AT&T

MERLIN® Attendant

for MERLIN LEGEND™ Communications System
Installer's Guide

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

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This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference, in which case the user will have to correct the interference at his or her own expense. For additional FCC interference registration, and repair information, see the information located at the back of this book.

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The order number for this book is 555-600-711. To order additional books, call 1 800 432-6600 in the U.S. and 1 800 255-1242 in Canada. For more information on how to order this and other system reference materials, see "About This Guide."

Support Telephone Numbers

AT&T provides a toll-free customer helpline 24 hours a day. In the U.S. call the AT&T Helpline at 1 800 628-2888 if you need assistance when installing, programming, or using your system. In Canada call one of the following Technical Assistance Centers for service or technical assistance:

Eastern Canada and Ottawa:	1 800 363-1882
Ontario:	1 800 387-4268
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Contents

Index

Tables

Installation and MERLIN LEGEND System Programming

Programming Features of the MERLIN Attendant

Testing and Troubleshooting

Figures

Installation and MERLIN LEGEND System Programming

About This Guide

This guide provides instructions about the installation and operation of the MERLIN® Attendant for the MERLIN LEGEND™ Communications system. It is intended for qualified technicians who install, maintain, and repair communications systems and implementors who program the system.

Conventions

The following conventions are used throughout the instructions in this guide:

- Keystrokes on the PC or telephone are shown as in the following examples:

    [Menu] means press the menu button on the MLX-20L™ display telephone.

    [F1] means press the F1 key on the PC.

    ⊞ means press the pound sign on the telephone.

- Menu selections on the MLX-20L display telephone are shown in the following manner:

    Enter means select Enter from the menu on the display.

Related Guides

The guides listed below are available to help setup, use, and maintain the MERLIN Attendant in configuration with the MERLIN LEGEND system:

Additional copies of the related system guides listed below can be ordered from the AT&T Customer Information Center (telephone numbers are listed on the inside front cover of this book).

Guide Title	Order Number
MERLIN Attendant System Manager's Guide	555-600-710 *Comcode* 106431265
Planning Forms	555-600-712
MERLIN LEGEND System Programming Guide PBX System Planning PBX System Planning Forms Key System Planning Key System Planning Forms	555-610-111 555-610-113 555-610-117 555-610-112 555-610-116

Installation and MERLIN LEGEND System Programming

1

Overview

The MERLIN Attendant answers incoming calls on designated lines with a prerecorded message and directs callers to the appropriate extension in the MERLIN LEGEND Communications System. This equipment can provide the following services:

- reduce the workload of the receptionist

- help to ensure incoming calls are answered during peak calling periods

- answer incoming calls after hours and on holidays and weekends

> ⚠️ **CAUTION:**
> *The MERLIN Attendant only operates with the MERLIN LEGEND system and a 517C13 Basic Telephone (012) Module.*

Key Features

Some of the key features of the MERLIN Attendant are as follows:

- **Security Code**
  The authorized caller code that must be entered before changing any programmable features to protect recorded announcements and other programming from being changed by unauthorized personnel.

- **Remote Programmability**
  Features, including recorded announcements, can be programmed from a Touch-Tone phone either on-site or from a remote location.

- **Day/Night/Transfer Announcements**
  Specific greetings can be played to callers in response to the time of day or the status of the call.

- **System Clock/Weekly Calendar**
  The internal clock and calendar can track business hours and days of operation to allow the appropriate announcement to be played to callers.

- **Call Supervision**
  The MERLIN Attendant can supervise calls and monitor the progress of calls.

- **Alternate Routing**
  When the first requested extension is unavailable, callers can be transferred automatically to a secondary extension.

- **Battery Backup**
  Routing plans and programming changes can be saved up to eight weeks following a power outage, provided the battery is fully charged. Recorded announcements can be saved up to three hours under the same conditions.

Front Panel

There are three lights on the front panel as shown in Figure 1-1.
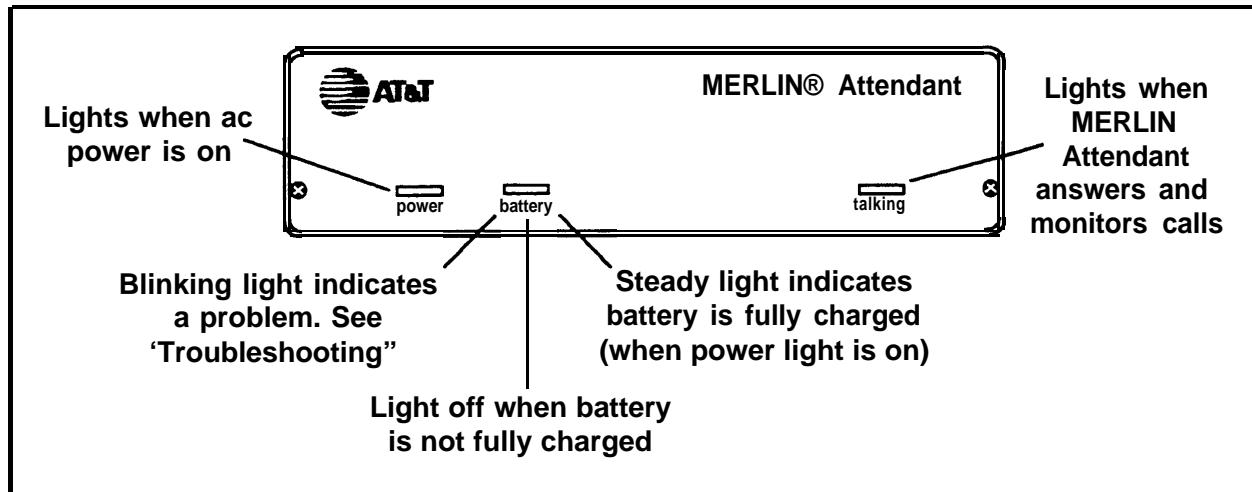
Figure 1-1   Front View of the MERLIN Attendant

The lights indicate the following:

■ **power**
MERLIN Attendant is connected to a power source when this light is on.

■ **battery**
Table 1-1 describes the meaning of the different light combinations when ac power is connected.

■ **talking**
This light is on whenever the MERLIN Attendant answers and monitors a call.

Table 1-1   Meaning of Power and Battery Lights

Power Light	Battery Light	Description
On	Off	Battery charging
On	On	Battery fully charged
Off	On	Unit operating on battery power
Off	Off	Unit not operating; refer to "Troubleshooting"
On	Blinking	Out of Service code; refer to "Troubleshooting"

