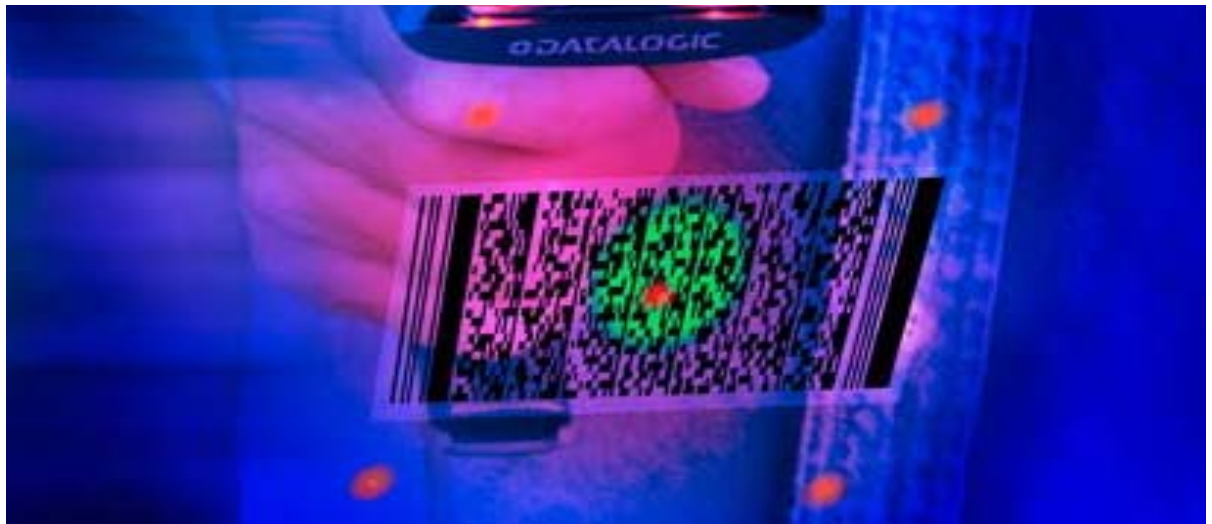


USA Driver License Parsing



Quick Reference Guide

Datalogic Scanning, Inc.
959 Terry Street
Eugene, Oregon 97402
Telephone: (541) 683-5700
Fax: (541) 345-7140

An Unpublished Work - All rights reserved. No part of the contents of this documentation or the procedures described therein may be reproduced or transmitted in any form or by any means without prior written permission of Datalogic Scanning, Inc. or its subsidiaries or affiliates ("Datalogic" or "Datalogic Scanning"). Owners of Datalogic products are hereby granted a non-exclusive, revocable license to reproduce and transmit this documentation for the purchaser's own internal business purposes. Purchaser shall not remove or alter any proprietary notices, including copyright notices, contained in this documentation and shall ensure that all notices appear on any reproductions of the documentation.

Should future revisions of this manual be published, you can acquire printed versions by contacting your Datalogic representative. Electronic versions may either be downloadable from the Datalogic website (www.scanning.datalogic.com) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Datalogic publications, please let us know via the "Contact Datalogic" page.

Disclaimer

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice.

Datalogic is a registered trademark of Datalogic S.p.A. in many countries and the Datalogic logo is a trademark of Datalogic S.p.A. All other brand and product names referred to herein may be trademarks of their respective owners.

Microsoft Windows[®], Windows[®] 2000, Windows[®] CE, Windows[®] NT, Windows[®] XP and the Windows logo are registered trademarks of Microsoft Corporation.

Patents

This product is covered by one or more of the following patents:

US Pat.: 6,512,218 B1; 6,808,114 B1; 6,877,664 B1; 6,997,385 B2; 7,053,954 B1; 7,102,116 B2; 7,282,688 B2; 7,387,246 B2.

European Pat.: 996,284 B1; 999,514 B1; 1,128,315 B1; 1,396,811 B1.

Additional patents pending.

Table of Contents

Overview	1
Models Supported	1
Configuring with Aladdin	1
To Configure Using Barcodes:	2
Default Settings	2
Driver License Element Extraction	2
Output Separator Characters	2
Missing Element Fill Characters	3
Output Selection	4
Service and Support	9
Registering Your Datalogic Product	9
Host Configuration Strings	10
Character to Hex Conversion Table.....	12
Hex Conversion Barcodes	14

NOTES

USA Driver License Parsing

Overview

This Quick Reference Guide contains user instructions for using the USA Driver License Parsing. This feature allows the selection and output of data elements from a USA Driver License PDF417 barcode. The reader can be configured for this option using either Datalogic Aladdin or programming barcodes.

