 c/s (special version 60 c/s)	117, 200, 220, 240 V	117, 200, 220, 240 V
Maximum power consumption	ca. 35 W	ca. 30 W
Dimensions	520 x 675 mm	390 x 490 mm
Seated depth	215 mm	175 mm
Weight	41 kg	23 kg

We supply the following professional turntables:

EMT 927	Professional Turntable, mono, turntable diameter 44 cm, chassis construction, prepared for stereo, three speeds: 33⅓, 45 and 78 r. p. m., equipped with transistorized mono equalizer amplifier EMT 155 and two pick-up cartridges.
EMT 927 A	Same as type 927, with additional optical groove indicator.
EMT 927 D	Professional Turntable, **special type,** laboratory machine for the recording industry, mono, prepared for stereo, turntable diameter 44 cm, with optical groove indicator, ratio 1 : 4, chassis construction, three speeds: 33⅓, 45 and 78 r. p. m. With glass auxiliary turntable, optically flat elastic centring spindle and centring cone, without stop/start arrangement. Equipped with transistorized mono equalizer amplifier EMT 155 and two pick-up cartridges EMT-OFS 25 and EMT-OFS 65.
EMT 927 st	Same as type 927, however with transistorized switchable stereo/mono equalizer amplifier EMT 155 st and one stereo pick-up cartridge EMT-TSD 15.
EMT 927 Ast	Same as type 927 st, with additional optical groove indicator.
EMT 927 Dst	Same as type 927 D, however with transistorized switchable stereo/mono equalizer amplifier EMT 155 st and one stereo pick-up cartridge EMT-TSD 15.
EMT 927–932 a	Twin Console, on castors, grey enamelled, for EMT 927 all types.
EMT 930	Professional Turntable, mono, turntable diameter 33 cm, with optical groove indicator, chassis construction, prepared for stereo, three speeds: 33⅓, 45 and 78 r. p. m., equipped with transistorized mono equalizer amplifier EMT 155 and two pick-up cartridges EMT-OFS 25 and EMT-OFS 65.
EMT 930 st	Professional Turntable, stereo, turntable diameter 33 cm, chassis construction, three speeds: 33⅓, 45 and 78 r. p. m., equipped with transistorized switchable stereo/mono equalizer amplifier EMT 155 st and one stereo pick-up cartridges EMT-TSD 15.
EMT 930–932 c	Twin Console, on castors, grey enamelled, for EMT 930 all types.

ELEKTROMESSTECHNIK WILHELM FRANZ KG

P. O. BOX 1520 · 7630 LAHR/SCHWARZWALD · WESTERN GERMANY · PHONE: (07821) 2053 · CABLES: MESSTECHNIK · TELEX:754934

EMT WILHELM FRANZ GMBH

SEMINARSTR. 92 · CH 5430 WETTINGEN (AG) SWITZERLAND · PHONE: BADEN-(056)60550 · CABLES: EMTFRANZWETTINGEN · TELEX:53682

Print No. PE 709–3–Pe
Printed in Germany