

Chapter 2

K22 and K80 Operating Procedures

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2.1 Background

This chapter of the SOP describes the operation of the K22 Point-Of-Sale (POS) device and the K80 Cashless Automated Teller Machine (ATM).

NOTES:

1. Operator is defined as a properly authorized agent clerk/cashier or functional manager (payee) that performs Navy Cash transactions. For example, the ship's store cashier, a disbursing clerk, the wardroom cashier or officer, and the MWR custodian are operators.
2. Cardholder is defined as any person holding a Navy Cash card or making a purchase (payer) or receiving a refund with their Navy Cash card at any merchant on the ship.
3. Merchant is defined as the shipboard activity that supplies items or services to be purchased or makes a refund. The ship's store, MWR, private messes, and post office are all merchants.

2.2 Planned Maintenance System

Preventive maintenance for the Navy Cash Financial System is covered through the Planned Maintenance System (PMS). PMS information for Navy Cash is available from the ship's Maintenance and Material Management (3-M) Coordinator. Maintenance Index Page (MIP) number 6541/080-14 applies to Navy Cash. In particular, proper cleaning of the card readers can significantly reduce the incidents of card readers failing to read the Navy Cash card.

2.3 K22 Point of Sale Device

The K22 is a handheld Point-Of-Sale (POS) device that is used to record sales transactions in the Navy Cash system. It can be operated online or offline and has a battery backup in the event of power failure to continue to operate and to protect data. The disbursing office has portable K22s that may be checked out when required. Since a limited number of these portable devices are available, they must be returned to the disbursing office as soon as possible after use.

2.3.1 Basic Day-to-Day Retail Operations (Normal Mode)

The operation of the K22 in recording sales transactions is relatively straightforward and is explained in basic terms in the following few paragraphs. Subsequent paragraphs contain more detailed explanations and describe modifying the K22 device setup to, for example, change the mode or add, delete, or modify merchants, events, or amounts.

a. Operator Log On. The operator must first log on the Navy Cash system in order to operate the K22 (see paragraph 2.3.11.a for a more detailed description). The operator will remain logged on the system until he or she specifically logs off.

(1) Online Mode. In the online mode, the K22 is connected directly to the Local Area Network (LAN) and the operator selects the "OK" key to turn the K22 on.

(a) The K22 automatically boots up and displays the Operator Log-On screen, prompting the operator for Operator ID.

(b) The operator enters his or her Operator ID using the keypad and presses the OK key. Operator IDs are four-digit numbers.

(c) The K22 sends a message to the server, and the server returns a message to the K22 either accepting or denying the operator log-on.

(d) If the log-on is accepted, the K22 enters the current configuration normal operation and is ready for use when the Operator Name is displayed on the screen.

(e) If log-on is denied, the operator must report to the disbursing office to resolve the problem.

(2) Offline Mode. If the K22 is going to be used in the offline mode, operator log-on must first take place online at any K22 network connection point. K22 connection points are located in the disbursing office, general mess, private mess, MWR, post office, or other locations set up during the Navy Cash installation.

(a) The operator disconnects the K22 device currently in operation (if any) and connects the K22 that he or she wants to log onto to the LAN with a data cable.

(b) Once connected, the offline log-on procedure is the same as the online procedure. After log-on is complete, the operator can disconnect the data cable and proceed to operate the K22 in the offline mode. The operator should make sure that the K22 has fresh batteries before disconnecting the device from the network, i.e., going offline.

b. Sales Transactions.

To begin a generic purchase transaction, the K22, whether online or offline, is already properly logged-in and ready to operate (a screen showing the current operator name is shown) (see paragraphs 2.3.11.c through 2.3.11.i for a more detailed description). The K22 has three function keys that can have a merchant, an event, and an amount assigned to them. The operator or the cardholder can select the “CLR” key to completely cancel the transaction and return the K22 to the main screen at anytime during the process.

(1) The operator selects the appropriate merchant ID function key. This step identifies the type of sale transaction, i.e., some merchants perform more than one sale transaction type. For example, the post office has three sale transaction types (stamps, postal meter sales and money orders).

(a) The merchant function keys are programmed when the disbursing office originally configures the K22.

(b) If only one merchant has been assigned to the function keys, this step is not needed because a merchant is automatically assigned to the sales transaction.

(c) If the cardholder’s Navy Cash card is inserted in the K22 before the sale begins, only one merchant/event/amount purchase can be done because multiple entries of merchants/ events/amounts are not allowed.

(2) The operator selects the appropriate event code function key, which is optional, or presses OK to proceed to the amount entry screen.

(3) The operator enters the sale amount using the keypad or selects an amount function key. If the sale amount was entered with the keypad, the “OK” key is pressed to confirm the sale.

(4) The K22 displays the current sales total for each type of sales transaction. The operator repeats the three steps above to add items until the sale is completed. The displayed sales amount is revised after each item is added.

(5) After all items are entered into the K22, the final sales amount is displayed and the operator prompts the cardholder to insert their Navy Cash Card.

(6) The cardholder inserts their Navy Cash card into the card reader receptacle on the K22.

(7) The K22 prompts the cardholder to enter their PIN.

(8) The cardholder enters their PIN using the keypad.

(9) The K22 confirms the PIN and prompts the cardholder to confirm the final sale amount with a yes or no question.

(10) The cardholder accepts the sale amount by pressing the “OK” key.

(11) Alternatively, the cardholder can select the “CLR” key to completely cancel the transaction and return the K22 to the main screen at anytime during the process.

(12) When the cardholder presses the OK key to submit the transaction, the message “Approved” or “Denied” is displayed on the screen for each type sales transaction amount.

(a) If “Approved” is displayed, the K22 debits the amount from the cardholder’s Navy Cash Card. In the case where more than one transaction type amount is involved in the sale, it is possible that one transaction type amount will be approved while another will be denied. This depends on the amount of the sale and the amount of money on the cardholder’s Navy Cash card. For example, if a cardholder wants to purchase a money order and stamps (two different sales transaction types) and only has enough money on the card (e-purse/chip) for the stamp purchase, the K22/system will approve the stamp purchase and deny the money order purchase. The K22 will display which parts of the sale were accepted, and the operator can press the up or down arrows to scroll through a list to see the individual sales results.

(b) If “Denied” is displayed, the cardholder has insufficient funds and the transaction (or partial transaction under certain circumstances discussed above) is canceled automatically. The operator directs the cardholder to transfer a sufficient amount of funds to their card at the cashless ATM (K80) before the sale can be accomplished.

(13) If a cardholder’s card is hot listed for any reason, the K22 will immediately display the message “Invalid Card” when the cardholder’s card is inserted into the K22. The K22 will lock the card from further use (the chip is permanently rendered unusable) and display the message “Remove Card”.

c. Download of Sales Transactions from K22 to Navy Cash Server

(1) Online Mode. When operated in the online mode, sales transactions are downloaded to the Navy Cash server automatically and do not require operator intervention.

(2) Offline Mode. When operated in the offline mode, the upper right-hand corner of the K22 screen displays an asterisk (“*”) for offline mode and an exclamation point (“!”) when transactions have been recorded (stored) and require downloading to the Navy Cash server.

(a) The K22 can be downloaded at any Navy Cash network connection point (disbursing, MWR, private mess, general mess, ship’s store, post office). The network connection points are the same as for the log-on function.

(b) Disconnect the K22 device currently in use (if any) and use the data cable to connect the offline K22 to the network connection point. Ensure the K22 is powered on by pressing the green “OK” key.

(c) The download starts automatically when the LAN connection is made and begins when the asterisk on the K22 screen disappears, usually within a minute.

(d) The “!” will remain displayed until all transactions have been downloaded to the server. When the “!” symbol disappears, the K22 can be disconnected from the network connection point. If a K22 was disconnected to permit the download, it should be reconnected at this time.

(3) K22 Terminal Lost or Destroyed. The K22 POS terminal is used to store the value of sales transactions and should be protected much like a cash box, particularly when operated in the offline mode. When being transported off the ship and over water, the K22 should be carried in a waterproof container equipped with a flotation device. In the unlikely event that a K22 is lost or destroyed before the sales transactions data recorded in it are downloaded to the server, the sales transactions can be reconstructed from copies of sales receipts.

(a) The Navy Cash chip balance is essentially maintained in two places, physically on the chip and electronically in the database ashore. If sales transactions are not captured on the Navy Cash server on the ship, e.g., the K22 is lost overboard before the transactions are downloaded to the server, then no transactions can be posted to the shore database, and the Navy Cash database ashore has no way of knowing the value to transfer to that particular merchant’s account or the correct chip balances on cardholders’ cards. The chip balance on the card (the correct value) will be different from the chip balance that is maintained in the shore database.

