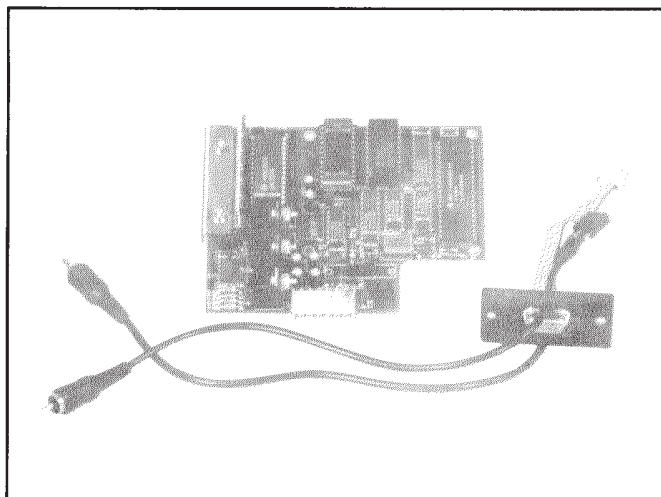




# 8751A Programmable Microaudio 14 Band Equalizer Module



## KEY FEATURES

- ★ Convenient Plug-in Module
- ★ Wide Dynamic Range
- ★ Unique Filter Arrangement
- ★ Selectable Boost/Cut Steps

## PRIMARY SPECIFICATIONS

Type:	Active analog filter set
Number of Bands:	14 bands located on ISO center frequencies from 80 Hz to 6.3 kHz.
Programmable Features:	
Boost/Cut of each band:	$\pm 12$ dB in 1 dB steps $\pm 6$ dB in $\frac{1}{2}$ dB steps
Input circuitry:	
Type:	Unbalanced
Impedance:	15 k $\Omega$
Nominal Level:	0 dBu (0.775 V rms)
Maximum Level:	+18 dBu
Output circuitry:	
Type:	Unbalanced
Source Impedance:	10 $\Omega$
Nominal Level:	0 dBu (0.775 V rms)
Maximum Level:	+18 dBm (+24 dBu into 2 k $\Omega$ or greater load)
Frequency Response:	20 Hz - 20 kHz, +0 dB, -1 dB
Dynamic Range:	> 105 dB (peak signal to A-weighted background noise)

## DESCRIPTION

The **8751A** is a fourteen band programmable MicroAudio equalizer module. The module plugs directly into a main-frame I/O port of an Altec Lansing **1700C** mixer/preamp; **1707C** mixer/power amplifier or **1715C** mixer/power amplifier. Two male RCA terminated leads extending from the rear connector panel allow the equalizer to be connected in the audio path between the pre-amp output and input of the power amplifier being used. The equalizer control is accessed only through a data port. This makes the equalizer tamper-proof. For more selectivity in equalization control, the **8751A** utilizes a variable, high Q filter circuit in each of the 14 bands.

The internal microprocessor controls the amount of boost or cut for the 14 bands in 1 dB steps over a  $\pm 12$  dB range. The equalizer module has a unique filter band arrangement. One-third octave filters are used for tuning of mid-band frequencies. The low frequencies and high frequencies are adjusted using one octave filters. The unique variable Q filter design arrangement and tamper-proof control provide an equalization function that enhances a 1700 series design without taking valuable rack space.

## SYSTEM REQUIREMENTS

Any Altec Lansing 1700C series mainframes will accommodate the **8751A**. To program the **8751A** one of the various Altec Lansing programmers is needed. The programmers are the Altec Lansing **8055B** Hand-Held Programmer, the **8061A** PC Controller Card, and the **8063A** RS-232 Converter, each

available from Altec Lansing. The model **1700C** Mixer/Pre-Amp does not have a power amp section. If the equalizer module is used in this model, the equalizer will be used as an output to drive another power amplifier unit only.

## 8751A Specifications (continued)

### Total Harmonic

**Distortion:** < 0.01% at unity gain from 20 Hz to 20 kHz

**IMD (SMPTE 4:1):** < 0.05% at unity gain

**Noise Floor:** < -90 dBm, A-wtd, all controls at zero dB

### Connectors:

**Audio:** Male RCA type via 10" audio cable.

**Data:** 9-pin D-subminiature female connector

**Non-volatile Memories:** one

### Power Requirements:

15 V dc bipolar supplied by the host mainframe

### Operating Temperature

**Range:** Up to 50°C (122°F)

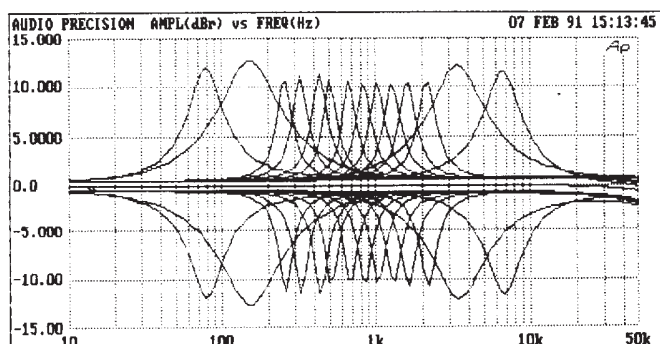
### Weight,

**Net:** 1 lbs (454 grams)

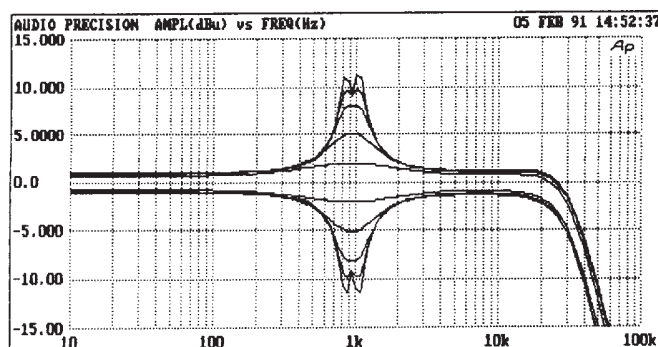
**Shipping:** 2 lbs (908 grams)

### Included Accessories:

Input/Output connector panel connector, Operating Instructions.



Boost and Cut  
Individual Filters



Two Adjacent Filters  
Boost & Cut at  
1 dB, 3 dB, 6 dB, 9 dB and 12 dB.

