ART FLEX SOFTWARE

ArtFlex Barcode
User Guide

ArtFlex Barcode - User Guide

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Installers and licensing

You can obtain the plug-in installers and licenses on our artflex.software website.
Getting a trial license **-** Register on: **https://www.artflex.software/en/download**
We will email you the trial license and instructions. It enables all plug-in functions for 21 days.
Purchasing a full license **-** Go to: **https://artflex.software/en/eshop**
The website will guide you through the easy purchasing procedure.

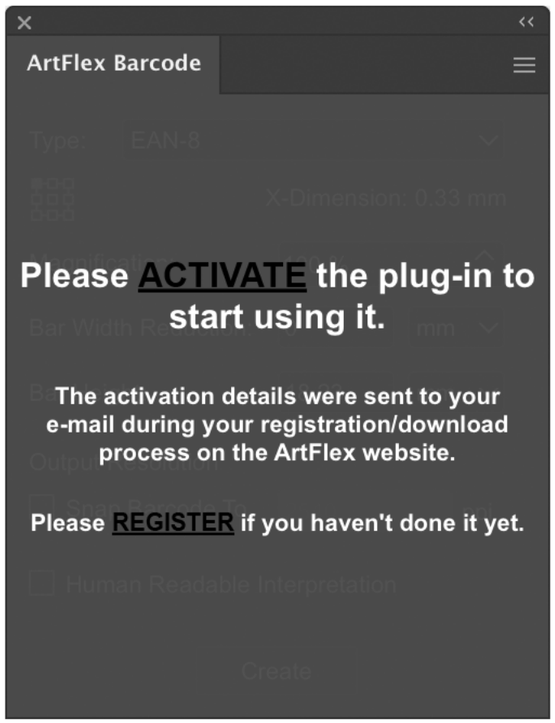
Plug-in installation

Run the Installer downloaded from the artflex.software website. It will detect the compatible Adobe Illustrator or/and Adobe InDesign applications and install the plug-in in appropriate folders. The plug-in can be installed on both macOS and Windows systems and is always compatible with the latest and the previous versions of Adobe Illustrator and Adobe InDesign.

Plug-in panel location

The plug-in panel is located under Window -> ArtFlex -> ArtFlex Barcode

Unlicensed mode

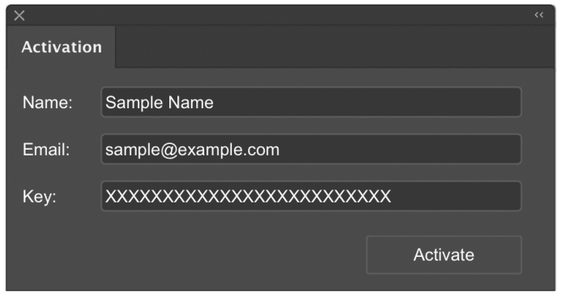


Unlicensed plug-in panel

The plugin opens in Unlicensed Mode right after the installation. Use your Trial or Full License to unlock all plugin functionalities. Click on the ACTIVATE text to start the activation process.

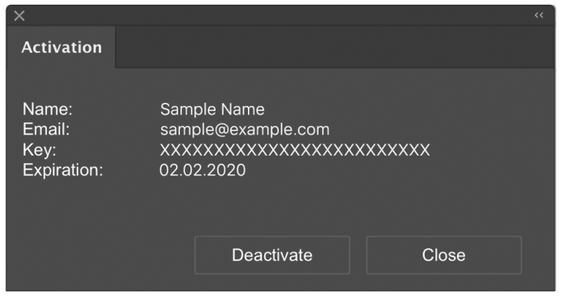
You can activate the plug-in only if you are registered on our website. All registered users will get one free trial license. If you have not registered yet, you can do so by clicking on the REGISTER text.

Activation/Deactivation process



Activation window

License activation process
1) Click on the ACTIVATE text in the Unlicensed plug-in panel to start the activation process. It will open the Activation window.
2) In the Activation window fill out the Name, Email and License Key you have received by email.
3) Press the Activate button and wait until the license is validated.
4) Activation is processed the moment that the License expiration date and Deactivate button appear in the Activation window. Plug-in is licensed.



Activation window of licensed plug-in

License deactivation process
1) Press the Deactivate button in the Activation window.
2) The plug-in will start the deactivation process.
3) After successful deactivation the plug-in will switch to Unlicensed mode.

Good to know

- Internet connection is required to activate the plug-in. As the plug-in periodically checks the license validity, we recommend you use a permanent internet connection. The plug-in can also work offline, but it will automatically switch to Unlicensed mode after a period without an internet connection. If you cannot use your license (e.g. because of a broken workstation) please contact us at https://artflex.software/en/support. We can deactivate the old license and issue a new one.
- Each registered user can use his trial license only once and only on one computer. If you need to activate the plug-in more times, please contact us via our support page. We will arrange it for you.

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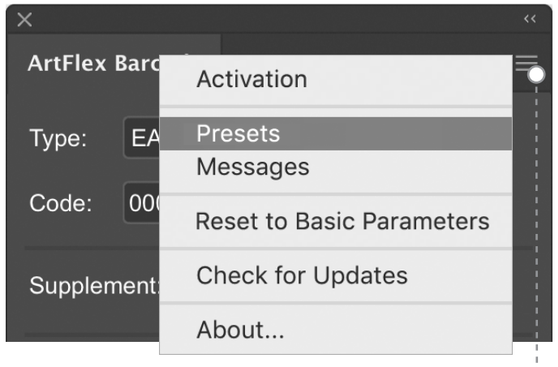
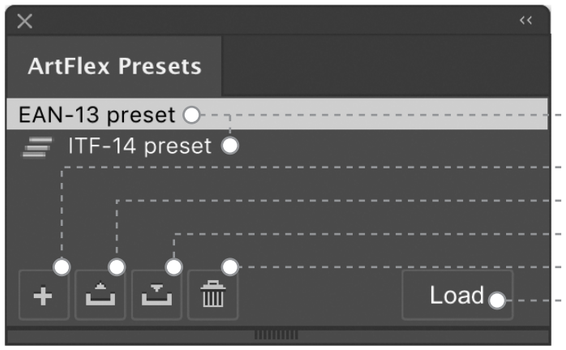
Using Presets



What is ArtFlex Barcode preset

Users can save all barcode specifications to presets. Preset contains values specified in the main Artflex Barcode plug-in window. Thanks to the presets users can create barcode in Illustrator and open it in InDesign and vice versa. The presets together with ArtFlex Barcode Illustrator and InDesign compatibility ensure that all barcodes have identical specifications, look identically and can be handled identically in both Illustrator and InDesign.

To open the Presets window, press the window menu button in the top right corner and select Presets.



Presets window description

List of created and imported presets

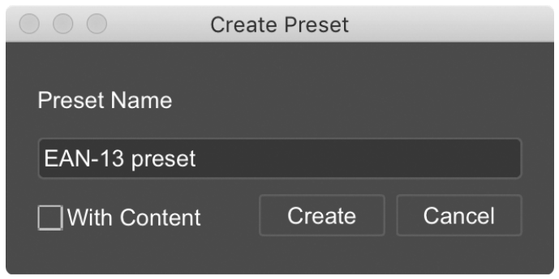
Create Preset button

Export Preset button

Import Preset button

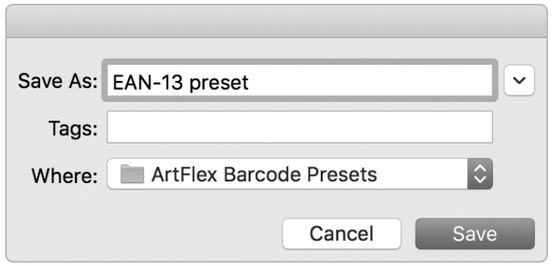
Delete Preset button

Load Preset button



Creating a preset

1) Press the Create Preset button in the Presets window. It opens the Create Preset dialog window.
2) Choose a name for the preset.
3) Optionally you can choose whether the code content should be included in the preset (tick the With Content option).
4) Press the Create button.
5) The new preset appears in the list of presets in the presets window. In case you ticked the With Content option a small sign next to the preset name will appear.



