

PLAY IT **HOT**...  
PLAY IT FORD!



AUDIO SYSTEMS

# 1989 Ford Sound Systems...

## Hot and New for 1989... Presenting the FORD JBL Audio System

Ford and JBL. These two great American companies have joined together the excellence of audio engineering and loudspeaker design to meet the stringent standard of FORD JBL performance.

Ford expertise in electronics and audio engineering speaks for itself with over 50 years of audio design. Maintaining one of the most technically advanced audio development and test facilities in the world, Ford has become one of the world's largest automotive audio component manufacturers.



JBL, the recognized leader in professional loudspeaker design, has been delivering breathtaking sound in concert halls and theaters for over forty years. Today, the majority of the world's top recording studios use JBL loudspeakers.

## FORD JBL Audio System for Thunderbird

And for 1989, Ford and JBL have again created a preeminent stereo sound system specifically designed for the new Ford Thunderbird. The audio system was designed concurrently with the development of the Thunderbird to ensure the finest in sound quality.

This all new FORD JBL Audio System incorporates a bi-amplified sound system design dividing the audio spectrum into two frequency ranges, low and high. This separation of power amplification for the two frequency ranges provides greater performance with less distortion.

The new FORD JBL Audio System for Thunderbird features an 85-watt subwoofer speaker system that provides resounding bass performance so important for the driving environment.

In addition to the subwoofer system, a four-channel, 60-watt amplifier powers eight tweeter and midrange speakers positioned in four strategic locations for the best sound imaging. The speakers are contained in sealed enclosures to provide controlled performance conditions

and better sound reproduction. This Thunderbird sound system is custom-equalized specifically to the car's acoustical environment to ensure smooth performance through its entire frequency range.

## FORD JBL Audio System for Taurus

The FORD JBL Audio System is also offered for the 1989 Ford Taurus. This unique system features a single four-channel, 140-watt amplifier providing power to 10 high-performance JBL speakers in four locations. The system is again custom equalized for the acoustical requirements of the specific vehicle... it's the luxury sound you've been waiting for in Taurus!

## Compact Disc... The Sizzling Sound of Digital Recording for Thunderbird and Probe

In 1989, Ford introduces the ultimate in car audio performance on the Thunderbird and Probe. Clean, crisp digital sound is offered with the optional Ford Compact Disc Player.

With CD, unerring digital recording overcomes the limitations of other recording methods to capture sound in its purest form. And Ford provides the flexibility of analog cassette with the CD System.

When the pure sound of CD is combined with the acoustic performance of the FORD JBL Audio System, the result is an audio experience of exceptional clarity, realism and dynamic range.



## On the Leading Edge of Audio Excellence for a Hot 50 Years

Half a century of hot sound. That's the Ford reputation. And the Ford Audio System Group is proud that its customers have looked to Ford for leadership, innovation and quality in automotive sound systems.

"World Class" is constantly changing for the better, and Ford strives to stay on top by being committed to continual improvement of its audio systems. Ford audio engineers are dedicated to providing the best performance and quality in automotive sound systems.

## Quality Designed In

From antenna to speakers — and everywhere in between, the quality performance of Ford audio systems reflects our goal of leadership in the automotive audio field. Listen — and experience the outstanding quality in the 1989 Ford sound systems.

Part of that quality is in Ford's meticulous custom-design of its audio systems to "fit" the vehicle.

Ford components are carefully designed, selected and tested to provide the best performance. The full, rich quality of sound is combined with a balanced delivery throughout the vehicle to meet Ford's exacting standards.

Even more important than the number or size of the speakers is their compatibility and placement within the vehicle. Speaker location, positioning and mounting all contribute to delivering true fidelity and concert hall quality for maximum listening enjoyment.

