

LT 4600A MULTIFORMAT VIDEO GENERATOR

Instruction Manual (LOGO APP)

Thank you for purchasing.

Please carefully read this instruction manual and the included "GENERAL SAFETY SUMMARY". Please use the product safely.

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1. INTRODUCTION

This manual explains the logo application (hereafter referred to as Logo App) that is supplied with the LT 4600A. For information on how to use the LT 4600A, see the LT 4600A instruction manual.

Logo App is a software for converting bitmap data (*.bmp) into 4-level monochrome data (*.lg) that can be used on the LT 4600A.

2. PREPARATION

To use Logo App, you need the following devices. Please obtain them separately.

Device	Environmental conditions
PC	Microsoft Windows Vista, 7, 8, 10
	Microsoft .Net Framework 3.5 or later must be installed.
USB memory device	Up to 8 GB

3. INSTALLATION

Follow the procedure below to install Logo App in your PC. When updating Logo App, you do not have to uninstall the old version. The old version will be overwritten.

1. Load the CD-ROM supplied with the LT 4600A, and run LT4600_LOG0_Application_Installer.msi.

⊙ CD-ROM

- | Distruction_Manual_for_LT_4600A
- L LOGO_Application_v1.0
 - L LT4600 LOGO Application Installer.msi

2. When the following window appears, click Next.

🖞 LT4600 LOGO Application 📃 📼 📼
Welcome to the LT4600 LOGO Application Setup Wizard
The installer will guide you through the steps required to install LT4600 LOGO Application on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel < Back

3. When the following window appears, select the installation folder, and click Next.

🛃 LT4600 LOGO Application	- • •
Select Installation Folder	- 🔶
The installer will install LT4600 LOGO Application to the following folder.	
To install in this folder, click "Next". To install to a different folder, enter it be	low or click "Browse".
Eolder: C¥Program Files (x86)¥LEADER¥LT4600 LOGO Application¥	B <u>r</u> owse Disk Cost
● <u>E</u> veryone ◯ Just <u>m</u> e	
Cancel < <u>B</u> ack	Next >

4. When the following window appears, click Next.



5. When the following window appears, the installation is complete. Click Close.

HT4600 LOGO Application			- • •
Installation Complete			- 🔶
LT 4600 LOGO Application has been suc	ccessfully installe	d.	
Please use Windows Update to check fo	or any critical upo	dates to the .NET Fi	ramework.
	Cancel	< <u>B</u> ack	

4. UNINSTALLATION

To uninstall the software, select "LT4600 LOGO Application" in Programs and Features of Control Panel, and click Uninstall.

					3
Control Panel +	Programs and Features	✓ ⁴ → Search		5	Q
Tasks View installed updates Get new programs online at Windows Marketplace	Uninstall or change a program To uninstall a program, select it from the l	ist and then click "Uninstall", "Cl	hange", or "Rep	air".	
View purchased software	🕛 Organize 🔽 🏢 Views 🔍 💱 Uninsta	ll 😼 Change 🛛 💀 Repair		(0
(digital locker)	Name	Publisher	Installed On	Size	
Turn Windows features on or off	1 Dell Resource CD ■ Intel(R) Graphics Media Accelerator Driver ■ Intel(R) PRO Network Connections Drivers	Dell Inc.	6/30/2008 6/30/2008 6/30/2008	3.04 MB	
	Intel® Active Management Technology Intel® Management Engine Interface	Intel Corporation Intel Corporation	6/30/2008 6/30/2008	13.1 MB	
	💷 lt4446	LEADER	5/1/2014	394 KB	
	🔶 LT4600 LOGO Application	LEADER ELECTRONICS CORP.	5/1/2014	24.0 KB	
All I	🔀 Microsoft .NET Framework 3.5 SP1	Microsoft Corporation	4/23/2012	27.8 MB	
	Microsoft .NET Framework 4 Client Profile	Microsoft Corporation	4/23/2012	120 MB	
	SoundMAX	Analog Devices	6/30/2008	44.0 KB	

5. HOW TO USE

To convert bitmap data (*.bmp) into 4-level monochrome data (*.lg), follow the procedure below.