The connectors and four setup switches on the back panel are shown in Figure 1-2.
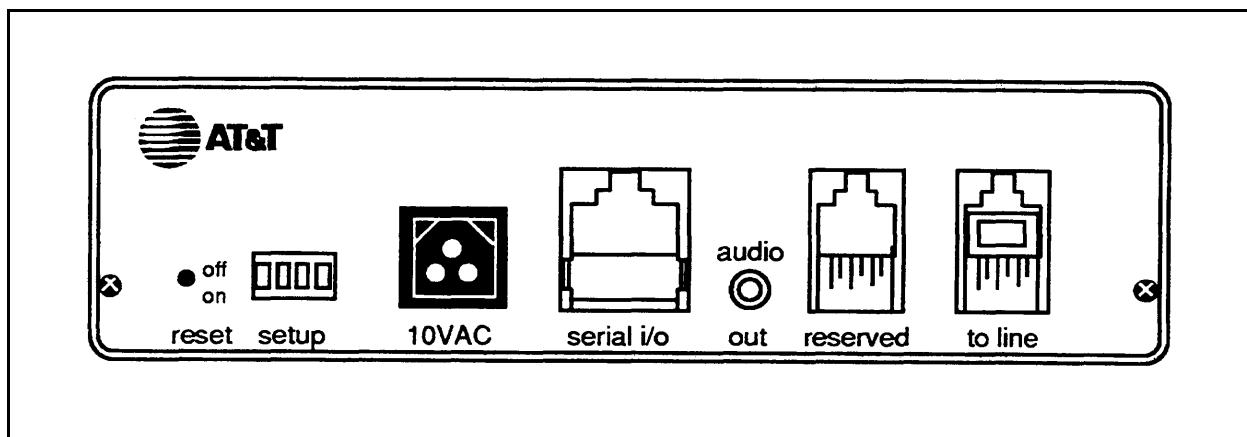
Figure 1-2 Back View of the MERLIN Attendant

The purpose of the connectors and switches are as follows:

- **reset**
  This recessed button resets the MERLIN Attendant. See "Troubleshooting" for details.

- **setup switches**
  There are four setup switches. Switches 1, 2, and 3 control the MERLIN Attendant response to a power outage as shown in Table 1-2; switch 4 is not used.

Table 1-2   Meaning of Setup Switch Settings

Switch	On (Down)	Off (Up)
1	Recorded announcements are retained during a power outage	Recorded announcements are erased during a power outage
2	Routes and other programming parameters are retained during a power outage	Routes and other programming parameters are reset to defaults during a power outage
3	The MERLIN Attendant continues to answer calls during a power outage	The MERLIN Attendant does not answer calls during a power outage
4	Not Used	Not Used

⚠️ **CAUTION:**
After connecting ac power to the MERLIN Attendant, be sure that switches 1 and 2 are on (down) and switches 3 and 4 are off (up). With this setting, recorded announcements are saved up to three hours during a power outage (assuming the battery is fully charged) and routing plans and programming parameters are retained up to eight weeks.

■ **10V AC**
The power connector.

■ **serial i/o**
Connects the attendant to a printer during diagnostic tests.

■ **audio out**
Not used.

■ **reserved**
Not used.

■ **to line**
Connects the attendant with the Basic Telephone (012) Module on the
MERLIN LEGEND system control unit.

Equipment and Location Requirements

The following equipment is supplied with the MERLIN Attendant:

- power cord with transformer
- 8-foot, 6-wire modular phone cord
- mounting plate
- System Manager's Guide

Also required, but not supplied, is a 517C13 Basic Telephone (012) Module housed in a MERLIN LEGEND system control unit. Up to four MERLIN Attendants can be connected to the module.

When the maximum of four MERLIN Attendants is connected to the module, only two basic telephones intended for call handling should be connected to any of the remaining eight ports. However, when programming MERLIN Attendant features, you can connect a basic Touch-Tone telephone to one of the remaining eight ports to perform the programming procedures.

NOTE:
If a 400 w/dtmf module is present in the system, basic telephones maybe connected to all available ports on the Basic Telephone (012) Module.

Table 1-3 shows the number of single-line sets that can be supported on one BTM:

Table 1-3   Basic Telephone Module Ports Usage

No. of MERLIN Attendants	Additional Single-Line Sets
4	2*
3	3*
2	3*
1	4*

Plus one single line set for MERLIN Attendant programming only

Number of MERLIN Attendants Required

If a customer is using the MERLIN Attendant only for backup call handling or night service, only one MERLIN Attendant is required unless call volume is heavy, as shown in Table 1-4. When call traffic is heavy, the number of MERLIN Attendants required at a site depends on the number of calls the customer receives during peak hours. Refer to Table 1-4 to determine how many MERLIN Attendants are required.

Table 1-4   Calls Per Hour Table

Calls Per Hour	Number of Units Needed
2 5	2
25 - 50	3
50 - 100	4

If the customer does not know the number of calls the business gets during peak hours, you can estimate how many MERLIN Attendants are required by asking the customer how many incoming lines the business has. Then refer to Table 1-5 to determine the number of MERLIN Attendants required.

Table 1-5   Incoming Lines Table

Number of Lines	Number of Units Needed
6 or fewer	2
7 - 9	3
10 - 12	4

Location Requirements

The MERLIN Attendant is designed to be connected to a Basic (012) Telephone Module of the MERLIN LEGEND System control unit. It is not

intended to be connected directly to the network. The location for the MERLIN Attendant must meet the following criteria:

- Within 5 feet of a *properly grounded* ac power source that is *not* controlled by a switch.

   NOTE:
   If possible, the MERLIN Attendant should share the same power source with the MERLIN LEGEND system control unit. This is required when the MERLIN LEGEND system control unit is connected to an Uninterruptible Power Supply (UPS).

- Not more than 10 feet away from the MERLIN LEGEND system control unit. If the MERLIN Attendant is located more than 10 feet from the control unit, the MERLIN Attendant may drop some calls.

- A sufficient distance away from a heating or cooling source to prevent exposure to temperatures beyond 32°F to 104°F (0°C to 40°C).

System Programming Procedures

Use the programming procedures on the following pages to configure the MERLIN LEGEND system for the MERLIN Attendant(s). These procedures must be completed *before* you install the MERLIN Attendant.

Check with the MERLIN LEGEND System Manager to ensure the following tasks have been performed:

- the lines assigned to the MERLIN Attendant(s) are programmed
- the lines are assigned to pools
- the extensions have numbers assigned

You should also ask the customer which lines are being answered by the MERLIN Attendant, including backup call handling and Night Service.

NOTE 1:
The MERLIN Attendant cannot be used with systems configured for behind-switch mode. Use either the hybrid PBX mode or the key mode.

NOTE 2:
The MERLIN Attendant cannot be used with any voice-mail systems.

If you are installing more than one MERLIN Attendant to answer the same lines or line pools, you need to assign them to the same Call Distribution Group to prevent call contention between the units.

Perform all the appropriate programming procedures from a personal computer (PC) or MLX-20L. The programming procedures which follow provide side-by-side instructions for both cases. Refer to the MERLIN LEGEND System Programming Guide for more information on these procedures.

Setting Voice Messaging System (VMS)/Automated Attendant (AA) Options

NOTE:
If the MERLIN LEGEND system does not have VMS/AA extensions designated as such, the following will occur:

> 1- Calls routed to extensions or routes on a blind transfer will return to the auto attendant unit after the Return Transfer Interval, instead of going to the receptionist. The caller will get the day or night announcement again as if it is a new incoming call.

> 2- Calls routed to a extension or route on a blind transfer will ring once on the intercom button and then ring on the line pool button.

Use the following procedure to set the VMS/AA options.

NOTE:
In the following procedures, an "n" in brackets represents any one digit number. For example, [nnnn] represents a four digit number. Similarly, an [s] represents a digit in a slot number and a [p] represents a digit in a port number. The digits appear on the screen as you dial or type. If you make an error, select **Backspace** on the MLX-20L or press **[F4]** on the PC and retype.

