



Technics



ELCASET

**The New Audio Tape System.
Large Size Cassette Tape
with High Performance,
Wide Frequency Characteristics
and Very Low Noise.**



Actual Size

Introducing a New Breed of Recording Tape—the ELCASET, bridging the gap between open-reel and compact cassette tapes.

ELCASET, jointly developed by Matsushita Electric Industrial Company, Ltd. (Technics), Sony Corporation and Teac Corporation, is a new high grade cassette-like tape with the same high performance as open-reel tapes. ELCASET has the same handling convenience as the smaller compact cassette tapes, but with the same tape width and tape speed as open-reel, giving it a much better dynamic range, frequency characteristics, and sound quality. In other words, ELCASET incorporates the advantages of both other tapes, without the disadvantages of either. ELCASET is the audio tape that so many audio enthusiasts have been waiting for.



Main Features

1. Open-reel performance now available in cassette form. ELCASET is 2.5 times larger in volume than compact cassette tapes, but maintains the same handling convenience.
2. Greater dynamic range and superior sound quality, since tape width and tape speed are the same as open-reel tapes. That is, 6.3 mm (1/4 inch) and 9.5 cm/sec (3-3/4 ips).
3. Automatic identification of type of tape; Low-Noise High-Output/Ferri-Chrome/CrO₂, for instance. Also, automatic switchover for Dolbyized/non-Dolbyized tapes.
4. Better tape transport mechanism and greater stability since ELCASET tape is lifted out and over to the heads, not vice versa. Multiple head configurations can be accommodated.
5. Control tracks down the center of the ELCASET tape provides automatic program selection etc.
6. Same stereo/mono compatibility as compact cassette tapes since the same track pattern is employed.

Compact Cassette/ELCASET/Open-Reel Tape Comparison

	Compact Cassette	ELCASET	Open-Reel
Size	102 x 64 x 12 mm (approx. 4" x 2 1/2" x 1/2")	152 x 106 x 18mm (approx. 6" x 4 1/8" x 3/4")	7" (5", 10") diameter
Tape Speed	1 7/8 ips (4.8 cm/sec)	3 3/4 ips (9.5cm/sec)	3 3/4, 7 1/2 or 15 ips (9.5, 19 or 38cm/sec)
Tape Width Thickness	3.81mm (3/16") 0.012mm with C-90 tape	6.3mm (1/4") 0.013mm with LC-90 tape	6.3mm (1/4") 0.038mm with long playing tape
Accidental Erasure Prevention	Yes (permanent)	Yes (defeatable)	None
Automatic Detection	CrO ₂ Tape only	3 Types of Tape + Dolby NR	None
Automatic Program Selection	Starting Point only	Any Particular Program	Starting Point only (some decks)
MONO/STEREO Compatibility	Yes	Yes	No
Adaptability to Multi-Head Configuration	Possible	Easily Possible	Easily Possible
Tape Threading	Unnecessary	Unnecessary	Necessary

Cassette Convenience with Open-Reel Performance.

Like having your cake and eating it at the same time.

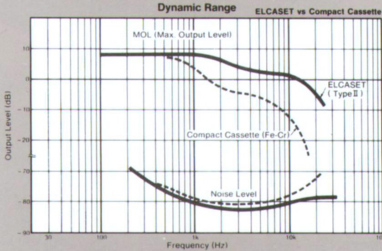
1. Cassette Handling Convenience

All the handling convenience of the smaller compact cassette is here. Pocket-sized, easy to carry, easy to load, and easy to store. The superior quality of open-reel tapes is now available in the simple pop-in pop-out operation. No more time consuming tape threading with the ELCASET.



2. Greater Dynamic Range and Sound Quality

With the wider 1/4" (6.3 mm) tape, and faster 3 3/4 ips (9.5 cm/sec) tape speed, ELCASET performance is on a par with open-reel tapes, and a step above compact cassette tapes in frequency characteristics, dynamic range, wow and flutter, level variation, dropout, and crosstalk etc. The improvement in quality of the sound is very considerable indeed, especially in terms of signal-to-noise ratio when Dolby noise reduction is employed.