(b) The information required to reconstruct the sales transactions would need to be provided by whoever collected the transactions. It could come from the ROM II reports if it was the ship’s store K22 that was lost or destroyed or from copies of receipts given to cardholders, e.g., in the wardroom, Chiefs mess, or MWR. The amounts that were deducted from cardholders’ cards and the cardholders’ names or card numbers would be provided to the Navy Cash Customer Service Center (CSC) at the toll free number listed in Chapter 1 of this SOP. CSC personnel would then adjust each cardholder’s chip balance in the shore database. This should synchronize the chip balance in the shore database with the chip balance on the

cardholders' Navy Cash cards, and enable payment to the merchant account. The accuracy will, of course, only be as good as the information provided to the CSC.

d. Operator Log Off

(1) Online Mode. In the online mode, the operator selects the "Off/Cancel" key (see paragraph 2.3.11.b for a more detailed description). The operator will remain logged on the system until the operator specifically logs off. The operator is not automatically logged off if the K22 is turned off.

(a) The K22 prompts operator with a yes or no question to confirm that log-off is desired.

(b) The operator selects the "OK" key.

(c) The K22 sends a message to the server, and the server returns a message to the K22 either accepting or denying the operator log-off.

(d) If the log-off is denied, the K22 returns to normal operation.

(e) If the log-off is accepted, the K22 enters the Log-On screen and log-off is completed.

(f) To turn the K22 off, the operator holds the "OFF" key down for 10 to 20 seconds.

(2) Offline Mode. If the K22 has been used in the offline mode, operator log-off must take place online at any K22 network connection point. The network connection points are the same as for the log-on function. The operator connects the K22 data cable to the network connection point and performs the same steps as for the online log-off.

2.3.2 K22 Modes

a. Administrative Screens: The K22 Administrative Screens allow the device to be configured to work in the Normal Mode or in the Proxy Mode. The Administrative Screens are entered by use of an Administrative Password and allow the Disbursing Officer, or designated representative, to change the following variables. Once the variables have been altered, the changes can be saved.

(1) **Merchant ID** — Assign to one of the three function keys in Normal Mode. The K22 must be online for Merchant IDs to be set. The Terminal ID must be set before Merchant IDs can be set.

(2) **Event ID** — Assign to one of the three function keys in Normal Mode. The K22 must be online for Event IDs to be set. The Terminal ID and Merchant ID must be set before Event IDs can be set.

(3) **Amount** — Assign to one of the three function keys in Normal Mode

(4) **Mode** — Select Normal Mode or Proxy Mode.

(5) **Admin Password** — Change the Admin Password.

(6) **Terminal ID** — A 16-digit number assigned to the K22. The Terminal ID is the first eight digits of the device serial number followed by eight zeros.

(7) **Force Operator Logon** — Forces operator logon in Proxy Mode.

b. **Normal Mode:** In Normal Mode, the K22 is used as a POS device and allows the Operator to log on and log off the system (see paragraphs 2.3.1.a and 2.3.1.d) and process sales transactions (see paragraph 2.3.1.b). An operator must be logged on before the K22 can process transactions. The K22 must be connected to the Navy Cash network for an operator to log on or off, but constant network connection is not required to process sales transactions. When a K22 is in normal mode, the proper order for a sales transaction is:

- (1) Press a function key to select a Merchant.
- (2) Press a function key to select an Event (*optional*).
- (3) Press a function key to select a pre-set amount or enter the amount using the keypad.
- (4) Insert Navy Cash card and enter PIN.
- (5) Verify Amount.
- (6) Complete Sale.
- (7) Display result of Sale.

At least one merchant must be assigned to a function key to enter the Normal Mode. Merchants are assigned to function keys using the Admin Screens (see paragraph 2.3.9). If only one merchant is assigned to a function key (i.e., the rest are left blank), the K22 will automatically use that one merchant for any sale (in this case, step 1 above does not need to be performed). If one or two merchants are assigned to function keys, and the other key(s) left blank, the blank key(s) will not work.

Events are assigned to function keys based on the merchant selection. After a user selects a merchant function key, then the function keys represent the events assigned to that merchant. Events are assigned to function keys using the Admin Screens (see paragraph 2.3.9). If no events are assigned to function keys, the K22 will proceed immediately to the amounts screen. If no event is assigned, a function key will not work. If the user does not want to use an event, “OK” can be pressed and no event will be assigned.

Amounts can also be assigned to function keys. Amounts are assigned to function keys using the Admin Screens (see paragraph 2.3.9). If no amount is assigned, a function key will not work.

c. **Proxy Mode:** In proxy mode, the K22 interacts with the disbursing application (see Chapter 8 of this SOP) and the ROM II cash register (when K22 and cash register are connected) (see Chapter 7 of this SOP). In each case, the K22 is connected to the PC by a serial cable. The proxy mode relies on a Navy Cash Proxy application that resides on the PC. If there is a problem with the K22 in the proxy mode, e.g., the K22 screen displays the “Offline” message for an extended period, it may be necessary to restart the Navy Cash Proxy application.

- (1) Locate the Navy Cash Proxy icon in the Windows status bar next to the clock. The icon has green and blue colors and is meant to look like a serial cable connector.
- (2) Either right-click or double-click the icon. A window will open titled “Navy Cash Proxy”.
- (3) Click the “Quit” button.
- (4) Go to the Start Menus > Programs > Navy Cash Disbursement Interface > and click on Shortcut to Navy Cash Proxy.exe to restart the application. The icon should reappear in the status bar.

2.3.3 K22 Device Setup

The K22 uses a Secure Access Module (SAM) for interaction with the Navy Cash card. The SAM is loaded directly into the K22 device. If the SAM is not in the K22, the K22 will not work and a message saying “Out of Order — Call Maintenance” will replace the main screen.

a. Device Setup Entry To Main Menu. When the K22 is first set up after it has been flashed with the hex file, the Device Setup mode will immediately skip to Admin Password Entry. If the K22 has been set up before, pressing 5 when the K22 first boots up will enter the Device Setup (see paragraph 2.3.7.c for a more detailed description).

- (1) K22 prompts user to enter Admin Password.
- (2) User Enters Admin Password.
- (3) K22 Verifies and displays Main Menu.
- (4) User selects option to change. This step allows entry to all other Use Cases/Modes.

b. Admin Password Entry (see paragraph 2.3.7.d for a more detailed description).

- (1) K22 prompts user to enter new Admin Password.
- (2) User enters new Admin Password.
- (3) K22 asks user to reenter new Admin Password.
- (4) User reenters new Admin Password.
- (5) K22 returns to Main Menu.

c. Merchant Entry. Merchants can be assigned to any or all of three function keys (see paragraph 2.3.9.a for a more detailed description).

- (1) K22 prompts user to select function key to assign to a merchant.
- (2) User selects a function key.
- (3) If Cancel (CLR) is selected, K22 returns to Main Menu.
- (4) K22 queries server for a list of merchant ID numbers.

- (5) K22 asks user to select which merchant ID to use.
- (6) User scrolls through list of Merchant IDs and selects one.
- (7) K22 asks user to confirm merchant ID.
- (8) User confirms merchant ID.
- (9) K22 returns to Step 1.

d. Event Entry. Events can be assigned to any or all of three function keys for each merchant ID assigned (see paragraph 2.3.9.b for a more detailed description).

(1) K22 prompts user to select the function key for the merchant to which the event will be assigned.

- (2) User selects a function key that has a current merchant ID assigned.
- (3) The K22 prompts user to select function key to assign to an event.
- (4) User selects a function key.
- (5) If Cancel (CLR) is selected, K22 returns to Main Menu.
- (6) K22 queries server for a list of current event codes.
- (7) K22 asks user to select which event code to use.
- (8) User scrolls through list of event codes and selects one.
- (9) K22 asks user to confirm event code.
- (10) User confirms event code.
- (11) K22 returns to Step 1.

e. Amount Entry. Amounts can be assigned to any or all of three function keys (see paragraph 2.3.9.c for a more detailed description).

- (1) The K22 prompts user to select function key to assign to a preset Amount.
- (2) User selects a function key.
- (3) If Cancel (CLR) is selected, the K22 returns to the Main Menu.
- (4) K22 asks user for the Amount.
- (5) User enters the Amount.
- (6) The K22 will prompt user to confirm the Amount assignment.
- (7) User confirms the Amount.
- (8) The K22 returns to Step 1.

f. State Selection (see paragraph 2.3.7.f for a more detailed description).

- (1) K22 prompts user to select state for K22 (Normal or Proxy).

