Magnetic Stripe Test Limit Cards
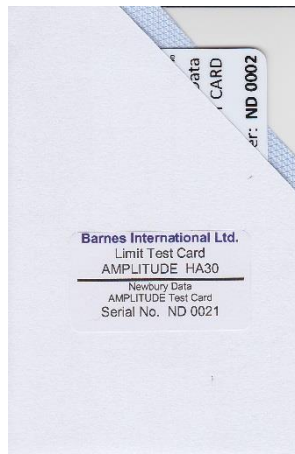
Created using the world's most accurate magnetic stripe analyser available today – the Mag-Tester REVO

Standard Barnes Test Limit Cards with single encoding parameter errors are available as described below. Each card is individually numbered and carries details of its purpose and specially set parameter. Graph plots showing the relationship of the specially set parameter to the ISO requirement are also available.

TEST LIMIT CARDS MAJOR FEATURES

ID1 Card size standard, others available (ATB etc)

PVC card base material standard

Any or all three tracks (ISO and non ISO positions)

Jitter variations:-variable levels (ISO and outside ISO)

Bit space variations:-various bit densities (ISO and outside ISO)

Signal Amplitude variation

Data/Coding variations (standard ISO)

Start sentinel position variation

Custom test limits can be chosen (selected) by the user

Other standards available as variants such as

Barnes International Ltd.
Limit Test Card
AMPLITUDE HA30
Newbury Data
AMPLITUDE Test Card
Serial No. ND 0021

Standard Cards

☐ Standard Barnes Test Limit Cards are single track encoded and use high coercivity media.

☐ High coercivity media is preferred as its encoded state is most resistant to accidental or partial erasure during its life.

☐ Low coercivity media is also available by customer request. Additional tracks are also available by customer request.

☐ The customer should specify which track(s), which specially set parameter and what encoded data is required

Typical Usage

☐ **Production Quality Control** – verifying that your mag stripe card readers can meet and go beyond the ISO standard during reader/encoder manufacture, verifying equipment performance and quality.

☐ **Test** ATM's, Point of Sale terminals, ticket dispensing machines, any mag stripe Cards acceptance device.

☐ **Engineering** analysis – compare results from known quality cards to cards in the field.

☐ **Development** – Customised special limit cards available for any ISO parameter, Amplitude, bit space, jitter, start sentinel position and encoded data.

A typical card reader test card pack:

Key to test result expectations:

P = Reader should read successfully

F = Reader **may** Fail to read

Cards Type Amplitude (5 cards/set)

(%UR)

HA6	Mean Amplitude 6%	F
HA10	Mean Amplitude 10%	F
HA25	Mean Amplitude 25%	P
HA100	Mean Amplitude 100%	P
HIAMIN52	ISO Amplitude Ui Bottom Limit card, ie Ui min @ 52%UR	P

Cards Type Jitter

HJ15/30	ISO USED 15% - 30% (Int – Sub Int)	P
HJ20/35	>ISO USED 20% -35% (Int – Sub Int)	F

Cards Type BitSpacing (4 cards/set)

HBSMAX	ISO average BS max	P
HBSMAX+10%	ISO average BS max +10%	F

(May require a reduced character count)

HBSMIN	ISO average BS min	P
HBSMIN-10%	ISO average BS min -10%	F

Cards Type Start Sentinel (5 cards/set)

HSSMIN	At SS Early Limit	P
HSSMIN-0.5	0.5mm before SS Early Limit	P
HSSMAX	At SS Late Limit	P
HSSMAX+0.5	0.5mm after SS Late Limit	P
HSS10C	10 clocking Zeros	F

Track Location away from card ref edge:

HTO+0.3	(0.3mm Away from card ref edge)	P
HTO+0.5	(0.5mm Away from card ref edge)	F
HTO+0.8	(0.8 mm Away from card ref edge)	F

Track Location towards card ref edge:

HTO-0.3	(0.3mm Towards card ref edge)	P
HTO-0.5	(0.5mm Towards card ref edge)	F
HTO-0.8	(0.8mm Towards card ref edge)	F

Barnes can encode any number of different parameters on the mag stripe, and combinations of some parameters may also be available. Customer specific settings can be encoded when required.

Parameters Tested and definitions:

Amplitude – this is a measurement of the read back signal from the card. Low or high amplitude can make a card difficult to read.

Bit spacing – the physical measurement of the size of the bit cells all along the cards, intervals and subintervals. It is important as they define the binary "1" and "0"

Jitter – the difference in bit space length from one bit cell to the adjacent bit cell. Too much jitter can make a card unreadable.

Start sentinel – the position of the first binary "1" bit. If it occurs too late on a card then it may be unreadable, the same if it occurs too early.

Data – the data can be defined as per the customer requirement or as normal Barnes test data.