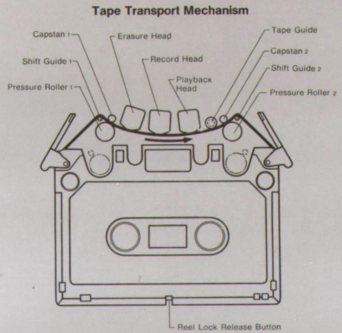
3. Automatic Identification of Tape Type, Dolby NR

Special identification holes in the rear edge of the ELCASET with corresponding detector provisions in the tape deck, for automatic detection of the type of tape (LH, FeCr, CrO₂) and presence or absence of Dolby® noise reduction. The deck then switches to the optimum recording or playback characteristic, with automatic selection of proper equalization, recording bias and Dolby processing.



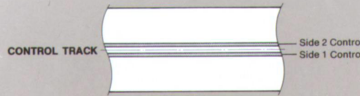
4. Higher Precision and Stability in Tape Transport

Because the ELCASET tape is lifted out from its cassette case onto the heads, and not the heads onto the tape as in compact cassettes, higher precision and stability in tape transport are assured. In addition, 3-head and 4-head systems etc. can also be readily employed, improving such critical characteristics as frequency response, dropout stability, monitor ability even further. This is one of the most important differences with ELCASET: — record, playback and tape monitor like open-reel tapes, but load and unload like cassette tapes.



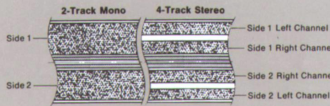
5. Control Tracks for Automatic Program Selection

ELCASET also features two unique control tracks (one track per side) running down the center of the tape. Signals recorded in these control tracks can then be used to select particular programs from the audio tracks. Previously, this feature had only been available in professional and scientific equipment etc.



6. Compatible Stereo/Mono

Since the left and right stereo channels are recorded on the same half of the tape, as in compact cassette tapes, stereo and mono ELCASET tapes can be readily interchanged with each other on the same equipment.



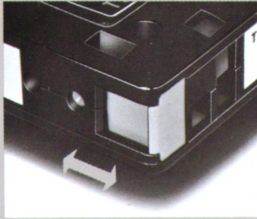
* Dolby and "Double D" device are the trademarks of the Dolby Laboratories Inc.

Many Additional Improvements to the Cassette Case Design

Greater safeguards and better automation

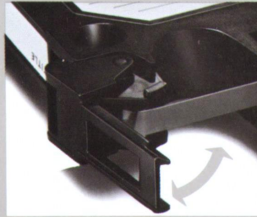
Anti-Recording Device

Slide-in slide-out sensor plate for prevention of accidental erasure. In compact cassette tapes, this special feature was a once-only *permanent* measure. But in ELCASET, it is a simple slide-in slide-out *reversible* action.



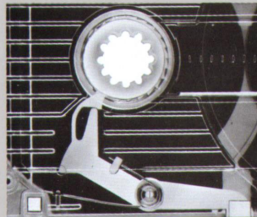
Tape Protection Guard

Front guard covers for greater protection of tape. Since the ELCASET tape is extractable to a certain extent, greater care has been taken to prevent the tape from being jolted out and damaged during handling etc.



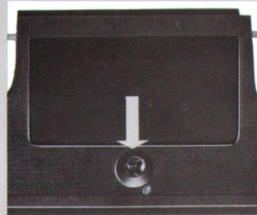
Automatic Reel Lock Device

Automatically released reel lock device. Tape reels remain stationary when being carried around, thanks to the spring-controlled reel lock device which is released automatically when the ELCASET case is inserted into the deck.



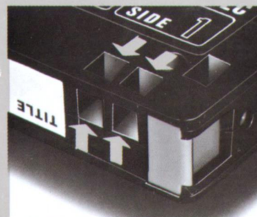
Tape Side Identification Hole

Side 1 indicator hole for easy identification in the dark. This readily detected centrally located hole is yet another convenience built into the ELCASET tape. At night etc. when the labels are next to impossible to see, this feature will prove very worthwhile.



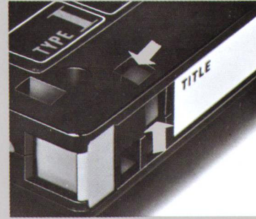
Tape Type Identification Holes

Automatic identification of type of tape. The three different types of ELCASET tapes have different identification codes built into the bottom of the case. That means the different bias and recording equalization required are adjusted automatically. The identification hole can be located either in the front or side surface.