- (2) User selects a state.
- (3) K22 asks user to confirm the new state.
- (4) User confirms new state.
- (5) K22 returns to State Selection Menu.

g. Proxy Mode Force Operator Logon Selection (see paragraph 2.3.8.a for a more detailed description).

- (1) K22 displays to the user the current force operator logon setting.
- (2) User changes setting.
- (3) K22 asks user to confirm the new setting.
- (4) User confirms new setting.
- (5) K22 returns to proxy mode menu.

h. Terminal ID Entry (see paragraph 2.3.7.e for a more detailed description).

- (1) K22 prompts user to enter a new Terminal ID.
- (2) User enters a new Terminal ID.
- (3) K22 will ask user to confirm new Terminal ID.
- (4) User confirms new Terminal ID.
- (5) K22 returns to Main Menu.

i. Save Device Setup. Terminal ID must be entered before the Device Setup can be saved (see paragraph 2.3.10 for a more detailed description).

- (1) K22 prompts user to indicate if they wish to save changes (Yes/No).
- (2) User selects “Yes” to save changes and “No” to not save changes.
- (3) If user answers Yes, K22 saves all changes made.
- (4) K22 reboots itself.

2.3.4 Quick Guide to Configuring a K22

a. A Quick Guide to Configuring a K22 is included at Appendix B. The guide contains an example of the K22 Configuration Settings Worksheet. A copy of the worksheet will be filled out for each K22 included as a part of the Navy Cash installation. The worksheet provides an aid to assist in troubleshooting any equipment or software problems and should also be referred to and updated whenever a K22 is being configured or reconfigured.

b. When configuring a K22 to connect to the ROM II electronic cash register, additional steps are required. Appendix C, How to Set Up Navy Cash and ROM II, provides these guidelines.

2.3.5 K22 Screens

The K22 screen can display four lines of text of 20 characters each. In the descriptions below of the various screen displays, the line numbers “0” through “3” on the left of each “screen” are used for textual references only and are not displayed on the K22 screen itself.

2.3.6 Boot-Up and Error Screens

When the K22 is first booted, there are a series of boot-up screens. These screens show the current state of the K22 as it powers up. During this boot up phase, the following screens and error states are possible.

```
0 Loading Drivers
1
2
3
```

Device specific drivers are being loaded.

```
0 DEVICE ERROR
1 CALL MAINTENANCE
2
3
```

This screen is shown when the main card reader cannot be activated.

```
0 DEVICE ERROR -S1
1 CALL MAINTENANCE
2
3
```

The two error screens on the left occur when the Secure Access Module (SAM) cannot be activated.

```
0 DEVICE ERROR -S2
1 CALL MAINTENANCE
2
3
```

```
0 Init Connections
1
2
3
```

The device is initializing communication connections.

```
0 CONNECTIVITY ERROR
1 CALL MAINTENANCE
2
3
```

This error indicates Serial Port communication cannot be activated.

```
0 Loading Configurations
1
2
3
```

The device is loading saved configurations.

2.3.7 Device Setup Screens

a. Initial Device Configuration Screens: After the K22 is flashed, it needs to be configured, and an initial password is required to protect the configuration information. The password must be four digits long. The password is not saved until the Device Setup is saved.

Under normal circumstances, all K22s received on the ship have already been set up and a password has already been assigned, either by the installation team or the depot. To begin configuring a K22 for merchant use, skip to step “c” below, press the “5” key to enter the admin mode, enter the current four-digit admin password, press the “3” key to bring up the state selection screen, and then skip to step “f” below to select either normal mode or proxy mode as appropriate.

```
0 Enter New
1 Admin Password
2
3 CLR=Clear    OK=Done
```

As the password is entered, a series of asterisks is shown on line 2. If CLR is pressed, the digits are cleared, and the user can re-enter. If OK is pressed before any digits are entered, line 3 changes to say “A value is required”. If OK is pressed before all four digits are entered, line 3 changes to say “4 digits required”.

```
0 Re-Enter New
1 Admin Password
2
3 CLR=Clear    OK=Done
```

If OK is pressed after four digits have been entered, the next screen will ask for the new password to be reentered. If the reentered four digits are not the same as the original four digits, the K22 will ask for a new password to be entered again. The K22 will not continue until both passwords are the same.

b. Set Terminal ID. The next requirement is to set a Terminal ID. Terminal IDs are 16 digits long. The new Terminal ID will not be saved until the Device Setup is saved.

```
0 Enter Terminal ID
1
2
3 CLR=Clear   OK=Done
```

The first Terminal ID Entry screen will ask the user to enter a Terminal ID. The digits will be shown on line 1 as they are entered. If CLR is selected, the digits are cleared, and the user can re-enter. If OK is selected before any digit is entered, a message on line 2 will read “A value is required”. If OK is pressed before 16 digits are entered, line 2 will read “16 digits required”.

```
0 New Terminal ID
1 xxxxxxxxxxxxxxxxxxxx
2 Confirm       OK=Yes
3              CLR=No
```

If OK is pressed after 16 digits have been entered, the Confirm screen will be shown. The new Terminal ID will be shown on line 1. If CLR is selected, the first terminal entry screen will be shown for re-entry. If the user presses OK, the new Terminal ID will be assigned, and the K22 will return to the main menu.

c. Device Setup Entry to Main Menu. When the K22 is booted up (after the first boot), the initial screen will be displayed showing the current Version and Build number of the K22 software, where x.xx is the Version number and y is the Build. If the “5” Key is pressed, the K22 will ask for the current Admin Password for entry into the Device Setup Screens. The Admin Password is four digits long.

```
0 Press 5 to enter
1 admin mode
2
3 V x.xx By
```

As the Password is entered, it appears on line 2 as asterisks and “Cancel” will change to “Clear”. Once the Password has been entered, the user will select OK to continue. If CLR is pressed while characters are on line 2, the data will be cleared. If there is nothing on line 2, the K22 will reboot.

```
0 Admin Mode
1 Enter Password
2
3 CLR=Cancel   OK=Done
```

```
0 Admin Mode
1 Wrong Pin - Do you
2 wish to try again?
3 CLR=No       OK=Yes
```

If the Admin Password is entered incorrectly, the K22 will ask if the user wishes to try again. Pressing OK will return to the Enter Password Screen. Pressing CLR will reboot the K22.

```
0 1 Password
1 2 Terminal ID
2 3 State
3 CLR=Cancel OK=Save
```

Once the Admin Password has been entered correctly, the Main Menu will be shown. If OK is pressed, the Save Screen will be shown for confirmation. If CLR is pressed, nothing is saved, and the K22 reboots. If “1” is pressed, the Password Change Screens will be shown. If “2” is pressed, the Terminal ID Change Screen will be shown. If “3” is pressed, the State Screen is shown.

d. Admin Password Entry Screens. When entered, the first screen will ask the user to enter a new Admin Password. The password must be four digits long. The new password will not be fully changed until the Device Setup is saved.

```
0 Enter new
1 Admin Password
2
3 CLR=Cancel OK=Done
```

As the password is entered, a series of asterisks will show on line 2, and “Cancel” will change to “Clear”. If CLR is pressed while line 2 is blank, the device will return to the Main Menu. If pressed after entering digits, the digits will be cleared. If OK is pressed after 4 digits have been entered, the next screen will ask for the new password to be reentered. If OK is pressed before four digits are entered, line 3 will read “4 digits required”.

```
0 Re-enter new
1 Admin Password
2
3 CLR=Cancel OK=Done
```

As the password is reentered, it will show a series of asterisks on line 2. If CLR is pressed while line 2 is blank, the device will return to the Main Menu. The last confirmed value will be retained, and the most recently entered value will be discarded. If CLR is pressed after entering digits, the digits will be cleared. If pressed before four digits are entered, line 3 will read “4 digits required”. After the password has been reentered and the OK key is pressed, the device will return to the Main Menu.

e. Terminal ID Entry: If Terminal ID is selected from the main menu, the entry screen will initially display the current value. Terminal IDs are 16 digits long. The new Terminal ID will not be saved until the Device Setup is saved.

```
0 Terminal ID
1 xxxxxxxxxxxxxxxxxxxx
2
3 CLR=Change   OK=Done
```

If the user presses CLR, then “Change” becomes “Clear” and a new Terminal ID can be entered. The new Terminal ID will be shown on line 1 as it is entered. Continuing to press CLR will result in line 1 being cleared. If OK is selected while line 1 is clear, the Main Menu will be shown. If OK is selected after data is entered, but before 16 digits are reached, a message on line 2 will read “16 digits required”. The user can continue entering the Terminal ID until done.

```
0 New Terminal ID
1 xxxxxxxxxxxxxxxxxxxx
2 Confirm       OK=Yes
3               CLR=No
```

