Meridian 1 Options 201, 211

Meridian SL-100

Voice Message Exchange Interface General Description

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About this document

When to use this document

This publication describes the Voice Message Exchange (VMX) interface feature. The VMX interface feature is optional and can be provisioned on Meridian SL-100 switches that are equipped with MSL03 and later software releases.

This document contains the following major topics:

- Feature description

- Feature operation

- Meridian SL-100 / VMX configurations

- Feature implementation

- Maintenance and administration

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the *next* software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the *same* software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *MSL-100 Master Index of Publications*, 555-4031-001.

This document is written for all MSL-100 Family offices. More than one version of this document may exist. To determine whether you have the

latest version of this document and how documentation for your product is organized, check the release information in *Meridian SL-100 Master Index of Publications*, 555-4031-001.

References in this document

The following documents are referred to in this document:

- 555-4031-801, Meridian SL-100 Feature Description Manual
- 555-4031-851, Common Customer Data Schema

What precautionary messages mean

The types of precautionary messages used in NT documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER   Possibility of personal injury

DANGER
Risk of electrocution
Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING   Possibility of equipment damage

> **WARNING**
> **Damage to the backplane connector pins**
> Align the card before seating it, to avoid bending the
> backplane connector pins. Use light thumb pressure to
> align the card with the connectors. Next, use the levers on
> the card to seat the card into the connectors.

CAUTION   Possibility of service interruption or degradation

> **CAUTION**
> **Possible loss of service**
> Before continuing, confirm that you are removing the card
> from the inactive unit of the peripheral module.
> Subscriber service will be lost if you remove a card from
> the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the
following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a
command:

>BSY

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are
shown in uppercase letters:

>BSY CTRL

Variables

Variables are shown in lowercase letters:

>BSY CTRL ctrl_no

The letters or numbers that the variable represents must be entered. Each
variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

The following excerpt from a procedure shows the command syntax used in this document:

1 Manually busy the CTRL on the inactive plane by typing

>BSY CTRL ctrl_no
and pressing the Enter key.

where

ctrl_no   is the number of the CTRL (0 or 1)

Example of a MAP response:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

Feature description

Overview

The Voice Message Exchange (VMX) Interface is an optional feature that enables you to send and receive voice messages. Voice messages are sent, stored, and retrieved using a VMX microprocessor, which is interfaced to the host Meridian SL-100 through 2-way, 4-wire E&M trunks.

Access to VMX features and services can be allowed for users on the host Meridian SL-100 and users who are part of an Electronic Switched Network (ESN).

There are two requirements for access to VMX features and services:

- You must have access to a telephone set that is arranged for dual tone multifrequency (DTMF) outpulsing. (A portable multifrequency tone generator can be used with non-DTMF telephones.)

- You must be defined to VMX software as a VMX subscriber and be assigned a unique identification (ID) number to access your personal Voice Mailbox and other VMX voice messaging functions. Typically, your ID corresponds to the 7-digit number of your telephone.

A user who is not defined as a VMX subscriber can indirectly (through call forward or call transfer to the Message Desk) access VMX, whether or not that user's telephone is arranged for DTMF outpulsing. Access in this manner is, however, limited only to depositing a voice message in a VMX subscriber's Voice Mailbox.

A Meridian SL-100 attendant console cannot be a VMX subscriber because the console uses digital signaling and does not generate DTMF tones, which are used by VMX for command messages. The attendant console can, however, connect users to VMX and can access the Message Desk.

For customers, VMX features and services offer the following benefits:

- The paperwork (and staff) associated with manual message taking is reduced or eliminated.

- An unmanned message store and retrieval service can be provided on a 24-hour basis.

- Printed-copy memos can be reduced.
- "Telephone tag" can be reduced or eliminated.
- In a network environment, a uniform corporate-wide voice messaging network can be implemented.

As a VMX subscriber, you'll receive the following voice messaging features and capabilities:

- A visual (steadily lit message waiting lamp) or audible (stuttered dial tone) indication is given at your telephone when there are unacknowledged voice messages in your personal Voice Mailbox.
- By directly accessing VMX, voice messages can be composed, reviewed, edited, erased, saved, or sent to another VMX subscriber as well as a nonsubscriber.
- Voice messages that are deposited in your mailbox can be redirected, with any additional comments you want to add, to other subscribers or nonsubscribers.
- A single message can be composed and sent to VMX subscribers who are part of a predefined group (such as department and location).
- Incoming calls to your telephone can be forwarded to VMX for answering.
- A personal greeting can be composed and presented to incoming callers who are call forwarded to VMX.
- A personal announcement can be composed and presented to forwarded callers when you do not want the caller to leave a voice message.

Basic features

The basic VMX features give you the essential capabilities for voice messaging. These include sending voice messages, receiving voice messages, and administering voice messages.

Sending messages

With VMX, you can compose, review, and edit a voice message. When satisfied with the message content, it can be sent (and subsequently saved or erased) to the following:

- Another VMX subscriber
- A nonsubscriber served by the host Meridian SL-100
- A nonsubscriber served by the public network
- A predefined group of VMX subscribers and nonsubscribers

Receiving messages

You can receive voice messages from the following:

- Other VMX subscribers

- Nonsubscribers served by the host Meridian SL-100

- Nonsubscribers served by the public network

Administering messages

You can perform the following tasks:

- Reply to messages received from other subscribers

- Redirect messages received from subscribers and nonsubscribers to other subscribers

- Save any messages that are received or composed

- Erase any messages that are received or composed

Message desk

VMX can be arranged to provide a message desk function. Three variations of Message Desk are available: Regular, Express, and Combination/Integrated. Each VMX may have more than one message desk of the same or different types. The types are determined by parameters in the VMX database and may be set or changed by the VMX System Administrator.

Regular message desk

In this configuration, a separate Message Desk Voice Mailbox is used for voice message deposit. Users can call the Message Desk directly or be call-transferred or call-forwarded to the Message Desk. Callers are prompted by VMX to say the name of the party for whom the message is to be left, then to say the actual message. The message is deposited in the Message Desk Voice Mailbox.

Periodically, a Message Desk Operator (person) must scan the Message Desk Voice Mailbox, listen for the name of the intended recipient, then redirect the message to the subscriber's personal Voice Mailbox. The subscriber is notified of the waiting message only after it has been deposited in his or her personal mailbox, not while the message is in the Message Desk Voice Mailbox.

Express message desk

This feature functions similarly to the Regular Message Desk; however, a caller can bypass the Message Desk Voice Mailbox and deposit a message directly into a subscriber's personal Voice Mailbox.

Callers (direct, call forwarded, or call transferred) are prompted by VMX to dial (on a DTMF telephone) the address of the message recipient, then say the message. The message is immediately deposited in the subscriber's personal Voice Mailbox. Callers who enter an invalid mailbox address twice in succession are asked by VMX to say the name of the message recipient, then leave the message as in Regular Message Desk operation. The Message Desk Operator must subsequently redirect this message to the intended recipient.

Combination/integrated message desk

As in Regular Message Desk operation, callers are asked to say the name of the intended message recipient and say the message. Knowledgeable users, with access to a telephone arranged for DTMF outpulsing, can override the VMX prompts by dialing the mailbox address of the intended recipient and depositing the message directly into the subscriber's personal Voice Mailbox.

Call answering

This feature enables you to forward all incoming calls to VMX. VMX answers each call, prompts the caller to speak the message, then deposits the message in your mailbox.

With this feature, you can compose a personal greeting or personal announcement to be played by VMX to incoming callers. A personal greeting is typically used to inform callers that you are away from the office for a short time, but if they will leave a message you will respond to their call when you return. A personal announcement is typically used to inform a caller that you will be out of the office for an extended time and to either call another party or call back at a later date. Callers who receive a personal announcement cannot leave a voice message.

You can change the personal greeting or personal announcement at any time. If you don't provide a personal greeting or announcement, a fixed, default VMX message is presented to callers, and they are asked to leave a voice message.

Voicenet

The Voicenet feature enables voice messages to be sent and received between VMX systems. VMX systems that are arranged for Voicenet are distributed among the other switches within a customer's ESN network.

Voice messages can be composed, sent, received, replied to, or redirected between subscribers on different VMX systems in the same fashion as basic voice messaging. In addition, you can specify immediate or deferred delivery of a message to a subscriber on another VMX system. If deferred delivery is specified, the message is batched with all other messages to the other VMX system, and delivered to the other system during non-peak hours.

The Voicenet feature introduces three different types of voice mailboxes: deferred delivery, priority delivery, and trouble.

Figure 1-1 illustrates the Voicenet messaging sequence. To send a Voicenet message to subscriber BBB, subscriber AAA makes a direct call to VMX AA, addresses the message to BBB (3672654), composes the message, flags the message for deferred delivery, and sends the message. VMX AA sends the message to the deferred delivery mailbox associated with VMX BB. (All messages, deferred, or priority, or both, are first sent to the deferred delivery mailbox.)

Figure 1-1
VMX Voicenet configurationxx
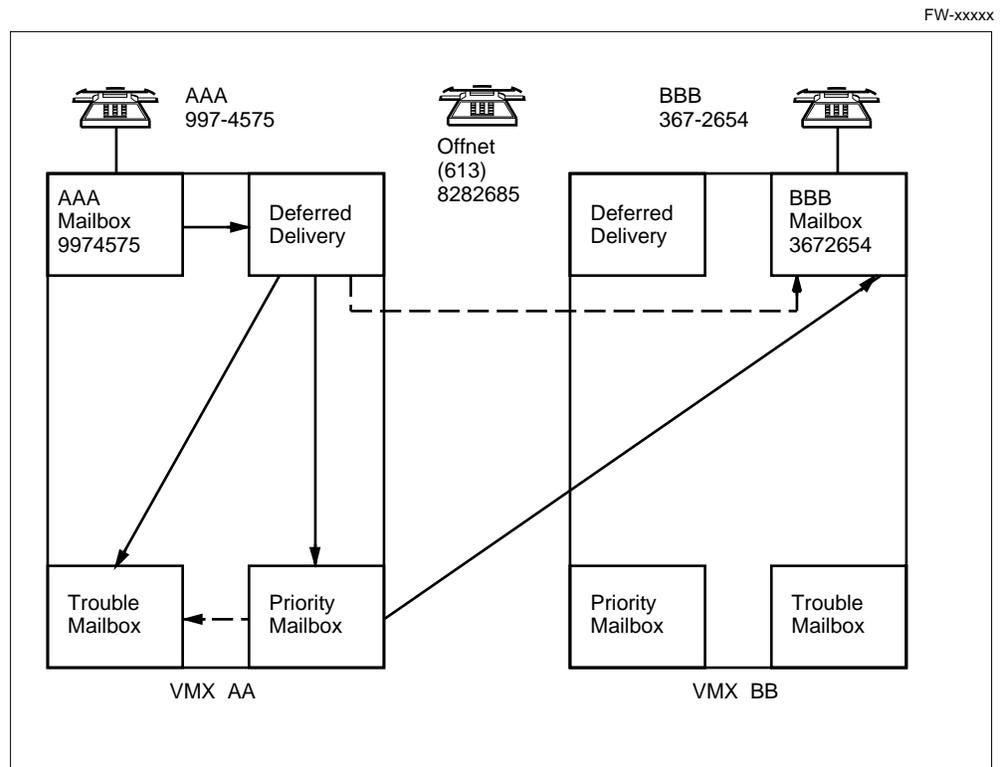
At a predefined time, VMX AA seizes an outgoing line to VMX BB and transmits AAA's message, together with any other messages destined for subscribers at VMX BB. Messages are sent from the deferred delivery mailbox in the order in which they were received (first in, first out). VMX BB deposits the received message in the personal mailbox of subscriber BBB, and activates the Message Waiting Indication for subscriber BBB's telephone. Subscriber BBB makes a direct call to VMX BB to access his or her personal mailbox and receive the message from subscriber AAA.

Note: Note: If subscriber AAA specifies priority delivery of the message to subscriber BBB, VMX AA diverts the message from the deferred delivery mailbox to the priority delivery mailbox, and delivers the message as soon as a line becomes available to VMX BB.

If VMX AA encounters a problem (poor transmission quality, for example) while sending a message to VMX BB, that message is placed in a trouble mailbox at VMX AA and an alarm message is printed at VMX AA's printer. The VMX System Administrator must access the trouble mailbox and redirect the message to the intended recipient when the problem is corrected.

Feature access

The host Meridian SL-100 is interfaced to VMX using 2-way, 4-wire E&M trunks. As such, translation and routing must be performed by the host Meridian SL-100 to direct calls to VMX. Therefore, VMX is considered a location that is remote from the Meridian SL-100 on which it is hosted. This applies when VMX is configured in either a stand-alone or ESN environment.

Dialing format

Because VMX is treated as a remote location, the following dialing format is used for calls to VMX:

AC + LOC + XXXX

AC

AC is a one-digit or two-digit VMX trunk access code when VMX is configured in a stand-alone environment, or the ESN access code when VMX is configured in an ESN environment.

LOC

LOC is a unique three-digit office code (NXX) when VMX is configured in a stand-alone environment, or an ESN location code when VMX is configured in an ESN environment. In a stand-alone environment, the LOC digits cannot conflict with Numbering Plan Area (NPA) codes or office codes (NXX) defined at the host Meridian SL-100.

In an ESN environment, the LOC digits cannot conflict with any NPA, NXX, or LOC codes that are defined within the network.

XXXX

XXXX is the VMX Directory Number (DN) that identifies the type of call being made to VMX. Three types of calls can be directed to VMX: Direct, Call Answering, and Message Desk. Each call type requires a unique DN: Direct Call DN, Call Answering DN, and Message Desk DN.

The last three digits of each VMX DN are called command codes. In processing Direct or Message Desk calls to VMX, the host Meridian SL-100 uses the access code and location code digits to select the appropriate trunk group for call completion to VMX. Once a trunk is selected and VMX is prepared to receive digits, the first digit of the VMX DN is dropped, and the command code digits are outpulsed to VMX. The received command code digits enable VMX to provide the appropriate response for the particular call type.

Call answering

Call Answering calls are directed to VMX through the Call Forward feature. To present the forwarded caller with the appropriate personal greeting or announcement associated with the called party's mailbox, VMX must know the origination of the forwarded call.

Referring to Figure 1-1, subscriber AAA (997-4575) programs his or her telephone to forward all incoming calls to VMX Call Answering by specifying 6-446-2345 as the destination number for forwarded calls. The station's host Meridian SL-100 converts this number to 6-4462345-997-4575. The digits 3459974575 are outpulsed to VMX. These digits identify the type of call and the called station's DN, which enables VMX to present the forwarded caller with the personal greeting or announcement from subscriber AAA's personal mailbox.

