Technical white paper

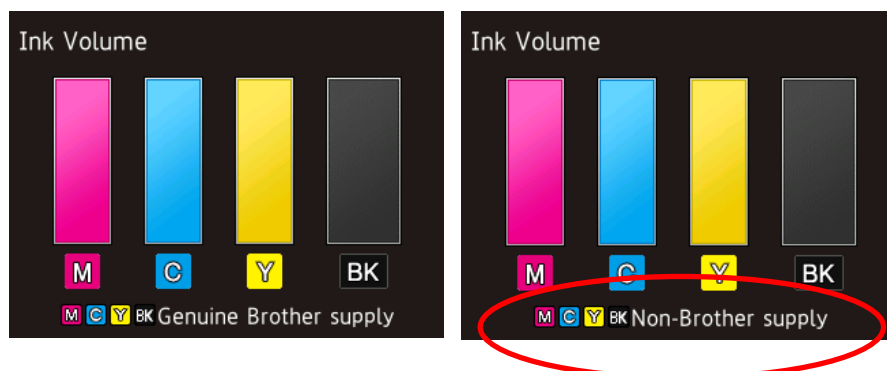# Aftermarket Chips for Brother Inkjet or Laser Printers

Ver 5-2 : updated September 2023

Introduction

In 2015, we have launched a new series of inkjet printers which contain a new cartridge authentication function. These printers can provide a message to customers stating whether the ink cartridge installed is a Brother branded ink cartridge manufactured by Brother (**"Brother Genuine Ink Cartridge"**) or a non-Brother ink cartridge manufactured by others. The message shown on the printer display or applications would be either "Genuine Brother supply" or "Non-Brother supply" as indicated below:

In addition, some of the printers released after 2020 have IC chips recording genuine / non-genuine information in consumables other than ink cartridges / toner cartridges for the purpose of maintenance service and function improvement.

<In the case of inkjet printers>

However, the authentication message will not be accurate unless the chip manufacturer has properly programmed the data field on the chip of the cartridge. Please refer to the instructions (the "**Instructions**") in the "Instruction" section of this Whitepaper on how to properly program the data field on the chip.

If you are a <u>supplier of Brother consumables</u> please instruct your chip manufactures to follow the Instructions in order to allow accurate display of the authentication message and avoid

causing confusions to customers or the maintenance service etc. customers receive. If you are a <u>chip manufacturer,</u> please follow and comply with the Instructions and do not attempt to use any programs to circumvent this authentication function. For the purpose of this Whitepaper, "you" refers to both suppliers of Brother consumables and chip manufacturers.

Background & Benefits

We believe every customer has a right to be properly informed of the brand of the cartridges that they are using. However, we recognize there were cases where cartridges misidentified themselves as Brother Genuine Ink or Toner Cartridges when they are actually not. As a result customers, without knowing the reason, suffered from using certain low-quality alternatives or counterfeit products (or products using deceptive brand identification) that may cause malfunctions or damages to their printers. We have therefore introduced this authentication function that aims to prevent such misidentifications and provide better transparency to customers to make an informed choice. Furthermore, consumers can also receive appropriate maintenance services, etc. by this authentication function.
– we believe these will be beneficial to everyone concerned in the Brother consumables market.

It is important to note that proper programming of the chip and identification of the cartridge as "non-Brother supply" will not result in any loss to features or quality in printing. Instead, it will be beneficial for you to properly identify your cartridges so that you can demonstrate to your customers that your products are respectful of registered trademarks and are not used to facilitate any counterfeit products. We therefore strongly advise you to follow our Instructions and cooperate with us in this respect.

Instructions

To ensure accurate messaging, Brother's printer firmware reads and reacts on messaging based on data field(s) on the chip of the cartridge. Programming the data field on the chip correctly will enable the printer to identify non-Brother cartridges and display the correct message to customers. Please follow the following instructions i) and ii).

i)   Please change the string ASCII characters from "brother" to some other value. Any value is acceptable but we recommend manufacturers to use their own brand identifiers.

ii)   Please change "Field X" following the ASCII characters to "0x01". Please note that the value "0x00" for Field X should only be used for Brother Genuine Ink or Toner Cartridge.

Please note that you do not have to make the change under Instruction i) and ii) for the model marked with * in the APPENDIX to this whitepaper.

For illustration purpose, please also refer to the following diagrams:

Brand name							Types of cartridge
b	r	o	t	h	e	r	Field X

Field X	Indication
0x00	Genuine Brother supply
0x01	Non-Brother supply
0x10	(Reserved)
0x11	(Reserved)

Example

Initial data

Brand name							Types of cartridge
b	r	o	t	h	e	r	0x00

After modified

Brand name							Types of cartridge
a	b	c	C	o	r	p	0x01

Please note that putting any value other than "brother" or "brother genuine" as ASCII characters and/or putting "0x01" in Field X will only change the display message that the customer sees, and it will not affect print speed or other functionality of the printer.

