

EMC Technologies Report Number: M050435_Cert_Terminal

APPENDIX H – User Manual

GPRS/GSM

K78-205

Advanced Mobile Payment Terminal

User Guide

Version 2.0, September 2003

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NOTICE TO USERS

REGULATORY AND SAFETY INFORMATION

Australian Communications Authority (Australia Only)

The GSM module fitted in this device complies with Australian requirements and is marked with Australian supplier code N173.

European Telephone Network (European Union Only)

This equipment has been declared as compliant in accordance with EU Council Directive 1999/5/EC for pan-European single terminal connection to the Public Switched Telephone Network (PSTN) and displays the CE mark accordingly. However, due to differences between the individual PSTNs provided in different countries, the Declaration of Compliance does not, of itself, give an assurance of successful operation on every PSTN network termination point. In the event of problems you should contact your equipment supplier in the first instance.

FCC and Industry Canada Regulatory and Safety Information (USA/Canada Only)

(a) Information to Users

Warning: Changes or modifications not expressly approved by Keycorp could void the user's authority to operate the equipment.

SAR

SAR compliance for body-worn operations is restricted to belt-clips, holsters and accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Antenna Warning

Use only the supplied antenna. Unauthorised antennas, modifications or attachments could impair quality and/or damage device or result in violation of FCC regulations.

(b) FCC Radio Frequency Interference Statement

NOTE: 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 instruction manual, 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 technician for help.

(c) FCC Telephone Connection – General Requirements

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

Applicable certification jack Universal Service Order Codes (“USOC”) for the Equipment is RJ11C.

If service from the local telephone is requested they will require Facility Interface Code (“FIC”) and Service Order Code (“SOC”). These are as follows:

- (a) Facility Interface Code (“FIC”) 02LS2
- (b) Service Order Code (“SOC”) 9.0Y

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a

telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. The REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If this equipment, K78-205, causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment K78-205, for repair or warranty information, please contact your service provider. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

This equipment is of a type that is not intended to be repaired.

This equipment must not be used on party lines. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

Industry Canada Radio Frequency Interference Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada

Industry Canada Telephone Connection

NOTICE: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that

registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

NOTICE: The Ringer Equivalence Number (REN) for this terminal equipment is 1.7. The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

Important Safety Instructions – Telecommunications Cable

CAUTION – To reduce the risk of fire, use only No.26 AWG or larger telecommunication cord.

ATTENTION – Pour réduire les risques d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG au de section.

Important Safety Instructions – Lithium Battery

CAUTION – Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

ATTENTION – Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

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Welcome

Thank you for choosing our K78-205 Advanced Mobile Payment Terminal. This guide will provide you with the information you need to operate it. Please use this guide as your primary reference point, together with your application guides. For any further details, please contact your service provider.

Note: This guide covers only the K78-205.

Please read the safety, maintenance and battery handling information carefully.

Guidelines

Please observe the following guidelines at all times:

- Do NOT use the product where it will interfere with other devices.
- Do NOT get the unit wet – it is not resistant to liquids.
- Handle the unit carefully to prevent damage to the antenna.
- The printer is a small device and must be handled gently.
- When loading paper, the paper cover must also be handled gently.
- When disconnecting cables pull the PLUG and NOT the cord.
- The unit must only be operated with the battery module in place.

Safety

Please refer to this user guide when using this product.
Failure to comply with interference requirements can be dangerous or illegal.

Use only accessories that have been approved by the manufacturer.

Overview of the K78-205 Terminal

Operation

For this product to operate financial or other transactions you must have a network connection through your service provider. Connection is normally provided as part of your supply agreement. Your service provider will give you your reference guides and help desk numbers.

Should you have any problems during a transaction that cannot be solved using this guide, then please call your service provider's help desk.