Dolby NR Identification Hole

Automatic identification of Dolby NR system. Also on the bottom of the case, next to the type identifiers, is a special automatic Dolby NR detector hole. In the ELCASET, even the Dolby NR switch has been automated. The identification hole can be located either in the front or side surface.



Tape-End Detector Window

More advanced and safer Auto-Stop mechanism. Both ends of the tape are attached to ample amounts of transparent leader tape. A combination of lamp and photo-transistor or photo-cell in the tape deck detects the leader photo-electronically and activate the Auto-Stop mechanism automatically and almost immediately, even in fast forward and rewind modes. So tape-end tension problems are eradicated altogether.



Tape Amounts Check Window

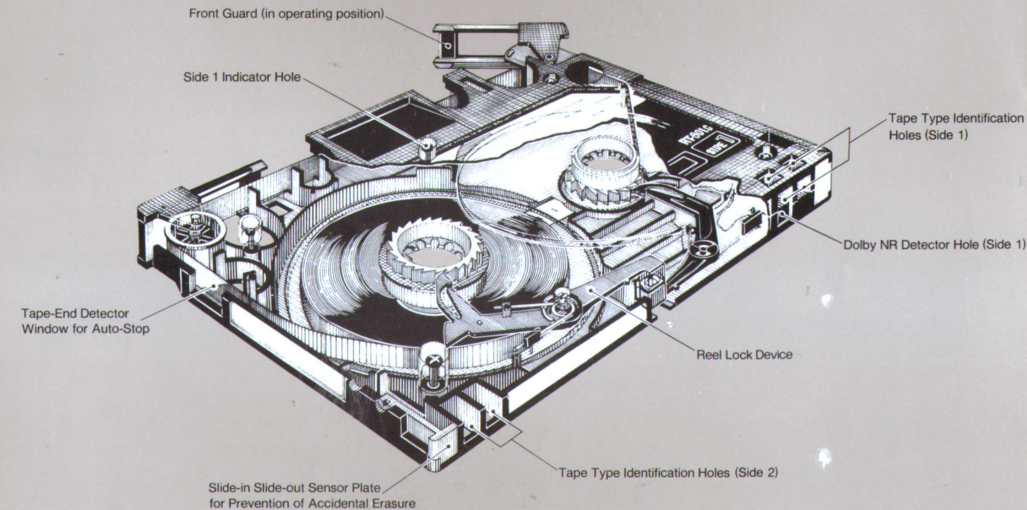
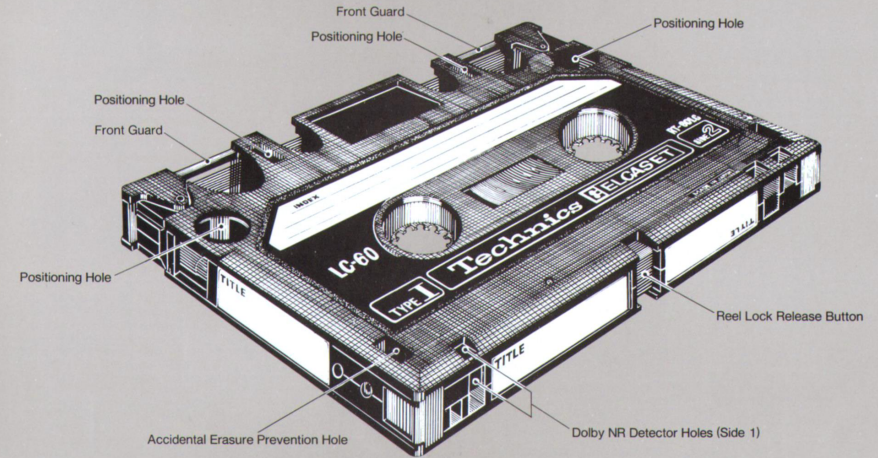
Bigger window for better observation of amounts of tape on supply and take-up reels. The bigger ELCASETs reveal more of the tape, giving a more accurate indication of how much tape is left.