Step	MLX-20L	PC
1. Enter programming mode	**[Menu]**	**S** **P** **M** [any key]
	Sys Program	**[F1]**
	Exit	**[F5]**
2. Display VMS/AA screen	**AuxEquip**	**[F9]**
	VMS/AA	**[F6]**

Step	MLX-20L	PC
3. Change number of rings before transfer		
■ Display MERLIN LEGEND Transfer Rtn Interval screen and erase current setting	**TransferRtn** **[Drop]**	**[F1]** **[Alt] + [P]**
■ To specify that calls are not transferred to the backup position	**0**	…to)
■ To set number of rings (1-9) before calls are transferred to the backup position	Dial number of rings: [n]	Type number of rings: [n]
4. Save your entry	**Enter**	**[F10]**
5. Return to System Programming Menu. You are now ready to program the call distribution groups.	**Exit** **Exit**	**[F5]** **[F5]**

Programming Call Distribution Groups

Use this procedure to set the calling group options. This procedure starts from the System Programming Menu.

Step	MLX-20L	PC
1. Display Group Calling menu and select Line/Pool assignment.	**Extensions** **[More]** **Grp Calling** **Line/Pool**	**[F6]** **[PgUp]** **[F4]** **[F10]**

Step		MLX-20L	PC
2.	Identify calling group you want to program	Dial the calling group extension number: [nnn] or press **[DSS]** for group extension number you want	Type the calling group extension number: [nnn]
	Save your entry	**Enter**	**[F10]**
3.	Identify line/trunk or pool to assign to calling group in any one of the following ways:	Dial:	Type:
	Line/Trunk number (801-880) (key mode only)	[nnn]	[nnn]
	Pool number (PBX mode only)	[nnn]	[nnn]
	Slot and Port number (key mode only)	⁎[sspp]	⁎[sspp]
	Logical ID number (key mode only)	#[nnn]	#[nnn]
	Save your entry	**Enter**	**[F10]**
4.	Exit to Group Calling Menu	**Exit**	**[F5]**
5.	Select Member Assignment	**Members**	**[F9]**

Step		MLX-20L	PC
6.	Identify calling group you want to program	Dial the calling group extension number: [nnn] or press **[DSS]** for group extension number you want	Type the calling group extension number: [nnn]
	Save your entry	**Enter**	**[F10]**
7.	Identify extension(s) to assign to calling group in any **one** of the following ways:	Dial:	Type:
	Extension number	[nnn] or press **[DSS]** for extension number you want	[nnn]
	Slot and Port number	✱[sspp]	✱[sspp]
	Logical ID number	#[nnn]	#[nnn]
	Save your entry	**Enter**	**[F10]**
8.	Exit to Group Calling Menu	**Exit**	**[F5]**
9.	Select Hunt Type	**Hunt Type**	**[F1]**
10.	Identify calling group you want to program	Dial the calling group extension number: [nnn] or press **[DSS]** for group extension number you want	Type the calling group extension number: [nnn]
	Save your entry	**Enter**	**[F10]**
11.	Specify circular hunt type	**Circular**	**[F1]**

Step	MLX-20L	PC
12. When all entries are complete, save choice(s) and exit to the System Programming Menu. You are now ready to set the Night Service options.	**Enter** **Exit** **Exit** **Exit**	**[F10]** **[F5]** **[F5]** **[F5]**

Programming Night Service

Use the following procedure to set the Night Service options for the MERLIN Attendant. This procedure starts from the System Programming Menu.

Step	MLX-20L	PC
1. Select Night Service and Group Assignment	**NightSrvce** **GroupAssign**	**[F10]** **[F1]**
2. Identify the operator position to assign to calling group in any **one** of the following ways:	Dial:	Type:
Extension number	[nnn] or press **[DSS]** for extension number you want	[nnn]
Slot and Port number	⁎[sspp]	⁎[sspp]
Logical ID number	#[nnn]	#[nnn]
Save your entry	**Enter**	**[F10]**

Step	MLX20-L	PC
3. Identify extension to assign to calling group in any **one** of the following ways:	Dial:	Type:
Extension number	[nnn] or press **[DSS]** for extension number you want	[nnn]
Slot and Port number	*[sspp]	*[sspp]
Logical ID number	#[nnn]	#[nnn]
Save your entry	**Enter**	**[F10]**

■ To assign another telephone to Night Service Group	Dial extension number **Enter**	Dial extension number **[F10]**
■ To remove telephone from Night Service Group	Dial extension number **Delete**	Dial extension number **[F8]**
4. When all entries are complete, save and return to the System Programming Menu. You are now ready to specify a group type for the calling group.	**Enter** **Exit** **Exit**	**[F10]** **[F5]**

NOTE:
It is recommended that you backup and monitor the MERLIN Attendant with the receptionist or other person as follows. Assign the MERLIN Attendant lines/pools to the receptionist and the transfer redirect extensions (with

delayed-ring option). This is applicable only if the system operator (and/or the person at transfer redirect extension) is available to handle redirected calls.

All the lines appearing on all the attendant extensions must be programmed to appear on the Night Service extensions.

Assigning Calling Group Type

Use this procedure to assign the calling group you created to the *Generic VMI* group type. The system automatically logs in group members assigned to the *Generic VMI* group type following a power failure. This procedure starts from the System Programming Menu.

Step	MLX-20L	PC
1. Select Group Calling	**Extensions** **[More]** **GrpCalling**	**[F6]** **[PgUp]** **[F4]**
2. Select Group Type	**[More]** **GroupType**	**[PgUp]** **[F1]**
3. Identify calling group you want to program for Group Type If you plan to program more than one group, enter lowest extension number.	Dial the calling group extension number: [nnn] or press **[DSS]** for group extension number you want	Type calling group extension number: [nnn]
Save your entry	**Enter**	**[F10]**
4. Select Generic VMI Group	**Generic VMI**	**[F3]**
Save your entry	**Enter**	**[F10]**
5. Exit System Programming and return to normal call handling	**[Home]**	**[Home]**

Connecting the MERLIN Attendant

Follow the steps below to install the MERLIN Attendant:

> ⚠️ **CAUTION:**
> *Before initial installation of the MERLIN Attendant, set switches 1 and 2 on the back panel to off (up).*

1. Connect a basic Touch-Tone phone to the port on the Basic Telephone (012) Module that you have programmed for the MERLIN Attendant.

2. Lift the handset.

3. Dial ⌗③① to turn on the Privacy feature to prevent the MERLIN Attendant and the receptionist from answering a call at the same time.

4. Hang up the handset.

5. Repeat steps 1 through 4 for each MERLIN Attendant port.

6. Place the MERLIN Attendant on a table or desktop or mount it using the mounting bracket:

> ⚠️ **CAUTION:**
> *To avoid internal damage and feature malfunction, do not stack multiple MERLIN Attendants.*

   a. Using a #10 or smaller screw (wood, sheet metal, concrete), attach the wall mounting bracket to a vertical wall surface so that the hook end of the bracket is down.

   b. Locate the keyhole opening on the underside of the MERLIN Attendant with the hook on the bracket. Slide the unit over the hook and down to secure.

