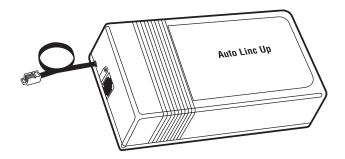


AUGUST 1999 MC160A-R2 MC160AE-R2

Auto Linc Up



CUSTOMER SUPPORT INFORMATION

Order toll-free in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: 877-877-BBOX FREE technical support, 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 Mail order: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018 Web site: www.blackbox.com • E-mail: info@blackbox.com

FCC REQUIREMENTS FOR TELEPHONE-LINE EQUIPMENT

- The Federal Communications Commission (FCC) has established rules which permit this device to be directly connected to the telephone network with standardized jacks. This equipment should not be used on party lines or coin lines.
- If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until the repair has been made. If this is not done, the telephone company may temporarily disconnect service.
- If you have problems with your telephone equipment after installing this device, disconnect this device from the line to see if it is causing the problem If it is, contact your supplier or an authorized agent.
- 4. The telephone company may make changes in its technical operations and procedures. If any such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes.
- 5. If the telephone company requests information on what equipment is connected to their lines, inform them of:
 - a. The telephone number that this unit is connected to.
 - b. The ringer equivalence number.
 - c. The USOC jack required: RJ-11C.
 - d. The FCC registration number.

Items (b) and (d) can be found on the unit's FCC label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

In the event of an equipment malfunction, all repairs should be performed by your supplier or an authorized agent. It is the responsibility of users requiring service to report the need for service to the supplier or to an authorized agent.

NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT

INSTRUCCIONES DE SEGURIDAD

- Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
- Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
- 3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
- 4. Todas las instrucciones de operación y uso deben ser seguidas.
- El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
- 6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
- El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
- Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
- 9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

- 10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
- El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
- Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.
- 13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
- El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
- En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.
- El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
- Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.
- 18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objectos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

TRADEMARKS

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1. Specifications

Compatibility — Compatible with V.34 modems

Speed — Up to 33.6 kbps

Temperature — Operating: -40 to 158 °F (-40 to 70 °C); Storage: -40 to 239 °F (-40 to 115 °C)

Humidity — 5 to 95%, non-condensing

Indicators — None

Connectors — Handset: (1) RJ-22 female; Data connector: (1) RJ-11; (1) RJ-22 on pigtail

Power — MC160A-R2: 120 VAC, 60 Hz; MC160AE-R2: 230 VAC, 50 Hz

Size — 5.1"H x 2.9"W x 1.1"D (12.9 x 7.4 x 2.8 cm)

Weight — Product weight: 0.5 lb. (0.2 kg); Shipping weight: 1.3 lb. (0.6 kg)

2. Quick Start

This chapter describes how to manually calibrate and dial using the Auto Linc Up. If you would like to know about other ways of using the Linc Up, read the rest of this manual.

Follow these steps:

- 1. Set your modem to ignore dial tone.
- 2. Connect the Auto Linc Up to a telephone.
- 3. Calibrate the Auto Linc Up.
- 4. Manually dial the number you wish to connect to.

2.1 Setting the Modem to Ignore Dial Tone

Refer to your communications software manual or **Section 6.2, Dialing Data Calls Manually**, if you don't know how to set your modem to ignore dial tone.

2.2 Connecting the Auto Linc Up to a Telephone

To connect your Auto Linc Up to a telephone, see **Figure 2-1**.

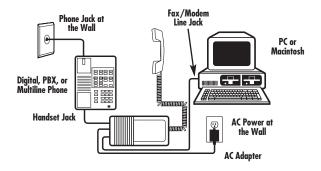


Figure 2-1. Connecting the Auto Linc Up to a Telephone.

Using the AC adapter is optional; the Auto Linc Up also works with batteries (supplied).

