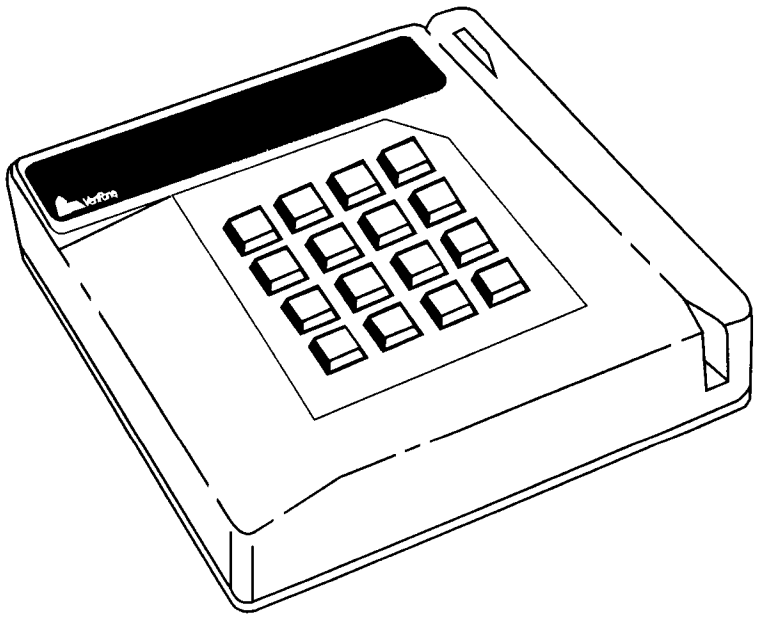
TRANZ 380
Reference Manual

VeriFone Part Number 11452 - Revision B
Manual Revision 2.0



TRANZ 380 Reference Manual
VeriFone Part Number 11452, Revision B
Manual Revision Number 2.0

Published: June 1991

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Printed in the United States of America

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About This Manual

This manual is designed to be used as a reference for the TRANZ 380 terminal. The manual is divided into eight sections and includes four appendices:

- Introduction
- Installation
- Downloading
- How the Terminal Works
- Basic Operation
- Terminal Parameters
- Transaction Parameters
- Maintenance and Diagnostics
- Appendices

TRANZ 380

TRANZ 380 is a powerful, compact transaction terminal which supports a Bar Code Wand or an encrypting PIN Pad and will drive VeriFone Printer models 150, 250, 500 and 600. The 64K bytes of EPROM memory is complemented by 64K or 128K of RAM (dependent on model of TRANZ 380). The versatile internal modem supports both U.S. and international use, and the integrated cardreader reads IATA Track 1, ABA Track 2 and ATM Track 3. It is possible to simultaneously read Tracks 1 and 2, or Tracks 2 and 3. It is also possible to read only a single track at a time, thus facilitating VISA fraud control features when software is written for either Track 1 or 2. These enhanced functions make the TRANZ 380 a breakthrough POS terminal for its size and price.

Manual Sections

Section 1, "Introduction," gives you some background information on the TRANZ 380 and includes descriptions of the terminal's hardware and optional peripheral features.

Section 2, "Installation," outlines the steps you should follow to install your terminal to the communication and power sources and to optional peripherals.

Section 3, "Downloading," covers the methods of downloading data to one or more TRANZ 380 terminals.

Section 4, "How the TRANZ 380 Works," gives you the basic concepts on the terminal's capabilities and functions, such as host transactions, local functions and terminal and transaction parameters.

Section 5, "Basic Operation," explains how to perform some of the basic TRANZ 380 operations.

Section 6, "Terminal Parameters," describes the terminal parameters of the TRANZ 380.

Section 7, "Transaction Parameters," provides the transaction parameters of the TRANZ 380.

Section 8, "Maintenance and Diagnostics," includes troubleshooting, diagnostic procedures, service and cleaning for the TRANZ 380.

The appendices included in this manual provide supplemental information on the TRANZ 380 terminal memory locations, prompts and error messages, enhanced TCL commands, and features and specifications.

TRANZ 380 Applications

This manual is a reference guide for installing your TRANZ 380 terminal and also describes some of the basic operations of the unit. However, the actual operations and procedures used with the TRANZ 380 depend on the application loaded into the terminal.

An application is a set of instructions stored in your terminal. All TRANZ 380 terminals are equipped with a standard application. However, your terminal may also be supplied with a custom application to perform special transactions used by your company.

To learn how your custom TRANZ 380 application fits within the daily operations of your company or financial institution, refer to your custom application's reference manual.

FCC Compliance

Warning: This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the manufacturer's instructions, it may cause interference with radio and television reception.

- The TRANZ 380 terminal complies with Part 68 of the FCC Rules. Located on the rear panel of this terminal is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this unit. If requested, this information must be provided to the telephone company.
- Registered Equipment USOC: RJ11C
- The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the device not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.
- If the TRANZ 380 terminal causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. However, 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 this equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

- If trouble is experienced with the TRANZ 380 terminal, contact your Help Desk or the VeriFone Customer Support Hot Line (800-654-1674 in the USA; 714-979-1870 outside the USA) for repair and/or warranty information. If the trouble is causing harm to the telephone network, the telephone company may request that you remove the equipment from the network until the problem is resolved.
- Do not, under any circumstances, attempt to service, adjust or repair this unit. If your equipment problems cannot be resolved by calling one of the phone numbers above, you will have to return your terminal to VeriFone for repair or replacement. The VeriFone Customer Support Hot Line will instruct you on how to return your terminal.
- The TRANZ 380 terminal cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. (Contact the state public utility commission, public service commission, or corporation commission for information.)

Attention Canadian Users

Notice: *The Canadian Department of Communications (DOC) label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational and safety requirements. The department does not guarantee the equipment will operate to a user's satisfaction.*

Make sure your local telephone company will permit you to install this equipment. Use only the connection methods accepted by your telephone company. You should be aware, however, that compliance with the above conditions may not prevent degradation of service in some conditions.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Equipment malfunctions, or any equipment repairs and alterations made by a user, may give the telephone company cause to request the user to disconnect the equipment.

For your own protection, make sure that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: *Do not attempt to make such connections yourself; contact the appropriate electric inspection authority or electrician.*

TRANZ 380 Terminal Load Number (pending)

The load number (LN) indicates the amount of load the terminal will add to a telephone loop. The loop may consist of any combination of devices, provided the sum of their load numbers does not exceed 100. If the sum exceeds 100, the loop may be overloaded.

An alphabetic suffix is also specified in the load number for the appropriate ringing type (A or B), if applicable. For example, LN = 38B designates a load number of 38 and a B-type ringer.

Lithium Battery Caution

The Random Access Memory (RAM) in the terminal is protected by a lithium battery. ***Do not,*** under any circumstances, attempt to replace the lithium battery in the terminal. Failure to comply may invalidate your warranty.

The VeriFone Service Department recognizes the following:

Caution: *Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instruction.*

Service

See Section 8, Maintenance and Diagnostics, for information on returning the TRANZ 380 for service and for the VeriFone Customer Support Hot Line telephone number.

1. Introduction

TRANZ 380 is a powerful, compact electronic transaction terminal capable of gathering and transferring information at high speed. The terminal's versatility makes it ideal for many diverse applications including point-of-sale (POS) electronic payment transfer and authorization, time and attendance tracking, order entry, inventory and process tracking.

To perform credit authorizations and other transactions instantly and automatically, the TRANZ 380 communicates with a remote host computer via the telephone lines. Several modem options are available for communicating at different speeds and on different phone systems.

TRANZ 380 will simplify transactions and provide you with more flexibility, improved speed and greater accuracy. And, because TRANZ 380 can use a standard telephone line to access information from remote computers, you can easily install and use the terminal at any retail counter or office.

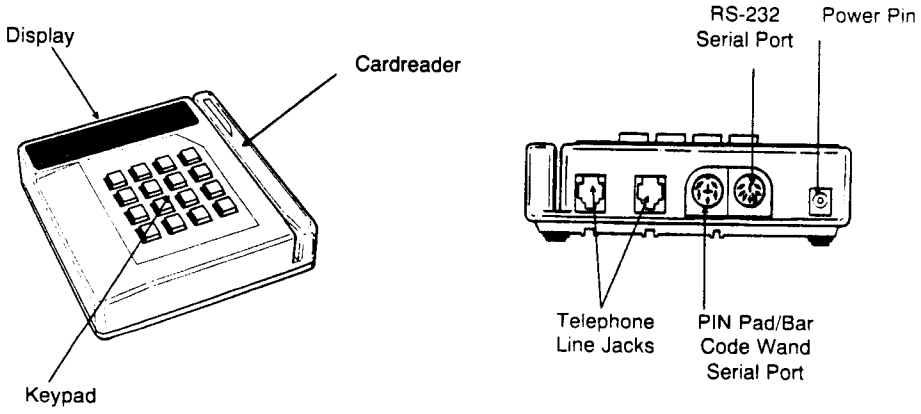


Figure 1-1. TRANZ 380 Terminal

Display Panel

The 16-character alphanumeric display panel provides you with the visual prompts and information needed to operate the TRANZ 380 terminal. This bright blue, vacuum fluorescent display is easy to read, even under poor lighting conditions. It displays fully-formed numerals, letters and punctuation symbols.

Keypad

As Figure 1-2 illustrates, the keypad has 16 keys for entering alphabetical and numeric data. The actual functions of each key will vary depending on your terminal's application. Refer to your application manual for the operations associated with each key.

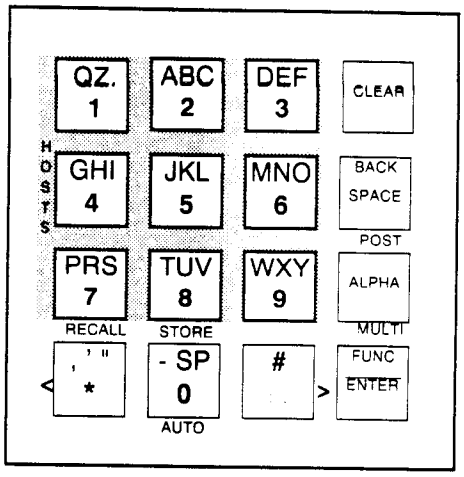


Figure 1-2. TRANZ 380 Keypad

Cardreader

TRANZ 380 features an integrated magnetic stripe cardreader (slot on the right side of the terminal) for reading the data of most major credit, debit and private cards. Specifically, the cardreader is comprised of IATA Track 1, ABA Track 2 and ATM Track 3. It is possible to simultaneously read Tracks 1 and 2, or Tracks 2 and 3. It is also possible to read only a single track at a time, thus facilitating VISA fraud control features when software is written for either Track 1 or 2. (See Appendix D for more information.) You can enter customer identification by simply sliding a credit or debit card through the slot.

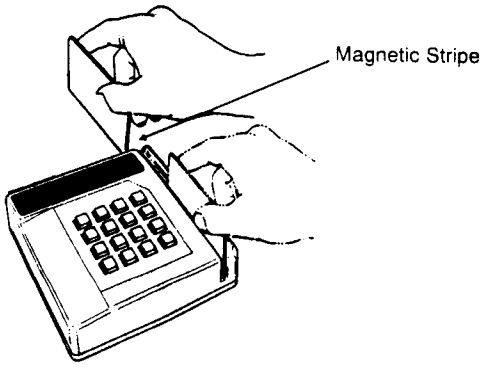


Figure 1-3. TRANZ 380 Cardreader

Place the card at the back of the cardreader slot with the magnetic stripe down and to the right. Slide the card toward you without stopping. The cardreader reads the card data and validates the account number.

Telephone Jacks

TRANZ 380 has two modular telephone jacks on its rear panel. You can connect your telephone line to either jack. The second jack allows a standard telephone or another TRANZ 380 terminal to share the same telephone line.

Serial Port

TRANZ 380 uses a serial port to communicate with other devices such as a printer, an IBM PC compatible computer, or even another TRANZ 380 terminal. These devices connect to the 8-pin DIN connector on the back of the TRANZ 380 terminal.

PIN Pad/Bar Code Wand Port

An additional serial port is provided for a PIN (personal identification number) Pad or a bar code reader. These devices connect to the 6-pin DIN connector on the rear of the TRANZ 380 terminal.

Power Pack

Each TRANZ 380 terminal is equipped with a power pack that plugs into a standard 120 volt AC outlet. The cord from the power pack plugs into the power pin on the back of the TRANZ 380 terminal.

Cable Routing Channels

The telephone line and power pack cords normally hang from the rear of the TRANZ 380 terminal. However, if you need to hang the cords from the front of the terminal, you can route the cords through special channels molded underneath the TRANZ 380 case.

Optional Printers

The TRANZ 380 terminal operates with four optional VeriFone Printers: Printer 150, Printer 250, Printer 500 and Printer 600.

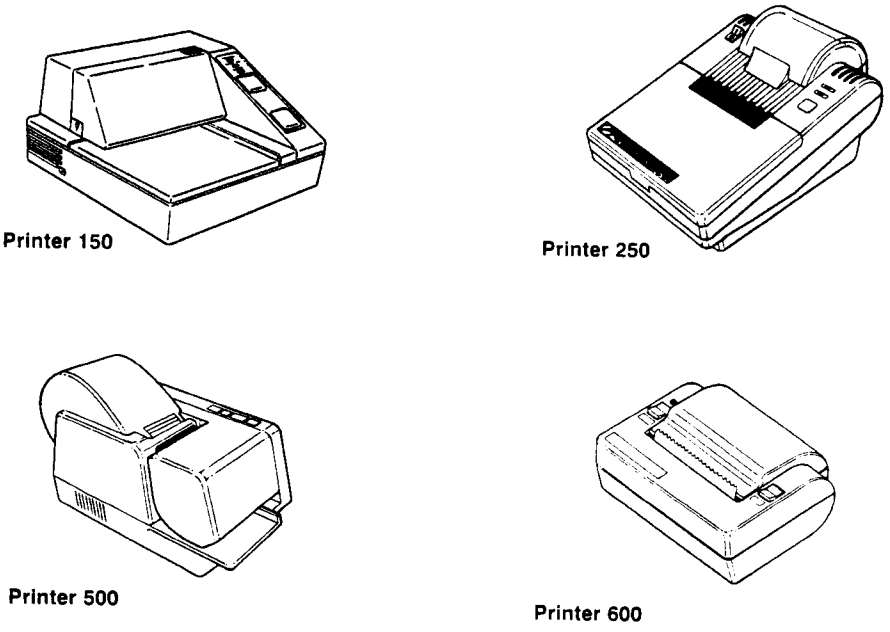


Figure 1-4. VeriFone Printers

Printer 150

The VeriFone Printer 150 is a freestanding dot-matrix slip printer. The Printer 150 prints receipts and local reports on forms as thick as 3-ply with up to 42 characters per line.

Printer 250

The VeriFone Printer 250 is a low-cost, high-performance roll printer. It prints receipts and local reports on rolls of continuous plain or 2-ply carbon-less roll paper at up to 42 characters per line. The Printer 250 combines the versatility of a dot matrix printer with a small footprint and a wide range of features to satisfy the printing needs of transaction processing operations.

Printer 500

The VeriFone Printer 500 is a high-performance, dot-matrix printer that prints up to 42 characters per line. It has several paper feed options and can print on precut paper slips, continuous paper rolls, or both.

Printer 600

The VeriFone Printer 600 is a quiet and very economical thermal roll printer that prints up to 40 characters per line, or 80 compressed characters. Its small footprint and ability to mount to a wall makes it ideal for many locations.

Optional Telephone

An optional telephone is also available from VeriFone—the TRANZFone. By plugging the telephone into one of the terminal's modular jacks, both the terminal and the telephone can share the same telephone line.

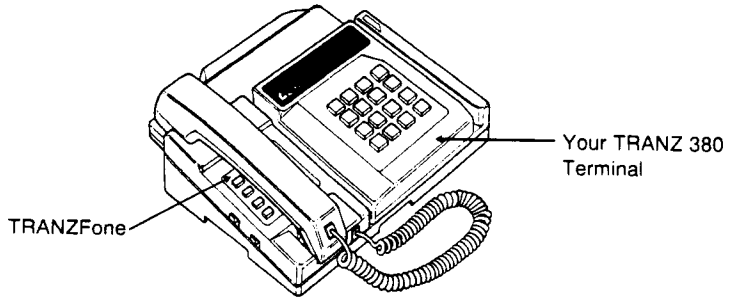


Figure 1-5. VeriFone TRANZFone

Internal Modem

A modem (modulator/demodulator) converts electronic data into tones that can be sent great distances over telephone lines. The TRANZ 380's internal modem is available in two versions, both of which provide simple and automatic telecommunications with a host computer.

Bell 212A/103

Intended for use with United States telephone systems, the Bell modem options 212A and 103 operate at 300 or 1200 baud; 1200 baud operation provides the fastest communication with the host computer.

CCITT V.21 and V.22

Intended for use with international telephone systems, this internal modem option operates in CCITT mode to support V.21 (300 baud) and V.22 (1200 baud) communications.

Note: CCITT modems are not available for all versions of the TRANZ 380.

Optional Bar Code Wand

Bar codes are a series of vertical lines on a label that identify an item. The code is read by drawing a special wand across the label. The VeriFone bar code wand, shown in Figure 1-6, connects to the PIN Pad/Bar Code Reader port, located on the rear of the TRANZ 380.

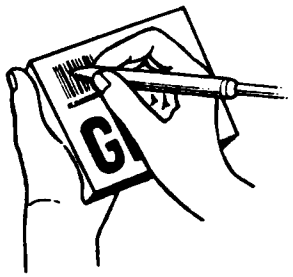
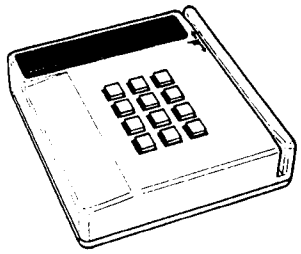


Figure 1-6. VeriFone Bar Code Wand

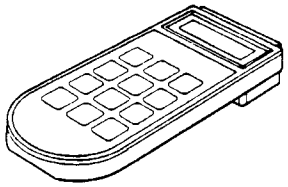
Optional PIN Pads

The VeriFone PINPad 201, shown in Figure 1-7, is a peripheral data entry device that accepts PINs (personal identification numbers) and encrypts the numbers for security purposes. PINs are entered during a retail transaction to verify that a customer is authorized to use the card offered. If a customer enters an incorrect PIN, the host computer will not complete the transaction.

The cardreader of the PINPad 201 is used to gather account information, and the display panel provides the card holder with prompts, instructions or other information.



PINPad 201



PINPad 101

Figure 1-7. VeriFone PIN Pads

The VeriFone PINPad 101 is similar in function to the PINPad 201 but does not feature a cardreader. All PINs are entered manually via the keypad. It connects to a controller that controls all PIN pad operations and does the actual communicating with the host computer. The PINPad 101 can be wall- or countertop-mounted and removed from its mount for hand-held operations.

2. Installation

Selecting a Location for Your Terminal

Select a location for your TRANZ 380 that is convenient for the operator and offers adequate ventilation and protection. In general, avoid areas with:

- Excessive heat
- Oil or moisture
- Excessive dust
- Excessive electrical noise
  (caused by air conditioners, motors, fans, neon signs, or power tools)
- Direct sunlight
- Artificial light that could reflect glare off the display panel

Unpacking

Carefully inspect the shipping carton and its contents for shipping damage. If the TRANZ 380 is damaged, file a claim immediately with the shipping company and notify your VeriFone sales representative. Do not use a damaged terminal.

1. Remove all the items from the carton. You should have:
   - The TRANZ 380 terminal
   - A telephone line cord
   - A power pack with a six-foot cord

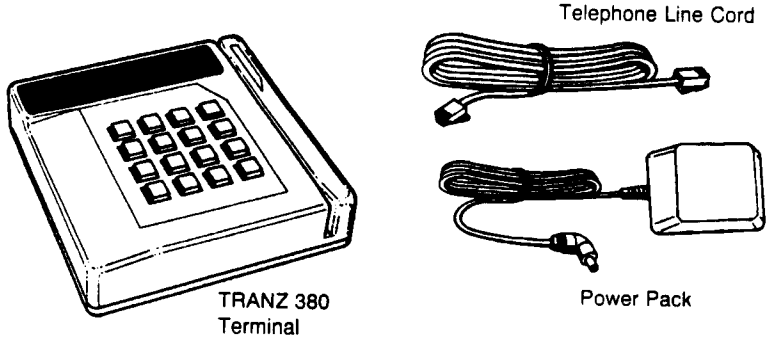


Figure 2-1. TRANZ 380 Components

2. Remove any protective plastic wrapping from the terminal and place all the components on a table or counter top.
3. Remove the plastic strip from the display panel. This strip protects the display panel during shipment.
4. Save the carton and packing material for repacking or moving the terminal in the future.

Telephone Line Connection

1. Connect one end of the telephone line cord to one of the two modular jacks on the rear of the terminal. Both jacks perform the same function so it doesn't matter which one you use.
2. Connect the other end of the line cord to your RJ11 type modular telephone wall jack. If you do not have a modular wall jack, obtain an adapter from your local telephone company.

Connecting a Standard Telephone (optional)

1. Connect one end of the telephone's line cord to the unused modular jack on the rear of the terminal.

   Note: You must use a fully-operational telephone, not just a handset.
2. If the other end of the cord is not already connected to the telephone, connect it at this time.
3. If your telephone requires additional connections, such as a handset or power supply, refer to the instructions supplied with the telephone when connecting these components.

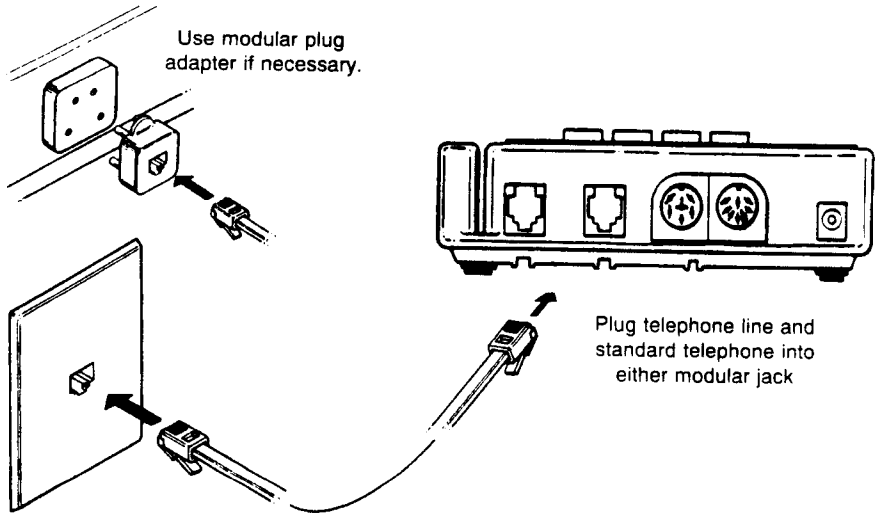


Figure 2-2. Telephone Line Connections

Connecting the Printer 150 (optional)

The VeriFone Printer 150 is a compact slip printer that is ideal for printing receipts, logs, settlement reports and other transaction data on plain paper or forms as thick as 5-ply with up to 42 characters per line.

The following instructions are for connecting the Printer 150 to the TRANZ 380 terminal. Follow the instructions supplied with the printer for unpacking the printer, inserting paper and ink ribbons, and maintenance. Use VeriFone printer interface cable with part number 10465-XX for standard mode or 10392-XX for Printer 100 emulation mode.

Warning: Before installing the Printer 150, be sure the TRANZ 380 terminal is not plugged into a power source.

1. Connect the small plug from the printer power pack to the power connector of the Printer 150, located on the right side of the rear panel. Ensure that the flat surface is up (arrow facing forward).
2. Plug the printer interface cable into the 8-pin mini-DIN connector on the rear of the printer.
3. Plug the other end of the cable into the TRANZ 380's RS-232 port.
4. Plug the male AC power cord plug into an indoor, grounded 120 volt AC outlet. Verify that the green POWER indicator comes on. Do not install or operate the Printer 150 outdoors.

Note: If you are running the Printer 150 in the Printer 100 emulation mode, press the RESET button on the Printer 150 after you power up your terminal. This will help ensure correct operation with your terminal's application software.

Note: Figure 2-3 depicts power pack with part number 02396-01. If power pack with part number 10890-01 is used, the power cord will appear from the opposite side of the power pack; however, this does not effect the connections.

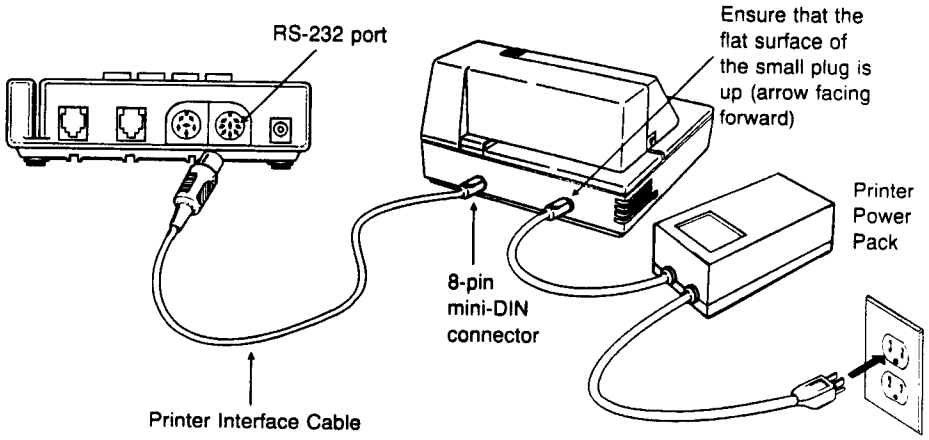


Figure 2-3. Printer 150 Connections

Connecting the Printer 250 (optional)

The VeriFone Printer 250 is a low-cost, high-performance roll printer. It prints receipts and local reports on rolls of continuous plain or 2-ply carbon-less roll paper at up to 42 characters per line. The Printer 250 combines the versatility of a dot matrix printer with a small footprint and a wide range of features to satisfy the printing needs of transaction processing operations.

