

Fingerprint Identification System

Owner's Manual





CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
 DO NOT REMOVE COVER (OR BACK)
 NO USER-SERVICEABLE PARTS INSIDE
 REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC (Federal Communications Commission)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technical for help.

WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two Conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesirable operation.

- A suitable conduit entries, knock-outs or glands shall be provided in the cable entries of this product in the end user.
- **Caution:** Danger of explosion if battery is incorrectly replaced. Replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

- Holes in metal, through which insulated wires pass, shall have smooth well rounded surfaces or shall be provided with brushings.

Warning: Do not install this equipment in a confined space such as a bookcase or similar unit.

Warning: Wiring methods shall be in accordance with the National Electric Code, ANSI/NFPA 70.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warning: To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

Caution: This installation should be made by a qualified service person and should conform to all local codes.

Caution: To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Caution: The apparatus should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the apparatus.

To disconnect power from the mains, pull out the mains cord plug. When install the product, ensure that the plug is easily accessible.



Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.
5. EEE Compliance with Directive.

Hereby, LG. declares that this LAFP10-R, LAFP10-S is in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC.

CE This product is manufactured to comply with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

European representative :

This class [B] digital apparatus complies with Canadian ICES-003 Get appareil numerique de la classe [B] est conforme a la norme NMB-003 du canada.

Important Safety Instructions

- 1. Read these instructions.** - All these safety and operating instructions should be read before the product is operated.
- 2. Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.
- 3. Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.
- 4. Follow all instructions.** - All operating and use instructions should be followed.
- 5. Do not use this apparatus near water.** - For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; near a swimming pool; etc.
- 6. Clean only with dry cloth.** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** - Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product, and to protect it from overheating. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**

Important Safety Instructions

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Glossary



LAFP10
Fingerprint Identification System

■ Admin, Administrator

- As a user who can enter into the terminal menu mode, he can register/modify/delete terminal users and change the operating environment by changing settings.
- If there is no administrator for a terminal, anyone can change the settings. In this regard, it is recommended to register at least one administrator.
- Caution is required with registration and operation because an administrator has the right to change critical environmental settings of the terminal.

■ 1 to 1 Verification

- A user's verification fingerprint (template) is compared to the user's enrollment fingerprint (template) previously registered. The terminal performs 1:1 matches against the user's enrolled template until a match is found.
- It is called 1 to 1 Verification because only the fingerprint registered in the user's ID or card is used for comparison.

■ 1 to N Identification

- The terminal performs matches against multiple fingerprints (templates) based solely on fingerprint information.
- Without the user's ID or card, the user's fingerprint is compared to fingerprints previously registered.

■ I-Capture (Intelligent Capture)

- Reinforces detection capability for residual fingerprints (fingerprints left on a sensor window due to sweat or contaminants on a finger) and automatically adjusts sensor settings to detect good-quality fingerprints regardless of the conditions (dry or wet) of the fingerprints.

■ Authentication level

- Depending on the fingerprint match rate, it is displayed from 1 to 9. Authentication is successful only if the match rate is higher than the set level.
- The higher the Authentication level, the higher the security. However, it requires a relatively high match rate, so Authentication is vulnerable to failure.
- 1:1 Level: Authentication level used for 1:1 verification.
- 1:N Level: Authentication level used for 1:N identification.

■ Authentication method

- Various kinds of authentication including FP (fingerprint) authentication, PW (password) authentication, RF (card) authentication, or a combination of these methods.
- Ex) FPIPW: fingerprint or password authentication; password is used for authentication if fingerprint authentication fails.

■ Function keys

- [F1], [F2], [F3], [F4], [ENTER] are used, and they are used for direct authentication and each key represents each authentication mode.

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1. Before using

1.1. Safety precautions

- Under no circumstances will Union Community be responsible for accidents or damages caused by inappropriate use of the product caused by not referring to the user manual.

Warning

<p>⊘ Handling with wet hands or allowing liquid to flow into it is not advised. It may cause an electric shock or damage.</p> 	<p>⊘ Do not disassemble, repair, or modify the terminal at discretion. It may cause an electric shock, fire or damage.</p> 
<p>⊘ Do not place a fire source near the terminal. It may cause a fire.</p> 	<p>⊘ Keep out of reach of children. It may cause an accident or damage.</p> 






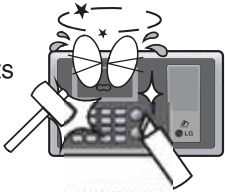

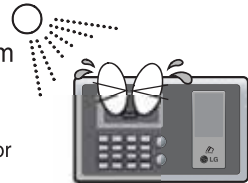

⚠ Safety
If the above warnings are ignored, it may result in death or serious injury.