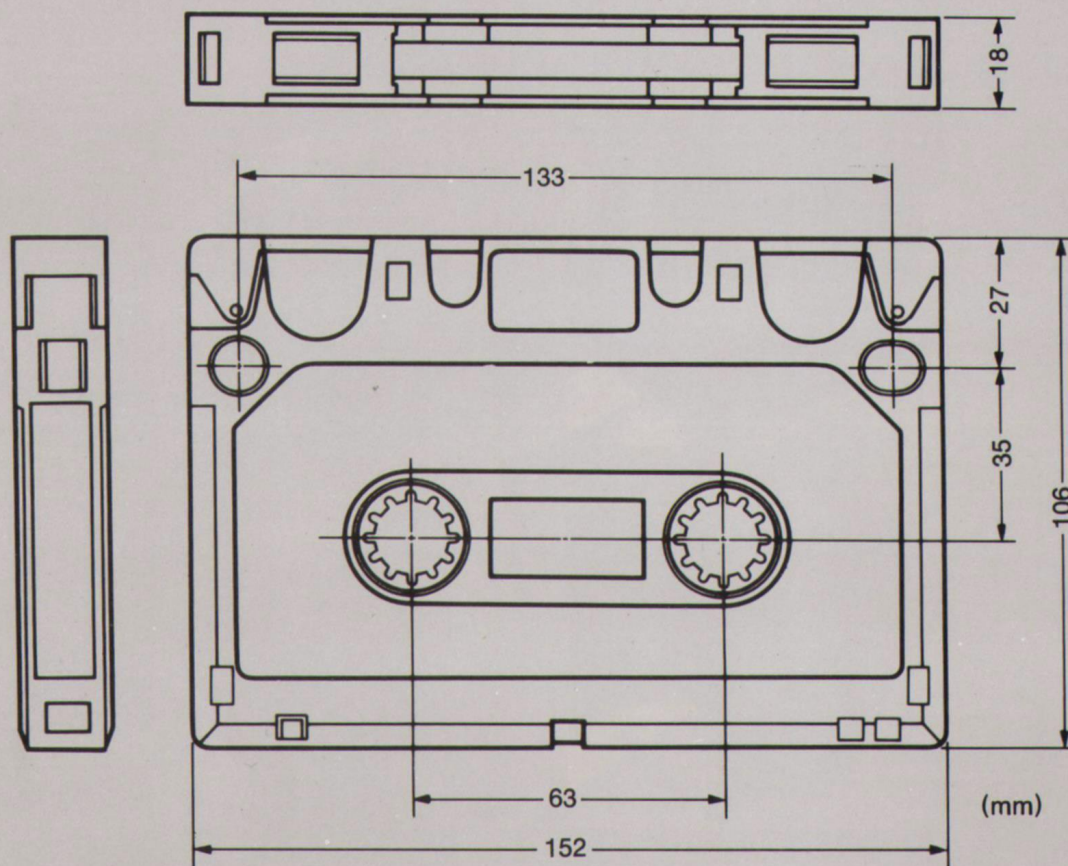
Three Types of Tape

ELCASETs come loaded with 3 types of recording tape: Low-Noise High-Output tape, Ferri-Chrome tape, or Chromium Dioxide (CrO₂) tapes, for instance. LH tape delivers good high range response, high signal-to-noise ratio and good freedom from dropout problems, and is therefore superb, for high quality music recordings. Ferri-Chrome and Chromium Dioxide tapes are recent developments aimed at discriminating recordists. They offer increased dynamic range in the low and high parts of the audio spectrum as well as superior frequency response. All three types of ELCASETs are to be played back with the same time constant of 3180/70 micro seconds.

Plays and Records Like Open-Reel, but Handles Like Cassette.