## Ergonomics in Design

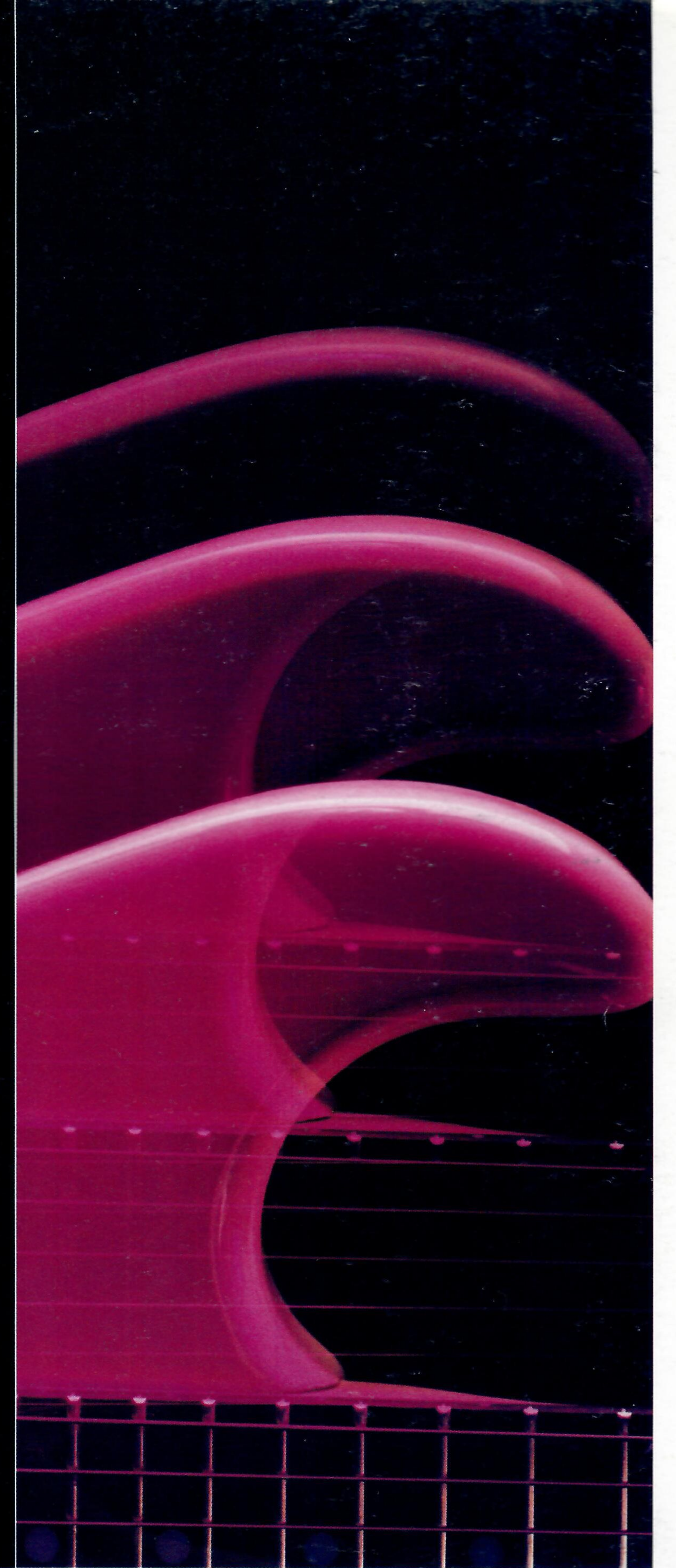
Ergonomics is the physical relationship between driver and vehicle; or in this case, between driver and sound system.

With the customer in mind, Ford audio systems have been designed to ensure that controls are easy to reach, easy to operate and conveniently grouped for the greatest efficiency while driving.

## Our Hottest Year

Discover the Ford audio systems quality and performance in all the new 1989 Ford vehicles.

The heat is on in 1989 and you are going to hear it!



## The FORD JBL Audio System

New for Ford in 1989... the beautiful blend of JBL's high-performance speakers with Ford's audio expertise in electronics design. The new FORD JBL Audio Systems incorporate the following loudspeaker and amplifier design features:

### For the Thunderbird

- The loudspeaker system consists of 9 speakers selected for the best sound reproduction:
  - Four 4-inch midrange speakers and four 1-inch tweeters and passive crossover.
  - A 7-inch subwoofer.
  - All speakers are in sealed enclosures to provide controlled system performance.
- 105 dB SPL acoustic output.
- Bi-amplified power distribution between the subwoofer and other speakers.
- The amplifier section features 145 watts of total power.
  - The subwoofer amplifier provides 1 x 85 watts into 4 ohms at 2.0% THD from 20 Hz-200 Hz, typical (1 x 80 watts into 4 ohms at 0.08% THD from 20 Hz-200 Hz, typical).
  - A second amplifier provides 4 x 15 watts per channel into 4 ohms at 2.0% THD from 200 Hz-20 kHz, typical (all channels driven) (4 x 13 watts per channel into 4 ohms at 0.08% THD from 200 Hz-20 kHz, typical [all channels driven]).
- Custom equalized for Thunderbird for precise sound reproduction and balance.