2.3 Manual Dialing with the Auto Linc Up

With the telephone handset in the cradle (hung up), have your modem dial. After your modem has dialed, lift the handset and manually dial the number you are trying to connect with using the keypad of the telephone. Leave the handset out of the cradle for the entire communication process. When you are finished with the call, hang up the telephone.

- Remember, if you are operating the Auto Linc Up from batteries, you must take your modem off hook (start your connection) within one minute of calibrating the Linc Up.
- Make sure your modem is set to ignore dial tone.

NOTE

If you cannot set your modem to ignore dial tone, refer to the standard procedure, beginning with **Chapter 3**.

3. Introduction

3.1 General

The Auto Linc Up provides a data communications interface between your fax/modem and virtually any PBX or multiline telephone.

You can connect the Linc Up in seconds simply by removing the coiled handset cord from the telephone base, connecting the Linc Up to your telephone base, then connecting the handset (with coiled cord attached) and your communications device to the Auto Linc Up (see **Figure 2-1**).

The Auto Linc Up is compatible with V.34 modems and can support connection rates up to 33.6 kbps.

3.2 About This Manual

This manual contains seven chapters.

- Chapter 1 lists specifications for the Linc Up.
- Chapter 2 is a Quick-Start Guide to get your system set up quickly.

- Chapter 3 (this chapter), Introduction, provides general information about the Auto Linc Up, describes the contents of each chapter in this manual, lists the package contents, and provides preinstallation guidelines.
- Chapter 4, Telephone Autodial Chart, provides guidelines for autodialing.
- Chapter 5 describes how to send data and faxes.
- Chapter 6 describes how to receive data and faxes.
- Chapter 7 provides operating tips.

3.3 What the Package Includes

Your package should include the following items. If anything is damaged or missing, please contact Black Box immediately at 724-746-5500.

- (1) Auto Linc Up unit
- (1) AC adapter (115-VAC for MC160A-R2, 230-VAC for MC160AE-R2)
- This user manual

3.4 Preinstallation Guidelines

Please read the complete manual and then return to those sections that suit your needs. Before installing your Auto Linc Up, observe these guidelines:

- Connection}—Never connect the Auto Linc Up directly to an analog or digital telephone line (wall outlet). Follow the procedures in this user guide to avoid damaging your Linc Up.
- Dialing—Configure your fax/modem for Tone dialing.
- Speakerphones—If the attached telephone has speakerphone capability, do not use the speakerphone function when using your fax/modem. This mode deactivates the handset jack used to send and receive data.
- Speaker Control and Volume—The telephone handset is deactivated during dialing. If you use a modem or fax/modem, you can use the command to enable the modem speaker and the command to set its volume. You can then "listen in" on dialed calls to monitor their status. Refer to your modem manual for more information.

4. Installation

4.1 Connection Procedures

To connect your Auto Linc Up to a telephone, refer to **Figure 2-1** on **page 9** and follow the steps listed below.

- Remove the spiral handset cord from the handset jack on the telephone base unit and insert it into the Auto Linc Up connector jack labeled HANDSET.
- Insert the Linc Up's modular telephone cord (which is permanently attached at one end to the Linc Up) into the handset jack on the telephone base unit.
- Connect a modular telephone cord from your modem, fax/modem, or fax machine jack labeled "Line" or "Wall" to the Linc Up connector jack labeled DATA.
- If you're using the supplied AC adapter, connect the round end to the jack labeled to the jack labeled DC on the Auto Linc Up and the other end to an AC outlet.

Your installation should resemble the one shown in **Figure 2-1** on **page 9**.

- 5. Lift the telephone handset and listen for a dial tone. If you do not hear the dial tone, check your connections to make sure they match those shown in **Figure 2-1**.
- 6. When your modem, fax/modem, or fax machine is not in use, you can use the telephone normally.

5. Telephone Autodial Chart

A "Yes" in the "AUTODIAL" column indicates that autodialing is supported with that telephone model. The number in the "SEE NOTE" column refers to a note at the end of the table.