VMX port assignment

When the Voicenet feature is equipped for transmission of voice messages between VMX systems, a minimum of one voice port is required on one VMX system to communicate with another VMX system. If traffic considerations dictate, two voice ports may be configured; one port dedicated for transmission of voice messages to the other system, and the other port dedicated for reception of voice messages from the other system.

Trunk group assignment

On the Meridian SL-100, two trunk groups are defined to route the different call types to VMX. One trunk group is used to route Direct, Message Desk, and Call Answering calls to VMX. A second trunk group is used to route Voicenet calls to VMX.

Off-network access

You can access your Voice Mailbox from an off-network (off-net) location by using the Meridian SL-100 Direct Inward System Access (DISA) service. Enter the DISA access code (depending upon system configuration, an authorization and account code may also be required) and dial VMX as though placing an on-network (on-net) VMX call.

VMX-originated calls

Calls originated by VMX are of two types: Message Waiting Indication (MWI) calls or outgoing call requests. Outgoing call requests are either an Outcall Delivery (message delivery to a telephone) or a Voicenet call to a Voicenet port.

Message waiting indication calls

VMX notifies you that a message has been deposited in your Voice Mailbox. Depending upon the type of telephone set, either the Message Waiting lamp lights or a stuttered dial tone is heard when your telephone goes off-hook. MWI remains active as long as new messages are in queue. When the last new message is saved, erased, or redirected, the indication is deactivated.

MWI on a station can mean the following:

- A message is waiting at the Meridian SL-100 Message Center

- Another station has left a call request

- A message is waiting in your Voice Mailbox

Because there is no differentiation between the origins of the indication, you should check your Voice Mailbox first.

Outgoing call requests

Outgoing calls from VMX can be placed to the following:

- Local, long distance, or ESN node telephone numbers

- A subscriber on another VMX in the same Voicenet

Outcall delivery

You can direct VMX to deliver a message to any telephone number, either on-net or off-net. On-net numbers must include the appropriate access code and location code, even if the call is to be placed to the same location. When dialing an off-net number, all necessary access codes must be used.

Referring to Figure 1-1, subscriber AAA, addressing a message to be sent to an on-net nonsubscriber, dials 6 (access code), 613 (location code) and 8282685 (DN). Assuming that the nonsubscriber has an off-net DN, subscriber AAA dials 9 (local access code), 1 (Direct Distance Dialing code), 613 (NPA code), and 8282685 (DN).

Once you have recorded the message, VMX calls the number you indicated, announces itself when the call is answered, and delivers the message. If the number is busy, not answered, or hangs up before delivery of the message, VMX continues to call the number at set time intervals, until the number answers and receives the message or until the maximum number of call attempts have been made. (The number of VMX callbacks is a programmable VMX parameter.) After the message is delivered, it is erased.

By enabling Message Notification by dialing the command code, 062, you can be notified by VMX of incoming messages as they arrive. When you answer your phone, you'll hear the four-tone VMX logo. Next, enter your VMX ID (and password, if applicable) and retrieve the message.

Message Notification can also be used with compatible paging systems (those which immediately autodial the beeper upon receipt of the last digit of the dialed DN). If Message Notification is enabled for you and the DN of the paging system has been entered into the VMX database for this feature, VMX can call the pager number to activate the beeper. VMX can then be called from any telephone arranged for DTMF outpulsing and the message retrieved.

If the Message Notification call from VMX is not answered or receives a busy signal, VMX continues to call at set intervals until the call is answered or the system maximum for callback attempts is reached.

Feature interaction

Attendant and station message waiting

Because VMX and Meridian SL-100 Attendant and Station Message Waiting features use the same MWI (visual or audible, depending on set type), users cannot immediately know which source originated the message to be retrieved. Therefore, if a MWI resulted from a VMX call, dialing the Meridian SL-100 Call Request Retrieve code results in a reorder tone. VMX messages can only be retrieved from Voice Mailboxes by dialing the VMX Subscriber Access DN.

Call forward

This feature allows you to forward calls to your mailbox, the VMX Message Desk, or any other station number.

Call transfer/three-way conference

Using Call Transfer or Three-way Conference, calls may be transferred to or conferenced with a subscriber's Voice Mailbox or the VMX Message Desk. However, transferring a call to a subscriber's Voice Mailbox results in the caller having full access to the subscriber's mailbox and VMX privileges and is, therefore, not recommended.

Hunt groups and multiple access directory numbers

An outcall message delivery attempt from VMX to a member of a hunt group or multiple access directory number is delivered to whoever answers the call. Calls are directed to the pilot number of a hunt group or primary member of a multiple access directory number.

Make set busy

If this feature is activated at a station, MWI activation or deactivation still occurs.

Night service

The VMX Message Desk can be designated as the Night Service number. Callers are prompted to state the name of the recipient and leave a message. However, only VMX subscribers can receive messages left in this manner.

Speed call/automatic dial

VMX DNs can be programmed for speed calling or automatic dialing. In programming this feature, your user ID should not be included.

Feature operation

Overview

The Voice Message Exchange (VMX) is designed for easy use and provides a variety of services to increase personnel productivity. Voice prompts from VMX provide subscribers and nonsubscribers with instructions to use the system features.

Each subscriber is assigned a Voice Mailbox with a unique address. A Voice Mailbox is essentially a certain amount of storage space on the VMX data disks on which voice messages, which have been digitized by the system, are stored.

Note: The following operational descriptions are not intended to be all-inclusive. For further feature operation instructions, refer to the appropriate VMX documentation.

Basic system capabilities

VMX provides three basic messaging capabilities:

- Sending a Voice Message

- Receiving a Voice Message

- Administering a Voice Message

Voice mailbox access

Users can access a Voice Mailbox in one of two ways:

- By dialing the VMX access number and entering the assigned user identification (ID) number and password

- By dialing a station which has been forwarded to VMX

Once connected, you'll hear VMX announce the number of messages deposited. VMX then instructs you to dial 2 to receive messages or dial asterisk (*) to use other features.

Sending messages

To send a message before receiving any messages, dial asterisk (*) to signal VMX that some other activity is desired. Enter the VMX address (typically a station number) to which the message is to be sent. Up to 10 addresses (depending upon VMX parameters) can be sent the same message.

Group Codes can save time for subscribers who frequently send messages to the same group of individuals. The Group Code capability, which is a class-of-service attribute, allows the simultaneous distribution of a single Voice Message to an unlimited number of individual addresses by the entry of a single address or Group Code.

After each address or Group Code is entered, VMX echoes the address entered and prompts you to enter another address or to enter 0 (zero) if no additional addresses are to be entered. If a mistake is made in entering an address, dial asterisk (*) to cancel the last address entered and then re-enter the correct address.

To begin recording, dial 1 and speak the message. You can pause while recording by dialing 1 again. To resume recording, dial 1 and speak the remainder of the message.

Note: The maximum length of a Voice Message is a VMX parameter. Usually, the maximum length is about 3 minutes. As you approach the time limit, you'll be prompted and will have a short period to finish your message and send it.

To review the message before it is sent, dial 3 to back up the message approximately 10 seconds, or dial 33 to go to the beginning of the message.

To skip forward approximately 10 seconds, dial 4. Dial 44 to go to the end of the message.

To send a recorded message, dial 5 and the message will be sent to the address(es) previously entered for that session. To cancel a message instead of sending it, dial asterisk (*) and then begin recording again by dialing 1.

To be notified whether the recipient listened to the message, dial 55 when sending the message (rather than 5). VMX will notify the sender if the message has not been delivered within a given period of time (a VMX system parameter).

After the message has been sent, you can do the following:

- Terminate the session by dialing asterisk (*)

- Send another Voice Message by entering another address

- Receive any Voice Messages that have been sent to your mailbox by dialing 011

- Access special features by dialing the appropriate feature code

Receiving messages

To receive a Voice Message after accessing your mailbox, dial the receive command, 2. VMX will play the first message. To pause during message playback, dial 2; the message will restart when 2 is dialed again. The reversing and forwarding commands (3, 33 and 4, 44, respectively) are identical with those used when reviewing an unsent message.

After the message has been delivered, VMX prompts you to do the following:

- Reply to the message by dialing 022

- Redirect the message to others by dialing 021

- Save the message for further reference by dialing 7

- Erase the message by dialing 5

If you have additional messages in your mailbox, VMX will notify and prompt you to dial 2 to receive the next message. Messages are played back in the order that they were received.

Administering messages

When a message is deposited in your mailbox and subsequently received, you may respond to it by replying, redirecting it to someone else, saving the message for reference, or erasing it.

Replying to messages

You may send a Voice Message in reply to a message just received without having to enter the address information. By dialing 022, the addressing function is skipped, since VMX knows who sent the message you just received. VMX will issue a prompt to dial 1, record a reply, then dial 5 to send the message to the originator's mailbox.

Redirecting messages

To forward a copy of a received message to another person, prefixed with a brief comment or introduction, dial the redirect command, 021. VMX prompts you to dial the address(es) of the recipient(s). After dialing the address information, comments are recorded. To send the message, dial the command 5. The original message remains in your Voice Mailbox until erased, or can be directed to others with different comments. Any replies to redirected messages are sent to the person who redirected the message, rather than the originator of the message.

Saving messages

The save command, 7, allows you to save messages for further reference or to administer them at a later time. Complete messages can be saved at any time during message delivery. After the message has been saved, it is moved to the end of the message queue. The command 2 causes VMX to play the next message. Therefore, you can scan your Voice Mailbox by successively dialing 2 and 7, listening to only the first portion of each message.

Erasing messages

You may erase any message after listening to it by dialing 5 at the end of the message. You must wait until the end of your message to erase it. If you don't need to listen to the whole message, dial 44 to get to the end, then dial 5 to erase.

Control functions

VMX contains several Control Functions to help you efficiently use your Voice Mailbox. As you use VMX, you'll hear different beeps and tones, which signify different characteristics. See Table 2-1 for a beep description.

Table 2-1 xxx
Beeps - what they mean

You hear	When
4-tone logo	You dial the VMX access number; it means VMX has answered.
Single beep	You dial an appropriate command; VMX is acknowledging you.
A series of single beeps at slow intervals	You've paused (by dialing 2 while receiving a message or by dialing 1 while recording a message. Also heard while VMX idles,waiting for you to dial the next command. You have about 30 seconds before VMX times out.) Or, you may have "talked off" - your voice sounded like the touch-tone 1 in the middle of recording. VMX thinks you're pausing. Dial 1 again to resume recording.
Double beep	You misdial your ID and dial asterisk (*) to cancel it. VMX is telling you to try again. Also heard when you cancel a command in the tone response mode.
Triple beep	You dial an invalid command; try another command.
Triple beep while recording a message	Your voice may have sounded like a touch tone (other than 1).

Table 2-1 xxx Beeps - what they mean (continued)	
You hear	**When**
Triple beep while listening to a message	If you're receiving a message and hear a triple beep before the end of the message, the message may be damaged. Do not erase it. Redirect any triple-beep messages to the VMX Trouble Mailbox for repair.
-END-	

The asterisk (*) is used in three different situations:

- To cancel
- To change from receive mode to send mode
- To close you Voice Mailbox

For cancelling, use the asterisk (*) to do the following:

- Dial asterisk (*) to cancel a mistake when you're dialing your ID.
- Dial asterisk (*) to cancel an address mistake in the send mode.
- Dial asterisk (*) to cancel the text of a message you are recording so you can start over.

For changing from receive mode to send mode, use the asterisk (*) to do the following:

- Dial asterisk (*) to bypass or stop receiving messages; this advances you to the send mode.
- If you have no messages, you'll automatically be advanced to the send mode.

For closing your Voice Mailbox, use the asterisk (*) to do the following:

- Dial asterisk (*), then asterisk (*) again, if you are in the receive mode.
- Dial one asterisk (*) after sending messages in the send mode.

Special features

Your mailbox can be assigned class-of-service attributes that permit or deny access to several VMX special features. The three-digit commands allow you to dial the special features after entering the send mode.

AutoScan

AutoScan allows you to scan your messages by playing just the names of the persons who sent them. If the sender has not recorded a Name Personal Address Response, you'll hear the address instead. As you hear the names, you can listen to the message or let it keep scanning. To enable AutoScan, dial 050 and listen for the confirming prompt. When in the receive mode, AutoScan starts playing names. Between each name is a brief pause and a beep. To speed up the scanning, dial 4 as soon as you recognize the name, which advances you immediately to the beep and the next name. To listen to a message, dial 2 during the name or pause. If you save or erase a message, the scan continues. To leave a message in the new queue, dial asterisk (*) during or after the message; the scan will continue. When AutoScan is finished, VMX advances you to the send mode. Dialing 050 also disables AutoScan.

Password

You can add a password to provide extra security in gaining mailbox access. The password can be a combination of any four digits and must be entered immediately after dialing your user ID. VMX does not prompt you for a password, but access will not be gained until the password has been dialed successfully. To add or change a password, enter the send mode by dialing asterisk (*) while in the receive mode, then dial 053, listen for a response and dial any four digits followed by an octothorpe (#). To remove a password, enter 053 and an octothorpe (#) while in the send mode.

Voice prompts

Voice prompts for all activities are heard unless this feature is disabled, in which case only acknowledgment tones are heard. To disable the voice prompts, dial 051 while in the send mode. To re-establish the voice prompts, dial 052. Voice prompts can be overridden at any time by dialing the next appropriate command.

Time stamp

You can determine when each Voice Message was sent to your mailbox by enabling the Time Stamp feature. VMX will then state the day and time each message was sent before delivering the message text. Time Stamp can be enabled by dialing 054 when in the send mode and can be disabled by the same command.

AutoPlay

AutoPlay saves time by playing your messages automatically. Dial 058 to enable (and disable) AutoPlay and listen for the prompt, "You have enabled (or disabled) AutoPlay." Dial 2 to hear your first message. When you save or erase a message, the next message immediately starts playing.

Note: If AutoScan is enabled, it will override AutoPlay.

Automatic continuation from new to saved messages

This function automatically moves you from your new message queue to your saved message queue. Dial 060 to enable (and disable) this function. You'll hear the prompt, "You have enabled (or disabled) Automatic Continuation to saved messages upon completion of new message delivery." Enable Automatic Continuation if you want to listen to your saved messages immediately after disposing of your last message. After delivery of your new messages, you'll hear the prompt, "Beginning saved messages. Please dial 2 to receive them." Disable this function if you want to hear only your new messages. After your delivery of your new messages, you'll go immediately into the send mode.