The following instructions are for connecting the Printer 250 to the TRANZ 380. Follow the instructions supplied with the printer for unpacking, inserting paper and ink ribbons and maintenance. Use VeriFone printer interface cable with part number 10448-XX (straight connector) or 10454-XX (90-degree connector).

Warning: Before installing the Printer 250, be sure the TRANZ 380 terminal is not plugged into a power source.

1. Connect the 4-pin mini-DIN plug from the printer power pack to the power connector of the Printer 250, located on the right side of the rear panel.
2. Plug the printer power pack into an indoor, grounded 120 volt AC outlet. Do not install or operate the Printer 250 outdoors.
3. Plug the 8-pin mini-DIN connector of the printer interface cable into the communications port of the Printer 250, located on the left side of the rear panel.
4. Connect the other end of the printer interface cable to the TRANZ 380's RS-232 or printer port, located on the right side of the rear panel.

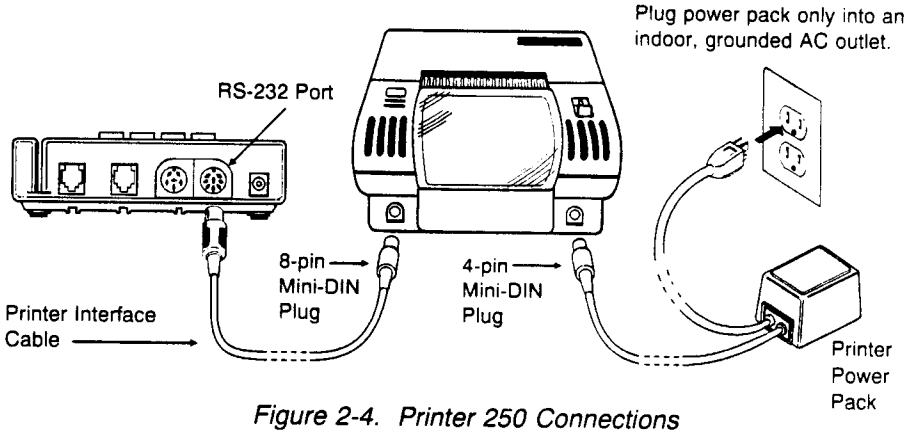


Figure 2-4. Printer 250 Connections

Connecting the Printer 500 (optional)

The VeriFone Printer 500 is a high-performance, dot-matrix printer that prints up to 42 characters per line. It has several paper feed options and can print on precut paper slips, continuous paper rolls, or both.

The following instructions are for connecting the Printer 500 to the TRANZ 380. Follow the instructions supplied with the printer for unpacking, inserting paper and ink ribbons and maintenance. Use VeriFone printer interface cable with part number 10448-XX (straight connector) or 10454-XX (90-degree connector).

Warning: Before installing the Printer 500, be sure the TRANZ 380 terminal is not plugged into a power source.

1. Insert the 3-pin mini-DIN plug from the printer power pack into the power connector on the left side of the Printer 500 rear panel.
   Note: This is a self-locking plug. When you wish to remove the cable, you must first pull the outer sleeve on the plug straight back.
2. Many Printer 500 power packs have a permanently attached AC power cord. However, if your power pack has a separate removable AC power cord, plug the cord into the connector on the power pack.
3. Insert the 8-pin mini-DIN plug of the printer interface cable into the RS-232 connector of the Printer 500, located on the right side of the rear panel.

4. Connect the other end of the printer interface cable to the TRANZ 380's RS-232 or printer port, located on the right side of the rear panel.
5. Plug the male AC power cord plug into an indoor, grounded 120 volt AC outlet. Do not install or operate the Printer 500 outdoors.

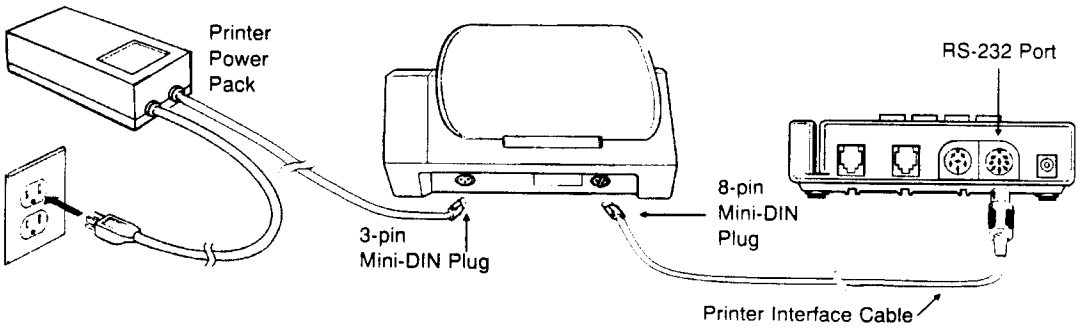


Figure 2-5. Printer 500 Connections

Connecting the Printer 600 (optional)

The VeriFone Printer 600 is a quiet and very economical thermal roll printer that prints up to 40 characters per line, or 80 compressed characters. Its small footprint and ability to mount to a wall makes it ideal for many locations.

The following instructions are for connecting the Printer 600 to the TRANZ 380. Follow the instructions supplied with the printer for unpacking, inserting paper and maintenance. Use VeriFone printer interface cable with part number 10448-XX (straight connector) or 10454-XX (90-degree connector).

Warning: Before installing the Printer 600, be sure the TRANZ 380 terminal is not plugged into a power source.

1. Insert the 8-pin mini-DIN plug of the printer interface cable into the RS-232 connector of the Printer 600, located on the left side of the rear panel.
2. Connect the other end of the printer interface cable to the TRANZ 380's RS-232 or printer port, located on the right side of the rear panel.
3. Attach the small plug on the power pack cord to the power pin of the Printer 600, located on the right side of the rear panel.
4. Plug the two-prong AC connector from the power pack into an indoor 120 volt AC outlet. Do not install or operate the Printer 600 outdoors.

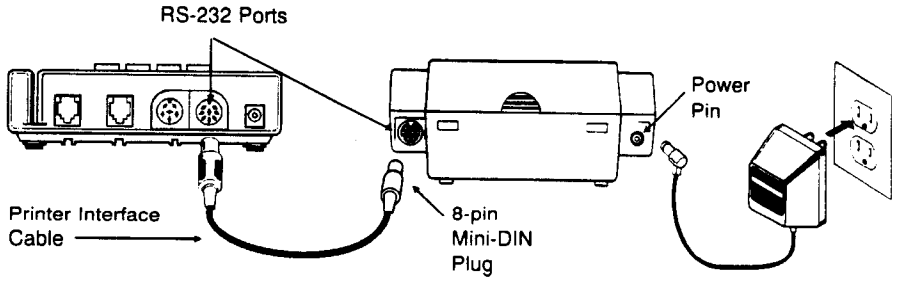


Figure 2-6. Printer 600 Connections

Connecting the Bar Code Wand (optional)

Connect the plug on the bar code wand to the PIN Pad/Bar Code port on the rear of the TRANZ 380 terminal, as shown below in Figure 2-7.

Warning: Before connecting the bar code wand, be sure the TRANZ 380 terminal is not plugged into a power source.

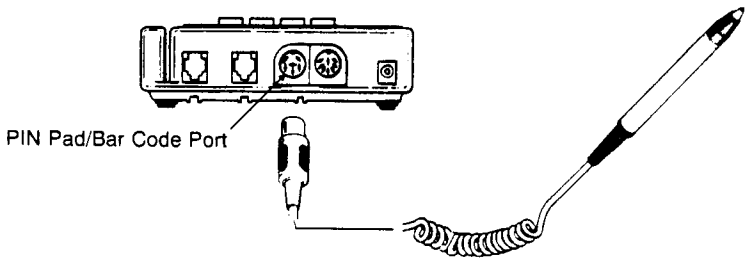


Figure 2-7. Bar Code Wand Connection

Connecting the PIN Pad (optional)

The TRANZ 380 terminal can be used with either the PINPad 101 (hand-held model; Figure 2-8, left frame) or the PINPad 201 (terminal-size model; Figure 2-8, right frame). The following steps are typical for connecting either PIN pad:

Warning: Before connecting a PIN pad to the TRANZ 380, be sure the terminal is not plugged into a power source.

1. Connect the modular plug on the PIN pad cable to the modular jack on the rear of the PIN pad.
2. Connect the 6-pin DIN plug on the other end of the cord to the PIN Pad/ Bar Code port on the rear of the TRANZ 380 terminal.

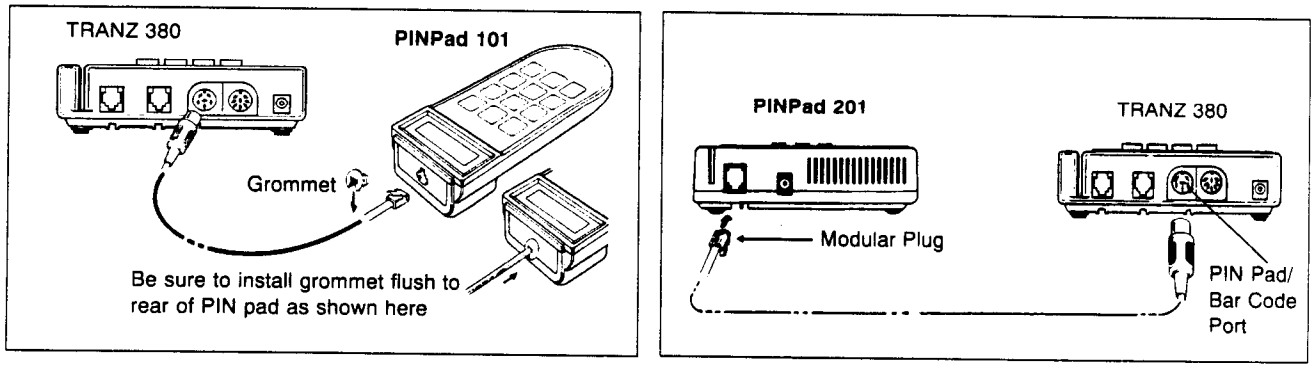


Figure 2-8. PIN Pad Connections

Connecting the Terminal Power Pack

1. Attach the small plug on the power pack cord to the power pin on the rear of the terminal.
2. Plug the two-prong AC connector from the power pack into an indoor 120 volt AC outlet.

Warning: Do not plug the power pack into an outdoor outlet or operate the TRANZ 380 terminal outdoors. Disconnecting the power source during processing may cause program corruption and/or loss of data capture files.

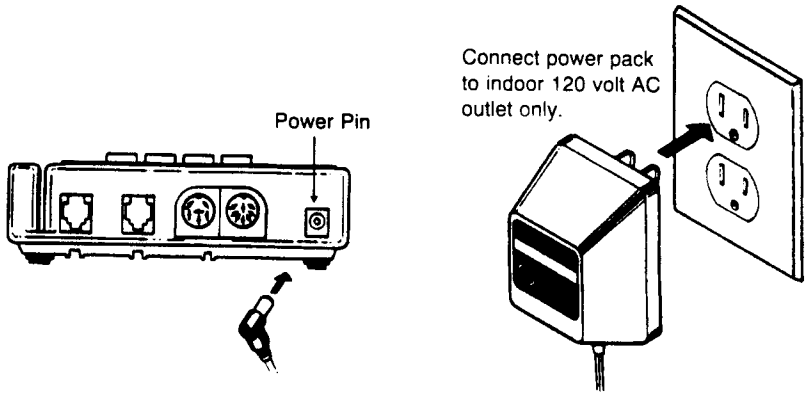


Figure 2-9. Power Pack Connections

Routing Cords in the Cable Channels (optional)

The cable routing channels, located underneath the terminal, allow you to hang the power and modular line cords from the front of the terminal instead of the rear.

1. Turn the TRANZ 380 terminal upside down and locate the cable channels. (See Figure 2-10.)
2. Insert a section of each cable into the channel closest to the cable plug. Be sure that the cords are straight and nested securely in the channels.
3. Turn the terminal right side up and place it back in its original position with the cords neatly out of the way.

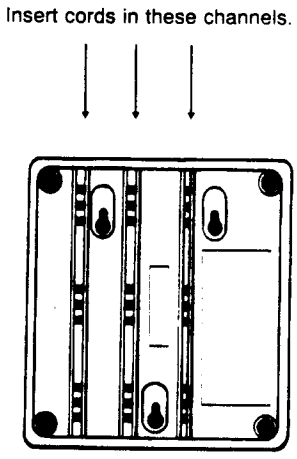


Figure 2-10. Cable Routing Channels

3. Downloading

TRANZ 380 Downloading

Before you can fully operate the TRANZ 380, its memory must contain both application code and parameter data. Application code provides the instructions the terminal needs to perform its operations and to respond to different events as they occur.

Parameter data is additional information specific to a terminal, host computer or merchant. Examples of parameter data include the terminal serial number, host computer phone number and the merchant identification number.

Because application code is usually lengthy, it should rarely be entered from the terminal's keypad. Instead, applications are transferred from a download computer or another terminal. Parameter data can be entered from the keypad, or it can be easily downloaded like application code.

There are three different ways to download the application code:

- Terminal-to-Terminal Direct Download
- Direct PC Download
- Telephone Download

Note: TRANZ 330 Track 2 applications should run on the TRANZ 380 without modification. TRANZ 330 Track 1 applications, as well as Track 1 and Track 2 applications, will require a few modifications.

Terminal-to-Terminal Direct Download

This is the simplest download method. Terminal-to-terminal downloads involve copying all the information from the memory of one terminal (master) into the memory of another terminal (slave). This results in two terminals with exactly the same information in each memory location.

Before using this download method, you must have a "master" terminal with all of the application code and parameter data already stored in its memory. Use telephone or direct PC downloading if you need to create a master terminal. The following instructions describe how to perform a terminal-to-terminal download. You will need a download cable (VeriFone part number 00490-00) for this procedure.

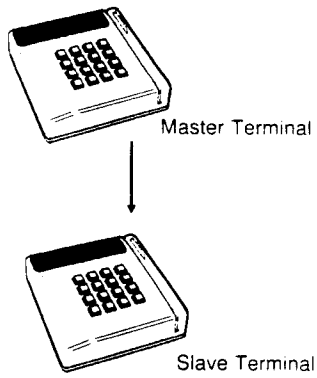


Figure 3-1. Terminal-to-Terminal Download

The following table illustrates which terminal-to-terminal downloads are possible and which are not.

Table 3-1. Terminal-to-Terminal Downloading Possibilities

Master	Slave	Possible?
TRANZ 380 w/64K RAM	TRANZ 380 w/64K RAM	Yes
TRANZ 380 w/128K RAM	TRANZ 380 w/128K RAM	Yes
TRANZ 380 w/64K RAM	TRANZ 380 w/128K RAM	Yes
TRANZ 380 w/128K RAM	TRANZ 380 w/64K RAM	No
TRANZ **380** (any)	TRANZ **330** (any)	No
TRANZ **330** (any)	TRANZ **380** (any)	No

Master/Slave Considerations

The TRANZ 380 sending the information is called the master terminal; the TRANZ 380 receiving the information is called the slave terminal.

Terminal-to-terminal downloads completely replace the memory in the slave terminal. You must manually enter the data in those memory locations specific to an individual terminal.

For example, memory location 0001 is reserved for a terminal's serial number. If the number is not changed, this memory location will contain the serial number of the master terminal instead of the slave terminal.

Usually only the terminal's serial number will have to be changed. However, refer to your application reference manual to see if any other memory locations are affected by the download. Use the STORE or RECALL functions as described in Section 5 to change individual memory locations.

During terminal-to-terminal downloads, the date and time of the master terminal can be transferred to the slave terminal. Since this feature is not always desirable, you have the option of enabling or disabling it. By changing memory location 1000 to "1", this feature is enabled; by changing it to "0" or leaving it empty, this feature is disabled. See Section 6 for more information.

1. Connect one end of the terminal-to-terminal download cable to the 8-pin DIN connector (printer port) on the back of the master terminal.
2. Connect the other end of the cable to the 8-pin DIN connector on the back of the slave terminal.

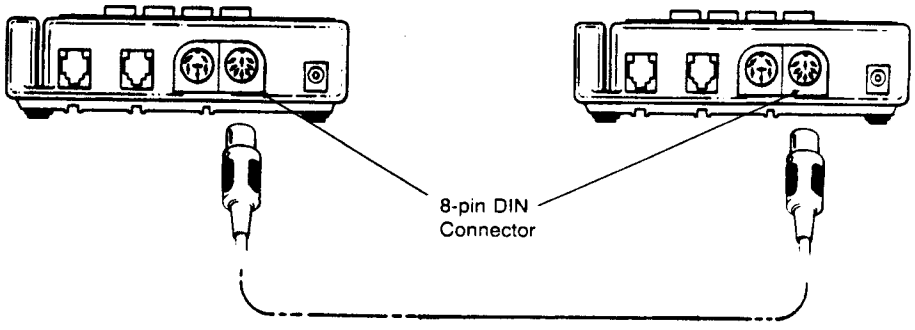


Figure 3-2. Terminal-to-Terminal Connections

3. Use the terminal's displayed prompts as a guide for the following procedure to download the application code and parameter data.

	Display	Response
On the Master Terminal:	1. (idle prompt)	On the master terminal, press [FUNC/ENTER].
	2. FUNCTION?	Press [*] on the master terminal. *Note: If memory location 0017 contains a non-zero number, the memory will be password protected. You will be required to enter the system password before proceeding with the download. This is a feature designed to prevent unauthorized access to the data stored in the terminal.* *If memory location 0017 contains a zero, the password is not required and you can proceed to step 5.*
	3. ENTER PASSWORD?	Enter the system password to unlock memory information. The system password supplied with each terminal is **Z66831** (press: [1] [ALPHA] [ALPHA] [6] [6] [8] [3] [1]). However, if you or the application programmer have already created a new password, enter the new password instead.
	4. ******	The terminal will display an asterisk for each key entered.After entering the complete password, press [FUNC/ENTER].
	5. UNIT SEND	The display panel will show UNIT SEND to indicate that the master terminal is ready to download to the slave terminal.
On the Slave Terminal:	6. (idle prompt)	Press the slave terminal [FUNC/ENTER] key.
	7. FUNCTION?	Press [#] on the slave terminal. The slave terminal will momentarily display UNIT RECEIVE indicating that it is ready to receive the information from the master terminal. *Note: If memory location 0017 contains a non-zero number, the memory will be password protected. You will be required to enter the system password before proceeding with the download. This is a feature designed to prevent unauthorized access to the data stored in the terminal.* *If memory location 0017 contains a zero, the password is not required and you can proceed to step 10.*

	Display	Response
	8. ENTER PASSWORD?	Enter the system password to unlock memory information. The system password supplied with each terminal is **Z66831** (press: [1] [ALPHA] [ALPHA] [6] [6] [8] [3] [1]). However, if you or the application programmer have already created a new password, enter the new password instead.
	9. ******	The terminal will display an asterisk for each key entered. After entering the complete password, press [FUNC/ENTER].
On Both Terminals:	10. UNIT SENDING DOWNLOAD APPL	Shortly after the UNIT RECEIVE message is displayed, the master terminal will display UNIT SENDING. The slave terminal's display will change to DOWNLOAD APPL.
	11. DOWNLOAD DONE	When the download is complete, both terminals will display the DOWNLOAD DONE prompt indicating the download was a success. Press the [CLEAR] key on both terminals to display the idle prompt.

Direct PC Downloads

A direct PC download uses a cable to directly transfer an application program from a PC to your TRANZ 380 terminal. Due to the speed and simplicity of this procedure, direct PC downloads are ideal for downloading to many terminals prior to their deployment to permanent locations.

A direct PC download requires:

- A TRANZ 380 terminal
- An IBM PC or compatible computer
- A cable: IBM-PC version, VeriFone part number 00446-05 (25 pin)
  IBM-AT version, VeriFone part number 00446-04 (9 pin)
- ZONTALK 2000, version 2.0 or higher—a proprietary software downloading program developed by VeriFone
- A terminal application must be present on the PC before downloading

Connecting the Download Computer

1. Connect the 8-pin DIN connector on the download cable to the 8-pin DIN connector on the rear of the TRANZ 380 terminal.
2. Connect the other end of the download cable to the COM1 or COM2 serial port on the download computer. The download software allows you to specify which COM port to use.
3. Follow instructions in "Performing the Direct PC Download" (on next page).

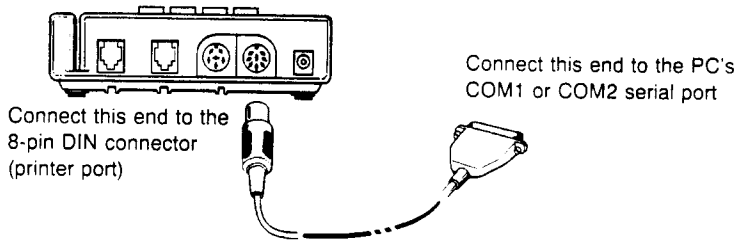


Figure 3-3. TRANZ 380 to PC Connection

Performing the Direct PC Download

Following the instructions in the *ZONTALK 2000 Reference Manual*, set up ZONTALK 2000 on your PC to perform a direct download; then perform the following steps on the TRANZ 380 terminal. Ensure that the PC is properly connected to the TRANZ 380 terminal before downloading.

Display	Response
1. (idle prompt)	On the TRANZ 380 terminal, press [FUNC/ENTER].
2. FUNCTION?	Press [#] to indicate you want to receive a direct download.
3. *-------- **------- ***------ ****----- *****---- ******--- *******-- ********- *********	The PC will now download the program to the terminal. A simple graphic is displayed on the terminal showing the progress of the download. As the download progresses, the graphic changes to show the percentage of the download complete—with each character representing 10% of the download.
4. DOWNLOAD DONE	This prompt indicates a successful download. If you see the prompt DOWNLOAD FAILED: • Reset the PC for another download. • Press any key on the TRANZ 380 terminal to return to the FUNCTION? prompt. • Repeat step 2 above. If the download fails again, you may be trying to download an invalid or nonexistent program. Press [CLEAR].
5. (idle prompt)	The terminal will automatically restart and begin running the application program.

Note: If you wish to download the application to additional terminals, connect the next TRANZ 380 terminal to the PC and repeat steps 1 through 4. Repeat this operation for each terminal that requires the application program.

Telephone Download

If you do not have a PC running ZONTALK 2000, version 2.0 or higher, at your location, you will have to call a remote download computer to request a download. Many TRANZ 380 terminals in the field receive application code and parameter data via telephone download.

With telephone downloading, you can choose either a full or partial download. A full download sends all application code and parameter data. A partial download sends only the data needed to upgrade the application or parameters already in a terminal. This is faster than completely replacing all of this information in your terminal. The contents of a partial download are determined by the ZONTALK 2000 software. However, if the terminal does not have any application code, or if you are not sure if it does, request the full download.

When telephone downloading, the TRANZ 380 terminal prompts you for the correct data if nothing is programmed in the following memory locations.

Memory Location	Information
0000	Download computer's telephone number.
0001	TRANZ 380 terminal serial number. This number is located on the bottom of the terminal.
0019	Application ID number. Obtain this number from the person responsible for maintaining the application files in the download computer.
0960	Speed selection. This memory location should contain a "2" for 1200 baud communication or a "1" for 300 baud communication. The speed selected must match the speed used by the download computer.

Download Prompts for Empty Memory Locations

The procedure for entering any of the above locations during a download is as follows:

Display	Response
1. (idle prompt)	Press [FUNC/ENTER]
2. FUNCTION?	Press [0].
3. DOWNLOAD?	Press [FUNC/ENTER]
4. DWNLD PHONE NUM? SERIAL NUM? APPLICATION ID? DNLD SPEED?	The TRANZ 380 will prompt you if any of the four memory locations is empty. Enter the phone number, serial number, application ID and download speed as necessary. Continue with Step 4 on page 3-7.

Telephone Download Procedure

Display	Response
1. (idle prompt)	Press [FUNC/ENTER].
2. FUNCTION?	Press [0].
3. DOWNLOAD?	• If you want a complete download of application code and parameter data, press [FUNC/ENTER]. • If you want a partial download, press [*].
4. DIALING	Wait — the terminal is dialing the download computer. If the terminal displays WAITING FOR LINE, check the telephone line cord connection. If the cord is properly connected, the line may be busy. Press [CLEAR] to abandon the call, or wait until the line is free.
5. WAITING FOR ANSR	The terminal is waiting for the download computer to answer.
6. *--------- **-------- ***------- ****------ *****----- ******---- *******--- ********-- *********- **********	The PC will now download the data to the terminal. A simple graphic is displayed on the terminal showing the progress of the download. As the download progresses, the graphic changes to show the percentage of the download complete — with each character representing 10% of the download.

Note: If the remote download computer cannot locate your application's id number in its data base, the prompt APPL ID NOT FND will be displayed. Press [CLEAR] to cancel the download, check memory location 0019 and try again. If the problem persists, contact the person responsible for maintaining the download computer.

