

**NOW WITH
SYNCHRONOUS MOTOR**



THE *Brenell*

MARK 5 TAPE RECORDER

SPECIALLY DESIGNED to meet the more exacting requirements of those who wish to employ tape recording for the teaching of music, the drama, foreign languages or other educational purposes—in addition, of course, to normal recreational use and industrial purposes—the new Brenell Mark 5 has a choice of 4 speeds and many other additional features of considerable value.

Indeed, as one studies the Specification shown overleaf, it becomes obvious that no effort has been spared to ensure that the quality of its reproduction attains a very high level.

Nor is this all—for, by means of a 3-position switch, frequency correction is automatically applied at 15, $7\frac{1}{2}$ and $3\frac{3}{4}$ i.p.s. to C.C.I.R. standards. This ensures that the correct play-back characteristic—so essential for optimum fidelity—is always available. The ultra-efficient Brenell Sound-heads—the carefully designed 50 K/cs oscillator circuit—

the application of negative feed-back to secure a uniform level throughout the wide frequency band—the use of a large internal elliptical speaker of high flux density—all these play their part in permitting the attainment of a standard of performance which will never fail to delight the most critical ear.

Finally, because it is realised that such a versatile instrument will be subjected to long and arduous service. Brenell engineers have developed a Unit Assembly System which, by permitting the instant disconnection of any of its several units, makes internal inspection, lubrication, adjustment or valve renewal literally a matter of minutes.

The Mark 5 complete **64 gns.**
(including 1,200 ft. of tape and spool)

Crystal microphone 3 gns. extra.

Ribbon microphone from £7-17-6d. extra

With recording level meter **69 gns.**

Special Features of the

BRENELL MARK 5 **TAPE RECORDER**

Three Independent Motors (capstan drive motor being synchronous) chosen for their high degree of speed stability with exceptional reliability and endurance.

Four Recording Speeds, $1\frac{7}{8}$, $3\frac{3}{4}$, $7\frac{1}{2}$ and 15 for maximum versatility under all circumstances.

Instant stop without spillage achieved even at high speeds by positive mechanical system of proved reliability.

Pause Key to halt tape movement temporarily when recording or playing back. Permits the easy omission of unwanted announcements or musical passages and therefore saves tape.

Digital Rev. Counter enables any portion of a recording to be quickly located when desired.

Hi-Fi Amplifier is of advanced design and, at the turn of a switch, can be used quite independently of the Tape Recorder. Thus it becomes available for any public address announcement application or, for example, in conjunction with an F.M. Tuner and gramophone turn-table as a complete Radiogram.

Recording Level Indicator. During recording the peak level is at all times clearly visible on the latest type of miniature magic eye or recording level meter. In this way recordings of unvarying quality can be made without the slightest risk of failure.

Monitoring Facilities. During any recording operation high impedance headphones (2,000/4,000 ohms) can be plugged into the socket provided—a great convenience when recording from a distance or when using a mixer unit.

Permits the use of $8\frac{1}{4}$ " dia. Reels. For professional or other applications where recordings are required to be made at a speed of 15 i.p.s., the facility of being able to use $8\frac{1}{4}$ " dia. reels will be greatly appreciated.

Azimuth Head Adjustment. This ensures highest quality of reproduction from commercially pre-recorded tapes and also permits interchangeability with those made on other machines.

Provision for extra Soundheads. Additional Soundheads (up to two in number) can be fitted at any future time for dual channel operation, for stereophonic sound, for tape monitoring, etc.

Fast Re-wind in either direction by switch which automatically lifts pressure pads and withdraws tape from contact with heads. Full reel of 1,200 ft. of tape can be completely re-wound in 45 seconds.

Coloured Signal Lights indicate visually and automatically the actual operation taking place and thereby eliminate all risk of error.

Abridged Specification

Brenell Record/Playback Head

High Impedance, twin track, with operative gap at top to conform to British Standards.

Impedance : 1,800 ohms at 1 K/cs.
16,000 ohms at 10 K/cs.
50,000 ohms at 45 K/cs.

Bias Frequency : 50 K/cs approx.

Optimum Bias Current : 1.0 mA.

Optimum Recording Current :
100 micro Amps.

Brenell Erase Head

Low Impedance, twin track, with operative gap at top to conform to British Standards.

Erase Frequency : 50 K/cs.

Erase Power : 2 to 2.5 watts.

Wow and Flutter : Less than 1% at $7\frac{1}{2}$ i.p.s.

Brenell Hi-Fi Amplifier

Frequency Range :

At $3\frac{3}{4}$ i.p.s. : 60/7,000 cps \pm 3 db.
At $7\frac{1}{2}$ i.p.s. : 60/12,000 cps \pm 3 db.
At 15 i.p.s. : 50/16,000 cps \pm 3 db.

Sensitivity :

Microphone : 2.5 mVs into 2 megohms.
Radio or Pick-up : 100 mVs into 150 K/ohms

Output : 4 watts into 15 ohms.

Internal Speaker : 9" \times 5" elliptical.

Valve Line up : EF 86, ECC 83, EL 84, EZ 80
EM 81 (or equivalents).

Indicator Lamps : 6.5 volts, 0.2 amp. MES.

Total Power Consumption : 100 watts.

Working Voltage : 200/250 volts AC 50 cycles
or 110 volts AC 60 cycles.

Socket 1 (Input) : For high impedance Microphone (crystal ribbon or moving coil).

Socket 2 (Input) : For Pick-up, radio or F.M. Tuner.

Socket 3 (Output) : For headphone monitoring or to feed signal to external amplifier.

Two Additional Sockets : Two additional co-axial sockets are provided on the chassis, one to permit the amplifier to be permanently connected with a Radio/Gram input and the other for monitoring and playback to be effected through an extra amplifying system, (output 250 mVs into 50 K/ohms).

Output Socket (at rear) : For use with an external loud speaker (15 ohms). Insertion of the plug into the socket automatically disconnects the internal loud speaker.

Size : 18" \times 17" \times 9"

Nett Weight : 38 lb.

Brenell Engineering reserve the right to alter this specification as modifications are made.

Sole Manufacturers

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