⚠ Cautions
If the above cautions are ignored, it may result in property loss or human injury.

- ⊘ The sign is a "Prohibition"
- ⚠ The sign is that user should keep the manual

1. Before using

⚠ Cautions

<p>⚠</p> <p>Avoid using insecticide or flammable spray near the terminal.</p>  <p>It may result in deformation or color change.</p>	<p>⚠</p> <p>Avoid high humidity or dust.</p> <p>The terminal may be damaged.</p> 	<p>⚠</p> <p>Avoid severe temperature changes.</p> <p>The terminal may be broken.</p> 
<p>⚠</p> <p>Avoid using water, benzene, thinner, or alcohol for cleaning.</p>  <p>It may cause an electric shock or fire.</p>	<p>⚠</p> <p>Do not place a magnet close to the terminal.</p> <p>The terminal may break down or malfunction.</p> 	<p>⚠</p> <p>Avoid impacts or using sharp objects on the terminal.</p> <p>The terminal may be damaged and broken.</p> 
<p>⚠</p> <p>Do not contaminate the fingerprint input area.</p> <p>Fingerprints may not be well recognized.</p> 	<p>⚠</p> <p>Keep away from direct sunlight.</p> <p>It may cause deformation or color change.</p> 	<p>⚠</p> <p>Read the operator manual, any damage caused due to misuse will be the user's liability.</p> 

1. Before using

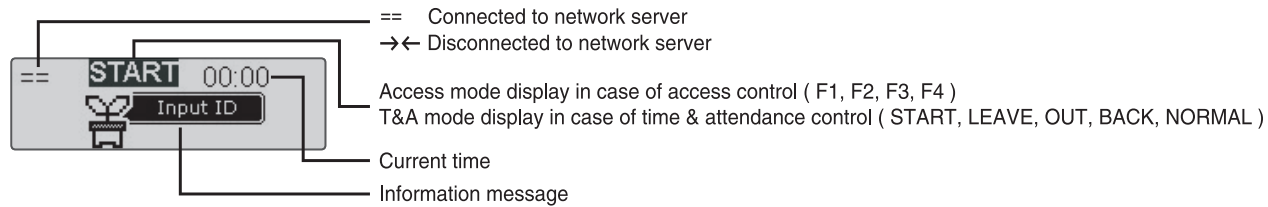
1.2. Terminal description



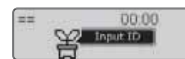
①	LCD	Display character message for all the operations
②	Key pad	[F1] : Start, [F2] : Leave, [F3] : Outside work, [F4] : Come back
		Input digits (1~9)
		Enter '0' or LCD menu scroll
		Terminal menu setting (Enter into menu mode for terminal menu setting when pressed over 2 seconds)
③	Enter, Call	- Clear typo when entering settings - Move up to higher menu - Use when escaping from menu setting
		Use after entering the settings when configuring the terminal environment Visitors use this to ring the interphone bell
④	Micro phone	Convey visitor's voice to door phone
⑤	LED Lamp	Show operation status like power supply, Lock status and card contact
⑥	Fingerprint input window	Fingerprint input
⑦	IRED sensor	Person's approach makes it automatically turn on button LED and LCD window with ID input screen
⑧	Card input area	Card input
⑨	Speaker	Voice output

1. Before using

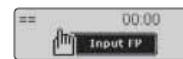
1.3. Screen description



- Initial screen.



- Waiting for a user's ID to be input.



- Fingerprint input.



- When a non-registered user ID is entered.
 - When connection mode is SN and 1:N identification is tried even though there is no user allowed for 1:N identification.



- Password input.



- Successful authentication.



- Authentication failed.



- Terminal program is in upgrade.
 (Power must not turn off when this message is displayed.)



- There is no user registered on the terminal or no connection to the server, so it is trying to connect.



- Waiting for a reply from the server for authentication.



- A registered user tried authentication at that time when access is not allowed.






- There is no response from the server during the authentication process.
 - Network to server is disconnected during the authentication process.








- Terminal is locked.
 - It is not mealtime in case of meal control mode.