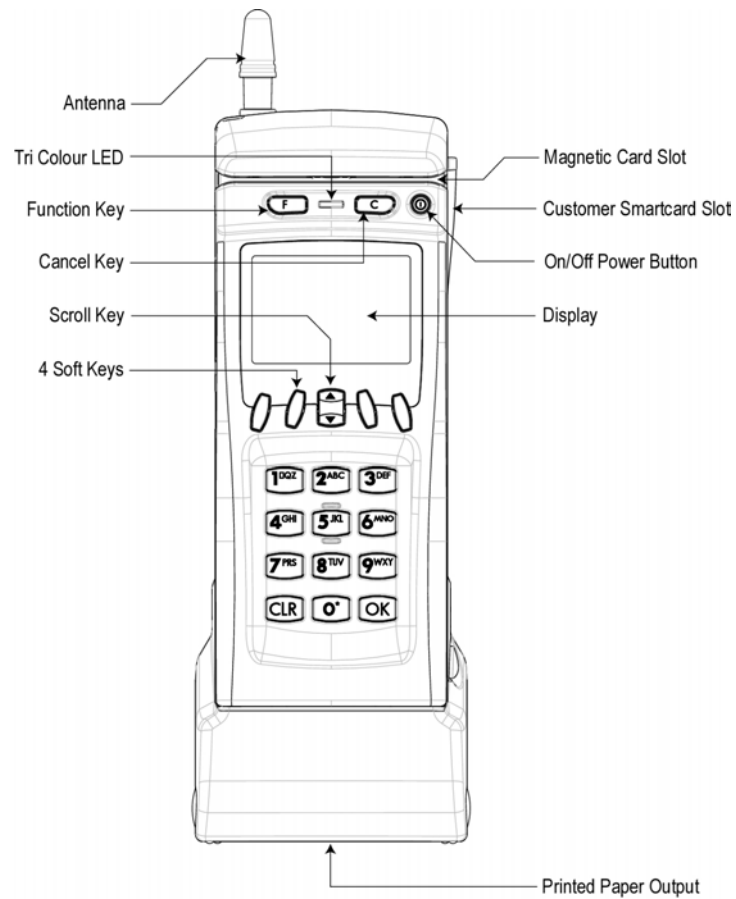
Please note that the terminal's DC power supply is charging the battery. It is NOT powering the unit. If your battery is fully discharged you must recharge the unit for a period of time before the terminal can be operated.

The K78-205 uses an internal GSM/GPRS modem to perform wireless communications.

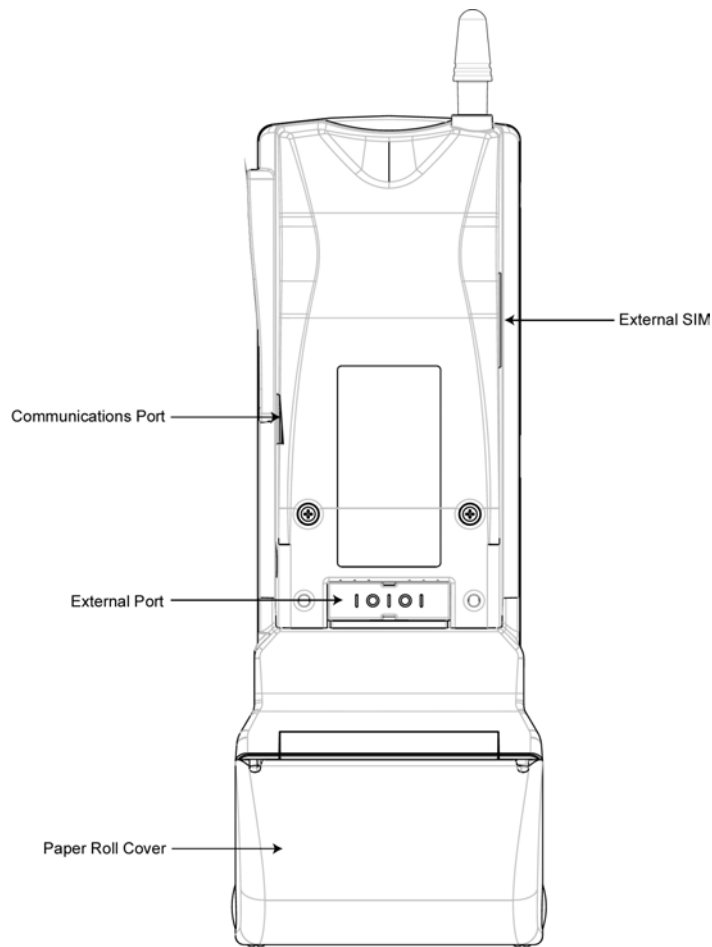
K78-205 Components

Each component is explained in detail in this chapter.

