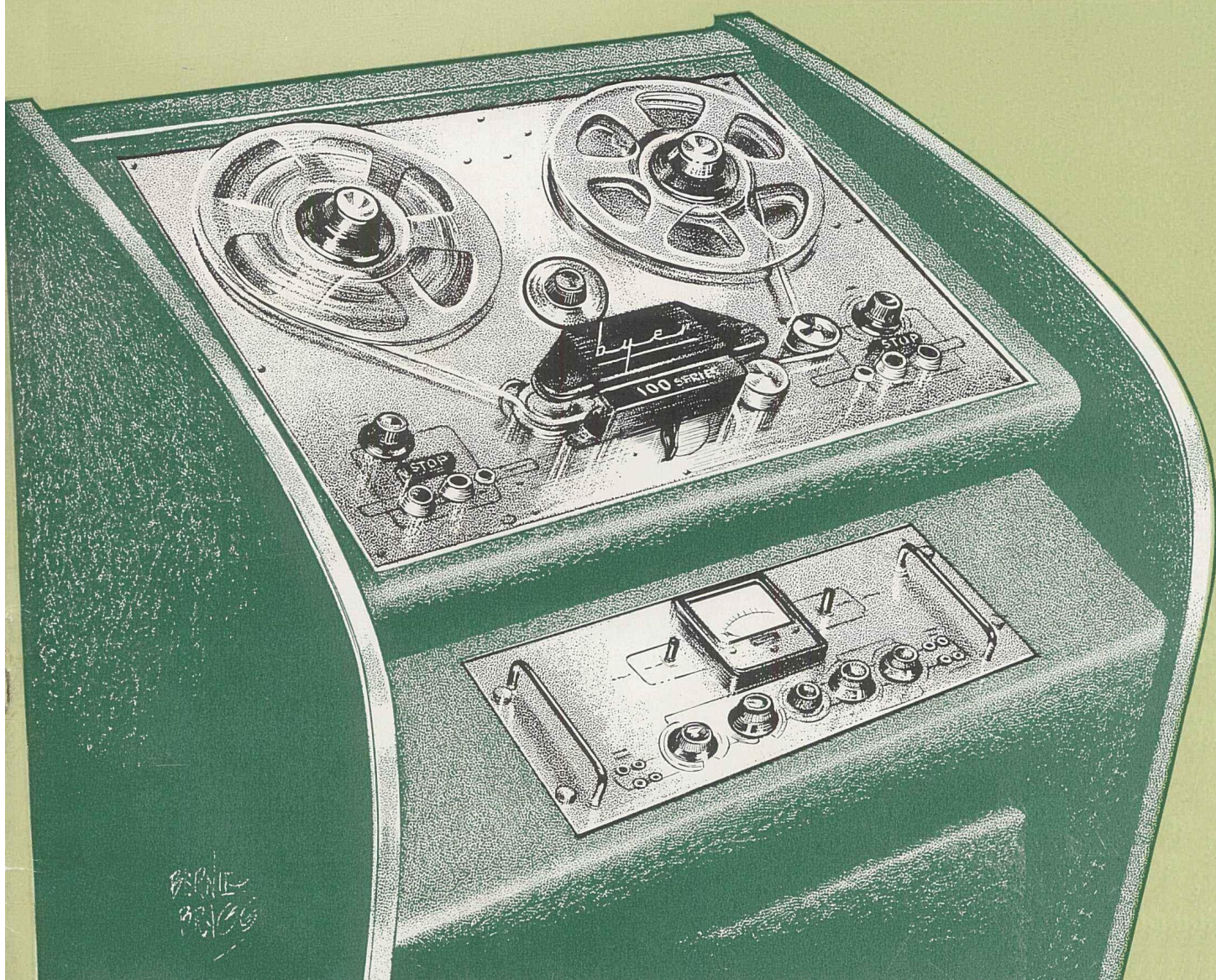


"100" SERIES CONSOLE TAPE RECORDER



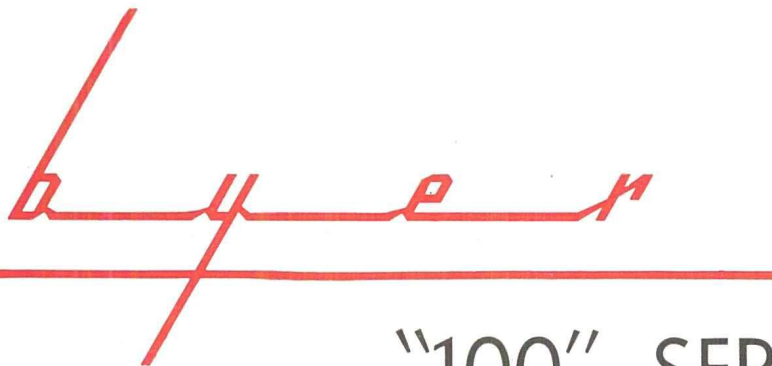


PRESENTING *the Byer "100"*
Series, the world's finest
magnetic tape recorder
for broadcasting stations
and professional recordists.
The Byer "100" has
all the features dreamed of
by Recording Engineers.

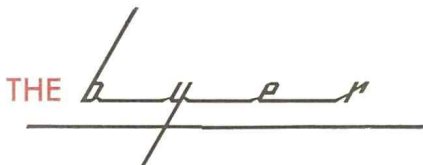
Magnetic Tape Recorder Division

ROLA COMPANY (AUST.) PTY. LTD.

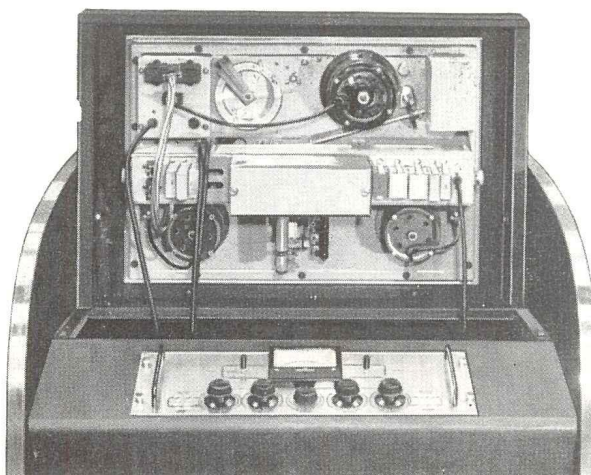
THE BOULEVARD,
RICHMOND, E.1,
VICTORIA, AUSTRALIA.



"100" SERIES CONSOLE TAPE RECORDER



"100" SERIES CONSOLE TAPE RECORDER BRINGS YOU THESE BENEFITS



A hinged mechanical deck makes servicing extremely simple.

FREQUENCY RANGE

—wide enough for highest fidelity requirements in both "Record" and "Playback"

SIGNAL TO NOISE RATIO

—more than adequate, enough to permit maximum dynamic range.

CHANNEL FACILITIES

—suitable for wide range of application.

OPERATIONAL FLEXIBILITY

—fool-proof operation and choice of "Replay" characteristics are important features.

BIAS AND "ERASE"

—use of separate frequencies.

LONG LIFE HEADS

—encapsulated type laminated heads have provision for azimuth adjustment.

The Byer "100" Series standards for frequency range are far higher than those set down for any other professional type recorder. Compensation controls are provided on both "Record" and "Replay" channels to cover the characteristics of individual tapes at both operating speeds.

The Byer "100" Series has a much better signal to noise ratio than that generally specified for top-grade recorders. Below 2% Total Harmonic Distortion, it is not less than 60 dB. "Wow" and "Flutter" characteristics are also excellent and much superior to those hitherto achieved in this type of recorder.

