
ATTACHMENT E.**- USER MANUAL -**

HCT CO., LTD.

SAN 136-1, AMIL-RI, BUBAL-EUP, ICHEON-SI, KYOUNGKI-DO, 467-701, KOREA
TEL:+82 31 639 8517 FAX:+82 31 639 8525 www.hct.co.kr

Payment Terminal User's Manual

Ver 1.0

INDEX

1. POWER AND NETWORK CABLE.....	3
1.1 POWER INPUT	3
1.2 HOW TO CONNECT POWER	3
1.3 HOW TO CONNECT NETWORK CABLE.....	5
1.4 CABLE POSITION AND LENGTH.....	6
2. RF CARD OPERATION.....	7
2.1 RF CARD SPECIFICATION.....	7
2.2 PAYMENT TERMINAL OPERATION	7
2.3 USER DISPLAY (LATENT)	7
3. HARDWARE SPECIFICATION.....	8

1. Power and Network Cable

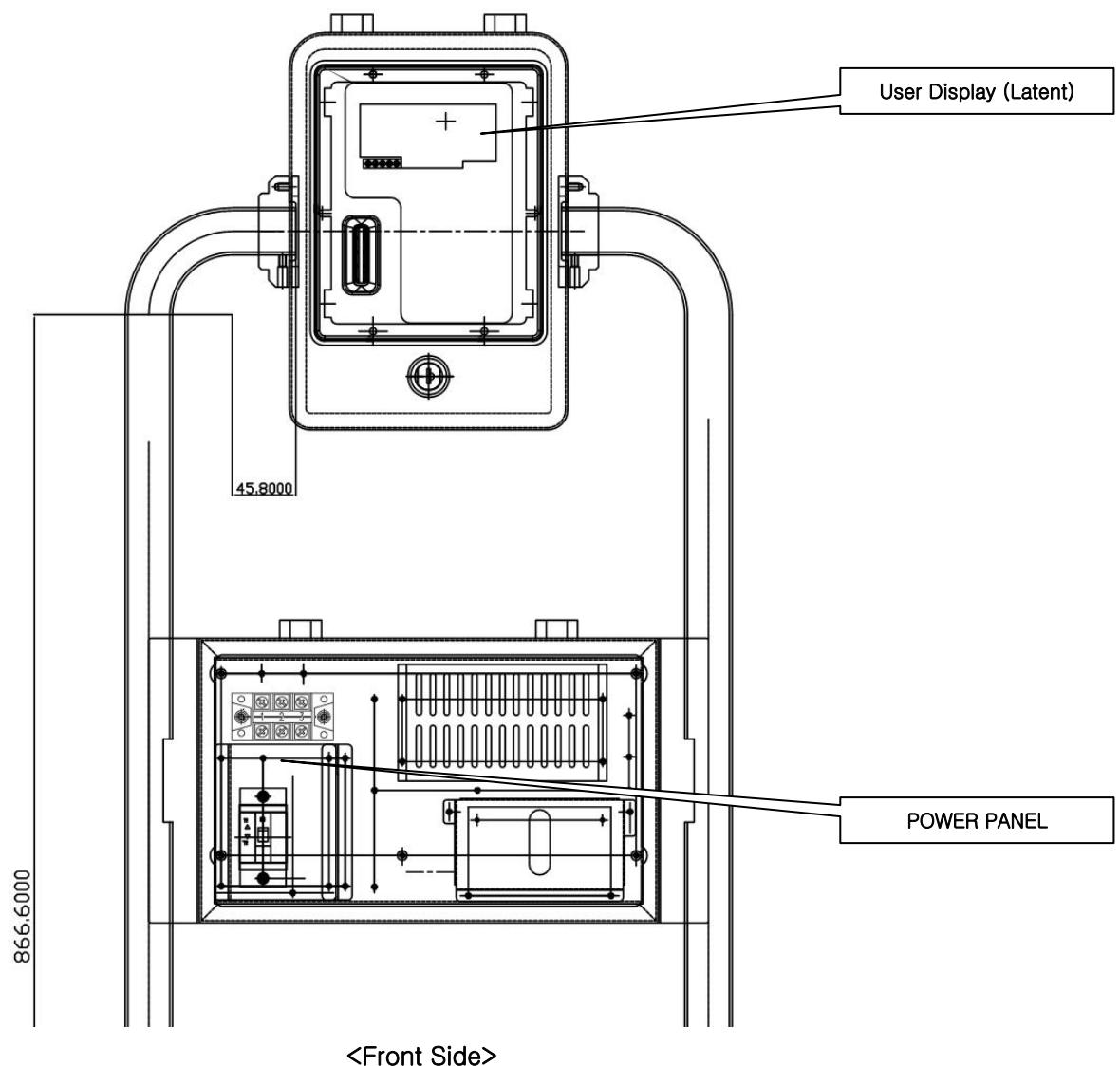
1.1 Power Input

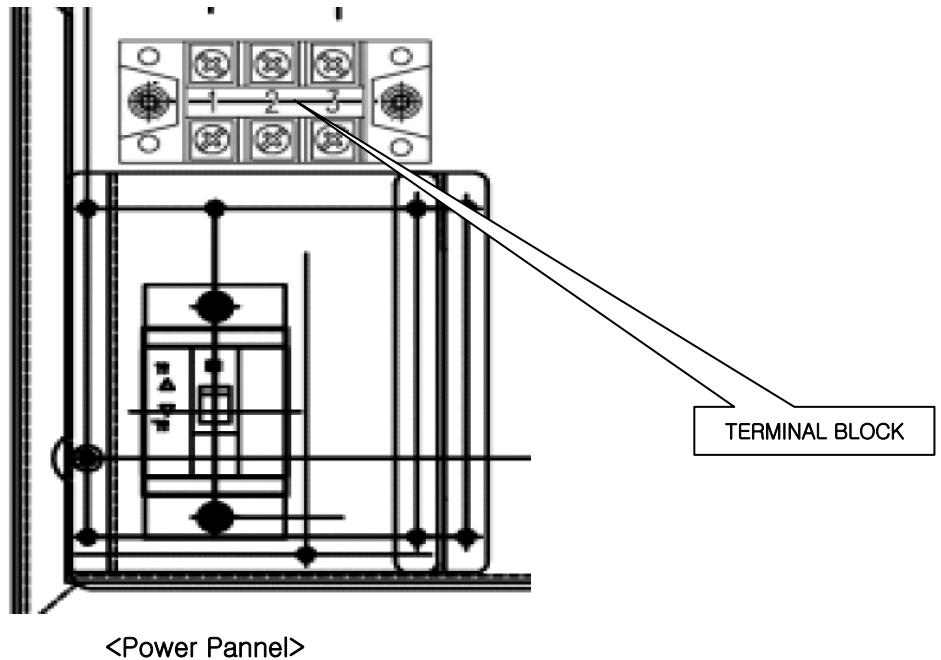
INPUT VOLTAGE : AC 110V/220V (50~60Hz)

CABLE : UL 2464-3C 16AWG

TERMINAL : RING TYPE

1.2 How to Connect Power

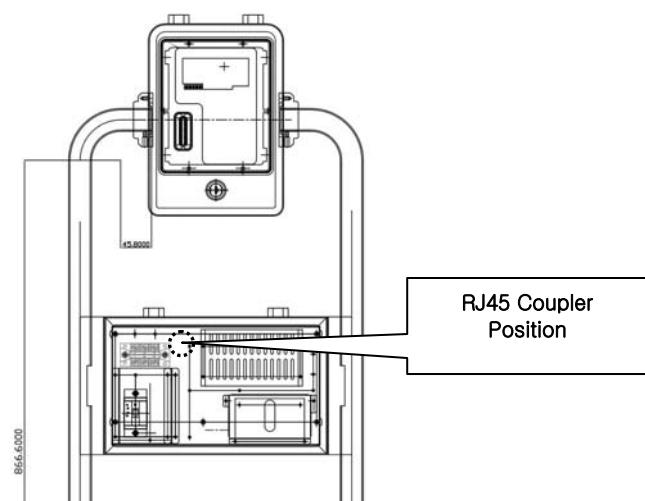
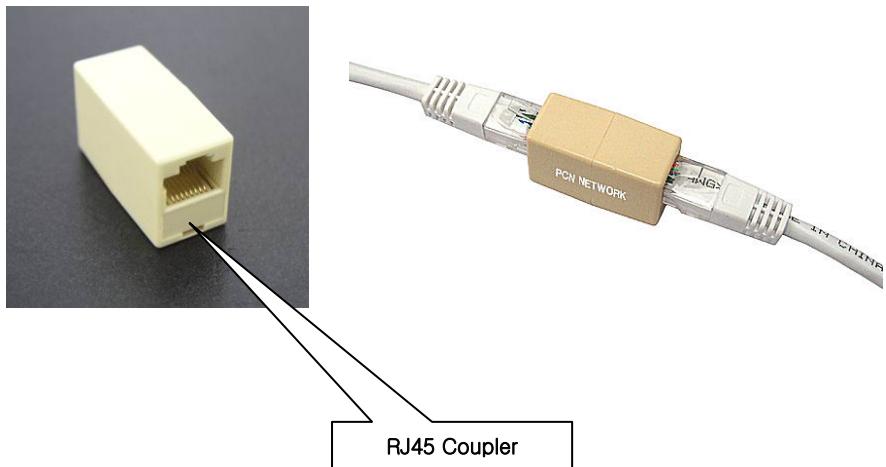




Open the door on the frontside of the Payment Terminal to find the power panel toward the lower mid-section. Connect the AC input power cable to the terminal block inside the power panel.