### For the Taurus

- The loudspeaker system consists of 10 speakers optimally designed for overall system performance:
  - Two 3-way speakers consisting of a woofer, a midrange and a tweeter in each side of the rear package tray.
  - Two 2-way speakers each consisting of a 5 1/4-inch woofer and a 1-inch tweeter mounted high in each of the front doors.
- Selective frequency fading; all woofers remain in operation at controlled levels when the system is faded front-to-back for consistent bass performance.
- Extended low frequency response to 25 Hz to provide deep resonant bass.
- The amplifier features 140 watts of total system power.
  - 4 x 35 watts per channel into 4 ohms at 1000 Hz with .07% THD, typical.
- An excursion control computer with continuously variable loudness compensation and automatic overload protection for balanced sound reproduction at all volume levels, with minimum distortion.
- Custom equalized for Taurus for precise sound reproduction and balance.

The radio in the FORD JBL Audio Systems offers a host of features and controls, including:

- Improved Ergonomics and Lighting**—Easy-to-operate controls with soft, halo lighting.
- Electronic Volume Control**—Precise volume adjustment with the touch of a switch.
- Pop-Out Tone Controls**—Easy access and adjustment with retractable controls.
- 18 Preset Station Memory Settings\***—6 AM and 12 FM stations can be stored in memory with six soft-touch buttons.
- Seek and Scan Functions**—Permit easy tuning and auditioning of AM or FM radio stations. Seek and scan are also operational on cassette tape.
- Local/Distant Automatic Tuning Sensitivity**—Allows the listener to adjust the sensitivity of the "Seek and Scan" function. In "Seek" or "Scan" the listener can restrict the tuning to only strong (local) signal stations or all stations (distant).
- AM Stereo**—Stereo reception of AM stereo broadcasting stations using the Motorola C-Quam® AM Stereo System.

All Electronically Controlled Cassette Player with —

- Soft-Touch Controls**—Electronically powered to operate with less effort than mechanical controls.
- Motorized Cassette Ejection**—Activated by soft-touch control. Assures smooth delivery of cassette during insertion and ejection.
- Seek and Scan Functions**—Allow listener to fast forward between selections on prerecorded cassettes. The seek feature will skip ahead to next selection... or replay the selection that was just heard.
- Automatic Metal Tape (CrO<sub>2</sub>) Equalization**—Player senses when metal tape is inserted and automatically adjusts equalization for proper playback.
- Auto-Reverse**—When one track of tape has played, unit automatically reverses to play the other track.

Also, the latest noise suppression/reduction features like —

- Switchable DNR™** (Dynamic Noise Reduction) — Reduces noise level for AM and FM broadcasts.
- Switchable Dolby® B Noise Reduction** — Reduces annoying tape hiss on cassettes.

*\*On Thunderbird and Bronco II radios equipped with a clock, there are 15 preset station memory settings — 5 AM and 10 FM. The sixth button operates the clock.*

*C-Quam® is a Registered Trademark of Motorola Inc. DNR™ is a Trademark of National Semiconductor Corp. Dolby® is a Registered Trademark of Dolby Laboratories Licensing Corp.*

## High-Level Audio System

This high-feature, high-performance audio system sets the standard in quality, reliability, reception and user convenience for premium automotive radio receivers. The electronic AM stereo/FM stereo cassette radio offers the advanced control features, including those described on previous page for the FORD JBL radio. The

High-Level Audio System includes a six speaker system located in optimal positions for your listening pleasure. 80 watts of total power from a separate 4-channel amplifier provide maximum listener enjoyment anywhere in the car.



## Warm Up Your Senses With The Hottest Sounds Of The New Ford Compact Disc Player

Now available on the Thunderbird and the Probe... the spectacular sound of compact disc. When combined with the high-performance of the FORD JBL Audio System in Thunderbird or the Electronic Search Radio and subwoofer speaker system on the Probe, the result is exceptional clarity, realism and dynamic range. Plus,

with installation of Ford's compact disc player, there are two choices of pre-recorded music in your stereo system... the CD player is installed below the radio/cassette player so either a CD or an analog cassette can be used for your listening pleasure.