If OK is pressed after 16 digits have been entered, the Confirm screen will be displayed with the new Terminal ID shown on line 1. If user presses OK, the new Terminal ID will be assigned, and the Main Menu will be shown again. If CLR is selected, the new Terminal ID will not be assigned — instead the previous value will be shown.

f. State Selection. The State Selection Screens allow the user to select the operational state of the K22, either Normal Mode or Proxy Mode. The new state selection will not be saved until the Device Setup is saved.

```
0 State: Normal Mode
1
2 Press 0 to Switch
3 CLR=Cancel   OK=Done
```

On line 0, the current Mode will be shown. If the “0” key is selected, the mode is switched, from Normal to Proxy or from Proxy to Normal. If OK is selected, the mode is accepted, and the menu for that particular mode is displayed. CLR cancels the change and returns to the main menu.

```
0 State: Proxy Mode
1
2 Press 0 to Switch
3 CLR=Cancel   OK=Done
```

2.3.8 Proxy Mode Setup Screens

After the mode is confirmed in the state selection screen, a menu for that particular mode is shown. If the proxy mode was selected, then the proxy mode menu will be displayed.

```
0 1 Enforce User Logon
1
2
3 OK=Main Menu
```

If “1” is selected, the “Enforce User Logon” screen will be shown. If OK is selected in the Proxy mode menu, the K22 will return to the Main menu.

a. Enforce User Logon Selection

```
0 Current State:
1 Do Not Force Logon
2 Press 0 to Switch
3 CLR=Cancel   OK=Done
```

Pressing the “0” key toggles the K22 between requiring a successful user logon before any other action can occur or not requiring a user logon. Pressing OK returns the K22 to the proxy mode menu keeping the currently selected setting. Pressing CLR returns the K22 to the proxy mode menu without saving the changes. *ROM II and Navy Cash operator IDs must match for sales receipts to be reported properly. However, even when ROM II and Navy Cash are integrated, "Enforce User Logon" must be set to "Do Not Force Logon".*

```
0 Current State:
1 Force Operator Logon
2 Press 0 to Switch
3 CLR=Cancel   OK=Done
```

2.3.9 Normal Mode Setup Screens

After the mode is confirmed in the state selection screen, a menu for that particular mode is shown. If the normal mode is selected, then the normal mode menu will be displayed.

```
0 1 Merchant
1 2 Event
2 3 Amount
3 OK=Main Menu
```

If “1” is selected, the “Merchant Entry” screen will be shown. If “2” is selected, the “Event Entry” screen will be shown. If “3” is selected, the “Amount Entry” screen will be shown. If OK is selected in the normal mode menu, the K22 will return to the Main menu.

a. Merchant Entry Screens. When first entered, the Merchant Entry screen (in Normal Mode) will ask the user to select a function key to which a merchant will be assigned. Merchant Assignments are not saved until the Device Setup is saved.

```
0 Set Merchants
1 Press a Function Key
2
3 OK=Menu
```

To assign a Function Key to work with a merchant, the K22 will ask the user to press the function key. The user can also press “1” for the F1 function key, “2” for the F2 function key, or “3” for the F3 function key. Pressing CLR or OK will return the K22 to the normal mode menu.

```
0 Press a Function Key
1 <<F1 Merchant>>
2 <<F2 Merchant>>
3 <<F3 Merchant>>
```

If the “Func” key is pressed instead of one of the function keys themselves, the screen will show the merchants currently assigned to function keys. Line 1 will show the merchant assigned to F1, Line 2 to F2, and Line 3 to F3. Pressing CLR or OK will return the K22 to the previous screen. Pressing one of the three function keys will advance the K22 to the set merchant screen for that function key.

```
0 Current Merchant
1 xxxxxxxxxxxxxxxxxxxxxxxx
2
3 CLR=Cancel    OK=Done
```

Once a function key has been selected, the K22 will show the current merchant assigned to that function key on line 1. The K22 will then ask if the user would like to change the merchant. Pressing CLR will return the K22 to the merchant entry screen. Pressing OK will continue to the next screen. If no merchant has been entered, the K22 will go immediately to the next screen.

```
0 Current Merchant
1 xxxxxxxxxxxxxxxxxxxxxxxx
2 Getting Merchants
3 Please Wait ...
```

The K22 will then try to get the merchant list from the server. While it attempts to retrieve the list, the K22 will display the current merchant on line 1. If no merchant is selected, “Merchant not set” will be displayed on line 0. Lines 2 and 3 will say “Getting Merchant Please Wait...”. Should the K22 be offline during this operation, the screen will say “Offline Unable to Set Mchnt” and will then return to the merchant entry screen.

```
0 Current Merchant
1 xxxxxxxxxxxxxxxxxxxxxxxx
2 Select New Merchant
3 xxxxxxxxxxxxxxxxxxxxxxxx
```

After it gets the current merchant list from the server, the K22 will say “Select New Merchant” on line 2 and display the merchant currently selected from the list of current merchants on line 3. The user can press the “Up” and “Down” keys to scroll up and down the list of merchants. To clear an already set merchant, the K22 allows the user to scroll past the end of the list to the “Clear Merchant” description. If the “Clear Merchant” selection is chosen, then no merchant will be assigned to the function key. Pressing OK will select the currently selected merchant displayed on line 3 and bring up the confirmation screen. Pressing CLR will cancel the merchant selection process and return the K22 to the merchant entry screen.

```
0 New Merchant
1 xxxxxxxxxxxxxxxxxxxxxxxx
2 Confirm      OK=Yes
3              CLR=No
```

After the desired merchant is selected, the K22 will ask the user to confirm the new merchant selection. The new merchant will be displayed on line 1. Pressing OK will confirm the new merchant. Pressing CLR will discard the new merchant selection. In either case, the K22 will return to the normal mode menu.

b. Event Entry Screens. When first entered, the Event Entry screen, which is only available in Normal Mode, will ask the user to select a function key for the merchant to which the event will be assigned. Event Assignments are not saved until the Device Setup is saved.

```
0 Set Events
1 Press a Function Key
2 to Select Merchant
3 OK=Menu
```

In setting up the K22 to process events, the user will first be asked to which merchant the event will be assigned. To designate that merchant, the K22 will ask the user to press the function key assigned to the merchant. Functions keys F1, F2, or F3 are accepted if there is a merchant assigned to the respective key. The user can also press “1” for the F1 function key, “2” for the F2 function key, or “3” for the F3 function key. Pressing CLR or OK will return the K22 to the normal mode menu.

```
0 Press a Function Key
1 <<F1 Merchant>>
2 <<F2 Merchant>>
3 <<F3 Merchant>>
```

Before the merchant is selected, if the “Func” key is pressed instead of one of the function keys, the screen will show the merchants currently assigned to function keys. Line 1 will show the merchant assigned to F1, Line 2 to F2, and Line 3 to F3. Pressing CLR or OK will return the K22 to the previous screen. Pressing one of the three function keys will advance the K22 to the event entry selection screen for the merchant associated with that function key.

```
0 <<Selected Merchant>>
1 Press a Function Key
2 to Set Event
3 OK=Menu
```

Once the merchant has been selected by pressing the appropriate function key, the K22 will ask the user to designate another function key to which the Event Code will be assigned. The current merchant selected will be shown on line 1. Pressing OK will return the K22 to the normal mode menu.

```
0 Press a Function Key
1 <<F1 Event>>
2 <<F2 Event>>
3 <<F3 Event>>
```

Before an event is selected, if the “Func” key is pressed instead of one of the function keys, the screen shows the events currently assigned to function keys. Line 1 shows the event assigned to F1, Line 2 to F2, and Line 3 to F3. Pressing CLR or OK will return the K22 to the previous screen. Pressing one of the three function keys will advance the K22 to the next screen.

```
0 Current Event
1 xxxxxxxxxxxxxxxxxxxxxxxx
2 Getting Event List
3 Please Wait...
```

Once a function key has been selected, the K22 will retrieve the Event list from the server, and the current event assigned to the function key will be displayed on line 1. If no event is set for the particular function key, “Event Not Set” will be displayed on line 0, and line 1 will be blank. Lines 2 and 3 will say “Getting Event List Please Wait...”.

```
0 Current Event
1 xxxxxxxxxxxxxxxxxxxxxxxx
2 Select New Event
3 Please Wait...
```