Terminal Block Pin Number	Description
1	INPUT AC
2	INPUT AC
3	F.G

1.3 How to Connect Network Cable

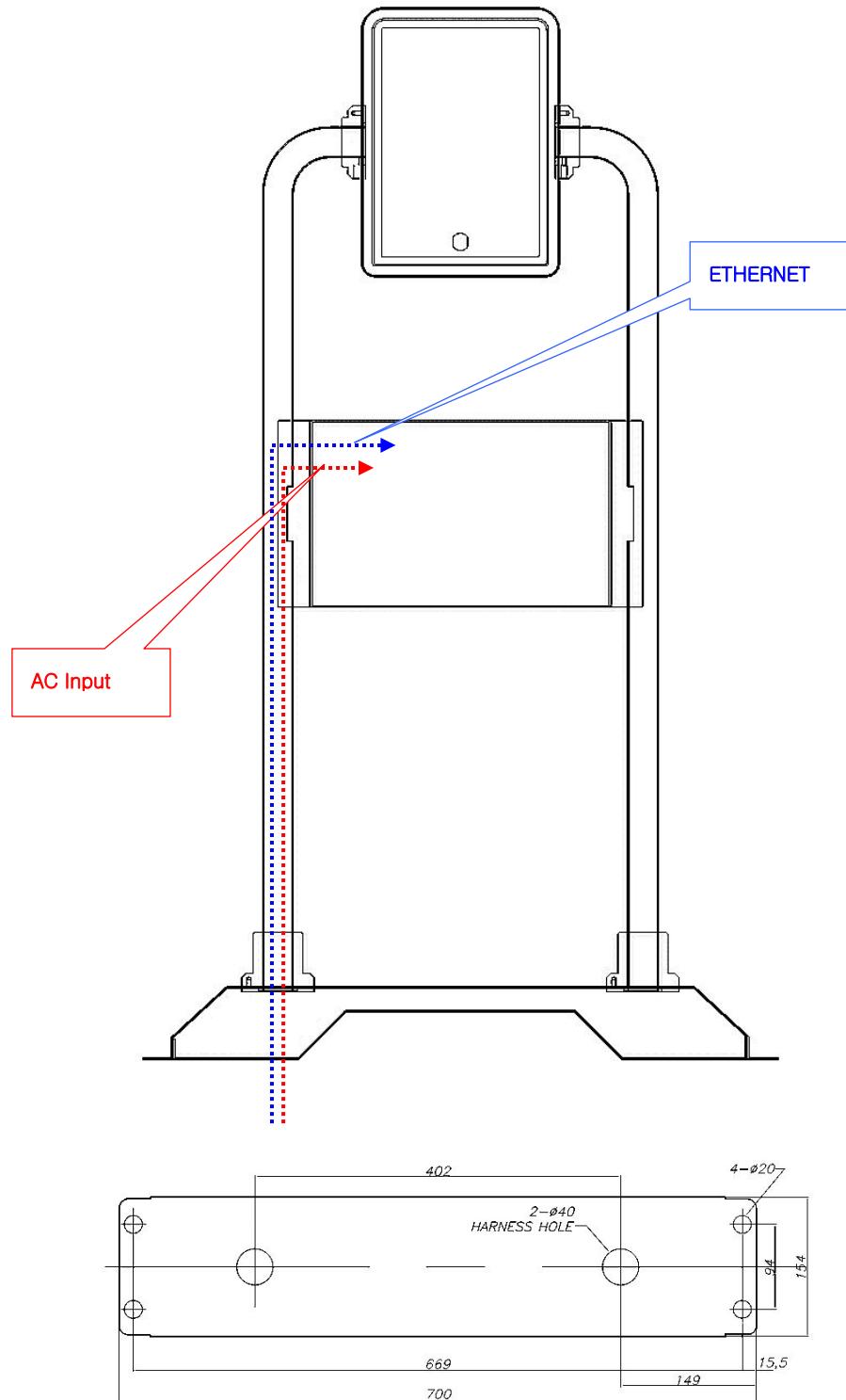


Connect network cable (ETHERNET,Category-5) to RJ45 coupler inside the Middle door on the front of the Payment Terminal.