Note: If the remote download computer cannot locate your terminal's serial number in its data base, the prompt SERIAL # NOT FND will be displayed. Press [CLEAR] to cancel the download, check memory location 0001 and try again. If the problem persists, contact the person responsible for maintaining the download computer.

Display	Response
7. DOWNLOAD DONE	The terminal successfully completed the download. Press [CLEAR] to return to the idle prompt. If UNSUCCESSFUL DL appears instead, the terminal was unable to complete the download. This could be due to bad telephone lines or other problems not related to the terminal. Press [CLEAR] and try the download procedure again. If the problem persists, contact the VeriFone Customer Hot Line.

BuyPass Download

TRANZ 380 terminals support BuyPass downloads, which allow for a set of keystrokes other than what is used in ZONTALK 2000, version 2.0 or higher. To access this feature, follow the instructions below:

Display	Response
1. (idle prompt)	Press [FUNC] and [0].
2. DOWNLOAD?	Press either [1] or [2]. [1] = full download [2] = partial download
3. DWNLD PHONE NUM?	Enter the download phone number.
4. MERCHANT ID?	Enter the merchant ID number.
5. DIALING WAITING FOR ANSWER COMMUNICATING DOWNLOAD DONE	Wait until the download is done.

4. How the TRANZ 380 Works

This section will give you an overview of the TRANZ 380 capabilities and how its different functions work. More detailed operational information can be found in your application manual.

Host Transactions

The TRANZ 380 operates as a basic transaction computer with pre-programmed prompts for banking applications. It is intended to communicate with a host computer, which is typically located at a financial institution or a company's data processing center. Host computers can store and process large amounts of data, including a customer's account history. By communicating with the host computer, usually over telephone lines, the TRANZ 380 puts this vast data base at the terminal operator's fingertips. The host computer notifies the terminal operator whether or not a transaction can be authorized.

The TRANZ 380 terminal can be programmed to perform up to nine different transactions with remote host computers. The specific transactions available are determined by the application program downloaded to the terminal.

A typical host transaction involves dialing the host computer, providing the host computer with information about the terminal and the customer, and receiving authorization to complete the transaction.

One transaction key is reserved for each type of transaction used by each host computer. For example, if you use three different transactions for each of three different host computers, you will need all nine transaction keys.

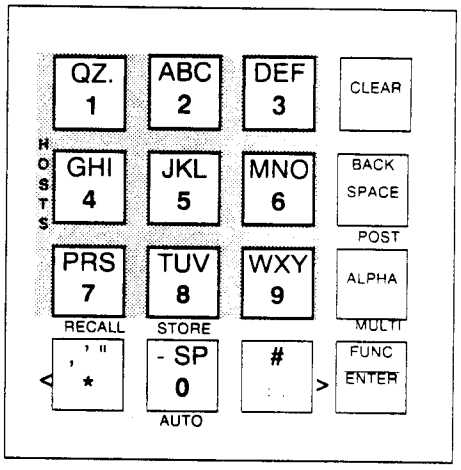


Figure 4-1. TRANZ 380 Host Keys

Local Functions

Unlike host computer transactions, local functions are performed only at the terminal and do not require communications with a host computer. In fact, most local functions can be performed, even when the phone line is disconnected or busy.

The TRANZ 380 can perform several different local functions. Some of these functions are standard for all terminals. Up to seven custom local functions (also called local transactions) can be programmed for your application and performed from the keypad. However, the actual number of local functions available to the user depends on how many were programmed into the application.

The local functions available vary with each application. However, some typical local functions may include the following. Refer to your application reference manual for information on the local functions available to you.

- Calculating batch totals;
- Storing user identification information;
- Listing different transactions previously stored in the terminal;
- Date and time calculation; and
- Printing transaction data or other information.

Applications

The way a TRANZ 380 terminal operates and the procedures it follows is determined by its application (also called application program). An application is a series of instructions electronically stored (programmed) in the terminal's memory. These instructions direct the terminal to perform specific operations and to respond properly to different events as they occur.

Each TRANZ 380 terminal is supplied with the same standard application. However, to meet the specialized needs of a company, many terminals are programmed with a custom application.

Standard Application

Although each TRANZ 380 is initially programmed with a standard application, this application is only accessible on terminals that do not have a custom application already loaded into them. The standard application allows the user to access many of the services offered by several host computers. This is often sufficient for handling the needs of many companies. However, because the standard application may not meet all of the specialized needs of some companies, many TRANZ 380 terminals are programmed with a custom application.

Custom Applications

Custom applications help make the terminal work within a company's existing operations rather than forcing a company to change transaction procedures to work with a terminal.

These applications can specify how host computer transactions will be performed and how extensive security and fraud control measures will be. If other devices, such as a printer, are used with the terminal, a custom application can precisely determine the procedures and formats for entering and printing information with these devices.

Programming a Custom Application

Custom applications are created by programmers using the VeriFone Terminal Control Language (TCL). TCL programming is typically performed on an IBM PC or compatible computer. When the application is completed, it can be sent from the computer to the terminal using a process called downloading. The downloading process transfers the application to the terminal and stores it electronically in the terminal's memory. See Section 3 for downloading information.

With the inception of the TRANZ 380, there are now two different types of memory available for creating custom TCL applications: Program and Batch. Program Memory holds the TCL application itself and Batch Memory holds batch files. A batch file is a group of input data that is collected together and processed as a single unit. The terminal stores batch files in RAM. As more transactions are performed, the terminal typically adds input data to the open batch until the batch is closed or the memory becomes full.

Program Memory may be up to 64K, while Batch Memory can grow to use all available RAM. For both types of memory, the system memory of the terminal must also be considered when calculating free space. The formula for determining Program Memory space is: Total RAM (64K or 128K) less System Memory less Batch Memory = Program Memory.

The formula for determining Batch Memory space is: Total RAM (64K or 128K) less System Memory less Program Memory = Batch Memory. Again, Program Memory is limited to 64K, but Batch Memory can take up all available RAM not being used by System Memory and Program Memory.

Figure 4-2 illustrates Program and Batch Memory for the 64K and 128K versions of the TRANZ 380. Due to the differences between Batch and Program Memory, the *S and *Z TCL commands have changed (see Appendix D).

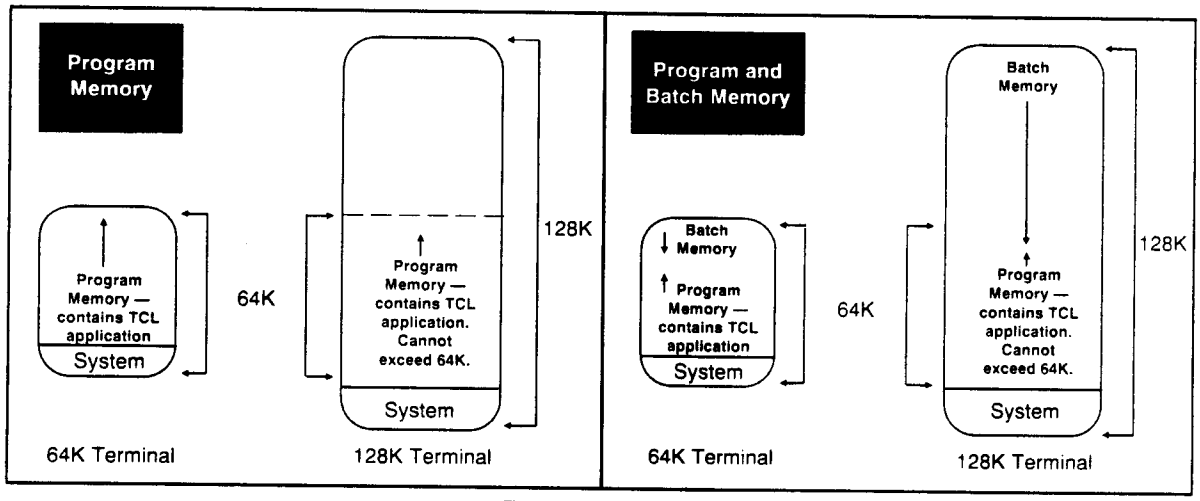


Figure 4-2. Program and Batch Memory

Programming with the Keypad

The TRANZ 380 keypad can be used to quickly modify part of an application program or to update some of the data stored in the terminal's memory (such as a host computer telephone number). However, creating an entire application is always done on personal computers. These computers have more memory and more keys which make them better equipped for typing and editing application code.

RAM and ROM Memory

Application code, parameter data and system firmware (code permanently programmed into the terminal at the factory) all reside in the terminal's electronic memory. There are two different types of electronic memory in each TRANZ 380 terminal—Random Access Memory and Read Only Memory. Random Access Memory, or RAM, is used to store information that can be easily acquired and modified. Because this memory is readily changed, it is useful for storing custom applications, temporary data entered from the keypad or card reader, phone numbers, the date and time, and other information that may be subject to change from time to time.

Because RAM is also temporary, the built-in battery provides backup power to preserve data in RAM in the event of a power failure.

Read Only Memory, or ROM, is factory installed with each TRANZ 380 terminal. This information is permanent and cannot be changed by the user or application programmer. Because it cannot be changed, ROM is ideal for safely storing the operating system firmware which controls the different components of the terminal and allows the downloading and use of custom applications. The standard application found in all TRANZ 380 terminals is also stored in ROM.

Memory Locations

RAM memory is divided into segments called memory locations. Some memory locations are dedicated to specific functions. For example, memory location 0001 is reserved for the terminal's serial number and location 0004 is reserved for the current date. Other memory locations are general purpose locations which can be used for a variety of functions.

Because RAM memory locations are temporary, the information they contain can be changed at any time. However, for security reasons, these locations can be password protected to prevent unauthorized tampering.

Caution: Do not alter the information in TRANZ 380 memory locations unless you fully understand what you are changing. Your terminal will not be able to function properly unless the locations contain valid data.

Note: While the reserved memory locations are accessible, we recommend that you not use them. Using these memory locations now may cause conflicts in the future with subsequent firmware versions.

Terminal Parameters

A terminal parameter is information that relates to the terminal itself. Table 4-1 lists the different parameters that may be used by your application. However, the actual parameters used depends on the application programmed in your terminal. Each parameter is explained in more detail in Section 6, and all memory locations are listed in Appendix A.

Table 4-1. Terminal Parameters

Memory Location	Parameter
0000	Remote Download Computer Phone Number
0001	Terminal Serial Number
0004	Program Date
0005	Message Sequence Number
0006	Scroll Length

Memory Location	Parameter
0007	Multiple Transaction Timeout
0009	Terminal Key Beep
0010	Dial Type
0011	Dial Speed Flag
0012	Parallel Phone Available Flag
0013	Number of Attempts
0014	Telephone Line Test
0015	Delay Before Auto Answer
0017	RECALL, Set Clock, Unit-to-Unit Restriction Flag
0019	Application ID
0030	Idle Prompt
0031-0036	Function Keys #1-6
0037	Out of Memory Control String
0038	Auto Answer Control String
0039	Function Key #9
0040-0099	Memory Dial Phone Numbers (General Records)
0950	Printer Type
0951	Printer 250 Paper Advance (Number of Line Feeds)
0952	Generic Printer Baud Rate
0953	Generic Printer Data Format
0954	Generic Printer Handshake
0958	Bell/CCITT Mode
0960	Dial-Up Line Upload/Download Speed
0965	Auto Answer Speed
0966	Auto Answer Processing
0967	Auto Answer Packet Inactivity Timeout
0970	PIN Pad/Bar Code Wand Serial Port Function
0975	Line Recovery Time
0977	Free Memory Reclamation Parameter
0979	Abort Control String
0980	Delay Executing Idle Loop Control String
0981	Idle Loop Control String
0982	Idle Loop Phone Number
0983	Idle Loop Response Analysis Control String
0984	Idle Loop Inactivity Timeout
0985	Host # for Card Initiated Transactions
0986	Host # for Bar Code Initiated Transactions
0990	Communication Error Control String
0999	Programming Error Recovery Log
0955 - 0957	Reserved
0959	
0961 - 0964	
0968 - 0969	
0971 - 0974	
0976	
0978	
0987 - 0989	
0991 - 0996	

Memory Location	Parameter
0998	
1000 - 1049	Reserved

Transaction Parameters

Each transaction requires a set of parameters before the transaction can be performed on a TRANZ 380 terminal. For example, the host computer phone number must be stored in the correct memory location before the terminal can dial the host computer.

Once the necessary parameters are stored, the terminal will automatically execute the transaction when the associated transaction key is pressed.

Because the TRANZ 380 can accommodate up to nine different transactions, memory locations are reserved for nine different sets of parameters.

Table 4-2 lists the different parameters that may be required for a transaction with a host computer. However, the actual parameters used depends on the requirements of a particular transaction.

Table 4-2. Transaction Parameters

Memory Location	Parameter (X = transaction keys 1-9)
0X00	Primary Phone Number
0X01	Secondary Phone Number
0X02	Call Center Phone Number
0X03	Referral Card Phone Number
0X04	Merchant/Terminal ID
0X05	Message Format Flag
0X06	Fraud Control Flag
0X07	Transaction Control String
0X08	Transaction Type Prompt
0X09	Floor Limit
0X10	Response Analysis Control String
0X11	Auxiliary Control String
0X12	Multiple-Transaction Group Code
0020-0029	Login Strings 0 through 9

Note: Each of the nine transaction keys has its own set of parameters. For example, the merchant ID memory location for transaction key "2" is 0204. For key "3," the merchant ID memory location is 0304.

Multiple Transactions

TRANZ 380 can perform multiple transactions on a single dial up. Multiple transactions are performed back-to-back; when one transaction is finished, the operator starts the next one until all transactions are completed. This feature, when supported by the host computer, speeds up transactions by reducing the number of times the terminal dials up the host computer.

Networks

TRANZ 380 permits communications with several separate networks. Networks help callers reach a remote computer that cannot be easily accessed by direct telephone connection. The network receives a call from the terminal and routes the call to the desired host computer.

For example, if transaction key [3] is programmed to access a host via a network, pressing [3] would cause the terminal to dial the network's telephone number. The network would in turn route the call to the host computer. To the user, the network is invisible. The only noticable difference may be a slightly slower transaction speed. Eleven networks currently supported by the TRANZ 380 are:

Tymnet
Compuserve
Telenet
Geisco
Nabanco/Western Union
Busycomm
Datapac (Canada) – no parity
Autonet
Connet
Datapac – even parity
Western Union

Permanent Terminal ID Number

As a requirement of the operating system, a unique terminal ID number is burned into the EPROM of each TRANZ 380 terminal. The number's format is "12xxxxxx", where "12" is the vendor code for VeriFone and "xxxxxx" is the Permanent Terminal ID Number. The number may be read by executing the TCL command +V1, which appends the number to the destination buffer. (See Appendix D for how the +V command has been enhanced for the TRANZ 380.) The number may also be read by accessing the diagnostic function to display all messages; see below.

Note: Not all versions of the TRANZ 380 support a Permanent Terminal ID Number, nor do all countries require it.

Display Messages Test

This test displays all status, error messages and fixed prompts contained in the terminal.

Display	Response
1. (idle prompt)	Simultaneously press [*] and [3] keys.
2. DIAGNOSTICS	Press [0] for the Display Messages Test function.
3. XXK RAM IN TERM	Amount of RAM in your terminal. XX = 64 or 128 depending on your RAM configuration.
4. 12XXXXXX	"12" followed by the Permanent Terminal ID Number. Press [ENTER] to scroll forward.
5. TZ 380 (firmware)	"Firmware" is the EPROM version number. Press [ENTER] once for each message to be displayed, or press [CLEAR] to end the routine.
6. (various messages)	
7. (idle prompt)	

5. Basic Operation

This section describes how to perform some of the basic operations of the TRANZ 380 terminal. These operations are used with the standard application supplied with each terminal. However, because actual operations may vary in custom applications, refer to your application manual if you are not using the standard application.

Startup

The TRANZ 380 will start up automatically as soon as it is plugged into its power source. The terminal will first display "TRANZ 380" followed by the firmware version number. The terminal will then display the application ID number (if available) followed by the idle prompt. The idle prompt indicates the terminal is ready for operation.

Idle Prompt

The standard application's idle prompt is the day of the week, date and time. For example: THU 7/23 10-18 A (Thursday, July 23, 10:18 a.m.). By using the TCL command J, you can modify the time in the idle prompt to display in either a 12- or 24-hour format. See the J command in Appendix D and also see the *TCL Programmer's Manual.* For further information on altering the idle prompt, see page 6-8 of this manual for the idle prompt terminal parameters.

Host Transaction Keys

The nine alphanumeric keys (labeled 1 through 9) are also known as the host transaction keys and perform operations requiring communication with a host computer.

1. Check the display for the idle prompt. If it is not displayed, press [CLEAR] to cancel the current operation and display the idle prompt.
2. Press the desired host transaction key to begin the transaction.
3. Follow the instructions given by the prompts on the display panel. These prompts help provide the host computer with information needed to complete the transaction.
4. When the transaction is finished, press [CLEAR] to display the idle prompt.

Note: These keys can also be used for local functions when [FUNC/ENTER] is pressed first. Refer to Section 4 for more information.

Using the Cardreader

The cardreader saves time and avoids the mistakes that can occur when manually entering information from the keypad.

1. Check the display for the idle prompt. If it is not being displayed, press [CLEAR] to end the current operation and return to the idle prompt.
2. Insert the credit or debit card into the rear of the cardreader slot with the magnetic stripe facing down and to the right of the terminal. (See Figure 5-1.)

3. Without stopping, slide the card briskly through the slot.

   If the terminal beeps, check the position of the magnetic stripe, and slide the card through the slot again. If the beep persists, the card may be damaged. Manually enter the account number from the keypad.

4. Complete the transaction following the displayed prompts.

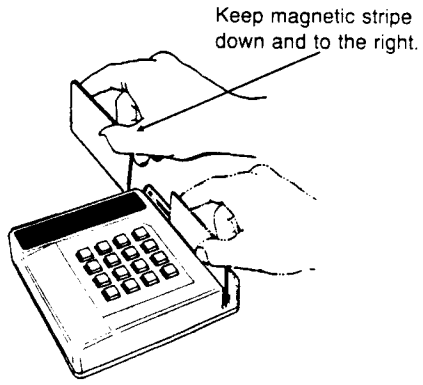


Figure 5-1. Cardreader Operation

Note: Some transactions are initiated by pressing a transaction key first and then sliding the card through the slot. If a host key is not pressed before a transaction, the terminal will use the host key as defined by memory location 0985 (default is key 1). Refer to your application manual for more details.

Using the Optional Bar Code Wand

The optional bar code wand can be used with terminals without a built-in bar code reader or for bar code labels that cannot fit through the cardreader.

To use the wand, simply draw the tip of the wand smoothly across the entire bar code.

Memory Dialing

The memory dial feature, also known as auto dial, is used to automatically dial phone numbers stored in the TRANZ 380 memory. To use this feature, you must have a standard telephone connected to the terminal and at least one phone number stored in the terminal's memory.

Display	Response
1. (idle prompt)	Press the [0/AUTO] key.
2. MEMORY DIALER	Enter the three-digit memory location number that contains the desired phone number. Instructions for creating memory dial phone numbers are found in Section 6 "Terminal Parameters."
3. (memory location and phone number)	The terminal will show the memory location and the phone number it contains and then dial the phone number.
4. PICK UP HANDSET	Pick up the telephone handset to complete the call. To cancel a call before the connection is made, press [CLEAR]. To end the call, place the handset back in its cradle. If "PICKUP HANDSET" is still displayed, press [CLEAR].

Entering Alphanumeric Data From the Keypad

The TRANZ 380 keypad has 16 keys; twelve of these keys can be used to enter as many as 47 different alphanumeric characters. These characters are the letters A though Z, the numerals 0 through 9 and the following special characters: +* , ' " - . # : ; @ and [space].

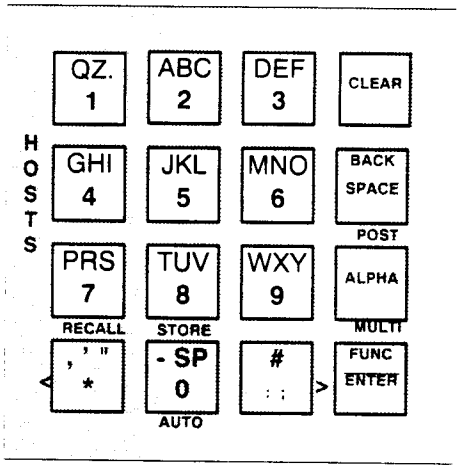


Figure 5-2. TRANZ 380 Keypad

Just as the [SHIFT] key on a typewriter selects one of two different characters assigned to a single key, the [ALPHA] key on the terminal selects the different characters available per key.

Press the key containing the character and then press the [ALPHA] key as many times as required to display the correct character.

Note: The terminal must be in a mode that allows data entry, such as the STORE or RECALL modes, before information can be entered from the keypad.

The following examples in Table 5-1 demonstrate how to enter the characters 2, A, B, and C using the [2] key and the [ALPHA] key.

Table 5-1. Entering Alphanumeric Data

Desired Character	Keys to Press
2	Press the [2] key.
A	Press the [2] key. Press the [ALPHA] key once.
B	Press the [2] key. Press the [ALPHA] key twice.
C	Press the [2] key. Press the [ALPHA] key three times.

The following table lists the different characters available from the keypad and how to access these characters.

Table 5-2. TRANZ 380 Alphanumeric Characters

Key to Press	Without Pressing [ALPHA] Key	Press [ALPHA] Key One Time	Press [ALPHA] Key Two Times	Press [ALPHA] Key Three Times
1 QZ.	1	Q	Z	.
2 ABC	2	A	B	C
3 DEF	3	D	E	F
4 GHI	4	G	H	I
5 JKL	5	J	K	L
6 MNO	6	M	N	O
7 PRS	7	P	R	S
8 TUV	8	T	U	V
9 WXY	9	W	X	Y
0 -SP	0	-	(space)	+
* ,'"	*	,	'	"
# :;@	#	:	;	@

Using the STORE Function

The STORE function allows you to store data in a single memory location. If data is already stored in that location, the STORE function will replace the existing data with the new data.

To prevent unauthorized manipulation of the data stored in the terminal, the system password is required before the STORE function can be used.

The following steps describe how to use the STORE function.

Display	Response
1. (idle prompt)	Press [FUNC/ENTER].
2. FUNCTION?	Press [8/STORE].
3. PASSWORD?	Enter the system password to unlock memory. The system password supplied with each terminal is **Z66831** (press: [1] [ALPHA] [ALPHA] [6] [6] [8] [3] [1]). However, if you or the application programmer have already created a new password, enter the new password instead.

Display	Response
4. ******	The terminal will display an asterisk for each key entered. After entering the complete password, press [FUNC/ENTER].
5. STORE WHAT?	Enter the four-digit memory location number (0000 through 1999) where you want to store the data. For example, to store the telephone number of a remote download computer, enter 0000, which is the memory location for the telephone number.
6. (memory location) =	The memory location number you entered will be displayed. Now enter the data you want to store in the memory location. For this example, enter the telephone number of the remote download computer.
7. (memory location) = (data)	The memory location number plus the data you just entered will be displayed. If you make any errors, press [BACKSPACE] to erase them. Then reenter the correct data. Press [FUNC/ENTER] to complete the entry.
8. STORE WHAT?	To select the next memory location to be modified, follow steps 5 through 7. To exit the STORE function, press [CLEAR]. *Caution: Once the terminal's memory has been unlocked, it will remain unlocked until the unit is powered down and started up again or a host transaction key (1-9) is pressed.* *To ensure the memory is locked after using the STORE function, press one of the host transaction keys (1-9) after the idle prompt and then immediately press the [CLEAR] key. This will lock the memory so it cannot be changed until the password is entered again.*

Using the RECALL Function

The RECALL function displays and changes data stored in a memory location. For example, to look up the current download computer telephone number, use the RECALL function to display the contents of memory location 0000.

Displaying Information

These steps describe how to use the RECALL function to display information.

	Display	Response
1.	(idle prompt)	Press [FUNC/ENTER].
2.	FUNCTION?	Press [7/RECALL]. *Note: If memory location 0017 contains a non-zero number, the system password will be required before data can be displayed. This is a feature designed to prevent unauthorized access to the data stored in the terminal. If memory location 0017 contains a zero, the password is not required and you can proceed to step 5.*
3.	PASSWORD?	Enter the system password to unlock memory information. The system password supplied with each terminal is **Z66831**. However, if you or the application programmer have already created a new password, enter the new password instead.
4.	******	The terminal will display an asterisk for each key entered. After entering the complete password, press [FUNC/ENTER].
5.	RECALL WHAT?	Enter the desired memory location number (0000 to 1999) of the data you wish to see. For example, to see the telephone number of a remote download computer, enter 0000.
6.	(memory location) = (data)	The terminal will display the number of the memory location and the data it contains. You now have the following options: • To view the data in the next memory location, press [FUNC/ENTER]. • To view the data in the previous memory location press [ALPHA]. • If the entire contents of a memory location does not fit on the display panel, use the scroll keys [*] and [#] to view the additional characters. • To exit the RECALL mode, press [CLEAR]. • If you want to add or change the data, follow steps 7 through 9.

Adding and Changing Information

Follow these steps when using the RECALL function to change the information in a memory location.