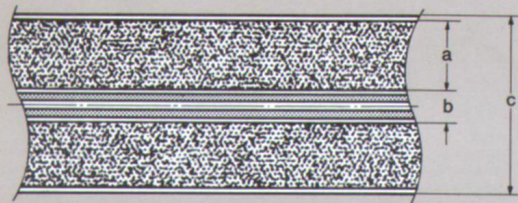


Specifications



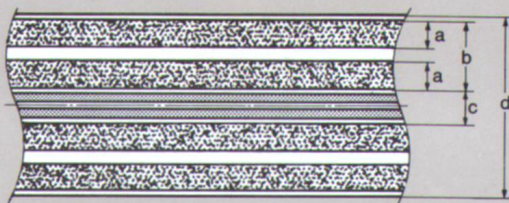
Dimensions:	152 × 106 × 18 mm (approx. 6" × 4-1/8" × 3/4")
Tape Speed:	9.5 cm/sec. (3-3/4 ips)
Tape Width:	6.3 mm (1/4")
Tape Thickness:	0.013 mm with LC-90 tape
Playback Time Constant:	3180 micro sec. + 70 micro sec.
Reference Recording Level:	185 nWb/m
Recording Time:	60 minutes (30 minutes per side) with LC-60 tape, 90 minutes (45 minutes per side) with LC-90 tape

2-Track Mono



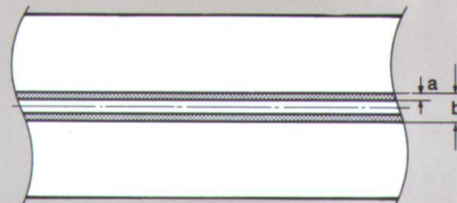
a = 2.55 mm
b = 1.05 mm
c = 6.3 mm

4-Track Stereo

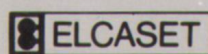


a = 1.05 mm
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Control Track



a = 0.2 mm
b = 0.6 mm



Look for this mark on all products
manufactured under the ELCASET standard.



Technics
Matsushita Electric



Technics



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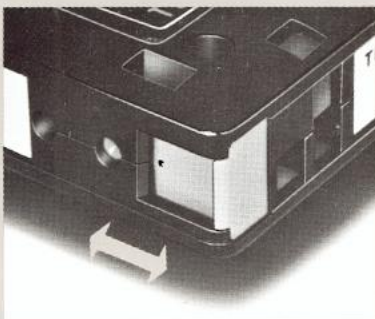
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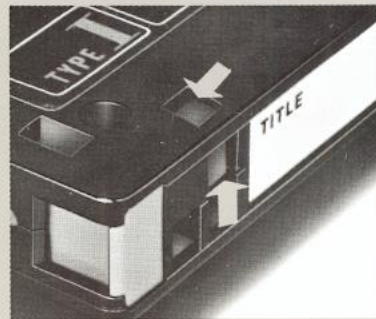
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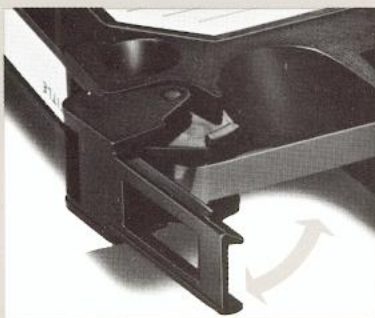
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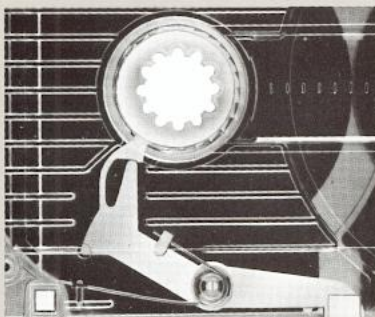
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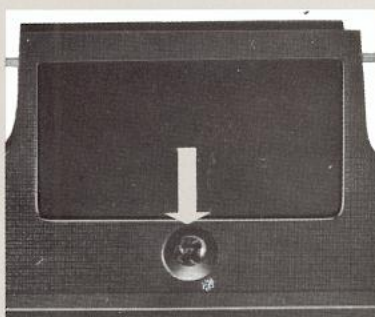
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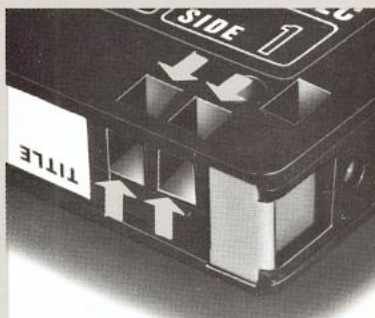


