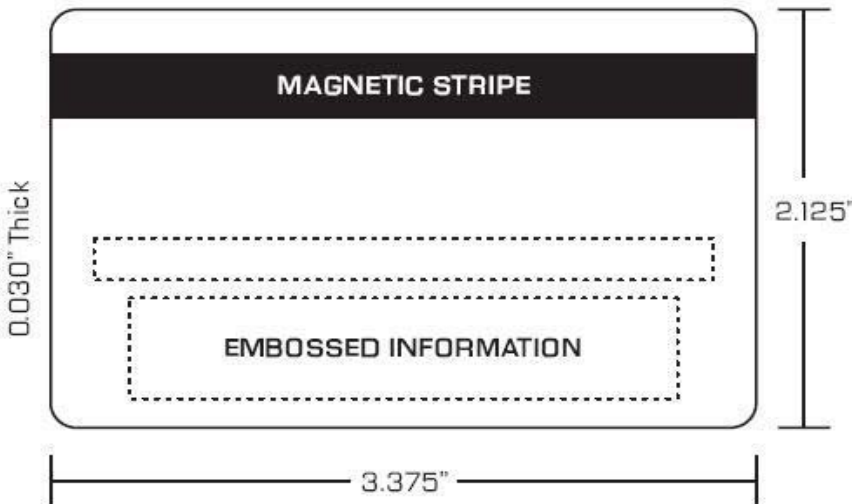


# PERFORMANCE PRINTING INC. MAGNETIC ENCODING SPECS

## Dimensions - Financial Transaction Cards



<b>ISO</b>	
7810	Physical characteristics of credit card size document
7811-1	Embossing
7811-2	Magnetic stripe - low coercivity
7811-3	Location of embossed characters
7811-4	Location of tracks 1 & 2
7811-5	Location of track 3
7811-6	Magnetic stripe - high coercivity
7813	Financial transaction cards

**For copies of specifications contact:**  
American National Standards Institute  
11 W. 42nd Street, New York, NY 10036  
212-642-4900

0.223"	Track		Recording Density (bits per inch)	Character Configuration (including parity bit)	Information Content (including control characters)
0.110"	1	IATA	210	7 bits per character	79 alphanumeric characters
0.110"	2	ABA	75	5 bits per character	40 numeric characters
0.110"	3	THRIFT	210	5 bits per character	107 numeric characters

## Card Data Format - Track 1

76 ALPHANUMERIC DATA CHARACTERS

SS	FC	PAN	FS	NAME	FS	ADDITIONAL DATA	DISCRETIONARY DATA	ES	LRC														
		Primary Account No. (19 digits Max.)		Name (26 alphanumeric characters Max.)		<table border="0"> <tr> <td colspan="2"><b>No. of characters</b></td> </tr> <tr> <td>Expiration date [YYMM]</td> <td>4</td> </tr> <tr> <td>Service Code</td> <td>3</td> </tr> </table>	<b>No. of characters</b>		Expiration date [YYMM]	4	Service Code	3	<table border="0"> <tr> <td colspan="2"><b>No. of characters</b></td> </tr> <tr> <td>*PVKI</td> <td>1</td> </tr> <tr> <td>*PVV or Offset</td> <td>4</td> </tr> <tr> <td>*CVV or *CVC</td> <td>3</td> </tr> </table>	<b>No. of characters</b>		*PVKI	1	*PVV or Offset	4	*CVV or *CVC	3		
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*PVKI	1																						
*PVV or Offset	4																						
*CVV or *CVC	3																						

Some or all of the above fields may be found with the discretionary data

<b>SS</b> Start Sentinel	%	<b>FC</b> Format Code
<b>FS</b> Field Separator	^	<b>LRC</b> Longitudinal Redundancy Check character
<b>ES</b> End Sentinel	?	

