



DEVELOPMENT STANDARD

QIC-105
Revision A
08 Apr 86

MAGNETIC HEAD FOR USE WITH
QIC-120-DC RECORDING FORMAT

**Quarter-Inch
Cartridge
Drive Standards, Inc.**

311 East Carrillo Street
Santa Barbara, California 93101
Telephone (805) 963-3853
Fax (805) 962-1541
www.qic.org

(See important notices on the following page)

Important Notices

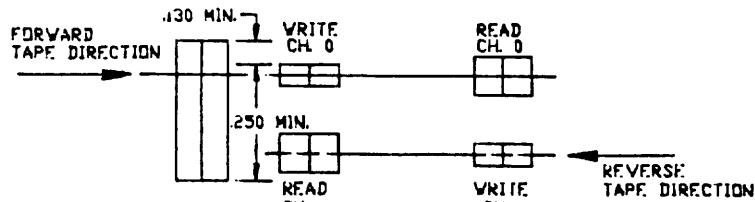
This document is a development standard adopted by Quarter-Inch Cartridge Drive Standards, Inc. (QIC). This document may be revised several times during the development cycle. It is intended solely as a guide for companies interested in developing products which can be compatible with other products developed using this document. QIC makes no representation or warranty regarding this document, and any company using this document shall do so at its sole risk, including specifically the risks that a product developed will not be compatible with any other product or that any particular performance will not be achieved. QIC shall not be liable for any exemplary, incidental, proximate or consequential damages or expenses arising from the use of this document. This development standard defines only one approach to the product. Other approaches may be available in the industry.

This development standard is an authorized and approved publication of QIC. The underlying information and materials contained herein are the exclusive property of QIC but may be referred to and utilized by the general public for any legitimate purpose, particularly in the design and development of quarter-inch tape cartridge drive subsystems. This development standard may be copied in whole or in part *provided* that no revisions, alterations or changes of any kind are made to the materials contained herein. Only QIC has the right and authority to revise or change the material contained in this development standard, and any revisions by any party other than QIC are totally unauthorized and specifically prohibited.

Compliance with this development standard may require use of one or more features covered by proprietary rights (such as features which are the subject of a patent, patent application, copyright, mask work right or trade secret right). By publication of this development standard, no position is taken by QIC with respect to the validity or infringement of any patent or other proprietary right, whether owned by a Member or Associate of QIC, or otherwise. QIC hereby expressly disclaims any liability for infringement of intellectual property rights of others by virtue of the use of this development standard. QIC has not and does not investigate any notices or allegations of infringement prompted by publication of any QIC development standard, nor does QIC undertake a duty to advise users or potential users of QIC development standards of such notices or allegations. QIC hereby expressly advises all users or potential users of this development standard to investigate and analyze any potential infringement situation, seek the advice of intellectual property counsel, and, if indicated, obtain a license under any applicable intellectual property right or take the necessary steps to avoid infringement of any intellectual property right. QIC expressly disclaims any intent to promote infringement of any intellectual property right by virtue of the evolution, adoption, or publication of any QIC development standard.

1.0 Mechanical format of the head:

1.1 QIC-105 Channel Layout



1.2 Read effective track width is .0105".

1.3 Write effective track width is .0065".

1.4 Centerline to centerline channel pitch between the write and read channel along the same gap line is .1120".

1.5 Write gap to read gap spacing is .300".

1.6 Erase gap to write channel 0 spacing is .305" maximum.

1.7 Read/Write gap length is 40 ".

2.0 Electrical format:

2.1 Recording density: 12,500 flux reversals per inch. GCR.

2.2 Output read head at 12,500 flux reversals per inch and 72 inches per second tape speed: 1.0 mv minimum.

2.3 Read head load: 5k and 15 pf.

2.4 Write saturation current (I_{sat}) at 12,500 FRPI is defined as the current value at the first 95% of the maximum read output.

2.5 Write current (I_w) is set at 110% of the write saturation current value.

2.6 Resolution: Is determined as the ratio: $\frac{E_o @ 12,500 \text{ FRPI}}{E_o @ 4,167 \text{ FRPI}} \times 100\%$

This ratio shall be a minimum of 50%.

2.7 Magnetic crossfeed:

The ratio of the signal through the read core with one write coil energized at 12,500 FRPI and I_w (no tape moving), to the "read while write" output signal at 12,500 FRPI.

This ratio to be 5% max when the crossfeed output is measured using a band pass filter of 1.4 times the highest operating frequency.

2.8 Peak Shift: See ANSI definition, should be 15% maximum.

2.9 Erase function: The tape shall be AC erased with a frequency of 3.65 mhz and a 12 V maximum voltage supply source. The residual of any signal after one pass erasure shall be less than 3% of the read output of a 12,500 signal.