7. Make sure setup switches 1 and 2 are *off,* then plug one end of the modular phone cord into the jack on the back of the MERLIN Attendant labeled "to line." (See Figure 1-3.)
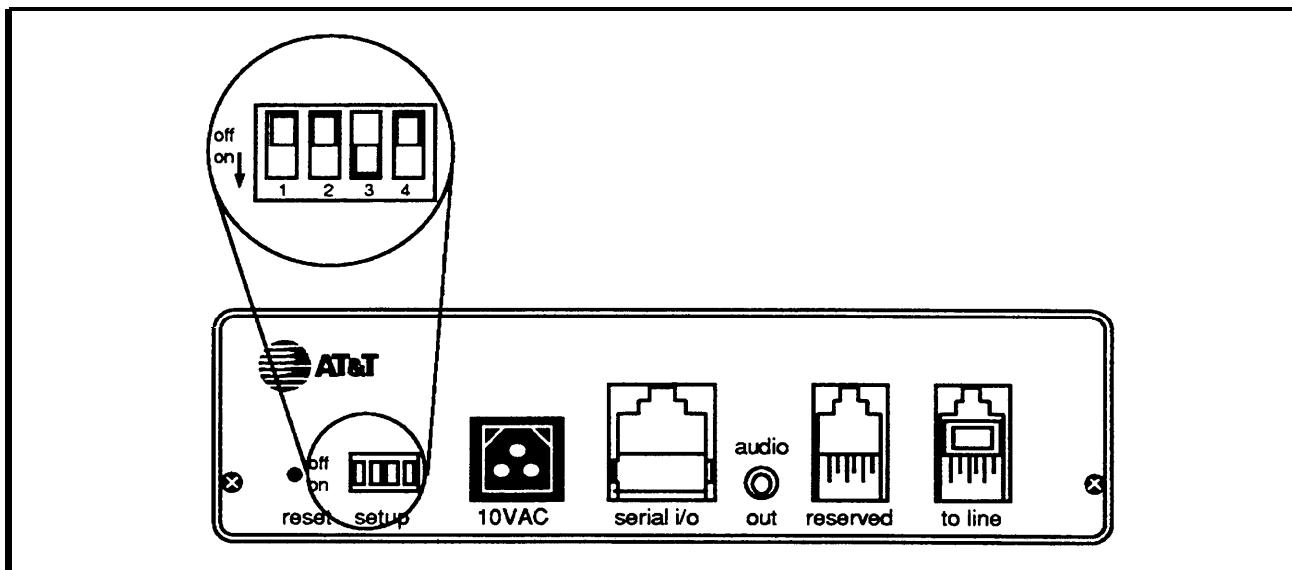

Figure 1-3   Setup Switch Positions for Installing Unit

8. Plug the other end of the modular phone cord into an programmed MERLIN Attendant port on the Basic Telephone (012) Module. (See Figure 1-4.)

9. Plug one end of the power cord into the 10 VAC power connector on the MERLIN Attendant.

10. Plug the other end into a 120 VAC outlet.
    The power light goes on. If the battery light flashes, one or more prompts have not been programmed.

11. Reset the setup switches as described in Table 1-6.

Table 1-6   Switch Settings When Operating Unit

Switch	Setting	Result
1	On	Saves recorded announcements during power outage
2	On	Saves routes and programmable features during power outage
3	Off	Does not use battery backup to answer calls during power outage (See NOTE)
4	OFF	Not Used

NOTE:

During a power outage there is no need to use battery backup to answer calls if the MERLIN Attendant shares an Uninterruptible Power Supply (UPS) with the MERLIN LEGEND system control unit. If a UPS is not being used with the control unit, during a power failure incoming calls cannot be answered by the system and therefore cannot be directed to the MERLIN Attendant.
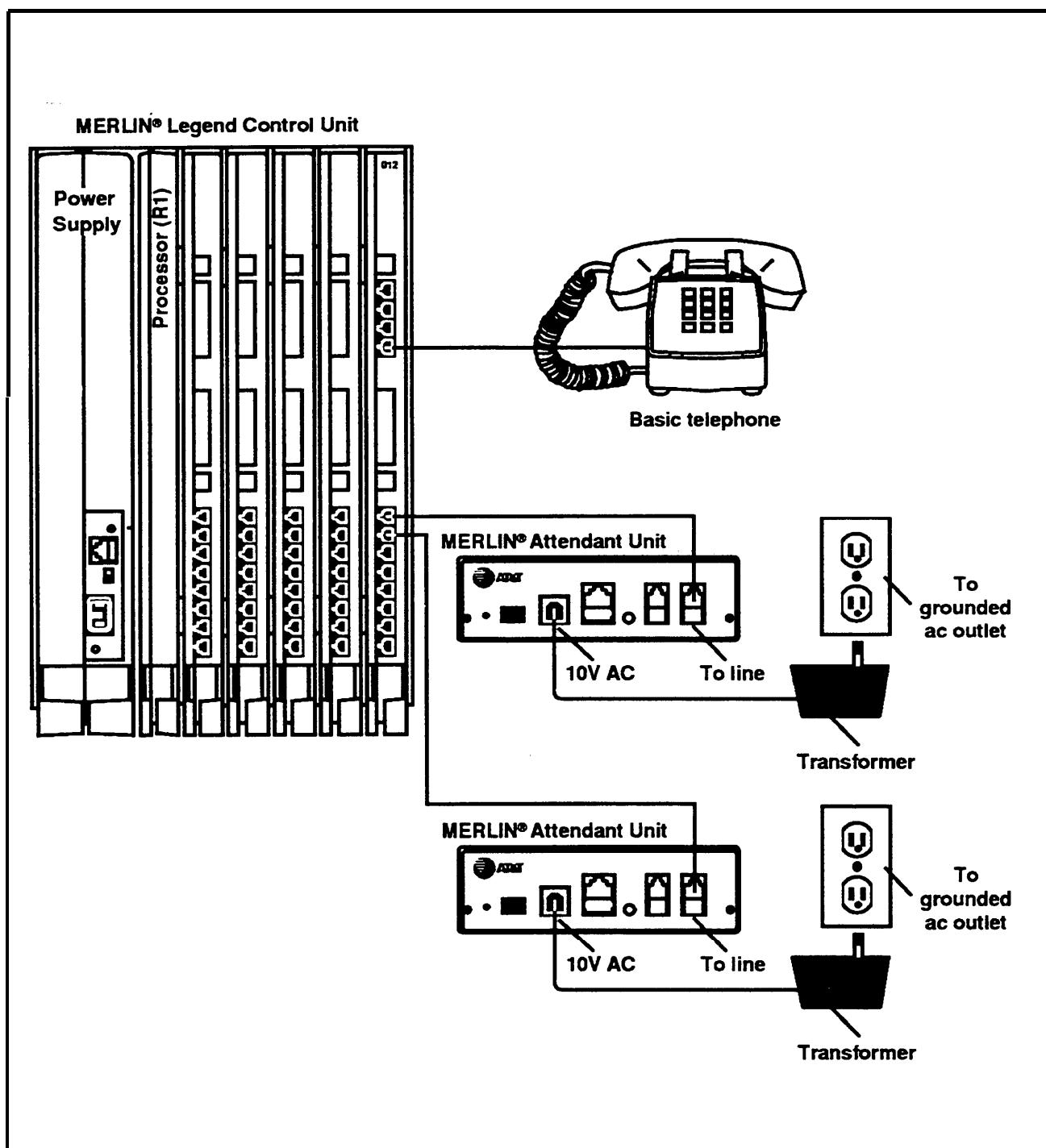
Figure 1-4   Connecting MERLIN Attendants to the MERLIN LEGEND Control Unit.

