

**B·I·C** SPEAKER SYSTEMS/PREVIEW



**B·I·C**  
introduces  
a new series  
of loudspeakers.

## You asked us to listen.

As a company with a 40-year history of responding to trends in the hi-fi market, we listened.

You said that what you needed was high-performance loudspeakers, with broad musical range, at affordable prices.

So a new B-I-C Series was developed.

Speakers with a sound so impressive they invite comparison with the most respected competition in the industry. Yet with a design approach that is sensitive to price points.

We listened to you. Now you listen to us.

### A-B and see.

We've created this new B-I-C Series with the emphasis on acoustical results.

These speakers incorporate a newly modified version of our patented Venturi-coupled enclosure, to enhance bass response.

This in turn is combined with carefully designed heavy-duty drivers and meticulously calculated crossover networks to preserve critical musical nuances.

The voices breathe, the strings and reeds vibrate. You hear the bite of the brass and the delicate shimmer of brushes. And underneath it all, the delineating beat of the drums.

Instead of false coloration and oversized imagery, these speakers artfully present the original.

Rather than favoring one kind of music, they flatter them all.

And when you A-B these new speakers against other name brands, you'll find we have what you asked for.

### Model 66.

The new B-I-C Model 66 (a) has the sensitivity to produce 91 db at 1 meter with 1 watt input under anechoic conditions (more in a normal room). And it can safely deliver an ear-splitting 111 db, the equivalent of 100 watts\* of undistorted music power.

The 12" woofer has an oversized aluminum voice coil assembly for greater heat dissipation, and a precisely calculated suspension system and magnet structure to avoid "bottoming" on massive percussive passages. Bass is clean and tight, right down through organ pedal notes.

The 5" midrange, with lightweight Nomex™ coil assembly and extra heavy-duty power capacity, is acoustically isolated. Voices and middle register tones are smooth and natural.

**\*Note on power ratings:** The maximum power ratings assume the amplifier or receiver is being operated below its "clipping" point (undistorted music). Since most amplifiers have a power reserve capable of delivering as much as 50% more the rated power when pushed to volume levels which produce amplifier clipping, speakers can be damaged as a consequence of overloading. A more powerful amplifier will, in most cases, help avoid "clipping", but in such instances particular care should be taken not to exceed the maximum SPL and safe power input ratings of the speakers.

The high-order harmonics of the mid-range spectrum, and the treble range instruments, are reproduced with exceptional articulation and definition by a twin tweeter array. Its sound dispersal characteristics provide true stereo imaging, avoiding the overblending which can actually reestablish mono.

A limited-action Tonal Balance control enables acoustical adjustments without disturbing network parameters. Each driver is individually fused for maximum protection.

The cabinet is finished in oil-stained, hand-rubbed walnut wood veneer and tastefully complemented with a dark brown, acoustically transparent removable stretch-

pressure level, and will handle up to 75 watts\* of undistorted music.

A 10" high-excursion woofer is specially designed to function with the modified Venturi-coupled enclosure. A new 5" midrange with curvilinear cone and inverted-dome covers the middle register, uninterrupted to 10,000 Hz, where a new super tweeter with perforated sound dispersal screen carries on to beyond 20,000 Hz.

All components are individually fused for maximum protection to speaker and amplifier. A limited-action Tonal Balance control provides acoustical adjustments, yet will not upset network phase coherence.

The cabinet is sturdily constructed to avoid spurious resonances, and is finished in hard-surfaced vinyl, walnut grain. Brown stretch-cloth grille. Dimensions (w/o grille): 25½ x 14½ x 10½ deep. Net weight: 34 lbs.

### Model 22.

Similar in most respects to the Model 44, the more compact Model 22 (c) requires less shell strength, and is equally attractive on the floor in rooms with limited space availability.

The mid-range and treble components are the same high-performance units used in the Model 44, ensuring smooth, clean and articulate response. The 8" woofer, with Dynel surround, high-temperature aluminum voice coil, heavy-duty magnet assembly and improved Venturi-coupled enclosure offers the tight, clean bass response you'd expect from larger systems.

Sensitivity is 87 db; maximum sound pressure level is 107 db; up to 60 watts\* of undistorted music. Limited-action Tonal Balance control. Cabinet is walnut grain vinyl on acoustically damped composition wood. Brown stretch-cloth grille. Dimensions (w/o grille): 22 x 13 x 10. Net weight: 28½ lbs.

### Model 11.

The Model 11 (d) sound and performance capabilities belie its compact 18½ x 11 x 9 deep size (w/o grille).