Importing a preset

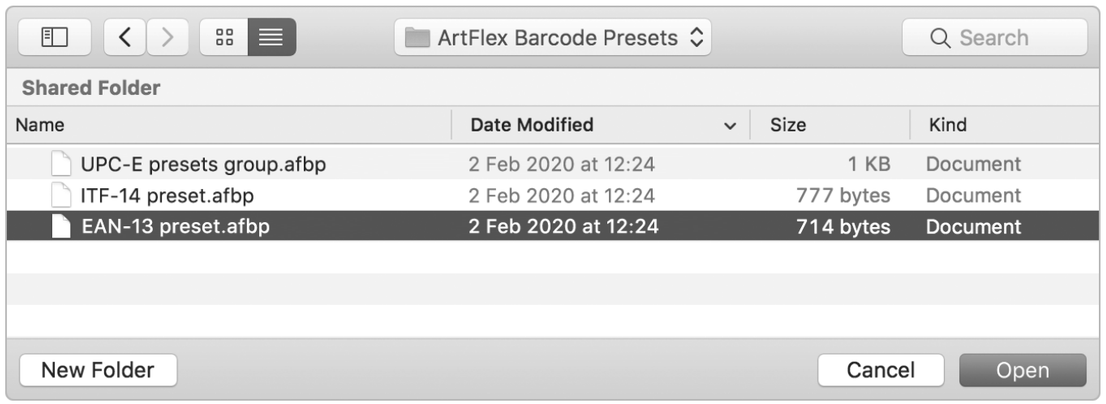
1) Press the Import Preset button. It will open the import dialog window (see image below).
2) Select a preset or preset group you wish to import and click on Open.
3) The new preset(s) appears in your list of presets in the Preset window.

Exporting a preset

1) Select a preset in the Preset window (presets group can be selected by holding cmd key in macOS or ctrl key in Windows).
2) Press the Export Presets button. It will open the export dialog window (see image on the left).
3) Type the name of your preset or preset group in the Save As field and click on Save.
4) An .afbp preset file is created.

Loading a preset to the plug-in window

1) In the list of presets select the preset you wish to use and click on the Load button. The preset can be also loaded by double clicking on the preset name.
2) The plug-in reads the preset content and displays the new settings immediately in the main plug-in window.



Good to know

Two examples how presets can help:

1) Creation of one central barcode specifications repository which allows cross company and cross application unification of barcodes creation.
2) Organization of barcodes according to different specifications. For example creation of sets which correspond to various print or scanning requirements (eg. bar width reduction, output resolution or wide to narrow ratio).

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EAN-13, EAN-8, UPC-A, UPC-E, ISBN, ISSN codes interface



Type - Barcode type EAN-13, EAN-8, UPC-A, UPC-E, ISBN, ISSN.

Code - Place for the code digits. 13 digits for EAN-13, 12 digits for UPC-A, 8 digits for EAN-8 and UPC-E.

Suplement - Adds 2 or 5 digits barcode supplement

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

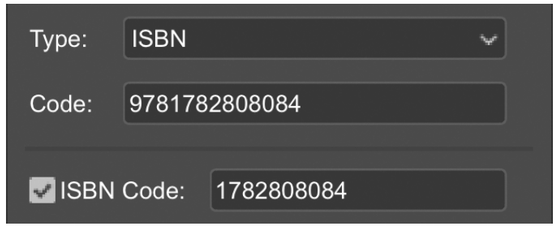
HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Quiet Zone Indicator (QZI) - Marks zone where no other design can be placed. Helps to improve scannability.

Create Button - Generates barcode based on the values specified above.

ISBN/ISSN specific features



ISBN 10 code
Choose ISBN code type and type the code digits in the Code field, the ISBN Code filed will be completed automatically.



ISBN 13 code
Inserting a hyphen at the beginning of the ISBN 10 changes the code to ISBN 13.



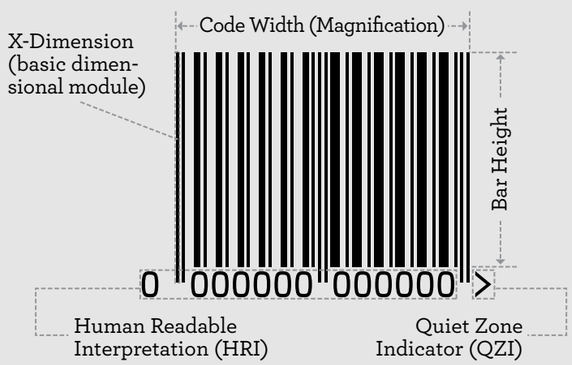
ISSN code
Choose ISSN code type and type the code digits in the Code field, the ISSN Code filed will be completed automatically. A hyphen can be inserted manually in the ISSN Code.



ISSN/ISBN code alignment
Aligns the code with the barcode on left, on center or on right.

Good to know

Code dimension terms
EAN-13, EAN-8, UPC-A, UPC-E, ISBN, ISSN



ISBN code sample
ISBN 10 code with 5 digits suplement



Bar Width Reduction (BWR)



The BWR reduces the thickness of bars to compensate the print presure

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Sizes of EAN/UPC symbols and their modules at dif. levels of recommended magnif. (80-200%)