The front view of the K78-205 is shown below.



The rear view of the K78-205 is shown below.



Magnetic Card Reader

The K78-205 reads most regular magnetic cards. Your service provider will tell you which brands of cards are accepted.

Note: Because the unit is small, you may need to practise swiping the card a few times to familiarise yourself with how the unit works.

The magnetic stripe on the back of the card must slide against the magnetic head. The display will advise you if you have a bad swipe or if the terminal does not accept the type of card that you are swiping.

SAM Slots (Optional)

The terminal can contain other smaller smartcards similar to your GSM (Global System for Mobile communications) mobile phone SIM (Subscriber Identity Module). These are about the size of a postage stamp and are known as Secure Access Module (SAM) cards and are located under the back panel. The K78-205 supports several SAM cards that can be used for different payment methods. Your service provider will normally install these SAMs.

There is one SAM card on the main unit located under the battery. This is normally used for security, similar to a mobile phone SIM card.

Customer Smartcard Reader

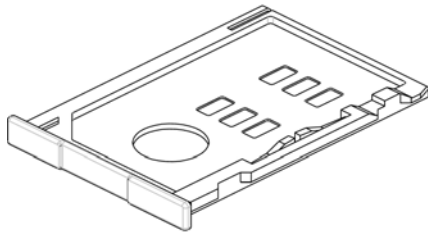
The K78-205 supports a full size customer smartcard reader. A smartcard is a credit card sized card that has a microchip inserted in it. There are many different types of smartcards, and your service provider will tell you which types you can accept.

The slot is designed to be used for customer cards. The customer card is inserted with the microchip facing upwards. The terminal will tell you if the card is not accepted by the terminal.

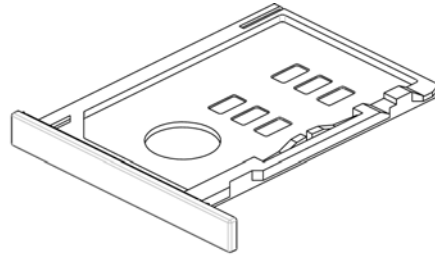
Internal GSM/GPRS Modem

The K78-205 includes an internal GSM/GPRS modem for wireless operation. Before you can use the GSM/GPRS modem, a SIM Card

must be inserted in the SIM Tray in the side of the unit. There are two types of SIM tray. The standard SIM tray permits users to change SIM cards if required. The secure SIM prevents SIM access or replacement once installed.



SIM Tray



Secure SIM Tray

Keys

All keys are backlit.

Soft keys

These keys align with menu instructions on the display.

Scroll key

Where a menu is displayed on the screen, the scroll key allows you to move up and down the menu.

Function key

This key calls up menus and special functions.

Cancel key

This key is used to cancel an operation.

Power ON/OFF Button

The K78-205 unit has a power ON/OFF switch. Press and hold the ON/OFF button for two seconds to turn the unit on; hold it for three seconds to turn it off.

Display

The terminal has a graphics display with icons. The display has backlights that turn on when the unit is active. The lights will turn off automatically after a short time to conserve the battery. The backlights can be turned on again by pressing any key on the keypad.

Status Light

There is a light at the top of the unit that provides information about operation and charging. The light has three colours – green, orange and red. The significance of the status light is dependent on application requirements. Please refer to your application guides for further details.

Printer Module

There is a printer module at the bottom of the unit. The K78-205 supports two sizes of printer paper. The paper roll cover is transparent, providing a clear view inside the paper roll holder.

The printer module covers come in two sizes to accommodate the two printer paper sizes. In addition, the locator clips that correctly position the paper roll in the printer module can also be adjusted to cater for the two paper sizes.

External Port

The K78-205 provides an external port connector to support one of a number of devices through a special interface cable.

Communications Module

The K78-205 includes an interface to the service provider's network via a wireless modem. An antenna is included to enhance reception performance.

Dialup Modem

The unit also provides an optional modem that offers dialup connection through the landline to the host. A cable may be provided for this purpose.