## ARCHITECT'S and ENGINEER'S SPECIFICATION

The programmable plug-in Module shall have fourteen programmable filter bands at standard ISO center frequencies from 80 Hz to 6.3 kHz. The bands at 80 Hz, 160 Hz, 3.15 kHz and 6.3 kHz shall have low filter Qs to provide one octave spacing. The filter bands from 250 Hz to 2 kHz shall be spaced on 1/3 octave intervals. The unit shall be packaged on a single plug in card for use with the Altec Lansing 1700 series mixer and mixer/preamplifier main-frames. There shall be no external controls. The equalizer shall be microprocessor-controlled and shall only be programmable from an external controller. The unit shall have one non-volatile RAM memory for storing the equalizer setting.

Each of the fourteen band-pass filters shall be programmable from -12 dB to +12 dB in one dB increments. The unit shall operate from a 15 V dc, bipolar power supply in the mainframe.

The unit shall meet the following performance criteria: Maximum input level: 6.16 V rms. Input impedance: 15 kohms or higher. Maximum output power level: +18 dBm. Output noise: less than -90 dBm A-weighted with all gains at unity. Dynamic range: at least 100 dB. THD: less than 0.01 % with all gains at unity. IMD (SMPTE 4:1): less than .05 % with all gains at unity. The plug-in equalizer shall be the Altec Lansing Model 8751A.



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# **8751A**

## **Programmable 14 Band Equalizer Module**

# **Installation and Operating Instructions**

**ALTEC LANSING CORPORATION**

a **MARK IV** company

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# Installation and Operating Instructions for the 8751A Programmable 14 Band EQ Module

## 1 INTRODUCTION

The **8751A** 14 band EQ module installs inside any Altec Lansing 1700-series mainframe. It is designed specifically for powered mainframes, such as the **1707C** and **1715C**, but works equally well in the **1700C** mixer/preamplifier when used with an external 14× series power amplifier. (See Section 6 for information regarding its use in the A or B version mainframes.)

The **8751A** may be programmed using the Altec Lansing **8055B** hand-held programmer or the **8051A** combination RTA/autoprogrammer. If you prefer computer control and have either the **8061A** PC control adapter or the **8063A** RS-232/μA-bus adapter, you may use Acousto-Graphics™ Release 1.3 for the **8751A** included with each module.

## 2 INSTALLATION

### 2.1 Mounting the 8751A Connector Assembly to a 17×× Series Mainframe

Each 17×× series mainframe has six input/output channels. On the rear panel for each channel location is an access cover which hides the connector cut-out. To install the **8751A** connector assembly, follow the instructions below.

1. Remove the access cover from the channel position where you want to install the **8751A** connector assembly. Save the two mounting screws.
2. Carefully route the pig-tailed wires through the connector opening on the rear panel. Position the **8751A** connector plate flush against the panel and orient as shown in Figure 1. Secure with the two screws you removed in Step 1.

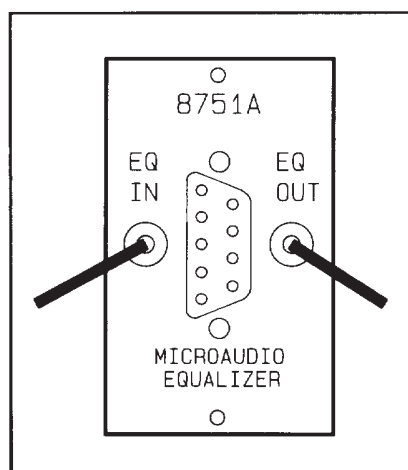


Figure 1 Connector Assy. Face

**NOTE:** For a proper fit, make sure the rubber grommets fit entirely within the connector opening.

**NOTE:** Although the module and connector assembly can be installed in any 17××C series module position, channel six is preferred because of its proximity to the **PREAMP OUT** and **AMP IN** connectors. For information regarding installation in an A or B series mainframe, refer to Section 6.

### 2.2 Installing the 8751A Inside a 17×× Series Mainframe

To install the **8751A** module, follow the steps below.

1. Unplug the mainframe from its AC power source.
2. Remove the two screws securing the top cover access panel (17××C series only) and lift the panel up and away from the mainframe. If you have an earlier model mainframe without the top access panel, remove the top cover per its instructions.
3. Position the module over the desired channel position and press it down firmly onto the

7-pin mating connector on the motherboard.

**NOTE:** Although the module and connector assembly can be installed into any 17××C series module position, channel six is preferred because of its proximity to the **PREAMP OUT** and **AMP IN** connectors. For information regarding installation in an A or B series mainframe, refer to Section 6.

4. Secure the module to the rear panel using the mounting screws provided.
5. Attach the 4-wire audio cable connector to JP2 and the 10-wire ribbon cable connector to JP3 on the module. Connectors JP2 and JP3 are polarized meaning that the mating plugs can only be plugged in one way. Refer to Figure 2.

**NOTE:** One edge of the 10-wire ribbon cable has a colored stripe (RED). This stripe should be towards the rear of the mainframe.

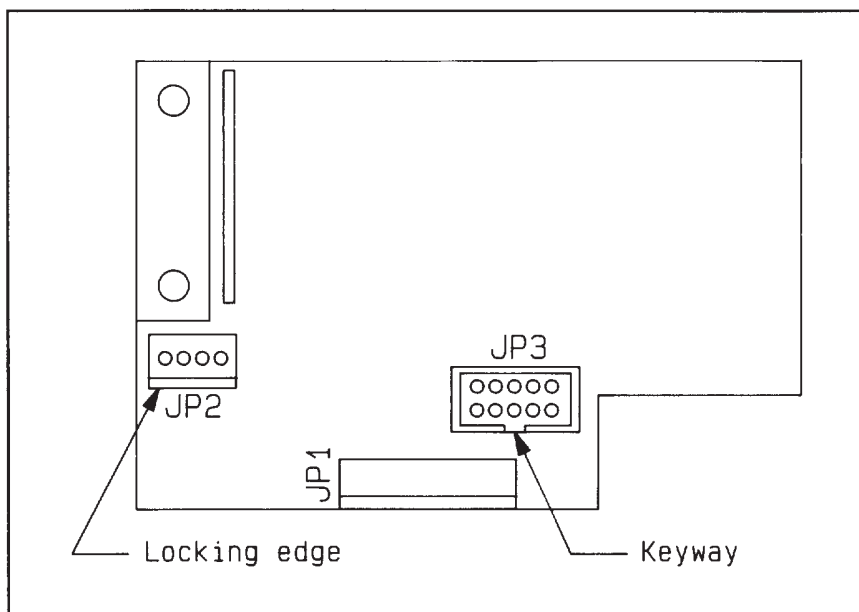
6. Install and secure the access panel (or top cover) with the screws removed in Step 2.