1. Before using




1.4. Voice information

- “Please enter your fingerprint”  Enter fingerprint using the fingerprint input window
- “You are authorized”  Successful authentication
- “Please try again”  Authentication failed

1.5. Buzzer sound

- “ppig”  When a button is pressed or a card is being read.
 When fingerprint input is completed and user is allowed to take off his fingertip
- “ppibig”  Authentication is failed or wrong user fingerprint input happened.
- “ppiriririck”  Waiting for fingerprint input
- “ppiririck”  Authentication is successful or settings for the current user are completed.

1.6. LED signal

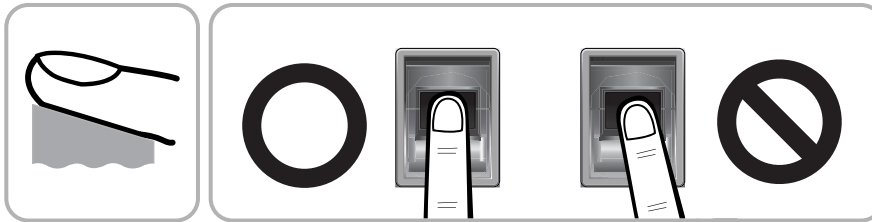
-  POWER LED : Power on/off
-  DOOR LED : Door open/close
-  CARD LED : Card contact

1. Before using

1.7. Correct fingerprint registration and input methods

Correct fingerprint registration methods

Place your index finger on the window just as you do with a finger stamp. Finger tip touching is not an appropriate registration or input method. Make sure the center of your finger touches the window.

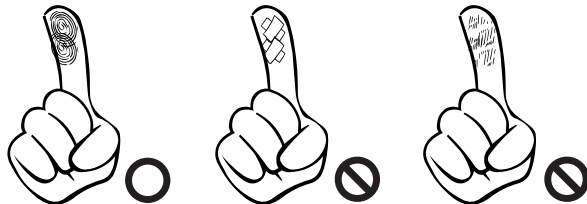


Use your index finger, if possible.

As usual, the index finger guarantees an accurate and stable fingerprint input.

Check if your fingerprint is unclear or damaged.

It is tricky to recognize fingerprints on dry, wet, unclear, or injured fingers. Use another finger in this case.



1. Before using

1.7. Correct fingerprint registration and input methods

Cautions about fingerprint condition

Depending on the user's fingerprint condition, some fingerprints may not be used or may cause an inconvenience.

- If the fingerprint is damaged or very unclear, then it cannot be recognized. Please use a password instead in this case.
- When a finger is dry, breathe on the finger for smooth operation.
- For kids, it may be tricky or impossible to use the terminal because their fingerprints are too small or very unclear. It is recommended to register their fingerprints every six months.
- For the elderly, it may not be possible to register their fingerprints if there are too many fine lines on the fingerprints.
- If fingerprints are very unclear, it may be convenient if you register 2~3 fingerprints.
- It is recommended that you register more than 2 fingerprints.

2. Introduction

2.1. Features

- Access control system using LAN**
 - Communication between the unit and authentication server is done through a UTP cable and TCP/IP protocol, so an existing LAN can be used as it is. It guarantees network-based administration and monitoring as well as easy expansion, high reliability, and higher speed.
- Convenient auto sensing function**
 - Simple authentication process without any key input simple fingerprint touching is sufficient.
- Simple authentication using fingerprints**
 - Fingerprint authentication technology prevents users from forgotten password or card, stolen key or card, etc., which is one of good ways to improve security level.
- High processing capacity of terminal and server**
 - There is not any limit on management of user's access information in case that access server is used. Even in standalone operation by using local terminal, it is possible to manage fingerprint authentication of more than 8,000 users (in optional case).
- Various information messages**
 - It ensures easy fingerprint recognition because voice and LCD window information are provided during the authentication process. In addition, the backlight installed in the LCD window helps with easy key operation in the dark.
- Door phone**
 - Easy visitor identification and convenient response.
- Various and flexible access controls**
 - No risk of rent, forgery, or loss of keys or cards.
 - Perfect control by assigning different security clearances to each user or group.
 - Flexibility provided by allowing limited time for entry/exit.
 - Low maintenance.
 - No need to issue visitor card for visitor.

2. Introduction

2.1. Features

- Various applications including access control, time & attendance, etc.**
 - Various operation modes depending on the terminal menu settings.
- Enhanced security with detection of fake finger**
 - Adopted detection technology of fake finger enhances security level.
- Various registration and authentication methods**
 - There are a total of 11 registration and authentication methods (4 methods if the card reader is not installed), so you are required to select one method before registering users and an administrator.