Using the K78-205 Terminal

Setting up the Terminal

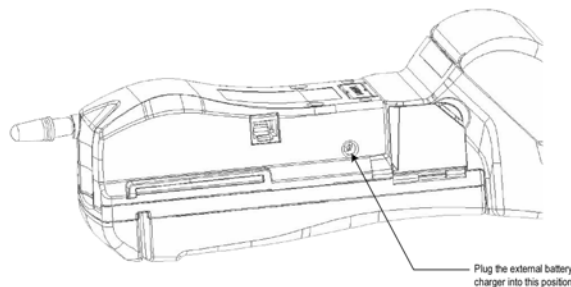
The terminal will have software pre-loaded by your service provider. Ensure that you have **completely** charged the K78-205 terminal before first use.

Terminal Charging

The external terminal charger charges both the K78-205 terminal and the battery.

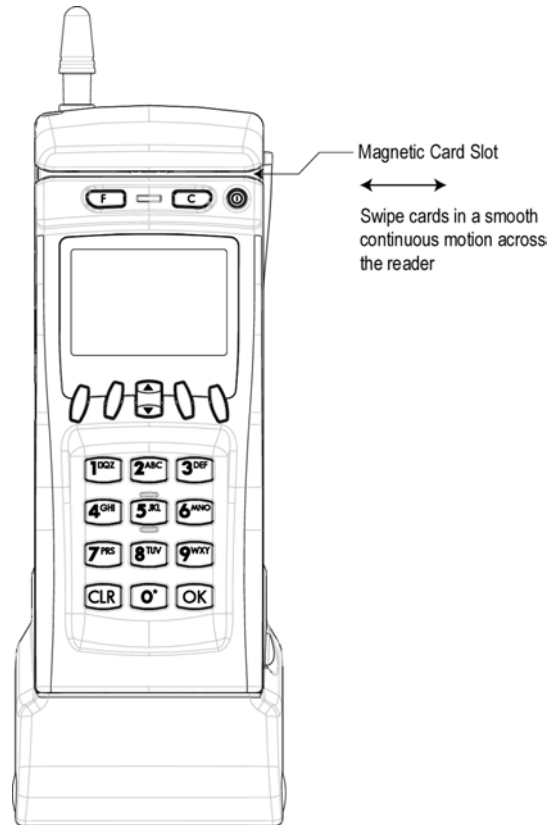
To recharge the K78-205 terminal, plug the external power supply cable into the K78-205 via the connector located on the side of the unit. The battery consists of a 4.8V NiMH pack that includes protection circuits. NiMH batteries do not show a memory effect like NiCd, but for optimum charging results, it is best to ensure the batteries are completely flat before charging.

Charging the battery should take about 2.5 hours for an 80% charge, and 5 hours for a 100% charge, but again for best results, it is best to leave the charger switched on overnight (with the K78-205 turned off). A rippling battery symbol on the display indicates that the battery is being charged.



Magnetic Card Reader

The magnetic card reader can be swiped from either direction. For best results, position the card so the stripe faces the top of the terminal, and swipe in a smooth continuous motion across the reader. To ensure that it is read correctly, the entire card must be swiped across the reader.

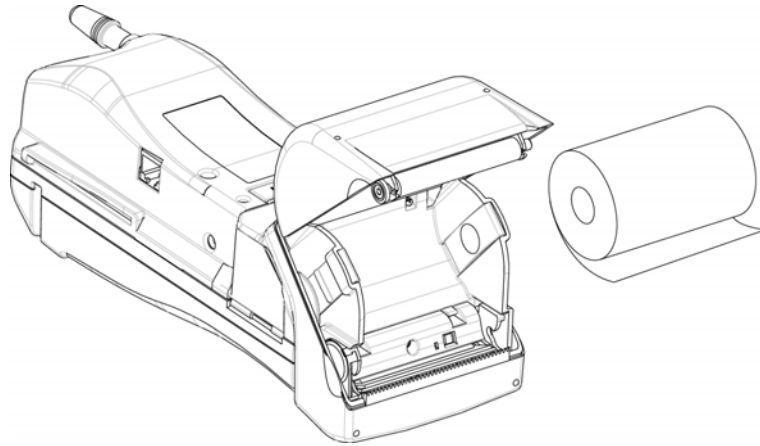


Note: If the optional softcover case is fitted, the magnetic card reader will need to be exposed before use. Simply undo the velcro straps located on the sides of the flap covering the magnetic card reader, push back the flap, and secure the velcro straps to the rear mounted velcro pads. This ensures that the cover flap is held back and out of the way when the magnetic card reader is being used.