### 2.3 Connecting the 8751A Audio Input and Output Cables to a Mainframe

Two gray shielded audio cables terminated with male phono connectors protrude through the grommets on the **8751A** connector plate. The cable on the left (when looking at the rear of the mainframe) is the equalizer's input and the other, the output. Both are clearly labeled on the connector plate.

To connect to a powered mainframe, i.e. a mainframe with a built-in power amplifier, remove





**Figure 2** Location of Connectors JP2 and JP3 on 8751A

the "U" shaped jumper connecting the PREAMP OUT and AMP IN connectors. Plug the EQ IN cable into the PREAMP OUT connector and the EQ OUT cable to the AMP IN connector.

In a non-powered mainframe such as the 1700C mixer/preamplifier, the EQ IN cable connects to the PREAMP OUT connector as before. The EQ OUT cable, however, must connect to the AMP IN connector on a separate powered mainframe or amplifier.

## 3 PROGRAMMING THE 8751A EQ MODULE

### 3.1 Programming the 8751A with an 8051A RTA/Autoprogrammer

Although the 8051A RTA/auto-programmer has 28 bands, it can still be used to program the 8751A equalizer by using the lower fourteen bands. Table I relates the frequency bands of the 8751A to the lower fourteen bands of a 28 band equalizer.

To program the equalizer from an 8051A, follow these steps.

1. Apply power to the mainframe containing the equalizer.
2. Apply power to the 8051A and connect the communications cable provided with it between the two units.

**NOTE:** The communications cable should have a short length of BLACK heatshrink tubing shrunk around one end.

To program the 8751A, use the lower fourteen bands on the 8051A. Refer to Table I. When recalling data from the 8751A, it will be displayed simultaneously on the lower and upper fourteen bands of the 8051A.

For more detailed information on the operation and use of the 8051A, refer to its operating instructions (Altec part #42-02-026007).

### 3.2 Programming the 8751A with the 8055B Hand-held Programmer

The small 8055B portable programmer may be used to

**Table I** Relationship Between 14 Frequency Bands in 8751A and 28 Band Programmers

8751A FILTER BAND TO PROGRAM (Hz)	28-BAND PROGRAMMER BAND TO USE (Hz)
80	31.5
160	40
250	50
315	63
400	80
500	100
630	125
800	160
1 k	200
1.25 k	250
1.6 k	315
2 k	400
3.15 k	500
6.3 k	630

program the 8751A by using the lower fourteen frequency bands. Refer to Table I.

To program the 8751A, apply power to the mainframe and connect the programmer to the equalizer using the cable provided with the 8055B.

**NOTE:** The communications cable should have a short length of BLACK heatshrink tubing shrunk around one end.

To program the 8751A, use the lower fourteen frequency bands. Refer to Table I. When recalling data, it can be read on the lower or upper fourteen bands of the 8055B's display.

For more detailed information on the operation of the 8055B programmer, refer to its operating instructions (Altec part #42-02-

## *Installation and Operating Instructions for the 8751A Programmable 14 Band EQ Module*

027617).

**NOTE:** When the 8055B is first connected, none of the gain LEDs will be illuminated, only the 800 Hz LED. This is intentional and indicates that the present equalizer settings have not changed. Only after pressing the ↑ or ↓ keys, or the FLAT key, and then pressing ENTER, will a gain LED be illuminated.

### **3.3 Programming the 8751A with Acousta-Graphics™ Release 1.3 Software**

A special version of Acousta-Graphics™ Release 1.3 software is provided with each 8751A. The main graphics screen has fourteen frequency bands rather than the usual 28. As with other versions of the software, it supports both the 8061A plug-in PC adapter card and the 8063A RS-232/μA-bus converter.

#### **3.3.1 Using an 8061A PC Adapter Card**

If you have an 8061A, apply power to the 17×× series mainframe and the computer. Next, connect the communications cable with the CLEAR heatshrink marker at one end (provided with the adapter) between its output port and the equalizer. For more detailed information on the 8061A, refer to its installation instructions (Altec part #42-02-026009).

#### **3.3.2 Using an 8063A RS-232/μA-bus Converter**

If you have an 8063A converter, apply power to the 17×× series mainframe and the computer. Next, connect the 25-pin female connector at one end of the standard serial cable to one of the computer's COM ports (COM 1 or COM 2), and the 25-pin male end

to the RS-232 input on the 8063A.

Install the DC output plug from the wall transformer into the DC receptacle on the 8063A. Plug the wall transformer into a nearby AC outlet. Finally, connect the communications cable with the BLACK heatshrink marker at one end between the μA-bus output of the 8063A and the equalizer. For more detailed information on the 8063A, refer to its installation instructions (Altec part #42-02-030001).

#### **3.3.3 Programming with Acousta-Graphics™ Release 1.3 Software**

To program the 8751A, follow the instructions in the accompanying Acousta-Graphics™ Release 1.3 Software Guide (Altec part #42-02-037644) included with this product.

### **4 FACTORY SERVICE**

Should factory service be required, ship the unit prepaid to:

ALTEC Customer Service/Repair  
10500 West Reno Ave.  
Oklahoma City, OK 73128 USA

Enclose a note describing the problem in as much detail as possible. This helps us find and repair the problem more quickly for a speedier return to you.

### **5 TECHNICAL ASSISTANCE**

For applications assistance or other technical information, call the Technical Services Manager at (405) 324-5311. You may also FAX (405) 324-8981 or write to:

ALTEC Technical Assistance  
P.O. Box 26105  
Oklahoma City, OK 73126-0105  
USA

### **6 INSTALLING THE 8751A IN 17××A OR B SERIES MAINFRAMES**

The 8751A is fully compatible electrically with earlier mainframes (pre-C models). However, the 17×× series A and B mainframes have a *pass* transistor on a heatsink located between module (channel) positions 5 and 6. Since the 8751A is larger than a typical audio module (1781A/AT), Altec recommends that it be installed in a channel position other than 5 and 6.