Programming Features of MERLIN Attendant

2

Program the MERLIN Attendant from a Touch-Tone phone using the special commands that are discussed in this Chapter. For each command string:

> ✱ tells the MERLIN Attendant that the following digits are a part of a command. It can also be used to start a command over when a mistake is made

> # denotes the end of an entry or executes the command string

NOTE:
All programming for the MERLIN Attendant should be done from a single-line Touch-Tone phone. If you are programming from a multiline phone, such as a MERLIN LEGEND system telephone, that is connected to the MERLIN LEGEND system control unit, you must enter an additional # each time a # appears in a programming command.

Completing the Planning Forms

Ask the customer for the completed MERLIN Attendant Planning Forms. If the forms have not been completed, have the customer fill them in before proceeding any further. The planning forms are as follows:

- Planning Form A—Business Days
- Planning Form B—Business Hours

- Planning Form C—Announcement Time Reallocation

- Planning Form D—Announcement Recordings

- Planning Form E—Routing Plan

- Planning Form F—Supervised Transfers

- Planning Form G—Blind Transfers

- Planning Form H—Call Processing Options

- Planning Form I—Combined Routes/Individual Changes

> **NOTE:**
> You can order the MERLIN Attendant Planning Forms from the AT&T
> Customer Information Center (phone numbers are located on the inside
> front cover of this book). Use this document number when ordering:
> 555-602-712.

Entering the MERLIN Attendant
Authorized Caller Mode

Perform the following steps before you begin programming:

1. Connect a basic Touch-Tone telephone to an unused port on the Basic
    Telephone (012) Module.

2. Dial the MERLIN Attendant and wait for the tone.
    Single beep sounds to indicate there are no announcements recorded.

3. Dial the default authorized caller code: [*][7][8][9][#].
    The two-beep confirmation tone sounds.

4. Continue programming the features in the following order:

    a. Set the MERLIN Attendant Clock

    b. Set the Business Days

    c. Set the Business Hours

d. Reallocate Announcement Times

e. Record Announcements

f. Play Back Announcements

g. Program Supervised Transfer Routes

   or Program Blind Transfer Routes

h. Change Call Processing Options/Combined Routes

i. Program Combined Routes/Individual Changes

Setting the Clock

The clock in the MERLIN Attendant must be synchronized with the clock in the MERLIN LEGEND system control unit to use the Night Service feature. If the MERLIN Attendant clock is not set, the Day Announcement plays at all times.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to set the MERLIN Attendant clock:

1. Dial ⊡ 7 1 followed by:

   a. One digit for the current day of the week

      1 = Sunday
      2 = Monday
      3 = Tuesday
      4 = Wednesday
      5 = Thursday
      6 = Friday
      7 = Saturday

   b. Two digits for the current month

      01 = January
      02 = February

> *03 = March*
> *04 = April*
> *05 = May*
> *06 = June*
> *07 = July*
> *08 = August*
> *09 = September*
> *10 = October*
> *11 = November*
> *12 = December*

  c. Two digits for the current date (01 - 31)

  d. Two digits for the current year (00 - 99)

  e. Two digits for the current hour (in military time)

  > *00 = midnight*
  > *23 =11:00 p.m.*

  f. Two digits for the current minute (00 - 59)

  g. Two digits for the current second (00 - 59)

  > **NOTE:**
  > Step g is optional.

2. Dial ⌗ to enter the command.
   The two-beep confirmation tone sounds.

3. Continue programming or dial ✳ ⌗ to exit authorized caller mode.

4. Dial ⌗ again to disconnect.

Setting the Business Days

Refer to MERLIN Attendant Planning Form A to set the customer's business days (the default is open Monday through Friday).

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to set the business day:

1. Dial ⧆7️4️ followed by the code for the day of the week:

    1 = Sunday
    2 = Monday
    3 = Tuesday
    4 = Wednesday
    5 = Thursday
    6 = Friday
    7 = Saturday
    9 = All days

2. Dial one digit to indicate whether the business is open or closed for the day specified in step 1.

    1 = open
    2 = closed

    The two-beep confirmation tone sounds.

3. Repeat steps 1 and 2 for each day of the week (unless "all days" was specified).

4. Continue programming or dial ⧆# to exit authorized caller mode.

5. Dial # again to disconnect.

Setting the Business Hours

Refer to MERLIN Attendant Planning Form B for the customer's business hours. The default setting is Monday to Friday, 8:30 a.m. to 5:00 p.m.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to set the business hours:

1. Dial ⟨*⟩⟨7⟩⟨3⟩ followed by:

   a. One digit code for the day of the week:

      1 = Sunday
      2 = Monday
      3 = Tuesday
      4 = Wednesday
      5 = Thursday
      6 = Friday
      7 = Saturday
      9 = Entire week (7 days)

   b. Two digits for the opening hour (military time)

      00 = midnight
      23 = 11:00 p.m.

   c. Two digits for the opening minute (00 to 59)

   d. Two digits for the closing hour (military time)

      00 = midnight
      23 = 11:OO p.m.

   e. Two digits for the closing minute (00 to 59)
      The two-beep confirmation tone sounds.

2. Repeat step 1 for each day (unless "entire week" is selected).

3. Continue programming or dial ⟨*⟩⟨#⟩ to exit authorized caller mode.

4. To disconnect, dial ⟨#⟩.

Reallocating Announcement Times

Five announcements are available. Each has a default duration in seconds, totaling 64 seconds. Refer to MERLIN Attendant Planning Form D to see if the customer has elected to lengthen or shorten any of the time allocations. If a

customer is not using an announcement, set the allocated time to 00. The default allocations are as follows:

NOTE:
If there is no recording present, but time is allocated for a recording, a beep sounds, followed by silence. The silence lasts for the duration allocated for the missing recording. The full period of silence is repeated each time a call is received.

Change the time setting to 00 to eliminate the recording.

Table 2-1   Default Announcement Time Allocations

Seconds	Announcement
20	Day announcement
20	Night announcement
14	Transfer Fail announcement
5	Hold announcement
5	Connect announcement

NOTE:
If the time allocated to one announcement is increased, decrease another time accordingly so that the total time does not exceed 64 seconds. Announcements are recorded only up to the time allocated. If while recording an announcement you run over the time allowed, the recording stops at the time allocated. Therefore, always play back the announcements to be sure they were completely recorded. See "Playing Back Announcements" in this section.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to reallocate announcement times:

⚠ **CAUTION:**
This procedure causes all announcements to be erased.

1. Dial ⸬*⸬⸬4⸬⸬9⸬ followed by the announcement time lengths for each announcement:

    NOTE:
    Set the time allocation to 00 for any announcement that is not being used.

    a. Two digits for the maximum time (in seconds) allocated for the Day announcement

    b. Two digits for the maximum time (in seconds) allocated for the Night announcement

    c. Two digits for the maximum time (in seconds) allocated for the Transfer Fail announcement

    d. Two digits for the maximum time (in seconds) allocated for the Hold announcement

    e. Two digits for the maximum time (in seconds) allocated for the Connect announcement

2. Dial ⸬#⸬ to enter the command.
    The two-beep confirmation tone sounds.

3. Continue programming or dial ⸬*⸬⸬#⸬ to exit authorized caller mode.

4. Dial ⸬#⸬ to disconnect.

Recording Announcements

Refer to MERLIN Attendant Planning Form D for the standard announcements. The customer may elect to record these announcements in his or her own voice or the voice of another employee.

When recording the announcement, the speaker should speak clearly, use a normal tone of voice, and pause after each route number so that when the message is played the caller has an opportunity to hear the number he or she

needs to enter. If announcements are being transferred from a tape recorder, make sure the volume is not set too high.