1.4 Cable Position and Length

Power Cable : more than 100mm

Network Cable : more than 100mm



2. RF Card Operation

2.1 RF Card Specification

Contactless Philips Mifare 14443 Type A Card are accepted

ASK 100 % , 106kbs

Carrier frequency 13.56 MHz

1024 Bytes EEPROM

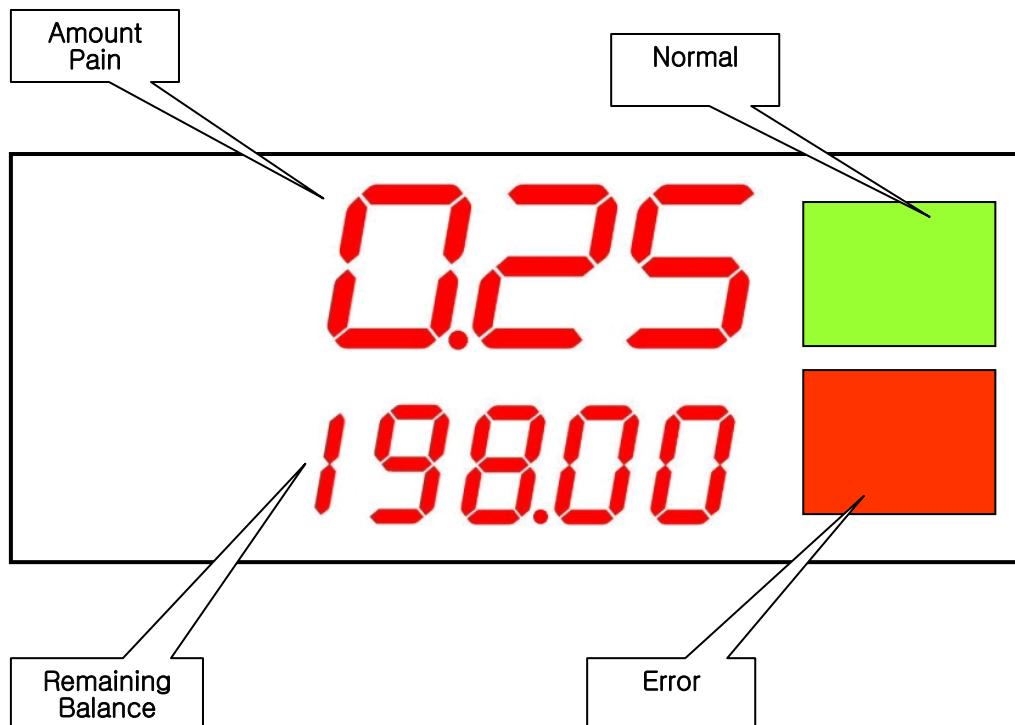
2.2 Payment Terminal Operation

User tags the RF card to pass the Payment Terminal.

User can confirm card balance and the current fare deducted through the display at the Payment Terminal.

The Payment Terminal operates only normal mode. In normal mode, card is used to operate the Payment Terminal typically.

2.3 User Display (Latent)



3. Hardware Specification

Category	Description
CPU	<ul style="list-style-type: none"> – Intel PXA255 , 32bit , 400Mhz
Memory	<ul style="list-style-type: none"> – SDRAM (Main Memory) : 32MByte – NOR Flash Memory : 16MByte (Boot Loader,OS Kernel,RAMDISK, Application Program) – NAND Flash Memory : 128MByte (Fare Table, Transaction Data, Error Data, Voice Data) Saves more than 100,000 transaction records (over 10 days' worth if 10,000 transactions occur per day)
SAM	<ul style="list-style-type: none"> – PLCC Type : 2 socket, – SIM Type : 4 socket (Security Module for Ticket Processing)
Latent (User Display)	<ul style="list-style-type: none"> – 8bit RISC CPU – Program Memory 128KBytes – RF Module : RC531 (Mifare Standard, ISO14443 Type A, B Card Acceptable) – Fee Display : Over 4 Digits (88.88 \$) – Balance Display : Over 5 Digits (888.88 \$) – Green LED , Red LED
Interface	<ul style="list-style-type: none"> – Ethernet 10–Base T (10Mbps)
Sound	<ul style="list-style-type: none"> – None
Case	<ul style="list-style-type: none"> – Stainless Steel and Painted Steel
Backup Battery	<ul style="list-style-type: none"> – DC UPS for RF Reader (approx. 2 minutes) – With embedded protector against excessive discharge/charge
Environment	<ul style="list-style-type: none"> – Temperature : -10°C~45°C – Humidity : Up to 90% relative humidity
Procession Speed	<ul style="list-style-type: none"> – RF Card Processing Speed: Less than 1 second from access to antenna – Passing Speed/Minute: More than 30 passengers
Power Usage	<ul style="list-style-type: none"> – Input Voltage : AC 110 ~ 220V ± 10% – Input Frequency : 50 ~ 60 Hz ± 2 % – Earth : Type 3 Grounding

User's Information

1. Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. FCC compliance Information

This device complies with part 15 of FCC 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 undesired operation.

3. Information to User

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.