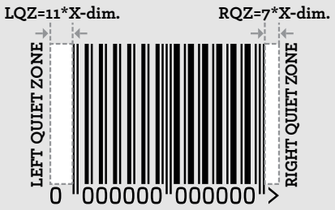
MAGNIF.	X-DIMENSION	EAN-13/UPC-A DIMENSIONS		EAN-8 DIMENSIONS		UPC-E DIMENSIONS	
[%]	width [mm](inches)	width [mm](inches)	height [mm](inches)	width [mm](inches)	height [mm](inches)	width [mm](inches)	height [mm](inches)
80	0.264 (0.010)	29.83 (1.174)	18.28 (0.720)	21.38 (0.842)	14.58 (0.574)	13.47 (0.530)	18.28 (0.720)
85	0.281 (0.011)	31.70 (1.250)	19.42 (0.765)	22.72 (0.894)	15.50 (0.610)	14.31 (0.563)	19.42 (0.765)
90	0.297 (0.011)	33.56 (1.321)	20.57 (0.810)	24.06 (0.947)	16.41 (0.646)	15.15 (0.596)	20.57 (0.810)
95	0.314 (0.012)	35.43 (1.395)	21.71 (0.855)	25.39 (1.000)	17.32 (0.682)	15.99 (0.630)	21.71 (0.855)
100	0.330 (0.013)	37.29 (1.468)	22.85 (0.900)	26.73 (1.052)	18.23 (0.718)	16.83 (0.663)	22.85 (0.900)
105	0.347 (0.013)	39.15 (1.541)	23.99 (0.944)	28.07 (1.105)	19.14 (0.753)	17.67 (0.696)	23.99 (0.944)
110	0.363 (0.014)	41.02 (1.615)	25.14 (0.990)	29.40 (1.157)	20.05 (0.789)	15.51 (0.611)	25.14 (0.990)
115	0.380 (0.014)	42.88 (1.688)	26.28 (1.035)	30.74 (1.210)	20.96 (0.825)	19.36 (0.762)	26.28 (1.035)
120	0.396 (0.015)	44.75 (1.762)	27.42 (1.080)	32.08 (1.263)	21.88 (0.861)	20.20 (0.795)	27.42 (1.080)
125	0.413 (0.016)	46.61 (1.835)	28.56 (1.124)	33.41 (1.315)	22.79 (0.897)	21.04 (0.828)	28.56 (1.124)
130	0.429 (0.016)	48.48 (1.909)	29.71 (1.170)	34.75 (1.368)	23.70 (0.933)	21.88 (0.861)	29.71 (1.170)
135	0.446 (0.017)	50.34 (1.982)	30.85 (1.215)	36.09 (1.421)	24.61 (0.969)	22.72 (0.894)	30.85 (1.215)
140	0.462 (0.018)	52.21 (2.056)	31.99 (1.259)	37.42 (1.473)	25.52 (1.005)	23.56 (0.928)	31.99 (1.259)
145	0.479 (0.017)	54.07 (2.129)	33.13 (1.304)	38.76 (1.526)	26.43 (1.041)	24.40 (0.961)	33.13 (1.304)
150	0.495 (0.019)	55.94 (2.202)	34.28 (1.350)	40.10 (1.579)	27.35 (1.077)	25.25 (0.994)	34.28 (1.350)
155	0.512 (0.020)	57.80 (2.276)	35.42 (1.394)	41.43 (1.631)	28.26 (1.113)	26.09 (1.027)	35.42 (1.394)
160	0.528 (0.020)	59.66 (2.349)	36.56 (1.439)	42.77 (1.683)	29.17 (1.148)	26.93 (1.060)	36.56 (1.439)
165	0.545 (0.021)	61.53 (2.422)	37.70 (1.484)	44.10 (1.736)	30.08 (1.184)	27.77 (1.093)	37.70 (1.484)
170	0.561 (0.022)	63.39 (2.496)	38.85 (1.530)	45.44 (1.789)	30.99 (1.220)	28.61 (1.126)	38.85 (1.530)
175	0.578 (0.022)	65.26 (2.569)	39.99 (1.574)	46.78 (1.842)	31.90 (1.256)	29.45 (1.159)	39.99 (1.574)
180	0.594 (0.023)	67.12 (2.643)	41.13 (1.619)	48.11 (1.894)	32.81 (1.292)	30.29 (1.193)	41.13 (1.619)
185	0.611 (0.024)	68.99 (2.716)	42.27 (1.664)	49.45 (1.947)	33.73 (1.328)	31.14 (1.226)	42.27 (1.664)
190	0.627 (0.024)	70.85 (2.789)	43.42 (1.709)	50.79 (2.000)	34.64 (1.364)	31.98 (1.259)	43.42 (1.709)
195	0.644 (0.025)	72.72 (2.863)	44.56 (1.754)	52.12 (2.052)	35.55 (1.400)	32.82 (1.292)	44.56 (1.754)
200	0.660 (0.026)	74.58 (2.936)	45.70 (1.800)	53.46 (2.105)	36.46 (1.435)	33.66 (1.325)	45.70 (1.800)

Source: GS1.com, GS1_General_Specifications.pdf

Good to know

Quiet zones - The left (LQZ) and right (RQZ) quiet zones indicate free space on the barcode sides where no other elements should be placed. Quiet zones improve the barcode scanability.

EAN-13



For 100% magnification (X-dim: 0.33 mm) the LQZ is 3.63 mm and RQZ is 2.31 mm.

EAN-8



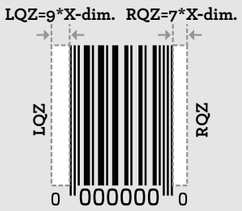
For 100% magnification (X-dim: 0.33 mm) the LQZ is 2.31 mm and RQZ is 2.31 mm.

UPC-A



For 100% magnification (X-dim: 0.33 mm) the LQZ is 2.97 mm and RQZ is 2.97 mm.

UPC-E



For 100% magnification (X-dim: 0.33 mm) the LQZ is 2.97 mm and RQZ is 2.31 mm.

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ITF-14 code interface



Type - Barcode type ITF-14.

Code - Place for the 14 digits.

Grouping - see ITF-14 specific features.

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Wide To Narrow Ratio - Sets the width ratio between wide and narrow bars. Helps to improve scannability.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between the HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Bearer Bars - see ITF-14 specific features.

H Mark - see ITF-14 specific features.

Create Button - Generates barcode based on the values specified above.

ITF-14 specific features

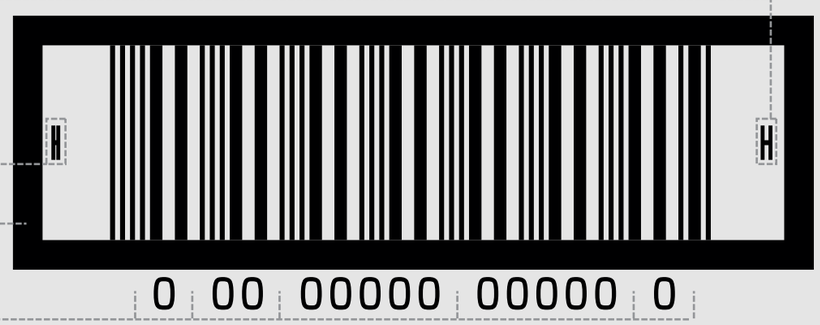
Grouping
The digits (HRI) Grouping is an optional feature. The Grouping usually helps to identify easier the item and its manufacturer. The manufacturers use different types of Grouping. The Plug-in offers 5 types of common Groupings.

Bearer Bars
Bearer Bars help to equalize the pressure of the printing plate over the entire surface of the code and thus to enhance the readability.
For printing methods that do not require printing plates the Bearer Bars can appear only at the top and bottom of the symbol.

H Mark
Two small H Mark characters can be included to allow the amount of ink spread to be checked by examining the gap between the verticals of the H Mark. The H Marks are optional and usually are used by older printing technologies/machines.

Good to know

ITF-14 sample
The code below corresponds to the values specified in the plug-in screenshot on the left side of this page.



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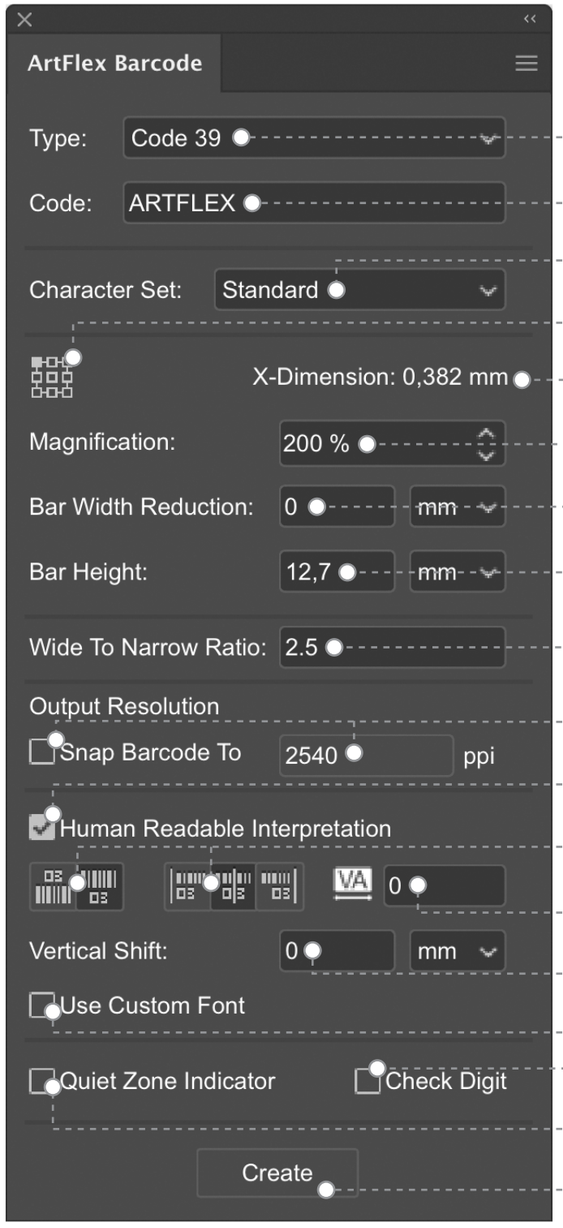
Code 39 interface



Type - Barcode type Code 39.