---

### **Notes:**

## *Installation and Operating Instructions for the 8751A Programmable 14 Band EQ Module*

### 7 SPECIFICATIONS

<b>Filter Type:</b>	Active analog filter set	<b>Power:</b>	$\pm 15$ -18 V DC @ 50 ma DC (supplied by the host main-frame)
<b>Number of Bands:</b>	14 bands at the following ISO center frequencies: 80 Hz, 160 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 3.15 kHz, and 6.3 kHz	<b>Operating Temperature Range:</b>	Up to 50°C (122°F)
<b>Programmability:</b>		<b>Weight:</b>	
Boost/cut:	$\pm 12$ dB in 1 dB steps	Net:	1 lbs (454 grams)
<b>Input Circuitry:</b>		Shipping:	2 lbs (908 grams)
(Ref. 1 kHz, 0 dBu = 0.775 V rms)		<b>Accessories:</b>	
Type:	Unbalanced	(Included)	● One connector assembly plate
$Z_{IN}$ :	15 k $\Omega$		● One pkg. of mounting screws
Nominal level:	0 dBu		● One 8751A Installation and Operating Instructions
Maximum level:	+18 dBu (6.16 V rms)		● One Acousta-Graphics™ Release 1.3 Software Guide for the 8751A
<b>Output Circuitry:</b>			● One 5¼" (360K) disk of Acousta-Graphics™ Release 1.3 Software
(Ref. 1 kHz, 0 dBm $\equiv$ 1 mW = 0.775 V rms across 600 $\Omega$ )			● One 3½" (720K) disk of Acousta-Graphics™ Release 1.3 Software
Type:	Unbalanced		
$Z_{Source}$ :	10 $\Omega$		
Minimum $Z_{Load}$ :	600 $\Omega$		
Nominal output:	0 dBu (0.775 V rms)		
Maximum power:	+18 dBm		
<b>Frequency Response:</b>			
(Ref: 1 kHz)	20 Hz - 20 kHz, +0/-1 dB		
<b>THD:</b>	< 0.02% from 20 Hz to 20 kHz, all bands at 0 dB		
<b>IMD (SMPTE 4:1):</b>	< 0.05%, all bands a 0 dB		
<b>Noise Floor:</b>	< -90 dBm A-wtd, all bands at zero dB		
<b>Dynamic Range:</b>			
(Ref. 1 kHz)	> 105 dB (peak signal to A-wtd background noise)		
<b>Connectors:</b>			
Audio:	Male phono connectors on $\approx$ 16 inch leads		
Programming:	9-pin D-subminiature female connector		
<b>Memories:</b>	Single memory, non-volatile with 10 year retention		

*Altec Lansing Corporation continually strives to improve its products and their specifications. Therefore, all specifications are subject to change without notice.*





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# **Acousta-Graphics™ Release 1.3 for the 8751A Programmable Equalizer**

## **Software Guide**

**ALTEC LANSING CORPORATION**

a **MARK IV** company

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## 1 INTRODUCTION

Acousta-Graphics™ Release 1.3 is the controlling software program for the **8751A** single channel 14 band equalizer. The software works in conjunction with the **8061A** MicroAudio Control Adapter or the **8063A** RS-232-to-MicroAudio Data Bus Converter. The **8063A** allows communication with equalizers through the COM1 or COM2 serial ports, making it easy for laptop computers to program the equalizers.

## 2 SYSTEM REQUIREMENTS

The Acousta-Graphics software will run on IBM PC, XT/AT, or any 100% compatible computer system which uses PC-DOS or MS-DOS version 2.1 or greater. The computer must have at least 512 kbytes of random access memory (RAM).

The graphics screen will work with CGA, MCGA, EGA, VGA, pc3270, Hercules, and AT&T400 or compatible graphics display adapters with the appropriate monitor attached. This includes most laptop computer systems with a pixel resolution of 640 horizontal by 200 vertical.

The software can print text and graphics on Epson MX/FX-series printers or any dot-matrix printer capable of emulating an Epson printer. Laser printers which emulate the HP LaserJet Series II may also be used.

A recommended desktop computer system includes 640 kbytes of RAM, one 360 kbyte floppy drive, one 30 Mbyte hard drive, one RS-232 serial port, one parallel printer port, one **8061A** MicroAudio PC Control Adapter, and a VGA-type display adapter and color monitor. A recommended laptop computer system includes 640 kbytes of RAM, two 720 kbyte 3½" disk drives, one RS-232 serial port, one parallel printer port, one **8063A** RS-232-to-MicroAudio Data Bus Converter, and a CGA-compatible LCD display.

## 3 CONVENTIONS USED IN THIS MANUAL

To make reading this manual a little easier, the following conventions and notations will be used:

- Computer commands will be in **BOLDFACE** and capitalized for emphasis.
- **<RET>** means press the RETURN or ENTER key.
- **<ESC>** means press the ESCAPE key.
- Since PC-DOS and MS-DOS are functionally the same, both will be referred to as DOS.
- Whenever the prompt "Press any key to continue..." appears, you can press any printable character key on the keyboard, or a function or cursor key.

## 4 FILES CONTAINED ON THE DISKETTE

The Acousta-Graphics software is supplied on one 5¼" diskette or one 3½" diskette. In either case, the following files will be on the disk:

AG14.EXE                      This is the Acousta-Graphics program which controls the equalizer.

AG14.DOC                      This file, if included, will contain the latest information regarding the software. You may read this file on-screen after you type the following command at the DOS prompt:

**TYPE AG14.DOC <RET>**

You may print the file by typing:

**COPY AG14.DOC PRN  
<RET>**

## 5 BACKING UP THE ORIGINAL ACOUSTA-GRAPHICS DISKETTE

It is preferable to make a backup or "working copy" of the original diskette to preserve the original and reduce the risk of accidental erasure or damage. To make a backup of the Acousta-Graphics Release 1.3 diskette, follow the steps below for your type of system.

### 5.1 Backing Up the Original Diskette on a Hard Disk System

1. Boot the computer system as usual.
2. Format a blank diskette in drive A: by typing:

**FORMAT A: <RET>**

3. Make a subdirectory on the hard disk by typing:

**MKDIR C:\AG14 <RET>**

4. Change to the new directory by typing:

**CD C:\AG14 <RET>**

5. Remove the formatted diskette from drive A: and insert the original Acousta-Graphics Release 1.3 disk. At the DOS prompt, type:

**COPY A:\*.\*/V <RET>**

6. Remove the Acousta-Graphics disk and store it in a safe place. Insert the blank formatted diskette in drive A: and type:

**COPY \*.\* A: /V <RET>**

This disk should be saved as the master backup of the original diskette.