Three Types of Tape

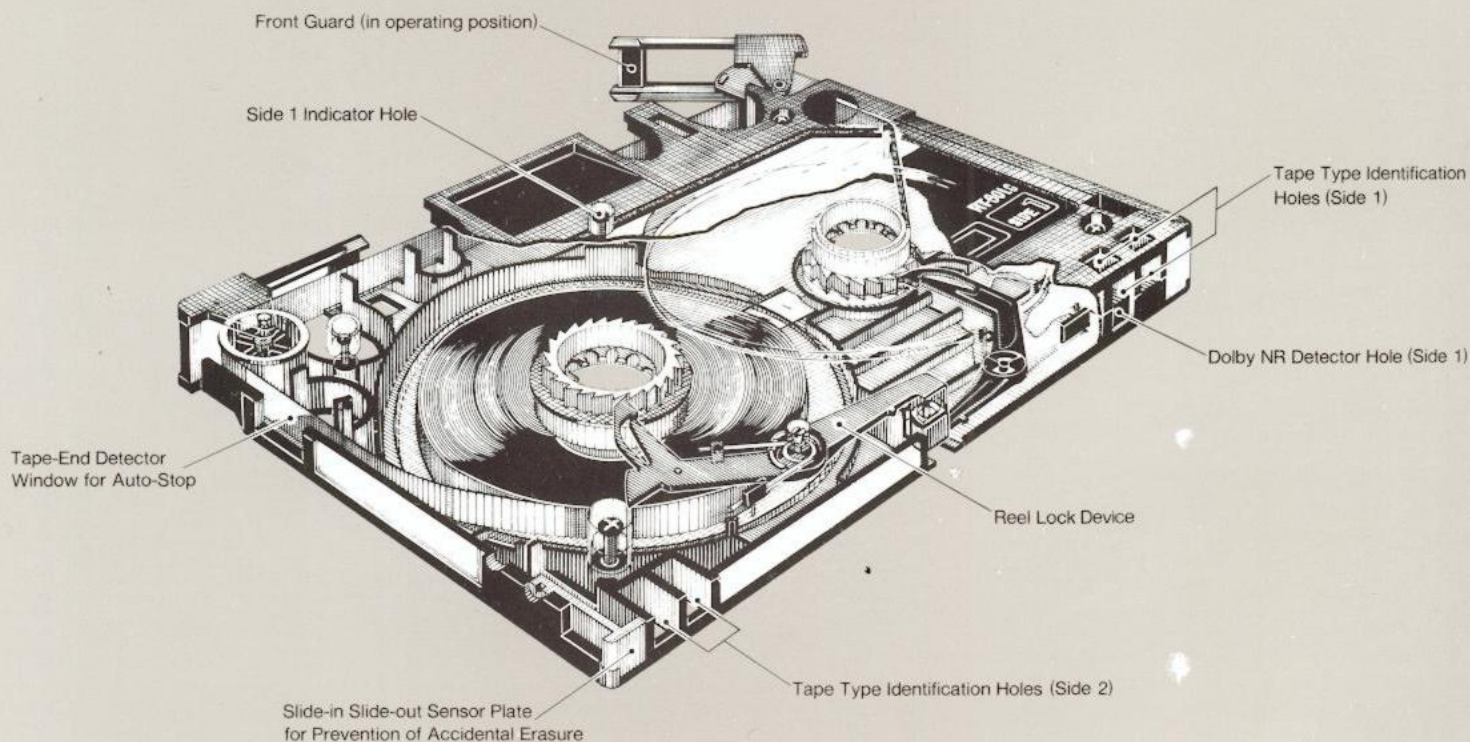
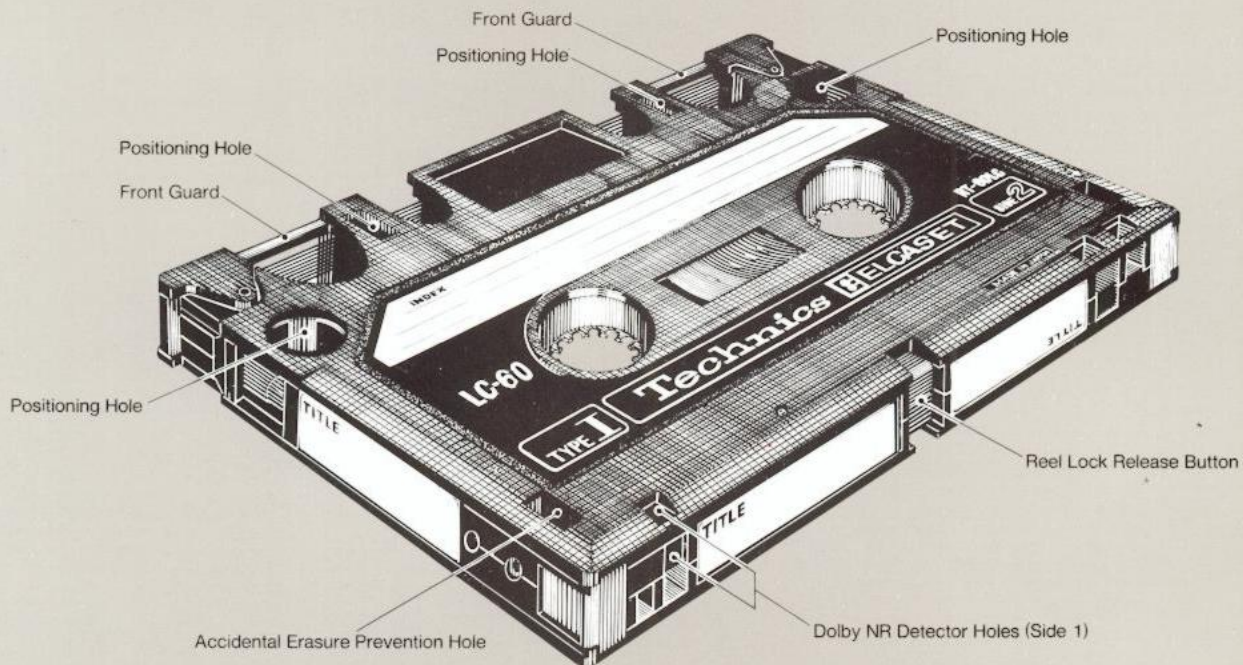
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