Loading the Printer Paper

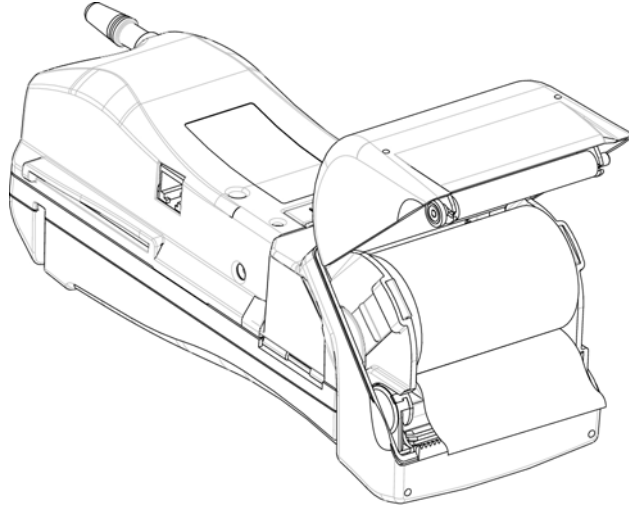
To load the printer paper, follow the steps below.

1. Open the paper roll cover by holding the cover tabs and pulling them up towards you. The paper roll holder is now accessible.



2. Hold the K78-205 in one hand with the K78-205 LCD (Liquid Crystal Display) facing towards your palm, and with the paper roll section away from your body.

3. Holding the paper roll with the other hand, place the paper roll in the holder using the locator clips to hold it in place. The paper roll should be positioned as indicated by the white label on the bottom of the paper roll holder. The loose paper end should come from the bottom of the roll, and rest on top of the serrated edge on the main unit.



4. Replace the paper roll cover in its original position. The cover must be properly closed for the printer to operate successfully.

Note: Depending on the size of the printer paper, an adjustment of the locator clips may be necessary. If this is the case, ensure that they are adjusted before placing the paper roll in the paper holder.

To accommodate the smaller printer paper size, adjust the locator clips so that they are sitting in the “down” position, and for the larger printer paper size, adjust the locator clips so that they are sitting in the “up” position. The paper roll cover must also be changed according to the size of printer paper used.

Changing Paper Roll Cover

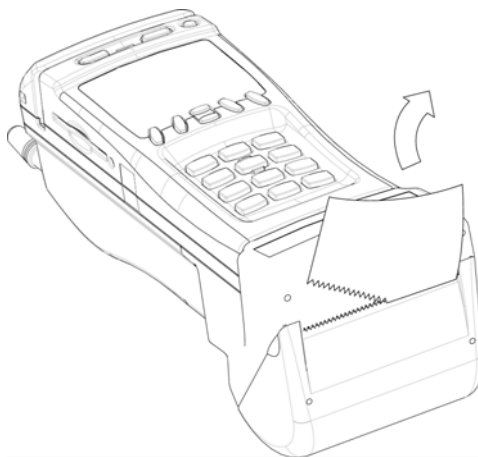
To change the paper roll cover:

1. Open the paper roll cover currently in use.
2. Carefully remove the cover from the pivot heads on either side of the printer.
3. Align the new paper roll cover with the pivot slots on the printer, then push the pivot slots of the cover into the printer pivot heads. The paper roll cover should click into place.