Message notification

VMX calls you when incoming messages have been deposited in your Voice Mailbox or calls another specified number when this feature has been activated. To enable Message Notification while in the send mode, dial 062. Dialing 063 disables this feature and messages are held by VMX until you access your mailbox and dial the Receive command, 2.

Immediate call termination

Immediate Call Termination allows you to disconnect from VMX immediately, regardless of mode. Dialing 069 enables and disables this function. After hearing the prompt, dial two asterisks (* *) in succession to terminate your call. VMX acknowledges the termination with "Goodbye."

Call answering

Call answering answers your telephone for you. Callers hear your personal greeting and can leave you a message, which is deposited into your mailbox. To record a Call Answering Greeting, dial 071. Dial 1 and record your greeting (such as telling callers to leave a message after the tone). Dial 5 at the end of your greeting.

If you don't want callers to be able to leave a message, replace the greeting with an announcement. Dial 072 in the send mode. Dial 1 and record your announcement. (For example, tell callers that they will not be able to leave a message; you could say when you will be available or whom to contact instead.) Dial 5 at the end of your announcement.

You can update your greeting or announcement as often as you like. You can have either a greeting or an announcement recorded at one time. The one you record last will play until you change it. If you record neither, VMX plays a standard Call Answering Greeting.

Personalized address response

Users dialing a mailbox address normally will hear VMX echo that address. However, when the subscribers being addressed have recorded a personalized response, enabling the Address Response allows a subscriber preparing to send a message to hear those personalized names or messages.

To hear Personalized Address Responses, the feature command 055 is dialed. The same command disables the feature.

To record a name only, dial 075, then when prompted, dial 1 and speak your name. Dialing 076 deletes the name.

To record a short message response, dial 077, then when prompted, dial 1 and speak the message. Dialing 078 deletes the message response.

Transfer to operator

Transfer to Operator allows you to transfer to an operator or any other predefined extension while in the send mode. Dial 000 and VMX automatically transfers you to the extension.

Transfer to an extension

Transfer to an Extension allows you to dial an extension number while in the send mode of your Voice Mailbox. Dial 001 plus the extension number and VMX automatically transfers you to the extension you dialed.

New and saved message queues

VMX keeps two separate message queues, one for new messages and one for saved messages. After you dial your ID, VMX tells you how many messages are in each queue. Dial 2 to start receiving your new messages. After you save or erase your last new message, you'll be advanced to the send mode.

When you're in the send mode and want to ask for your messages, dial 011 for new messages and 012 for saved messages.

Note: All incoming messages are deposited into your new message queue. When you save a message, it is transferred to your saved message queue.

Transfer to sender

After listening to a message, you may automatically transfer to the sender's telephone by dialing 029.

Message desk

The VMX Message Desk prompts outside callers to leave a message. Callers have the following options:

- call the Message Desk number directly

- call a phone that is call-forwarded to the Message Desk

- be transferred to the Message Desk by an operator

- transfer to an operator by dialing a 0, or to an extension by dialing a 0 plus an extension number

Note: VMX users may override the Message Desk and access their Voice Mailboxes by dialing octothorpe (#).

Tables 2-2 and 2-3 provide a quick reference of basic and special VMX commands.

Table 2-2xx
VMX basic command summary

Basic commands	Function
1	Start/stop recording; pause receiving
2	Start/stop playing; pause receiving
3	Back up 10 seconds and play
33	Back up to the beginning and replay
4	Skip forward 10 seconds and play
44	Skip to end
5	Erase message; send message/send redirect/send reply
55	Send message and notify if not delivered
7	Save message/scan messages
0	End of addressing
011	Ask for message
021	Redirect message
022	Reply to message
*	Cancel message deposit; cancel address; change from receive to send
**	Goodbye (leave mailbox)
-END-	

Table 2-3 xx
VMX special command summary

Special commands	Function
050	Enable/disable AutoScan
051	Remove voice prompts
052	Enable voice prompts
053	Enable/change/disable password
054	Enable/disable time stamp
055	Enable address response (hear response)
058	Enable/disable AutoPlay
060	Enable/disable automatic continuation from new to saved messages
062	Enable message notification
063	Disable message notification
069	Enable/disable immediate call termination
071	Record or change personal greeting
072	Record or change personal announcement
075	Record or change a name response
076	Delete a name response
077	Record or change a message response
078	Delete a message response
000	Transfer to operator
001	Transfer to an extension
011	New message queue
012	Saved message queue
029	Transfer to a sender
#	User override (message desk)
0	Escape to operator (message desk)
-END-	

Configuration

Hardware

The Voice Message Exchange (VMX) can be configured in either a stand-alone or Electronic Switched Network (ESN) environment. Refer to Figures 3-1 and 3-2, respectively.

In a stand-alone environment, VMX can provide voice messaging services to subscribers served by the host Meridian SL-100. In an ESN environment, VMX can provide these services to subscribers served by the host Meridian SL-100, as well as subscribers served by other Meridian switches (Meridian SL-100, SL-1) within the network.

Subscribers who are eligible to use Direct Inward System Access (DISA) can use this feature to access VMX features and services from the public network. This applies to a VMX that is configured in a stand-alone or ESN environment.

Figure 3-1
Stand-alone VMX/Meridian SL-100 configuration
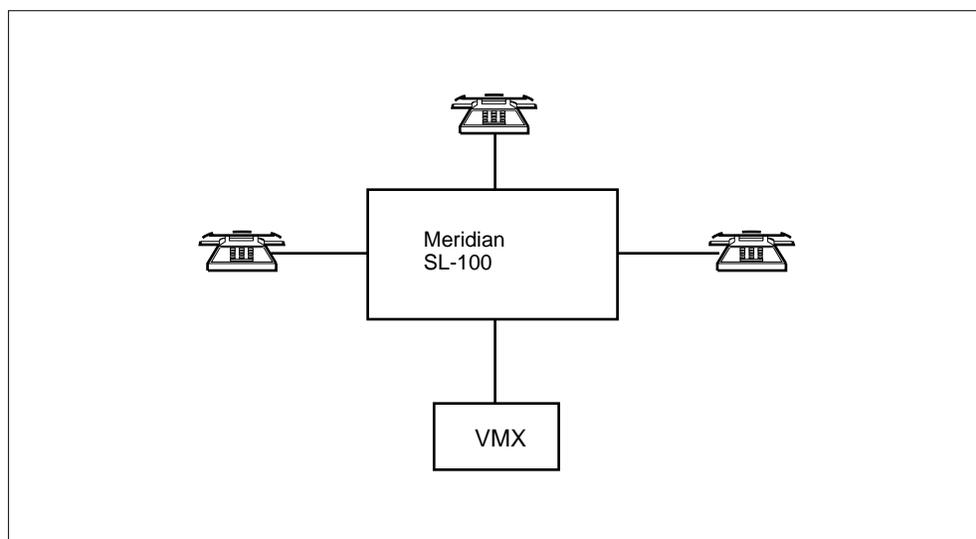
Figure 3-2
ESN VMX/Meridian SL-100 configuration
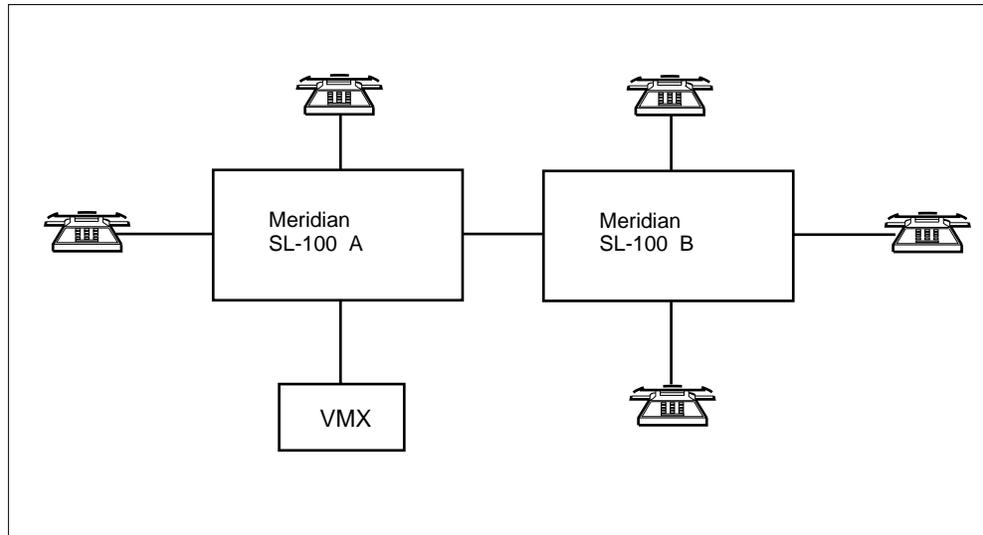
In an ESN network, comprising many widely dispersed switches, or where
the capacity of a single VMX is not sufficient, multiple VMX systems can
be provisioned. The additional VMX systems can be located at a single
Meridian SL-100 host or distributed among selected Meridian SL-100
switches within the network.

VMX cabinets

The VMX system is available in 8, 16, 24, 32, 48, or 64-voice port
configurations. Each voice port is bidirectional and interfaces with a single
4-wire E&M trunk circuit on the host Meridian SL-100.

VMX configurations of 8, 16, or 24 ports are housed in a single VMX
cabinet; configurations of 32, 48, or 64 ports require two cabinets.

A VMX cabinet consists of an upper level and a lower level. The upper level
contains the microprocessor circuit boards and associated power supplies;
the lower level contains the System Disks and Data (voice message) Disks
and associated power supplies.

VMX systems arranged for 8, 16, or 24 ports are equipped with two data
disks. System data (operating software, voice prompts, and subscriber
database information) are duplicated on each disk. Voice messages are stored
alternately on both disks. (Any one voice message is not duplicated on both
disks; nor is a single message split between the two disks.) If one of the
disks fails, VMX uses the operating software on the other disk to maintain
system operation. Voice messages that are stored on the failed disk are

accessible once the disk is repaired. The disks on 8-, 16-, or 24-port systems can store 48 hours of voice messages.

Systems arranged for 32, 48, or 64 ports are equipped with four data disks: two for storage of system data and two for storage of voice messages. The disks on these systems can store up to 82 hours of voice messages.

Removable, insulated panels are mounted on the front, rear, and sides of each cabinet. To meet Federal Communication Commission (FCC) Radio Frequency Interference (RFI) requirements, all panels must be left in place except when performing maintenance procedures.

The dimensions of a VMX cabinet are as follows:

- Height: 77.5 in (1970 mm)

- Width: 52.0 in (1320 mm)

- Depth: 30.0 in (760 mm)

A fully equipped VMX cabinet, crated for shipment and including circuit packs, power converters, disk drives, and cover panels, weighs 1500 lbs (600 kg).

The VMX cabinet is designed to operate from a 480V, 240V, 208V, or 120V single-phase ac source, fed through a Square D Sorgel dry-type isolation transformer to produce an output voltage of 120V ac (±5%).

VMX operator position

A VMX operator position is available with the VMX system. The position consists of a cathode-ray tube (CRT) terminal with keyboard, and an associated line printer.

From this position, the VMX operator can add or remove VMX subscribers, alter mailbox addresses or attributes, and request printed VMX statistical reports. The operator position can also respond to VMX system error messages that are output at the operator position printer.

The operator position requires two, direct-access telephone line terminations from the local telephone company. These lines terminate on RJ11 jacks at the operator position. One line, equipped with a telephone arranged for DTMF outpulsing, is used for voice communication between the VMX site and VMX field service personnel. The second line terminates on a VMX-provided dial-up modem. The modem is accessed by VMX field service personnel for the purpose of remote maintenance, when necessary.

VMX/Meridian SL-100 interface

Twenty-five pairs to 400-pair cable can be used to interface the VMX voice ports to the 4-wire E&M trunk circuits on the host Meridian SL-100. Each interface circuit consists of six conductors (Figure3-3). One 25-pair cable (50 conductors) interfaces eight VMX ports (Figure3-4). A VMX configured for the maximum of 64 ports can use any cable pair size (with the requisite number of cables) from 25-pair to one 400-pair interface cable. The cables originate from RJ21 male connectors on the rear of the VMX cabinet and terminate at the Main Distribution Frame (MDF) of the host Meridian SL-100. VMX voice ports are cross-connected at the MDF to the appropriate trunk circuit in the Meridian SL-100 (Figure3-5).