Once the list has been downloaded, the K22 will say “Select New Event” on line 2 and display the event currently selected from the list on line 3. Press the “Up” and “Down” keys to scroll up and down the list. To clear an already set event, scroll past the end of the list to the “Clear Event” description. Pressing OK will select the event displayed on line 3 and bring up the confirmation screen.

```
0 New Event
1 xxxxxxxxxxxxxxxxxxxxxxxxxxxx
2 Confirm      OK=Yes
3              CLR=No
```

After the desired event is selected, the K22 will ask the user to confirm the new event selection. The new event will be displayed on line 1. Pressing OK will assign the new event to the function key. Pressing CLR will discard the new event selection. In either case, the K22 will return to the first event setup screen.

```
0 Clear Event
1
2 Confirm      OK=Yes
3              CLR=No
```

If “Clear Event” was selected as the event description, then the confirmation screen will show “Clear Event” on line 0, and line 1 will be blank. Pressing OK will clear the event currently assigned to the function key.

c. Amount Entry Screens. When first entered, the Amount Entry screen will ask the user to select a function key to which an Amount will be assigned. Amount Assignments are not saved until the Device Setup is saved.

```
0 Set Amounts
1 Press Function Key
2
3 OK=Menu
```

To set a Function Key to work with an Amount, press the desired function key directly. The user can also press 1 for the F1 function key, 2 for the F2 function key, or 3 for the F3 function key. Pressing CLR or OK will return the K22 to the normal mode menu.

```
0 Press a Function Key
1 <<F1 Amount>>
2 <<F2 Amount>>
3 <<F3 Amount>>
```

Before the amount is selected, if the “Func” key is pressed instead of one of the function keys, the screen will show the amounts currently assigned to function keys. Line 1 will show the amount assigned to F1, Line 2 to F2, and Line 3 to F3. Pressing CLR or OK will return the K22 to the previous screen. Pressing one of the three function keys will advance the K22 to the amount set screen.

```
0 Current Amount
1 xxxx.xx
2 Enter new Amount
3 xxxx.xx
```

Once a Function key has been selected, the next screen will show the current Amount assigned to that key and allow the user to enter a new Amount. The current Amount will be shown on line 1. As the user enters a new Amount, the new Amount will be placed on line 3. Amounts are entered in the format “xxxxx.xx”. Pressing OK will assign the new amount to the selected function key. Pressing CLR will discard the new amount selection. In either case, the K22 will return to the first amount screen.

```
0 New Amount
1
2 Confirm      OK=Yes
3              CLR=No
```

After an amount has been entered, the user will be asked to confirm this new amount. The screen will list the amount on line 1. If OK is pressed, the amount will be assigned to the function key, and the first amount screen will be shown. If CLR is pressed, the K22 will return to the first amount screen without keeping the new amount.

2.3.10 Save Device Setup Screen

When selected, the K22 will ask the user if they would like to save the changes. If the Terminal ID has not been set when the Save Device Setup is selected from the Main Menu, the Terminal Entry screen will be shown instead.

```
0 Save Changes?
1
2 OK=Yes
3 CLR=No
```

If OK is selected, the changes made are saved. If CLR is selected, the changes will not be saved. After the settings are saved (or not saved) the K22 will reboot itself.

2.3.11 Normal Mode Screens

When entering the Normal Mode, the K22 will check to make sure the settings for Normal Mode are correct. Operator Log On and Operator Log Off are online functions (i.e., the K22 must be connected to the Navy Cash server). Purchase functions can be completed while the K22 is offline (i.e., the K22 is not connected to the Navy Cash server).

```
0 DEVICE NOT
1 INITIALIZED
2 ERROR
3
```

For Normal Mode, there must be at least one merchant set for the device. If no merchants are set, the Normal Mode will show the error screen on the left.

a. Operator Log On. A K22 can only have a single operator logged on at any one time. The only way to log on is through the log on screen. Once an operator has logged on, he or she will be logged on until he or she specifically logs off. Even rebooting the machine will not replace an operator that is currently logged on. Operator IDs are four digits long. When there is no operator logged onto the device, the K22 will show the Enter Operator ID screen.

```
0 Enter Operator ID
1
2
3 CLR=Clear   OK=Done
```

From the Enter Operator ID screen, the operator can enter his or her four-digit ID. As the ID is entered, it will show on line 1. If CLR is selected, the Operator ID that has been entered is cleared. If OK is selected and the Operator ID is four digits, the K22 will send a message to the server to log the Operator On.

```
0 Please Wait...
1 Logging Operator On
2
3
```

While the message is being sent, the screen will change to a “Please Wait” screen. If the CLR button is pressed while this operation is in progress, the log on will be canceled. If the server denies the log on, the Enter Operator ID is shown again. The returned error message is shown on line 2. Once a new key is pressed, the past error will disappear. If the server accepts the Operator Log On, the Normal Operation screens will be shown with the operator’s name.

b. Operator Log Off. To log an operator off the K22, press the Cancel/Off button. The K22 must be online, i.e., connected to the Navy Cash server, to log off an operator. Holding down the Cancel/Off key for more than 5 seconds will turn the K22 off, but will NOT log the Operator off.

```
0 Confirm
1 Operator Log Off
2
3 CLR=No      OK=Yes
```

The K22 will ask the operator to confirm Operator Log Off. If the CLR button is pressed, the operator is not logged off, and the K22 will return to Normal Operation. If the OK button is pressed, the K22 sends a message to the server to log the current operator off.

```
0 Please Wait for
1 Operator Log Off
2
3
```

While waiting for a response from the server, the K22 will display a “Please Wait” screen. If the server allows the operator to Log Off, the K22 will return to an Operator Log On screen. If the operator is not allowed to Log Off, the K22 will return to the Normal Operations screen. The returned error message is shown on line 2. Once a new key is pressed, the past error will disappear. Also, if CLR is selected while the device is waiting for a response, the K22 will return to the Normal Operation Screen without logging the operator off.

c. Basic Operation Screens. The K22 has a basic “Welcome to Navy Cash” screen that is shown when there are no current purchases being made. This screen will give information such as the current operator logged n, the status of the network, the status of the queued messages, and the balance of the currently entered and ready card.

```
0 Welcome to Navy Cash
1                               *!
2 Balance : $ xxxxx.xx
3 Wayne, John
```

```
0 Welcome to Navy Cash
1                               *!
2
3 Wayne, John
```

The basic screen that the K22 will display is shown on the left. The Operator is shown on line 3. The current card balance is shown on line 2. The balance will be in the format “\$ xxxxx.xx” (up to \$99999.99 of value). If there is no currently entered card, then line 2 will be blank. Finally, on line 1 are an asterisk and an exclamation point. The asterisk represents the current network status — if the K22 has had a contact with the server in the past 30 seconds, the asterisk will not be shown. The exclamation point represents whether there are purchase messages stored in the K22 that must be sent to the server — if there is at least one purchase message to be sent, the exclamation point will be shown.

Below are the possible states:

```
0 Welcome to Navy Cash
1                               *!
2
3 Wayne, John
```

Network down. At least one message to be sent.

```
0 Welcome to Navy Cash
1                               !
2
3 Wayne, John
```

Network up. At least one message to be sent.

```
0 Welcome to Navy Cash
1                               *
2
3 Wayne, John
```

Network down. No messages to be sent.

```
0 Welcome to Navy Cash
1
2
3 Wayne, John
```

Network Up. No messages to be sent.

```
0 Welcome to Navy Cash
1 Memory Full      *!
2
3 Wayne, John
```

After a purchase, messages are saved in the memory of the K22. When the K22 is online, the device will send these messages to the server. If the memory queue on the K22 is full, line 1 will say “Memory Full” in addition to the asterisk and exclamation point.

```
0 Welcome to Navy Cash
1                      *!
2
3 Operator 1234
```

If the Operator Name is not returned by the server, but the operator is still logged on, the Operator ID will be shown on line 3 instead of the Operator Name.

```
0 Please Remove Card
1
2
3                      #
```

If there is a card in the K22 that should be removed, the Normal screen will change to “Please Remove Card”. There will be a number on line 3 at the end of the line. This number represents the reason for removing the card.

```
0 Welcome to Navy Cash
1                      *!
2 Total: $ xxxxx.xx
3 Wayne, John
```

If there is currently an ongoing purchase, the Normal Operations screen will change to represent the total purchase. Other parts of the screen will function the same. If there is an ongoing purchase and the CLR button is pressed, the ongoing purchase is immediately canceled. The screen will return to the default Normal Operation screen. If the up or down scroll keys are pressed, the Purchase Review screens will be displayed (see below).

d. Purchase and Card Entry Screens. Purchases are entered while in normal operation mode. Purchase transactions are a combination of a merchant, event, and amount. As a purchase is entered, the amount of the new purchase is added to the total of the same merchant/event pairing. Each merchant/event pairing total is saved in memory until a card is entered.

```
0 Welcome to Navy Cash
1
2 Total : $ xxxxx.xx
3 Wayne, John
```