Here is an example of how a Day announcement is recorded:

"You have reached ANY Co. (Pause) If you know the extension of the person you are calling, please dial it now. (Pause) For Sales, dial 1. (Pause) For Parts, dial 2. (Pause) For Customer Service, dial 3. (Pause) Or stay on the line for operator assistance."

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to record announcements:

1. Dial ✻4 followed by the one digit code for the announcement being recorded:

    > *1 = Day announcement*
    > *2 = Night announcement*
    > *3 = Transfer Fail announcement*
    > *4 = Hold announcement*
    > *5 = Connect announcement*

2. Record the appropriate announcement. When you are finished, dial # to enter the announcement.
    The two-beep confirmation tone sounds.

    NOTE:
    The delay between the time you dial # to enter the command and the time you hear the confirmation tone represents the additional recording time available for the message.

3. Continue programming or dial ✻# to exit authorized caller mode.

4. Dial # to disconnect.

Playing Back Announcements

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to confirm the recording of announcements:

1. Dial ✱5 followed by the appropriate announcement code:

> *1 = Day announcement*
> *2 = Night announcement*
> *3 = Transfer Fail announcement*
> *4 = Hold announcement*
> *5 = Connect announcement*

   You hear the announcement as it was recorded.

2. Continue programming or dial ✱# to exit authorized caller mode.

3. Dial # to disconnect.

Programming Supervised Transfer Routes

Refer to MERLIN Attendant Planning Form F to see if the customer has planned any supervised transfer routes.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to program these routes:

NOTE:
If you make a mistake and want to reprogram a particular route, enter ✱3 followed by the route number (0 through 9) and dial # four times. This erases all programmed extension numbers for the route entered.

1. Dial ✱3 to enter a route.

2. Dial the route number (0 through 9). This is the number callers enter when they want to be connected to a particular department.

3. Dial the Day Primary Extension. When the business is open, this is the first extension number the MERLIN Attendant dials when a caller selects this route.

4. Dial ⊞ to indicate the end of the command for the Day Primary Extension.

5. Dial the Day Secondary Extension.

    NOTE:
    If this space is blank on the form, skip to step 6. If a secondary extension is not programmed, callers hear the Transfer Fail announcement when the first extension is busy or does not answer.

    When the business is open, the Day Secondary Extension is the number the MERLIN Attendant dials when it cannot connect the caller to the Day Primary Extension.

6. Dial ⊞ to indicate the end of the command for the Day Secondary Extension.

7. Dial the Night Primary Extension.

    NOTE:
    If this space is blank on the form, skip to step 8.

    When the business is closed, the Night Primary Extension is the first number that the MERLIN Attendant dials when a caller selects this route after normal business hours.

8. Dial ⊞ to indicate the end of the command for the Night Primary Extension.

9. Dial the Night Secondary Extension.

NOTE:
If this space is blank on the form, skip to step 10. If a secondary extension is not programmed, callers hear the Transfer Fail announcement when the first extension is busy or does not answer.

When the business is closed, the Night Secondary Extension is the number that the MERLIN Attendant dials when it cannot connect the caller to the Night Primary Extension.

10. Dial ⊞ to indicate the end of the command for the Night Secondary Extension.
    The two-beep confirmation tone sounds.

11. Repeat these steps for each Supervised Transfer route.

NOTE:
When programming route 0 for the receptionist, use an extension number that is not in the dial plan, such as 720, so that calls to the receptionist are directed to a line button not to an intercom button.

Programming Blind Transfers

Refer to MERLIN Attendant Form G to see if the customer has planned to use blind transfer routes.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to enter blind transfer routes:

NOTE:
If you make a mistake and want to reprogram a particular route, enter ✳ ③ followed by the route number (0 through 9) and dial ⊞ four times. This erases all programmed extensions for the route entered.

1. Dial ✳ ⑧.

2. Dial the route number (0 through 9). This is the number callers enter when they want to be connected to a particular department.

    NOTE:
    When programming route 0 for the receptionist, use an extension number that is not in the dial plan, such as 720, so that calls to the receptionist are directed to a line button not to an intercom button.

3. Dial the appropriate extension code:

    > *11 = Day Primary Extension*
    > *21 = Night Primary Extension*

4. Dial ②for a blind transfer.

5. Dial the extension number where the caller will be connected.

6. Dial #️ #️ .
    The two-beep confirmation tone sounds.

7. Continue programming or dial ✳️ #️ to exit authorized caller mode.

8. Dial #️ to disconnect.

Programming Combined Routes/Individual Changes

Refer to MERLIN Attendant Planning Form I to see if the customer has planned any combined transfer routes or changes to existing routes, such as extension number.

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to program these routes or changes:

1. Dial ✳️ ⑧

2. Dial the route number.

3. Dial the extension code.
   11=Day Primary Extension
   12=Day Secondary Extension
   21=Night Primary Extension
   22= Night Secondary Extension

4. Dial the transfer code.
   0=No Operation
   1=Supervised Transfer
   2=Blind Transfer
   5=Disconnect

5. Dial the extension number (2 to 4 digits) where the caller will be connected.

6. Dial #⃞ #⃞
   The two-beep confirmation tone sounds.

   NOTE:
   If you hear a three-beep (error) tone, return to step 1.

7. For each additional change, repeat steps 1 through 7.

8. Continue programming or dial *⃞ #⃞ to exit the authorized caller mode.

9. Dial #⃞ to disconnect.

Changing Call Processing Options

This section contains a list of ringing options and time delays that can be adjusted depending on the customer's needs. It also lists several options to improve call processing if the customer allows callers to dial individual extension numbers.

Table 2-2 gives a description of the options, the default setting for each one, and the possible settings that can be used. The last column can be used to record the value selected by the customer.

If the customer wants callers to have the option to enter individual extension numbers so that they can be connected to employees' telephones directly, these commands can improve the processing of those calls. Call transfers to extensions can be expedited when the MERLIN Attendant knows which extensions are valid in the MERLIN LEGEND system and what the maximum number of digits are in an extension (two to four). For example, if the customer has only 2-digit extension numbers ranging from 10 to 55, once a caller enters two numbers, the MERLIN Attendant quickly determines if the extension number is valid and transfers the call without waiting for further input from the caller.

NOTE:
Occasionally, a MERLIN LEGEND system has extension numbers with various numbers of digits. For example, a system may include two-digit extension numbers, such as 29, and four-digit extension numbers, such as 2489. In systems with mixed numbers of extension digits, the "Extension Digits" Call Processing option *must* be set to 19. The "Lowest Extension" and "Highest Extension" option cannot be used when "Extension Digits" is set to 19.

Refer to Planning Form H and the programming instructions following the table to change any of the values listed.