## 5.2 Backing Up the Original on a Dual Diskette Drive System

1. Boot the computer system in the usual way.
2. Format a blank diskette in drive B: by typing:

**A>FORMAT B: <RET>**

3. Remove the DOS system disk from drive A: and insert the Acousta-Graphics diskette. Now, type the following command:

**A>COPY A:\*.\*/B:/V <RET>**

4. Remove the Acousta-Graphics diskette and store it in a safe place. The disk in drive B: should be used as the working copy or as the master diskette from which future copies are made. We strongly recommend that you keep this first copy as a master backup of the original. You can easily create a duplicate copy as a working diskette by repeating Steps 2 and 3.

## 6 INSTALLATION OF THE SOFTWARE

### 6.1 On a Hard Disk System

If you have a hard disk system and have followed the instructions in Section 5.1, the software is already installed.

### 6.2 On a Dual 3½" or 5¼" System

If the programs reside together on one disk, the software is already installed. However, you may want to be able to boot your computer from the working Acousta-Graphics diskette. If you do, follow the steps below.

1. Boot the computer system in the usual way.
2. Format a blank diskette in drive B: by typing:

**A>FORMAT B: /S <RET>**

3. Remove the DOS system disk from drive A: and insert the Acousta-Graphics working

diskette. Now, type the following commands:

**A>COPY A:\*.\*/B: /V <RET>**

You now have a bootable Acousta-Graphics diskette in drive B:.

## 7 SETTING UP THE DEFAULT CONDITIONS FOR THE SOFTWARE

The first time (AG14.EXE) is run, a default configuration and setup screen will appear as shown in Figure 1. The current default settings are displayed in the "Current Default Settings" box. If you need to change any of the default conditions, you may do so by using the "←" and "→" cursor keys to move the large cursor bar horizontally across the menu until your choice is highlighted. As each choice is highlighted, a message appears across the top of the screen to indicate what settings can be changed with that menu choice. Press <RET> to activate your selection. As an alternative, you may press the highlighted character within the menu choice you wish to access. Either method results in a pull-down menu appearing offering configuration settings. These settings are described in the following subsections.

**NOTE:** Pressing the <ESC> key while in a pull-down menu will return you to the next higher menu level.

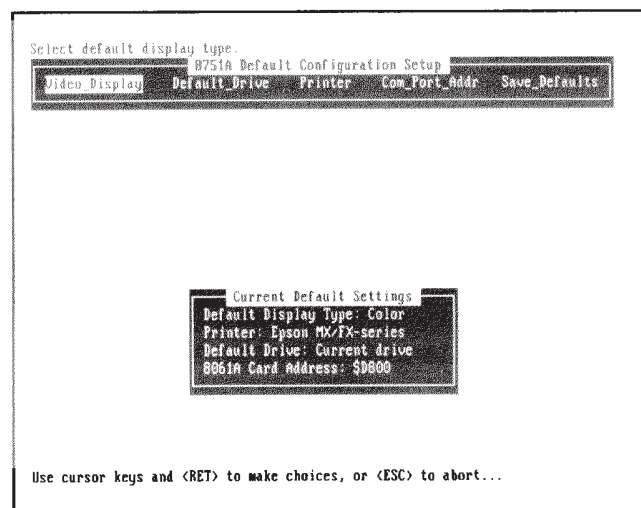


Figure 1 Configuration Setup Screen

### 7.1 Changing the Default Video Display and Gain Scale

Selecting "Video Display" on the main configuration screen results in a pull-down menu appearing offering a choice between color and monochrome. Use the "↑" and "↓" cursor keys to highlight your select-

ion. If you have a color video monitor and a color video display adapter, then highlight "1) Color" and press <RET>, or press "1". Otherwise, highlight "2) Monochrome" and press <RET>, or press "2".

**NOTE:** *If you have a CGA, or compatible, color monitor and display adapter, only the setup screen, the help screen, the disk management screens, and the report title screens will be in color; the main graphics screen will not. The main graphics screen will be in color only on systems using an EGA, VGA, or compatible color monitor and display adapter.*

As you make new selections, the main default configuration and setup screen will appear with the new choices displayed in the "Current Default Settings" box.

## **7.2 Changing the Default Drive**

Selecting "Default Drive" on the main configuration screen results in a pull-down menu appearing offering a choice of six default disk drives. The default disk drive is the drive on which the data files will be stored or retrieved. It need not be the same drive as the one from which Acousta-Graphics Release 1.3 software was run. However, since each data file requires 64 bytes, it is usually more convenient to select "1) Current Drive" as the default drive. To do so, highlight the "Current Drive" selection using the "↑" or "↓" cursor key, and press <RET>, or press "1". To make an alternate choice, highlight your choice with the cursor keys and press <RET>, or press the number next to your choice. As you make a new selection, the main default configuration and setup screen will appear with the new choice displayed in the "Current Default Settings" box.

## **7.3 Changing the Default Printer**

Selecting "Printer" on the main configuration screen results in a pull-down menu appearing offering a list of printers. The choices are:

- 1) Epson MX/FX series
- 2) HP LaserJet Ser II

Although only two printers are listed, many more printers can be used if they emulate one of the printers listed. To select a printer, use the "↑" or "↓" cursor key, and press <RET>, or press the number next to your choice.

## **7.4 Changing the Default Com Port Address**

Selecting "Com Port Addr" on the main configuration screen results in a pull-down menu appearing offering a list of five communication port

addresses. The first 3 choices are for the **8061A** MicroAudio PC Control Adapter, as indicated by "(8061A)" next to these choices. The last two choices are for the **8063A** RS-232-to-MicroAudio Data Bus Converter, as indicated by "(8063A)" next to these choices.

If you are using the **8061A** adapter, highlight the address which matches the hardware DIP switch setting on the **8061A** circuit card. Use the "↑" or "↓" cursor key to highlight your selection and press <RET>, or press the number next to your selection. The **8061A** is shipped from the factory with a DIP switch selected address of \$D800, which is intended for use in an IBM PC-XT computer or compatible. However, in some AT-type computers, this address location may conflict with other peripheral circuit cards which may be installed in the system. If this is the case, reset the DIP switch setting on the **8061A** to either of the other two addresses shown on the pull-down menu. Refer to the **8061A** Operating Instructions for information on how to reset the DIP switches.