Figure 3-3
VMX interface circuit conductors
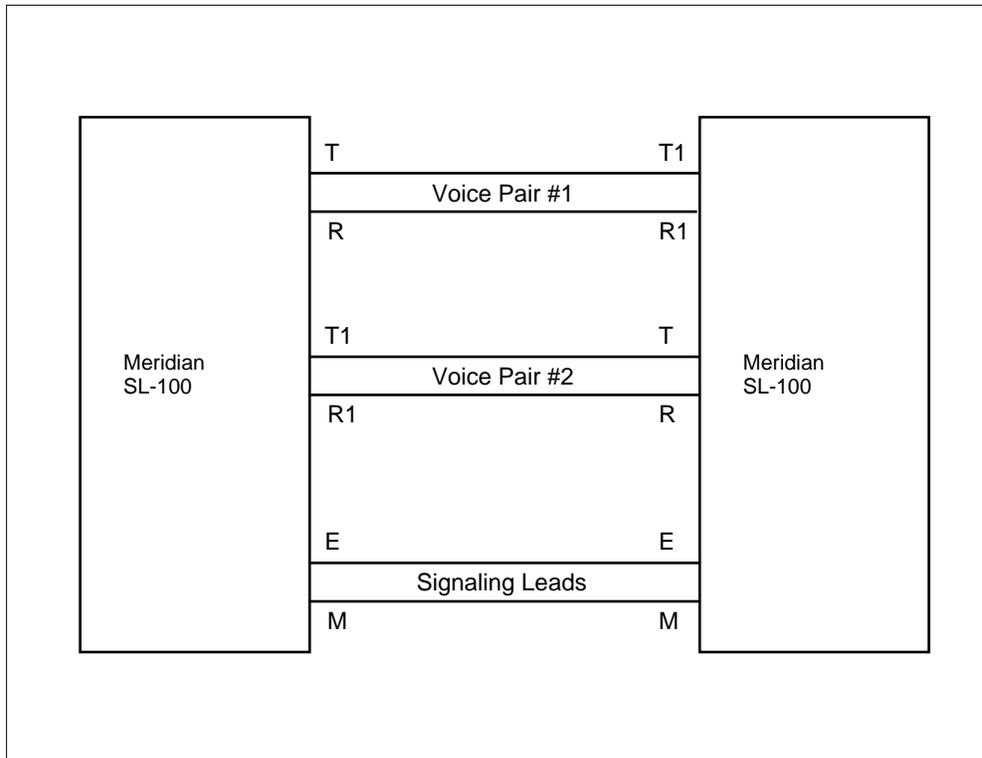
Figure 3-4
VMX interface pin connections

```
                              PIN #      FUNCTION

                              26              T
                              1               R
                              27              T1
                              2               R1          Line #1
                              28              E
                              3               M

                              29              T
                              4               R
                              30              T1
        50                    5               R1
        --      25            31              E          Line #2
        --      --            6               M
        --      --
        --      --            32              T
        --      --            7               R
        --      --            33              T1
        --      --            8               R1
        --      --            34              E
        --      --            9               M          Line #3
        --      1
        26                    --              --
                              --              --
                              --              --
                              --              --

                              47              T
                              22              R
                              48              T1
                              23              R1
                              49              E
                              24              M
                                                         Line #8
                              50              SPARE
                              25              SPARE
```
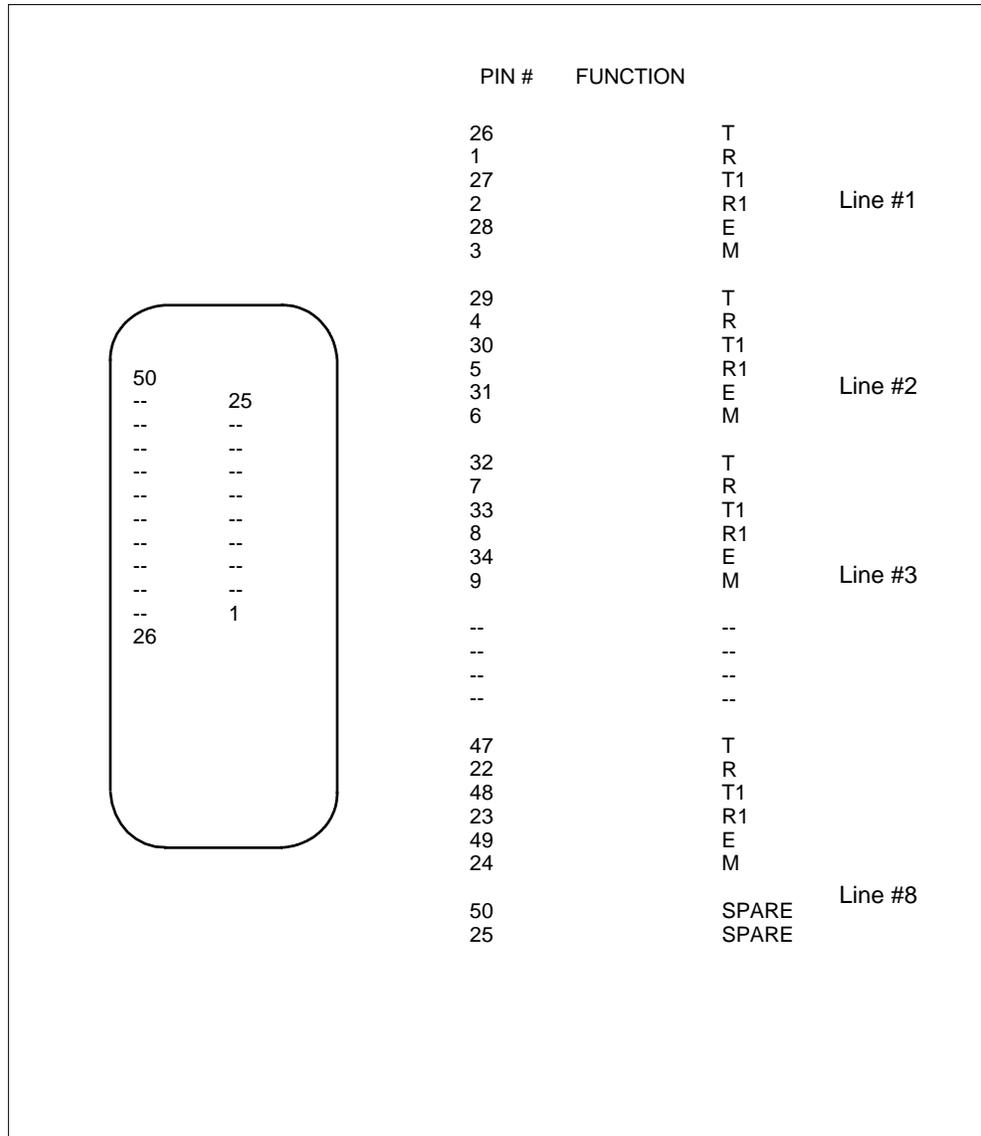
Figure 3-5
VMX port to Meridian SL-100 trunk cross connection
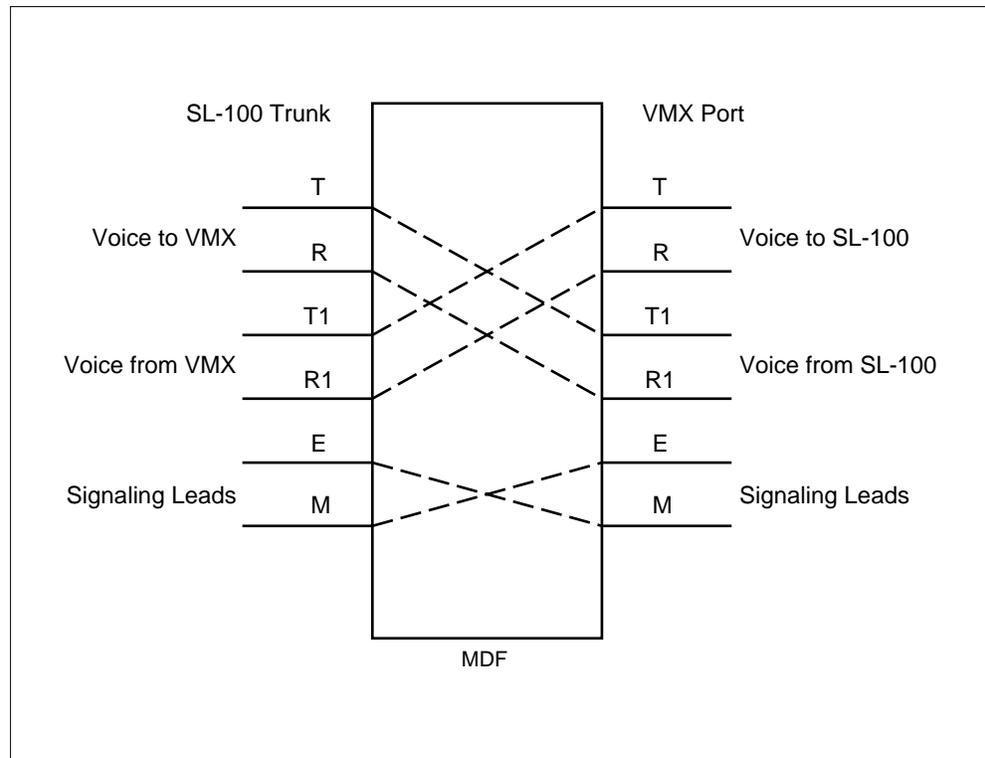
NT2X72AA 4-wire E&M trunk circuit packs are used in the host Meridian SL-100 to interface with the VMX ports. Each trunk circuit pack can interface with two VMX voice ports. Four trunk circuit packs are needed for an 8-port system. NT2X72AA packs are mounted in an 8-wire Trunk Module (TM8) or a Maintenance Trunk Module (MTM) in the host Meridian SL-100 (two 4-wire circuits per circuit pack).

To prevent the possibility of VMX becoming entirely disabled because of Trunk Module failure, VMX interface trunks should be distributed among the various Trunk Module shelves on the Meridian SL-100.

Each trunk circuit is arranged for the following:

- 600-ohm termination
- 2-way operation
- Multifrequency (MF) outpulsing
- Type D1 signaling (referred to by VMX, Inc. as Type 1, Variation B signaling)

- Wink-start operation

VMX alarm interface

The VMX alarm interface is a VMX hardware option that enables VMX alarms to be integrated with Meridian SL-100 alarm indications. The VMX alarm interface unit is interfaced to the host Meridian SL-100 through an NT0X10 Alarm Scanner circuit pack (mounted in a MTM in the Meridian SL-100), using a 1/4-inch phone jack connected from VMX to the MDF.

When this option is equipped, alarms that are generated by VMX are reflected as alarms on the host Meridian SL-100. With the exception of an ac power loss on VMX, all VMX-generated alarm indications continue until the RESET button is pressed on the interface unit in VMX. An ac power loss on VMX generates an alarm; however, restoration of ac power automatically resets the alarm interface unit.

VMX alarm-sending to the host Meridian SL-100 can be enabled (or disabled) at any time through operation of an ENABLE (or DISABLE) switch on the interface unit or by removing alarm entries from the appropriate tables on the Meridian SL-100.

Feature implementation

VMX data assignment

Datafill procedures for a stand-alone Meridian SL-100 and a Meridian SL-100 in an Electronic Switched Network (ESN) environment differ somewhat in entry requirements. In either case, the Maintenance and Administration Position (MAP) workstation is used to implement the Voice Message Exchange (VMX) feature. To establish the VMX feature in the Meridian SL-100 software, log on to the MAP workstation and use the Table Editor to datafill the tables affected by the VMX feature.

The following Meridian SL-100 tables are affected when VMX is configured in either a stand-alone or ESN configuration. (Tables are listed in the order of datafill.)

- XLANAME
- VMXTAB
- CUSTENG
- COSMAP (ESN only)
- PACMAN (ESN only)
- COSDATA (ESN only)
- NCOS
- CLLI
- TRKGRP
- TRKSGRP
- TRKMEM
- HNPACONT
- LINEATTR
- DIGMAN
- IBNRTE
- HNPACODE (subtable of HNPACONT)

- RTEREF (subtable of HNPACONT)
- IBNXLA

VMX-related tables

The datafill examples shown in the tables below are for illustrative purposes and represent typical field entries. Actual datafill entry depends on switch configuration, number and types of routes, dialing plan, and other variables. Additionally, each ESN node must be separately datafilled and routes established for each trunk group connecting to other nodes.

XLANAME

This table sets the network class of service (NCOS) pretranslator and translator for customer groups. See 555-4031-851. Table 4-1 describes the fields to be entered. The following is an example of a datafilled Table XLANAME:

XLANAME datafill example

Prompt	Response	Notes
> TABLE: XLANAME	table xlaname	
> XLANAME:	add	
> TRSEL:	pcdxk2	1
>	$	
Note: **1** The translator name entered here is also used in Table NCOS.		

Table 4-1
Table XLANAME

FIELD NAME	VALUE	COMMENTS
XLANAME	alphanumeric, 1-8 characters	The translator name for the customer, feature or preliminary translator. The same entry must appear in Table NCOS.
TRSEL	translator selector code	Translator selector. Not required for VMX. Enter $ to end data input.
-end-		

VMXTAB

This table contains data necessary for subscribers to forward calls to their VMX mailbox. See 555-4031-851. Table 4-2 describes the fields to be entered. The following is an example of a datafilled Table VMXTAB:

VMXTAB datafill example

Prompt	Response	Notes
> TABLE: VMXTAB	table vmxtab	
> VMXIDX:	add	
> HMLOCCD:	1	
> NOEXTDGS:	844	
> NONACDGS:	4	
> VMXCFWDN:	1	
>	8450024	

Table 4-2xx
Table VMXTAB

FIELD NAME	VALUE	COMMENTS
VMXIDX	1-255	This is the index which must be given when the VMX option is assigned in Table CUSTENG. 0 (zero) is the NIL value and will not be accepted as a valid index.
HMLOCCD	any three-digit number	This field contains the location code or office code assigned to the switch being datafilled. If no code is to be used, 0 (zero) should be entered.
NOEXTDGS	0-7	The number of digits in extensions used by the customer group with this VMIDX.
-continued-		

Table 4-2xx
Table VMXTAB (continued)

FIELD NAME	VALUE	COMMENTS
NONACDGS	0-7	This field contains the number of digits in the network access code for the customer group with this VMXIDX.
VMXCFWDN	any seven-digit number	The seven-digit number specified by the customer for use in call forwarding to VMX.
-end-		

CUSTENG

This table contains data related to the engineering aspects of the customer group that are of a permanent nature. See 555-4031-851. This table is datafilled only when VMX is in both stand-alone and ESN configurations. Table 4-3 describes the fields to be entered. The following is an example of a datafilled Table CUSTENG:

CUSTENG datafill example

Prompt	Response	Notes
> TABLE: CUSTENG	table custeng	
> CUSTNAME:	add	
> NONCOS:	corp	
> NOIBNTMT:	30	
> CONSOLES:	1	
> CUSTTYPE:	y	
> OPTION:	private	
> VMXINDX:	vmx	
> OPTION:	1	
>	$	

Table 4-3xx
Table CUSTENG

FIELD NAME	VALUE	COMMENTS
CUSTNAME	alphanumeric, 1-16 digits	This field specifies the name assigned to the customer group.
NONCOS	1-255	This field specifies the maximum quantity of NCOS numbers required for the customer group.
-continued-		

Table 4-3xx
Table CUSTENG (continued)

FIELD NAME	VALUE	COMMENTS
NOIBMTMT	0-63	This field specifies the number of IBN treatments for this customer group.
CONSOLES	Y or N	This field specifies whether attendant consoles can be used within the customer group.
CUSTTYPE	private, public, or family	This field sets customer group feature transparency within the switch for all customer groups, a family of customer groups, or no transparency.
OPTION	CONF6C or VMX	This field defines options permitted in this table. The VMX option must be assigned for the customer group to be able to use Call Forward Universal (CFU) to forward calls to VMX.
VMXINDX	1-255	This field should correspond with the appropriate index entry in Table VMXTAB. 0 (zero) is the NIL value and will not be accepted as a valid index. After entry in this field, the field OPTION will display again. Enter $ to end data entry in this table.
-end-		

COSMAP

The class-of-service mapping table allows flexible mapping of class-of-service values. It defines a COSMAP name that can be referenced in other tables. See 555-4031-851. This table is datafilled only when VMX is in an ESN configuration. Table 4-4 describes the fields to be entered. The following is an example of a datafilled Table COSMAP:

COSMAP datafill example

Prompt	Response	Notes
> TABLE: COSMAP	table cosmap	
> NAME:	add	
> MAX:	cenmap1	
> SCREEN:	30	
> VALTYPE:	allow	
>	anything	

Table 4-4
Table COSMAP

FIELD NAME	VALUE	COMMENTS
NAME	alphanumeric, 1-16 characters	This field assigns the mapping name to identify a particular class of service mapping.
MAX	0-255	This field assigns the maximum value allowed for the mapping result.
SCREEN	ALLOW, DISALLOW, or DEFAULT	This field determines the type of screening to be done on the original NCOS by the mapping.
VALTYPE	SAME, ANYTHING, or CONST (0-255)	This field determines the restrictions on the mapping results allowed in Table COSDATA.
-end-		

PACMAN

The Protocol Analysis and Code Manipulation table is used to interpret the ESN call types and subcall types for incoming calls. See 555-4031-851. This table is datafilled only when VMX is in an ESN configuration. Table 4-5 describes the fields to be entered. The following is an example of a datafilled Table PACMAN:

PACMAN datafill example

Prompt	Response	Notes
> TABLE: PACMAN	table pacman	
> PMI:	add	
> CMD:	1	
> FIELD:	fld	
> NUMDIGS:	tcos	
> COSMAP:	1	
> CMD:	cenmap1	1
>	$	

Note:
1 This entry should be the same name as entered in Table COSMAP.