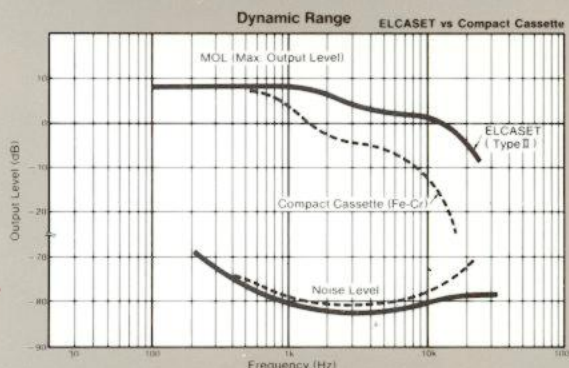
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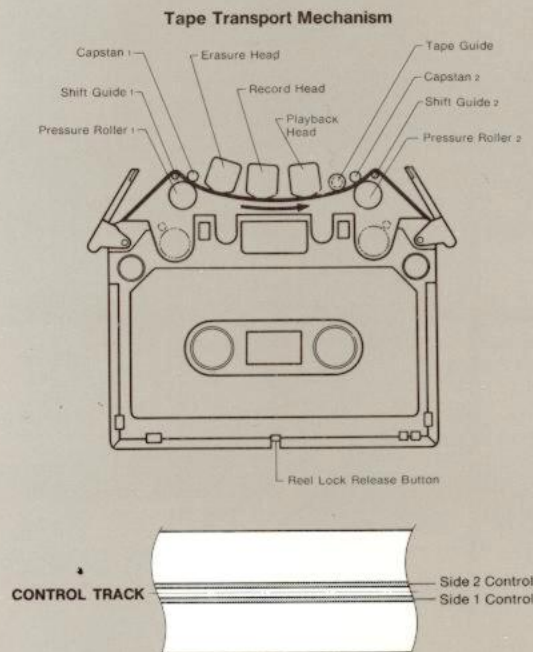