If you are using the **8063A** converter, highlight the com port to which the **8063A** is connected, e.g. COM1 or COM2, using the "↑" or "↓" cursor key and press <RET>, or press the number next to your selection.

## **7.5 Saving the Default Settings in the Configuration File**

To save your default settings, highlight "Save" and press <RET>, or press "S" on the main configuration and setup screen. A pull-down menu appears offering a choice between "Yes" and "No". If you highlight "Yes" and press <RET>, your default settings are written into a configuration file named "ag14.cfg". Each subsequent time the software is run, the program will read this file and configure itself according to those settings. The configuration file must reside in the same directory (on hard disk systems) or drive (on dual diskette systems) as the main Acousta-Graphics program named "ag14.exe".

If the configuration file is not found, the Acousta-Graphics software program displays the configuration and setup screen. The default settings displayed, even if not changed, must be saved as described above. If the default settings are not saved, the Acousta-Graphics software will return you to DOS.

If you wish to make temporary changes to any of the default settings (once the configuration file has been saved), you may do so by changing the default settings on the configuration and setup screen and answering "No" under "Save". The settings you have made will remain in effect until you exit Acousta-Graphics software. Upon running the



software the next time, the last settings saved will be in effect.

## 8 PROGRAMMING THE EQUALIZER FROM THE MAIN GRAPHICS SCREEN

Shown in Figure 2 is the main graphics screen. The upper portion of the screen consists of 14 frequency bands. Each frequency band has a rectangular control bar which may be moved upward or downward to set the gain of that frequency band. The control bar on the frequency band currently selected will be filled, red on color monitors or white on monochrome monitors.

The lower portion of the screen consists of function key assignments. These function keys allow you to easily access most of the features of the software. Each function is described in detail in this section. It is recommended that you read all of the software feature descriptions before using Acousta-Graphics.

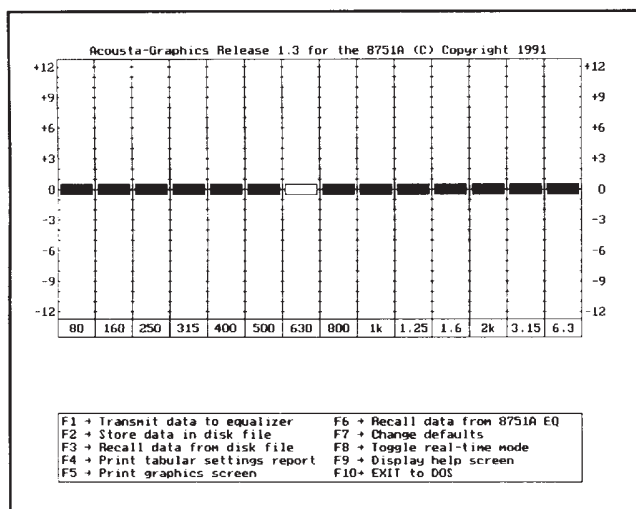


Figure 2 Main Graphics Screen

### 8.1 Setting Frequency Band Gain

To select the frequency band to be adjusted, use the “←” and “→” cursor keys. These keys will “wrap-around” at either end of the screen. The “HOME” key immediately selects the leftmost (80 Hz) frequency band. The “END” key immediately selects the rightmost (6.3 kHz) frequency band. The “INS” (insert) key immediately selects the 630 Hz frequency band.

The “↑” and “↓” cursor keys adjust the gain of the selected frequency band. No wrap-around occurs here. A “beep” sounds when the upper or lower limit has been reached. The “PgUp” key immediately sets the gain of the selected frequency band to maximum (full boost). The “PgDn” key immediately sets the gain of the selected frequency band to minimum

(full cut). The “DEL” key immediately sets the gain of the selected frequency band to 0dB.

To set all of the frequency bands to the same gain value, press “G”. A prompt will appear along the top of the function key assignments box asking for a value. Pressing <RET> without entering a value sets the gain of all the frequency bands to 0dB. You may also input any integer value between -12 and +12, and press <RET>. All the frequency bands will be set to this value.

### 8.2 F1 → Transmit data to equalizer

Once you have adjusted the gain of the frequency bands, press function key “F1” to transmit the data to the equalizer. Before an actual transmission occurs, a verification prompt appears along the top of the function key assignment box. Press <RET> to actively set the equalizer to the frequency band settings, or <ESC> to cancel the transmission request.

### 8.3 F2 → Store data in disk file

Pressing the “F2” key causes the Acousta-Graphics program to read all the files from the current directory on the default drive and display the list of files on the screen. You can abort the request and return to the main graphics screen by pressing <ESC>.

If the number of files in the current directory exceeds 105, the next page of file listings can be accessed by pressing “PgDn”. To go back to previous pages, press “PgUp”. The “Home” and “End” keys display the first and last page respectively.

Using the cursor keys, you can highlight a filename into which the data will be stored, or you may type a new filename at the small blinking cursor after the prompt “Enter name of file to store:”.

When typing a new filename, the first character typed is placed in the first character position in the data field following the filename prompt. The BACKSPACE key may be used to correct any typing errors. A filename extension is automatically appended to the end of the filename typed if one is not entered. Therefore, you do not need to type an extension unless a different extension is required.

After you select a filename, the prompt “OK to overwrite? Y, N, or <ESC> to abort...” appears. If you press “Y”, the contents of the selected file will be overwritten with the new data. If you press “N”, the file list is redisplayed to permit another selection. Pressing <ESC> will abort the request and return you to the main graphics screen.

If you need to write to a disk drive other than the default drive, simply precede the filename with the proper drive designator followed by a colon. For example, typing “b:mainhall” will store a file named

"mainhall.114" in the current directory on drive B:. You may also type a pathname such as "a:\chrch\chapel". In this case, a file named "chapel.114" will be stored in directory "\chrch" on drive A: (if the directory "\chrch" exists). You can temporarily change the default drive from this screen by pressing function key "F10". When pressed, the prompt "Change current drive to:" appears. Enter a new drive designator followed by a colon and press <RET>. Pressing <ESC> aborts the request. If a new drive designator is entered, it becomes the current default drive until the Acousto-Graphics program is exited.

#### 8.4 F3 → Recall data from disk file

To retrieve a disk file containing a set of frequency band settings, press function key "F3" while on the main graphics screen. The Acousto-Graphics program will list all the files in the current directory on the current drive. You can abort the request and return to the main graphics screen at any time by pressing <ESC>.