The 8" high-excursion woofer and phenolic-ringed tweeter are newly designed components. Together with the Venturi-coupled enclosure, they yield a musically balanced, high-definition sound.

The new B-I-C Model 11 leaves little wanting, save for the extension of bass and treble range that only our larger systems can provide.

Sensitivity is 85 db; maximum sound pressure level is 101 db; up to 45 watts\* of undistorted music. Cabinet is scuff resistant vinyl on hard surfaced wood composition, with walnut grain. Brown stretch-cloth grille. Net weight: 17½ lbs.

**We listened to you.  
Now you listen to us.**



cloth grille. Dimensions (w/o grille) 26¼ x 15¼ x 13½ deep; Net weight: 41 lbs.

### Model 44.

We think the Model 44 (b) is destined to be one of the most popular speaker systems in the industry. Its size makes it equally suitable for shelf or floor-standing use. And its performance capabilities are exceptional for its price point.

The Model 44 offers the uncolored, true-to-life sound you want, yet it preserves the musical nuances and emotional experience that distinguish the "real thing" from just another speaker box.

It has a sensitivity of 89 db at one meter with one watt input; 109 db maximum sound

**B-I-C SPEAKER SYSTEMS**

B-I-C is a trademark of B-I-C (Avnet, Westbury, NY, 11590). In Canada: C.W. Prentiss, Toronto.

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TEMP 2

## ELECTRICAL SPECIFICATIONS

	Model 11	Model 22	Model 44	Model 66
Sensitivity (@1W/1 Meter)	85dB	87dB	89dB	91dB
Max. Sound Pressure Level*	101dB	107dB	109dB	111dB
Max. Power Capacity*	45W	60W	75W	100W
Woofer Fuse	1.25A/3AG	1.5A/3AG	2.5A/3AG	2.5A/3AG
Midrange Fuse		1A/3AG	1A/3AG	1A/3AG
Tweeter Fuse	0.375A/3AG	0.5A/3AG	0.5A/3AG	1A/3AG
Nominal Impedance	8 $\Omega$	6 $\Omega$	6 $\Omega$	6 $\Omega$

### \*Notes On Power and Sound Pressure Level Ratings

The maximum power amplifier ratings indicated are based on the amplifier manufacturer's 8 ohm rating of his amplifier or receiver, and assumes it is being operated below the "clipping" point of the amplifier (undistorted music). Since most amplifiers have a power reserve capable of delivering as much as *four times* the rated power when pushed to volume levels which produce amplifier clipping, speakers can be damaged as a consequence of overloading. This can occur with volume control settings at half way up or more, depending upon program material and associated hi fi system equipment, and is the reason why it is possible to damage speakers with amplifiers normally "rated" below that of a speaker! Also important is the fact that addition of bass boost in the amplifier decreases the amplifier reserve power capability and will produce "clipping" distortion sooner, in relation to the amount of bass boost used. This too can result in speaker damage, for a variety of reasons.

The maximum sound pressure level indicated for each speaker signifies the loudest point to which the speaker can therefore be driven before the protective

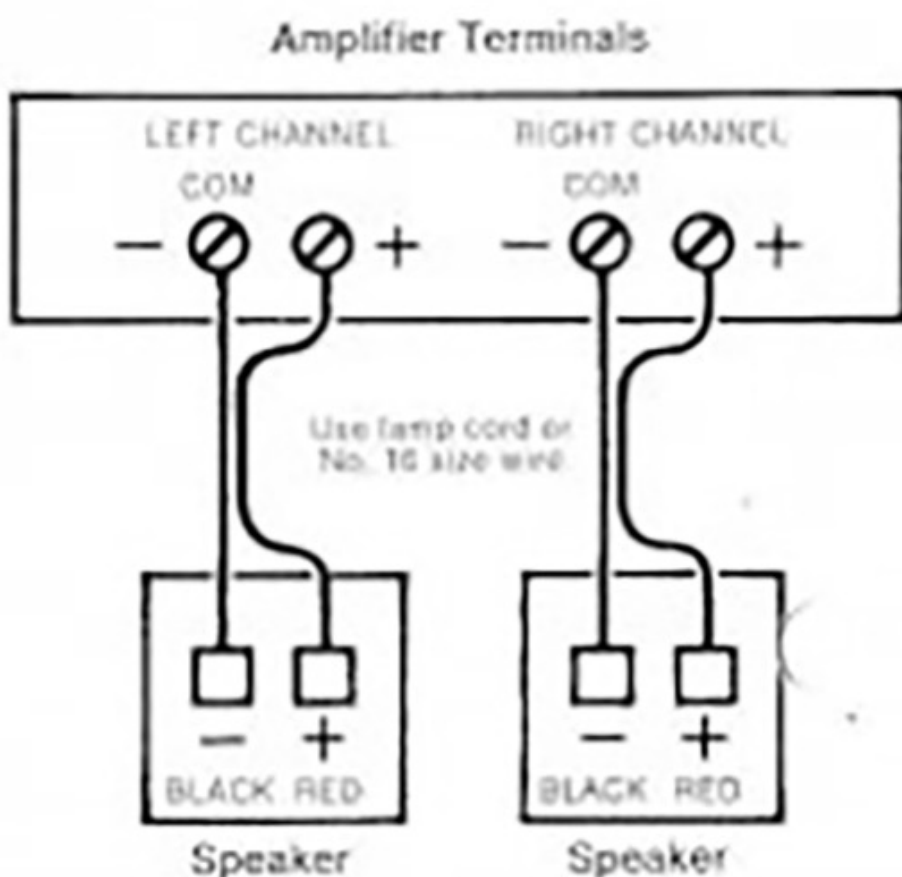
speaker fuses will blow, or damage to the components may occur.