### Compact Disc Player Features

- A direct loading system gently draws the disc inside and play begins.
- A digital LED display shows track number or elapsed time.
- A replay feature re-starts disc play at the beginning from any part of the disc.
- Two-speed fast forward and reverse functions that allow sound monitoring.
- Seek (AMS on Probe) control assists in locating desired previous or later selections.

- Stop (Pause on Probe) function allows the disc play to be stopped temporarily and resumed again with the touch of a button.
- Compression feature offers better dynamic range — brings the softer and louder passages closer together for a more consistent listening level. (Thunderbird only)

Thunderbird Compact Disc Player



Probe Compact Disc Player



## Electronic AM/FM Stereo Radios

Again, in 1989, two of our most popular models! Both offer full electronic tuning—including the seek feature which causes the tuner to automatically select and hold the most listenable broadcast stations up or down the frequency band. A local/distant feature allows selection of only stronger — or both stronger and weaker stations in seek mode. 18 preset memory

settings allow personal programming for instant recall of your favorite AM or FM stations.

Both deliver the quality and performance you're looking for — along with today's most popular features.

**The AM/FM Stereo Radio with Cassette Tape Player** offers an auto-reverse cassette deck, Dolby® B noise reduction and locking fast forward or rewind. Also, separate bass and treble controls, front/back fader and left/right balance control for stereo sound just as you like it.



### Features of the Electronic AM/FM Stereo Radio with Cassette Tape Player:

- 20 Watts Power
- Full Electronic Tuning
  - Seek (Bi-Directional with Local/Distant Control)
  - Manual Tuning
- 18 Preset Station Memory Settings (6 AM/12 FM)
- Separate Bass and Treble Controls
- Front/Back Fader Control
- Left/Right Balance Control
- Stereo/Mono Blend
- Lighted Liquid Crystal Display (LCD)
- Illuminated Graphics/Controls
- Clock (on selected vehicles)
- Auto-Reverse Cassette Tape Player
  - Dolby® B Noise Reduction
  - Locking Fast Forward and Rewind
  - Muting during Fast Forward and Rewind

**The AM/FM Stereo Radio** offers all the features and controls found on the stereo cassette model — except those which relate to the tape player.



### Features of the Electronic AM/FM Stereo Radio

- 20 Watts Power
- Full Electronic Tuning
  - Seek (Bi-Directional with Local/Distant Control)
  - Manual Tuning
- 18 Preset Memory Settings (6 AM/12 FM)
- Separate Bass and Treble Controls
- Front/Back Fader Control
- Left/Right Balance Control
- Stereo/Mono Blend
- Lighted Liquid Crystal Display (LCD)
- Illuminated Graphics/Controls
- Clock (on selected vehicles)

Dolby® is a Registered Trademark of Dolby Laboratories Licensing Corp.

