



DEVELOPMENT STANDARD

QIC-101
Revision B
10 Dec 85

MAGNETIC HEAD FOR USE WITH
QIC-150-DC RECORDING FORMAT

(Superseded by QIC-105)

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(See important notices on the following page)

Important Notices

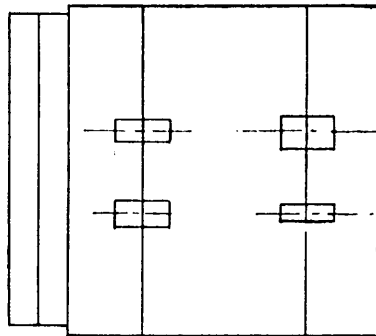
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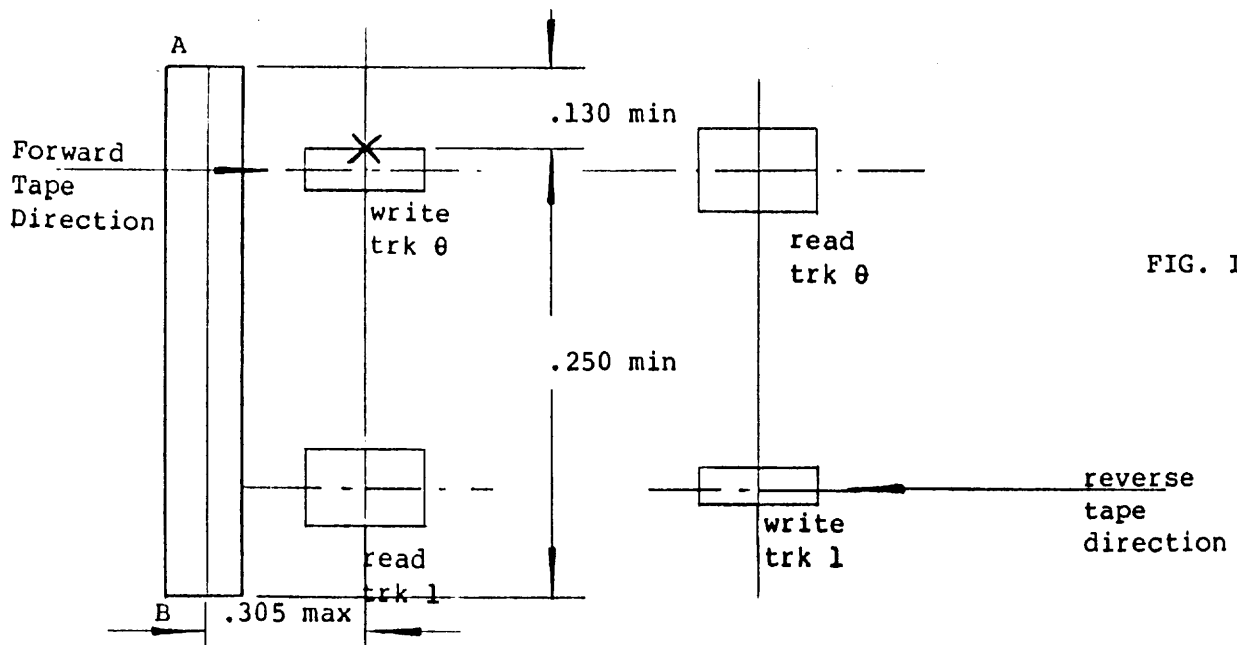
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1. The mechanical format of the head:

A. Two Channel, Two Gap, serpentine read after write.



B. The datum to which all other measurements are taken is to be defined as the base of the head side of the trailing edge of the write track 0. This datum is denoted by a star below, which is a magnified face view of the important mechanical parameters outlined below.



NOTE: Inner mechanical edges are the gaps at each physical channel.

- C. Write gap to Read gap to be .300" +/- .005".
 - D. The effective track width or ETW of the read to be .010 +/- .001".
 - E. The ETW of the write to be .0065 + .0010 -.0005.
 - F. The write channel edge to adjacent read channel edge to be .001:
 - G. The minimum tape bearing surface to be .140" front the upper edge of write track 0 and the lower edge of write track 1.
 - H. The centerline to centerline track pitch between the write and read along the same gap line to be .120" +/- .001.
 - I. The write gap of track 0 is to be the reference gap. All read/write gaps to be parallel to the reference gap by +/- 3 minutes of arc.
 - J. Head penetration as defined by ANSI document X3B5/84-59 section 5.13.
 - K. Effective erase area is .130 min. from write track -0- to edge A in Fig. 1, and .250 min. from write -0- to edge B in Fig. 1.
 - L. Write track -0-/read track 1 gap, to erase gap spacing is .305 max.
2. The Electrical Format of The Head:
- A. When reading and writing QIC-150 format, the following are definitions of performance parameters with their associated nominal values for the standard head which utilizes a DC600XTD cartridge or equivalent.
 - B. The tape shall be AC erased. After erasure, the residual of any recorded signal shall be less than 3% of the signal reference amplitude at 12,500 FRPI.
 - C. ISat: Is the current amplitude that yields the maximum read output at 12,500 FRPI.

 Il-The current amplitude that yields the first 95% of the maximum read output at 12,500 FRPI.

 I2-Iwrite = 110% Ref of Il.
 - D. Output: The peak output voltage at 12,500 FRPI and 90 ips to be 1.0mV minimum when measured with a full coil load of 5KW/15pf.
 - E. Resolution: Is determined as the ratio
$$\frac{E_o @ 12,500 \text{ FRPI}}{E_o @ 4,167 \text{ FRPI}}$$
 which occurs from recording with the write current 12. When the head is measured with a read load of 5KW/15pf. across the full coil this ratio shall be minimum of 50%.
 - F. Magnetic Crossfeed: The ratio of the signal through the read coil with the one write coil under test energised at 12,500 FRPI, to the "read while write" output signal at 12,500 FRPI to be 5% maximum when the cross feed output is measured at 12 using a low filter of 1.4 times% the highest operating frequency.