Display	Response
7. (memory location) = (data)	If the desired memory location is not displayed, use the RECALL function to display the contents of the memory location. Press [BACKSPACE].
8. PASSWORD?	You must unlock the memory with the system password before you can change the contents of the memory location. The password is required even if you entered it previously in step 3.
9. (memory location) =	Enter the new data for the memory location.
10. (memory location) = (data)	The memory location number plus the data you just entered will be displayed. If you make any errors, press [BACKSPACE] to erase them. Then reenter the correct data. Press [FUNC/ENTER] to complete the entry. *Caution: Once the terminal's memory has been unlocked, it will remain unlocked until the unit is powered down and started up again or a host transaction key (1-9) is pressed.* *To ensure the memory is locked after using the RECALL function, press one of the host transaction keys (1-9) after the idle prompt and then immediately press the [CLEAR] key. This will lock the memory so it cannot be changed until the password is entered again.*

Using the Multiple Transaction Function

The multiple transaction feature enables you to perform more than one transaction during a single call to a host computer that supports this feature. As soon as one transaction is completed, the terminal stays on the line and waits for you to select the next transaction. Because numerous phone calls are eliminated, performing multiple transactions is faster than performing the transactions separately.

Before you can perform multiple transactions, the following requirements must be met.

1. The host computer must be capable of performing multiple transactions.
2. The multiple transaction timeout period must be set in memory location 0007. To view the contents of memory location 0007, refer to "Using the RECALL Function" in this section.

3. All of the transactions used in a multiple transaction operation must use the same host computer. A special multiple transaction group code identifies the host computer assigned to a transaction. For example, if one host computer processes the transactions initiated by keys [1], [2] and [3], all three keys would have the same transaction group code.

   You can view the transaction group number in memory locations 0X12 (X = the host transaction key numbers 1-9). For more information on entering transaction group codes, refer to Section 7 in this manual.

After the above conditions are met, use the following procedure to perform multiple transactions.

Display	Response
1. (idle prompt)	Press the [ALPHA/MULTI] key.
2. MULTI TRANS	Press the desired host transaction key to perform the first transaction. When the transaction is completed, the final response message will remain on the display panel. Press another host transaction key to initiate the next transaction. It must use the same host computer and belong to the same transaction group as the previous transaction. Press [CLEAR] to display the idle prompt after the last transaction is completed. *Note: If you do not press the [CLEAR] key, the terminal will automatically end the operation when the multiple transaction timeout is reached.*

Using the POST Function

When using the TRANZ 380 standard application, the terminal automatically dials the selected host computer as soon as a host transaction key is pressed. This auto dial feature saves time by permitting you to enter transaction data from the keypad or cardreader while the terminal is dialing the host computer.

However, for transactions requiring a lot of data, you may prefer to enter all of the data before dialing the host computer. You can delay the data process using the POST or post-dial function as follows.

1. Press [CLEAR] to display the idle prompt.
2. Press [BACKSPACE/POST] before beginning a transaction. This invokes the post-dial feature.
3. Press the host transaction key and proceed with your transaction as you normally would. However, the terminal will not dial the host computer until all of the data is entered.

4. When the transaction is completed, the terminal returns to the normal, pre-dial mode.

   Post-dialing is only enabled for one transaction at a time. You must press [BACKSPACE/POST] before beginning each transaction that you want post-dialed.

Resetting the Calendar/Clock

The Calendar/Clock in the TRANZ 380 terminal has a built-in lithium battery to maintain the correct time even when power is removed from the terminal. However, there are occasions when you should reset the clock, such as adjusting for your time zone or resetting the clock to daylight savings time.

To reset the clock, follow these steps:

Display	Response
1. (idle prompt)	Simultaneously press [*] and [3].
2. DIAGNOSTICS	Press [ALPHA] to begin the "reset clock" function.
3. RTC CHIP TEST	The terminal will display this message for two seconds while it tests the real time clock (RTC) chip. The terminal will then prompt you through the following entries for resetting the date and time. If you make a mistake, press [BACKSPACE] and reenter the correct information. Press [FUNC/ENTER] after each entry.
4. YEAR 1980-2079 =	Enter two digits for the current year. For example, enter "91" for the year 1991.
5. MONTH =	Enter a number, 1 through 12, to identify the current month. For example, enter the number "6" for June.
6. DAY =	Enter a number, 1 through 31, to identify the current day. For example, enter "14" for the date June 14.
7. HOUR 0-23 =	Enter a number, 0 through 23, to identify the current hour in a 24-hour format.. For example, enter "10" if the time is 10 a.m.; enter "16" if the time is 4 p.m.
8. MINUTES =	Enter the number of minutes, from 0 to 59, currently past the hour. For example, enter "14" if the time is 10:14.
9. SECONDS =	Enter the number of seconds from 0 to 59, currently past the minute. For example, enter "23" if the time is 10:14 and 23 seconds.
10. (day of week, date and time)	The terminal will display the new date and time.

Changing the System Password

Certain operations such as STORE and RECALL, require the use of the system password to prevent unauthorized or accidental destruction of data. Each TRANZ 380 is shipped with the factory set system password "Z66831" (press: [1] [ALPHA] [ALPHA] [6] [6] [8] [3] [1]).

You may want to change this password to an unpublished number. You can change the password at any time provided you know what the current password is. The password may contain up to nine alphanumeric characters.

Caution: *If you change the system password and then forget or lose the new password, there is no method you can use to determine the new password! Losing or forgetting the new password will prevent you from adding information to memory or changing any of the information already stored in memory! However, transactions that do not require use of the password may still be executed.*

The VeriFone Customer Support Department can reset the password back to Z66831. This involves shipping the terminal to the VeriFone Customer Support Center and will incur a service charge. See page 8-8 for returning the terminal.

Follow these steps to change the system password.

Display	Response
1. (idle prompt)	Press [FUNC/ENTER].
2. FUNCTION?	Press [ALPHA].
3. ENTER OLD PASSWD	Enter the old password. *Note: Each keystroke is displayed as a "*" (asterisk).* After entering the password, press the [FUNC/ENTER] key. If the password entered does not match the current system password, the terminal will display the prompt "INVALID PASSWORD"=." Press [FUNC/ENTER] and [ALPHA] to re-start the procedure and enter the correct password. If the password entered matches the current system password you will be prompted for the new password.
4. ENTER NEW PASSWD	Enter the new password. *Note: Each keystroke is displayed as a "*" (asterisk).* After entering the password, press the [FUNC/ENTER] key.
5. ENT PASSWD AGAIN	Enter the new password again.

Display	Response
	Note: Each keystroke is displayed as a "" (asterisk).* After entering the password, press the [FUNC/ENTER] key. If you incorrectly enter the password, the terminal will abort the change password routine. If you correctly enter the password both times, the change is successful and the terminal returns to the idle state.

Terminal Displays PROGRAMING ERR X

This message indicates that the TRANZ 380 terminal detected an error in its RAM (Random Access Memory). The message will also include a single-digit code (X) to identify the error type.

If this message appears, you must either override the error or remove the error by re-initializing (clearing) the terminal's memory.

Error Codes

Table 5-3 lists the nine possible codes that may appear at the end of this error message. These codes indicate what the terminal was attempting before the error was detected.

Table 5-3. Programming Error Type Codes

Attempted Operation	Start	End
Power-up	0	
Store from TCL	1	2
Dial-up download	3	4
Store from keypad	5	6
Unit-to-unit download	7	8

Programming Error Override Procedure

CAUTION! *Although you can still operate the TRANZ 380 terminal after overriding the error, the memory is still corrupted. This option is provided only for testing purposes or to allow you to retrieve important data from memory. You must clear the error as soon as possible to ensure reliable operation. To clear the error, download the application program using one of the methods described in Section 3.*

Display	Response
1. PROGRAMING ERR X	Press [5] and [3] simultaneously. Wait for the idle prompt.
2. (idle prompt)	• You can now continue with normal operations.

Display	Response
	• Use the RECALL procedure described in this section to view any data you might need. The error log is stored in memory location 0999. See *Error Log* below. • Download the application program as soon as possible. This will re-initialize memory, clearing all remaining errors.

Error Log

The terminal enters the date, time and type of programming errors in memory location 0999. Entries for up to 12 errors can be stored at one time. A hyphen '-' separates each entry.

The format for each entry is MMDDYYHHC-, where:

Value	Description
MM	Month
DD	Day
YY	Year
HH	Hour in 24-hour format
C	Programming error type code
-	Entry separator

For example: If location 0999 contains 081291100-081291150-, two errors were detected and overridden after power-up attempts on August 12, 1991—one at 10 am and the other at 3 pm.

Re-initialize Memory Procedure

Use the re-initialize memory procedure to clear the error from the terminal. After re-initializing memory, you must download the application program before you can perform any transactions.

CAUTION! *Re-initializing memory will clear the application program and data from the terminal. If you need to retrieve any information before clearing these from memory, use the Programming Error Override Procedure instead.*

Display	Response
1. PROGRAMING ERR X	Press [1] and [ENTER] simultaneously. Wait for the idle prompt.
2. (idle prompt)	The terminal's RAM is reinitialized and ready for downloading. Download the application program as described in Section 3.

6. Terminal Parameters

Terminal Parameters

Your TRANZ 380 terminal must be configured with terminal-specific parameters which determine how the terminal operates. Special memory locations are reserved specifically for terminal parameters. By entering the proper parameters, you will enable the terminal to work with your on-site phone system and determine how your terminal operates with the standard application software.

For example, you can determine how many characters the terminal scrolls when the scroll key is pressed, or the phone number of the download computer.

The terminal's memory is divided into 2,000 memory locations, each having a unique four-digit address or identification number such as 0000, 0502 and 1999. Some memory locations are dedicated to specific functions. For example, memory location 0001 is reserved for the terminal's serial number and location 0004 is reserved for the current date. Other memory locations are general purpose and can store a variety of data. These general use locations, or records, are not listed here, but can be found in Appendix A. Table 6-1 lists the Terminal/Location parameters and their dedicated memory locations.

Table 6-1. Terminal Parameters

Memory Location	Description
0000	Download Phone Number
0001	Serial Number
0004	Program Date
0005	Message Sequence Number
0006	Scroll Length
0007	Multiple Transaction Timeout
0009	Terminal Key Beep Flag
0010	Dial Type Flag
0011	Dial Speed Flag
0012	Parallel Phone Available Flag
0013	Number of Retries
0014	Telephone Line Test Flag
0015	Delay Before Auto Answer
0016	Encrypted Working Key/Master Key Pointer
0017	RECALL, Set Clock, Unit-to-Unit Restriction Flag
0019	Application ID
0030	Idle Prompt
0031-0036	Function Keys (#1-6)
0037	Out of Memory Control String
0038	Auto Answer Control String

Memory Location	Description
0039	Function Key (#9)
0040-0099	Memory Dial Phone Numbers (General Records)
0950	Printer Type
0951	Printer 250 Paper Advance (Number of Line Feeds)
0952	Generic Printer Baud Rate
0953	Generic Printer Data Format
0954	Generic Printer Handshake
0958	Bell/CCITT Mode
0960	Dial-Up Line Upload/Download Speed
0965	Auto Answer Speed
0966	Auto Answer Processing
0967	Auto Answer Packet Inactivity Timeout
0970	PIN Pad/Bar Code Wand Serial Port Function
0975	Line Recovery Time
0977	Free Memory Reclamation Parameter
0979	Abort Control String
0980	Delay Executing Idle Loop Control String
0981	Idle Loop Control String
0982	Idle Loop Phone Number
0983	Idle Loop Response Analysis Control String
0984	Idle Loop Inactivity Timeout
0985	Host # for Card Initiated Transactions
0986	Host # for Bar Code Initiated Transactions
0990	Communication Error Control String
0997	VeriFone Control String
0999	Programming Error Recovery Log
1000	Date and Time Transfer

Entering Terminal/ Location Parameters

If you are using a standard application or if you programmed your terminal by downloading an application from another TRANZ 380 terminal, you must configure your terminal with the Terminal/Location parameters.

Use the STORE or RECALL functions as described in Section 5 for instructions on entering information into your terminal's memory locations.

Note: If you programmed your terminal with a remote IBM PC compatible download computer, these parameters may have already been entered for you. Use the RECALL function to determine if the parameters were downloaded.

Download Phone Number

Memory Location: 0000
Character Type: Alphanumeric
Field Length: Up to 32 characters

This parameter is the phone number the terminal dials to connect to the remote download computer. The download phone number may contain up to 32 characters including numerals 0 through 9 and a two-second pause (-).

You can enter an access code with the phone number and, if needed, separate the two by inserting the pause character between them. For example, if you enter the common outside line access code "9" followed by a dash (-) and the phone number, the terminal will dial the 9, pause two seconds, then continue dialing the phone number. Insert additional pause characters as needed for pauses longer than two seconds.

If the memory location is empty, the terminal will automatically prompt you for the download data.

Note: Do not add a dash (-) in the middle of a phone number. This will create an unnecessary delay in dialing the number. The pause character is intended for deliberate pauses between access codes and phone numbers.

Serial Number

Memory Location: 0001
Character Type: Alphanumeric
Field Length: Up to 10 characters

Turn your terminal upside down and locate the serial number on the label after the characters "S/N." Enter this number into memory location 0001. This number identifies your terminal to the download computer.

If the memory location is empty, the terminal will automatically prompt you for the download data.

Program Date

Memory Location: 0004
Character Type: Numeric
Field Length: 6 characters

Enter the date into memory location 0004. This records the date that the parameters in the terminal were updated.

The format for this parameter is MMDDYY. For example, to enter July 23, 1991, enter "072391."

Format	Description
MM	Month
DD	Date
YY	Year

Message Sequence Number

Memory Location: 0005
Character Type: Numeric
Field Length: 4 characters

The TRANZ 380 terminal assigns a sequence number to every VISA second generation transaction it performs.

The terminal sequentially numbers each transaction, thus identifying the order in which the transactions are performed.

The message sequence number (also called the transaction sequence number) parameter allows you to specify the number of the first transaction in the

sequence. For example, if you select the number 0500, the first transaction will be numbered 0500, the second 0501, the third 0502 and so on.

Scroll Length

Memory Location: 0006
Character Type: Numeric
Field Length: Up to 2 characters

The TRANZ 380 terminal has a 16 character display panel which is adequate for viewing most prompts. To view messages longer than 16 characters, you will need to scroll to the right or to the left. The scroll length parameter determines the number of characters that will be scrolled each time the right [*] or left [#] scroll keys are pressed. For example, if the parameter selected is "12," pressing the [*] key will scroll the display 12 characters to the right.

Multiple Transaction Timeout

Memory Location: 0007
Character Type: Numeric
Field Length: 1 character

The multiple transactions feature of the TRANZ 380 allows the terminal to perform more than one transaction on a single call to a host computer. This parameter specifies the length of time the terminal will wait between transactions before disconnecting the phone line.

If a transaction ends and a new one doesn't begin within the time specified in this parameter, the terminal will break the phone connection with the host computer. However, as long as another transaction begins within the specified time, the terminal will remain connected.

Ten different entries are available. If nothing is entered in the memory location, the multiple transaction feature is disabled.

Entry	Timeout Length
0	Multiple transactions disabled
1	20 seconds
2	40 seconds
3	60 seconds
4	80 seconds
5	100 seconds
6	120 seconds
7	140 seconds
8	160 seconds
9	90 minutes

Terminal Key Beep Flag

Memory Location: 0009
Character Type: Numeric
Field Length: 1 character

The terminal key beep flag indicates whether or not the terminal should beep when the keys are pressed. Enter a 0 if you want a beep, or enter a 1 if you don't want a beep.

Dial Type Flag

Memory Location: 0010
Character Type: Numeric
Field Length: 1 character

This parameter indicates the type of dialing your TRANZ 380 terminal will use, whether tone or pulse, and also allows enhanced pulse dialing setting for Europe.

Entry	Description
0	Tone dial
1	Pulse dial (USA)
2	10 - n dial
3	n + 1 dial

Note: The terminal must be configured for the type of telephone transmission used by the telephone company central office in your area. Check with your phone company if you do not know which type of service you have.

Parameters 2 and 3 contain pulse dialing settings where "n" represents the telephone number digit you dial. If you dial the digit "0" with a parameter 2 setting, there will be 10 pulses. If you dial a "1", there will be 9 pulses. Parameter 3 is just the opposite, with the digit "0" having 1 pulse and the digit "9" having 10 pulses.

Dial Speed Flag

Memory Location: 0011
Character Type: Numeric
Field Length: 1 character

The TRANZ 380 terminal can be programmed to dial a phone number at one of five speeds. This parameter determines the number of digits or pulses per second. If nothing is entered for the parameter, the terminal will dial a normal 10 digits per second or 10 pulses per second.

Entry	Speed
0	5 per second; very slow dial
1	7 per second; slow dial
2	10 per second; normal dial
3	15 per second; fast dial
4	20 per second; very fast dial

Note: The Canadian Department of Communications (DOC) does not permit dialing speeds greater than 10 digits or pulses per second to be used in Canada.

Parallel Phone Available Flag

Memory Location: 0012
Character Type: Numeric
Field Length: 1 character

This parameter indicates if a standard telephone is connected to the same telephone line as the TRANZ 380 terminal. This flag permits the automatic dialing of the call center of the "PICK-UP CARD" phone number provided the host computer sends a RealShare or VISA second generation type message with an autodial command.

Enter a "0" if a phone is not connected. Enter a "1" if a phone is connected.

Note: The TRANZ 380 terminal beeps when either of the automatic phone numbers is dialed, indicating that the clerk should pick up the handset for instructions.

Number of Retries

Memory Location: 0013
Character Type: Numeric
Field Length: 1 character

You can select the number of times the TRANZ 380 terminal will redial a telephone number for a transaction before giving up. For example, if a "5" is entered, the terminal will dial the primary phone number up to five times followed by the secondary phone number five times. The terminal won't stop dialing until the other phone is answered or if the number of attempts indicated here are made. If no entry is made for this memory location, the terminal will default to three attempts.

Telephone Line Test

Memory Location: 0014
Character Type: Numeric
Field Length: 1 character

This parameter tests the telephone line to determine if another telephone is being used on the same line. If the test is activated and a phone is being used, the terminal will not perform the transaction until the line is free.

The line test also enables the TRANZ 380 terminal to interact with the control signals of standard key telephone systems. In a key system, the A/A1 wires on a telephone line indicate when a call is on hold. To work on a key system, the TRANZ 380 must enable A/A1 control.

Note: A/A1 activation support is available only as a special order option. If you require this support, please call your VeriFone sales representative.

There are four options for this parameter.

Entry	Description
0	Activate A/A1, do line test.
1	Activate A/A1, don't do line test.
2	Don't activate A/A1, do line test.
3	Don't activate A/A1, don't do line test.

Delay Before Auto Answer

Memory Location: 0015
Character Type: Numeric
Field Length: 3

This parameter allows you to set the delay in seconds before the terminal answers an incoming call after the first ring. The maximum value is 999 seconds. Memory location 0038 must contain a control string before the auto answer feature will be enabled.

Encrypted Working Key/ Master Key Pointer

Memory Location: 0016
Character Type: Alphanumeric
Field Length: 18

This parameter allows you to obtain an encrypted PIN block from a VeriFone PIN pad when the *H command is executed. The terminal expects location 0016 to contain the Encrypted Working Key and a pointer to which of the ten PIN pad working keys is to be used. The format of the data in location 0016 is as follows:

0016=nnnnnnnnnnnnnnnn-x

where:

n	=	Encrypted Working Key hexadecimal digit
-	=	Mandatory data separator
x	=	Master Key Pointer (0-9)

RECALL, Set Clock, Unit-to-Unit Restriction Flag

Memory Location: 0017
Character Type: Numeric
Field Length: 1 character

This parameter allows you to protect memory from unauthorized or accidental alteration by putting a password restriction on the RECALL, clock setting and terminal-to-terminal download functions. If you enter a non-zero number in location 0017, the system password Z66831 will be required for these functions. If you enter a zero for location 0017, the password will not be required.

Application ID

Memory Location: 0019
Character Type: Alphanumeric
Field Length: Up to 7 characters

The application ID identifies a custom application file name to the download computer. With this ID, the download computer can select the correct application and download it to the terminal. Obtain the application ID from the person responsible for maintaining the download computer.

If the memory location is empty, the terminal will automatically prompt you for the download data.

Idle Prompt

Memory Location: 0030
Character Type: Alphanumeric
Field Length: Up to 16 characters

The standard TRANZ 380 idle prompt is the day of the week, date and time in the following format:

WWW MM/YY hh:mma

where:

WWW	=	3-character day of week
MM	=	numeric month
YY	=	numeric year
hh	=	hours in 12-hour format
:	=	"blinking" colon
mm	=	minutes
a	=	AM or PM indicator

You can change the display by entering a new prompt in memory location 0030. Any message can be entered, such as "READY" or "HELLO," in up to 16 alphanumeric characters. If memory location 0030 is empty, the terminal will display the default idle prompt: day of week, date and time.

If the first character in memory location 0030 is a "." (period), the operating system will use the remaining characters as format information for the date and time. The characters are described in the TCL command J. (See Appendix D for how the TCL command J has been enhanced for the TRANZ 380.) The time may be represented in either a 12- or 24-hour format.

Example: to display "MY BANK hh:mm"

where:

"hh" is hours in a 24-hour format, ":" is a blinking colon and "mm" is minutes

The user would store the string: ".UMY UBUAUNUK SKRTE"

where:

.	=	time format information flag
UM	=	M
Y	=	Y
space	=	space
UB	=	B
UA	=	A
UN	=	N
UK	=	K
space	=	space
S	=	suppress leading zeroes
K	=	hours in 24-hour mode
R	=	allow leading zeroes
T	=	blinking colon
E	=	minutes

Function Keys #1-6, #9

Memory Location: 0031-0036, 0039
Character Type: Alphanumeric
Field Length: 120 characters

These parameters can be used by an application to perform local functions. Each function key is accessed by pressing [FUNC/ENTER] followed by the appropriate numeric key ([1], [2], [3]...[6], [9]). This then executes the control string in the corresponding memory location (0031, 0032, 0033... 0036, 0039).

Out of Memory Control String

Memory Location: 0037
Character Type: Alphanumeric
Field Length: 120 characters

This parameter can be used by the application to automatically delete old data if the TRANZ 380 detects that all available memory is already in use.

This location is usually empty and must be custom programmed for each application to utilize this feature.

Auto Answer Control String

Memory Location: 0038
Character Type: Alphanumeric
Field Length: Up to 120 characters

This parameter enables the TRANZ 380 to respond to an incoming telephone ring and communicate with another dial-up device.

This memory location is usually empty and needs to be programmed for the auto answer control string to support communication between the TRANZ 380 and the remote dial-up device.

Memory Dial Phone Numbers

Memory Location: 0040-0099 (General Records)
Character Type: Alphanumeric
Field Length: Up to 60 characters

Caution: *Some of these memory locations may contain application program data. Refer to your application reference manual to see which of these locations are available before entering memory dial phone numbers.*

For convenient memory dialing you can store frequently called telephone numbers in the memory locations reserved for general records. To use this feature, press the [0] key after the idle prompt and then enter the memory location that contains the phone number you want to dial.

The phone number may contain up to 60 characters including the numerals 0 through 9 and a two-second pause (-) character.

You can enter an access code with the phone number and, if needed, separate the two by inserting one pause character for each two-second pause between them. For example, if you enter the common outside line access

code "9" followed by a dash (-) and the phone number, the terminal will dial the 9, pause two seconds, then continue dialing the phone number.

Note: Do not add a dash (-) in the middle of a phone number. This will create an unnecessary delay in dialing the number. The pause character is intended only for use between access codes and phone numbers.

Printer Type

Memory Location: 0950
Character Type: Numeric
Field Length: 1 character

This parameter allows you to specify the type of printer you have connected to the TRANZ 380 terminal. There are currently four options.

Entry	Printer Type
0	No printer
1	Generic roll printer
2	Printer 250 / Printer 600
3	Printer 150 / Printer 500

Printer 250 Paper Advance

Memory Location: 0951
Character Type: Numeric
Field Length: 3 characters

This parameter allows you to specify the number of line feeds a Printer 250 roll printer will automatically advance after printing a receipt or transaction record. The default number of line feeds is 6. However, you can enter any number from 1-255.

Generic Printer Baud Rate

Memory Location: 0952
Character Type: Numeric
Field Length: 1 character

This parameter specifies the serial port baud rate if the printer type is set for generic roll printer (0950=1).

Entry	Baud Rate
0	300 baud (default)
1	600 baud
2	1200 baud
3	2400 baud
4	4800 baud
5	9600 baud
6	19200 baud

Generic Printer Data Format

Memory Location: 0953
Character Type: Numeric
Field Length: 1 character

This parameter specifies the data format for the serial port if the printer type is set for a generic roll printer (0950=1).

Entry	Data Format
0	7 data bits, even parity, 2 stop bits (default)
1	8 data bits, no parity, 2 stop bits

Generic Printer Handshake

Memory Location: 0954
Character Type: Numeric
Field Length: 1 character

This parameter determines the type of handshaking used on the serial port if the printer type is set for generic roll printer (0950=1).

Entry	Handshake
0	Hardware (CTS/RTS default)
1	None

Bell/CCITT Mode

Memory Location: 0958
Character Type: Numeric
Field Length: 1 character

This parameter allows you to set the internal modem to either Bell or CCITT mode.

Note: This feature is not available for all versions of the TRANZ 380.

Entry	Mode
<empty>	Bell
0	Bell
1	CCITT

Dial-Up Line Upload/Download Speed

Memory Location: 0960
Character Type: Numeric
Field Length: 1 character

This parameter is for specifying the communications speed (baud rate) used when uploading or downloading information over a public dial-up line. The baud rate you specify must match the baud rate used by the device your TRANZ 380 is communicating with.