Table 2-2   Call Processing Options

Program Code	Option/ Description	Default Settings	Possible Settings	Current Settings
2901	**Day Answer Delay** In Day mode, number of rings before the MERLIN Attendant answers an incoming call. Determines immediate or backup call handling	1	1 — 5	
2902	**Night Answer Delay** In Night mode, number of rings before the MERLIN Attendant answers an incoming call. Determines immediate or backup call handling. If not using Night mode, set to 15.	1	1 — 15	
2903	**Dialing** Delay Number of seconds after an announcement that a caller has to dial a route or extension before the call is transferred to the receptionist.	2	2 — 5	
2904	**Extension Delay** Number of rings allowed for an extension to answer before the call is transferred to the receptionist.	4	2 — 6	
2916	**Extension Digits** The number of digits in an extension. If all phones have 2-digit extensions, set to 2. If all phones have 3-digit extensions, set to 3, etc. If the system has various numbers of digits (e.g. combinations of 2- and 3-digit extension numbers , set to 19.	2	2 — 4 or 19	

Table 2-2   Call Processing Options (Continued)

Program Code	Option/ Description	Default Settings	Possible Settings	Current Settings
2918	**Extension Transfer** Indicates how extension calls are transferred. If blind transfer (2) is selected, calls are transferred to the receptionist when an extension dialed is busy or does not answer. If supervised transfer (1) is selected, callers hear the Transfer Fail announcement when an extension dialed is busy or does not answer.	1	1 — 2	
9709	**Lowest Extension** Identifies the lowest valid extension number in the range available in the system. Do not set for systems with various numbers of extension digits. (See "Extension Digits.")	–	–	
9710	**Highest Extension** Identifies the highest valid extension number in the range available in your system. Do not set for systems with mixed numbers of extension digits. (See "Extension Digits.")	–	–	

You must enter the authorized caller mode before you can perform this procedure (see "Entering the MERLIN Attendant Authorized Caller Mode"). Perform the following steps to change any of these Call Processing Options:

1. Dial ⧏∗⧐ followed by the appropriate "Program Code" as shown in Table 2-2.

> *2901 = Day Answer Delay*
> *2902 = Night Answer Delay*
> *2903 = Dialing Delay*
> *2904 = Extension Delay*
> *2916 = Extension Digits*
> *2918 = Extension Transfer*

> *9709 = Lowest Extension*
> *9710 = Highest Extension*

2. Dial the number you have entered under "Current Setting."

3. Dial #.
   The two-beep confirmation tone sounds.

   NOTE:
   For Codes 9709 (Lowest Extension) and 9710 (Highest Extension), dial # twice to enter.

4. Continue programming or exit authorized caller mode by dialing * #.

5. To disconnect, dial #.

Testing and Troubleshooting

3

Testing

Once you have installed and programmed the MERLIN Attendant, perform the tests that follow.

Testing Supervised Transfer Routes

Perform the following steps if the customer has programmed any supervised transfer routes:

1. Dial the MERLIN Attendant extension.

2. Dial the first supervised transfer route number.

3. Verify that the primary extension from the Route Plan (Planning Form E) rings. Do *not pickup the call.*

4. Make sure the call is forwarded to the secondary extension, if programmed. If not, make sure the call is forwarded to the receptionist.

5. Repeat this procedure except this time take the phone at the secondary extension off-hook.

6. Make sure the Transfer Fail announcement plays.

7. Repeat this procedure for each supervised transfer route.

Testing Blind Transfer Routes

Use this procedure if the customer has programmed any blind transfer routes:

1. Dial the MERLIN Attendant extension.

2. Dial the first blind transfer route number.

3. Verify that the extension from the Route Plan (Planning Form F) rings. *Do not pickup the call.*

4. Make sure the unanswered call is routed to the receptionist.

5. Repeat this procedure for each of the blind transfer routes.

Testing Extension Numbers

Use this procedure if the customer allows callers to enter individual extension numbers:

1. Dial the MERLIN Attendant extension.

2. Dial a valid extension number.

   NOTE:
   If the system includes various numbers of extension digits (e.g., 2- *and* 3-digit extensions), dial a valid extension number for each extension length. If supervised transfer is selected, there will be a delay of up to two seconds (or the current "Dialing Delay" setting) before you are connected to the extension numbers of the shorter length.

3. Make sure the call is directed to the proper extension.

4. Dial an invalid extension number.

5. Make sure the call is directed to the receptionist.

Troubleshooting

This section describes various difficulties that might occur, the possible causes for the difficulty and procedures you can follow to try and solve the problem yourself. This section also describes how to print reports.

Out-of-Service Codes

If the MERLIN Attendant detects a problem, the unit enters an out-of-service state. The LED labeled "battery" on the front panel blinks a specific number of times, pauses, then repeats the pattern. Refer to Table 3-1 for a list of the Out-of-Service codes.

NOTE:
The MERLIN Attendant will not answer calls while it is out of service. The line will continue to ring until the receptionist answers or the caller hangs up.

If the "battery" light blinks once, pauses and blinks again, make sure all appropriate announcements are recorded. See "Playing Back Announcements" in Chapter 2, "Programming Features of the MERLIN Attendant."

If the problem persists or the "battery" light blinks more frequently, use a straightened paper clip to press the recessed reset button on the back panel of the MERLIN Attendant.

NOTE:
Pressing **reset** does *not* affect the programming or recorded announcements.

If pressing **reset** does not correct the problem, the MERLIN Attendant should be replaced.

⚠ **CAUTION:**
If you must disconnect ac power to the MERLIN Attendant, make sure setup switches 1 and 2 on the back panel are on (down). This saves programming and recorded announcements.

Table 3-1   Out-of-Service Codes

Number of Blinks	Problem
1	Announcements were not recorded or were erased (slow blink) or cannot compute battery level (fast blink)
2	Unable to turn Voice Recorder off
3	Unable to turn Voice Recorder on
4	Unable to turn Voice Playback off
5	Unable to turn Voice Playback on
6	Announcement detected with no time allocation
7	Attempt made to play an unrecorded announcement
8	RAM constants pool corruption detected
9	ROM check-sum error detected
10	Invalid value read from Real-Time Clock

Power Failures

During a power failure, the MERLIN Attendant can maintain all of its programming information (i.e., routes, business schedule, authorization code) up to eight weeks and all recorded announcements up to three hours *if* the MERLIN Attendant battery was fully charged and switches 1 and 2 were in the ON position at the time of the power failure.

It takes 18 hours of continuous power to charge the battery.

Printing Reports

You can connect a TI 700 or equivalent 1200-baud serial printer to the serial i/o port of the MERLIN Attendant to produce reports to analyze call traffic patterns or to see how routes, announcement times, or business schedules are programmed.

NOTE:
A special adapter is required to connect a "silent 700" printer.

Setting the Baud Rate

The default baud rate for the serial i/o port is 9600. To connect the printer, set the baud rate to 1200 using the following procedure:

1. Dial the MERLIN Attendant extension from a Touch-Tone phone, preferably a single-line set.

    NOTE:
    If you are programming from a multiline Touch-Tone phone connected to a MERLIN LEGEND system control unit, you must enter an additional ⌗ each time a ⌗ appears in a programming command.

2. Wait for an answer.

3. Dial ✳ followed immediately by the authorized caller code and ⌗ .

    The two-beep confirmation tone sounds.

4. Dial ✳ ② ⑨ ① ⑦ ① ② ⌗ to change the baud rate to 1200 baud.
    The two-beep confirmation tone sounds.

5. Continue programming or exit authorized caller mode by dialing ✳ ⌗ .

6. To disconnect, dial ⌗ .

Contents of a Traffic Analysis Report

The traffic analysis report provides the following information:

- **Route**
  The report is detailed by route number (0 through 9)

- **Messages**
  This field is not relevant to the MERLIN Attendant.

- **Attempted**
  This field contains the number of times outside callers have selected a particular route since the last time the counter was reset to 0. See "Resetting the Counters" for details.

- **Completed**
  This field records the number of times a call was completed to a particular route.