## Graphic Equalizer System

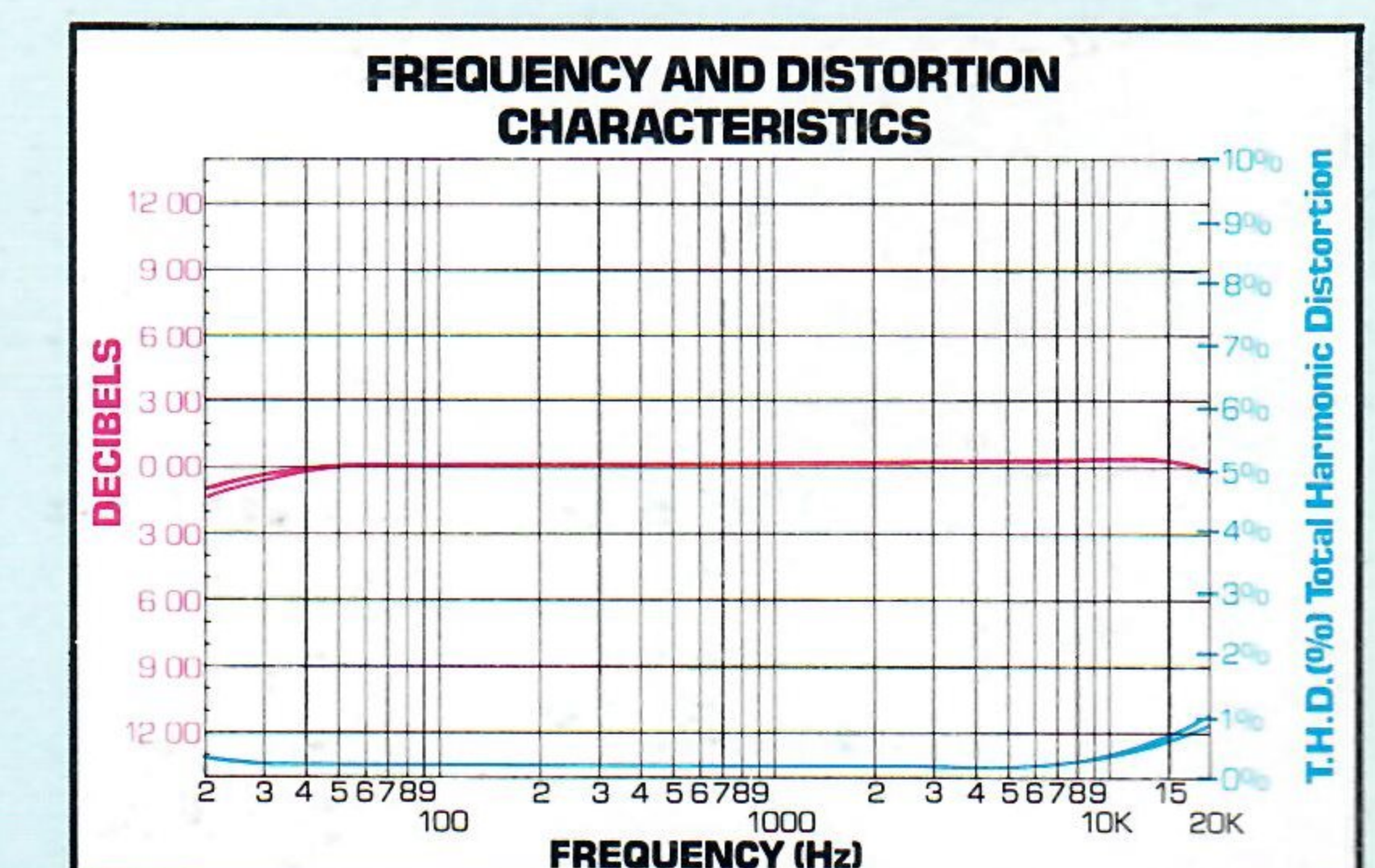
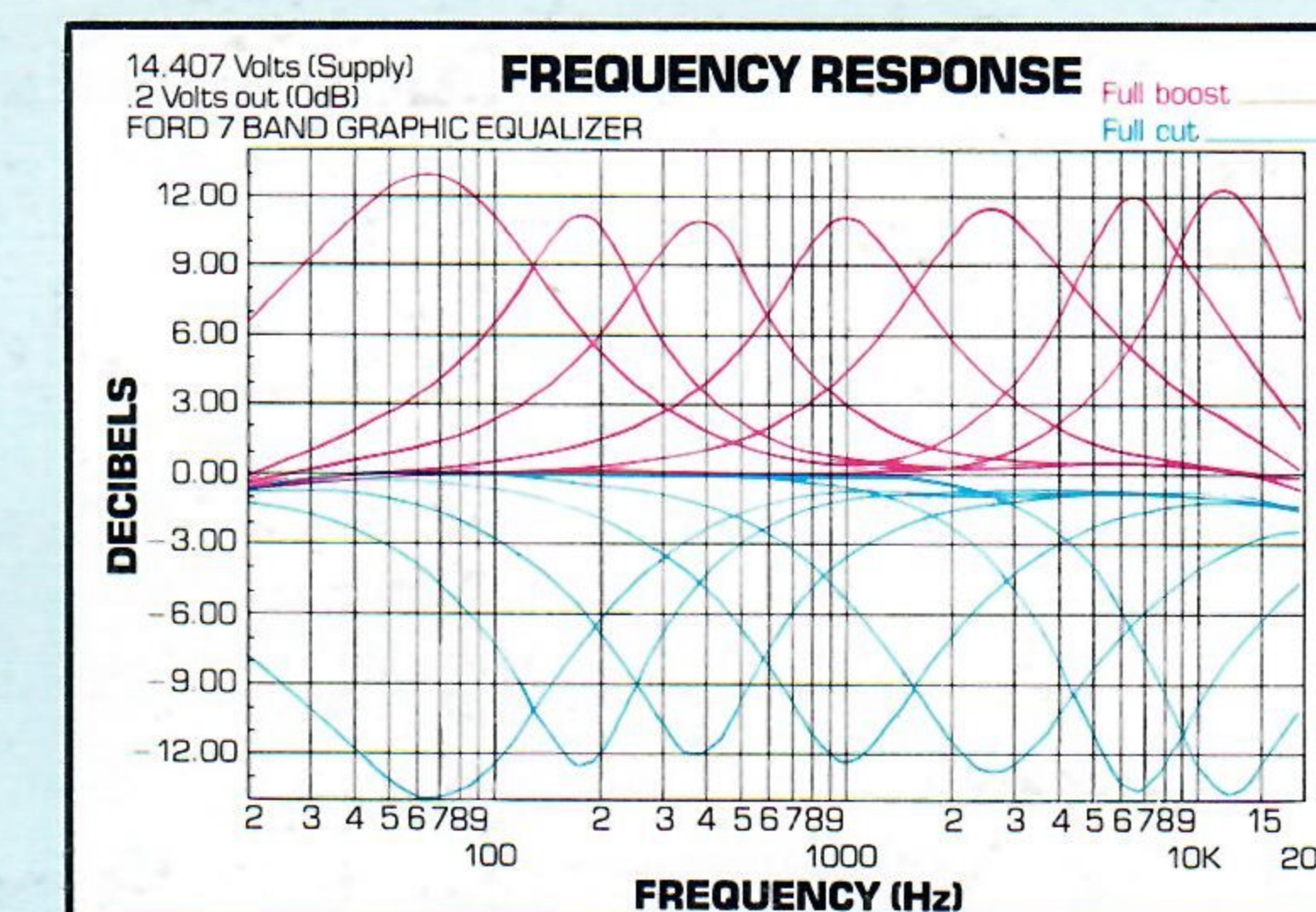
Precisely tailor the sound of your Aerostar entertainment system to suit your individual taste by selecting the Graphic Equalizer System. With this Super Sound System, you'll get up to 80 watts of power with internal power