Code - Place for the code characters.

Character Set - Specifies available characters. See Code 39 specific features.

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Wide To Narrow Ratio - Sets the width ratio between wide and narrow bars. Helps to improve scannability.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/ center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between the HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Check Digit - See Code-39 specific features.

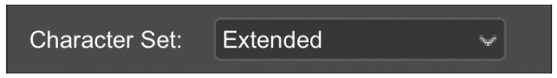
Quiet Zone Indicator - Marks zone where no other design can be placed. Helps to improve scannability.

Create Button - Generates barcode based on the values specified above.

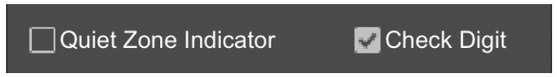
Code 39 specific features



Standard Character Set
The Code-39 Standard character set contains following characters:
Digits 0-9
Letters A-Z
Symbols –.$/+%
Space is used as a special symbol



Extended Character Set
The Code-39 Extended set contains the full 128 ASCII character table. Using the extended set requires bigger code space (see Code-39 samples bellow).



Check Digit
Code-39 does not contain an automatic built in checking function. However, an optional check digit (Modulo 43) can be enabled. The check digit helps to eliminate mistakes, on the other hand, it creates additional bars requiring more space (see Code-39 samples bellow).

Good to know

Code-39 samples
The size of the code varies depending on whether extended character set or check digit is used.



Standard character set
Check digit off.



Extended character set
Check digit off.



Standard character set.
Check digit on.



Extended character set.
Check digit on.

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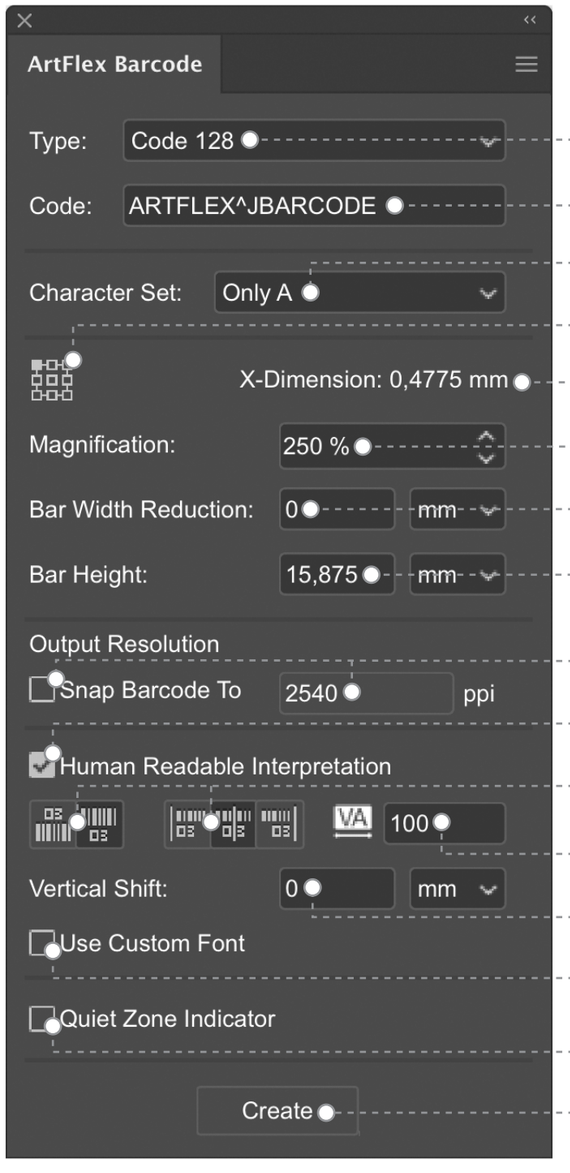
Code 128 interface



Type - Barcode type Code 128.

Code - Place for the code characters.

Character Set - Specifies available characters. See Code 128 specific features.

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/ center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between the HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Quiet Zone Indicator - Marks zone where no other design can be placed. Helps to improve scannability.

Create Button - Generates barcode based on the values specified above.

Code 128 specific features



Character Set Auto
It is the default option. The best char. set combination to optimize the barcode width.



Character Set A
ASCII characters 00 to 95 (0–9, A–Z and control characters), special characters and FNC 1–4



Character Set B
ASCII characters 32 to 127 (0–9, A–Z, a–z), special characters and FNC 1–4



Character Set C
00–99 (encodes two digits with a single code point) and FNC1

For full content of the character sets please see the table on the following page.

Good to know

Control Characters
Control characters are non printing symbols included in the character set A. Scanning codes which contain control characters performs other action than adding printable text symbol (see the code example below).

The plug-in allows to add the control characters by right (secondary) clicking on the code field. It opens a list where an appropriate character can be selected (see the list on the right side).

Code 128 control character example:
The code below corresponds to the values specified in the plug-in screenshot on the left side of this page. The code contains Line feed (LF) character represented by ^J control key. It means that all the printable characters placed after the control key will be moved to a new text line.



The above code will be scaned as:

ARTFLEX
BARCODE

Null character	NUL
Start of Header	SOH
Start of Text	STX
End of Text	ETX
End of Transmission	EOT
Enquiry	ENQ
Acknowledgment	ACK
Bell	BEL
Backspace	BS
Horizontal Tab	HT
Line feed	LF
Vertical Tab	VT
Form feed	FF
Carriage return	CR
Shift Out	SO
Shift In	SI
Data Link Escape	DLE
Device Control 1 (oft. XON)	DC1
Device Control 2	DC2
Device Control 3 (oft. XOFF)	DC3
Device Control 4	DC4
Negative Acknowledgment	NAK
Synchronous idle	SYN
End of Transmission Block	ETB
Cancel	CAN
End of Medium	EM
Substitute	SUB
Escape	ESC
File Separator	FS
Group Separator	GS
Record Separator	RS
Unit Separator	US
Space	SP
Delete	DEL

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Code 128 - Code sets A, B and C - Complete character table