Manufacturer Ameritech	Model None Specified	Autodial Yes	See Note*
Lucent (AT&T)	Definity	Yes	4
,	Destiny	_	2
	Dimension	_	2
	G2	Yes	
	Horizon	Yes	
	ISDN	No	
	Infinity	Yes	
	Legend	No	8
	Merlin	Yes	
	Merlin II	_	2
	Partner	Yes	
	Spirit	Yes	
	System 25	Yes	3 & 4
	System 75	Yes	3 & 4
	System 85	Yes	3 & 4
Comdial	Digitech	Yes	
	Executech	Yes	
	Impact	Yes	
David Systems	None Specified	_	2
Eagle	None Specified	Yes	
Ericson	MD110	Yes	

Manufacturer	Model	Autodial	See Note*
Executone	Encore CX	No	8
	IDS	No	9
	Model 228	No	8
	Model 432	No	8
	Key Systems	Yes	
Fujitsu	Focus 196	No	5
	Others	Yes	
GAI-Tronics	Cohort	No	8
Harris	Lanier	Yes	
	Optic	No	
Hitachi	Digital Model 200	_	2
	HCX-5000	_	2
Intecom	IBX System	No	8
	Hitech/1232	Yes	4
Intertel	MPK-2	_	2
	Axxess	No	8
	Premier	No	
	Others	Yes	
Isoetec	Key Systems	Yes	
	Digital PBX	_	2
ІТТ	None Specified	_	2
lwatsu	Omega	Yes	
	Omega III	Yes	
	Omega IV	Yes	4
Kokyo Co.	Kanda	Yes	

Manufacturer Lanier	Model EKT-220 (Elec. Key)	Autodial Yes	See Note*
Lexar	Telex	No	6 & 8
Macrotel	None Specified	Yes	
Mitel	Superset SX-200	No No	8 8
NEC	Determ II Determ III Determ V Electra Freedom Mark II Others	Yes — Yes No Yes Yes Yes Yes	2
Nitsuko	Onyx	_	2
Northcom	Premier (NC-1648)	Yes	
Northern Telecom	Advantage Focus Logic One Meridian SL1 & SL100 Meridian 1 Norstar DR5 or DID Unity Vantage KXT2375	Yes No No No No Yes Yes Yes	7 8 8 8 8 8
ranasunic	DBS Others	Yes Yes Yes	
Phillips	Sopho Set Executive	_	2 & 6

Manufacturer	Model	Autodial	See Note*
Premier	Digital	Yes	7
Rolm	Model 120	No	8
	Model 240	No	8
	Model 244	No	8
	Model 312	No	8
	Model 400	No	8
	Model 600	No	8
	Model 612	No	8
	Model 620	No	8
	Model 624	No	8
	Others	No	8
Siemens	Dyad	No	6 & 8
Olemens	Dyad Jr.	No	6 & 8
	HCM-600	_	2
	HCM-200		2
	Hicom Digital	_	2
	Saturn Digit 260	_	5
	Saturi Digit 200	_	5
Southwestern Bell	Freedom Phone-Older	Yes	
	Freedom Phone-Newer	Yes	1
SRX	Vision Phone	_	2
Tadiran	EKT 221	Yes	
	Emerald	_	2
	Coral I & II	_	2
	Others	Yes	
Telrad	Model 816	Yes	
Tonaa	Model 2484	Yes	
	Symphony	No	8
	Digital (818)	No	8
	Others	_	2
	Outota		_

Manufacturer	Model	Autodial	See Note*
TIE	Business Comm	_	2
	Datastar	Yes	
	DCX	Yes	
	Meritore	Yes	
	Onyx	Yes	
	TC22	Yes	
	EX2260	Yes	
	Ultracom CX	_	2
	Keyset 9	_	2
Toshiba	EKT 2000 series	Yes	
	EKT 3000 series	_	2
	EKT 6000 series	Yes	
	Perception	No	8
	Strata (Key system)	_	2
	103 series	Yes	
Trillium	Panther	_	2
	Talkto 616	_	2
Vodavi	Electronic Key System	Yes	
	Star Plus	Yes	
Walker	Marathon	Yes	
	Poet	Yes	