amplifier equalization. Featuring 7 adjustable frequency control bands with a frequency response from 20 Hz to 20 kHz, the Graphic Equalizer, with a dynamic range of 70 dB includes all Premium Sound features.



### Features of the Graphic Equalizer System:

- Up to 80 Watts Power
- Full Electronic Tuning
  - Seek (Bi-Directional with Local/Distant Control)
  - Manual Tuning
- 18 Preset Station Memory Settings (6 AM/12 FM)
- Separate Bass and Treble Controls
- Front/Back Fader Control
- Left/Right Balance Control
- Stereo/Mono Blend
- Lighted Liquid Crystal Display (LCD)
- Clock
- Illuminated Graphics/Controls
- Auto-Reverse Cassette Tape Player
  - Dolby® B Noise Reduction
  - Locking Fast Forward and Rewind
  - Muting during Fast Forward and Rewind
- ± 12 dB Equalization Range
- Dynamic Range of 70 dB
- Dual LED Bar Graphic Power Meter
- 7-Band Detent Tone Control
- Frequency Response from 20 Hz to 20 kHz





## Premium Sound System

Enhance your listening pleasure with the Premium Sound System. A special power amplifier is mated with an upgraded four- or six-speaker system — depending on specific vehicle applications.

Precise amplifier specifications produce accurate sound reproductions. Tune in for a lifelike listening experience.

### Features of the Premium Sound System

- Up to 80 Watts Power
- Power Amplifier
- Premium Speakers
- Internal Power Amplifier Equalization
- Dynamic Range of 70 dB