Data Elements parsing and extraction is performed according to the AAMVA DL/ID Card Specifications issued in the years 2000, 2003, 2005.

These parameters allow you to select and output a subset of data elements from a USA Driver License PDF417 barcode. The data output order can be configured, together with a string separator between the output elements and a specified filling string to be used if the desired element is not found inside the barcode.

Models Supported

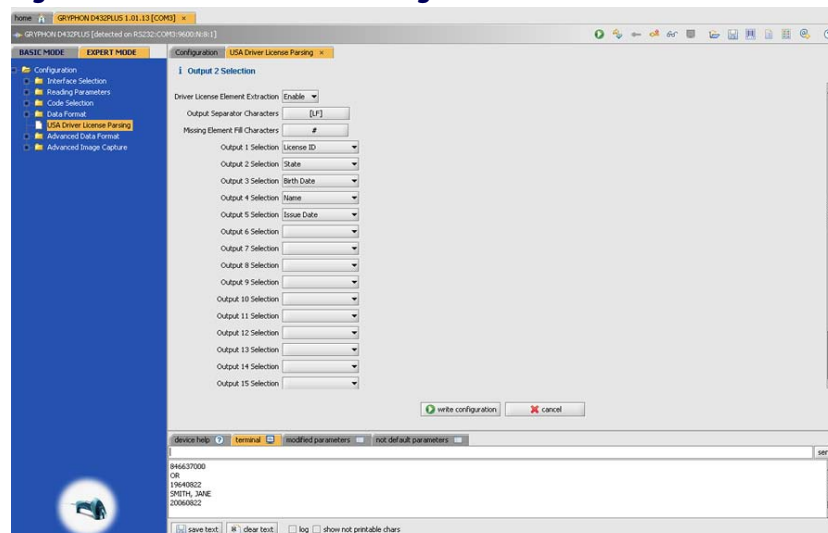
Gryphon D432/D412Plus Barcode Reader

PowerScan PD8500 Reader

Configuring with Aladdin

With the reader connected to your PC, run Aladdin and follow the instructions in the onscreen help, as shown in the example below. The designated data will be output as you specified.

Figure 1. USA Driver License Parsing in Aladdin





Default Settings



To Configure Using Barcodes:

1. Read the Enter Configuration code **ONCE**, available on the top of each programming page.
2. Modify the desired parameters in one or more sections by reading the parameter code and selecting the value from the Hex/Numeric table at the end of this guide, or by following the given procedures.
3. Read the Exit and Save Configuration code **ONCE**, available on the top of each programming page.

Default Settings

Element Name	Default
Driver License Element Extraction	Disable
Output Separator Characters	1 separator character: [LF]
Missing Element Fill Characters	1 fill character: '#'
Output Selection 1	License ID
Output Selection 2	State
Output Selection 3	Birth Date
Output Selection 4	Name
Output Selection 5-18	No field

Driver License Element Extraction

Enables/Disables Driver License Parsing and Element Extraction from PDF417 barcodes. Read the Enter Reader Configuration barcode at the top of the page, then read the desired barcode to set the parameter.

DRIVER LICENSE ELEMENT EXTRACTION

Disabled



Enabled



Output Separator Characters

This parameter allows you to define a string of characters to be used as a separator between output data elements. Minimum number of selectable characters is 0 (no separation between output elements). Maximum number of selectable characters is 10.

Example:

To configure two separator characters whose hex values are 0D and 0A:

1. Read the Enter Reader Configuration barcode at the top of the page.
2. Read the Separator characters barcode below.



Missing Element Fill Characters



3. Select the desired number of characters as decimal values, reading two digits in the range of 0-9 from the "Hex Conversion Barcodes" starting on page 14 of this manual.



The number of characters must be specified; if no separation character is needed, you must read 00 after the Separator Characters barcode.

4. Select the desired separator characters as Hex values:
 - First separator hex value — read the first digit “0”, then the second digit “D” (from the hexadecimal table).
 - Second separator hex value — read the first digit “0”, then the second digit “A” (from the hexadecimal table).
5. Read the “Exit and Save Reader Configuration” barcode at the top of the page.