NOTES

- 1. If you encounter difficulties, contact Technical Support.
- 2. Insufficient data is available to determine if the phone system supports autodialing with the Auto Linc Up.
- 3. Autodial not supported on Model 7300 phones.
- 4. You may have to dial an outside access number, such as 9, on the phone before autodialing.
- This phone has nonstandard handset wiring and is not compatible with the Auto Linc Up.
- This phone has nonstandard handset wiring and requires a special adapter cable. Call Technical Support for details.
- When autodialing, you must dial a number on the keypad of the telephone after the modem has dialed to maintain the line connection.
- 8. You may be able to program these phone systems to obtain a direct trunk access to enable autodialing.

6. Sending Data and Faxes

You can send data and faxes either by automatically dialing (autodialing) a telephone number via the computer or manually dialing the number via the telephone keypad.

6.1 Autodialing Data and Fax Calls

To autodial calls, the telephone and/or your phone system must support autodialing. For a list of telephones that support autodialing, refer to the autodial chart in **Chapter 5**.

If your Auto Linc Up is connected to a digital telephone that does not support autodialing, use the manual dialing procedure.

- 1. Prepare your modem, fax/modem, or fax machine for sending.
- Lift the telephone handset and listen for a dial tone. Leave the handset out of the cradle. DO NOT hang it up, or you will terminate the call. Make sure that you have programmed a pause in the communication software before dialing any

digits. If the pause before dialing any digits has been set up, you can use the automatic calibration.

3. To make a connection using a modem or fax/modem, press the Enter key on your computer. Remember that if you plan to use auto calibration, you must enter a two-second delay into your dial string.

OR

To make a connection using a fax machine, press its Start button. Again, if you plan to use auto calibration, you must enter a two-second delay into your fax dial string.

- 4. Transfer the data or fax. When you finish, return the handset to the cradle.
- 5. To hang up a modem or fax/modem, use your software's call termination feature, or type ATH0 and press Enter from direct connect mode.

OR

To hang up a fax machine, press its Stop button.

- The telephone handset is electronically disconnected when the modem goes off-hook.
 You must hang up your modem to restore use of your telephone handset.
- Some fax software takes a few moments to prepare a document before dialing. This delay may cause a dial-tone "timeout" on many telephones. To avoid the dial-tone timeout, either convert the document to fax format before you prepare to send it, or do not lift the handset from the telephone cradle until the software indicates t hat it is ready to dial.

6.2 Dialing Data Calls Manually

If the digital telephone connected to your Linc Up does not support autodialing, use the following procedure to dial data calls manually.

- 1. Prepare your computer to autodial a call.
- If your modem is configured to wait for a dial tone before dialing, reconfigure the Dial command ATDT to ATX3DT, where:
- X3 tells your modem to dial without waiting for a dial tone.

- DT specifies touch-tone dialing.
- Adding the comma adds a two-second delay for the automatic calibration mode. If your communication software does not allow adding a comma in the dial command string, you can add it in front of the first digit of the telephone number you are trying to have the modem dial.
- 3. Perform one of the following steps:
- If your modem does not look for a dial tone, or if you added X3, use the telephone keypad to dial the remote modem's telephone number. Then press Enter on your computer keyboard.
- If your modem looks for a dial tone and your communication software prevents you from editing the Dial command line or initialization string, press Enter on your computer keyboard. Immediately after the modem finishes dialing, use the telephone keypad to dial the Host number.

Either step should allow your modem to connect with the remote host modem.

To operate properly, your modem must go off-hook and dial, even though you manually dialed the remote modem's telephone number. Your modem does not have to dial the entire telephone number; one digit is sufficient to complete the off-hook process.