If the memory location is empty, the terminal will automatically prompt you for the download data.

Entry	Baud Rate
<empty>	300 Baud
1	300 Baud
2	1200 Baud

Auto Answer Speed

Memory Location: 0965
Character Type: Numeric
Field Length: 1 character

This parameter is used for specifying the communications speed (baud rate) used when the host computer calls the terminal.

Entry	Baud Rate
<empty>	300 Baud
1	300 Baud
2	1200 Baud

Auto Answer Processing

Memory Location: 0966
Character Type: Numeric
Field Length: 1 character

This parameter allows control over how the terminal will respond when it auto-answers calls from the host computer.

Entry	Process
<empty>	Go off-hook, wait 2 seconds, execute Control String in 0038
2	Go off-hook, wait 2 seconds, execute Control String in 0038
1	Go off-hook, wait 2 seconds, raise answer carrier, execute Control String in 0038
0	Go off-hook, wait 2 seconds, raise answer carrier, wait for ENQ, execute Control String in 0038

Auto Answer Packet Inactivity Timeout

Memory Location: 0967
Character Type: Numeric
Field Length: 1 character

This parameter determines how long the terminal will remain off hook without any communications activity from the host.

Entry	Timeout Length
0	Multiple transactions disabled
1	20 seconds
2	40 seconds
3	60 seconds
4	80 seconds
5	100 seconds
6	120 seconds

Entry	Timeout Length
7	140 seconds
8	160 seconds
9	90 minutes

PIN Pad/ Bar Code Wand Serial Port Function

Memory Location: 0970
Character Type: Numeric
Field Length: 1 character

If you wish to use the PIN Pad/Bar Code Wand port, you must specify its function by identifying the device connected to it. Enter the desired number from the table below. If you are not using the port, leave this location empty or enter a "0."

Entry	Function
<empty>	Nothing Connected
0	Nothing Connected
1	Bar Code Wand
2	PIN Pad
3	General Communications Device

Line Recovery Time

Memory Location: 0975
Character Type: Numeric
Field Length: 1 character

When the terminal attempts to dial out and determines that the line is already in use, it will wait until the line becomes available. This parameter determines how long the terminal will remain on hook once the line is available to allow the phone company enough time to disconnect the line and prepare for the next call. Acceptable values for this parameter are in the range of 1 to 255 seconds with a default value of 3 seconds.

Free Memory Reclamation Parameter

Memory Location: 0977
Character Type: Numeric
Field Length: 1 character

This parameter controls how memory is made available for re-use once the data in it has been deleted. It is usually empty and should be custom programmed for each application to utilize the various options. If this location is empty, the default is "0": "Reclaim 1 piece of free memory after every store operation."

Entry	Description
0	Reclaim 1 piece of free memory after every store operation.
1	Reclaim 1 piece of free memory after each transaction or function.
2	Reclaim all free memory after each transaction or function.
3	Do not reclaim free memory.

Abort Control String

Memory Location: 0979
Character Type: Alphanumeric
Field Length: 60 characters

This parameter can be used to provide customized processing each time the terminal powers up, or a transaction or local function is completed. This location is usually empty and must be custom programmed for each application to utilize this feature.

Delay Executing Idle Loop Control String

Memory Location: 0980
Character Type: Alphanumeric
Field Length: Up to 120 characters

This parameter is used in conjunction with the other Idle Loop parameters (0981, 0982, 0983 and 0984). It specifies the time in seconds between each execution of the Idle Loop Control String (0981).

Idle Loop Control String

Memory Location: 0981
Character Type: Alphanumeric
Field Length: Up to 120 characters

This parameter allows you to program the TRANZ 380 to perform specific tasks while the terminal is in the idle state. It is used in conjunction with the other Idle Loop parameters (0980, 0982, 0983 and 0984).

As an example, the terminal can be programmed to check the current time to see if it has exceeded a predetermined trigger time then automatically dial up a remote host to upload captured records.

Idle Loop Phone Number

Memory Location: 0982
Character Type: Alphanumeric
Field Length: Up to 60 characters

This parameter is used in conjunction with the other Idle Loop parameters (0980, 0981, 0983 and 0984). It specifies the phone number to dial for host communications initiated from the Idle Loop Control String (0981).

Idle Loop Response Analysis Control String

Memory Location: 0983
Character Type: Alphanumeric
Field Length: Up to 120 characters

This parameter is used in conjunction with the other Idle Loop parameters (0980, 0981, 0982 and 0984). It contains the control string used to analyze the response received from a host when the transaction is initiated from the Idle Loop Control String (0981).

Idle Loop Inactivity Timeout

Memory Location: 0984
Character Type: Alphanumeric
Field Length: Up to 60 characters

This parameter is used in conjunction with the other Idle Loop parameters (0980, 0981, 0982 and 0983). It specifies the time in seconds the TRANZ 380 will wait before disconnecting the phone line when performing multiple transactions from the Idle Loop Control String (0981).

Host for Card Transactions

Memory Location: 0985
Character Type: Numeric
Field Length: 1 character

This parameter specifies which host transaction key control string will be executed when a card is swiped through the reader from the idle state. Valid entries for this parameter are 1 through 9 with the default being 1.

Host for Bar Code Transactions

Memory Location: 0986
Character Type: Numeric
Field Length: 1 character

This parameter specifies which host transaction key control string will be executed when a bar code is swiped through the reader from the idle state. Valid entries for this parameter are 1 through 9 with the default being 2.

Communication Error Control String

Memory Location: 0990
Character Type: Alphanumeric
Field Length: 60 characters

By default, communication errors result in the display of an error message and the termination of the transaction in progress. This parameter is used to allow the TRANZ 380 to customize the processing of communication errors.

This location is usually empty and must be custom programmed for each application to utilize this feature.

VeriFone Control String

Memory Location: 0997
Character Type: Alphanumeric
Field Length: 120

This control string is reserved for VeriFone use, specifically, VeriFone testing purposes. A control string may be located here and executed via the TRANZ 380 Diagnostics Menu (see page 8-3).

Programming Error Recovery Log

Memory Location: 0999
Character Type: Alphanumeric
Field Length: 60

An error condition may occur when the TRANZ 380 is in any of its five modes of operation that requires access to nonvolatile RAM and a checksum error is noted. If you elected to log the programming error event, the result will be in this memory location. See pages 5-11 and 5-12 for more information on programming errors and recovery.

Date and Time Transfer

Memory Location: 1000
Character Type: Alphanumeric
Field Length: Up to 120

This parameter enables or disables the transfer of the master terminal's date and time to the slave terminal during a terminal-to-terminal download. A value of "1" enables the transfer of the date and time; a value of "0", or if this location is empty, disables the transfer.

7. Transaction Parameters

Transaction Parameters

The TRANZ 380 must be configured with transaction parameters to perform transactions with a host computer. These parameters are stored in the memory locations associated with the terminal's nine transaction keys. Transaction parameters contain information that relates specifically to a host computer, such as the host telephone number or your merchant ID number. The parameters also relate to the type of transaction, whether you're performing a credit card authorization or a check authorization.

If you are using the standard application with your TRANZ 380 terminal, this section provides the background you need to enter these parameters. However, if you are using a custom application, these parameters may not apply to your terminal. Refer to your custom application manual for specific transaction information.

The TRANZ 380 accepts nine sets of transaction parameters. Each set is directly associated with one of the host transaction keys numbered 1 through 9.

By pressing one of these keys, you can initiate the desired transaction with the proper parameters for the host computer. For example, when you press [2], you initiate a transaction using parameters in memory locations 0200 through 0212.

Table 7-1. Transaction Parameters

Memory Location	Description (X = transaction key on keypad)
0X00	Primary Phone Number
0X01	Secondary Phone Number
0X02	Call Center Phone Number
0X03	Referral Phone Number
0X04	Merchant/Terminal ID
0X05	Message Format Flag
0X06	Fraud Control Flag
0X07	Transaction Control String
0X08	Transaction Type Prompt
0X09	Floor Limit
0X10	Response Analysis Control String
0X11	Auxiliary Control String
0X12	Multiple Transaction Group Code
0020-0029	Login Strings

Primary Phone Number

Memory Location: 0100, 0200, 0300, 0400, 0500, 0600, 0700, 0800, 0900
Character Type: Alphanumeric
Field Length: Up to 32 characters

This is the host computer telephone number the TRANZ 380 terminal automatically dials when you press the corresponding transaction key. Unless the application directs the terminal not to call this number, this is the first number the terminal will call. The terminal accepts up to nine primary telephone numbers, one for each host transaction key. The primary phone number may contain up to 32 characters including the numerals 0 through 9 and a two-second pause (-) character.

You can enter an access code with the phone number and, if needed, separate the two by inserting the pause character between them. For example, if you enter the common outside line access code "9" followed by a dash (-) and the phone number, the terminal will dial the 9, pause two seconds, then continue dialing the phone number.

Note: Do not add a dash (-) in the middle of a phone number. This will create an unnecessary delay in dialing the number. The pause character is intended for use between access codes and phone numbers. If the phone number is for a packet switched network such as Compuserve or Tymnet, you must add an "L" followed by the network login string number (0-9). See "Login Strings" in this section for more information.

Secondary Phone Number

Memory Location: 0101, 0201, 0301, 0401, 0501, 0601, 0701, 0801, 0901
Character Type: Alphanumeric
Field Length: Up to 32 characters

The secondary phone number is an alternate number for the host computer. Whenever the terminal cannot contact a host computer using the primary phone number, it will dial the secondary phone number. The format for secondary phone numbers is identical to the primary phone number format.

Call Center Phone Number

Memory Location: 0102, 0202, 0302, 0402, 0502, 0602, 0702, 0802, 0902
Character Type: Alphanumeric
Field Length: Up to 32 characters

This is the number to dial when you cannot contact the host computer, or when you need a voice authorization code for pre-authorized transactions. Dialing this number puts you in direct contact with the call center operator. The format for the call center phone numbers is identical to the format for the primary phone numbers.

Note: The terminal will dial the call center number automatically when:

- *A telephone is attached to the terminal;*
- *The parallel phone location is set to "1".*

- *The terminal is trying to process a VISA second generation or RealShare transaction, and;*
- *The terminal receives instructions from the host computer to auto dial the call center number.*

Referral Phone Number

Memory Location: 0103, 0203, 0303, 0403, 0503, 0603, 0703, 0803, 0903
Character Type: Alphanumeric
Field Length: Up to 32 characters

When processing a transaction, the terminal may display "PICK-UP CARD" or a similar prompt. This is to warn you that the card is either stolen, fraudulent, or has some other problems. You are required to follow the card provider's policy regarding such cards.

Upon receiving such a prompt, the terminal will automatically dial the referral phone number. The person answering the call will advise you on how to proceed.

Note: The terminal will only dial the referral phone number automatically when:

- *A telephone is attached to the terminal,*
- *The parallel phone location is set to "1".*
- *The terminal is trying to process a VISA second generation or RealShare transaction and;*
- *The terminal receives instructions from the host computer to auto dial the referral number.*

The format for the referral phone number is identical to the format for the primary phone number.

Merchant Identification Number

Memory Location: 0104, 0204, 0304, 0404, 0504, 0604, 0704, 0804, 0904
Character Type: Alphanumeric
Field Length: Up to 46 characters

This parameter (also known as the terminal ID) identifies your company and terminal to the host computer. This number is supplied by the bank or independent service provider and may contain up to 46 alphanumeric characters. A separate merchant ID is provided for each host transaction key.

Message Format Flag

Memory Location: 0105, 0205, 0305, 0405, 0505, 0605, 0705, 0805, 0905
Character Type: Numeric
Field Length: Up to 3 characters

The message format flag, or transaction format flag, tells the terminal how to format data packets for communications with the host computers. For example, a message format flag "5" can tell the terminal to send a data packet using the VISA first generation protocol, placing the transaction code before the account number, without verifying the Luhn check digit.

If nothing is entered for this parameter, the terminal will default to the standard VISA first generation format. Refer to the Appendix B in the *TCL Programmer's Manual* for specific information on the various pre-programmed protocol options.

The terminal will ignore the transaction format flag if a transaction control string memory location contains a control string (locations 0107, 0207, 0307, 0407, 0507, 0607, 0707, 0807, 0907).

Sixteen different flags available, numbered from 0 to 15. The following is a description of each flag. For more information on transaction (message) format flags, refer to the *TCL Programmer's Manual.*

Flag	Description
0	1st generation; verifying the Luhn check-digit.
1	1st generation; without verifying the Luhn check-digit.
2	2nd generation; verifying the Luhn check-digit.
3	2nd generation; without verifying the Luhn check-digit.
4	1st generation with transaction code before account number; verifying the Luhn check-digit.
5	1st generation with transaction code before account number; without verifying the Luhn check-digit.
6	2nd generation with transaction code before account number; verifying the Luhn check-digit.
7	2nd generation with transaction code before account number; without verifying the Luhn check-digit.
8	1st generation with NDC transaction code after amount; verifying the Luhn check-digit.
9	1st generation with NDC transaction code after amount; without verifying the Luhn check-digit.
10	2nd generation with NDC transaction code after amount; verifying the Luhn check-digit.
11	2nd generation with NDC transaction code after amount; without verifying the Luhn check-digit.
12	1st generation with transaction code after amount; verifying the Luhn check-digit.
13	1st generation with transaction code after amount; without verifying the Luhn check-digit.
14	2nd generation with transaction code after amount; verifying the Luhn check-digit.
15	2nd generation with transaction code after amount; without verifying the Luhn check-digit.

Fraud Control Flag

Memory Location: 0106, 0206, 0306, 0406, 0506, 0606, 0706, 0806, 0906
Character Type: Numeric
Field Length: Up to 3 characters

The fraud control flag determines the type of fraud preventive measures that will be used in a transaction. For example, a fraud control measure may require that the operator re-enter the last four digits of a card's account number.

Another measure may display the account number on the display panel so the operator can compare it with the number embossed on the card.

Although this parameter may contain up to three digits, only eight single-digit options are available at this time.

Value	Description
0	No fraud control used.
1	Enter last four digits of account number.
2	Display credit card information.
3	Combine 1 and 2.
4	Blue Box Emulator enabled.
5	Blue Box Emulator enabled, override enter last four digits.
6	Blue Box Emulator enabled, display card information.
7	Blue Box Emulator enabled, display card information, override enter last four digits.

Note: To the terminal operator, options 4 and 5 are identical and options 6 and 7 are identical.

Transaction Control String

Memory Location: 0107, 0207, 0307, 0407, 0507, 0607, 0707, 0807, 0907
Character Type: Alphanumeric
Field Length: Up to 120 characters (see text)

The transaction control string controls the interactions between the terminal and the operator for a particular type of transaction. This includes the prompts on the display panel, the information that must be entered from the keypad, and the structure of information transmitted to the host computer.

A control string, consists of TRANZ 380 Terminal Control Language (TCL) commands. The control string memory locations are limited to 120 characters. However, if longer control strings are required, several of them can be linked together. Refer to the *TCL Programmer's Manual* if you want to create your own control strings.

Note: Unless a custom control string is required, this parameter can be ignored. If this memory location is empty, one of the control strings supplied with the VeriFone standard application software will be used. The standard control strings are accessed with the Transaction (or Message) Format Flag (memory locations 0105, 0205, 0305, 0405, 0505, 0605, 0705, 0805, 0905).

Transaction Type Prompt

Memory Location: 0108, 0208, 0308, 0408, 0508, 0608, 0708, 0808, 0908
Character Type: Alphanumeric
Field Length: Up to 16 characters

The transaction type prompt displays for one second, the type of transaction selected when one of the host transaction keys is pressed. For example, the prompt may be set up to read "VISA CARD" or "CHECK." You can change these prompts to reflect the type of transaction being executed.

Floor Limit

This parameter may include up to 16 alphanumeric characters.

Memory Location: 0109, 0209, 0309, 0409, 0509, 0609, 0709, 0809, 0909
Character Type: Numeric
Field Length: Up to 4 characters

In the case of smaller credit card purchases, you may prefer to carry the risk of non-payment rather than incur the cost of having every transaction authorized. The floor limit is a numeric value from 0000 to 9999. This value indicates the dollar amount up to which you will accept credit without requiring a host authorization. For example, if the parameter value is 0010, the terminal will display "BELOW MINIMUM" and abort the transaction for sales of $10 or less.

Response Analysis Control String

Memory Location: 0110, 0210, 0310, 0410, 0510, 0610, 0710, 0810, 0910
Character Type: Alphanumeric
Field Length: Up to 120 characters (see text)

This parameter is a control string used in custom applications to analyze and act on a message received from the host computer. Like other TRANZ 380 control strings, the control string memory locations are limited to 120 characters. However, if longer control strings are required, several of them can be linked together. Refer to the *TCL Programmer's Manual* for more information on Response Analysis Control Strings.

Auxiliary Control String

Memory Location: 0111, 0211, 0311, 0411, 0511, 0611, 0711, 0811, 0911
Character Type: Alphanumeric
Field Length: Up to 120 characters (see text)

The auxiliary control string, used in custom applications, can be used for a variety of tasks such as formatting and controlling the output to the printer.

This parameter is a control string used in custom applications to analyze and act on a message received from the host computer. Like other TRANZ 380 control strings, the control string memory locations are limited to 120 characters. However, if longer control strings are required, several of them can be linked together. Refer to the *TCL Programmer's Manual* for more information on Auxiliary Control Strings.

Multiple Transaction Group Code

Memory Location: 0112, 0212, 0312, 0412, 0512, 0612, 0712, 0812, 0912
Character Type: Numeric
Field Length: 1 character

A multiple transaction group consists of different transactions that share the same host computer. By assigning a common group code to each of these transactions, you can perform a number of transactions with the same host on one phone call.

For example, when you initiate a multiple transaction operation, the terminal automatically dials the host computer for the first transaction. When the first transaction is finished, the terminal will wait for you to initiate another trans-

action that shares the same group number and host computer. The terminal will remain connected to the host computer after each transaction, unless no more transactions are initiated within a specific length of time (see multiple transaction timeout in Section 6).

This code is a one digit number from 1 to 9, representing the multiple transaction group. Assign the same group code number to transactions requiring communication with the same host computer.

Login Strings

Memory Location: 0020, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029
Character Type: Alphanumeric
Field Length: Up to 60 characters

A login string consists of a network code, a user name, and a password. Login strings are used only when the host computer is accessed through a private network. You do not need a login string if you dial the host computer directly.

The TRANZ 380 terminal can store up to 10 different login strings and can dial eight different networks.

Login strings are activated when the terminal dials a phone number that ends with the letter "L" followed by a numeral (0-9) that corresponds to the last digit of the login string memory location. For example, "L4" at the end of a phone number specifies login string 024 and "L7" specifies login string 0027.

The first component of the login string is a single digit network code. The different network codes currently available are as follows:

Code	Network
1	Tymnet
2	Compuserve
3	Telenet
4	Geisco
5	Nabanco/Western Union
6	Busycomm
7	Datapac (Canada – no parity)
8	Autonet
9	Connet
A	Datapac (Even parity)
B	Western Union

The second component is your network username and the third is your password to the network. The three components of the login string must be separated by dashes (Code-Username-Password).

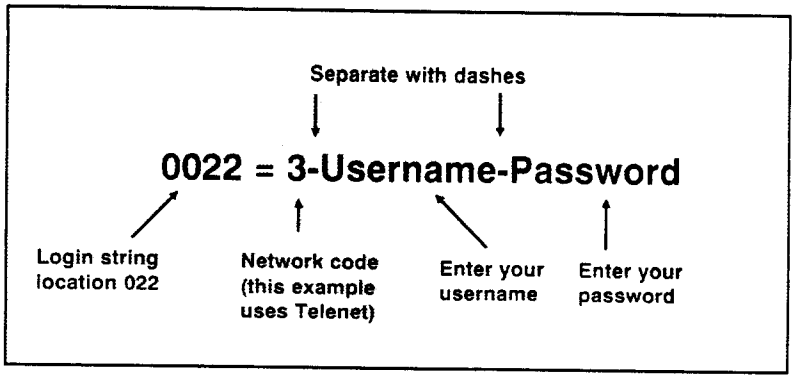


Figure 7-1. Network Login Strings

Refer to the information supplied by your network for additional information regarding your username and password.

Soft Login

TRANZ 380 features a "soft" login that can be programmed at the application level. If you wish to select a new login, use "Xn" following the phone number for the operating system to execute the login control string referenced in memory location "n".

Note: This memory location should be dedicated to perform a login and should return to allow normal transaction flows to occur once the login is completed.

The format in memory locations 0020-0029 remains the same as the logins described on the previous page, except that the first parameter represents the login control string to execute rather than a login selection. Remaining parameters (user name, user password, user location and location password) separated by a hyphen, do not change.

Refer to the +P, +X and +Y commands in the *TCL Programmer's Manual* for information on setting soft login protocol parameters.

8. Maintenance and Diagnostics

VeriFone follows stringent quality control standards when manufacturing the TRANZ 380 and all of its other products. Each unit that leaves the factory receives numerous tests to ensure quality and reliable operation. However, should you encounter a problem in operation, read this section for possible causes and solutions.

Error Messages

Appendix C in this manual lists the different prompts and error messages that may appear on the display panel. If you see any of these messages, refer to Appendix C or to your application manual for an explanation of the message.

Troubleshooting

These troubleshooting guidelines identify various problems and the appropriate corrective action. If you have problems operating your TRANZ 380 terminal, read these troubleshooting examples. If your problem persists, or if it is not listed here, call the **VeriFone Customer Support Hot Line** at **714-979-1870** (this number is in the U.S.A.).

Display Panel Does Not Display Correct Information

If the TRANZ 380 displays incorrect information, such as an unreadable message or nothing at all, you may have a power supply problem or a defective terminal. Follow these steps to determine the cause of the problem.

1. Check all of your cable connections and verify that your telephone line is connected properly.
2. Check your AC outlet to be sure it is supplying sufficient power.
3. Run the Display Test, as described later in this section, to ensure the display components are working.
4. Substitute your power pack with another TRANZ 380 power pack. If this solves the problem, call the VeriFone Customer Support Hot Line to obtain a replacement power pack.
5. Your application may not be properly loaded. Download your application and try again.
6. If the problem persists, call the VeriFone Customer Support Hot Line to have your terminal repaired or replaced.

Telephone Does Not Work Properly

1. Check your telephone line and telephone connections.
2. Check the phone lines using another standard telephone. If the other telephone works, have your telephone repaired or replaced.
3. If using another TRANZ 380 or telephone does not work, have your phone line serviced.

Printer Does Not Work

1. Check that you are using the proper cable and that all the cable connections for the printer are connected to the TRANZ 380.
2. Check the AC outlet for the printer to be sure it is supplying sufficient power.
3. Use the RECALL function to ensure that memory location 0950 contains the correct data for your printer type ("1" for a generic roll printer; "2" for the Printer 250 and the Printer 600; "3" for the Printer 150 and the Printer 600). See Printer Type in Section 6.
4. Refer to the instructions supplied with the printer for further information.

Bar Code Wand Does Not Work

1. Check all of your cable connections.
2. Draw the wand across a different bar code to ensure the problem is not an unreadable bar code on the label.
3. Use the RECALL function to verify that memory location 0970 contains the number "1" indicating bar code wand operation.
4. Run the Bar Code test as described later in this section.

PIN Pad Does Not Work

1. Check all of your cable connections.
2. Try a different credit card to ensure the problem is not a defective card.
3. Use the RECALL function to verify that memory location 0970 contains the number "2" indicating PIN Pad operation.
4. Call the VeriFone Customer Support Hot Line for further instructions.

Terminal Transactions Do Not Work

1. Perform your transactions using several credit cards to ensure the problem is not a defective card. When sliding the cards through the cardreader, be sure the magnetic stripe faces down and to the right of the terminal.
2. Your application may not be properly loaded. Download your application and try again.
3. Perform a manual transaction using the keypad instead of the cardreader. If the transaction works, call the VeriFone Customer Support Hot Line to have your terminal repaired or replaced.
4. If the manual transaction does not work, check your telephone line using another TRANZ 380 or a standard telephone.
5. If the telephone line does not work, check with the party you are trying to call to see if their system is operational and have your line checked by your telephone company.
6. If the telephone line works, call the VeriFone Customer Support Hot Line to return your terminal for service.

Keypad Does Not Respond

1. Check your display panel. If it displays the wrong characters or nothing at all, refer to the first item in this troubleshooting section, "Display Panel Does Not Display Correct Information".
2. Press several keys. If memory location 0009 contains a "0" or is <empty>, you should hear a short beep each time you press a key. If key beep works, check your application manual to be sure you are entering the correct data.
3. Run the Keypad Test as described later in this section to ensure the keypad components are working properly.
4. Your application may not be properly loaded. Download your application and try again.
5. If memory location 0009 contains a "0" or is <empty> and you do not hear any beep, or if the keys do not operate as the application says they should, call the VeriFone Customer Support Hot Line.

TRANZ 380 Diagnostics

The TRANZ 380 has a built-in diagnostic mode to help you perform various tests and operations using the TRANZ 380 keypad. The following instructions describe how to enter the diagnostic mode and perform the different routines available.

Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the key that corresponds to the function you want. The functions available are:

Key	Function
[0]	Display Messages Test
[1]	Memory Test
[2]	Keypad Test
[3]	Display Test
[4]	Cardreader Test
[9]	Transaction Simulation
[#]	Execute VeriFone Control String
[ALPHA]	Set Clock
[BACKSPACE]	Bar Code Test
[CLEAR]	Return to Idle Prompt

Display Messages Test

This test displays all status and error messages and fixed prompts contained in the terminal.