Separator Characters



Missing Element Fill Characters

This parameter allows you to define a string of characters to be used as a filling when the desired data element is not found inside the Driver License PDF417 barcode. The minimum number of selectable characters is 0 (no missing element filling). The maximum number of selectable characters is 10.

1. Read the Enter Reader Configuration barcode at the top of the page.
2. Read the Missing Element Fill barcode below.
3. Select the desired number of characters as decimal values, reading two digits in the range of 0-9 from the "Hex Conversion Barcodes" starting on page 14 of this manual.



The number of characters must be specified; if no separation character is needed, you must read 00 after the Separator Characters barcode.

4. Read the desired characters as Hex values from the "Character to Hex Conversion Table" on page 12 of this manual. See the example shown in the previous section for more information.
5. Read the Exit and Save barcode.

Missing Element Fill characters



**Output Selection****Output Selection**

Use the various Output Selection fields to specify the data elements to be output. The number of the field (1-18) determines the order in which they will be output.



If the sequence length is less than the maximum (18 fields), a NoField Output must always be put at the end of the sequence as a stopper.

The selectable data elements are:

Element	Description
License ID	License number assigned or calculated by the issuing authority.
State	State portion of the license holder address.
Birth Date	Date on which the license holder was born (can be MMDDYYYY or YYYYMMDD, depending on the jurisdiction).
Name	Name of the license holder. Can be last name only or whole name, depending on the jurisdiction.
Issue Date	Date on which the license was issued (can be MMDDYYYY or YYYYMMDD, depending on the jurisdiction).
Expiration Date	Date on which the driving and identification privileges granted by the license are no longer valid (can be MMDDYYYY or YYYYMMDD, depending on the jurisdiction).
City	City portion of the license holder address.
Address	Street portion of the license holder address.
Address2	Second line of the street portion of the license holder address.
Zip	Postal code portion of the license holder address.
Vehicle Class	Jurisdiction-specific vehicle class code.
Endorsement Code	Jurisdiction-specific codes that represent additional privileges granted to the license holder.
Restriction Codes	Jurisdiction-specific codes that represent restriction to driving privileges.
Sex	Gender of the license holder (can be 1=male, 2=female; or M=male, F=female, depending on the jurisdiction).
Eye Color	Color of license holder's eyes.
Hair Color	Color of license holder's hair.
Height	Height of the license holder.
Weight	Weight of the license holder.
blank	No data element selected.

Example:

1. Read the Enter Reader Configuration barcode at the top of the page.
2. Read the Output 1 Selection command, then read the Birth Date code from the table (Birth Date -> "03")

Enter Reader Configuration



Exit and Save Reader Configuration



Output Selection

-
3. Read Output 2 Selection command., then read the License ID code from the table (License ID -> "01")
 4. Read Output 3 Selection command, then read the NoField code from the table (NoField -> "00")
 5. Exit and Save Reader Configuration.

OUTPUT SELECTION

Output 1 Selection



Output 2 Selection



Output 3 Selection



Output 4 Selection



Output 5 Selection



Output 6 Selection



Output 7 Selection



Output 8 Selection



Enter Reader Configuration



Exit and Save Reader Configuration



Output Selection

Output 9 Selection



Output 10 Selection



Output 11 Selection



Output 12 Selection



Output 13 Selection



Output 14 Selection



Output 15 Selection



Output 16 Selection



Output 17 Selection



Output 18 Selection





Output Selection

Data Elements

No field



00

License ID



01

State



02

Birth Date



03

Name



04

Issue Date



05

Expiration Date



06

City



07

Address



08

Address2



09

Enter Reader Configuration



Exit and Save Reader Configuration



Output Selection

Zip



10

Vehicle Class



11

Endorsement Code



12

Restriction Codes



13

Sex



14

Eye Color



15

Hair Color



16

Height



17

Weight



18

Service and Support

Datalogic provides several services as well as technical support through its website. Log on to www.scanning.datalogic.com and click on the links indicated for further information including:

PRODUCTS

Search through the links to arrive at your product page where you can download specific Manuals and Software & Utilities including:

- Datalogic Aladdin™, a multi-platform utility program that allows device configuration using a PC. It provides RS-232 interface configuration as well as configuration barcode printing.