1. Start "LT4600 LOGO Application" on the PC desktop.



2. Click Select File.

e LEADER LT4600 L	OGO Application - Ver.1.0	
View BMP(Color)	Select File	Convert and Save
© LOGO	Threshold Settings	Convert and Save

3. Select a bitmap file (*.bmp).

Select a file that meets the following conditions. You cannot select a file (*.lg) that has already been converted.

File name: Up to eight characters (excluding the extension) consisting of alphanumeric characters or underscore.

File format: 24 bits, 256 colors, 16 colors

File size: Up to 320 dots × 240 lines (width × height)



4. Click LOGO to view the data after conversion.

If the data after the conversion appears okay, save the data. Proceed to step 7. Here, only check that the colors have been separated into four grayscale levels. The intensity used to display the data on the actual LT 4600A can be adjusted from the menu, so it will be different from what appears here.



5. Click Threshold Settings to set the conversion thresholds.

Use the sliders to set the thresholds.

Main Window			
🔶 LEADER LT4600 I	OGO Application - Ver.1.0		
View BMP(Color) COGO	Select File Threshold Settings	Convert and Save	
	LEVEL 0		
	LEVEL 1		
Level Threshold	Settings Dialog Box		
🔶 Level Threshold S	Settings		

	Level 3 192 ~ 255
· · · · · ·	Level 2 128 ~ 191
0	Level 1 64 ~ 127
Default	Level 0 0 ~ 63
Refresh	Apply Cancel

• Threshold

The threshold represents the intensity (Y). If we assume R, G, and B to take on values between 0 and 255, it can be derived from the following formula.

×

Y = 0.212*R + 0.701*G + 0.087*B

For example, if the thresholds are set as shown in the above figure, Logo App converts data according to the following rules.

- Intensities 0 to 63 are converted to level 0 and displayed at intensity 63.
- Intensities 64 to 127 are converted to level 1 and displayed at intensity 127.
- Intensities 128 to 191 are converted to level 2 and displayed at intensity 191.
- Intensities 192 to 255 are converted to level 3 and displayed at intensity 255.



Conversion Example

• Description of the Level Threshold Settings Dialog Box

Item	Description	
Default	The thresholds are reset to the following values.	
	Level 3: 192 to 255	
	Level 2: 128 to 191	
	Level 1: 64 to 127	
	Level 0: 0 to 63	
Refresh	The result of the conversion by applying the specified thresholds is displayed in the main	
	window.	
	The values are not applied until you click Apply.	
Apply	The values are applied, and the Level Threshold Settings dialog box closes.	
Cancel	The values are canceled, and the Level Threshold Settings dialog box closes.	

6. Click Apply to apply the settings.

7. Click Convert and Save to covert and save the data.

The data saved in the same location as the original data with the same name but with a different extension.

Example: test.bmp \rightarrow test.lg



8. When the following confirmation message appears, click OK.



6. DISPLAYING THE LOGO

This chapter explains how to overlay the data converted with Logo App on LT 4600A SDI signals. For details, see the LT 4600A instruction manual.

1. Place the converted logo (*.lg) in the LOGO folder of the USB memory device.

- USB memory device
- L 🗋 LT4600A
 - L 🗋 LOGO
 - L 🗋 ****.lg

2. Connect the USB memory device to the LT 4600A.

3. Using LOGO SELECT on the LT 4600A, transfer the data.

If "INT_*" appears in the lower right when you select a logo, it indicates a logo that has been imported into the LT 4600A earlier.

To display a logo from the USB memory device, select a logo that displays "*/*" in the lower right.

```
SDISETTING \rightarrow SDI \rightarrow LOGO \rightarrow

3. LOGO SELECT

\bullet TEST. LG 1 \swarrow 1

\bullet DATA TRANSFER OK ?

\bullet OK \Box CANCEL
```

4. On the LT 4600A, set LOGO ON/OFF to ON.

 $SDI SETTING \rightarrow SDI \rightarrow LOGO \rightarrow$ 3. LOGO ON/OFF $\Box ON \qquad \Box OFF$

The logo pattern appears in the upper left of the screen. You can move the logo position, change the logo intensity, and so on.

If the pattern is a check field, a logo cannot be displayed.



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