## Vehicle Sound System Applications

	Ford LTD Crown Victoria	Thunderbird	Taurus	Tempo	Mustang	Probe	Escort	Festiva	Econoline	Aerostar	F-Series	Ranger	Bronco	Bronco II
FORD JBL Audio System		○	○											
High-Level AM Stereo/FM Stereo Radio with Cassette Tape Player and Premium Sound	○	○ <sup>1</sup>	○											○
Compact Disc Player		○ <sup>2</sup>			○									
Electronic AM/FM Stereo Radio with Cassette Tape Player	○	○			○									
Electronic AM/FM Stereo Radio with Cassette Tape Player and Clock		○ <sup>3</sup>	○ <sup>4</sup>	○	○ <sup>5</sup>		○	○	○ <sup>6</sup>	○	○ <sup>6</sup>	○	○	○
Electronic AM/FM Stereo Radio with Cassette Tape Player, Clock and Graphic Equalizer									○ <sup>7</sup>					
Electronic AM/FM Stereo Radio	S	S				○ <sup>8</sup>								
Electronic AM/FM Stereo Radio with Clock		S	S	S	S		S	○ <sup>6</sup>	○	○ <sup>6</sup>	○ <sup>9</sup>	○ <sup>10</sup>	S	
Electronic AM Monaural Radio						○ <sup>3</sup>	○							
Electronic AM Monaural Radio with Clock								S	S	S	S	S		
Premium Sound System	○	○	○	○	○	○								
Power Antenna	○	○	○											

S = Standard (May Be Deleted) ○ = Optional

<sup>1</sup> Includes Clock

<sup>2</sup> Requires FORD JBL Audio System

<sup>3</sup> Standard on LX

<sup>4</sup> Standard on GLS

<sup>5</sup> Includes Premium Sound

<sup>6</sup> Standard on XLT

<sup>7</sup> Sound System includes Rear Audio Controls, Head-phone Jacks and Premium Sound, and is standard on XLT Plus and Eddie Bauer

<sup>8</sup> Standard on GT

<sup>9</sup> Standard on STX and GT

<sup>10</sup> Standard on XLT and Eddie Bauer

NOTE: Applications may vary by series, option package or geographic area. See your Ford Dealer for detailed availability information.

Ford Motor Company reserves the right to discontinue models or options at any time or change specifications, equipment or design without notice and without incurring obligation.

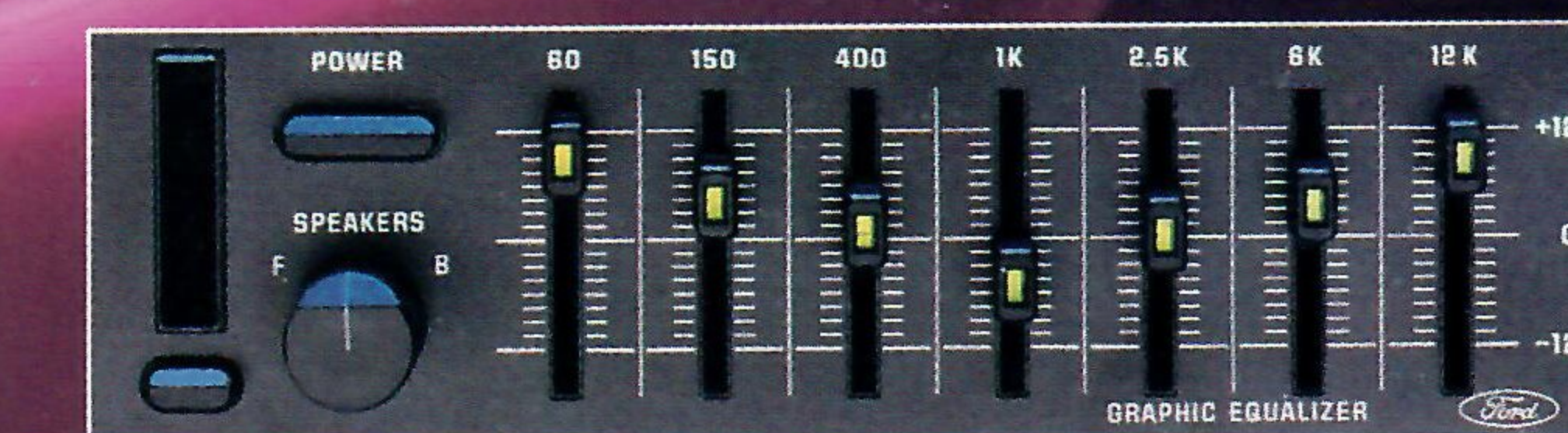
## Ford Audio Systems... A Full Range of Musical Instruments



High Level Audio and JBL Systems



Graphic Equalizer System



Compact Disc Player



Electronic AM/FM Stereo with Cassette



Electronic AM/FM Stereo



## AUDIO SYSTEMS

the sound of quality in every car we make

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