Display	Response
1. (idle prompt)	Press [*] and [3] simultaneously
2. DIAGNOSTICS	Press [0].
3. XXK RAM IN TERM	Amount of RAM in your terminal. XX = 64 or 128 depending on your RAM configuration.

Display	Response
4. 12XXXXXX	12" followed by the Permanent Terminal ID Number. Press [ENTER] to scroll forward. *Note: See page 4-7 for more information on the Permanent Terminal ID Number.* *Note: Not all versions of the TRANZ 380 support a Permanent Terminal ID Number, nor do all countries require it.*
5. TZ 380 (firmware)	"Firmware" is the EPROM version number. Press [ENTER] once for each message to be displayed, or press [CLEAR] to end the routine.
6. (various messages)	
7. (idle prompt)	

Memory Test

This test checks the TRANZ 380's RAM memory.

Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the [1] key for the Memory Test function.
3. MEMORY TEST	The TRANZ 380 will run the memory test on RAM. Press and hold down [CLEAR] to return to the idle prompt.

Keypad Test

The keypad test determines if the TRANZ 380 keys are functioning properly.

Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the [2] key for the Keypad Test. Press any key. The number or character will appear in every character segment of the display panel. Pressing the [BACKSPACE], [ALPHA], or [FUNC/ENTER] keys will display the characters B, C, and D respectively. If none of the keys respond, the problem may be with your display panel or power pack. Perform the Display Test and check the power pack before calling the VeriFone Customer Support Hot Line.

Display	Response
	If one or only several keys do not respond, call the VeriFone Customer Support Hot Line to have your unit repaired or replaced. • To return to the idle prompt, press the [CLEAR] key.

Display Test

The Display Test consists of three different display patterns that verify the lights in the display panel are working.

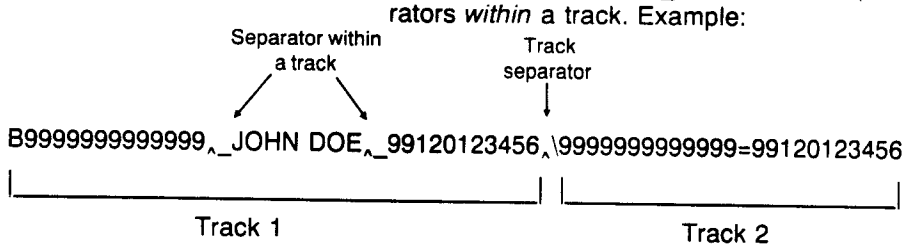
Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the [3] key for the Display Test function.
3. (display patterns)	These three displays will appear, one after another, on the display panel.
,,*,*,*,*,*,*,*,*,*,*,*,*,*,*, 0000000000000000 *0,	Check the different test patterns to be sure all of the segments are lighting properly. Be sure that the third test only displays three characters. If more characters are displayed, the display is "ghosting." If some of the segments are not lit, or if the displays do not match what you see in this manual, call the VeriFone Customer Support Hot Line to have your unit repaired or replaced.
4. DIAGNOSTICS	When the Display Test is complete, the terminal will return to the diagnostic mode. Press [CLEAR] to return to the idle prompt.

Cardreader Test

This test checks the operation of the Cardreader.

Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the [4] key for the Cardreader Test function.
3. WIPE CARD NOW	Place a credit card in the back of the slot with the magnetic stripe down and towards the right of the TRANZ 380 terminal. Briskly slide the card toward you without stopping.
4. (account number)	The account number on the card will appear in the display panel if the test is successful.

Display	Response
	This test verifies both card tracks and separates the two on the display with the symbols ^\ . Carats/underlines ^_ are used as separators *within* a track. Example:



Use the [#] key to scroll the display eight characters to the right. Keep using the [#] to scroll until you come to the end of the data. To scroll the display eight characters to the left, use the [*] key.

If the cardreader test is not successful, you will receive an error code. A carat followed by any letter and then the track separator, indicates that the track was not read. For example, ^B^\123 would mean that track 1 was not read. If you receive an error code, repeat the procedure with another card or try swiping the card slower. If the problem persists, call the VeriFone Customer Support Hot Line.

Resetting the Calendar/Clock

This operation is described in Section 5 under the heading Resetting the Calendar/Clock.

Bar Code Wand Test

The test checks the operation of the Bar Code Wand.

Display	Response
1. (idle prompt)	Simultaneously press the [*] and [3] keys.
2. DIAGNOSTICS	Press the [BACKSPACE] key for the Bar Code Wand Test function.
3. BAR CODE TEST	Draw the bar code wand across a bar code.
4. (bar code information)	If the test is successful, the display panel will show the encoded bar code information. If the test is not successful, you will receive an error message. If this occurs, repeat the procedure with another bar code. If the problem persists, call the VeriFone Customer Support Hot Line to have your unit repaired or replaced. Press the [CLEAR] key to return to idle prompt.

TRANZ 380 Transaction Simulation

The following two tests allow you to run demonstration transactions from the cardreader and keypad.

Cardreader Entry

	Display	Response
1.	(idle prompt)	Simultaneously press the [*] and [3] keys.
2.	DIAGNOSTICS	Press [9].
3.	ENTER ACCOUNT #	Swipe the card through the reader with its magnetic stripe facing the keyboard.
4.	AMOUNT OF SALE?	Enter in the amount of sale on the keypad.
5.	DIALING TRANSMITTING RECEIVING DEMO APPROVAL XXXXXX	Dialing to approval takes 25 seconds. The approval is a randomly-selected number and will remain displayed for 15 seconds. The display then returns to the idle prompt.

Keypad Entry

	Display	Response
1.	(idle prompt)	Simultaneously press the [*] and [3] keys.
2.	DIAGNOSTICS	Press [9].
3.	ENTER ACCOUNT #	Enter the account number on the keypad.
4.	ENTER DATE	Enter the expiration date of the card. The number should not exceed four digits.
5.	AMOUNT OF SALE?	Enter the amount of sale on the keypad.
6.	DIALING TRANSMITTING RECEIVING DEMO APPROVAL XXXXXX	Dialing to approval takes 25 seconds. The approval is a randomly-selected number and will remain displayed for 15 seconds. The display then returns to the idle prompt.

VeriFone Customer Support Hot Line

If you cannot resolve your problem with the troubleshooting tips (starting on page 8-1), performing diagnostics (starting on page 8-3), or if you have been instructed in this manual to call the VeriFone Customer Support Hot Line, then dial **714-979-1870** (this number is in the U.S.A.).

Returning the TRANZ 380 Terminal for Service

Unless otherwise instructed in this reference manual, do not, under any circumstances, attempt any service, adjustments or repairs on this unit. Before returning a unit to VeriFone, you must obtain a Merchandise Return Authorization (MRA) number.

Follow these procedures to ensure optimum service:

1. Before calling VeriFone, gather the following information:
   - Model(s) to be returned—use the model and/or VFI part number. The part number is usually located on the bottom of the unit. For example: TRANZ 380 terminal, part number P036-001-08.
   - Serial number(s) of equipment (usually located on the bottom of the unit)
   - Brief description of the problem
   - Billing address
   - Shipping address—this is where the unit(s) will be returned
2. If you are located in the United States, call **800-654-1674**. This is the **VeriFone Customer Support Hot Line**.
3. If you are located outside of the United States, call **714-979-1870** (this number is in the U.S.A.).
4. Ask for the MRA Department, which is open 7 a.m. to 5 p.m. Pacific Standard Time.
5. Give the MRA representative the same information as outlined in Step 1.
6. If the list of serial numbers is lengthy, you may want to fax the list, with all of the information detailed in Step 1, to the MRA Department. Include both a phone number where you can be reached and your fax number. Please print clearly and send your fax to the attention of the "MRA Dept." at 714-434-2498 or 714-434-2499. You will be issued an MRA number and the fax will be returned to you.
7. There is only one MRA number issued per model, even if there are several units (therefore several serial numbers) belonging to that particular model.
8. Be sure to record and keep:
   - MRA number(s)
   - Serial numbers of all units being returned
   - Shipping documentation (such as airbill numbers)

Cleaning

Periodically clean your TRANZ 380 terminal using a cloth dampened with water and a mild soap or cleaner. Do not use harsh chemicals. Because your terminal can be damaged by liquids, do not spray liquid cleaners directly on the terminal. Always apply the cleaner to the cloth before cleaning the TRANZ 380.

Appendix A. Memory Locations

Functional Listing of Memory Locations

The following is a functional listing of the TRANZ 380 terminal memory locations. A numeric listing of these memory locations follows.

Terminal Parameters

Memory Location	Description
0000	Download Phone Number
0001	Serial Number
0004	Program Date
0005	Transaction Sequence Number
0006	Scroll Length Flag
0007	Multiple Transaction Timeout
0008	Reserved
0009	Terminal Key Beep
0010	Dial Type Flag
0011	Dial Speed Flag
0012	Parallel Phone Available Flag
0013	Number of Attempts
0014	Telephone Line Test
0017	RECALL, Clock, Unit/Unit Restriction
0019	Application ID
0030	Idle Prompt
0950	Printer Type Flag
0951	Printer 250 Paper Advance (Number of Line Feeds)
0958	Bell/CCITT Mode
0960	Dial-up Line Upload/Download Speed
0970	Pin Pad/Bar Code Wand Port Function
0975	Line Recovery Time
0977	Free Memory Reclamation Parameter
0985	Host # for Card Initiated Transactions
0986	Host # for Bar Code Initiated Transactions
1000	Date and Time Transfer

Buffers

Memory Location	Description
0002	Transmit Buffer
0003	Receive Buffer
0018	Error Statistics Buffer

Login Strings and Function Key Control Strings

Memory Location	Description
0020	Login String #0
0021	Login String #1
0022	Login String #2
0023	Login String #3
0024	Login String #4
0025	Login String #5
0026	Login String #6
0027	Login String #7
0028	Login String #8
0029	Login String #9
0031	Function Key #1
0032	Function Key #2
0033	Function Key #3
0034	Function Key #4
0035	Function Key #5
0036	Function Key #6
0039	Function Key #9

General Records

Memory Locations	
0016	0513-0599
0040-0099	0613-0699
0113-0199	0713-0799
0213-0299	0813-0899
0313-0399	0913-0949
0413-0499	1050-1999

Auto Answer

Memory Location	Description
0015	Delay Before Auto Answer
0038	Auto Answer Control String
0965	Auto Answer Speed
0966	Auto Answer Processing
0967	Auto Answer Packet Inactivity Timeout

Idle Loop

Memory Location	Description
0980	Delay Executing Idle Loop Control String
0981	Idle Loop Control String
0982	Idle Loop Phone Number
0983	Idle Loop Response Analysis Control String
0984	Idle Loop Inactivity Timeout

Printer Information

Memory Location	Description
0950	Printer Type Flag
0951	Printer 250 Paper Advance
0952	Baud for Generic Roll Printer
0953	Data Format for Generic Roll Printer
0954	Handshake for Generic Roll Printer

Host Parameters

Note: The following memory locations have been truncated from 4 digits to 3. Each memory location in the table below is preceded by a "0".

Parameter / *Transaction Key*	Memory Location *#1*	*#2*	*#3*	*#4*	*#5*	*#6*	*#7*	*#8*	*#9*
Primary Phone Number	100	200	300	400	500	600	700	800	900
Secondary Phone Number	101	201	301	401	501	601	701	801	901
Call Center Phone Number	102	202	302	402	502	602	702	802	902
Referral Phone Number	103	203	303	403	503	603	703	803	903
Merchant/Terminal ID	104	204	304	404	504	604	704	804	904
Message Format Flag	105	205	305	405	505	605	705	805	905
Fraud Control Flag	106	206	306	406	506	606	706	806	906
Transaction Control String	107	207	307	407	507	607	707	807	907
Transaction Type Prompt	108	208	308	408	508	608	708	808	908
Floor Limit	109	209	309	409	509	609	709	809	909
Response Analysis Ctrl String	110	210	310	410	510	610	710	810	910
Auxiliary Control String	111	211	311	411	511	611	711	811	911
Multiple Trans Group Code	112	212	312	412	512	612	712	812	912

Miscellaneous

Memory Location	Description
0016	Encrypted Working Key/Master Key Pointer
0037	Out of Memory Control String
0979	Abort Control String
0990	Communication Error Control String
0997	VeriFone Control String
0999	Programming Error Recovery Log

Reserved for Future Use

Memory Location
0955-0957
0959
0961-0964
0968-0969
0971-0974
0976

Memory Location
0978
0987-0989
0991-0996
0998
1001-1049

Numeric Listing of Memory Locations

In addition to the memory location number and description, this numeric listing also includes the character type and the field lengths for the TRANZ 380 memory locations. The character type indicates which characters are permitted in these memory locations. "X" represents alphanumeric characters which include the letters A through Z, the numerals 0 through 9, and special characters * , ' " - # and (space). "9" represents the numeric characters 0 through 9. The field length indicates the maximum number of characters that can be stored in the memory location.

Sections 6 and 7 provide detailed information on the memory locations used with the TRANZ 380 standard application.

Memory Location	Character Type*	Field Length	Description
0000	X	20	Download Phone Number
0001	X	10	Serial Number
0002	—	—	Transmit Buffer
0003	—	—	Receive Buffer
0004	9	6	Program Date
0005	9	4	Message Sequence Number
0006	9	2	Number of Characters to Scroll
0007	9	1	Multiple Transaction Timeout
0008	9	5	Reserved
0009	9	1	Beeper On/Off
0010	9	1	Dial Type Flag (Tone/Pulse)
0011	9	1	Dial Speed Flag
0012	9	1	Parallel Phone Available Flag
0013	9	1	Number of Retries
0014	9	1	Line Test
0015	9	3	Delay Before Auto Answer
0016	X	18	Encrypted Working Key/Master Key Pointer
0017	9	1	RECALL, Clock, Unit/Unit Restriction
0018	9	16	Error Statistics
0019	X	7	Application Identification
0020	X	60	Login String #0
0021	X	60	Login String #1
0022	X	60	Login String #2
0023	X	60	Login String #3

* X = alphanumeric; 9 = numeric

Memory Location	Character Type*	Field Length	Description
0024	X	60	Login String #4
0025	X	60	Login String #5
0026	X	60	Login String #6
0027	X	60	Login String #7
0028	X	60	Login String #8
0029	X	60	Login String #9
0030	X	16	Idle Prompt
0031	X	120	Function Key #1 Control String
0032	X	120	Function Key #2 Control String
0033	X	120	Function Key #3 Control String
0034	X	120	Function Key #4 Control String
0035	X	120	Function Key #5 Control String
0036	X	120	Function Key #6 Control String
0037	X	120	Out of Memory Control String
0038	X	120	Auto Answer Control String
0039	X	120	Function Key #9 Control String
0040 to 0099	X	120	General Records 0040 to 0099
0100	X	32	Primary Phone Number
0101	X	32	Secondary Phone Number
0102	X	32	Call Center Phone Number
0103	X	32	Referral Phone Number
0104	X	46	Merchant/Terminal ID
0105	9	3	Message Format Flag
0106	9	3	Fraud Control Flag
0107	X	120	Transaction Control String
0108	X	16	Transaction Type Prompt
0109	9	4	Floor Limit
0110	X	120	Response Analysis Control String
0111	X	120	Auxiliary Control String
0112	9	1	Multi-Transaction Group Code
0113 to 0199	X	120	General Records 0113 to 0199
0200	X	32	Primary Phone Number
0201	X	32	Secondary Phone Number
0202	X	32	Call Center Phone Number
0203	X	32	Referral Phone Number
0204	X	46	Merchant/Terminal ID
0205	9	3	Message Format Flag
0206	9	3	Fraud Control Flag
0207	X	120	Transaction Control String
0208	X	16	Transaction Type Prompt
0209	9	4	Floor Limit
0210	X	120	Response Analysis Control String

* X = alphanumeric; 9 = numeric

Memory Location	Character Type*	Field Length	Description
0211	X	120	Auxiliary Control String
0212	9	1	Multi-Transaction Group Code
0213 to 0299	X	120	General Records 0213 to 0299
0300	X	32	Primary Phone Number
0301	X	32	Secondary Phone Number
0302	X	32	Call Center Phone Number
0303	X	32	Referral Phone number
0304	X	46	Merchant/Terminal ID
0305	9	3	Message Format Flag
0306	9	3	Fraud Control Flag
0307	X	120	Transaction Control String
0308	X	16	Transaction Type Prompt
0309	9	4	Floor Limit
0310	X	120	Response Analysis Control String
0311	X	120	Auxiliary Control String
0312	9	1	Multi-Transaction Group Code
0313 to 0399	X	120	General Records 0319 to 0399
0400	X	32	Primary Phone Number
0401	X	32	Secondary Phone Number
0402	X	32	Call Center Phone Number
0403	X	32	Referral Phone Number
0404	X	46	Merchant/Terminal ID
0405	9	3	Message Format Flag
0406	9	3	Fraud Control Flag
0407	X	120	Transaction Control String
0408	X	16	Transaction Type Prompt
0409	9	4	Floor Limit
0410	X	120	Response Analysis Control String
0411	X	120	Auxiliary Control String
0412	9	1	Multi-Transaction Group Code
0413 to 0499	X	120	General Records 0413 to 0499
0500	X	32	Primary Phone Number
0501	X	32	Secondary Phone Number
0502	X	32	Call Center Phone Number
0503	X	32	Referral Phone Number
0504	X	46	Merchant/Terminal ID
0505	9	3	Message Format Flag
0506	9	3	Fraud Control Flag
0507	X	120	Transaction Control String
0508	X	16	Transaction Type Prompt
0509	9	4	Floor Limit
0510	X	120	Response Analysis Control String

* X = alphanumeric; 9 = numeric

Memory Location	Character Type*	Field Length	Description
0511	X	120	Auxiliary Control String
0512	9	1	Multi-Transaction Group Code
0513 to 0599	X	120	General Records 0513 to 0599
0600	X	32	Primary Phone Number
0601	X	32	Secondary Phone Number
0602	X	32	Call Center Phone Number
0603	X	32	Referral Phone Number
0604	X	46	Merchant/Terminal ID
0605	9	3	Message Format Flag
0606	9	3	Fraud Control Flag
0607	X	120	Transaction Control String
0608	X	16	Transaction Type Prompt
0609	9	4	Floor Limit
0610	X	120	Response Analysis Control String
0611	X	120	Auxiliary Control String
0612	9	1	Multi-Transaction Group Code
0613 to 0699	X	120	General Records 0613 to 0699
0700	X	32	Primary Phone Number
0701	X	32	Secondary Phone Number
0702	X	32	Call Center Phone Number
0703	X	32	Referral Phone Number
0704	X	46	Merchant/Terminal ID
0705	9	3	Message Format Flag
0706	9	3	Fraud Control Flag
0707	X	120	Transaction Control String
0708	X	16	Transaction Type Prompt
0709	9	4	Floor Limit
0710	X	120	Response Analysis Control String
0711	X	120	Auxiliary Control String
0712	9	1	Multi-Transaction Group Code
0713 to 0799	X	120	General Records 0713 to 0799
0800	X	32	Primary Phone Number
0801	X	32	Secondary Phone Number
0802	X	32	Call Center Phone Number
0803	X	32	Referral Phone Number
0804	X	46	Merchant/Terminal ID
0805	9	3	Message Format Flag
0806	9	3	Fraud Control Flag
0807	X	120	Transaction Control String
0808	X	16	Transaction Type Prompt
0809	9	4	Floor Limit

* X = alphanumeric; 9 = numeric

Memory Location	Character Type*	Field Length	Description
0810	X	120	Response Analysis Control String
0811	X	120	Auxiliary Control String
0812	9	1	Multi-Transaction Group Code
0813 to 0899	X	120	General Records 0813 to 0899
0900	X	32	Primary Phone Number
0901	X	32	Secondary Phone Number
0902	X	32	Call Center Phone Number
0903	X	32	Referral Phone Number
0904	X	46	Merchant/Terminal ID
0905	9	3	Message Format Flag
0906	9	3	Fraud Control Flag
0907	X	120	Transaction Control String
0908	X	16	Transaction Type Prompt
0909	9	4	Floor Limit
0910	X	120	Response Analysis Control String
0911	X	120	Auxiliary Control String
0912	9	1	Multi-Transaction Group Code
0913 to 0949	X	120	General Records 0913 to 0949
0950	X	60	Printer Type Flag
0951	X	60	Number of Line Feeds for Printer 250
0952	X	60	Baud For Generic Roll Printer
0953	X	60	Data Format For Generic Roll Printer
0954	X	60	Handshake For Generic Roll Printer
0955 to 0957	X	120	Reserved
0958	X	60	Bell/CCITT Mode
0959	X	60	Reserved
0960	X	60	Dial-up Line Upload/Download Speed
0961 to 0964	X	120	Reserved
0965	X	60	Auto Answer Speed
0966	9	1	Auto Answer Processing
0967	9	1	Auto Answer Packet Inactivity Timeout
0968 to 0969	X	120	Reserved
0970	X	60	DIN 6 Peripheral
0971 to 0974	X	120	Reserved
0975	X	60	Line Recovery Time
0976	X	60	Reserved
0977	9	1	Free Memory Reclamation Parameter
0978	X	60	Reserved
0979	X	60	Abort Control String

* X = alphanumeric; 9 = numeric

Memory Location	Character Type*	Field Length	Description
0980	X	120	Delay Executing Idle Loop Control String
0981	X	120	Idle Loop Control String
0982	X	60	Idle Loop Phone Number
0983	X	120	Idle Loop Response Analysis Control String
0984	X	60	Idle Loop Inactivity Timeout
0985	9	1	Host Number For Card Initiated Trans
0986	9	1	Host Number For Bar Code Initiated Trans
0987 to 0989	X	120	Reserved
0990	X	120	Communication Error Control String
0991 to 0996	X	120	Reserved
0997	X	120	VeriFone Control String
0998	X	120	Reserved
0999	X	60	Programming Error Recovery Log
1000	X	120	Date and Time Transfer
1001 to 1049	X	120	Reserved
1050 to 1999	X	120	General Records 1050 to 1999

* X = alphanumeric; 9 = numeric

Appendix B.
Features and Specifications

Microprocessor

- Z180 CPU operating at 6 MHz

Memory

- 64K bytes EPROM standard
- 64K RAM or 128K RAM
  TRANZ 380 (Canada) with 64K is part number P036-001-08
  TRANZ 380 (Canada) with 128K is part number P036-001-09

Cardreader

- Integrated International Air Transport Association (IATA) Track 1, Standard American Bankers Association (ABA) Track 2 and Automated Teller Machine (ATM) format Track 3 magnetic cardreader—accepts all major credit, debit and ATM cards.

Display

- 16-character fluorescent alphanumeric with decimal point and comma.

Miscellaneous

- Built-in calendar/clock chip for maintaining accurate date and time. Can be used with a VeriFone printer for date and time stamping of transactions, reports and receipts.
- Internal lithium battery backup power source for RAM in the event of a power failure.
- Display panel and keypad accepts alphanumeric characters including letters A through Z, numerals 0 through 9, and special characters * , ' " - . # : ; @ (space).

Communication

- Automatic dialing in any of five speeds
- Auto-answer
- Bi-directional local communications via RS-232 port
- Multiple terminals can share the same telephone line
- Terminal dials either touch tone or pulse (rotary mode) and accepts 32-digit telephone numbers
- Automatically dials host telephone and call center numbers

Modem

- Internal modem with modular jack

Model Bell 212A/103

- Internal standard Bell 212A/103 dial-up modem—1200 and 300 baud

Model CCITT V.21/V.22

- Internal CCITT V.21/V.22 dial-up modem—300 and 1200 baud—for international telephone systems

Note: CCITT modems are not available for all versions of the TRANZ 380.

Restricted Memory Accessibility

- Memory can be locked by application and/or password protected to prevent accidental erasure, tampering and unauthorized reading of data

Multiple Transaction Capability

- The TRANZ 380 terminal can process multiple transactions to the same host computer on a single dial-up. The user selectable timeout limits idle time between transactions.

Custom Security and Fraud Control

- Built-in security and fraud controls including account number verification using Luhn check digit, displaying the magnetic stripe information for verification, and MasterCard "Blue Box" emulation for even more fraud control.

User-Programmable Password

- User-programmable password locks memory to prevent unauthorized use of terminal.

Selection of Transaction Data Formats

- TRANZ 380 includes 16 built-in transaction data formats to assist the programmer. These are industry standard formats with standard display prompts to handle many common transactions.

Options

- Bar Code Wand (Code 39)
- Encrypting PIN Pad
- ZONTALK 2000 software for downloading application programs and maintaining terminal inventory
- Standard telephone
- Slip printers
- Roll printers
- Slip and roll printer
- Thermal printer
- Custom keypad overlays

Power Requirements

- Voltage: 120 volts AC, 60Hz
- Power: 10W

Environmental

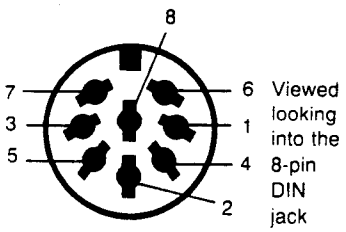
- Operating Temperature: 0-40°C. 32-104°F
- Humidity: 0 to 90% relative humidity; no condensation

Dimensions and Weight

- Height: 1.5 in (38.10 mm)
- Width: 5.6 in (143.10 mm)
- Depth: 6.0 in (152.40 mm)
- Shipping Weight: 2.3 lbs (1.04 kg)

RS-232 Serial Port 8-Pin DIN Connector

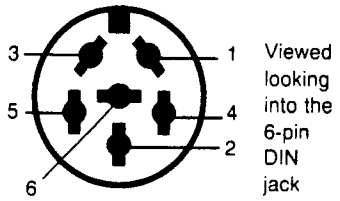
Pin	Function
1	GND - Signal Ground
2	DCD - Data Carrier Detect
3	RTS - Request To Send
4	CTS - Clear To Send
5	RXD - Receive Data
6	TXD - Transmit Data
7	DTR - Data Terminal Ready
8	No connection



Note: This port driver does not support XON/XOFF protocol or more than 1.5 stop bits.