Tearing off the Printed Receipt

Warning

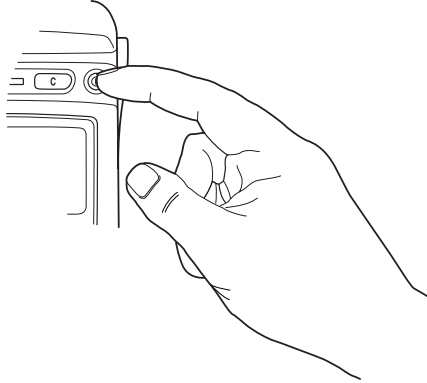
When tearing off printed receipts, etc., you must ensure that you tear the paper off along the serrated edge. This will ensure that the paper does not become jammed inside the paper entry slot. If you do not tear the paper off along the serrated edge you can cause the paper to jam and damage the printer. If the optional softcover case is fitted, ensure that the hood over the printer is pulled back to expose the paper exit slot.



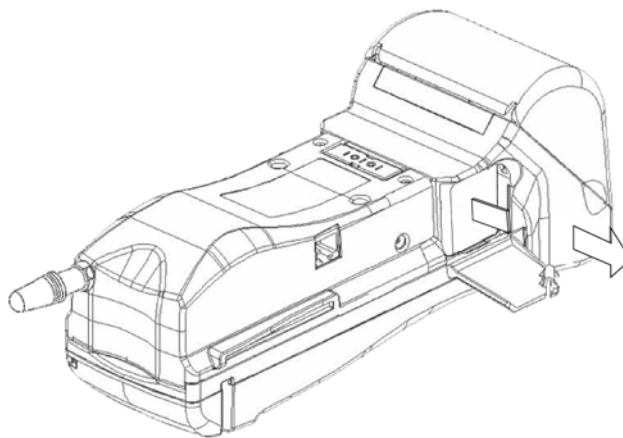
Removing the K78-205 Battery Module

To remove the battery pack, follow the steps below.

1. Turn off the power to the K78-205.

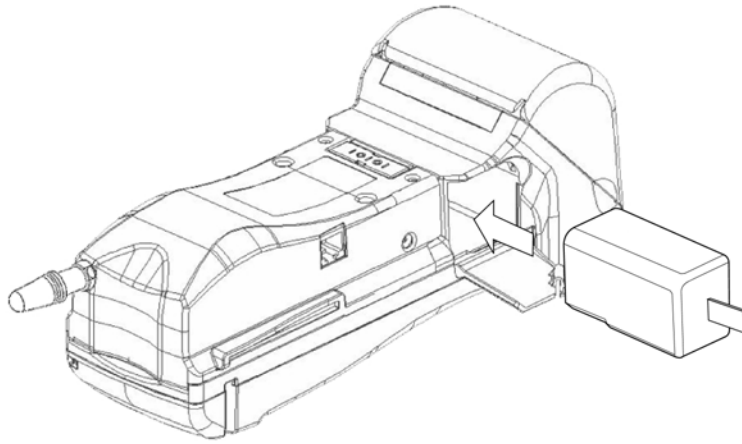


2. Open the battery cover that is located on the side of the unit.
3. Remove the battery pack by pulling it out using the small tag on the end of the battery.



To replace the battery:

1. Slide the new battery pack into the battery compartment.



Close the battery cover.

Inserting the SIM Card for the Internal GSM/GPRS Modem

The GSM/GPRS Modem provides for wireless communication. Before you can use the GSM/GPRS Modem, you must insert a SIM card in the K78-205.

To insert a SIM card:

1. Locate the External SIM Access slot on the side of the K78-205 unit. If the unit permits user access to the SIM card, you will see a yellow dot at one edge of the tray.
2. Using the tip of an old pen (or some similar instrument), press the yellow dot. This will partially eject the SIM tray from the slot.
3. Pull the tray out to remove it from the slot.



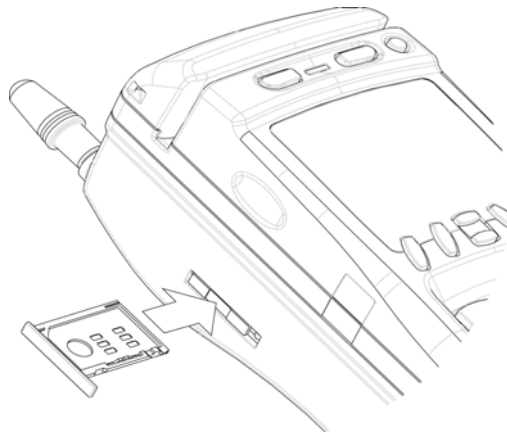
4. The Sim tray is recessed to accommodate a SIM card. Place the SIM card in the tray so that the gold contacts on the SIM card face up and the cut corner of the SIM card fits into the matching corner of the tray's recess.
5. Replace the tray in the slot and push it in until you hear a slight click.