SERVICE & SUPPORT

- Technical Support – Product documentation and programming guides and Technical Support Department in the world
- Service Programs – Warranty Extensions and Maintenance Agreements
- Repair Services – Flat Rate Repairs and Return Material Authorization (RMA) Repairs.
- Downloads – Manuals & Documentation, Data Sheets, Product Catalogues, etc.

CONTACT US

Information Request Form and Sales & Service Network

Registering Your Datalogic Product

Datalogic values your feedback. Please take a few moments and complete the Product Registration form located on our website (www.datalogic.com). Registering your products ensures that you will be informed of the latest product news, technical specifications, software updates and other future developments from Datalogic.

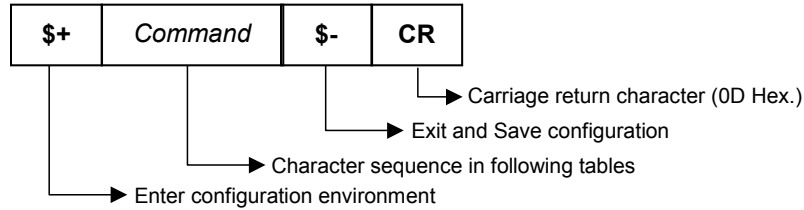
Host Configuration Strings

This section provides a description of how to modify the device configuration using serial strings sent from the Host.

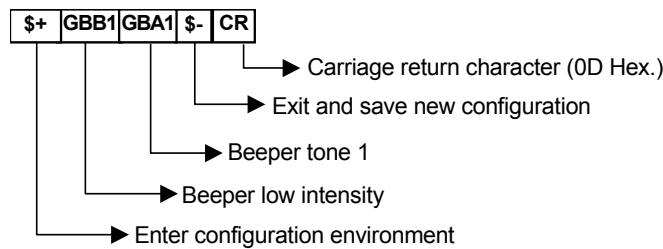


This method requires the RS-232, USB-Com, USB Bulk or USB Generic HID interface.

The device configuration can be changed by receiving commands from the Host through the current interface. When this method is used, the programming sequence format is the following:



Example:



Each configuration parameter setting removes the condition previously active for that parameter.

Serial Configuration Strings

ENTER/EXIT CONFIGURATION COMMANDS	
DESCRIPTION	STRING
Enter Configuration	\$+
Exit and Save Configuration	\$-

These commands do not require \$-

ENTER/DISABLE CONFIGURATION COMMANDS	
DESCRIPTION	STRING
Disable Driver License Element Extraction	DLA00
Enable Driver License Element Extraction	DLA01

OUTPUT SEPARATOR CHARACTERS	
DESCRIPTION	STRING
No Separator Character	DLA100
1 Separator Character [LF]	DLA101y
2 Separator Characters	DLA102yy

OUTPUT SEPARATOR CHARACTERS (continued)	
DESCRIPTION	STRING
3 Separator Characters	DLA103yyy
4 Separator Characters	DLA104yyyy
5 Separator Characters	DLA105yyyyy
6 Separator Characters	DLA106yyyyyy
7 Separator Characters	DLA107yyyyyyy
8 Separator Characters	DLA108yyyyyyyy
9 Separator Characters	DLA109yyyyyyyyy
10 Separator Characters	DLA110yyyyyyyyyy

y, a = HEX values representing an ASCII character.

y = Hex value from **00** to **FF**

MISSING ELEMENT FILL CHARACTERS	
DESCRIPTION	STRING
No Fill Character	DLA200
1 Fill Character #	DLA201y
2 Fill Characters	DLA202yy
3 Fill Characters	DLA203yyy
4 Fill Characters	DLA204yyyy
5 Fill Characters	DLA205yyyyy
6 Fill Characters	DLA206yyyyyy
7 Fill Characters	DLA207yyyyyyy
8 Fill Characters	DLA208yyyyyyyy
9 Fill Characters	DLA209yyyyyyyyy
10 Fill Characters	DLA210yyyyyyyyyy

y, a = HEX values representing an ASCII character.