Table 4-5
Table PACMAN

FIELD NAME	VALUE	COMMENTS
PMI	0-255	This field sets the protocol manipulation index for the PACMAN program.
CMD	FLD or SET	This field selects the appropriate PACMAN command. Enter the command FLD.
	-continued-	

Table 4-5
Table PACMAN (continued)

FIELD NAME	VALUE	COMMENTS
FIELD	COS, DCOS, or TCOS	This field selects the field to be extracted from the inpulsed digits. Enter TCOS to cause the trailing digits to be extracted from the inpulsed digits of a nondigital data call.
NUMDIGS	0-15	This field defines the number of inpulsed digits to be extracted from the digit stream.
COSMAP	alphanumeric	This field sets the COSMAP index into tables COSMAP and COSDATA where the extracted inpulsed digits are screened and mapped to an NCOS.
-end-		

COSDATA

This table screens and manipulates the NCOS associated with a call and assigns an ESN class of service. See 555-4031-851. This table is datafilled only when VMX is in an ESN configuration. Table 4-6 describes the fields to be entered. The following is an example of a datafilled Table COSDATA:

COSDATA datafill example

Prompt	Response	Notes
> TABLE: COSDATA	table cosdata	
> COSMAP:	add	
> COS:	cenmap1	1
> RESULT:	1	
>	0	
Note: **1** This entry should be the same name as entered in Table COSMAP.		

Table 4-6
Table COSDATA

FIELD NAME	VALUE	COMMENTS
COSMAP	alphanumeric, 1-16	This field is the mapping name that has been entered in Table COSMAP in the field NAME.
COS	0-255	This field assigns the NCOS value to be screened or altered.
RESULT	0-255	This field determines the NCOS value for the mapping result if the original NCOS passes screening.
-end-		

NCOS

This table defines the NCOS for the customer group. See 555-4031-851.
Table 4-7 describes the fields to be entered. The following is an example of
a datafilled Table NCOS:

NCOS datafill example

Prompt	Response	Notes
> TABLE: NCOS	table ncos	
> CUSTGROUP:	add	
> NCOS:	corp	1
> NCOSNAME:	2	
> LSC:	crpvmx	
> NCOSOPTN:	0	
> PRELMXLA:	xlas	
> FEATXLA:	pcxdk2	2
> DGCOLNM:	nxla	
> NCOSOPTN:	ndgt	
>	$	

Notes:
1 This entry should be the same as the customer name entered in Table CUSTENG.
2 This entry should be the same as the customer translator name entered in Table XLANAME.

Table 4-7xx
Table NCOS

FIELD NAME	VALUE	COMMENTS
CUSTGROUP	A-Z, 0-9, -, $, or blank	This field specifies the NCOS name. Enter the one- to six-character name assigned to the NCOS number for the key and lamp display. If other than the first record, leave blank.
LSC	0-31 or blank	This field designates the line screening code. If other than the first record, leave blank.
NCOSOPTN	XLAS, ACR, ATT, CBQ, CRL, SDOCS, OCTXLA, or OHQ	This field specifies the NCOS options and associated subfields assigned to the NCOS number. Use one record for each option. If an option is not provided, then no input for that option is required. Enter XLAS.
PRELMXLA	alphanumeric, 1-8 characters	This field contains the NCOS pretranslator for the unique VMXNCOS to be assigned in Table IBNXLA.
-continued-		

Table 4-7xx
Table NCOS (continued)

FIELD NAME	VALUE	COMMENTS
FEATXLA	alphanumeric, 1-8 characters or NXLA	This field contains the feature translator assigned to the NCOS number, if different than that in Table CUSTHEAD. If the same, enter NXLA.
DGCOLNM	alphanumeric, 1-8 characters or NDGT	This field defines the digit collection name for IBN stations, if different than that defined in table CUSTHEAD. If the same, enter NDGT. After this entry, NCOSOPTN is displayed again. Enter $ to end data entry in this table, or + to continue.
-end-		

CLLI

The Common Language Location Identifier table contains unique names that
identify announcement, tone, or trunk groups. See 555-4031-851. Table 4-8
describes the fields to be entered. The following is an example of a datafilled
Table CLLI:

CLLI datafill example

Prompt	Response
> TABLE: CLLI	table clli
> CLLI:	add
> TRKGRSIZ:	vmx2w
> ADMININF:	10
>	vmx users

Table 4-8 x
Table CLLI

FIELD NAME	VALUE	COMMENTS
CLLI	alphanumeric, 1-16 characters	This field identifies the trunk group.
TRKGRSIZ	0-2047	This field designates the maximum assignable number of trunks.
ADMININF	alphanumeric, 1-32 characters	This field contains administrative information to assist office personnel in identification of trunk group function.
-end-		

TRKGRP

This table defines the characteristics of the IBN trunk group. See 555-4031-851. Table 4-9 describes the fields to be entered. The following is an example of a datafilled Table TRKGRP:

TRKGRP datafill example

Prompt	Response	Notes
>	table trkgrp	
TABLE: TRKGRP		
>	add	
GRPKEY:		
>	vmx2w	1
GRPTYP:		
>	ibnt2	
TRAFSNO:		
>	0	
PADGRP:		
>	npdgp	
NCCLS:		
>	ncrt	
CUSTNAME:		
>	CORP	2
SUBGRPNO:		
>	0	
SELSEQ:		
>	midl	
NCOS:		
>	2	
BILLDN:		
>	n	

Note: 1. This entry should be the same as the trunk group identifier assigned to Table CLLI.
2. This entry should be the same as the customer name entered in Table CUSTENG.

-continued-

Prompt	Response	Notes
SUPV:		
>	ansdisc	
DISCTSEL:		
>	1	
INTRAGRP:		
>	n	
DIGIT0:		
>	n	
DIGIT1:		
>	n	
DTI:		
>	n	
TES:		
>	n	
CDR:		
>	n	
SMDR:		
>	n	
TRC:		
>	0	
ALTNCOS:		
>	0	
TRKDSR:		
>	n	
LSCFN:		
>	0	
ALTSCFN:		
>	0	

Note: 1. This entry should be the same as the trunk group identifier assigned to Table CLLI.
     2. This entry should be the same as the customer name entered in Table CUSTENG.

-continued-

Prompt	Response	Notes
LSCINCPT:		
>	0	
ALSCINCP:		
>	0	
IGA:		
>	n	
FDN:		
>	n	
FDV:		
>	n	
FLASH:		
>	n	
DPX:		
>	n	
PREEMPT:		
>	n	
OPTION:		
	$	

Note: 1. This entry should be the same as the trunk group identifier assigned to Table CLLI.

2. This entry should be the same as the customer name entered in Table CUSTENG.

-end-

Table 4-9
Table TRKGRP

FIELD NAME	VALUE	COMMENTS
GRPKEY	alphanumeric, 1-16 characters	This field contains the trunk group identifier assigned to Table CLLI.
GRPTYP	IBNTI, IBNTO, or IBNT2	This field identifies the trunk group type: incoming, outgoing or two-way. Enter IBNT2.
TRAFSNO	0 or 10-127	This field contains the value for incoming and outgoing traffic separation numbers assigned to the trunk group.
PADGRP	alphabetic	This field contains the pad group name assigned to the trunk group in Table PADDATA.
NCCLS	NCRT or alphabetic	This field designates the No-Circuit Class. If the trunk group is incoming, enter NCRT (no circuit).
CUSTNAME	alphanumeric, 1-16 characters	This field contains the name assigned to the customer group to which the trunk group belongs.
SUBGRPNO	0-7	This field contains the subgroup number of the attendant consoles.
SELSEQ	MIDL, LIDL, SEQ, or blank	This field defines the select sequence for the trunk group. Enter MIDL for most idle selection.
-continued-		

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
NCOS	0-255 or blank	This field contains the class of service number assigned to an incoming or two-way trunk group. An outgoing trunk group is left blank.
BILLDN	numeric, N or blank	This field assigns the billing DN for incoming or two-way trunk groups. If no billing is required, enter N. An outgoing trunk group is left blank.
SUPV	ANSDISC, DISCONLY, or NODISC	This field defines the type of supervision required for trunks in the trunk group. Enter ANSDISC.
DISCTSEL	0-3	This field specifies the disconnect timing selector for the trunk group. 0 represents 200 milliseconds (ms); 1, 400 ms; 2, 600 ms; 3, 800 ms.
INTRAGRP	Y or N	This field specifies whether intratrunk group calls are allowed or not.
DIGIT0	numeric, N or blank	This field specifies the first digit of one or two digits to be prefixed to the incoming digits on an incoming or two-way trunk group. If no digits are to be prefixed, enter N. Leave blank for an outgoing trunk group.
-continued-		

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
DIGIT1	numeric, N or blank	This field specifies the first digit of two digits to be prefixed to the incoming digits on an incoming or two-way trunk group. If no digits are to be prefixed, enter N. Leave blank for an outgoing trunk group.
DTI	Y, N, or blank	This field specifies dial tone incoming. Enter Y for incoming and two-way trunk group call originators to receive second dial tone.Enter N to not receive second dial tone, or leave blank for outgoing trunks.
TES	Y, N, or blank	This field specifies whether toll service is essential or not. Enter Y for incoming and two-way trunk group calls that are toll essential. Enter N if not toll essential, or leave blank for outgoing trunks.
CDR	Y, N, or blank	This field indicates whether Call Detail Recording is to be recorded using Station Message Detail Recording format. Enter Y if all incoming calls are to be recorded, N if not required, or leave blank for an outgoing trunk group.
-continued-		

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
SMDR	Y, N, or blank	This field indicates whether Station Message Detail Recording records are to be generated for incoming calls. Enter Y if all incoming calls are to be recorded, N if not required, or leave blank for an outgoing trunk group.
TRC	0-7 or blank	This field assigns terminating restriction codes for incoming or two-way trunk groups. Leave blank for outgoing trunk groups.
ALTNCOS	0-255 or blank	This field contains the Alternate Network Class of Service number used when attendant control of trunk group access is activated for incoming and two-way trunk groups. Leave blank for outgoing trunk groups.
TRKDSR	Y, N, or blank	This field designates whether distinctive ringing is to be provided for incoming or two-way trunk groups. Leave blank for outgoing trunk groups.
LSCFN	0-255 or blank	This field indicates the line screening code flag number for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
-continued-		

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
ALTSCFN	0-255 or blank	This field indicates the alternate line screening code flag number for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
LSCINCPT	0-63 or blank	This field contains the line screening code for flexible intercept for outgoing or two-way trunk groups. Enter the treatment number in Table IBNTREAT for a call blocked by line screening. Leave blank for incoming trunk groups.
ALSCINCP	0-63 or blank	This field contains the line screening code for flexible intercept for outgoing or two-way trunk groups. Enter the treatment number in Table IBNTREAT for a call blocked by alternate line screening. Leave blank for incoming trunk groups.
IGA	N or blank	This Ignore Answer field is not required. Enter N for outgoing or two-way trunk groups to satisfy Table Editor. Leave blank for incoming trunk groups.
	-continued-	

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
FDN	Y, N, or blank	This field indicates whether outgoing or two-way trunk group FX toll calls are to be routed to toll-denied treatment upon receipt of reversal from the far end. If not, enter N. Leave blank for incoming trunk groups.
FDV	Y, N, or blank	This field indicates whether outgoing or two-way trunk group FX toll calls are to be routed to the attendant console for intercept upon receipt of reversal from the far end. If not, enter N. Leave blank for incoming trunk groups.
FLASH	Y, N, or blank	This field indicates whether or not a flash is expected for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
-continued-		

Table 4-9
Table TRKGRP (continued)

FIELD NAME	VALUE	COMMENTS
DPX	Y, N, or blank	This field indicates whether a two-way group is associated with a Data Loop Extension (DPX) line. If trunk type is incoming or outgoing, leave blank.
PREEMPT	N or Y	Refer to the appropriate customer data schema document for a description of this field. If N is entered, OPTION is displayed. Enter $ to end data entry.
-end-		

TRKSGRP

This table provides electrical connection information for each subgroup assigned to a trunk group. See 555-4031-851. Table 4-10 describes the fields to be entered. The following is an example of a datafilled Table TRKSGRP:

TRKSGRP datafill example

Prompt	Response	Notes
>	table trksgrp	
TABLE: TRKSGRP		
>	add	
SGRPKEY:		
>	vmx2w 0	1
CARDCODE:		
>	2x72aa	
SIGDATA:		
>	std	
DIR:		
>	2w	
IPULSTYPE:		
>	dt	
ISTARTSG:		
>	wk	
OVLP:		
>	n	
PSPDSEIZ:		
>	30	
PARTDIAL:		
>	30	
OPULSTYP:		
>	dt	

Note: 1. This entry should contain the trunk group identifier assigned to Table CLLI and the subgroup number.

-continued-

Prompt	Response	Notes
OSTARTSG:		
>	wk	
IDGTIME:		
>	7	
NUMSTOPS:		
>	0	
GLAREYD:		
>	n	
CCONT:		
>	no	
RNGBCK:		
>	no	
ESUPR:		
>	n	
SAT:		
>	n	
REMBSY:		
>	y	
DIALMODE:		
>	m	
TRKGRDTM:		
>	17	

Note: 1. This entry should contain the trunk group identifier assigned to Table CLLI and the subgroup number.