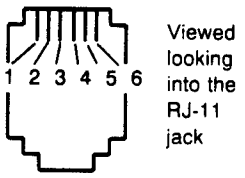
PIN Pad/Bar Code Serial Port 6-Pin DIN Connector

Pin	Function
1	+5 volts (through 4.7 ohm resistor)
2	Bar Code Receive Data
3	PIN Pad Receive Data (input port)
4	PIN Pad Transmit Data (output port)
5	GND
6	+9 v Unregulated PIN Pad Power



Serial Telephone Line (modem) Interface

PIN	Signal
1	(not used)
2	A
3	Ring
4	Tip
5	A1
6	(not used)



- Uses a USOC RJ-11 modular telephone jack to connect to ordinary dial-up telephone line.
- Four conductor telephone line cord with modular plugs furnished with terminal.
- Default modem data format: 7 data bits, even parity, 1 stop bit. Serial Interface.

Note: Not all versions of the TRANZ 380 support A /A1 activation.

Accessories

	Part Number	Description
	Note: The suffix -XX for cable part numbers denotes different lengths.	
Direct Download Cables	00446-05	TRANZ 380 to IBM PC or compatible personal computer
	00446-04	TRANZ 380 IBM AT or compatible personal computer
	00490-00	TRANZ 380 to TRANZ 380
Printers	P002-114-XX	Printer 150 Slip Printer
	10465-XX	Cable, TRANZ 380 to Printer 150 (standard mode)
	10392-XX	Cable, TRANZ 380 to Printer 150 (P100 emulation mode)
	10580-01	Stacker 5 (for use with Printer 150)
	P002-113-00	Printer 250 Roll Printer
	10448-XX	Cable, TRANZ 380 to Printer 250 (straight terminal connector)
	10454-XX	Cable, TRANZ 380 to Printer 250 (90-degree terminal connector)
	10580-01	Stacker 5 (for use with Printer 250)
	P002-116-00	Printer 500 Roll or Slip Printer
	10448-XX	Cable, TRANZ 380 to Printer 500 (straight terminal connector)
	10454-XX	Cable, TRANZ 380 to Printer 500 (90-degree terminal connector)
	P002-117-00	Printer 600 Thermal Roll Printer
	10448-XX	Cable, TRANZ 380 to Printer 600 (straight terminal connector)
	10454-XX	Cable, TRANZ 380 to Printer 600 (90-degree terminal connector)
	10580-01	Stacker 5 (for use with Printer 600)
Peripheral Devices	00302-03	Bar Code Wand
	P003-106-02	PINPad 101
	01582-XX	Cable, TRANZ 380 to PINPad 101
	P003-104-01	PINPad 201
	01582-XX	Cable, TRANZ 380 to PINPad 201
Optional Telephones	P010-102-00	TRANZFone
	P010-104-00	TRANZFone, buttonless (to restrict use of the phone)
Mounting Devices	10285-01	Wallmount
	10694-01	Deskmount (elevating wedge)
Programming Languages	P006-105-00	TCL Programming, version 5.14 (TCLOAD manual & diskette)
Downloading Packages	P006-107-00	ZONTALK 2000, version 2.0 (manual and diskette)
Reference Manuals	00368	TCL Terminal Control Language Programmer's Manual
Consumables	You can now order consumables, such as paper and ribbons, by telephone or FAX. To order by phone, call 800-233-0522. To order by FAX, dial 714-434-2498. These phone numbers are located in the United States. If you are located outside of the United States, contact your VeriFone representative.	

Note: Many of the TRANZ 380 accessories have the same part number as the TRANZ 330 accessories.

Appendix C.
Prompts and Error Messages

This section lists the prompts and error messages that may appear on your terminal's display. The list consists of two columns:

- the first column contains the message or prompt;
- the second column contains an explanation of the message and the appropriate corrective action (if required).

***,*,*,*,*,*,*,*,*,*,*,*,*,*,*,*,**
OOOOOOOOOOOOOOO
***O,**

These are three different display test patterns used by the terminal. When these appear, observe the display to ensure the proper display segments are lit and there are no shadows or "ghosts" in the unlit segments. If some segments do not illuminate, call the VeriFone Customer Support Hot Line (see page 8-7).

AMOUNT OF SALE?

Enter the total sale amount using the keypad and press [FUNC/ENTER].

APPL ID NOT FND

The download computer has no record of your application's id number. Use the RECALL function to verify that the number in location 0019 matches your application id number. After that, if you still receive this message, contact the person responsible for maintaining the download computer and the ZONTALK 2000 software.

BAD ACC'T NUMBER

The Luhn check-digit results indicate an invalid account number was entered. Re-enter the account number.

If you receive this message again, you may have a damaged or fraudulent card. Follow the procedures for handling damaged and fraudulent cards outlined by the card provider.

BAD EPROM

The terminal detects a problem possibly caused by a faulty EPROM chip. Power-down the terminal, then power it up again. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

BAD LOGIN SPEC

Message that appears when an illegal login specifier is used.

BAD LOGIN STRING

There may be a format error or an invalid entry for the login specifier. Use the RECALL Function to view the location of the phone number with the bad login specifier. Ensure the number is formatted as: A-NUMBER Ln, where:

A the optional access code (preliminary number you may need to dial to get an outside line on your phone system);

- the optional 2-second delay character;

NUMBER the telephone number;

L a flag signaling the following number is the login string specifier;

n the login string specifier. Valid entries are numbers 0 through 9.

BAD LRC The terminal displays this message during a cardreader test, when the card's Longitudinal Redundancy Character (LRC) does not match the LRC computed by the terminal.

The cardreader may have had a problem reading the card. Slide the card through the cardreader again. You may try sliding the card faster or slower. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

BAD RAM The terminal has detected a bad RAM chip.

Power-down the terminal, then power it up again. If the problem persists, call your help desk, or call the VeriFone Customer Support Hot Line (see page 8-7).

BAD RX COMMUN The number of NAKs (no acknowledgements) sent from the terminal has exceeded the specified number. This indicates that the terminal is not receiving information from the host computer. Check your telephone connections and call your help desk to determine if they are aware of any problems.

BAD TX COMMUN The number of NAKs (no acknowledgements) sent from the host has exceeded the specified number. This indicates that the host computer is not receiving information from the TRANZ 380 terminal. Check your telephone connections and call your help desk to determine if they are aware of any problems.

BELOW MINIMUM The amount of sale entered is less than the programmed floor limit. It is therefore considered too small to require authorization from the host.

BIRTHDAY MMDDYY Enter the cardholder's birth date, using two digits each for month, day and year.

BUSY The terminal has its busy detect enabled and detects a busy tone.

CALLING CENTER The terminal is dialing the call center to obtain a voice authorization.

Wait until the terminal displays the "PICK UP HANDSET" prompt. Upon receiving this prompt, pick up the telephone handset and proceed with the voice authorization.

CANNOT CONNECT A failure of the terminal and host 1200 baud modems to synchronize.

CARD ENTRY ONLY The terminal is informing you it will only accept data from the cardreader.

Slide the card through the cardreader to enter the account number and expiration date.

CHECK This indicates a check authorization transaction. With the standard application, this prompt appears when you press the host check transaction keys 3, 6, or 9.

COMMUNICATING The terminal is talking to ZONTALK 2000.

CONNECTED The unit has detected the carrier and is waiting for an ENQ.

CREDIT CARD This indicates a credit card transaction. With the standard application, this prompt appears when you press host credit card transaction keys 1, 4 or 7.

D.C. MEMORY ERROR The data capture memory is invalid. Contact your help desk for instructions.

DEMO APP XXXXX The terminal is informing you it is performing a demonstration transaction. Press [CLEAR] to return to the idle state.

DIALING The terminal is dialing a telephone number. Wait for the next prompt.

DIAGNOSTICS The terminal is in the diagnostics mode. Press one of the diagnostic keys to begin a diagnostic test, or press [CLEAR] to return to the idle prompt. See Section 8 for the different diagnostics tests available.

DIALING 2ND NUM The terminal is dialing the host's secondary telephone number. Wait for the next prompt.

DOWNLOAD? The terminal wants confirmation that you wish to request a download.

Caution: A download will replace the information already stored in your terminal.

Press [FUNC/ENTER] to confirm you want a full download, or the [*] if you want a partial download. Press [CLEAR] to abort the operation.

DOWNLOAD DONE The telephone download was successful.

DWNLD CANCELED The telephone download was canceled.

Use the RECALL function to verify that you have the correct download telephone number (location 0000), the terminal serial number (location 0001),

and the application ID (location 0019). Reenter the information if necessary and try the download again.

<EMPTY> The recalled memory location is empty. If you are in the RECALL mode, you can press [BACKSPACE] and enter new information in the memory location.

Press [CLEAR] to return to the idle state.

ENTER ACCOUNT # Either slide the card through the cardreader, or manually enter the account number from the terminal's keypad.

ENTER CARD Slide the card through the cardreader.

ENTER DATE MMYY Enter the expiration date on the card using two digits each for the month and year.

ENTER ID NUMBER This is a fixed prompt that the terminal displays to request the entry of an identification number (i.e., driver's license or checking account number).

Enter the appropriate identification number.

ENTER LAST 4 NUM This is a fraud control feature. Use the keypad to enter the last four digits of the account number embossed on the card.

ENTER NEW PASSWD The terminal is requesting a new system password to replace the existing one. Enter a new password followed by pressing the [FUNC/EDIT].

ENTER OLD PASSWD The terminal is checking to see if you know the current password. Enter the password and press [FUNC/EDIT].

ENTER PASSWORD You must enter the current password before you can continue. Enter the password or press [CLEAR] to cancel your operation.

ENTER STATE CODE Enter the code for the desired state.

ENTER TRAN CODE Enter the code for the desired transaction.

ENT PASSWD AGAIN The terminal is confirming the password you just entered. Enter the password a second time.

EXPIRY DATE MMYY Enter the expiration date of the customer's card, using two digits each for the month and year.

FUNCTION? You have selected the Function Menu. Press the desired terminal function key or press [CLEAR] to return to the idle prompt.

HOST DISCONNECT The host sent an EOT (end of text) character before the transaction was complete. Press [CLEAR] and retry the transaction. Call the VeriFone Customer Support Hot Line (see page 8-7) if problems persist.

INVALIDMEM SIZE This is a direct download message that signals an incompatible EPROM (firmware) version. Verify that the application you are downloading is intended for the firmware version in your terminal.

INVALID PASSWORD The password entered in the terminal does not match the password in memory.

KEY TEST The terminal is in the key test mode.

Press any key except for [CLEAR]. The terminal will display the pressed key in all 16 characters of the display. Press [CLEAR] to abort the test.

KEYBOARD ONLY The terminal will only accept data entered from the keypad.

LOGGING IN The terminal is logging into a network. Wait for the next prompt.

LOST COMM W/HOST The host has unexpectedly dropped the carrier. Check your telephone connections, then retry the transaction. If the problem persists, call your help desk to see if there's a problem with the host. If the host is okay, you may have trouble with your telephone lines.

MEMORY TEST The terminal is performing a memory test. The terminal will display random characters as the test proceeds.

Allow the test to continue, or press and hold [CLEAR] to abort the test. If a memory error is indicated, return the terminal for repair (see page 8-8).

MEMORY DIALER The terminal needs to know which telephone number to auto-dial.

Enter the memory location containing the telephone number you want to auto-dial.

MISMATCH DIGITS The last four digits of the manually entered account number do not match the digits secured by the cardreader.

Retry the transaction. If you receive this message again, you may have a fraudulent card. Follow the fraud procedures outlined by the card provider.

MULTI TRANS The multi-transaction feature is enabled. Press the host/transaction key for the first transaction you want to process.

NO ANSWER The terminal does not detect a carrier tone from the host computer.

Retry the transaction. If the problem persists, call your host center to see if there's a problem with the host.

NO CARRIER The terminal auto answers and does not detect carrier within 30 seconds.

NO COMM W/ HOST This indicates that there is no communication with the host computer. Check your telephone connections, then retry the transaction. If the problem persists, call your help desk to see if there's a problem with the host. If the host is okay, you may have trouble with your telephone lines.

NO <CR> FRM HOST The terminal did not receive the expected carriage return from the network.

Retry the transaction. If the problem persists, call your help desk to see if there's a problem with the network.

NO ENQ FROM HOST The terminal did not receive the expected ENQ character from the host within the specified period.

Retry the transaction again. If the problem persists, call your host center.

NO ETX The terminal displays this message during a cardreader test, informing you it failed to find the END SENTINEL on the customer's card.

The cardreader may have had a problem reading the card. Slide the card through the cardreader again. You may try sliding the card faster or slower. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

NO @ FROM HOST The terminal was trying to login to a network, but did not receive the characters it expected.

Retry the transaction. If the problem persists, call your help desk to see if there's a problem with the network.

NO =FROM HOST The terminal was trying to login to a network, but did not receive the characters it expected.

Retry the transaction. If the problem persists, call your help desk to see if there's a problem with the network.

NO LOGIN MSG The terminal did not receive a request to login when it was trying to access a network.

Retry the transaction. If the problem persists, call your help desk to see if there's a problem with the network.

NO LOGIN SPEC There is an "L" in the phone number and nothing after it. Use the RECALL or STORE function to add the number of the login string you want to access after the "L" in the phone number.

NO MERCHANT ID The terminal is informing you it cannot execute a transaction without the appropriate merchant ID.

Use the RECALL function to view the memory location of the merchant ID for the host transaction key you are using. Ensure the ID is correct. If the location is empty, enter the merchant ID.

NO PASSWORD The password is missing from the login string.

Use the RECALL or STORE function to include a login string with the correct password.

NO RESOURCE ID The resource ID is missing from the login string.

Use the RECALL or STORE function to include a login string with the correct resource ID. This prompt is used only for GEISCO network logins.

NO RESP FR HOST The terminal is informing you it did not receive the required response from the host.

Retry the transaction.

NO SERIAL NUMBER The terminal's serial number is not correctly stored in the terminal's memory.

Store the terminal serial number in the memory location 0001.

NO STX The cardreader did not detect the START SENTINEL on the card.

The cardreader may have had a problem reading the card. Slide the card through the cardreader again. You may try sliding the card faster or slower. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

NO TEL NUM No telephone number was stored for the host computer.

Store the host telephone number in the appropriate memory location.

NO USERNAME The username is missing from the login string.

Use the RECALL function to view the login string and to store the correct login string.

NOT 2ND GEN RESP The terminal is informing you that it received a response packet that was not programmed for second generation packet protocol.

Ensure the message format flag is set to enable second generation protocol. Call your host center to see if the host is capable of performing second generation authorizations.

ON HOOK The unit is currently on hook. If you are trying to make a call with the telephone, pick up the handset.

OUT OF MEMORY There is not enough memory to store the data being entered. If you want to store new information, you must either clear out some of your data capture

memory or some of the data in the memory locations. Remove any data you don't absolutely need (such as memory dial phone numbers) or unused login or control strings.

PARITY ERROR The terminal displays this message during a cardreader test, informing you it detected a parity error in the card data.

The cardreader may have had a problem reading the card. Slide the card through the cardreader again. You may try sliding the card faster or slower. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

PASSWORD? The terminal's memory is password protected. You must enter the password before it will allow you enter the store mode. Enter the password.

PICK-UP CARD The terminal is warning you that the card is either stolen, fraudulent, or has some other problem. Follow the card provider's policy regarding such cards.

Upon receiving such a prompt, the terminal will automatically dial the referral phone number. The person answering the call will advise you on how to proceed.

PICK UP HANDSET The terminal is informing you it has made the requested telephone connection. Pick up the handset.

PLEASE TRY AGAIN The terminal could not read the card the first time it was swiped through the cardreader.

The cardreader may have had a problem reading the card. Slide the card through the cardreader again. You may try sliding the card faster or slower. If the problem persists, call the VeriFone Customer Support Hot Line (see page 8-7).

POST DIAL The user has selected the option of having the terminal post dial.

PRIVATE CARD This indicates a private credit card authorization transaction. With the standard application, this prompt appears when you press the host private card transaction keys 2, 5, or 8.

PROGRAMING ERR X The terminal has detected bad data in the terminal's memory and will remain frozen until either memory is re-initialized or a programming error override is performed.

READY The terminal is informing you it is ready to perform a transaction.

Press a key to initiate the next desired transaction.

RECALL WHAT? The terminal needs to know which memory location it should recall.
Enter the four-digit memory location number.

RECEIVING The terminal is receiving information from the host computer.
Wait for the next prompt.

REDIALING The terminal is redialing the telephone number because it did not get an answer the first time.
Wait for the next prompt.

RESERVED You have recalled a reserved memory location.
Press [CLEAR].

SERIAL # NOT FND The download computer has no record of your terminal's serial number. Use the RECALL function to verify that this number in location 0001 matches the number on your terminal. After that, if you still receive this message, contact the person responsible for maintaining the download computer and the ZONTALK 2000 software.

STORE WHAT? The terminal needs to know which memory location you wish to store data in.
Enter a four-digit memory location number.

SUCCESSFUL The terminal has received a complete download.
Press [CLEAR] to return to the idle prompt.

SWIPE CARD NOW The terminal is waiting for you to slide the card through the cardreader.
Slide the card through the cardreader.

TCK ID # OR CARD The terminal needs the ticket or card account number.
Manually enter the ticket number at the terminal's keypad, or slide the card through the cardreader.

TRANSMITTING The terminal is transmitting information to the host computer.
Wait for the next prompt.

TRANZ 380 (version number) This is the signon message. The alphanumeric code to the right of "TRANZ 380" is the firmware release version number.
Wait for the terminal to display the idle prompt.

UNIT RECEIVE The unit is ready to receive new memory contents from a master terminal.

UNIT RECEIVING The unit is in process of receiving new memory contents.

UNIT SEND The unit is ready to send all its memory contents to the slave terminal.

UNIT SENDING The unit is in process of sending its memory contents.

UNREADABLE CARD The cardreader cannot read the card's magnetic stripe because the card is damaged.

Press [CLEAR] to return to the idle prompt. Sometimes, an unreadable card can be read by sliding it from the bottom to the top, rather than from the top to the bottom. If it is still unreadable, use the keypad to enter the account number manually.

UNSUCCESSFUL DL The attempted download was not successful.

Retry the download. If the download is still unsuccessful, call the operator at your download center.

WAITING FOR ANSWER The terminal has dialed a number and is waiting for the line to be answered.

Wait for the next prompt.

WAITING FOR LINE The terminal cannot dial because the telephone line is in use or is not connected to the terminal.

Ensure the telephone line is properly connected to the terminal. Check to see if the attached telephone is off-hook or in use.

Appendix D.
Enhanced TCL Commands

To accommodate some of the TRANZ 380's features, the following TCL commands have been enhanced. Use this appendix in conjunction with the *TCL Programmer's Manual.*

Variables

The TRANZ 380 supports 100 variables, as opposed to its predecessor, the TRANZ 330, which supports 10.

Variables may be used in a variety of ways—as counters, pointers to memory locations, ASCII code values or flags. You may use a variable as a parameter in any command that accepts a numeric value, and each variable has a possible value of 0–65535.

You can specify up to 100 variables for each transaction, numbering them 00 through 99. To designate a variable, precede the variable number with the pound (#) sign (#00, #01, #02, #03....#99). For example:

```
1.  *N#02.113      ; Set variable #02 to 113
    .
    .
    .
    A#02           ; Append memory location pointed to by variable #02
2.  *N#30.61       ; Set variable 30 to 61 (ASCII code for "=")
      R#30         ; Append the equal (=) sign to the destination buffer
```

Note: The leading zero in variables #00-#09 is not required (#0 = #00).

Cardreader

The TRANZ 380 has a dual track cardreader which reads IATA Track 1, ABA Track 2 and ATM Track 3. It is possible to simultaneously read Tracks 1 and 2, or Tracks 2 and 3. It is also possible to read only a single track at a time, thus facilitating VISA fraud control features when software is written for either Track 1 or 2.

Command E

Input from Cardreader or Keypad

This causes the terminal to accept input from either the cardreader or the keypad, automatically places a field separator after the data entry (except when input type flag 4 is selected), and appends the data to the destination buffer. The terminal checks to see if the account number is greater in length than 0 and less than 128 before copying to the destination buffer.

Format $Es_1.a_1.j.s_2.i.s_3.a_2.c$

Parameters

Parameter	Default Value	Description
s_1	0	Optional; number of commands to skip when input is from the cardreader.
a_1	0	Optional; the input type flag; identifies the type of editing criteria to be applied when data entry is from the keypad. Options 0 = Alphanumeric 1 = Alphanumeric 2 = Numeric 3 = Alphanumeric 4 = Amount; the decimal is added automatically; the default field length is 10 characters with a maximum length of 15 5 = Alphanumeric with hidden entry (displays asterisks) 6 = Numeric with hidden entry (displays asterisks) 7 = Alphanumeric with hidden password entry (displays asterisks instead of the password, and the entry is verified against the system password)
j	60	Optional; maximum number of input characters the terminal will accept from the keypad
s_2	0	Optional; the number of commands to skip after a NULL entry from the keypad. NULL entry occurs when you press [FUNC/ENTER] without entering data. Only valid for keyboard entry.
i	0	Optional; minimum number of input characters from the keypad. Only valid for keyboard entry.
s_3	0	Number of commands to skip if three bad card reads *Note: When reading two tracks, if one track contains an error or is not read properly, the terminal puts an error code in the destination buffer instead of the track information. The correctly read track will also be placed in the destination buffer, and the two tracks will be separated by the track separator. Errors are displayed as ^A - ^E on the terminal and as 0 - 5 in the destination buffer.*

Parameter	Default Value	Description
a_2	0	Track Selection Options 0 = Track 2 1 = Track 1 2 = Tracks 1 and 2 3 = Track 3 4 = Tracks 2 and 3
c	29	Track separator

Command M

Input from Cardreader Only

This causes the terminal to accept input from the cardreader only, to place a field separator after the data entry, and append the data to the destination buffer. When this command is used, there is no input type or data length restriction. If the user presses a key, the terminal beeps, displays CARD ENTRY ONLY for three seconds and returns to the idle prompt.

Format Ms.a.c

Parameters

Parameter	Default Value	Description
s	0	Number of commands to skip if three bad card reads *Note: When reading two tracks, if one track contains an error or is not read properly, the terminal puts an error code in the destination buffer instead of the track information. The correctly read track will also be placed in the destination buffer, and the two tracks will be separated by the track separator. Errors are displayed as ^A - ^E on the terminal and as 0 - 5 in the destination buffer.*
a	0	Track Selection Options 0 = Track 2 1 = Track 1 2 = Tracks 1 and 2 3 = Track 3 4 = Tracks 2 and 3
c	29	Track separator

Clock

With the J command, you can program the clock data to suit your needs. Note that the clock can be set to either a 12- or 24-hour format.

Command J

Append Clock Data to Destination Buffer

This appends clock data to the destination buffer and allows you to set the real-time clock chip using data from the destination buffer or to read clock data from the clock chip.

Format

Jn

Parameters

Parameter	Default Value	Description
n	None	Required; the parameter is either the number 1 or a command string. See the following text.

Enter a "1" to set the real-time clock chip to the time specified in the destination buffer. The format of the destination buffer is: WYYMMDDHHMMSS

W day of week (0 = Sunday, 1 = Monday, 2 = Tuesday, etc.)
YY year (19YY)
MM month (01 = January, 02 = February, 03 = March, etc.)
DD day of the month (01 through 31)
HH hour (24-hour clock; 1 p.m. = 13)
MM minutes (00 through 59)
SS seconds (00 through 59)

To append clock data to the destination buffer, enter a command string specifying the format of the data to be read from the calendar/clock chip. The string must be enclosed in single quotes and may contain letters, spaces, symbols and numbers. All characters in the string are literal and will be displayed exactly as written, except for the letters which are replaced by clock data according to the "Clock Data Table."

Clock Data Table

Code	Clock Data	Examples
A	2-digit year	1991 = '91'
B	2-digit month	July = '07'
C	2-digit date	1 through 31
D	2-digit hours, 12-hour clock	10 a.m. = '10' 1 p.m. = '01'
E	2-digit minutes	00 through 59
F	2-digit seconds	00 through 59
G	A or P	a.m. = 'A' p.m. = 'P' (12-hour clock)
H	4-digit year	1991 = '1991'
I	3-letter month	January = 'JAN'
J	Full month	January = 'JANUARY'

Code	Clock Data	Examples
K	2-digit hours, 24-hour clock	1 a.m. = '01' 1 p.m. = '13'
L	3-letter day	Monday = 'MON'
M	'M'	Adds 'M' to a.m. and p.m. (12-hour clock)
N	Full day	Monday = 'MONDAY'
O	:	Colon for time (8:30 14:22:13)
P	=	Equal sign instead of colon (8=30 14=22=13)
Q	Numeric day	Sunday = '0' Monday = '1' Tuesday = '2'
R	Allow leading zeros	01 JAN 91
S	Suppress leading zeros	1 JAN 91
T	"Blinking" colon (for the idle time display)	
U	Append next character	

Communication

The +U command has been changed to reflect the added baud rates of 4800 and 9600.