During a purchase, the total of all merchant/event pairings are shown on line 2. If CLR is pressed while in the main normal mode screen, all the current transactions will be cleared. If CLR is pressed during a transaction entry, just that transaction entry will be cancelled. Transactions can be entered until a card is inserted. Once a card is inserted, the transaction must be completed or cancelled. While a card is inserted it, is possible to enter new merchant/event/amount transactions, but each transaction must be approved and finished right after it is entered.

e. K22 Function Keys. At any time, if a function key is pressed, the current function key assignments will be shown. For example, if a function key is pressed before a transaction is completed, the merchant assignments will be shown. After a merchant is selected, if a function key is pressed, the event assignments will be shown. After an event is selected, if a function key is pressed, the amount assignments will be shown.

```
0 Press a Function Key
1 <<F1 Merchant>>
2 <<F2 Merchant>>
3 <<F3 Merchant>>
```

With three function keys on the K22, there are 12 possible combinations of merchants and events, three for merchants alone and nine for each merchant/event function key press.

```
0 Press a Function Key
1 <<F1 Event>>
2 <<F2 Event>>
3 <<F3 Event>>
```

While viewing the function key assignment screens, if the OK button is pressed, the K22 will return to the current selection screen. If the CLR button is pressed, the transaction is cancelled. If any of the function keys are pressed, i.e., F1, F2, or F3, then the appropriate function key assignments will be used for the current purchase.

```
0 Press a Function Key
1 <<F1 Amount>>
2 <<F2 Amount>>
3 <<F3 Amount>>
```

f. Purchase Review Screens. While the K22 is at the normal mode screen, pressing the up and down scroll buttons will enter the purchase review screens. The purchase review screens will show the current totals for each merchant/event pairing where the amount is greater than zero.

```
0 <<Merchant Name>>
1 <<Event Name>>
2 $ xxxxx.xx
3 Scroll or Press OK
```

The purchase review screen shows the merchant on line 0 and the event on line 1. If there is no event, line 1 will be blank. Line 2 shows the total of the purchase for this item. If the down scroll button is pressed, the next purchase item description is displayed until all items have been shown. If the up scroll button is pressed, the previous purchase item is displayed. If OK or CLR is pressed, the K22 returns to the normal operation screen.

g. Purchase Entry Screens. To begin a purchase, the user presses one of the function keys or a numeric key. The K22 then checks to see if only one function key has a merchant assigned. If there is only one merchant assignment, then the K22 will go to the event entry screen. If the original key pressed was a function key, the K22 will check to see if the function key has an event assignment. If it does, then the K22 will go to the amount entry screen with the selected event. If more than one function key has a merchant assigned, then the K22 will check to see if the key pressed has a merchant assignment. If the key pressed was a numeric key or a function key that does not have a merchant assigned, the K22 will ignore it. If the key has a merchant assigned, then the K22 will go to the event entry screen with the selected merchant. If there are no events assigned to any of the function keys, then the K22 will go immediately to the amount entry screen.

```
0 <<Merchant>>
1
2 Enter Event
3
```

Once the event entry screen is entered, the K22 will show the currently selected merchant on line 0. From this screen, if a function key is pressed, the K22 will check to see if an event has been assigned to that key. If an event has been assigned, the K22 will go to the amount entry screen with the selected event. If no event was assigned, then nothing will be done. If the OK button is selected, the K22 will not use an event and will go to the amount entry screen. If a numeric key is selected, the K22 will not use an event and will go to the amount entry screen.

```
0 <<Merchant>>
1 <<Event>>
2 $ xxxxx.xx
3 Enter Amount
```

Once the amount entry screen is entered, the K22 will show the currently selected merchant on line 0 and the currently selected event on line 1. If no event is selected, line 1 will be left blank. The current total of the sale is shown on line 3. If one of the function keys is pressed, the K22 will automatically use the value assigned to the function key as the amount for this transaction if the value is greater than 0 and show the amount on line 2. If the numeric keys are pressed, then the K22 will show the value as the amount for this transaction on line 2.

h. Card Entry Screens. Navy/Marine Cash cards may be inserted into the K22 at any time. The card will be acted upon the next time the main normal operation screen is displayed.

```
0 Please Wait
1 Accessing Card
2
3
```

When a Navy Cash card is entered, the K22 will access the card. The “Please Wait” screen will show until the card is fully accessed. If the card is blocked or unable to be accessed, the “Please Remove Card” screen will be shown. A message will be sent to the Navy/Marine Cash server with the reason for removal.

```
0 Enter PIN
1
2          ****
3 CLR=Clear  OK=Done
```

Once the card is fully accessed, the K22 will ask the cardholder to enter his or her Personal Identification Number (PIN). As the PIN is entered, a series of asterisks will be shown on line 2. If the CLR button is selected when no PIN numbers have been entered, the device will return to normal operations and ask for the card to be removed. If at least one of the PIN numbers has been entered, line 3 will say “CLR=Clear” and “OK=Done”. If the CLR button is pressed, the currently entered PIN will be cleared, and the cardholder can start again with PIN entry.

```
0 Verifying Pin
1 One moment please...
2
3
```

If the OK button is selected after all four of the PIN numbers have been entered, the K22 will try to verify the PIN.

```
0 PIN Invalid
1 Re-enter Pin
2
3 CLR=Clear   OK=Done
```

If it is unable to verify the PIN, the K22 will show a “PIN Invalid Re-Enter PIN” message on lines 0 and 1. As the PIN is reentered, the message will disappear.

```
0 Please Remove Card
1
2
3                                     #
```

If the card goes over its PIN retry limit, the “Please Remove Card” message will be shown. If there is any error, a message will be sent to the back end server with the reason for removal. There will be a number on line 3 at the end of the line. This number represents the reason for removing the card.

```
0 Welcome to Navy Cash
1
2 Balance: $ xxxxx.xx
3
```

After the card has been entered, the PIN presented, and the card authenticated, the K22 will return to normal mode if there is no sales transaction pending and display the current card balance.

```
0 Total: $ xxxxx.xx
1 Confirm?   OK = Yes
2           CLR = No
3 Scroll to Review
```

If there is a sales transaction pending, the K22 will enter the purchase confirmation screen (see paragraph i below). The total of the sale is shown on line 0 in a “\$xxxxx.xx” format. To confirm the transaction, press OK. To cancel the transaction and return to the normal operation screen, press CLR. Pressing the up and down scroll buttons will show the transaction review screens. If CLR is pressed, the sale is canceled and all the totals go to \$0.00.

i. Purchase Confirmation Screens. If there is an authentic Navy/Marine Cash card and at least one transaction in the K22, the Purchase Confirmation screens will be displayed.. The purchase confirmation screens are also shown when a card is in the K22 and a new transaction is entered. For every transaction, successful or failed, a log is saved in the offline queue to be sent to the Navy/Marine Cash server.

```
0 Total: $ xxxxx.xx
1 Confirm?   OK = Yes
2           CLR = No
3 Scroll to Review
```

The total of the sale is shown on line 0. To confirm the transaction, press OK. To cancel the transaction and return to the normal operation screen, press CLR. Pressing the up and down scroll buttons will show the transaction review screens.

```
0 <<Merchant Name>>
1 <<Event Name>>
2 $ xxxxx.xx
3 Scroll or Press OK
```

In the purchase review screens, pressing the scroll buttons will scroll through the transactions. Each transaction is shown as a merchant/event pairing with the total amount assigned to that merchant and event. If the merchant/event pairing does not have an amount assigned, it will not be shown. Pressing OK or CLR will return the K22 to the basic purchase confirmation screen.

```
0 Memory Full...
1 Current Transaction
2 Cancelled...
3 Please Wait
```

After the sale has been confirmed, the K22 will first check to make sure that there is enough memory in the offline queue to save the new sale. If the memory is full, the transaction will be cancelled and an error message saying “Memory Full” will be displayed. Once this screen is shown, it will remain until the offline queue can start receiving messages again. Once the queue has more available space, the K22 will return to the normal operation screen. The offline queue will clear normally while the K22 is connected to the network.

```
0 Please Wait for
1 Sale Completion
2
3
```

If there is room to save the new transaction, the K22 will begin to process the transaction. While the K22 is processing the transaction, the “Please Wait for Sale Completion” screen will be displayed. One transaction will be sent to the card as an amount with a merchant/event pairing for each merchant/event pairing. It is **CRITICAL NOT TO REMOVE THE CARD DURING THIS PERIOD**. Removing the card during sale completion does not mean the sale will not go through. It is still possible for part of the sale to have been completed before the card had been removed.

```
0 Purchase Succeeded
1
2
3
```