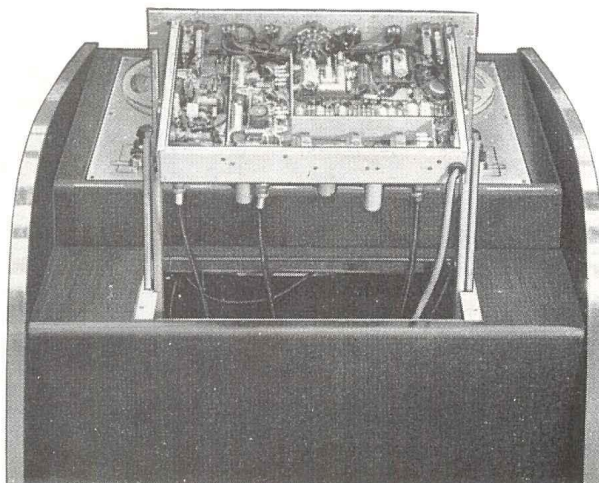
The Byer "100" Series is normally supplied as a full Track "Record" and "Replay" Unit, but can also be made available as a Half Track unit or as a Dual Track "Record" and "Replay" machine for Stereophonic Sound or Integration Purposes.

The "Record" and "Replay" characteristics of the Byer "100" Series are in accordance with C.C.I.R. specifications, but provision has also been made for replay of tapes recorded to N.A.B. standards. The control circuits employ electrically operated solenoids and relays. These can be remotely controlled if desired. The interlocking is such that accidental tape spillage is impossible. Continuously variable spooling in either direction is provided. The tape is automatically lifted off the heads during spooling. The "100" Series can accommodate 14" spools.

Another important feature of the Byer "100" Series is the use of separate "Bias" and "Erase" frequencies, a high one for "Bias" and a low one for "Erase."

The "Record" and "Replay" heads of the Byer "100" Series are the latest long-life laminated type, encapsulated for long-term stability.

A vernier azimuth adjustment is provided on the "Record" and "Replay" heads and the complete triple head assembly is readily removable for simplified head interchange.



*The control panel
tilts conveniently for
easy access.*

PRESS BUTTON OPERATION

—electro-mechanical interlocks
eliminate operating errors and
ensure complete flexibility.

FULL CUEING FACILITIES

—hinged "Replay" head shield
permits easy access to tape.

CIRCUIT METERING

—facilities are provided for
speedy checking of operating
voltages and currents.

ACCESSIBILITY

—normal service and
maintenance have been
made very easy.

OPTIONAL EXTRAS

—additional equipment is
available to extend
application of machine
if desired.

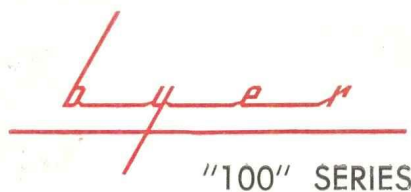
The control system on the Byer "100" Series is electrically interlocked in such a way that tape breakages automatically stop the machine. The interlock also permits push-button change from one mode of operation to another while the machine is running.

Provision has been made in the Byer "100" Series for access to the tape over the "Replay" head during operation. This provides full cueing facilities, enabling the tape to be positioned on, or adjacent to, the "Replay" head during spooling, thus making the machine particularly suitable for tape editing.