Transfer the data. When you finish, return the modem to an on-hook status and the telephone handset to its cradle.

To hang up, use your communication software's call-termination feature, or type ATH0 and press Enter from direct connect mode.

NOTE

The telephone handset is electronically disconnected when the modem goes off-hook. You must hang up your modem to restore use of your telephone handset.

6.3 Dialing Fax Calls Manually

If the digital telephone connected to your Linc Up does not support autodialing, use the following procedure to dial fax calls manually.

If your fax software supports a manual fax feature, you can use that procedure instead of the following to dial fax calls manually. Be sure to take the phone off-hook and press the manual calibration switch before running the fax software.

- Prepare your fax/modem or fax machine for sending.
- Lift the telephone handset and listen for a dial tone. Leave the handset out of the cradle. DO NOT hang it up, or you will terminate the call.
- 3. Press the Enter key on your computer keyboard if you are using a fax/modem. To use the automatic calibration you must enter the two-second delay in the fax/modem software.

OR

Press the Start button on your fax machine after entering the two-second delay in the fax-machine software if using automatic calibration.

- 4. Use the telephone keypad to dial the telephone number of the remote fax.
- 5. When you finish sending the fax, return the handset to the cradle.
- To hang up a fax/modem, use your software's call-termination feature, or type ATH0 and press Enter from direct-connect mode.

OR

- To hang up a fax machine, press its Stop button.
- The telephone handset is electronically disconnected when the fax/modem goes off-hook. You must hang up your fax/modem to restore use of your telephone handset.

• Some fax software takes a few moments to prepare a document before dialing. This delay may cause a dial-tone "timeout" on many telephones. To avoid the dial-tone timeout, either convert the document to fax format before you prepare to send it, or do not lift the handset from the telephone cradle until the software indicates that it is ready to dial. Remember that you still need to calibrate the Linc Up before dialing!

7. Receiving Data and Faxes

This chapter describes the procedure for receiving data and faxes.

7.1 Receiving a Data File

When someone calls you to send a data file, use the following procedure to answer the call and receive the file.

- 1. If you will be using your communication software's manual answer or manual receive command to answer the call, skip to step 2. Otherwise, place your modem in direct-connect (local terminal) mode. The manual that came with your communication software should explain this procedure.
- When the telephone rings, lift the telephone handset from the cradle. Leave the handset out of the cradle. DO NOT hang it up, or you will terminate the call.

Use your communication software's manualanswer or manual-receive command to answer the call.

OR

From direct-connect mode, type ATA and press Enter to have your modem answer the call.

- 4. At the end of the data transfer, return the handset to the cradle.
- 5. To hang up, use your communication software's call-termination feature, or type ATH0 and press Enter from direct-connect mode.

The telephone handset is electronically disconnected when the modem goes off-hook. You must hang up your modem to restore use of your telephone handset.

7.2 Receiving a Fax Document

When someone calls you to send a fax document, use the following procedure to answer the call and receive the document.

- When the telephone rings, lift the telephone handset from the cradle. Leave the handset out of the cradle. DO NOT hang it up, or you will terminate the call.
- To use a fax/modem, use your fax software's manual-answer or manual-receive command to answer the call.

OR

To use a fax machine, press its Start button.

- After you receive the document, return the handset to the cradle.
- To hang up a fax/modem, use your fax software's call-termination feature.

OR

To hang up a fax machine, press its Stop button.

8. Operating Tips

To make sure you get the most out of your Auto Linc Up, review the operating tips in this chapter.

8.1 Powering the Auto Linc Up

Use only the AC adapter supplied with your Auto Linc Up. Do not use an adapter for a different device.

8.2 Tone Dialing

Make sure your modem, fax/modem, or fax machine is configured for tone (DTMF) dialing. Your Linc Up will not work with pulse (rotary) dialing.