For the models marked with * in the APPENDIX to this whitepaper, please follow the instructions iii) and iv) below.

iii)   Please change a part of the string ASCII characters or whole characters from "brother genuine" to some other value. Any value is acceptable but we recommend manufacturers to use their own brand identifiers.

iv)   The models marked with * in the APPENDIX to this whitepaper, are expected to have Brother's logo data on the chip so please delete Brother's logo data which comes next to the string "brother genuine" from the chip.

Example

Initial data

Brand name															The first byte of Brother's logo data
b	r	o	t	h	e	r		g	e	n	u	i	n	e	0X47

After modified

Brand name															The first byte of Brother's logo data
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	0X00

Please note that putting any value other than "brother genuine" as ASCII characters and/or deleting Brother's logo data by changing the first byte of the logo data will only change the display message that the customer sees and maintenance services etc. that customer receive, and it will not affect print speed or other functionality of the printer.

Schedule

Brother Inkjet series with 2.7 inch or larger size LCD display launched from 2015 summer onwards are expected to have this authentication messaging function. You are therefore

prompted to properly and consistently program the existing chips of your cartridges by following the Instructions.

Current models of ink or toner cartridges that support this authentication messaging function are shown on the appendix of this whitepaper. The appendix will be updated as new models of Brother consumables that support the authentication messaging function are released.

Updates

This Whitepaper may be updated in the future. The latest version is available at:

http://update.brother.co.jp/pbj/pdf/en/Brother_White_Paper_Genuine_Authentication_EN.pdf

Contacts

For more information on this Whitepaper, please contact:
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APPENDIX :

Model list of ink or toner cartridges and other consumables that support the authentication function

Consumables Model	Examples of Applicable Printer Model
LC201, LC203	MFC-J680DW, MFC-J880DW, MFC-J885DW
LC211	DCP-J762N, MFC-J880N, DCP-J963N
LC221, LC223	DCP-J562DW, MFC-J680DW, MFC-J880DW
LC231, LC233	DCP-J562DW, MFC-J680DW, MFC-J880DW
LC261, LC263	DCP-J562DW, MFC-J680DW, MFC-J880DW
LC3011, LC3013	MFC-J491DW, MFC-J497DW, MFC-J690DW
LC3017, LC3019	MFC-J5330DW, MFC-J6530DW
LC3029	MFC-J5830DW, MFC-J6535DW
LC3033, LC3035	MFC-J995DW
LC3037, LC3039	MFC-J5845DW, MFC-J5945DW, MFC-J6545DW
LC3111	DCP-J572N, MFC-J893N, DCP-J973N
LC3117, LC3119	MFC-J6580CDW, MFC-J6980CDW
LC3129	MFC-J6995CDW
LC3133, LC3135	MFC-J1500N
LC3139	HL-J6000CDW, MFC-J6997CDW
LC3211, LC3213	DCP-J772DW, DCP-J774DW
LC3217, LC3219	MFC-J5330DW, MFC-J6930DW
LC3233, LC3235	DCP-J1100DW, MFC-J1300DW
LC3237, LC3239	MFC-J5945DW, HL-J6000DW
LC3311, LC3313	MFC-J890DW
LC3317, LC3319	MFC-J5330DW, MFC-J6930DW
LC3329	MFC-J5930DW, MFC-J6935DW
LC3333	DCP-J1100DW, MFC-J1300DW
LC3337, LC3339	MFC-J5945DW、MFC-J6945DW
LC3511, LC3513	MFC-J690DW, MFC-J890DW
LC3617, LC3619	MFC-J2330, MFC-J3930DW
LC3717, LC3719	MFC-J2330DW, MFC-J3930DW
LC401*, LC411*, LC421*	MFC-J1170DW, DCP-J1140DW
LC402*, LC412*, LC422*	MFC-J6540DW, MFC-J7300CDW

LC404*, LC414*, LC424*	MFC-J1215W
LC406*, LC416*, LC426*	MFC-J4335DW, MFC-J4340DW, MFC-J4140N
TN223, TN227	HL-L3210CW, MFC-L3710CW
TN233, TN237	DCP-L3551CDW, MFC-L3770CDW
TN243, TN247	HL-L3210CW, DCP-L3510CDW, MFC-L3710CW
TN253, TN257	HL-L3230CDW, DCP-L3510CDW, MFC-L3750CDW
TN730, TN760	DCP-L2550DW, HL-L2330D, MFC-L2710DDW
TN2410, TN2420	DCP-L2550DN, HL-L2375DW, MFC-L2750DW
TN2415, TN2445, TN2449	HL-L2375DW, MFC-L2713DW
TN2430, TN2450	HL-L2395DW, MFC-L2750DW
TN810, TN821, DR810CL, DR821CL, BU800CL	HL-L9410CDN, HL-L9430CDN, MFC-L9610CDN, MFC-L9630CDN
TN920, TN3600, TN70J, DR920, DR3600, DR70J	HL-L5210DW, DCP-L5510DW, MFC-L5710DW
TN830, TN2510, TN32JXL	HL-L2400D, HL-L2400DW, DCP-L2660DW, MFC-L2820DW
TN229, TN248, TN299	HL-L3220CDW, DCP-L3520CDW, MFC-L3780CDW