Magnetic card reader

With synchronous serial data transfer the transmitter and receiver are kept in time with each other by sharing the same clock signal, this means that there needs to be a wire to carry the data and a wire to carry the data. Asynchronous data has separate clocks in the transmitter and receiver running at about the same speed so there only needs to be a data wire to carry information from transmitter to receiver.

Does the magnetic card reader use synchronous or asynchronous data?

Read the information from the card using the oscilloscope. Set to storage, single trace, 25% pre-trigger, dual trace, dc, 5v per division, 2ms per division.

The data is read on the falling edge of each clock bit. Logic 0 is represented by 0v on the data line, logic 1 is represented by 5v on the data line.

Swipe the card through the card reader and write down the series of 1s and 0s and then translate using the table below.

What number is on the start of the card?

--Data Bits--				Parity		
b1	b2	b3	b4	b5	Character	Function
0	0	0	0	1	0 (0H)	Data
1	0	0	0	0	1 (1H)	"
0	1	0	0	0	2 (2H)	"
1	1	0	0	1	3 (3H)	"
0	0	1	0	0	4 (4H)	"
1	0	1	0	1	5 (5H)	"
0	1	1	0	1	6 (6H)	"
1	1	1	0	0	7 (7H)	"
0	0	0	1	0	8 (8H)	"
1	0	0	1	1	9 (9H)	"
0	1	0	1	1	: (AH)	Control
1	1	0	1	0	; (BH)	Start Sentinel
0	0	1	1	1	< (CH)	Control
1	0	1	1	0	= (DH)	Field Separator
0	1	1	1	0	> (EH)	Control
1	1	1	1	1	? (FH)	End Sentinel

Does the magnetic card reader use odd or even parity?