Once the sale is complete, the K22 will display the results. If all the purchases were successful, the screen will display “Purchase Succeeded”.

```
0 xx:Approved
1 xx:Denied
2 Scroll to Review
3
```

If one or more of the merchant/event pair transactions failed, the K22 will display the number of transactions approved and the number denied on lines 0 and 1, and line 2 will display the message “Scroll to Review”. In either case, the user can press the up or down scroll buttons to review the sale. For example, it is possible for the card to have enough funds to complete one transaction, but not all of them. Since each merchant/event pairing is considered one transaction, it is possible for the card to have enough funds to complete some merchant/event pairs but not all of them. These screens will show which ones were approved and which ones were denied. Line 2 will display the message “Scroll to Review”. In either case, the user can press the up or down scroll buttons to review the transactions. Pressing OK or CLR at these screens will return the K22 back to the normal operations screen.

```
0 <<Merchant Name>>
1 <<Event Name>>
2 $ xxxxx.xx: Success
3 Scroll or Press OK
```

If the up or down scroll buttons are selected, the K22 will display each individual merchant/event pair result. The merchant will be shown on line 0, and the event on line 1. Line 2 will display the amount of the purchase followed by a “Success” or “Failure” message. Transactions that succeeded, i.e., removed funds from the card, will show “Success; transaction that failed will show “Failure”. “Scroll or Press OK” will be shown on line 3. If OK or CLR is pressed, the K22 will return to the normal operations screen. If the up or down scroll buttons are pressed, the K22 will continue to scroll through the transactions results.

j. Diagnostic Screens. While in the Normal Operation mode, the diagnostic screens will show information about the current K22 that may be helpful in troubleshooting. To enter the diagnostic screens, the K22 must be at the normal operation screens with no transactions pending and no card inserted. Once the K22 is in this state, pressing the CLR button will display the first diagnostic screen. The diagnostic screens can also be entered from the Operator Log On screen if no portion of the Operator ID has been entered by pressing the CLR button. There are two diagnostic screens.

```
0 On-Line
1 <<Operator Name>>
2 xxxxxxxxxxxxxxxxxxxxxx
3 V x.xx By
```

Line 0 will show the current status of the K22, “On-Line” if the K22 is online and “Off-Line” if the K22 is offline. Line 1 will show the name of the operator currently logged on the K22. If no name is available, line 1 will say “Operator xxxx” where “xxxx” is the operator number. If no operator is logged on, line 1 will say “No Operator Logged On”. Line 2 will show the full 16-digit Terminal ID number. Line 3 will show the current version and build number of the K22 software, where x.xx is the Version number and y is the Build.

```
0 Normal Mode
1
2
3 Queue:
```

From the first diagnostic screen, press any button to enter the second diagnostic screen. The current K22 mode, “Normal Mode”, is shown on line 0. The number of messages in the queue is shown on line 3. This is shown as “Queue:x” where “x” is the number of queue messages. To exit the second diagnostic screen, press any button. The K22 will return to the normal operations screen.

k. Normal Mode Admin Message Support. While in the Normal Operation mode, admin messages may be sent to the K22. The K22 will only act on the messages when it is in the normal mode operations screen. Any pending transaction will be cancelled when an admin message is received. .

```
0 Please Wait...
1
2 Under Maintenance
3
```

While processing the admin message, the K22 will show the message “Please Wait...” on line 0 and “Under Maintenance” on line 2. Once it has finished processing the admin message, the K22 will return to the normal operation screen.

2.3.12 Proxy Mode Screens

This section details the screens shown by the K22 while in Proxy Mode or State. The proxy mode or state is used by the Navy Cash disbursing application and by the ROM II cash register.

a. Normal Operation. The K22 in proxy mode uses the Terminal ID that was defined in the device setup mode above. Because the Terminal ID is required before the K22 can be set to a usable state, the K22 is always correctly configured when in the Proxy Mode.

```
0 Welcome to Navy Cash
1   Proxy Mode
2   Please Insert
3   Navy Cash Card
```

With no card in the reader, the normal screen shown here is displayed.

```
0 Welcome to Navy Cash
1   Proxy Mode
2
3   Offline
```

When the K22 goes offline, all transactions (except the get-card-info command) are disabled. This screen is displayed.

```
0 Welcome to Navy Cash
1   Proxy Mode
2   Please Insert
3   Navy Cash Card   !
```

If the K22 has messages in the offline queue, the normal operation screen will show an exclamation point on line 3 at the end of the line. The exclamation point will be shown when the K22 is online or offline as long as there are messages in the queue.

```
0 Welcome to Navy Cash
1   Proxy Mode
2
3   Memory Full
```

If the K22's offline queue is full and the K22 is unable to continue entering new transactions, the K22 will display "Memory Full" on line 3.

```
0 Welcome to Navy Cash
1   Proxy Mode
2   Memory Full
3   Offline
```

When the K22 is offline, the "Memory Full" message will be displayed on line 2.

b. Card Entry

```
0 Please Insert
1 Navy Cash Card
2
3
```

If the Disbursing or the ROM II Application sends a command that requires the card to be inserted and it is not already inserted, the insert card screen is shown. This includes the Get-Card-Info request. The insert card screen is displayed if a card is inserted before the Disbursing or ROM II Application requests a transaction.

```
0 Checking Card
1 One moment please...
2
3
```

When the request is received (get-card-info or transaction request), the screen changes to the checking card screen. During this time, the card is verified to be a Navy Cash card and checked against the list of “hot” cards.

```
0 Waiting For Command
1
2
3
```

If the request is for card information, the screen returns to the “Waiting For Command” state and remains there for subsequent get-card-info requests.

```
0 Waiting For Command
1 Balance: $ xxxxx.xx
2
3
```

After a transaction that requires a PIN, this wait screen is displayed to show that the K22 has finished the last transaction and does not need additional hot list checks or PIN verifications to continue. The card balance is shown on line 1.

c. Operator Log On/Off. An operator log-on or log-off request can be made when the K22 is online whether or not a card is inserted. The K22 must be in an idle state, i.e., no other transactions pending, if a card is in the reader.

```
0 Please Wait...
1 Logging Operator On
2
3
```

```
0 Please Wait...
1 Logging Operator Off
2
3
```

These screens are displayed for log on and log off. When complete, the K22 returns to the screen that was previously displayed.

(a) Transaction Confirmation.

```
0 Enter Pin
1
2
3 CLR=Clear OK=Done
```

If the first request to the K22 is for a transaction other than a get-card-info request, e.g., a funds transfer to or from the chip, the checking card screen is displayed and then the user is asked to enter his or her PIN. This does not include the PIN change request.

```
0 Verifying Pin
1 One moment please...
2
3
```

The PIN verification screen is displayed during the PIN verification.

```
0 PIN Invalid
1 Re-enter Pin
2
3 CLR=Clear OK=Done
```

If the PIN was incorrectly entered and verification fails, the K22 gives a second chance for the user to re-enter the PIN. And again the “Verifying PIN” screen is displayed.

```
0 Withdraw $ 10.53
1
2 Confirm      OK=Yes
3              CLR=No
```

When complete, one of the confirmation screens to the left is shown (depending on the requested transaction). An example of \$10.53 is shown.

```
0 Credit $ 10.53
1
2 Confirm      OK=Yes
3              CLR=No
```

```
0 Transfer $ 10.53
1
2 Confirm      OK=Yes
3              CLR=No
```

The screen to the left is for a Navy Cash to Navy Cash transfer, i.e., transfer between two accounts that are not chip accounts.

```
0 Querying Network...
1 One moment please...
2
3
```

For credit transactions, the screen to the left is displayed, once the cardholder has confirmed the transaction, while the K22 attempts to query the network and complete the transaction.

```
0 Updating Card
1 One moment please...
2
3 CLR=Clear   OK=Done
```

If the response from the Backend Server is positive (for a credit), or if the transaction is a debit, this screen is displayed.

```
0 Done
1
2
3
```

After a successful transaction, the “Done” screen to the left is shown. Otherwise, the K22 will display the error received. These screens will remain active for a short time and then return to the normal operations screen or the basic card-in screen if a card is still in the K22.

d. PIN Change.

```
0 Enter New PIN
1
2      ****
3 CLR=Clear  OK=Done
```

When a PIN-reset request is made, the K22 will ask the cardholder to enter a new PIN. As the cardholder enters the PIN, the PIN will show up as a series of asterisks on line 2. During this time, if there is at least one digit on the display, pressing CLR will clear the PIN entered. This will allow the user to enter another PIN. Pressing OK will finish the PIN entry as long as four digits have been entered. If it is the first transaction requested using this particular Navy Cash card, the K22 will not perform the hot list check or ask for a PIN to be entered for verification.

```
0 Re-enter PIN
1
2
3 CLR=Clear  OK=Done
```