-end-

Table 4-10
Table TRKSGRP

FIELD NAME	VALUE	COMMENTS
SGRPKEY	alphanumeric	This field contains the CLLI trunk group identifier and the subgroup number.
CARDCODE	alphanumeric	This field contains the appropriate trunk card code.
SIGDATA	STD	This field has only one parameter. Enter STD for standard signaling.
DIR	IC, OC, or 2W	This field contains the trunk group direction. Enter 2W (two-way).
IPULSTYP	DP, DT, MF, NP, RP, or blank	This field defines the type of dialing for incoming or two-way trunk groups. Leave blank for outgoing trunk groups.
ISTARTSG	DD, IM, WK, XD, GD, blank, or DIALTONE	This field defines the incoming start signal type. Leave blank for outgoing trunk groups. Enter WK (wink start).
OVLP	Y, N, or blank	This field determines whether or not overlap outpulsing on incoming or two-way trunk groups is required. Leave blank for outgoing trunk groups.
	-continued-	

Table 4-10
Table TRKSGRP (continued)

FIELD NAME	VALUE	COMMENTS
PSPDSEIZ	2-30 or blank	This field specifies the time in seconds between receipt of digits up to and including the specified minimum number of digits expected. Leave blank for outgoing trunk groups.
PARTDIAL	2-30 or blank	This field specifies the time in seconds between receipt of digits after the specified number of digits is received. Leave blank for outgoing trunk groups.
OPULSTYP	DP, DT, MF, NP, RP, or blank	This field defines the type of dialing for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
OSTARTSG	DD, IM, WK, XD, GD, blank, or DIALTONE	This field defines the outgoing start signal type. Leave blank for incoming trunk groups. Enter WK (wink start).
IDGTIME	7-100, 0, or blank	This field specifies the interdigital timing in 10-ms intervals for outgoing and two-way trunk groups. Leave blank for incoming trunk groups. Enter 0.
-continued-		

Table 4-10
Table TRKSGRP (continued)

FIELD NAME	VALUE	COMMENTS
NUMSTOPS	0-3 or blank	This field specifies the maximum number of stop/go signals for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
GLAREYD	Y, N, or blank	This field determines whether or not a two-way trunk group must yield to glare. Leave blank for incoming and outgoing trunk groups.
CCONT	EI, IB, MW, TR, LN, 3W, or NO	This field specifies the type of coin control required,where the trunk subgroup is arranged for coin control. Enter NO.
RNGBCK	EI, IB, LN, MW, SX, WK, or NO	This field specifies the type of ringback signal required when the trunk group is arranged for ringback signal. Enter NO.
ESUPR	F, H, or N	This field indicates the type of echo suppressor located at the near end of the trunk group. Enter N (no).
SAT	Y or N	This field indicates whether or not the trunk subgroup is arranged to switch by satellite. Enter N (no).
-continued-		

Table 4-10
Table TRKSGRP (continued)

FIELD NAME	VALUE	COMMENTS
DIALMODE	C, M, or blank	This field designates the dial mode for incoming or two-way trunk groups: customer, machine-produced, or blank for outgoing trunk groups. Enter M.
TRKGRDTM	1-255 or blank	This field sets the wait time in milliseconds before returning to the idle link list after trunk disconnect for outgoing or two-way trunk groups. Leave blank for incoming trunk groups.
-end-		

TRKMEM

This table lists data for each trunk assigned to a trunk group, excluding intertoll trunk groups with Common Channel Interoffice Signaling (CCIS), which locates trunks. See 555-4031-851. Table 4-11 describes the fields to be entered. The following is an example of a datafilled Table TRKMEM:

TRKMEM datafill example

Prompt	Response	Notes
>	table trkmem	
TABLE: TRKMEM		
>	add	
CLLI:	vmx2w	1
>		
EXTRKNM:		
>	3	
SGRP:		
>	0	
PMTYPE:		
>	tm8	
TMNO:		
>	4	
TMCKTNO:		
>	29	
Note: 1. This entry should be the same as the trunk group identifier assigned to Table CLLI.		
-end-		

Tablex4-11
Table TRKMEM

FIELD NAME	VALUE	COMMENTS
CLLI	alphanumeric	This field contains the trunk group name assigned in Table CLLI.
EXTRKNM	0-9999	This field contains the external trunk number assigned to the trunk.
SGRP	0 or 1	This field contains the subgroup number to which the trunk is assigned.
PMTYPE	DCM, MTM, TM2, TM4, TM8, RSM, LTC, DTC, ATM, T8A, TAN, IAC, IDTC,LTCI, PDTC, RCC, RMM, RMSC, or STM	This field contains the peripheral module type in which the trunk is mounted. Enter either TM8 or MTM, whichever is appropriate.
TMNO	0-2047	This field contains the trunk module number in which the trunk is mounted.
TMCKTNO	0-29	This field contains the trunk module circuit number to which the trunk is assigned.
-end-		

HNPACONT

This table controls the home or serving NPAs translation schemes. See 555-4031-851. Each home NPA has two subtables that must also be datafilled; HNPACODE and RTEREF. The home NPA code subtable specifies the translation for each of the 1,000 codes. The home NPA Route Reference subtable specifies the translations associated with each of the route reference indexes specified in the Home NPA Code subtable. Table 4-12 describes the fields to be entered in HNPACONT. Tables 4-13 and 4-14 apply to HNPACODE and RTEREF, respectively. Both subtables must be entered from HNPACONT. The following are examples of an HNPACONT table, and HNPACODE and RTEREF subtables:

HNPACONT datafill example

Prompt	Response	Notes
>	table hnpacont	
TABLE: HNPACONT		
>	add	
NPA:		
>	416	
MAXRTE:		
>	32	
NOAMBIGC:		
>	1	
-end-		

Table 4-12x
Table HNPACONT

FIELD NAME	VALUE	COMMENTS
NPA	numeric, three digits	This field specifies the serving translation scheme. Enter the three-digit translation code.
MAXRTE	2, 4, 8, 16, 32, 64, 128, 255, 512, or 1023	This field specifies the quantity of route reference numbers to be allocated for in the RTEREF subtable. The number of route references allocates the amount of memory for the RTEREF subtable. After initial input, any change of table length in RTEREF will automatically update this field, when the command EXTEND is used.
NOAMBIGC	0-159	This field specifies the number of ambiguous codes required. Ambiguous code digits represent an ambiguous home or local (7 digits)or foreign NPA (10 digits).
-end-		

HNPACODE

Subtable home NPA code specifies the terminating office codes that each home NPA may terminate to within their area. This subtable must be accessed via the control table (HNPACONT) by positioning on the appropriate tuple and then entering the subtable command. The subtable command must be followed by either the subtable name or the subtable field number. The following is an example of datafill for subtable home NPA code.

HNPACODE datafill example

Prompt	Response	Notes
>	table hnpacont	
TABLE: HNPACONT		
>	sub hnpacode	1
>	add	
FROMDIGS:		
>	844	
TODIGS:		
>	844	
CD:		
>	dn	
SNPA:		
>	416	
NXX:		
>	844	
>	$	
>	add	2
FROMDIGS:		
>	845	
TODIGS:		
>	845	
Note: 1. This subtable must be entered from Table HNPACONT. 2. This will be a seperate tuple entry.		
-continued-		

Prompt	Response	Notes
CD:		
>	lrte	
RR:		
>	1	
>	$	
>	add	2
FROMDIGS:		
>	024	
TODIGS:		
>	024	
CD:		
>	frte	
RR:		
>	2	
>	$	

Note: 1. This subtable must be entered from Table HNPACONT.
2. This will be a seperate tuple entry.

-end-

Table 4-13
Subtable HNPACODE

FIELD NAME	VALUE	COMMENTS
Note: This subtable must be entered from Table HNPACONT. It must be filled three times, as noted below.		
FROMDIGS	numeric, three digits	This field contains a three-digit number assigned to the ambiguous code which can represent a single code or the first in a block of consecutive codes that have the same input data. This entry should be the Meridian SL-100 location or office code.
TODIGS	numeric, three digits	This field contains a three-digit ambiguous code that represents the last number in a block of consecutive numbers that have been entered in FROMDIGS.
CD	AMBI, ATV, CONT, DN, FNPA, FRTD, FRTE, HNPA, HRTE, INWC, INWO, INWS, INWT, LRTE, MTR, OPC3, OPC4, OPC5, SCD3, SCD4, SRNG, STRG, TERM, TTC, or VCT	This field assigns the three- to five-digit code type that initializes the subtable. Enter DN for the terminating office code.
SNPA	numeric, three digits	This field identifies the serving NPA of the called terminating line DN.
NXX	numeric, three digits	This field identifies the office code of the terminating line DN.
-continued-		

Table 4-13
Subtable HNPACODE (continued)

FIELD NAME	VALUE	COMMENTS
FROMDIGS	numeric, three digits	This field contains a three-digit number assigned to the ambiguous code that may represent a single code or the first in a block of consecutive codes that have the same input data. This entry should be the VMX location code.
TODIGS	numeric, three digits	This field contains a three-digit ambiguous code that represents the last number in a block of consecutive numbers that have been entered in FROMDIGS.
CD	AMBI, ATV, CONT, DN, FNPA, FRTD, FRTE, HNPA, HRTE, INWC, INWO, INWS, INWT, LRTE, MTR, OPC3, OPC4, OPC5, SCD3, SCD4, SRNG, STRG, TERM, TTC, or VCT	This field assigns the three- to five-digit code type that initializes the subtable. Enter LRTE to specify the local route code.
RR	0-1023	This field identifies the route reference index of the route list in the home NPA route reference subtable (RTEREF) to which translation is to proceed.
-continued-		

Table 4-13
Subtable HNPACODE (continued)

FIELD NAME	VALUE	COMMENTS
FROMDIGS	numeric, three digits	This field contains a three-digit number assigned to the ambiguous code that may represent a single code or the first in a block of consecutive codes that have the same input data. This entry should be the VMX call forward command code.
TODIGS	numeric, three digits	This field contains a three-digit ambiguous code that represents the last number in a block of consecutive numbers that have been entered in FROMDIGS.
CD	AMBI, ATV, CONT, DN, FNPA, FRTD, FRTE, HNPA, HRTE, INWC, INWO, INWS, INWT, LRTE, MTR, OPC3, OPC4, OPC5, SCD3, SCD4, SRNG, STRG, TERM, TTC, or VCT	This field assigns the three- to five-digit code type that initializes the subtable. Enter FRTE to allow 10 digits to be outpulsed to VMX.
RR	0-1023	This field identifies the route reference index of the route list in the home NPA route reference subtable (RTEREF) to which translation is to proceed.
-end-		

RTEREF datafill example

Prompt	Response	Notes
>	table hnpacont	
TABLE: HNPACONT		
>	sub rteref	1
>	add	
RTE:		
>	1	
RTESEL:		
>	t	
EXTRTEID:		
>	ibnrte 120	
RTESEL:		
>	$	
RTE:		
>	1	
RTESEL:		
>	s	
CONNTYPE:		
>	d	
CLLI:		
>	vmx2w	2
RTESEL:		
>	$	

Note: 1. This subtable must be entered from Table HNPACONT.

2. This entry should be the same as the trunk group identifier assigned to Table CLLI.

-end-

Tablex4-14
Subtable RTEREF

FIELD NAME	VALUE	COMMENTS
Note: This subtable must be entered from table HNPACONT. It must be filled twice, as noted below.		
RTE	1-1023 or blank	This field identifies the route reference index. Enter the VMX location code specified in subtable HNPACODE.
RTESEL	CND, DN, MN, N, NIL, NOT, QH, RT, RX, S, ST, T, TC, or TS	This field designates the route element selector code. Enter T to route the translation to another table or to another route list in the office route table.
EXTRTEID	alphanumeric	This field contains the external route identifier. Enter IBNRTE and the route key (numeric) that has been entered in Table IBNRTE.
RTE	1-1023 or blank	This field identifies the route reference index. Enter the VMX call forward code specified in subtable HNPACODE.
RTESEL	CND, DN, MN, N, NIL, NOT, QH, RT, RX, S, ST, T, TC, or TS	This field designates the route element selector code. Enter S to route directly to VMX with no preceding digits removed.
-continued-		

Tablex4-14
Subtable RTEREF (continued)

FIELD NAME	VALUE	COMMENTS
CONNTYPE	D	This field specifies the connection type. It is not used by system logic. Enter D to satisfy table control.
CLLI	alphanumeric	This field specifies the common language location identifier. Enter the code that was entered in Table CLLI for the VMX trunk to which the translation is to be routed. After this entry, the field RTESEL will display again. Enter $ to end data entry or + to continue.
-end-		

LINEATTR

This table defines the line attributes assigned to regular lines in Table LENS and to IBN station and attendant consoles in the IBN translation table. See 555-4031-851. Table 4-15 describes the fields to be entered. The following is an example of a datafilled Table LINEATTR:

LINEATTR datafill example

Prompt	Response	Notes
> TABLE: LINEATTR	table lineattr	
> LAIDX:	add	
> LCC:	511	1
> CHGCLSS:	ibn	
> COST:	none	
> SCRNCL:	nt	
> LTG:	nscr	
> STS:	0	
> PRTNM:	416	2
> LCANAME:	nprt	
> ZEROMPOS:	nlca	
> HOT:	none	
> TRAFSNO:	n	
> MRSA:	0	
> LATANM:	nil	
> MDI:	nillata	
> XLASYS:	0	
>	nil	

Notes:
1   This entry should be the same as the office code specified in Table IBNXLA.
2   This entry should correspond with the appropriate number entry in Table HNPACONT.