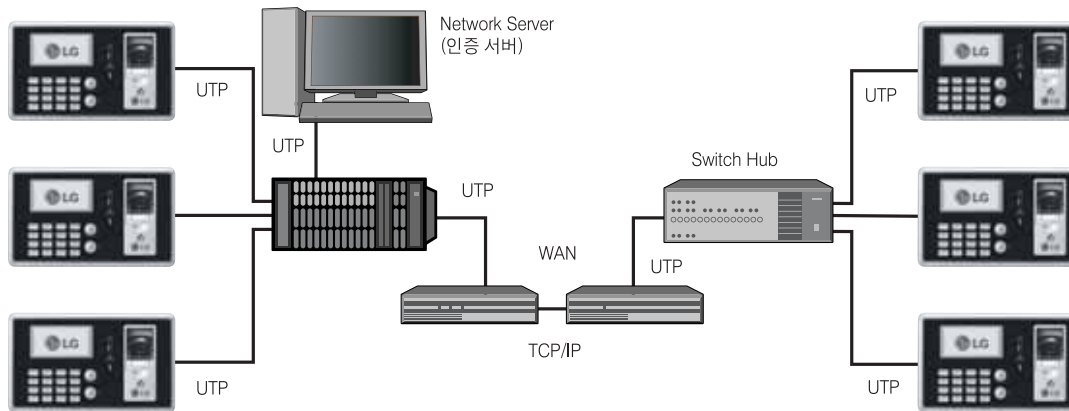
FP	Fingerprint registration. Fingerprint authentication.
ID&PW	Password registration. Password authentication after ID input.
FPIPW	Fingerprint and password registration. Fingerprint or password authentication.
FP&PW	Fingerprint and password registration. Password authentication after fingerprint authentication.
RF	Card registration. Card authentication
RFIFP	Card and fingerprint registration. Card or fingerprint authentication
RF&FP	Card and fingerprint registration. Fingerprint authentication after card authentication.
RFIPW	Card and password registration. Card or password authentication.
RF&PW	Card and password registration. Password authentication after card authentication.
ID&FPIRF&FP	Card and fingerprint registration. Fingerprint authentication after ID input or fingerprint authentication after card authentication.
ID&PWIRF&PW	Card and password registration. Password authentication after ID input or password authentication after card authentication.

※ RF defines '125KHz Proximity Card' or '13.56MHz Smart Card'.

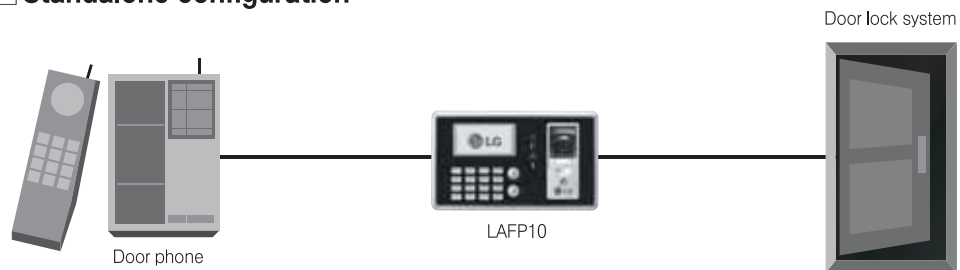
2. Introduction

2.2. Configuration

Network configuration



Standalone configuration



3. Configuration settings

3.1. Check items before device configuration settings

3.1.1. Entering menu

The following screen appears when [*] is pressed for over 2 sec.



1. User
2. Network
3. Option
4. Terminal Info
5. Ext Function
6. Device

- Press [0] to view menus not shown in the LCD window.
- Press a number key in order to go submenu. The following administrator authentication allows for entry of submenu.



<Input Admin ID>
ID : 0001

- Press [ENTER] after entering the administrator's ID, and the administrator authentication is processed according to the previous setting such as fingerprint authentication or password authentication. If the authentication succeeds, submenu screen appears.

※ Administrator authentication is required only once for all in main menu, so all other menus are accessible until he/she completely exits from the main menu.

3. Configuration settings

3.1.2. Changing setting parameters

To change setting parameters, press [#] to delete old values and input new values.



Press [0] to see menus not shown in the LCD window, and press the corresponding number to select a menu.



Press [ENTER] for confirmation of setting parameter or to move to the next setting, and press [#] to move to upper menus.



Hold [#] for over 2 sec. to cancel the current setting and move to the upper menu.