- **Abandoned before answer**
  This field indicates the number of calls abandoned before the MERLIN Attendant answered. It also includes calls answered by other MERLIN Attendants assigned to the same Calling Group.

- **Abandoned after answer**
  The number of calls abandoned after the MERLIN Attendant answers a call but before the call is processed.

- **Authorized callers**
  The number of times authorized caller mode was accessed for programming.

  NOTE:
  If any of the report counters exceed 65,535 total, the counter is reset to 0.

Connecting the Printer

To connect the printer, you need the following equipment:

- 14-foot, 8-conductor modular cable (straight)

- Modular/RS-232 DB-25 adaptor, male connector, or

- Modular/RS-232 DB-25 adaptor, female connector
  (depending on printer model)

The cable must be configured as shown in Table 3-2.

Table 3-2   Pinout Assignment for the TI 700 Printer

MERLIN Attendant	Printer
8 Conductor Modular Cable End Pins	RS-232 DB-25 Connector End Pins
Signal Ground—3	7—Signal Ground
Data Terminal Ready—8	6—Data Set Ready
Data Set Ready—6	20—Data Terminal Ready
Transmit Data—4	3—Receive Data
Receive Data—2	2—Transmit Data

Once the cable is configured and the printer is connected, perform the following steps:

NOTE:
If any of the report counters exceed 65,535 total, the counter is reset to 0.

Printing Call Handling Reports

To print a report, perform the following steps:

1. Dial the MERLIN Attendant extension from a Touch-Tone phone, preferably a single-line set.

2. Wait for an answer.

3. Dial ✳ followed immediately by the authorized caller code and 🔳 .

4. Dial ⟨*⟩⟨2⟩⟨9⟩⟨0⟩⟨9⟩ and the following appropriate choice:

   1 = print route programming
   2 = print traffic analysis report
   3 = print business schedule
   4 = print announcement time allocations

5. Once the report is complete, exit authorized caller mode by dialing ⟨*⟩⟨#⟩.

6. To disconnect, dial ⟨#⟩.

Resetting the Counters

To reset the call handling traffic statistics to 0, perform the following steps:

1. Dial the MERLIN Attendant extension from a Touch-Tone phone, preferably a single-line set.

   NOTE:
   If you are programming from a multiline Touch-Tone phone connected to a MERLIN LEGEND system control unit, you must enter an additional ⟨#⟩ each time a ⟨#⟩ appears in a programming command.

2. Wait for an answer.

3. Dial ⟨*⟩ followed immediately by the authorized caller code and ⟨#⟩.

4. Dial ⟨*⟩⟨2⟩⟨9⟩⟨1⟩⟨0⟩⟨1⟩.

5. Exit authorized caller mode by dialing ⟨*⟩⟨#⟩.

6. To disconnect, dial ⟨#⟩.

Printing Call Processing Reports

To print the current settings of call processing options, perform the following steps:

1. Dial the MERLIN Attendant extension from a Touch-Tone phone, preferably a single-line set.

2. Wait for an answer.

3. Dial ✱ followed immediately by the authorized caller code and #.

4. Dial ✱ 2 9 followed by the appropriate selection:

    01 = Day Answer Delay
    02 = Night Answer Delay
    03 = Dialing Delay

5. Dial #.

6. Once the report is completed, exit authorized caller mode by dialing ✱ #.

7. To disconnect, dial #.

Lost Authorized Caller Code

If the default authorized caller code (789) is changed and the new code is lost or forgotten, the default code can be restored. However this procedure also restores all the MERLIN LEGEND factory settings so that *any changed programmed setting must be re-entered and all announcements must be re-recorded.*

To restore the factory setting authorized caller code:

1. On the back of the MERLIN Attendant, set switches 1 and 2 to *off (up).*

2. Unplug the MERLIN Attendant from its power source.

3. With switches 1 and 2 still *off* (up), plug the MERLIN Attendant back into its power source.

4. Reset switches 1 and 2 to *on* (down).

5. Use the appropriate MERLIN Attendant Planning Forms to reprogram your settings and rerecord your announcements.

Index

A

10 VAC, 1-6
6-wire modular phone cord, 1-7

Administering Call Distribution Groups,
  1-12
    assign calling group type, 1-17
    line/pool assignment, 1-12
    member assignment, 1-13–1-14
    night service, 1-15–1-17
    selecting hunt type, 1-14
Administering lines, 1-10
Administering night service, 1-15–1-17
Alternate routing, 1-2
Announcements,1-2
    default duration, 2-6
    maintained during power outage, 3-4
    playing back, 2-10–2-11
    playing back, 2-10
    reallocating time , 2-6
    recording, 2-8–2-9
    selecting durations , 2-6, 2-8
Assigning calling group type, 1-17
Audio out, 1-6
Authorized caller code, 1-2
    entering, 2-2
    lost, 3-10
Authorized Caller Mode,
    entering, 2-2
    exiting, 2-4

B

Back panel, 1-4
Basic Telephone Module, 1-2
    connecting to, 1-7
Basic Telephone Module, connector, 1-6
Battery, 1-2, 1-20
    charging, 3-5
    in out-of-service state, 3-3
    recommended switch settings (table),
      1-19
Battery light, 1-3, 1-19, 3-3
Baud rate, setting, 3-5
Blind transfer routes
    programming , 2-12–2-18
    testing, 3-2
Business days, setting , 2-4–2-5
Business hours, setting, 2-5–2-6
Button, reset, 1-5, 3-3

C

C.O. line Dial Tone, 1-10
Calendar, weekly, 1-2
Call Distribution Groups, 1-10
    programming, 1-12–1-15
Call supervision, 1-2
Call processing reports, printing, 3-9
Call volume, used, 1-8
Caller code (security code), 1-2, 2-2
Calling group type, assigning, 1-17
Changing call processing options, 2-14
Charging the battery, 3-5

FCC Notification and Repair Information

This equipment is registered with the Federal Communications Commission (FCC) in accordance with Part 68 of its rules. In compliance with those rules, you are advised of the following:

MEANS OF CONNECTION: Connection to the telephone network shall be through a standard network interface jack USOC RJ11C. These USOCs must be ordered from your Telephone Company.

This equipment may not be used with party lines or coin telephone lines.

NOTIFICATION TO THE TELEPHONE COMPANIES: Before connecting this equipment, you or your equipment supplier must notify your local telephone company's business office of the following:

- The telephone numbers you will be using with this equipment.

- The appropriate registration number and ringer equivalence number (REN) which can be found on the back or bottom of the control unit.

You must also notify your local telephone company if and when this equipment is permanently disconnected from the line(s).

Repair Instructions: If you experience trouble because your equipment is malfunctioning, the FCC requires that the equipment not be used and that it be disconnected from the network until the problem has been corrected. Repairs to this equipment can only be made by the manufacturers, their authorized agents, or by others who may be authorized by the FCC. [In the event repairs are needed on this equipment, please contact the AT&T National Service Assistance Center (NSAC) at 1 800 628-2888.]

Rights of the Local Telephone Company: If this equipment causes harm to the telephone network, the local telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your local telephone company may make changes in its facilities, equipment, operations, or procedures that affect the proper functioning of this equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

INTERFERENCE INFORMATION NOTICE: FCC Rules require that you be notified of the following:

- This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications.

- This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment.

- Operating this equipment in a residential area is likely to cause interference, in which case the user, at his or her own expense, will be required to do whatever is necessary to correct the interference.