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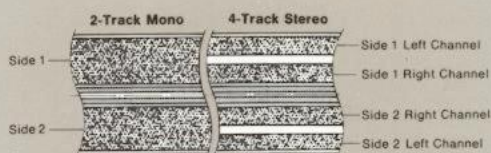
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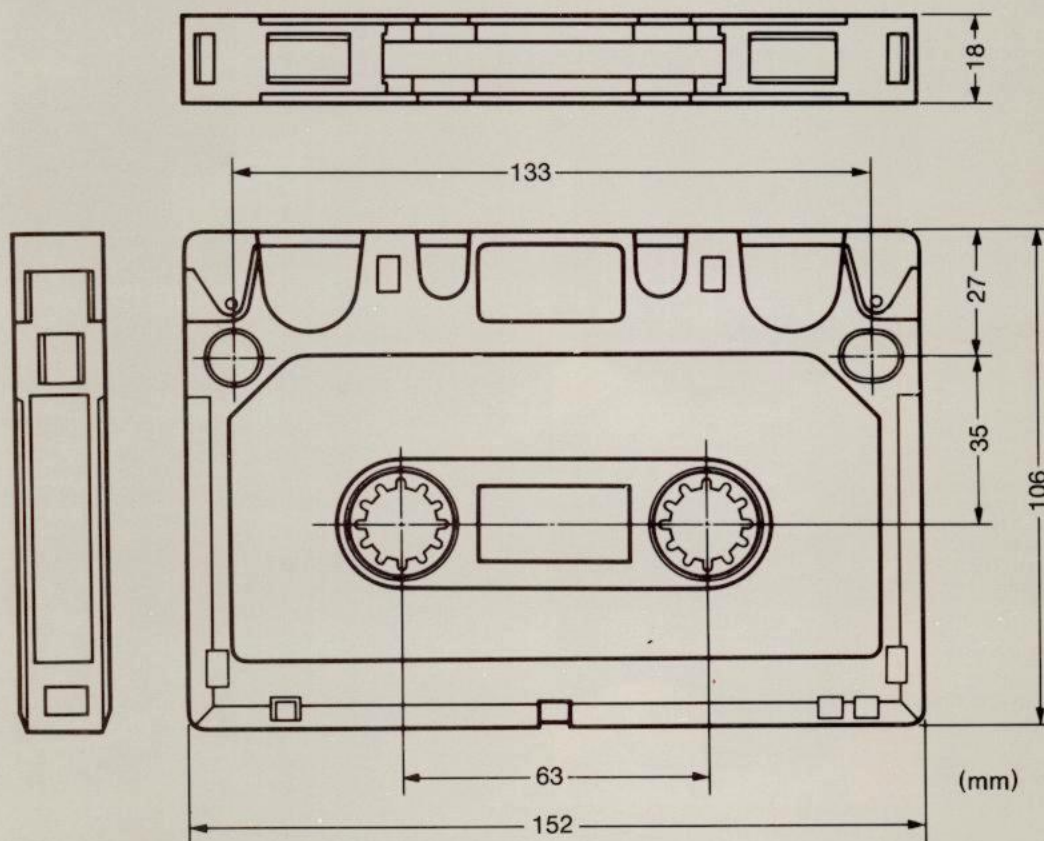
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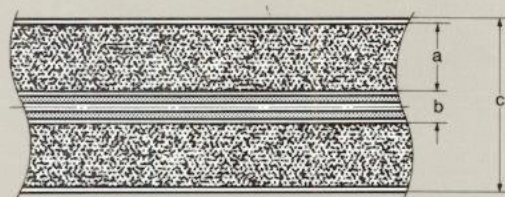
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Specifications



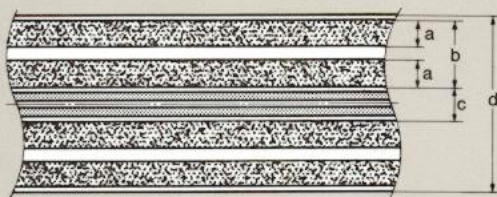
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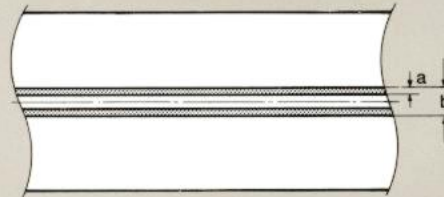
a = 2.55 mm
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4-Track Stereo

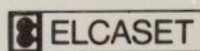


a = 1.05 mm
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c = 1.05 mm
d = 6.3 mm

Control Track



a = 0.2 mm
b = 0.6 mm



Look for this mark on all products
manufactured under the ELCASET standard.



Technics
Matsushita Electric