Securing the SIM Card in the Internal GSM/GPRS Modem

The K78-205 provides an optional secure SIM tray to prevent unauthorised removal of the Sim card from the unit once it is inserted.

To remove the standard SIM tray:

1. Locate the External SIM access slot on the side of the K78-205 unit. If the unit permits removal of the SIM tray, you will see a yellow dot at one edge of the access slot.
2. Using the tip of an old pen (or some similar instrument), press the yellow dot. This will partially eject the SIM tray from the slot.
3. Pull the tray out to remove it from the slot.



4. Discard the standard SIM tray and replace it with the secure SIM tray. The secure SIM tray has a wider face that will obscure access to the yellow dot on the SIM card access slot once it is inserted into the K78 unit.
5. The secure Sim tray is recessed to accommodate a SIM card. Place the SIM card in the tray. The gold contacts on the SIM card must face up. Match the cut corner of the SIM card to the corresponding corner of the SIM card recess in the tray.

6. Replace the tray in the slot and push it in until you hear a slight click.

Warning

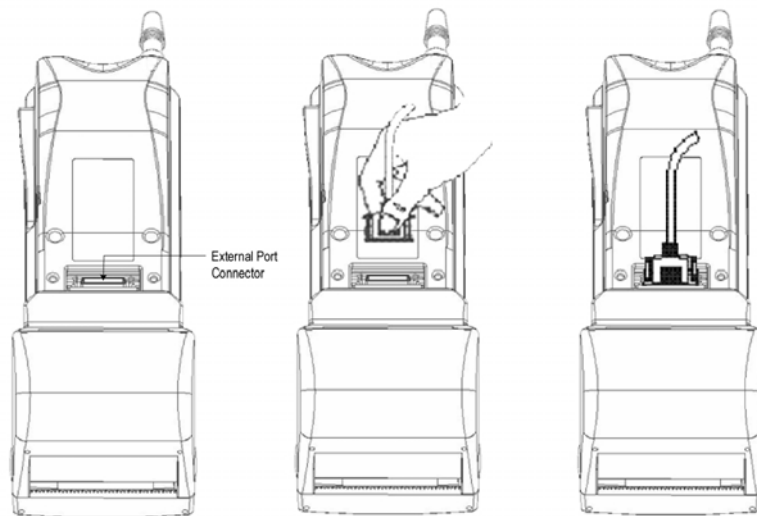
Once installed, the secure SIM tray can not be removed from the External SIM access slot. Any attempt to remove the tray will result in irreparable damage to the unit.

External Cable

The optional external communication cable provides the interface between the K78-205 and any external device, such as a modem, printer, or PC.

To plug in the external cable:

1. Remove the rubber cover to expose the interface connector.
2. Line the cable up, ensuring the D connector is correctly oriented, and then push the cable onto the connector until it clicks into place on both sides.

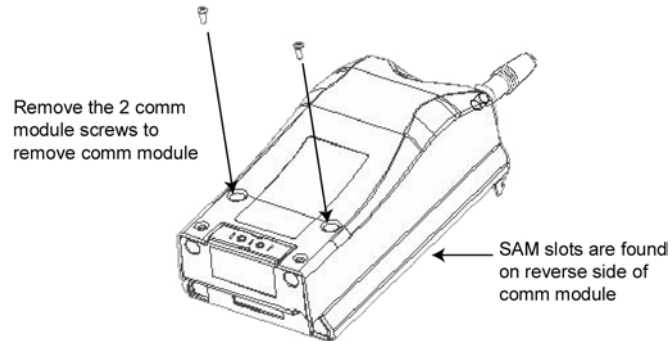


To release the cable, push in the clips on either side of the cable connector and remove the cable.