After the cardholder has entered a new PIN, the K22 will ask the cardholder to re-enter the PIN for confirmation.

```
0 Changing PIN...
1
2
3
```

These screens are followed by a “Querying Network...” screen and then the two screens on the left. After a few moments, the idle screen is shown and transactions can continue.

```
0 PIN Changed
1
2
3
```

e. Error Screens.

```
0 Transaction Canceled
1
2
3
```

If the user cancels a transaction, e.g., selects clear during a withdrawal, or cancels a PIN change, these screens are shown — followed by an idle screen.

```
0 Pin Change Canceled
1
2
3 CLR=Clear  OK=Done
```

```
0 Pin Change Failed
1 xxxxxxxxxxxxxxxxxxxxxx
2
3
```

If the Backend Server denies a PIN change, the returned message will be displayed on the K22 screen in the area “xxxxxxxxxxxxxxxxxxxx”.

```
0 Pin Change Failed
1 xxxxxxxxxxxxxxxxxxxxxx
2
3
```

The screen to the left is displayed when a card error occurs, e.g., the unblock PIN returned from the server fails to match that on the card. After a pause, the “Enter PIN” screen is shown, followed by a menu state. A message will be sent to the server for this error and to the disbursing application.

```
0 Transaction Failed
1 xxxxxxxxxxxxxxxxxxxxxx
2
3
```

The server may deny a transaction for some reason, e.g., the card-id is unknown. The returned message will be displayed on the K22 screen. As shown on the left, it will be displayed in the area “xxxxxxxxxxxxxxxxxxxx”.

```
0 Transaction Failed
1 xxxxxxxxxxxxxxxxxxxxxx
2
3
```

When attempting to place money on the card, the card software may deny the request, e.g., the amount to be loaded is too high or there are insufficient funds on the card to complete the transaction. This screen is displayed. A message will be sent to the back end server and to the disbursing application or ROM II cash register for this error.

```
0 Transaction Failed
1 Ntwk Message Timeout
2
3
```

The screen to the left is displayed when the server takes too long to respond to requests.

```
0 Please Remove Card
1
2
3 Time Expired
```

While the K22 is operating, various conditions may occur that require a transaction to be canceled and the card removed. This screen is displayed with an explanation at the bottom. For this example, the card has been in the reader too long without action.

```
0 System error cid
1
2
3
```

When this (or a similar message) is displayed, the K22 received incomplete or invalid data from the disbursing application or ROM II cash register. The application contact (and possibly the Navy Cash Customer Service Center) needs to be contacted.

2.4 K80 Cashless Automated Teller Machine Device

2.4.1 General

The K80 is an Automated Teller Machine (ATM)-like device that can read the chip on the Navy Cash card, interact with the Navy Cash server, and allow users to move “funds” between their bank and credit union accounts ashore and their Navy Cash (strip) accounts or their chip accounts. The K80 uses a SAM for interaction with the Navy Cash card, i.e., the chip on the card. If the SAM is not in the K80, the K80 will not work, and a message saying “Out of Order — Call Maintenance” will replace the main screen.

The K80 connects to the Navy Cash network through an internal serial port connection. The K80 is dependent upon a continuous network connection to the Navy Cash server. The K80 cannot support offline transactions, and, in fact, no transactions are allowed unless the K80 is connected to the Navy Cash server. The K80 receives “Ping” messages from the Navy Cash Server. If the K80 has not received a “Ping” message within 15 seconds, it will display a screen stating the ATM is currently out of service.

In the unlikely scenario that the server is down for a lengthy period of time (days, weeks), the retail operation will be operated on a cash basis, with the same procedures used prior to the implementation of Navy Cash.

2.4.2 Screens

a. Base Screen

1234567890123456789012345678901234567890
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5

Welcome
to the Navy Cash ATM

Please Insert Navy Cash Card

The K80 default base screen is shown on the left. The screen is 40 characters wide and 16 lines high. The numbers on the left and top show the current row and the current column for text placement and reference only and are not displayed on the K80 screen itself.

The K80 has a numeric keypad below the display. This keypad includes the numbers 0 to 9 in a standard keypad layout. Also included are the OK key on the lower right in green and the CLR key on the lower left in red.

The K80 has four buttons on each side of the Lighted Crystal Display (LCD) screen. These buttons are located adjacent to Lines 0, 5, 10, and 15. From this point on, these buttons will be referred to with a letter (L for Left, R for Right) and a number (the line where the button is located). For example, the buttons on the left side will be L0, L5, L10, and L15. For the right side buttons from the top, the labels will be R0, R5, R10, and R15.

Displayed in the upper right corner of the screen is a two-digit alphabetical code, which signifies a specific type of error when detected. A legible message associated with the error code is displayed clearly on the footer of the screen notifying a user of possible maintenance difficulty.

b. Boot Up Screens and Error Screens. When the K80 first powers up, there are a series of boot-up screens. These screens show the current state of the K80 as it powers up. During this boot-up phase, there is a possibility of several error states. The error states are located on the first four lines on the screen and will not go past the first 20 characters. The following screens and error states are possible.

```
0 Loading Drivers
1
2
3
```

Device specific drivers are being loaded.

```
0 DEVICE ERROR
1 CALL MAINTENANCE
2
3
```

This screen is shown when the main card reader cannot be activated.

```
0 DEVICE ERROR-S1
1 CALL MAINTENANCE
2
3
```

The error screens on the left occur when the SAM cannot be activated.

```
0 DEVICE ERROR-S2
1 CALL MAINTENANCE
2
3
```

```
0 Init Connections
1
2
3
```

The screen indicates that the K80 is initializing communication connections.

```
0 CONNECTIVITY ERROR
1 CALL MAINTENANCE
2
3
```

This error indicates Serial Port communication cannot be activated.

```
0 Loading
Configurations
1
2
3
```

The K80 is loading saved configurations.

```
0 Device Not
Initialized
1 Call Administrator
2
3
```

The K80 is not initialized. See the Terminal ID entry screen section.

c. Terminal ID Entry Screen. When a K80 is initialized, it is necessary to enter a new Terminal ID for the K80. This can be done with the Terminal ID Entry Screens. These screens can only be brought up when the K80 is booted with the door open. At all other times, it will either not display the Terminal ID Entry Screens (if one has been entered previously) or it will display the error “Device not Initialized Call Administrator” (if a Terminal ID has not been set previously).

```
0 Press 5 to enter
1 admin mode
2
3 V x.xx By
```

The first screen (shown on the left) allows the user to enter the Terminal ID Entry Screen. To enter the screen, press the 5 button. If the button is not pressed within 5 seconds, the K80 will boot normally. Also displayed is the current Version and Build number of the K80 software. This is shown as “Vx.xx By” where x.xx is the Version number and y is the Build number.

```
0 Change Terminal
1 Identification?
2 OK = Yes
3 CLR = No
```

The second screen confirms that the Terminal ID should be changed. Press OK to change the ID or CLR to cancel and boot the machine normally.

```
0 Enter New
1 Terminal ID
2
3
```

The screen to the left is now shown. If the K80 has not had a Terminal ID entered into it before, this will be the first screen that is shown. The Terminal ID entered must be exactly 16 digits long. If more than 16 digits are entered, only the first 16 will be used. If CLR is pressed, the Terminal ID will return to no digits entered and allow a new Terminal ID entry. If OK is pressed before 16 digits are entered, nothing will happen.

```
0 New Terminal ID
1 xxxxxxxxxxxxxxxxxxxx
2 Confirm      OK = Yes
3              CLR = No
```

Once the Terminal ID is set, the screen to the left asks the operator to confirm the new Terminal ID. Press OK to confirm the ID and CLR to return to the Terminal ID Set.

```
0 Save Changes
1
2 OK = Yes
3 CLR = No
```

Once the new Terminal ID has been confirmed, the next step will be to Save the Changes. Press OK to save the changes and CLR to cancel the changes.

```
0 Rebooting
1
2
3
```

Whether the changes have been saved or not, the K80 will then reboot.

2.5 Navy Cash Equipment Checklist

A sample Navy Cash Equipment Checklist is included at Appendix G. This checklist will be tailored for each ship as a part of the Navy Cash installation. The checklist provides an aid to assist in troubleshooting any equipment or software problems and should also be used to review the status of all the ship’s Navy Cash devices on a periodic basis.