Table 4-15xx
Table LINEATTR

FIELD NAME	VALUE	COMMENTS
LAIDX	0-1023	The line attribute index designates the long distance access code and Meridian SL-100 location or office code. The number should be the same as that specified in Table IBNXLA.
LCC	alphanumeric	This field specifies the line class code assigned to the line attribute index.
CHGCLSS	CAMO, DATO, RCFW, TOPS, or NONE	This field specifies the charge class assigned to the line attribute index, if a switching unit is arranged for Local Automatic Message Accounting (LAMA). Otherwise, NONE will be specified.
COST	HI, LO, or NT	This field specifies the type of class of service tone required: high, low, or no tone.
SCRNCL	alphanumeric or NSCR	This field determines whether screening by class of service is required or not. When required, the class of service subtable names should be entered. If no screening is required, enter NSCR.
LTG	0-63	This field specifies the line treatment group assigned to the line attribute index.
	-continued-	

Table 4-15xx
Table LINEATTR (continued)

FIELD NAME	VALUE	COMMENTS
STS	numeric three digits	This field specifies the serving NPA assigned to the line attribute index. This number should correspond with the appropriate entry in Table HNPACONT.
PRTNM	alphanumeric	This field specifies the pretranslator subtable name when pretranslation is required. When not required, NPRT should be entered.
LCANAME	alphanumeric or NLCA	This field specifies the local calling area screening subtable name when screening of local NXX codes is required. When screening is not required, NLCA should be entered.
ZEROMPOS	alphanumeric	This field specifies the position in the operator position table where calls are to be routed should operator (0-) and special toll (0+) dialing be required. Otherwise, NONE should be entered.
HOT	Y or N	This field specifies whether a hotel line is to be arranged for dialing, yes or no.
-continued-		

Table 4-15xx
Table LINEATTR (continued)

FIELD NAME	VALUE	COMMENTS
TRAFSNO	0-127	This field assigns the incoming and outgoing traffic separation number assigned to the line attribute. If not required, enter 0 (zero).
MRSA	alphanumeric or NIL	This field specifies the AT&T Message Rate Service Area to which the line attribute is assigned. If not required, enter NIL.
LATANAME	alphanumeric or NILLATA	This field specifies the Local Access and Transport Area name to which the line attribute is assigned. If not required, enter NILLATA.
MDI	0-1023	This field assigns the metering data index.
XLASYS	NIL, PX, CT, FA, OFC, DN, or AM	This field determines the translator system type. Enter NIL.
-end-		

DIGMAN

This table consists of data which allows digit manipulation and gives the customer a simplified destination code-based dialing plan. Subscribers served by the switch can dial a fixed number of digits to reach a called party, regardless of the number of digits in the connection. See 555-4031-851. Table 4-16 describes the fields to be entered. The following is an example of a datafilled Table DIGMAN:

DIGMAN datafill example

Prompt	Response	Notes
> TABLE: DIGMAN	table digman	
> DMIKEY:	add	
> DIGCOM:	70	1
> REMCOUNT:	rem	
> DIGCOM:	4	
>	$	2
> DMIKEY:	add	
> DIGCOM:	71	
> POSITION:	cl	
> DIGCOM:	end	
> FIELD:	fld	
> DIGS:	cos	
> MAP:	1	
> DIGCOM:	cenmap1	3
>	$	

Notes:
1   This entry should be the same as the digit manipulation index in Table IBNRTE.
2   Enter $ if the record is the last containing a digit command for the DMIKEY or + to continue.
3   This entry should be the same name as entered in Table COSMAP.

Table 4-16xx
Table DIGMAN

FIELD NAME	VALUE	COMMENTS
DMIKEY	0-4096	This field specifies the digit manipulation key to this table. Where the record is other than the first entry for this field, leave the field blank. A 0 (zero) entry indicates to the switch that the data following this key is not to be used. This entry should be the same as the digit manipulation index entered in Table IBNRTE.
DIGCOM	INC, NEX, CF, CB, CL, SDN, COM, PAU, REM, FAIL, SIG, IFCC, CALL, ARDENY, ANS, ATD, or FLD	This field specifies the digit command for the digit manipulation key. One digit command per line, up to a maximum of six per DMIKEY may be entered. REM is to be selected.
REMCOUNT	0-15	This field specifies the number of digits preceding the VMX command code to be removed from the digit stream, leaving only the VMX code to be outpulsed to VMX. After entry in this field, DIGCOM will be displayed again. Enter $ to end table entry, or + to continue entering digit commands for this DMIKEY.
DIGCOM	CL	This is the position locate digit command.

-continued-

Table 4-16xx
Table DIGMAN (continued)

FIELD NAME	VALUE	COMMENTS
POSITION	BEG or END	Select END to set the cursor at the end of the digit string. After this entry, DIGCOM will be displayed again. Enter $ to end, or + to continue.
DIGCOM	FLD	This is the field area digit command.
FIELD	COS	This is the class of service field area.
DIGS	0-15	This field specifies the number of digits to outpulse for the COS field.
MAP	alphanumeric	Enter the name of the class of service from table COSMAP that contains the value of the COS digits to be outpulsed. After this entry, DIGCOM will be displayed again. Enter $ to end, or + to continue.
-end-		

IBNRTE

This table defines the IBN route lists, with each route list identified by a route reference index number. The maximum number of route lists is 1024. See 555-4031-851. Table 4-17 describes the fields to be entered. The following is an example of a datafilled Table IBNRTE:

IBNRTE datafill example

Prompt	Response	Notes
> TABLE: IBNRTE	table ibnrte	
> RTE:	add	
> IBNRTSEL:	120	
> OHQ:	n	
> CBQ:	n	
> EXP:	n	
> CLLI:	n	
> DMI:	vmx2w	1
> IBNRTSEL:	70	2
>	$	

Notes:
1 This entry should be the same as the trunk group identifier assigned to Table CLLI.
2 This entry should be the same as the digit manipulation index in tables IBNRTE and DIGMAN.

Table 4-17x
Table IBNRTE

FIELD NAME	VALUE	COMMENTS
RTE	0-1023 or blank	This field assigns the route reference index to the route list.If not required, leave the entry blank. This entry should be the same as specified in subtable RTEREF.
IBNRTESEL	CND, DN, IW, LINE, N, NOT, OW, QH, RX, S, T, VFG, AC, NIL, or INS	This field designates the route selector element for this table.
OHQ	Y or N	This field specifies whether or not off-hook queuing is allowed on this route, yes or no.
CBQ	Y or N	This field specifies whether or not call back queuing is allowed on on this route, yes or no.
EXP	Y or N	This field specifies whether or not an expensive route and expensive route warning tone is to be applied, yes or no.
-continued-		

Table 4-17x
Table IBNRTE

FIELD NAME	VALUE	COMMENTS
CLLI	alphanumeric	This field identifies the location code assigned in Table CLLI to which translation is to be routed.
DMI	0-4096	This field indicates the digit manipulation index as specified in Table DIGMAN that changes the digits to be outdialed. If not required, enter 0 (zero). After this entry, the field IBNRTSEL is displayed again. Enter $ to end data entry in this table.
-end-		

IBNXLA

This table stores the data for the digit translation of calls from an IBN station, attendant console, incoming, or incoming side of an IBN trunk group. See 555-4031-851. Table 4-18 describes the fields to be entered. The following is an example of a datafilled Table IBNXLA:

IBNXLA datafill example

Prompt	Response	Notes
>	table ibnxla	
TABLE: IBNXLA		
>	add	
KEY:		
>	pcxdk2 022	1
TRSEL:		
>	ftr	
NO_ACCODE_DIGITS:		
>	0	
FTR_TYPE:		
>	vmx	
MWITYPE:		
>	mwion	
DGSTOCOL:		
>	7	
>	add	
KEY:		

Note: 1. This entry should be the translator selector number entered in Table XLANAME and the MWI ON command code.
2. This entry should be the translator selector number entered in Table XLANAME and the MWI OFF command code.
3. This entry should be the translator selector number entered in Table XLANAME and the Outcall command code.
4. This entry should be the translator selector number entered in Table XLANAME and the Meridian SL-100 location code.
5. This entry defines the network type, DOD. (ESN could be specified instead.)
6. This entry should be the same as the long distance access code assigned in Table LINEATTR.

-continued-

Prompt	Response	Notes
>	pcxdk2 023	2
TRSEL:		
>	ftr	
NO_ACCODE_DIGITS:		
>	0	
FTR_TYPE:		
>	vmx	
MWITYPE:		
>	mwioff	
DGSTOCOL:		
>	7	
>	add	
KEY:		
>	pcxdk2 025	3
TRSEL:		
>	n	
NOPREDIG:		
>	3	
>	add	
KEY:		
>	pcxdk2 844	4
TRSEL:		
>	net	

Note: 1. This entry should be the translator selector number entered in Table XLANAME and the MWI ON command code.
2. This entry should be the translator selector number entered in Table XLANAME and the MWI OFF command code.
3. This entry should be the translator selector number entered in Table XLANAME and the Outcall command code.
4. This entry should be the translator selector number entered in Table XLANAME and the Meridian SL-100 location code.
5. This entry defines the network type, DOD. (ESN could be specified instead.)
6. This entry should be the same as the long distance access code assigned in Table LINEATTR.

-continued-

Prompt	Response	Notes
ACR:		
>	n	
SMDR:		
>	y	
NO_ACCODE_DIGITS:		
>	0	
SECOND_DIAL_TONE:		
>	n	
DGCOLNM:		
	ibn2	
CRL:		
>	n	
INTRAGROUP:		
>	y	
NET_TYPE		
>	dod	5
SMDRB:		
>	n	
LINEATTR:		
>	511	6

Note: 1. This entry should be the translator selector number entered in Table XLANAME and the MWI ON command code.
2. This entry should be the translator selector number entered in Table XLANAME and the MWI OFF command code.
3. This entry should be the translator selector number entered in Table XLANAME and the Outcall command code.
4. This entry should be the translator selector number entered in Table XLANAME and the Meridian SL-100 location code.
5. This entry defines the network type, DOD. (ESN could be specified instead.)
6. This entry should be the same as the long distance access code assigned in Table LINEATTR.

-continued-

Prompt	Response	Notes
TOLL_RESTRICTION: >	none	

Note: 1. This entry should be the translator selector number entered in Table XLANAME and the MWI ON command code.
2. This entry should be the translator selector number entered in Table XLANAME and the MWI OFF command code.
3. This entry should be the translator selector number entered in Table XLANAME and the Outcall command code.
4. This entry should be the translator selector number entered in Table XLANAME and the Meridian SL-100 location code.
5. This entry defines the network type, DOD. (ESN could be specified instead.)
6. This entry should be the same as the long distance access code assigned in Table LINEATTR.

-end-

Table 4-18x
Table IBNXLA

FIELD NAME	VALUE	COMMENTS
Note: The fields below must be datafilled twice - once specifying MWI ON with the appropriate VMX MWI ON command code and again specifying MWI OFF with the appropriate VMX MWI OFF command code.		
KEY	alphanumeric	This field defines the translator selector name, as entered in Table XLANAME, and the three-digit command code for MWI ON or MWI OFF corresponding with the VMX database entry for that command code.
TRSEL	IAGROUP, FEAT, TRMT, ATT, ROUTE, IAG23, STAR, FLEXI, SRNG, N,NET, REPL, ATTO, TTTR, TTTT, PROTO, NSC, CUTTD, AMBI, EXTN, FTR, or OCT	This field defines the translator selector. It should be set to FTR for this feature.

-end-

Table 4-18x
Table IBNXLA(continued)

FIELD NAME	VALUE	COMMENTS
NO_ACCODE_DIGITS	1-7	This field specifies the number of access code digits to precede the digits specified in the KEY field.
FTR_TYPE	CWD, LSPKP, PNC, or VMX	This field indicates what feature is assigned to the corresponding digilator index. It should be set to VMX for this feature.
MWITYPE	MWION or MWIOFF	This field indicates whether the corresponding digilator index is in the MWI ON or MWI OFF command code. It will only be prompted for when the field FTR_TYPE is set to VMX.
DGSTOCOL	0-7	This field indicates how many digits are to be collected after the MWI command code is received. It will only be prompted for when the field FTR_TYPE is set to VMX.
KEY	alphanumeric	This field consists of the translator name, as entered in Table XLANAME, and the three-digit command code for the outcall command corresponding with the VMX database entry for that command code. See Note 1.
-continued-		

Table 4-18x
Table IBNXLA(continued)

FIELD NAME	VALUE	COMMENTS
TRSEL	IAGROUP, FEAT, TRMT, ATT, ROUTE, IAG23, STAR, FLEXI, SRNG, N, NET, REPL, ATTO, TTTR, TTTT, PROTO, NSC, CUTTD, AMBI, EXTN, FTR, or OCT	This field defines the translator selector. It should be set to N to set the prefix fence. See Note 1.
NOPREDIG	1-25	This field indicates the number of prefix digits which are to be deleted from translation. Enter 3 for the number of digits in the outcall command code from VMX. See Note 1.
KEY	alphanumeric	This field consists of the translator name, as entered in table XLANAME and the three-digit location code or office code of the Meridian SL-100 corresponding with the VMX database entry for that code. See Note 2.
TRSEL	IAGROUP, FEAT, TRMT, ATT, ROUTE, IAG23, STAR, FLEXI, SRNG, N, NET, REPL, ATTO, TTTR, TTTT, PROTO, NSC, CUTTD, AMBI, EXTN, FTR, or OCT	This field defines the translator selector. It should be set to NET, to route to the DOD network.
ACR	Y or N	This field indicates whether or not an account code entry is required when the DOD access code is dialed, yes or no.

-continued-

Table 4-18x
Table IBNXLA(continued)

FIELD NAME	VALUE	COMMENTS
SMDR	Y or N	This field specifies whether or not all DOD access calls are to be station message detail recorded, yes or no.
NOACDIGS	1-7	This field specifies the number of access code digits in the DOD access code.
SDT	Y or N	This field indicates whether or not a second dial tone is required, yes or no.
DGCOLNM	alphanumeric, 1-8 characters	This field defines the name assigned to the block of data in Table DIGCOL for digit collection for IBN lines.
CRL	Y or N	This field indicates whether or not code restriction levels apply to DOD calls, yes or no.
NETTYPE	DOD, PVT, AVN, OWT, ESN, AVP, or GEN	This field indicates the network type. Enter DOD.
SMDRB	Y or N	This field determines whether or not only the chargeable calls that dial the DOD access code are to be station message detail recorded, yes or no.
LINEATTR	0-1023	This field indicates the line attribute index number assigned to the DOD access code. Enter the same number as is in Table LINEATTR.

-continued-

Table 4-18x
Table IBNXLA(continued)

FIELD NAME	VALUE	COMMENTS
TOLLREST	NONE, TDN, or TDV	This field specifies the call restrictions applicable to direct dial and operator-assisted type calls. An entry of TDN will divert calls to the attendant console for intercept and identification. See Note 2.
-end-		

Note 1: To set the VMX outcall command code and prefix fence, these fields would appear as shown.

Note 2: To have VMX access the Direct Outward Dialing (DOD) network, the fields named Key through Tollrest must be datafilled.