y = Hex value from **00** to **FF**

OUTPUT SELECTION	
DESCRIPTION	STRING
Ouput Selection 1	DLB01xx
Ouput Selection 2	DLB02xx
Ouput Selection 3	DLB03xx
Ouput Selection 4	DLB04xx
Ouput Selection 5	DLB05xx
Ouput Selection 6	DLB06xx
Ouput Selection 7	DLB07xx
Ouput Selection 8	DLB08xx
Ouput Selection 9	DLB09xx
Ouput Selection 10	DLB10xx
Ouput Selection 11	DLB11xx
Ouput Selection 12	DLB12xx
Ouput Selection 13	DLB13xx
Ouput Selection 14	DLB14xx
Ouput Selection 15	DLB15xx
Ouput Selection 16	DLB16xx
Ouput Selection 17	DLB17xx
Ouput Selection 18	DLB18xx

x = Field code value from **00** to **18**

Character to Hex Conversion Table

CHARACTER TO HEX CONVERSION TABLE								
char	decimal	hex	char	decimal	hex	char	decimal	hex
NUL	000	00	*	042	2A	U	085	55
SOH	001	01	+	043	2B	V	086	56
STX	002	02	,	044	2C	W	087	57
ETX	003	03	-	045	2D	X	088	58
EOT	004	04	.	046	2E	Y	089	59
ENQ	005	05	/	047	2F	Z	090	5A
ACK	006	06	0	048	30	[091	5B
BEL	007	07	1	049	31	\	092	5C
BS	008	08	2	050	32]	093	5D
HT	009	09	3	051	33	^	094	5E
LF	010	0A	4	052	34	_	095	5F
VT	011	0B	5	053	35	`	096	60
FF	012	0C	6	054	36	a	097	61
CR	013	0D	7	055	37	b	098	62
SO	014	0E	8	056	38	c	099	63
SI	015	0F	9	057	39	d	100	64
DLE	016	10	:	058	3A	e	101	65
DC1	017	11	;	059	3B	f	102	66
DC2	018	12	<	060	3C	g	103	67
DC3	019	13	=	061	3D	h	104	68
DC4	020	14	>	062	3E	i	105	69
NAK	021	15	?	063	3F	j	106	6A
SYN	022	16	@	064	40	k	107	6B
ETB	023	17	A	065	41	l	108	6C
CAN	024	18	B	066	42	m	109	6D
EM	025	19	C	067	43	n	110	6E
SUB	026	1A	D	068	44	o	111	6F
ESC	027	1B	E	069	45	p	112	70
FS	028	1C	F	070	46	q	113	71

char	decimal	hex	char	decimal	hex	char	decimal	hex
GS	029	1D	G	071	47	r	114	72
RS	030	1E	H	072	48	s	115	73
US	031	1F	I	073	49	t	116	74
SPACE	032	20	J	074	4A	u	117	75
!	033	21	K	075	4B	v	118	76
"	034	22	L	076	4C	w	119	77
#	035	23	M	077	4D	x	120	78
\$	036	24	N	078	4E	y	121	79
%	037	25	O	079	4F	z	122	7A
&	038	26	P	080	50	{	123	7B
'	039	27	Q	081	51	 	124	7C
(040	28	R	082	52	}	125	7D
)	041	29	S	083	53	~	126	7E
			T	084	54	DEL	127	7F

Hex Conversion Barcodes

0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Australia

Datalogic Scanning Pty Ltd
Telephone: [61] (2) 9870 3200
australia.scanning@datalogic.com

France and Benelux

Datalogic Scanning Sarl
Telephone: [33].01.64.86.71.00
france.scanning@datalogic.com

Germany

Datalogic Scanning GmbH
Telephone: 49 (0) 61 51/93 58-0
germany.scanning@datalogic.com

India

Datalogic Scanning India
Telephone: 91- 22 - 64504739
india.scanning@datalogic.com

Italy

Datalogic Scanning SpA
Telephone: [39] (0) 39/62903.1
italy.scanning@datalogic.com

Japan

Datalogic Scanning KK
Telephone: 81 (0)3 3491 6761
japan.scanning@datalogic.com

Latin America

Datalogic Scanning, Inc
Telephone: (305) 591-3222
latinamerica.scanning@datalogic.com

Singapore

Datalogic Scanning Singapore PTE LTD
Telephone: (65) 6435-1311
singapore.scanning@datalogic.com

Spain and Portugal

Datalogic Scanning Sarl Sucursal en España
Telephone: 34 91 746 28 60
spain.scanning@datalogic.com

United Kingdom

Datalogic Scanning LTD
Telephone: 44 (0) 1923 809500
uk.scanning@datalogic.com



www.scanning.datalogic.com

Datalogic Scanning, Inc.

959 Terry Street
Eugene, OR 97402
USA
Telephone: (541) 683-5700
Fax: (541) 345-7140