Num. Value	Code Set A	Code Set B	Code Set C	Num. Value	Code Set A	Code Set B	Code Set C	Num. Value	Code Set A	Code Set B	Code Set C	Num. Value	Code Set A	Code Set B	Code Set C
00	space	space	00	27	;	;	27	54	V	V	54	81	DC1	q	81
01	!	!	01	28	<	<	28	55	W	W	55	82	DC2	r	82
02	"	"	02	29	=	=	29	56	X	X	56	83	DC3	s	83
03	#	#	03	30	>	>	30	57	Y	Y	57	84	DC4	t	84
04	$	$	04	31	?	?	31	58	Z	Z	58	85	NAK	u	85
05	%	%	05	32	@	@	32	59	[	[	59	86	SYN	v	86
06	&	&	06	33	A	A	33	60	\	\	60	87	ETB	w	87
07	'	'	07	34	B	B	34	61	]	]	61	88	CAN	x	88
08	(	(	08	35	C	C	35	62	^	^	62	89	EM	y	89
09	)	)	09	36	D	D	36	63	_	_	63	90	SUB	z	90
10	*	*	10	37	E	E	37	64	NUL	`	64	91	ESC	{	91
11	+	+	11	38	F	F	38	65	SOH	a	65	92	FS	|	92
12	,	,	12	39	G	G	39	66	STX	b	66	93	GS	}	93
13	-	-	13	40	H	H	40	67	ETX	c	67	94	RS	~	94
14	.	.	14	41	I	I	41	68	EOT	d	68	95	US	DEL	95
15	/	/	15	42	J	J	42	69	ENQ	e	69	96	FNC3	FNC3	96
16	0	0	16	43	K	K	43	70	ACK	f	70	97	FNC2	FNC2	97
17	1	1	17	44	L	L	44	71	BEL	g	71	98	SHIFT	SHIFT	98
18	2	2	18	45	M	M	45	72	BS	h	72	99	CODE C	CODE C	99
19	3	3	19	46	N	N	46	73	HT	i	73	100	CODE B	FNC4	CODE B
20	4	4	20	47	O	O	47	74	LF	j	74	101	FNC4	CODE A	CODE A
21	5	5	21	48	P	P	48	75	VT	k	75	102	FNC1	FNC1	FNC1
22	6	6	22	49	Q	Q	49	76	FF	l	76	103	START A	START A	START A
23	7	7	23	50	R	R	50	77	CR	m	77	104	START B	START B	START B
24	8	8	24	51	S	S	51	78	SO	n	78	105	START C	START C	START C
25	9	9	25	52	T	T	52	79	SI	o	79		STOP	STOP	STOP
26	:	:	26	53	U	U	53	80	DLE	p	80				

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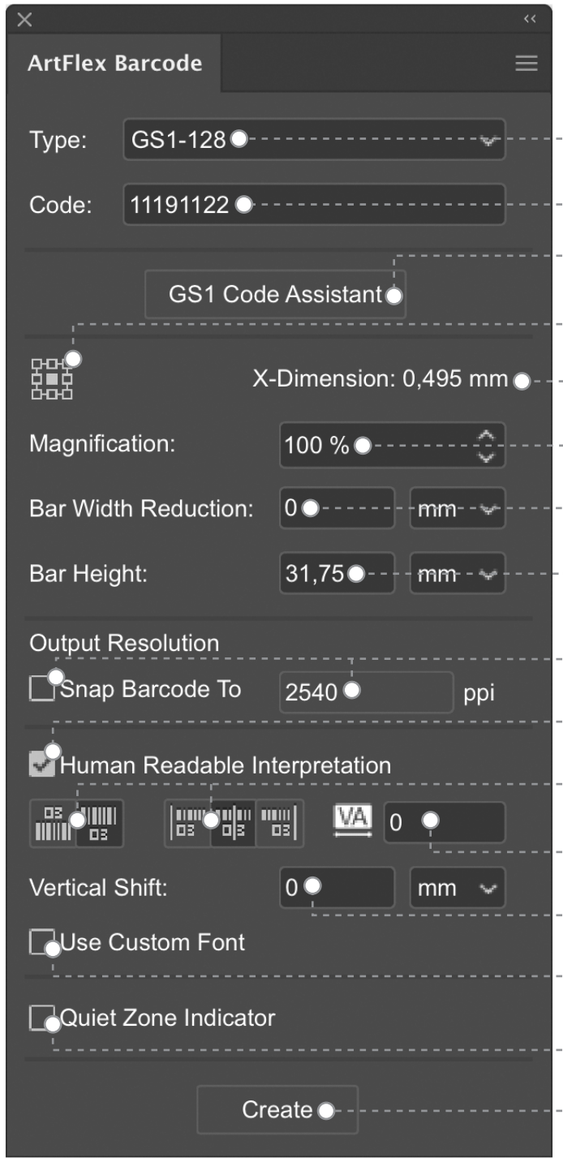
GS1-128 interface



Type - Barcode type GS1-128.

Code - Place for the code characters.

GS1 Code Assistant - See GS1-128 specific features.

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

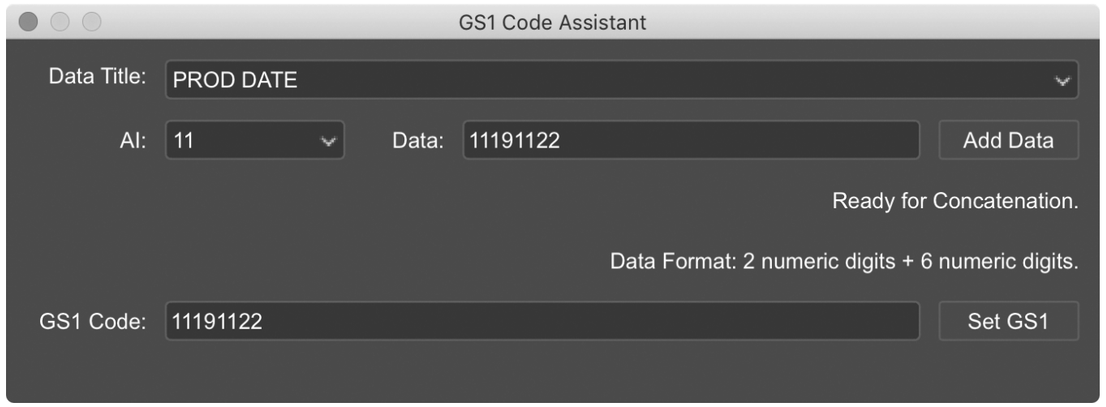
Use Custom Font - Replaces the default HRI by selected font.

Quiet Zone Indicator - Marks zone where no other design can be placed. Helps to improve scannability.

Create Button - Generates barcode based on the values specified above.

GS1-128 specific features

GS1-128 Code Assistant
The code assistant helps to create a GS1-128 code. It contains all available Application Identifiers (AI). It shows how many characters and segments each AI requires and verifies the correctness of your code. It can also concatenate codes made from more AIs.



Create code with GS1-128 Code Assistant
1) Select the Data Title field which describes the AI function (rolling over the field shows full description of the selected Data Title).

2) The AI number is auto-selected according to the chosen Data Title (rolling over the AI field shows full description of the selected AI number).
You can also select any AI number directly without specifying the Data Title first. In such a case the Data Title will be auto-selected according to the chosen AI number.

3) The selected AI number is automatically copied to the Data field. In case you are using 4 digit AI number containing the letter "n" on the end, only the first three digits are copied to the Data field and you must complete it by the fourth digit (this depends on your AI instructions).

After setting the AI number in the Data field you complete the code by typing all remaining segments of the selected AI. The length of the segments depends on the selected AI specification. The two text lines below the Data field give you info how many characters and code segments the selected AI requires and show you the current status of the code you are just typing.

5) As soon as the code meets the AI specifications the Add Data button is activated. Pressing the button copies the code to the GS1-128 Code field. You can repeat the above procedure several times and concatenate more AIs to one GS1-128 code.

6) Press the Set GS1 button to send the composed GS1-128 code to the main plug-in window. The code is ready for creation now.