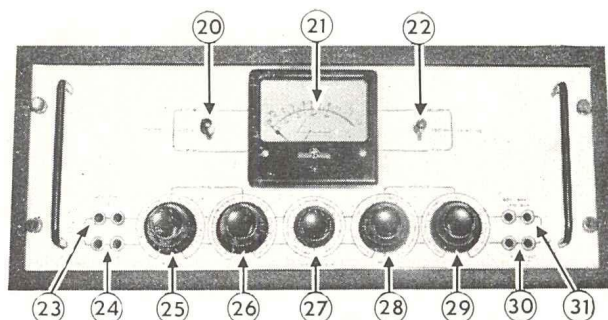
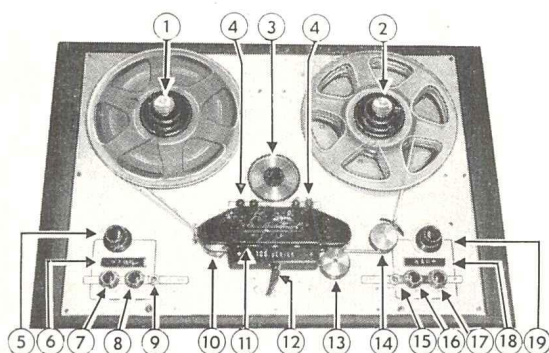
Provision is made by means of switching of the "Record" and "Replay" Level Meter for the measurement of the cathode current of all valves in the signal circuits of the recorder, as well as the bias and erase currents — and the Mains and high tension supply voltages.

Special attention has been paid in the design of the Byer "100" Series to provide complete accessibility to all components. Relays are located under an easily removable dust cover. The control box section is removed by unscrewing two knurled nuts and uncoupling the connectors to the deck assembly. The amplifier is mounted on tiltable slides, thus giving access to the under chassis components. On the mechanical deck key components are assembled as detachable units. The deck is hinged and swings back to permit access to the components mounted beneath it.

Included in the optional extras which can be provided with the Byer "100" Series are two types of monitor amplifiers — a 3 watt and a 10 watt unit — and for the addition of Microphone Input and Remote Control equipment.



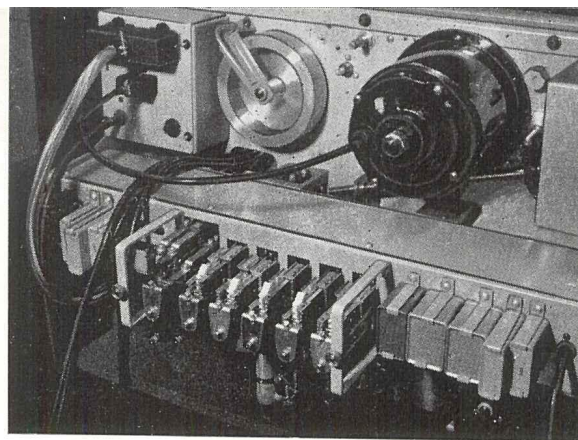
C O N T R O L S



- | | | | |
|---|-------------------------------|----|---------------------------|
| ① | Supply spool | ①⑥ | Spooling press button |
| ② | Take-up spool | ①⑦ | Play press button |
| ③ | Timing indicator | ①⑧ | "STOP" bar |
| ④ | Function indicator lights | ①⑨ | Variable spooling control |
| ⑤ | Speed change control | ②① | Meter selector switch |
| ⑥ | "STOP" bar | ②② | V.U. meter |
| ⑦ | "RECORD" press button | ②③ | Monitor selector switch |
| ⑧ | "REMOTE START" press button | ②④ | 600 ohm line input |
| ⑨ | "REMOTE START" control switch | ②⑤ | Bridge input |
| ⑩ | Stabiliser | ②⑥ | "RECORD" gain control |
| ⑪ | Triple head assembly | ②⑦ | "REPLAY" gain control |
| ⑫ | Cue control | ②⑧ | Metering selector switch |
| ⑬ | Pressure roller | ②⑨ | "RECORD" monitor gain |
| ⑭ | Guide roller | ③① | "REPLAY" monitor gain |
| ⑮ | Spool tension switch | | Monitor output |
| | | | 600 ohm line output |

byer "100" SERIES SPECIFICATIONS

The actuating relays are readily accessible.