Establishing a VMX user database

The VMX system operator has the responsibility of controlling all VMX database operations. By entering on-line and off-line commands from the keyboard of the VMX system console and observing the responses displayed on the cathode-ray tube (CRT) screen, the operator can do the following:

- Turn the system on and off
- Activate and deactivate various system components
- Generate brief daily status reports
- Generate and print user reports
- Add or remove users from the database
- Change the contents of a user database record

This section briefly discusses the establishment of a user database. For more detailed information, refer to the VMX Software Reference Manual and the VMX Operations Guide.

Creating the user database

The user database is created at the system console in five steps:

- Define classes of service

- Create the system overflow mailbox
- Create user and other system mailboxes
- Activate mailboxes
- Create group codes

Defining classes of service

Each Voice Mailbox has special features that govern its capabilities. VMX, Inc. has designed several standard classes of service that are designed to serve a particular need. These class-of-service numbers can be specified for a user or an entirely different one may be created. A class of service must be assigned to each mailbox.

VMX class of service attributes

For certain VMX features to work properly, you need a class of service that includes certain attributes (functions). Some of the features are Call Answering, Message Desk, and Voicenet. A given feature may have one or more required attributes that are used in defining a given user's class of service.

Combination message desk class of service

A Combination Message Desk Voice Mailbox must include the following attributes:

- NAMUSR - name of user
- RPRTGRP - report group
- MSGDEP - message deposit
- MLBXTYPE - mailbox type
- NAMADR - name of addressee
- MDTRANS - Message Desk transfer

This class of service may also include the following functions:

- NAMERSP - name response
- MSGRSP - message response

Message desk operator mailbox class of service

A VMX Message Desk Operator mailbox class of service must include the following attributes:

- NAMUSR - name of user
- MSGDEP - message deposit
- FORWARD - forward message

- RPRTGRP - report group

This class of service may also include the following functions:

- NAMESP - name response
- MSGRSP - message response
- NAMRSUP - name response update
- AUTINQ - automatic inquiry
- TIMSTP - time stamp
- EXTNDQNG - extended queueing
- MDOTEXT - MDO message text review

Voice trouble mailbox class of service

The Voice Trouble Mailbox class of service should have the following attributes:

- RPTGRP - report group
- NAMUSR - name of user
- MSGDEP - message deposit
- EXTNDQNG - extended queuing
- AUTINQ - automatic inquiry
- TIMSTP - time stamp

Setting up a line group

After setting the required classes of service, a line group is defined. The SET command is used for line group definition. The parameters of this command are as follows:

- LINE (LN) = Network (N), Local (L)
- CALL (C) = Incall (I), Outcall (O), Both (B)
- TYPE (T) = Message Desk (M), DID (D), User (U), PBX (P)
- LANGUAGE (LA) = 0, 1, 2, or 3

Generally, only one Line Group is created for the Meridian SL-100 (others can be reserved for Voicenet). All lines (except for Voicenet) are assigned to that Line Group. The definition for the Line Group is as follows:

SET, LN2=L, C=B, T=P, LA=0

If there is a default Message Desk, the operator must also set MDO, MDC, and MDU when Line Group 2 is set. The values for these parameters are as follows:

- MDO = Message Desk Operators mailbox address
- MDC = Customized Greeting Number (0 is default)
- MDU = Message Desk Voice Mailbox ID

Creating mailboxes

The first mailbox to be created should be the System Overflow Mailbox. This is the mailbox that collects misaddressed messages and messages in excess of individual user mailbox capacity. The system automatically assigns it internal record 1. The System Overflow Mailbox is created in the same manner as creating user mailboxes. It should be assigned the VMX predefined class of service, 8. The System Overflow Mailbox should, in turn, have its own overflow mailboxes.

User Mailboxes are created from the Create (C) code. A list of users' names and their VMX IDs and addresses should be provided by the company or organization. The ID can be from four to eight digits, established as a system parameter during configuration. The VMX automatically assigns each mailbox an internal record number in entry sequence.

The Voice Mailbox address should be entered next. It usually is the same as the user's telephone number or extension and can be from three to 15 digits, depending upon system parameters.

The next entry should be the class-of-service number. It should be followed by the user's name and report group (usually paralleling an organizational unit structure).

Some VMX features require the entry of additional data about the user's mailbox. This additional data can include the following:

- Overflow mailbox
- Rotary mailbox
- Rotary mailbox for change of address
- Message notification and message indication
- Diversion ID and priority mailbox
- Foreign language index

For further information about creating mailboxes and data entry, refer to the VMX Software Reference Manual.

Activating the voice mailbox

A mailbox must be activated before a user can actually use the system. The command ON, followed by the command U, will bring a new user into service.

Entering group codes

Users who have the group code feature in their class of service can establish their group codes (up to 10 at any one time). Users write a two-digit code, usually beginning at 10 and ending at 19 as their group codes, and the VMX address and name of each member to be assigned to each group, on a form provided them by the system administrator. The information on this form is used by the system operator to enter in the user database.

When the DISTRIBUTION CODE prompt is displayed, enter the update mode (U) and enter the second digit of the group code followed by the address of every member of that group. Up to 10 group codes (with unlimited addresses in each) can be entered for a user. Members of group codes can be added or deleted in a similar manner. An entire group code can be deleted by entering an asterisk (*) followed by a carriage return.

Maintenance and administration

VMX external alarm interface

The Voice Message Exchange (VMX) External Alarm Interface is an add-on hardware option that enables VMX major and minor alarm indications to be interfaced with the Meridian SL-100 so that VMX alarm messages can be printed out on the Meridian SL-100 system printer, as well as the VMX system printer. This alarm interface might be used in situations where VMX is remote from the Meridian SL-100. VMX alarm messages indicate an abnormal system status that must be investigated.

The VMX alarms are connected to the Meridian SL-100 by inserting the phone plugs into the alarm board jacks on the Input/Output (I/O) panel at the rear of the VMX unit and cross-connecting to the appropriate Meridian SL-100 alarm circuit at the MDF. Ensure that the Meridian SL-100 alarm equipment is turned on and that the toggle switch on the back of the VMX is in the ENABLE position. To discontinue alarm indications on the Meridian SL-100, place the toggle switch on the back of the VMX in the DISABLE position.

CAUTION
Do not plug the AC power cord for external alarm equipment into a VMX internal socket, as damage may occur.

Audible alarm indications can be deactivated by pressing the RESET button on the alarm board at the rear of the VMX.

VMX alarm messages

When a major or minor VMX alarm condition occurs, the VMX printer logs either a "System Monitor Major Alarm Generated" message or a "System Monitor Minor Alarm Generated" message, immediately preceded by the major or minor alarm message. The printed message includes the abnormal condition that caused the System Monitor to generate the alarm.

The external alarm interface generates messages resulting only from the major/minor alarm conditions listed in the following paragraphs. All other VMX alarm messages are printed on the VMX printer. For a detailed explanation of the VMX alarm messages and recommended operator action, refer to the VMX *Software Reference Manual*.

Major alarms

VMX major alarms are generated by the following hardware and software conditions:

- Failure of system ac power (detected by loss of +5 volts within the VMX system)

- Time-out of the Administrator System Interface Module (SIM) board watchdog timer

- No circuit subsystem responded to polls

- Slave processor Block Transfer Bus (BTB) failure

- Universal Control Board (UCB) panic detected

Minor alarms

VMX minor alarm messages are generated only by the system monitor software conditions below:

- Master processor poll failure

- Call processor failed to acknowledge poll message

- Call processor timed out while processing poll message

Log reports

There are two new Meridian SL-100 log reports for the VMX Interface feature. Both reports are associated with the activation/deactivation of the subscribers Message Waiting Indication (MWI).

VMX100

This log report documents the successful attempts to activate/deactivate of the subscribers' MWI. A successful attempt to activate results in the following message:

- VMX MWI ACTIVATED

A successful attempt to deactivate results in the following message:

- MWI DEACTIVATED

Both messages are for information only and require no action.

VMX101

This log report documents the unsuccessful attempts to activate/deactivate a subscribers' MWI. There are several reasons for an unsuccessful attempt, most of which occur when a VMX call encounters an error in the VMX MWI call processing software.

- Message: STATION HAS WRONG OPTIONS FOR VMX MWI
  Action: Check Meridian SL-100 line option and VMX database coordination.

- Message: UNABLE TO TRANSLATE VMX MWI CALL
  Action: Check VMX database and Meridian SL-100 translation tables.

- Message: UNABLE TO PROCESS VMX MWI ON REQUEST
  Action: Check line and trunk states. Check Meridian SL-100 line assignment and VMX database.

- Message: UNABLE TO PROCESS VMX MWI OFF REQUEST
  Action: Check line and trunk states. Check Meridian SL-100 line assignment and VMX database.

- Message: INVALID DESTINATION FOR VMX MWI CALL
  Action: Check VMX database and Meridian SL-100 translation tables.

- Message: CANNOT FIND LINE DATA FOR VMX MWI CALL
  Action: Check Meridian SL-100 line assignment and VMX database.

Testing

Several tests can be conducted to check the operational status of VMX once the database for both VMX and the Meridian SL-100 have been established and both systems have been brought on line. These tests are conducted using the VMX *Software Reference Manual* as reference.

System control test

This test consists of operating the VMX system console and performing the on-line commands specified in the On-line Commands Checklist in the *Software Reference Manual*. VMX responds to an entry in one of two ways. For a request for information, VMX displays the requested information. For other types of commands, VMX displays either "Request Accepted" or "Request Rejected, Error On Input." For a list of command codes, enter <$> and a carriage return to display the command code menu.

User features test

This test demonstrates the ability of VMX to perform all user features as specified in the VMX User Features Specification. The test consists of calling VMX from a dual-tone multifrequency (DTMF) telephone that has a Voice Mailbox with a class of service to permit the features being tested. After the VMX access code has been dialed, enter the appropriate command and verify the successful operation of the feature.

Port test

This test verifies the ability of VMX to both originate and receive calls on each of the installed ports of the Meridian SL-100.

- Outcall Test - This test consists of using the console command TEST to cause each VMX port to place an outcall to a telephone located near the system console.

- Incall Test - This test consists of calling each VMX port from a DTMF telephone to deposit and deliver a Voice Message.

- Noise Test - This test uses a Hewlett-Packard 4940A Transmission Impairment Measurement Set to measure the residue noise on each port of VMX.

  - Connect the set to VMX and select the TERM mode to terminate the 600-ohm trunk line.

  - Gain access to the VMX port by leaving a message.

  - Remove the transmitter unit from the telset and replace it with a 600-ohm resistor to get a silent condition on the set.

  - Answer the queuing by dialing the DTMF command 1 and begin recording a message of silence for 120 seconds, then end recording by dialing 1 again. Dial 7 to save the message.

  - Re-enter the port and receive the message by dialing 011 followed by 2. The message should be silence.

  - Measure the port output using the HP 4940A for the following:

    - C-MSG noise in dBrnC

    - 3KHz flat noise in dBrnC

    - 15KHz flat noise in dBrnC

      All measurements must compare with AT&T signal-to-noise standards.

- Total Harmonic Distortion Test - This test uses a Hewlett-Packard 334A Distortion Analyzer to measure total harmonic distortion on each VMX port.

  - Gain access to the port to leave a message.

  - Use the DTMF command code 1 to record a 1000-Hz tone at 0.0 dBm for 120 seconds and dial 1 again to stop recording. Dial 7 to save the message.

  - Call the port for the message by dialing 011 followed by 2, and measure the total harmonic distortion on the Distortion Analyzer. The measurements must meet AT&T standards.

Power failure restart test

This test demonstrates the ability of VMX to recover from an interruption of primary ac power.

- Place the system in an on-line activated state.

- Remove the primary power from VMX for at least 1 minute by opening the main circuit breaker.

- Reapply ac power by closing the main circuit breaker and verify that VMX has recovered to an on-line state within 20 minutes.

- Test the processing of messages by placing a call to VMX from a DTMF telephone and depositing or receiving a message.

Remote diagnostics test

This test demonstrates the remote accessibility of VMX for diagnostic purposes. Place a call to VMX, Inc. headquarters Field Service Department in Richardson, Texas and ask that they place a call to the Meridian SL-100 terminal interface port and perform the diagnostic commands listed in the On-line Commands Checklist.

Administrative requirements

Ongoing responsibilities

A VMX installation requires that a number of key responsibilities be carried out by customer representatives. Of these responsibilities, administration and operation are essential. The System Administrator and System Operator handle these functions.

System Administrator

The System Administrator oversees day-to-day VMX operations, establishes procedures, acts as liaison between the telephone company and VMX, Inc., and sees that technical operations are accomplished and user problems are resolved.

System operator

The System Operator is responsible for running the on-line and off-line reports and entering information into the VMX database as needed. The operator's primary responsibilities for ongoing operations are as follows:

- Update the database of user information

- Monitor VMX status

- Generate system reports

- Perform general monitoring of system functions

- Run on-line utility programs

- Reconfigure the system using on-line commands

- Monitor VMX alarm messages

- Report problems to VMX, Inc. Customer Service

For further information concerning these activities, refer to the VMX *Operations Guide*.

Reports

VMX produces statistics on the use and operation of the system in the form of system reports. All reports are generated at the system console. Refer to the VMX *Software Reference Manual* for the appropriate commands to generate the following system reports:

- System Report (RPRT) - This report consists of four separate reports on system operation:

  - Call Report - Provides information about successful calls, abandoned calls, and outgoing unsuccessful calls.

  - Message Report - Provides hourly information about message deposits and deliveries, number of messages stored, number of messages to be delivered, percentage of message storage space used, dial command use, and special function code use.

  - Line Report - Provides hourly information about the number of calls on each line, percentage of time the line was occupied during business hours, and the number of minutes a line was out of service.

  - Disk Report - Provides information about the type of disk, the percentage of disk storage space in use, and the number of disk errors.

- User Activity Log (URPT) - This report provides information concerning user activity on the system. It can be generated on individuals or on Report Groups.

- Message Delivery Status Report (MRPT) - This report records the destinations of messages sent. It lists all messages by the ID of the recipient, unless the message was sent to a nonsubscriber, lists the ID of the sender and the time and date of deposit. Its use could be to determine who sent a garbled or obscene message and on which line the message was sent.

- Call Activity Log (CRPT) - This report provides information about all incoming or outgoing calls processed by VMX. Its use is to allow the system operator to trace problem calls and determine long distance usage.

- Deposit Report (DRPT) - This report provides a record of all messages sent by a user. Using this report, it is possible to trace a message sent by an individual, even though the recipient may have erased it.

Meridian 1 Options 201, 211

Meridian SL-100

Voice Message Exchange Interface

General Description

northern telecom