Good to know

GS1 Application Identifiers (AIs) are prefixes used in barcodes and EPC/RFID-tags to define the meaning and format of data attributes. The AIs cover various industry sectors to include product data beyond the GTIN, such as the batch/lot number, serial number, best before date, expiration date etc. More information on https://www.gs1.org/standards/barcodes/application-identifiers

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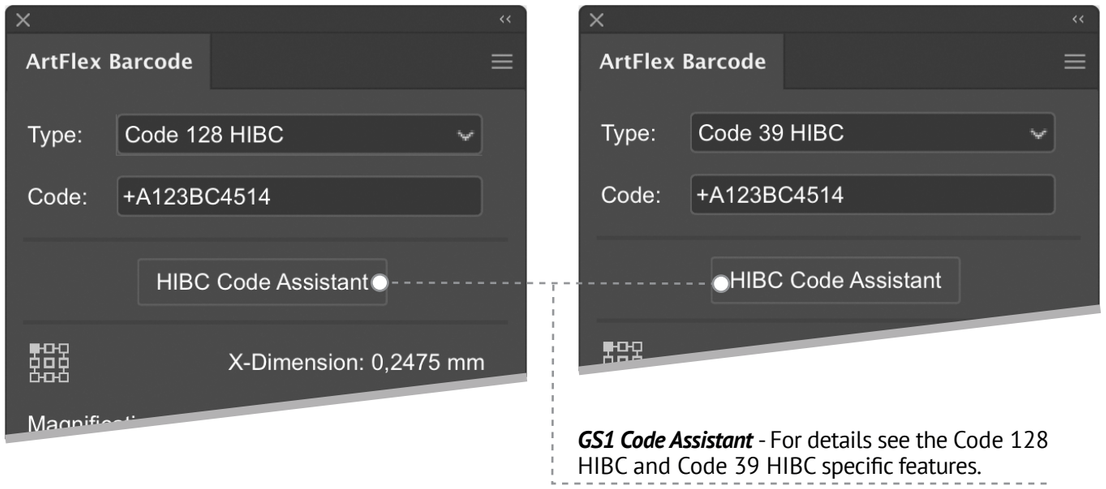
Code 128 HIBC/Code 39 HIBC interface

The interface of the 128 HIBC and 39 HIBC codes is almost identical to the GS1-128 interface described on the previous page. The difference consists in HIBC Code Assistant described on this page.



GS1 Code Assistant - For details see the Code 128 HIBC and Code 39 HIBC specific features.

Good to know

Analysis of concatenated 128 HIBC code data structure based on the HIBC Code Assistant values from the plug-in screenshot on the right side of this page.



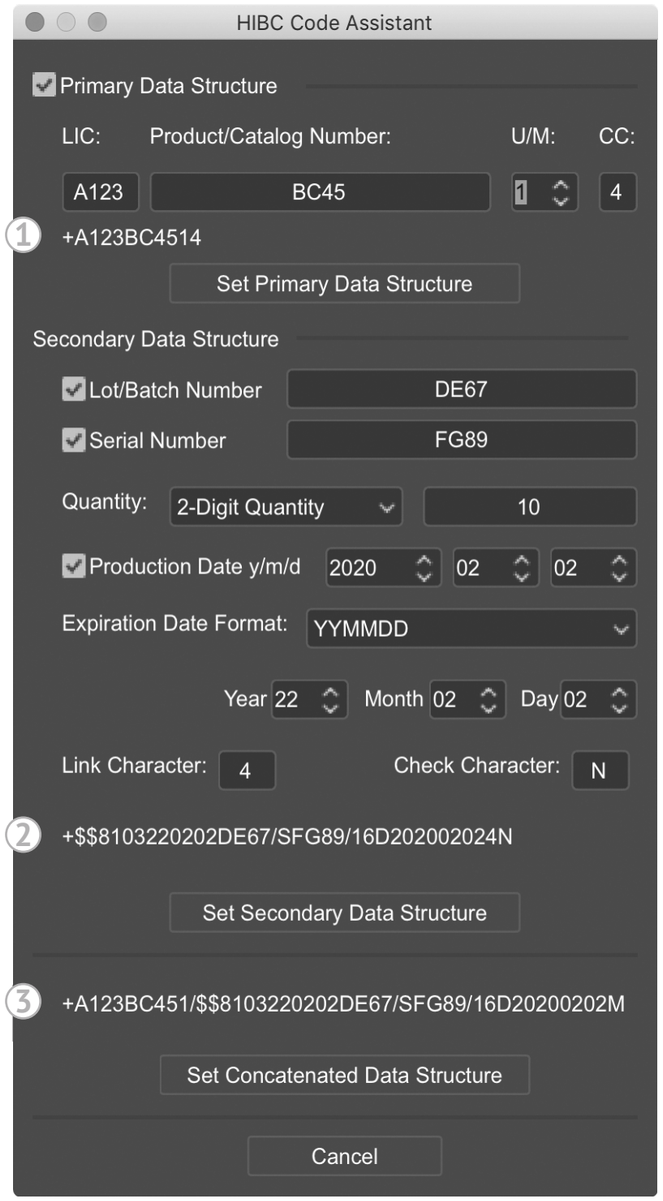
	Primary Data Structure segments
+	HIBC Supplier Labeling Flag
A123	Labeler Identification Code (LIC)
BC45	Product/Catalog Number (PCN)
1	Unit of Measure (U/M)
	Other segments
/	Concatenation symbol
M	Modulo 43 Check Character

	Secondary Data Structure segments
$$	Quantity/Date/Lot ref. identifier
8	Specifies the Quantity format
10	Quantity
3	Specifies the Expiration Date format
220202	Expiration Date (yymmdd)
DE67	Lot/Batch Number
/S	Data identifier for Serial Number
FG89	Serial Number
/16D	Data identifier for Production Date
20200202	Production Date (yyyymmdd)

Note: The code structure can differ depending on used input data.

Code 128 HIBC/Code 39 HIBC spec. features

HIBC Code Assistant
The HIBC Code Assistant helps to create 128 HIBC and 39 HIBC codes. It contains all necessary settings for correct HIBC codes composition. It automatically checks codes for mistakes. It can compose separated primary and secondary codes and also concatenated codes.



HIBC Code Assistant - Alphanumeric previews
The HIBC Code Assistant contains previews which display alphanumeric content of the composed code. The previews are instantly updated as soon as a user changes any of the input data.

In case the data input contains a mistake, the previews will show a warning and a hint how to correct the code.

There are three alphanumeric previews. One for each data structure.
① Primary data structure preview
② Secondary data structure preview
③ Concatenated data structure preview

HIBC Code Assist. - Exporting composed code
Each data structure (primary, secondary or concatenated) can be exported to the code field of the main plug-in window for barcode creation. Just press the Set Data Structure button located under each alphanumeric preview for the export.

Creating HIBC barcode without HIBC Code Assistant
HIBC barcode can be also created by simple typing/copying a code directly to the code field of the main plug-in window and pressing the Create button.

Good to know

The HIBC Code Assistant is intended to be used by experienced users with a good HIBC code composition knowledge.