TAPE SPEEDS:	3¾/7½ or 7½/15 or 15/30 i.p.s. (For telemetry or other applications, machines fitted for 30/60, 60/120 or any special tape speeds can be provided.)
FREQUENCY RESPONSE:	15 i.p.s. ± 4 dB from 20 to 20,000 c.p.s. 15 i.p.s. ± 2 dB from 30 to 18,000 c.p.s. 7½ i.p.s. ± 4 dB from 30 to 17,000 c.p.s. 7½ i.p.s. ± 2 dB from 40 to 14,000 c.p.s. 3¾ i.p.s. ± 3 dB from 40 to 8,000 c.p.s.
RECORDING CHARACTERISTICS:	The "Record" and "Play" characteristics are in accordance with C.C.I.R. specifications, and in addition provision has been made for the replay of tapes recorded to American N.A.R.T.B. characteristics.
EQUALISATION:	Controls are provided for correcting the frequency response of both "Record" and "Replay" channels independently and on both speeds to compensate for varying tape characteristics.
SIGNAL TO NOISE RATIO:	Not less than -60 dB when measured from the 2% total harmonic distortion point.
WOW AND FLUTTER:	3¾ i.p.s. less than .15%. 7½ i.p.s. less than .08%. 15 i.p.s. less than .06%.
START AND STOP TIME	Virtually instantaneous.
PLAYING TIMES:	7½ i.p.s. with 1,200 ft. tape on 7" spool — 32 minutes. 7½ i.p.s. with 2,400 ft. tape on 10½" N.A.B. spool — 64 minutes. 7½ i.p.s. with 5,000 ft. tape on 14" spool — 133 minutes.
PLAYBACK TIMING ACCURACY:	± .1% (± 1.8 seconds over a half-hour period at 7½ i.p.s.).
REWIND TIME:	Variable, but less than 1½ minutes for a 2,400 ft. reel.
CONTROLS:	Electro-mechanical press-button interlock. Separate "Stop," "Forward," "Rewind" and "Record" buttons, Fail/Safe over-run switching. Motor Speeds and Equalisation for tape speeds controlled by a common switch, whilst a reel size switch provides correct tape tension for 5" to 7" reels, and 10½" to 14" reels.
METERING:	Provision is made for measurement of cathode currents of all valves in the signal circuits of the recorder, plus bias, erase current, A.C. mains, and high tension supply voltage.
RECORD INPUT:	Normally 600 ohms balanced input, bridge-in at zero level (+8 dbm). Range +20 to -20 dbm. (Optional extras include a microphone channel —90 dbm input.)
OUTPUT TO LINE:	+8 dbm 600 ohms (up to +18 dbm available by adjustment).
AMPLIFIERS:	Separate "Record," "Playback," "Line Amplifier," and "Meter Amplifier" are employed.
PLUG-IN HEAD ASSEMBLIES:	The complete Triple Head Assembly is readily removable as a unit for simplified head interchange.
BIAS:	Use of high bias frequency and a low erase frequency eliminates design compromise necessary to achieve both optimum erase and recording performance from a single frequency source.
EDITING FACILITIES:	Switching from "Play" to "Record" without any pause in tape motion, and without any clicks or electrical interference.
MONITORING:	Independent "Record" and "Playback" amplifiers allow direct comparison of original and recorded signals by means of an A.B. switch. The standard V.U. meter can also be independently bridged across the incoming line, the record amplifier or, alternatively, the 600 ohms zero level output. Provision for mounting monitor amplifier and speaker system within the console cabinet if desired. This latter unit is available as an optional extra.
POWER REQUIREMENTS:	280 watts at 240 volts 50 cycles A.C. operation.
RACK SPACE:	Standard 19". Tape transport 18¾": Amplifier 7": Power Supply 7".
CONSOLE DIMENSIONS:	Height — 41" (including castors). Width — 29¼", Depth — 28".
WEIGHT:	250 lbs.



Manufactured by
MAGNETIC TAPE RECORDER DIVISION

ROLA COMPANY (AUST.) PTY. LTD.

DISTRIBUTED BY

VICTORIA

Rola Company (Aust.)
Pty. Ltd., 8 Dorcas Street,
South Melbourne.

N.S.W.

Rola Company (Aust.)
Pty. Ltd., 167 Kent Street,
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