\*[PVKI] PIN Verification Key Indicator  
\*[PVV] PIN Verification Value  
\*[CVV] Card Verification Value  
\*[CVC] Card Validation Code

## Card Data Format - Track 2

37 NUMERIC DATA CHARACTERS

SS	PAN	FS	ADDITIONAL DATA	DISCRETIONARY DATA	ES	LRC														
	Primary Account No. (19 digits Max.)		<table border="1"> <thead> <tr> <th colspan="2">No. of characters</th> </tr> </thead> <tbody> <tr> <td>Expiration date (YYMM)</td> <td>4</td> </tr> <tr> <td>Service Code</td> <td>3</td> </tr> </tbody> </table>	No. of characters		Expiration date (YYMM)	4	Service Code	3	<table border="1"> <thead> <tr> <th colspan="2">No. of characters</th> </tr> </thead> <tbody> <tr> <td>*PVKI</td> <td>1</td> </tr> <tr> <td>*PVW or Offset</td> <td>4</td> </tr> <tr> <td>*CWV or *CVC</td> <td>3</td> </tr> </tbody> </table> <p>Some or all of the above fields may be found with the discretionary data</p>	No. of characters		*PVKI	1	*PVW or Offset	4	*CWV or *CVC	3		
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Service Code	3																			
No. of characters																				
*PVKI	1																			
*PVW or Offset	4																			
*CWV or *CVC	3																			
SS	Start Sentinel Hex B ;	LRC	Longitudinal Redundancy Check character																	
FS	Field Separator Hex D =																			
ES	End Sentinel Hex F ?																			

\*White boxes identify control characters

## Card Data Format - Track 3 (ISO 4909)

104 NUMERIC DATA CHARACTERS

SS	FC	PAN	FS	USE AND SECURITY DATA	ADDITIONAL DATA	ES	LRC																																														
		Primary Account No. (19 digits Max.)		<table border="1"> <thead> <tr> <th colspan="2">No. of characters</th> </tr> </thead> <tbody> <tr> <td>Country Code (optional)</td> <td>3</td> </tr> <tr> <td>Currency Code</td> <td>3</td> </tr> <tr> <td>Currency Exponent</td> <td>1</td> </tr> <tr> <td>Amount Authorized per Cycle</td> <td>4</td> </tr> <tr> <td>Amount Remaining this Cycle</td> <td>4</td> </tr> <tr> <td>Cycle Begin (Validity Date)</td> <td>4</td> </tr> <tr> <td>Cycle Length</td> <td>2</td> </tr> <tr> <td>Retry Count</td> <td>1</td> </tr> <tr> <td>PIN Control Parameters (optional)</td> <td>6</td> </tr> <tr> <td>Interchange Controls</td> <td>1</td> </tr> <tr> <td>PAN Service Restriction</td> <td>2</td> </tr> <tr> <td>SAN-1 Service Restriction</td> <td>2</td> </tr> <tr> <td>SAN-2 Service Restriction</td> <td>2</td> </tr> <tr> <td>Expiration Date (optional)</td> <td>4</td> </tr> <tr> <td>Card Sequence Number</td> <td>1</td> </tr> <tr> <td>Card Security Number (optional)</td> <td>9</td> </tr> </tbody> </table>	No. of characters		Country Code (optional)	3	Currency Code	3	Currency Exponent	1	Amount Authorized per Cycle	4	Amount Remaining this Cycle	4	Cycle Begin (Validity Date)	4	Cycle Length	2	Retry Count	1	PIN Control Parameters (optional)	6	Interchange Controls	1	PAN Service Restriction	2	SAN-1 Service Restriction	2	SAN-2 Service Restriction	2	Expiration Date (optional)	4	Card Sequence Number	1	Card Security Number (optional)	9	<table border="1"> <thead> <tr> <th colspan="2">No. of characters</th> </tr> </thead> <tbody> <tr> <td>First subsidiary Account No. (optional)</td> <td></td> </tr> <tr> <td>Secondary Subsidiary Account No. (optional)</td> <td></td> </tr> <tr> <td>Relay Marker</td> <td>1</td> </tr> <tr> <td>Cryptographic Check Digits (optional)</td> <td>6</td> </tr> <tr> <td>Discretionary Data</td> <td></td> </tr> </tbody> </table> <p>*A Field Separator (FS) must be used if an optional field is not used</p>	No. of characters		First subsidiary Account No. (optional)		Secondary Subsidiary Account No. (optional)		Relay Marker	1	Cryptographic Check Digits (optional)	6	Discretionary Data			
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The track formats used in this document are based on ISO Standards, however, other formats may be used. Contact your card issuer for your exact requirements