Detailed information about the HIBC codes composition: www.hibcc.org/wp-content/uploads/SLS-2.6-Final.pdf

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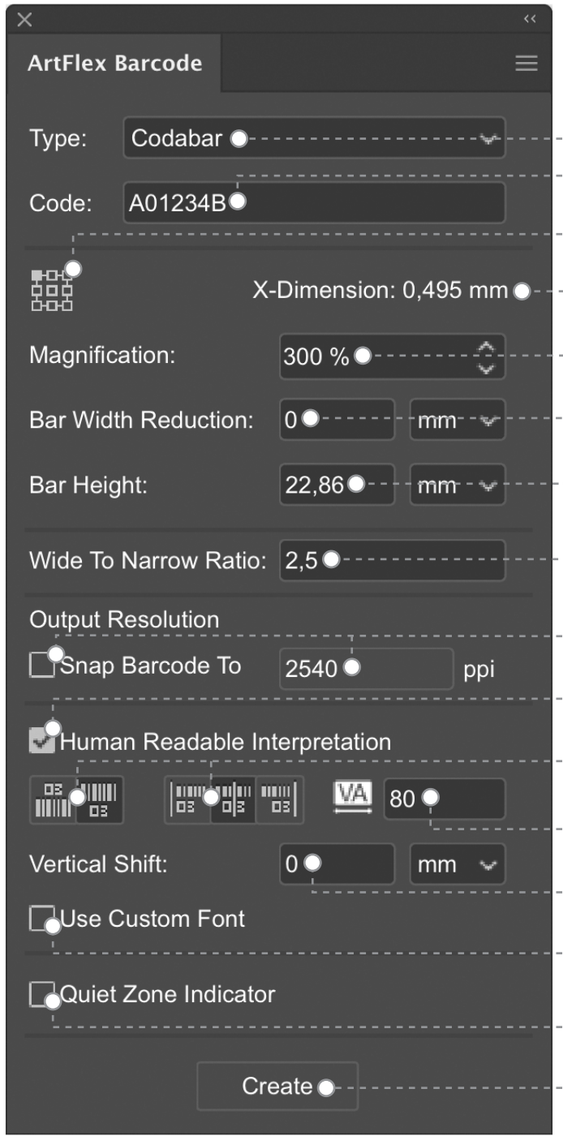
Codabar code interface



Type - Barcode type Codabar.

Code - Place for the code characters.

Magnification Reference Point - Indicates fixed point for barcode scaling.

X-Dimension - Displays the size of the basic dimensional module. It is the width of the narrow bar.

Magnification - Changes the width of the bars/code. It correlates with the X-Dimension size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Wide To Narrow Ratio - Sets the width ratio between wide and narrow bars. Helps to improve scannability.

Output Resolution - Snaps barcode to specified resolution for easier print tools preparation.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between the HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Quiet Zone Indicator - Marks zone where no other design can be placed. Helps to improve scannability.

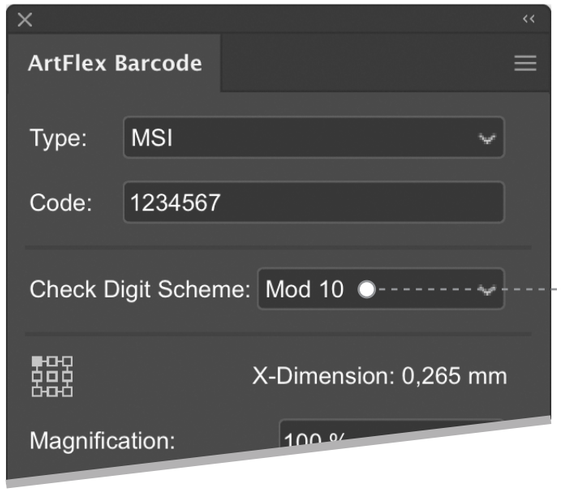
Create Button - Generates barcode based on the values specified above.

Good to know

First and last characters of the Codabar are called start and stop signs. **ABCDEN*T** char. are allowed. The body of the code can consist from **0-9** digits and **-$:/+.** characters.

MSI code interface

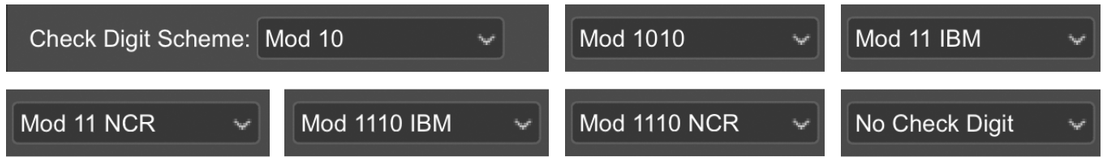
The interface of the MSI codes is almost identical to the Codabar interface (for details see the left part of this page.) The only MSI interface difference consists in Check Digit Scheme option.



Check Digit Scheme - Adds a check digit(s) on the end of the code. See MSI code specific feature below.

MSI code specific feature

Check Digit Scheme
The plug-in offers seven check digit schemes for calculating the MSI code check digit. Check digits verify data integrity during the bar coding reading process. The most common Mod 10 scheme is used as default option.



Good to know

The check digit(s) are calculated automatically according to the selected scheme. They are added on the end of the code. See examples for code 1234567 below: Mod 10 scheme calculates 4 and Mod 1010 calculates 41 as check digits.





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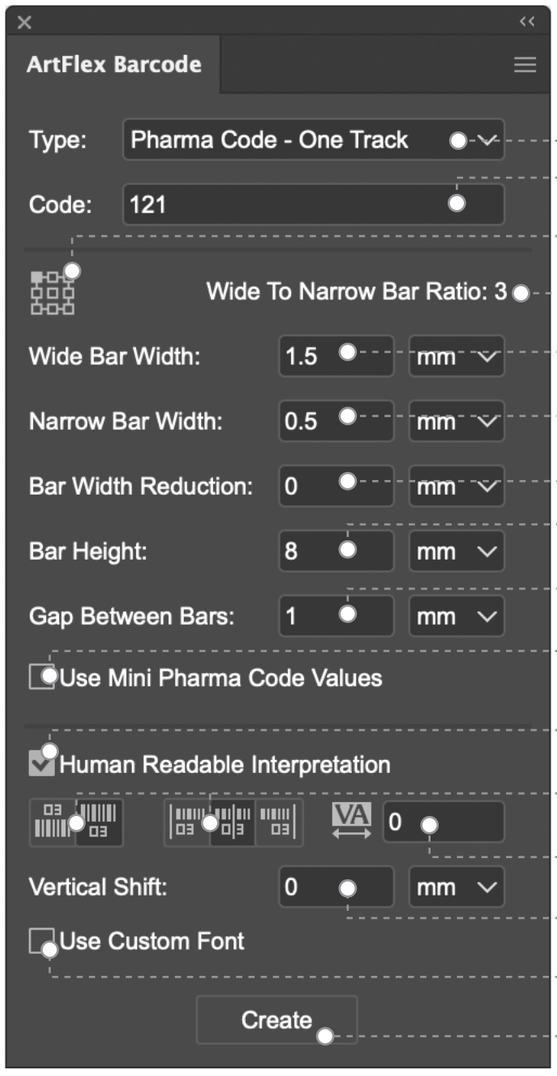
One Track Pharma Code interface



Type - Barcode type Pharma Code - One Track.

Code - Place for the code digits.

Magnification Reference Point - Indicates fixed point for barcode scaling.

Wide To Narrow Ratio - Shows the ratio between wide and narrow bars.

Wide Bar Width - Changes the width of the wide bars of the barcode.

Narrow Bar Width - Changes the width of the narrow bars of the barcode.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Bar Height - Changes the height of the bars.

Gap Between Bars - Changes the distance between the bars.

Use Mini Pharma Code Values - Option for creating a miniature version of the Pharma Code.

Human Readable Interpretation (HRI) - Appends the code characters to the barcode.

HRI Alignment/Placement - Aligns the HRI on left/ center/right. Places the HRI above/under the bars.

HRI Tracking - Changes the distance between the HRI characters.

HRI Vertical Shift - Changes the vertical distance between the custom HRI and edge of the bars.

Use Custom Font - Replaces the default HRI by selected font.

Create Button - Generates barcode based on the values specified above.