The program can display up to 512 files from which to choose. If the number of files exceed 105, the next screen page may be accessed by pressing the "PgDn" key. To go back to the previous page, press the "PgUp" key. The "Home" and "End" keys will display the first and last pages respectively.

Using the cursor keys, highlight a filename from which to retrieve data, or you may type the name of an existing file at the small blinking cursor after the prompt "Enter name of file to be read:". If you select a filename and the file contains valid Release 1.3 data, the data will be displayed on the main graphics screen. If you select a file containing invalid data, the prompt "Not valid 1.3 datafile. Press any key to continue or <ESC> to abort..." appears. Pressing a key other than <ESC> resets the file list to await your next selection.

When typing a filename to read, the first character typed is placed in the first character position in the data field following the filename prompt. The BACKSPACE key may be used to correct any typing errors. Since filename extensions other than ".114" can be used, you must type the full filename including its extension. Otherwise, a "File not found" error will result.

If you need to retrieve a file from a disk drive other than the default drive, simply precede the filename with the proper drive designator followed by a colon. For example, typing "b:pressbox.114" will retrieve a file named "pressbox.114" from the current directory on drive B:. You can also type a pathname such as "a:\racetrak\pressbox.114". In this case, a file named "pressbox.114" will be retrieved from the directory named "\racetrak" on drive A: (if that

directory exists). You can temporarily change the default drive from this screen by pressing function key "F10". When pressed, the prompt "Change current drive to:" appears. Enter a new drive designator followed by a colon and press <RET>. Pressing <ESC> aborts the request. If a new drive designator is entered, it becomes the current default drive until the Acousto-Graphics program is exited.

If the Real-time mode of operation is engaged, the data will be displayed on the main graphics screen. The data, however, will not be automatically transmitted to the equalizer without confirmation. To reprogram the equalizer with the data, press return after the verification prompt. Otherwise, press the <ESC> key.

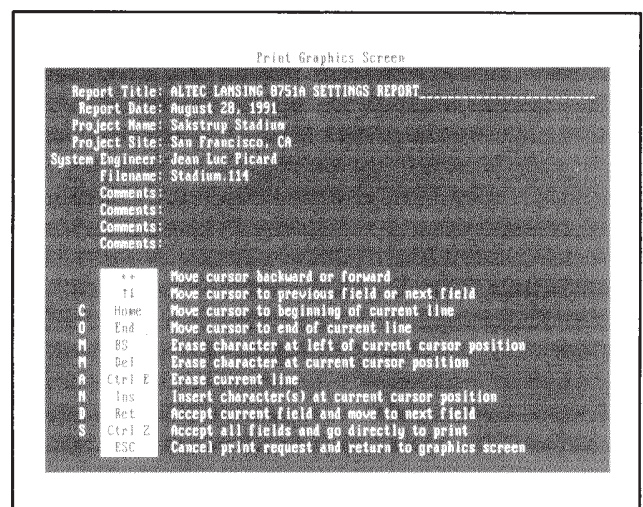


Figure 3 Report Title Screen

#### 8.5 F4 → Print tabular settings report F5 → Print graphics screen

The frequency band settings displayed on the main graphics menu can be printed in a tabular or graphical format along with related project information. If you want to print a report with tabular data, press function key "F4" while on the main graphics screen. If you want to print a graphical report, press function key "F5" while on the main graphics screen. The Acousto-Graphics program responds by displaying the "Report Title" screen shown in Figure 3. You can enter a new report title and date, the project name, the project site, the system engineer, the name of the associated datafile, and up to four lines of comments. An example of the tabular and graphical reports are shown in Figures 4 and 5.

The text editing commands are shown along the bottom to help you enter and correct text. Most are self-explanatory and will not be covered here. Several commands of note are <RET>, "CTRL Z"

(Control-Z), and <ESC>. The <RET> key accepts the current data entry field and moves the cursor to the next line. Holding down the "CTRL" key and pressing "Z" will accept all of the data entry fields as they are shown and will send this information along with the data immediately to the printer. Pressing <ESC> will abort the print request and return you to the main graphics screen.

Text you choose to enter will be remembered by the Acousta-Graphics program as long as it is running. If you enter a new project name, for example, and press <ESC> to abort the print request, the project name will reappear when the next title screen is displayed.

prior to retrieving new data, save the data in a disk file.

If you have changed or set the default com port to an incorrect setting, an error message "Device timeout. Header not transmitted. Press any key to continue..." appears when you attempt to retrieve data. In this event, exit the retrieve function by pressing any key and verify the com port address or port. Change the default com port address on the configuration and setup screen and retry the retrieve request.

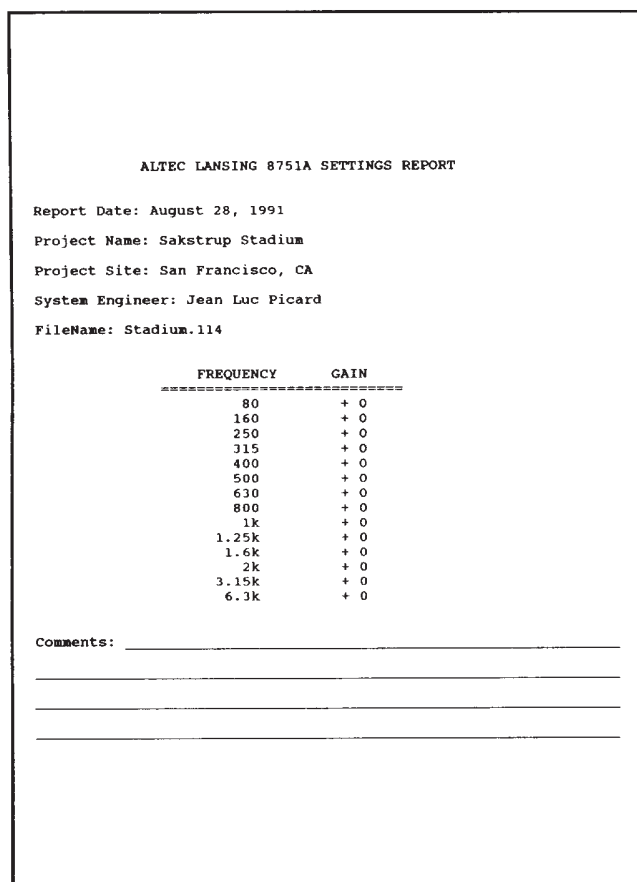


Figure 4 Printout with Tabular Data

#### 8.6 F6 → Recall data from 8751 EQ

Pressing function key "F6" while on the main graphics screen retrieves the frequency band settings currently in use by the equalizer. Before the data is retrieved, a verification prompt appears on the screen to allow you to confirm or cancel the request. Press <RET> to retrieve the data or <ESC> to cancel the request. The incoming data will overwrite any frequency band settings shown on the screen. If you wish to retain the frequency band settings displayed