Command +U

Set DIN 6 Communication Parameters

This command sets the data speed (baud rate) and format of the DIN 6 port.

Note: Be sure to select "General Communication Device" for the DIN 6 peripheral in memory location 0970.

Format $+Ua_1.a_2$

Parameters

Parameter	Default Value	Description
a_1	0	Optional; baud rate 0 = 300 (set to 1200 baud on abort) 1 = 600 2 = 1200 3 = 2400 4 = 4800 5 = 9600
a_2	0	Optional; data format 0 = no change (set to 7E1, pass 7 on abort) 1 = set 7E1, pass 7 bits 2 = set 8N1, pass 7 bits 3 = set 8N1, pass 8 bits

Command *T

Specify Communications Timeouts

This command sets the length of various communications timeout periods for dial terminals only. This command operates in conjunction with the current transaction. Once the terminal returns to the idle state, all values return to the default.

Version Dependency

The "a" parameter is only available on EPROM version 1.10 or greater.

Format

*T t_1.t_2.t_3.t_4.t_5.a

Parameters

Parameter	Default Value	Description
t_1	0	Optional; carrier detect timeout period. Timeout period begins when the terminal finishes dialing and ends when the terminal detects a carrier tone. You may specify a timeout period of 1 to 65 seconds; a 0 or blank leaves the value as is.
t_2	30 secs	Optional; ENQ timeout period. Timeout period begins when the terminal detects a carrier tone and ends when it detects an ENQ. You may specify a timeout period of 1 to 255 seconds; a 0 or blank leaves the value as is.
t_3	45 secs	Optional; response packet timeout period. Timeout period begins when the request packet is sent and ends when the terminal receives the complete response packet. You may specify a timeout period of 1 to 255 seconds; a 0 or blank leaves the value as is.
t_4	1 timeout period	Optional; the number of response periods allowed before the terminal hangs up. When the response timeout period is reached, the unit decrements this count, sends an ENQ and waits for a response. If the count reaches zero, the terminal will hang up. The default value for this parameter is 1.
t_5	2 secs	Optional; End Of Text (EOT) timeout period. Timeout period begins when the terminal receives the response packet and ends when the terminal receives the EOT. You may specify a timeout period of 1 to 255 seconds; a 0 or blank leaves the value as is.
a	0	End Of Text (EOT) Enable/Disable. 0 = No change to previous setting 1 = Enable EOT timeout 2 = Disable EOT timeout

Memory

The TCL commands *S and *Z have been modified to include Program and Batch memory options, which are only used for custom applications.

Command *S

Verify Memory Available

Use the *S command to ensure you have the required amount of memory. If the number of available bytes is greater than the "n" parameter, the terminal will skip "s" number of commands.

If you are creating a custom application and wish to use Program memory, use Option "0"; if you wish to use Batch memory, use Option "1". If you are not creating a custom application, these parameters do not need to be defined.

Version Dependency: The "a" parameter is only available on EPROM version 1.10 or greater.

Format: *Ss.n.a

Parameters

Parameter	Default Value	Description
s	0	Optional; the number of commands to skip when more than number of bytes specified in "n" are available.
n	0	Optional; the number of free bytes required. The terminal will check to see if the number of required bytes is available.
a	0	Optional; select which type of memory to verify space availability. Options 0 = Program Memory 1 = Batch Memory

Command *Z

Calculate Free Bytes

The *Z command calculates the number of free bytes left in RAM and appends the number to the destination buffer. This command has been changed by adding the parameter "a".

Version Dependency: The "a" parameter is only available on EPROM version 1.10 or greater.

Format: *Za

Parameters

Parameter	Default Value	Description
a	0	Optional; select which type of memory you would like to calculate the number of free bytes left in. Options 0 = Program Memory 1 = Batch Memory

Batch Operations

The following TCL commands have been enhanced to better program the TRANZ 380. Many of the commands have added the option of specifying the number of commands to skip if an operation is successful. A new batch search option is also available with the *E command. This option significantly shortens the time to locate a record within a batch.

For this section alone, Batch Operations, the execution details have been included to illustrate the specific command conditions, their outcome and the results that TCL creates. After each command's parameters, you will notice these heads: ***Execution Details,*** *Condition, Outcome* and *TCL End Result.* For those of our customers who are familiar with the command outcome for TRANZ 330 terminals, we have provided the command outcome for both the TRANZ 330 and TRANZ 380 when they differ; you will see **TRANZ 380 only** and **TRANZ 330 only** to help you differentiate the two. If there is more than one condition for a command, they are separated by a horizontal line. Parameters with multiple values (such as *B0 and *B1) are also separated by a horizontal line.

Command *A

Open New Batch

This command opens, or creates, a new batch and uses the data in the destination buffer as the batch header. If the destination buffer is empty or if the header of the current batch matches the header in the destination buffer, the current batch remains open and no change is made. When the header of the current batch does not match the header in the destination buffer, the current batch will automatically close and a new batch will be opened.

*Note: For additional information on error conditions, see command *F in the TCL Programmer's Manual.*

Version Dependency: The "s" parameter is only available on EPROM version 1.10 or greater.

Format: *As

Parameters:

Parameter	Default Value	Description
s	0	Optional; the number of commands to skip if the operation is successful.

Execution Details ***A Open New Batch**

Condition: Batch does not already exist and batch name is specified.

Outcome: Successful, batch created with the specified name.

TCL End Result:

Reponse Code: 0
Batch Pointer: Batch just created
Detail Pointer: First record

Condition Batch name not specified.

Outcome Successful, select the youngest batch.

TCL End Result
Response Code: 0
Batch Pointer: Batch just selected
Detail Pointer: First record

Condition Batch already exists and is the youngest batch.

Outcome Successful, select the youngest batch.

TCL End Result
Response Code: 0
Batch Pointer: Batch just selected
Detail Pointer: First record

Condition Batch already exists and is not the youngest batch.

TRANZ 380 Only:

Outcome Successful, select the youngest batch.

TCL End Result
Response Code: 0
Batch Pointer: Batch just selected
Detail Pointer: First record

TRANZ 330 Only:

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Data capture memory is empty and batch name not specified.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Not enough room in memory.

Outcome Failure, no action taken.

Response Code: 1
Batch Pointer: Not affected
Detail Pointer: Not affected

Command *B

Select Batch for Read Operations

This command selects a batch for data capture operations, such as the *E (Extract) or *D (Delete) commands. For example, before you can read/delete a record or delete a batch, you must select it using the *B command.

Version Dependency: The "s" parameter is only available on EPROM version 1.10 or greater.

Format: *Ba.s

Parameters

Parameter	Default Value	Description
a	0	Optional; code to indicate batch for read operation Options, select the: 0 = Current (youngest) batch 1 = Oldest batch 2 = Next batch—batch immediately following the one pointed to by batch pointer 3 = Batch with header record matching the contents of the destination buffer
s	0	Optional; number of commands to skip if the operation is successful.

Execution Details

*B0 Select Youngest Batch

Condition: At least one batch exists.

Outcome: Successful, youngest batch selected.

TCL End Result:
Response Code: 0
Batch Pointer: Youngest batch
Detail Pointer: First record

Condition: Data capture memory is empty.

Outcome: Failure, no action taken.

TCL End Result:
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*B1 Select Oldest Batch

Condition: At least one batch exists.

Outcome: Successful, oldest batch selected.

TCL End Result:
Response Code: 0
Batch Pointer: Oldest batch
Detail Pointer: First record

Condition Data capture memory is empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

***B2 Select Next Batch**

Condition Batch pointer is pointing to a batch other than the last batch.

Outcome Successful, next batch selected.

TCL End Result
Response Code: 0
Batch Pointer: Selected batch
Detail Pointer: First record

Condition Data capture memory is empty.

Condition Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition No batch selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Already pointing to last batch.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*B3 Select Specified Batch

Condition	Batch is specified and it exists.
Outcome	Successful, specified batch selected.
CL End Result	Response Code: 0 Batch Pointer: Specified batch Detail Pointer: First record

---

Condition	Data capture memory is empty.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 2 Batch Pointer: Not affected Detail Pointer: Not affected

---

Condition	Batch name not specified.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 2 Batch Pointer: Not affected Detail Pointer: Not affected

---

Condition	Data capture memory has no matching batch.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 2 Batch Pointer: Not affected Detail Pointer: Not affected

---

Command *C

Copy Destination Buffer to Batch

This command copies the contents of the destination buffer to the open batch.

*Note: This command can only be used to add a record to the latest opened batch. Use the +G command for record addition to older batches (see page D-24). The *C command can replace a detail record of the same length in an older batch.*

Version Dependency: The "s" parameter is only available on EPROM version 1.10 or greater.

Format: *Ca.s

Parameters

Parameter	Default Value	Description
a	0	Optional; select one of the following values Options 0 = Copy destination buffer to the end of the open batch 1 = Replace the current detail record with the contents of the destination buffer
s	0	Optional; number of commands to skip if the operation is successful.

Execution Details

***C0 Copy Destination Buffer to End of the Open Batch**

Condition: Batch exists.

Outcome: Successful, record is appended.

TCL End Result:
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

Condition: Not enough memory.

Outcome: Failure, no action taken.

TCL End Result:
Response Code: 1
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition: Data capture memory is empty.

Outcome: Failure, no action taken.

TCL End Result:
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*C1 Replace Selected Record with Contents of Destination Buffer

Condition New record is the same size as selected record.

Outcome Successful, selected record is replaced with new record.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just written

Condition New record is not the same size as selected record.

TRANZ 380 only:

Outcome Successful, selected record is replaced with new record.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just written

TRANZ 330 only:

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition New record is blank.

TRANZ 380 only:

Outcome Successful, selected record is replaced with new record.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just written

TRANZ 330 only:

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result

Response Code:	3
Batch Pointer:	Not affected
Detail Pointer:	Not affected

Condition Batch is empty.

TRANZ 380 only:

Outcome Successful, record is appended to batch.

TCL End Result

Response Code:	0
Batch Pointer:	Current batch
Detail Pointer:	Record just appended

TRANZ 330 only:

Outcome Failure, no action taken.

TCL End Result

Response Code:	3
Batch Pointer:	Not affected
Detail Pointer:	Not affected

Condition Data capture memory is empty.

Outcome Failure, no action taken.

TCL End Result

Response Code:	3
Batch Pointer:	Not affected
Detail Pointer:	Not affected

Command *D

Delete Batch, Records or Headers

This command will delete all or selected detail records, batches and batch headers from the data capture memory specified by the "a" parameter. Before using the *D command, you must select a batch using the *B command.

Version Dependency: The "s" parameter is only available on EPROM version 1.10 or greater.

Format: *Da.s

Parameters

Parameter	Default Value	Description
a	0	Optional; data capture item to be deleted Options, delete: 0 = Selected batch and batch header 1 = All detail records for selected batch 2 = All batches and detail records 3 = Selected detail record from any batch
s	0	Optional; number of commands to skip if the operation is successful.

Execution Details

***D0 Delete Selected Batch and Batch Header**

Condition: Last (youngest) batch selected.

Outcome: The selected batch is deleted.

TCL End Result:
Response Code: 0
Batch Pointer: NULL
Detail Pointer: NULL

Condition: Selected batch is not the last batch.

TRANZ 380 only:

Outcome: Successful, the selected batch is deleted.

TCL End Result:
Response Code: 0
Batch Pointer: Batch following the batch just deleted
Detail Pointer: First record of selected batch

TRANZ 330 only:

Outcome: Successful, the selected batch is deleted.

TCL End Result:
Response Code: 0
Batch Pointer: NULL
Detail Pointer: NULL

Condition Data capture memory empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*D1 Delete All Details for Selected Batch

Condition Batch selected.

Outcome Successful, all details within the selected batch are deleted.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: NULL

Condition Data capture memory empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*D2 Delete All Batches and Detail Records

Condition Any condition.

Outcome *Always* successful, all data capture memory deleted.

TCL End Result
Response Code: 0
Batch Pointer: NULL
Detail Pointer: NULL

---

*D3 Delete Selected Detail Record from Any Batch

Condition The record to delete is not the first record.

Outcome Successful, the selected detail is deleted.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: The record in front of the one that was just deleted

---

Condition The record to delete is the first record.

TRANZ 380 only:

Outcome Successful, the selected detail (first record) is deleted.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: The new first record

TRANZ 330 only:

Outcome Successful, the selected detail (first record) is deleted.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: The batch name

Condition The detail pointer points to the batch name.

TRANZ 380 only:

Outcome Not applicable—this condition cannot occur with the TRANZ 380.

TRANZ 330 only:

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition	Data capture memory is empty.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 3 Batch Pointer: Not affected Detail Pointer: Not affected

Condition	Batch not selected.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 3 Batch Pointer: Not affected Detail Pointer: Not affected

Condition	No detail in batch.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 3 Batch Pointer: Not affected Detail Pointer: Not affected

Command *E

Append Batch Detail to Destination Buffer

This command appends the batch header or the specified detail record from the current, open batch to the destination buffer. Before using this command, you must select a batch using the *B command.

If you attempt to append a record that does not exist, the terminal will set data capture error 3: RECORD NOT FOUND.

Version Dependency

The "a3" and "s" parameters are only available on EPROM version 1.10 or greater.

Format

*Ea.s

Parameters

Parameter	Default Value	Description
a	0	Optional; code identifying the data to be copied Options, copy: 0 = Next detail record in the selected batch 1 = First detail record in batch 2 = Batch header 3 = Find next detail record matching data in source buffer and copy into destination buffer. Data must match exactly, though source buffer data may be shorter than data in detail record.
s	0	Optional; number of commands to skip if the operation is successful.

Execution Details

***E0 Append Next Detail Record in Selected Batch to Destination Buffer**

Condition Batch selected and is not empty.

Outcome Successful, point to next record and read.

TCL End Result

Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Current record

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result

Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Detail pointer points to last record.

Outcome Failure, detail pointer reset to first record.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Reset to point to first detail record

Condition Batch empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*E1 Append First Detail Record in Batch to Destination Buffer

Condition Batch selected and is not empty.

Outcome Successful, point to first record and read.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Current record

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*E2 Append Batch Header to Destination Buffer

Condition Batch selected.

Outcome Successful, header is read.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Data capture memory is empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

---

*E3 Append Next Detail Record Matching Data in Source Buffer

Condition Batch selected and contains matching record.

Outcome Successful, point to matching record and read.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Matching record

Condition Batch not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 2
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition No matching record.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Command +G

Append Detail Record into Batch

This command appends a detail record to the selected batch or inserts a detail record in front of the selected record.

Version Dependency: The "s" parameter is only available on EPROM version 1.10 or greater.

Format: +Ga.s

Parameters

Parameter	Default Value	Description
a	0	Optional; select desired option Options 0 = Append record to selected batch 1 = Insert record in front of selected record
s	0	Optional; number of commands to skip if the operation is successful.

Execution Details

+G0 Append Detail Record to Selected Batch

Condition: Batch is empty.

TRANZ 380 only:

Outcome: Successful, record is appended.

TCL End Result:
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

TRANZ 330 only:

Outcome: Successful, record is appended.

TCL End Result:
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition: Detail pointer points to first record.

TRANZ 380 only:

Outcome: Successful, record is appended.

TCL End Result:
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

TRANZ 330 only:

Outcome Successful, record is appended.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Detail pointer points to middle record.

TRANZ 380 only:

Outcome Successful, record is appended.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

TRANZ 330 only:

Outcome Successful, record is appended.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Detail pointer points to last record.

TRANZ 380 only:

Outcome Successful, record is appended.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

TRANZ 330 only:

Outcome Successful, record is appended.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Not enough memory.

Outcome Failure, no action taken.

TCL End Result
Response Code: 1
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Data capture memory is empty.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

Condition Batch is not selected.

Outcome Failure, no action taken.

TCL End Result
Response Code: 3
Batch Pointer: Not affected
Detail Pointer: Not affected

+G1 Insert Detail Record in Front of Selected Record in Current Batch

Condition Batch is empty.

Outcome Successful, record is appended to batch.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just appended

Condition Detail pointer points to the first record.

Outcome Successful, record is inserted in front of the selected record (first record).

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just inserted

Condition Detail pointer points to a middle record.

Outcome Successful, record is inserted in front of the selected record.

TCL End Result
Response Code: 0
Batch Pointer: Not affected
Detail Pointer: Record just inserted

Condition	Detail pointer points to the last record.
Outcome	Successful, record is inserted in front of the selected record (last record).
TCL End Result	Response Code: 0 Batch Pointer: Not affected Detail Pointer: Record just inserted

Condition	Not enough memory.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 1 Batch Pointer: Not affected Detail Pointer: Not affected

Condition	Data capture memory is empty.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 3 Batch Pointer: Not affected Detail Pointer: Not affected

Condition	Batch is not selected.
Outcome	Failure, no action taken.
TCL End Result	Response Code: 3 Batch Pointer: Not affected Detail Pointer: Not affected

Miscellaneous

The following commands have been changed to accommodate the TRANZ 380.

Command +B

Calculate Block Character Check (BCC)

This command calculates the Block Character Check (BCC) on the contents of the destination buffer and places the result in the designated variable. To allow BCC calculation of data from multiple destination buffers, the initial value of the BCC is understood to be the current contents of the designated variable each time the +B command is executed. The BCC is used as a checksum to ensure validity of communications data.

Version Dependency: The "a1" parameter is only available on EPROM version 1.10 or greater.

Format: +B#v.a

Parameters:

Parameter	Default Value	Description
#v	0	Optional; variable to place result of calculation
a	0	Optional; type of BCC Options 0 = LRC 1 = CRC

Command +V

Append Signon Message to Buffer

This appends either the signon message (firmware release version), the EPROM Permanent Terminal ID Number, or the terminal RAM configuration to the destination buffer. (See page 4-7 for information on the EPROM Permanent Terminal ID Number.)

Note: Not all versions of the TRANZ 380 support a Permanent Terminal ID Number, nor do all countries require it.

Version Dependency: The "a" parameter is only available on EPROM version 1.10 or greater.

Format: +Va

Parameters:

Parameter	Default Value	Description
a	0	Select desired option. Options 0 = Signon message 1 = EPROM Permanent Terminal ID Number 2 = RAM configuration in Kbytes This number will appear as "64" or "128" in the destination buffer.

Glossary

ABA American Bankers Association. The TRANZ 380's cardreader can read ABA information stored on Track 2 of the credit card's magnetic stripe.

AC Alternating Current—used as a primary source of power by power packs and power supplies.

Access Code A code number dialed to gain access to a telephone line, such as the number "9" dialed to reach an outside line.

Alpha mode A means of allowing you to use the keypad to enter alphabetic characters.

Alphanumeric Capable of utilizing both alphabetic and numeric characters such as a terminal display or keypad or a computer keyboard.

Application A program consisting of special codes stored in memory used to control a terminal and its operations.

Application ID Number The number identifying which application is to be downloaded by the ZONTALK 2000 software from an IBM PC compatible computer.

ATM Automated Teller Machine. Track 3 of the TRANZ 380's cardreader can read standard ATM cards.

Bar Code A series of vertical stripes on a label used to identify an item.

Baud The signaling speed equal to the number of signal events per second. Not necessarily the same as bits per second.

Buffer An electronic device within the terminal that allows for the temporary storage of data.

Cable Routing Channels Grooves molded to underside of terminal for relocating cables.

Cardreader The slot on the top of the terminal that automatically reads the magnetic stripe on the back of a credit, debit or private card.

Calendar/Clock Chip An electronic component in the TRANZ 380 terminal that keeps track of the data and time.

Character A letter, number, punctuation, figure or other symbol used in a message or in a control function.

Custom Application An application created to meet the specialized needs of an individual company or institution.

Custom Prompts Information on the display panel created specially for a particular company or user.

Data Information used by the terminal that relates to a specific transaction or operation.

Debit Card Used in many of the same transactions as a credit card except no credit is given and the holder must have funds in his or her account to immediately cover the transaction.

Diagnostics The procedure for detecting and isolating a problem or malfunction with the TRANZ 380.

Display The small screen on your terminal directly above the keypad; this screen displays prompts and messages to guide you through transactions.

Download The process of transferring data from one computer or terminal to another.

Download Center The place where the download computer used for downloading applications and other information to terminals is located.

EPROM Read only memory permanently stored in the TRANZ 380 terminal. Contains the standard application and operating system.

File A collection of logically related records.

Firmware The basic instructions built into the TRANZ 380, stored in ROM and executed automatically.

Flag A programmed indicator such as a character or digit used for identification.

Fraud Control Measures taken to prevent unauthorized use of a credit or debit card.

Help Desk A department within a company that assists employees with their questions. When instructed to call your help desk, call them or, if your company does not have a help desk, ask someone knowledgeable. If you cannot resolve your problem, call the VeriFone Customer Support Hot Line (see page 8-7).

Host An authorization center computer used to process transactions; also called a host computer.

Host Center The place where your host computer is located.

Host Transaction Keys Keys 1 through 9 on the keypad. Pressing one of these keys begins the transaction assigned to that key.

Host Transactions Transactions performed by communicating with a host computer.

Host Parameters Parameters related specifically to transactions with a host computer.

IATA International Air Transport Association. The TRANZ 380's cardreader can read IATA information stored on Track 1 of the credit card's magnetic stripe.

Idle Prompt The information shown on the display panel when the terminal is not performing any operations or transactions. Normally the date and time.

Keypad The 16-key panel on the TRANZ 380. Used for entering data and operating the terminal.

Local Functions Operations performed at the terminal location only and not with a host computer. Up to seven are permitted and these are accessed by pressing the [FUNC/ENTER] key followed by the desired function key.

Login String A code consisting of a network code, user name and password, used to log onto a network.

Luhn Check-Digit A fraud control measure used in transactions.

Manual Transaction Transaction using account information entered from the keypad rather automatic reading devices such as the cardreader.

Memory The storage of codes and data in the circuitry of a terminal or computer or other media such as magnetic disk or tape.

Memory Dialing A method of automatically dialing telephone numbers stored in the terminal's memory rather than dialing by hand.

Memory Locations The segments used to divide the TRANZ 380 terminal's memory. Identified by a four-digit location number.

Merchant ID Number Number used by merchants to identify themselves and their terminal to host computer at their bank or financial institution. Also called terminal ID.

Messages Words and symbols appearing on the terminal's display which tell you the kind of information required, the result of a process, an error has occurred.

Modem Short for modulator/demodulator; a device that converts electronic data to audio signals (for transmission over telephone wires) and audio signals back to electronic data.

Multiple Transactions The capability of performing several transactions during a single call to a host computer.

Network A service that routes numerous transactions and data to the proper terminals and host computers.

Network Center The location where your network is centered.

Packet Switched Networks Networks that divide information into packets so host computer processing time is evenly distributed among different users.

Parameters Information stored in memory that configures the terminal for use with transactions and other operations.

Password A confidential code used to gain access to a host computer.

PC IBM PC or compatible personal computer used to download applications and data to the TRANZ 380 terminal.

POS Terminal A terminal used at the point-of-sale (POS) that can process transactions and communicate transaction information with a larger remote computer.

Post Dialing A feature that dials the host computer after all of the account and transaction information is entered into the terminal.

Power Pack A device that converts a voltage to a different level so it can be used by a particular device.

Printer A device used for imprinting records of a transaction on paper.

Prompt A message appearing on the terminal's display telling you what action is required or what type of information to specify.

Pulse Dialing A method of telephone dialing that specifies a phone number by the number of electrical pulses sent.

RAM Random access memory used to store custom applications and temporary data entered during a transaction.

RECALL Procedure used to display data in a memory location. RECALL can also be used to add or change data.

ROM Read only memory permanently stored in the TRANZ 380 terminal. Contains the standard application and operating system.

Scroll To move text across a display screen.

Serial Port Circuitry in the TRANZ 380 terminal with an 8-pin DIN connector for communicating with download computers, other terminals, and printers.

Standard Application The application provided with each TRANZ 380 terminal. You can override the standard application by downloading a custom application into the terminal.

Standard Password The password supplied with each terminal. This number, "Z66831," should be changed to a confidential number.

Standard Telephone A Bell compatible telephone. A telephone can be connected directly to the TRANZ 380 terminal for use on the same telephone line.

STORE Procedure used to store data in a memory location.

Swipe The action of sliding a card through the card reader.

Telephone Jack Modular type sockets for connecting telephone line cords and handsets.

Telephone Line The standard telephone wiring connecting you to your local or private telephone company.

Terminal The main component in your credit card authorization system; the terminal processes requests and allows you to initiate transactions (see also POS terminal).

Terminal Control Language (TCL) A proprietary programming language designed by VeriFone for programming the VeriFone TRANZ and XL family of terminals.

Terminal Parameters Parameters related to a specific terminal.

Tone Dialing A method of telephone dialing that uses different pitched tones to specify a phone number.

Track 2 Data American Bankers Association information stored on Track 2 of the credit card's magnetic stripe.

Transaction Key A software key used by the TRANZ 380 terminal to encrypt PINs (personal identification numbers) before they are sent to the host computer. The TRANZ 380 terminal first receives encrypted transaction keys from the host and decrypts them using a master key.

Transaction Data Formats Also called message formats. Includes 16 standard formats built into the TRANZ 380 terminal commonly used to send data to the host computer.

Variable A variable may be used in a variety of ways—as a counter, pointer to a memory location, an ASCII code value or a flag. You can use a variable as a parameter in any command that accepts a numeric value.

Wand A hand-held optical scanning device that reads bar code information.

ZONTALK 2000 A communications program for IBM PC compatible computers used to download applications from the computer to a terminal.

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