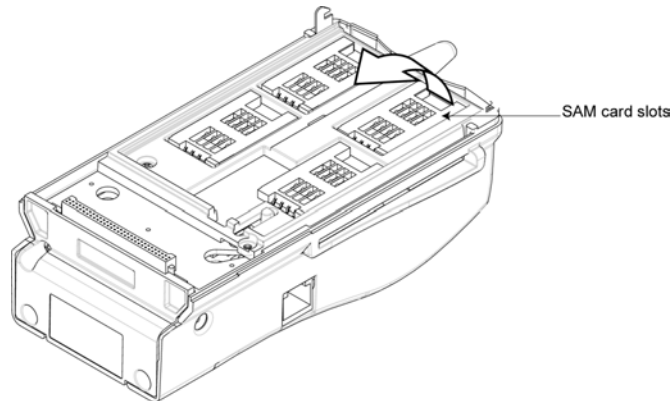
Accessing the SAM Cards (Optional)

To remove a SAM card (only if fitted):

1. Remove the two screws holding the back cover in place and lift the back cover off. Four SAM connectors are now accessible.



2. Remove the SAM card from the appropriate connector.



3. Replace the back cover in its original position. Replace the two screws.

Connecting the Dialup Modem

To connect the Dialup Modem:

1. Using the supplied cable, insert the standard RJ-11 connector at one end of the supplied cable into the jack in the side of the K78-205 unit.
2. Insert the other end of the cable into the phone jack on the wall.

Troubleshooting

Magnetic Card Reader

Display Indicates a Bad Swipe

Make sure that the magnetic stripe on the back of the card slides against the magnetic head. You may need to practise swiping the card a few times to familiarise yourself with how the magnetic card reader works.

Display Indicates that the Terminal does not Accept Card

If the terminal does not accept the type of card that you are swiping, check with your service provider about which brands of cards are accepted.

If these steps do not restore operation, please contact your regional service centre or refer to the field service personnel accredited by your regional service provider.

Printer Module

Terminal is not Printing

If the K78-205 is not printing, make sure that:

1. The power is turned on.
2. The paper roll is positioned correctly.
3. The paper roll has been loaded the correct way around.
4. The paper roll cover is closed properly.
5. The battery is not low.

If these steps do not restore operation, please contact your regional service centre or refer to the field service personnel accredited by your regional service provider.

Care and Maintenance

Looking after your Advanced Mobile Payment Terminal

To care for and maintain your K78-205 Advanced Mobile Payment Terminal:

- Keep the K78-205 unit in its optional softcase.
- Protect the terminal from rain, humidity and liquids.
- Avoid storing the terminal in extreme hot (over 70°C) or cold environments (below -10°C).
- The battery may be removed. Do not attempt to dismantle any other part of the terminal.
- To clean the terminal, wipe it with a soft cloth. Do not use organic solvents to clean the surface of the terminal.

Charging and Discharging the Battery

When charging or discharging the battery of the K78-205 terminal, keep the following guidelines in mind:

- If the terminal is not used for a time the battery will gradually discharge itself. The terminal sounds an audible tone when the battery is low.

Note: the K78-205 terminal turns itself off once the battery is fully discharged.

- Fully discharge the battery periodically. To discharge the battery, leave the terminal on until it turns itself off.
Do NOT discharge the battery in any other way. When the charger is not in use, disconnect it from the power source.
- Do NOT leave the terminal attached to the charger for longer than a week.
- Avoid extreme temperatures as they reduce the capacity and lifetime of the battery. Recycle or dispose of the batteries in a proper manner.
- Do NOT dispose of the batteries in fire or municipal waste.

Care and Maintenance Log

Date	Service	Name

Date	Service	Name

Glossary

GPRS	General Packet Radio Service
GSM	Global System for Mobiles
LCD	Liquid Crystal Display
LED	Light Emitting Diode
Magnetic Card	A plastic card with a magnetic stripe that stores cardholder information
Motient	Wireless packet data network
NiMH	Nickel Metal Hydride
NiCd	Nickel Cadmium
PIN	Personal Identification Number
POS	Point of Sale
SAM	Secure Access Module
SIM	Subscriber Identity Module
Smartcard	A plastic card with an embedded computer chip
USWD	US Wireless Data Inc. – wireless system interface (known as Synapse)