The manual that came with your modem, fax/modem, or fax machine should describe this procedure.

8.3 V.34/V.FAST Connections

Although your Auto Linc Up is V.34/V.FAST compatible, not everyone can get consistent connections at 33.6 kbps or 28.8 kbps. In fact, V.34 connections at 26.4 kbps, 24.0 kbps, and 21.6 kbps are common.

To obtain 33.6 kbps or 28.8 kbps connections, the remote modem or fax/modem must support V.34/V.FAST, and the telephone-line quality must be pristine along the entire length of the line.

8.4 Speakerphones

Make sure the telephone handset is removed from the cradle until you finish exchanging data. Hang up your modem or fax/modem to reactivate the handset. If the telephone has a speaker, the speaker must be turned off. Speakerphone operation disables the telephone handset jack that your Linc Up uses to transmit and receive data.

8.5 Princess and Trimline Telephones

Your Auto Linc Up will not operate with "Princess" or "Trimline" telephones, which have the keypad in the handset. The electronics with which the Linc Up interacts are not accessible in these telephones.

8.6 Hanging Up the Modem

Your Auto Linc Up disconnects the telephone handset when your modem or fax/modem is "on-line." After data transactions or when autodialing voice calls, use your communications software to hang up your modem so that the handset is reactivated.

You can either use the call-termination feature in your communication software, or type ATH0 and press Enter from direct-connect mode. The manual that came with your software should describe how to hang up the modem.

If you are using contact-management software, you may need to push a key on the computer keyboard to disconnect the modem or fax/modem after the number is dialed.

8.7 "No Dial Tone" Error Message

If you receive a "No Dial Tone" error message, include the Hayes command X1 or X3 in your modem Dial command. These commands tell your modem or fax/modem to dial without first listening for a dial tone.

Some telephone systems (such as Rolm) do not use the standard dial tone, and your modem or fax/modem may not recognize the nonstandard tone as a dial tone. This command (ATX1 or ATX3) is also useful when the system being used will not accept autodialing. The table

in **Chapter 5** (pages 16–21) lists some telephones that do and do not support autodialing.

8.8 Autodialing

Some telephone systems will not support autodialing (the ability to have the modem/fax dial the number of the system you are trying to connect with). You can perform a simple test to find out if the phone system the Linc Up is connected to will support autodialing. In the United States, the test is accurate for about 95% of phone systems. (It won't work in other countries.) The test is called the dial-tone timeout test (DTT) and works as follows:

- 1. Lift the telephone handset from cradle and access an outside line, this may involve dialing a prefix such as a "9" on the telephone.
- 2. Listen to the dial tone until it times out. The dial tone should time out within 15 seconds.

- 3. After the dial tone expires, you should hear one of the following:
- a. Recorded Operator message—this message will usually be "If you'd like to make a call, please hang up and try again..."
- Error Tone—the error tone may sound like a fast busy signal, an alternating high-low tone, or dead silence.

If the result of the DTT is the recorded operator message, there is a 95% probability that the phone system will support autodialing with the Linc Up. If the result of the DTT is an error tone, there is a 95% probability that the phone system will not support autodialing with the Linc Up.

Approximately 65% of the phone systems that require the dialing of a prefix such as a "9" or some other number to dial out of the building will require the prefix to be dialed manually (using the keypad of the phone) before having the modem/fax dialing the rest of the number.

8.9 Calling Technical Support

If you encounter a problem with your Linc Up and the tips in this chapter don't help you resolve the problem, call Black Box for technical support at 724-746-5500. Please have the following information handy when you call:

- 1. Auto Linc Up model number (MC160A-R2 or MC160AE-R2)
- 2. Telephone manufacturer and model name or number
- Modem or fax/modem manufacturer and model name or number
- 4. Communication software you are using

If possible, call us on the telephone that has the Linc Up connected, so that we can run diagnostics on the same telephone.



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