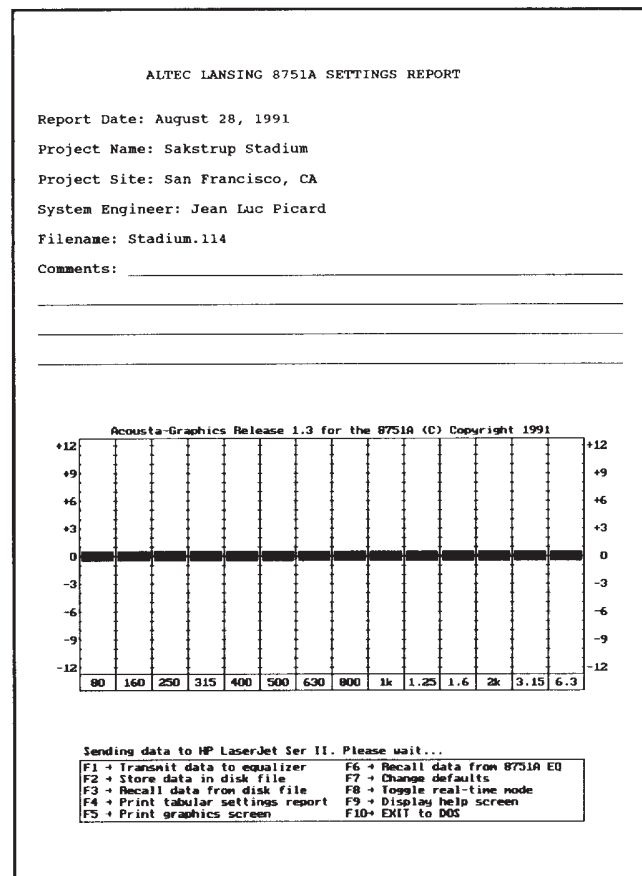


Figure 5 Printout with Graphical Data

#### 8.7 F7 → Change defaults

Pressing function key "F7" while on the main graphics screen allows you to change the default settings discussed at the first of this section.

If you do not save the new changes in the configuration file, they will only be in effect while the Acousta-Graphics program is running.

#### 8.8 F8 → Toggle real-time mode

Press function key "F8" while on the main graphics screen to toggle the Real-time mode of operation on or off. Whenever the notice "REAL-TIME mode" is displayed in the lower right hand



corner of the main graphics screen, any change in a frequency band setting is immediately transmitted to the equalizer. To exit the Real-time mode, press function key "F8".

### 8.9 F9 → Display help screen

Press function key "F9" while on the main graphics screen to display the Help screen. A list of commands appears indicating cursor control keys for the main graphics screen and their functions. A copy of the Help screen is displayed in Figure 6. To return to the main graphics screen, press any key.

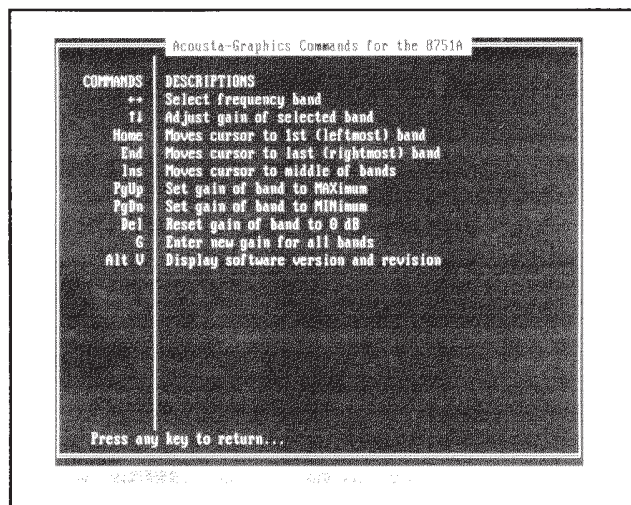


Figure 6 Help Screen

### 8.10 F10 → Exit to DOS

Pressing function key "F10" while on the main graphics screen will prompt a verification notice to confirm that you wish to exit the Acousta-Graphics program and return to DOS. Press <RET> to exit the program or <ESC> to abort this request.

### 8.11 Additional commands

One additional command, not supported by a function key, is available. While on the main graphics screen, holding down the "ALT" key and pressing the "V" character key displays the current software release and revision level information along the top of the function key assignments box. Should a problem occur requiring you to contact the manufacturer, please provide the revision level and compilation date provided (refer to section 10). This information helps us expedite a solution.

## 9 GETTING HELP

If you are having difficulty with Acousta-Graphics Release 1.3 Software, please write:

Acousta-Graphics Software

P.O. Box 26105

Oklahoma City, OK 73126-0105 USA

or call:

country code 01

(405) 324-5311

between the hours of 9:30 AM to 11:30 AM or 1:30 PM to 4:30 PM, North American Central Time, (15:30 - 17:30 or 19:30 - 22:30 GMT), Monday through Friday. Ask for the Technical Services Manager. Unfortunately, we are unable to accept collect calls.

You can also contact us via FAX at (405) 324-8981. To expedite help, please provide the following information:

- Nature of problem
- Circumstances or conditions for problem to occur
- Revision level of Acousta-Graphics Software (refer to section 8.11)
- Compilation date (refer to section 8.11)
- Type of computer system including video display adapter, amount of memory, printer model, etc.
- DOS version (type "VER" <RET> at your DOS prompt)

Every effort will be made to provide prompt and reliable support.

## 10 REFERENCED PUBLICATIONS

These publications are shipped with each device. Copies may be obtained from the address in section 10. The instruction manuals for the 8751A Programmable 14 Band Equalizer (Part No. 42-02-037492), 8063A RS-232-to-MicroAudio Data Bus Converter (Part No. 42-02-030001), and 8061A Micro-Audio PC Control Adapter (Part No. 42-02-026009), provide a wealth of supporting information.

## 11 TRADEMARK NOTICES

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