One Track Pharma Code allowed values

Standard One Track Pharma Code

	Standard	Minimum	Maximum
Narrow bar	0.5 mm	0.4 mm	0.7 mm
Wide bar	1.5 mm	1.3 mm	2.5 mm
Gap	1.0 mm	0.9 mm	2.5 mm

Miniature One Track Pharma Code

	Standard	Minimum	Maximum
Narrow bar	0.35 mm	0.3 mm	0.45 mm
Wide bar	1.0 mm	0.9 mm	1.7 mm
Gap	0.65 mm	0.55 mm	1.65 mm

Good to know

The range of possible encodations is limited - between 3 and 131070.
For applications which have restricted space requirements (e.g. small labels,narrow carton flaps, etc.) is recommended to use the Miniature (Mini) one-track Pharma Code.

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QR Code panel interface



Type - QR Code or Data Matrix

Tagging - List of available mobile taggings. Data read from tags activates specific functions on mobile devices. See the right page for details.

Tagging options - Space for tagging settings. Each tagging has different settings.

Magnification Reference Points - Indicates fixed point for 2D code scaling.

Points - Displays number of cells (basic dimensional modules) counted vertically and horizontally.

Cell Size - Changes basic dimensional module size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Width/Hight - Changes width/hight of 2D code in selected units.

Version - Specifies the number of squares (basic dimensional modules). See the right page for details.

Error Correction - Sets QR code error correction level. See the right page for details.

Safe Area - Marks zone where no other design should be placed. Helps to improve scannability.

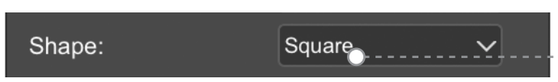
Unite Squares - Merges squares to reduce the number of shapes. See the right side of this page for details.

Control Command Recognition - Option to add control characters to 2D code. See the right page for details.

Create Button - Generates 2D code based on values specified in the plug-in panel.

Data Matrix code panel interface

The interface of the Data Matrix code plug-in panel is almost identical to the QR code panel. There are only two differences: 1) The code Reliability option is not present 2) Shape option is added



Shape - Assigns squared or rectangular pattern to Data Matrix code.

Description of selected features

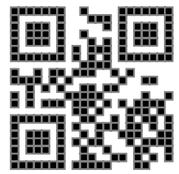
Tagging
Taggings add special tags to the QR code. Data read from the tags activates specific functions on mobile devices. There are 9 different tagging options available in the plug-in: Text, URL, vCard, SMS, Phone Call, Email, Geolocation, Event, WiFi.

Version
The QR and Data Matrix size is counted as the number of horizontal and vertical squares (basic dimensional modules). The size depends on the number of encoded characters. We recommend using the Auto option which selects automatically the smallest possible size, however, the size can also be specified manually.
If the manually selected size is not sufficient for the number of encoded characters it will not be possible to create the code.

Error Correction
The QR and Data Matrix codes are scannable even when part of them is damaged or removed.
There are 4 different QR code error correction levels:
Level L – up to 7% damage
Level M – up to 15% damage - this is the default option used by the plug-in
Level Q – up to 25% damage
Level H – up to 30% damage
The error correction level of Data Matrix codes is automatically determined by the symbol size and data capacity. Unlike QR codes, they cannot be freely specified.

Unite Squares
This function merges squares (basic dimensional modules) to the reduced amount of more complex shapes. This can be useful for further graphic processing in Adobe Illustrator.
The QR codes on the right side contain intentionally highlighted basic segments showing the impact of the Unite Square function.

Unite Squares is Off



Unite Squares is On



Control Command Recognition
This option lets you insert control characters to QR or Data Matrix code. Control characters do not represent written symbols.
To use this function please do the following: 1) Tick on the Control Command Recognition option
2) Do secondary (or right) click on the code input field 3) Select “Control Characters” from the local menu



This code will show encoded text in two lines because the Line Feed (LF) control character was included.
Result of scanninng: ARTFLEX
SOFTWARE

Good to know

Check our website www.artflex.software/en/products/ArtFlexQR to see how the QR and Data Matrix code tagging works.

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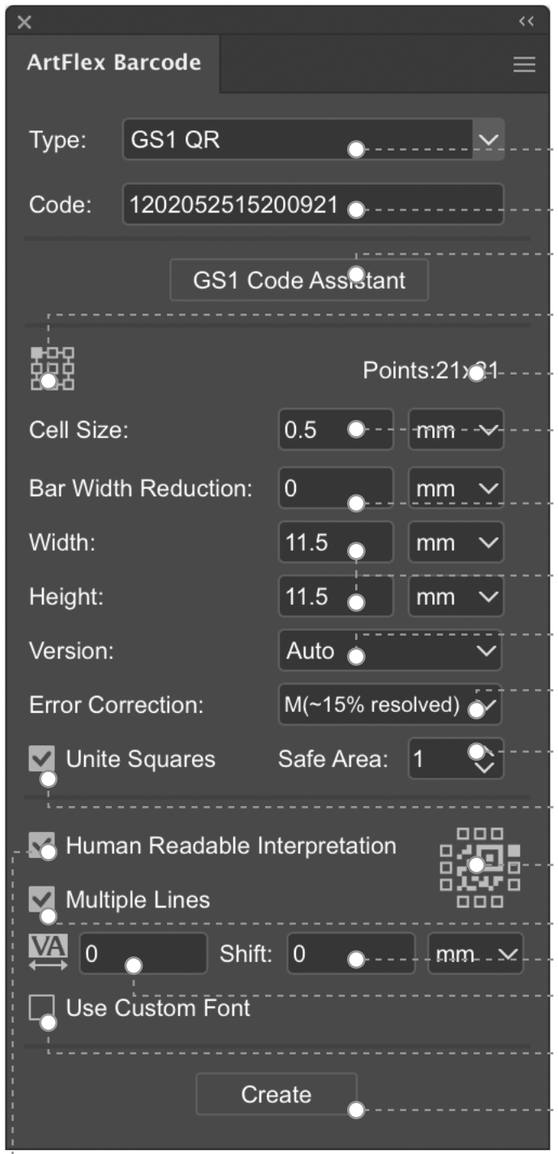
GS1 QR code panel interface



Type - GS1 QR or GS1 Data Matrix.

Code - Place for the code characters.

GS1 Code Assistant - See page 11 for details.

Magnification Reference Points - Indicates fixed point for 2D code scaling.

Points - Displays number of cells (basic dimensional modules) counted vertically and horizontally.

Cell Size - Changes basic dimensional module size.

Bar Width Reduction (BWR) - Compensates press gain during the printing process.

Width/Hight - Changes width/hight of 2D code in selected units.

Version - Specifies the number of squares (basic dimensional modules). See the right page for details.

Error Correction - Sets QR code error correction level. See the right page for details.

Safe Area - Marks zone where no other design should be placed. Helps to improve scannability.

Unite Squares - Merges squares to reduce the amount of shapes. See the right side of this page for details.

Text Placement - Selects position of the HRI in relation to the code.

Multiple Lines - Places HRI of each Application Indentifier (AI) on separate line.

HRI Shift - Changes the HRI to code distance.

HRI Tracking - Changes spaces between HRI characters.

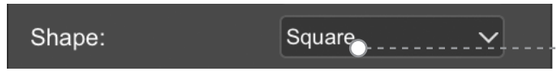
Use Custom Font - Replaces the default HRI by selected font.

Create Button - Generates 2D code based on values specified in the plug-in panel.

Human Readable Interpretation (HRI) - Appends the code characters to the code.

GS1 Data Matrix code panel interface

The interface of the GS1 Data Matrix code plug-in panel is almost identical to the GS1 QR code panel. There are only two differences: 1) The code Reliability option is not present 2) Shape option is added



Shape - Assigns squared or rectangular pattern to GS1 Data Matrix code.



ArtFlex Software GmbH
Kronacher Straße 9, 96365 Nordhalben, Germany
info@artflex.software

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