Of course, a more powerful amplifier may be used, which in most cases will in fact help avoid "clipping", but in such instances particular care should be taken not to exceed the maximum SPL or indicated safe power input ratings of the speakers.

**CAUTION:** Replace fuses with only the exact type and rating as the original.

### Connections to Amplifier or Receiver

The output connections of amplifiers or receivers are marked to identify polarity. The "negative" or "ground" terminals are



generally labelled "GND" or "COM" or with the symbol (-). The positive or "hot" side is labelled (+).

The terminals at the rear of the B-I-C loudspeakers are color-coded. In stereo systems, each speaker must be connected to its respective amplifier channel in exactly the same way, so that the two speakers are functioning in phase with each other. An incorrect phasing of the two speakers will cause a loss of bass response and improper stereo imagery. Be sure to also carefully follow instructions usually supplied with amplifiers or receivers.

### Removal of Grille

Speaker grille is secured to the cabinet by a pressure fit, by means of edge tabs on the grille which fit into slots in the cabinet. To remove the grille, apply pressure *gently* along both long sides together towards the center, so that the edge tabs lift out of the cabinet slots. To replace, first insert bottom edge tab and then the two sides, carefully fitting the top edge tab last.

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### Operating Instructions

A "Tonal Balance" control is provided (except on Model 11) to adjust the frequency response of the speaker to room acoustics and/or personal listening preference. The response of the Model 11 is maintained at maximum linearity ("flat"), in order to preserve proper musical balance within its operating range. Adjustment of the control on other models results, aurally, in the impression of either greater (MAX) or lesser (MIN) brightness. A "Normal" position is indicated which takes into account average room acoustics, but which may under various environmental and operating conditions require a slightly different setting.

The control action is intentionally limited, to avoid disturbing the significant phase-correcting and equalization level settings of the crossover network. Therefore, aural impressions between the full clockwise and counterclockwise settings will be subtle but adequate. Any desire to change the sound envelope still further can be accomplished with the amplifier tone controls.

### Overload Protection

Each driver unit in B-I-C speaker systems is individually fused, to maximize protection against power overload. Such overload can occur from applying more amplifier power than the speaker is designed to handle, even as undistorted music; or as a result of amplifier "clipping".

Some types of overload can occur accidentally, which fusing may not be able to prevent. Dropping a turntable arm on a record will create an instantaneous power surge that can damage drivers without giving the fuses a chance to blow. Turning an amplifier on or off or using other switches, with the amplifier volume control left turned up to a high level, will create the same condition.

Rewinding tape, forward or backwards at high speed, will create a high frequency signal at damaging power levels, unless the amplifier volume control is first turned down. Amplifiers can also develop subsonic and ultra high frequency oscillations which are not audible but damaging. This signifies an instable wiring condition between hi fi system components or a defective amplifier. A defective output stage in the amplifier can also produce a D.C. current of sufficient magnitude to overheat and damage woofers.

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**CAUTION:** Replace fuses with only the exact type and rating as the original.

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# B-I-C Speaker Systems combine linearity and efficiency in a way to maximize both!

**Why linearity?** Because it makes for sound reproduction accuracy.

**Why efficiency?** Because it provides a wide dynamic range and helps avoid amplifier distortion.

By combining the two, B-I-C brings you life-like sound that will satisfy the most discriminating listener. Here's how we do it:

## Venturi II

Our patented Venturi principle literally launched the high-efficiency era. It dramatically multiplies bass energy. In earlier versions it was possible to develop sound pressure at the venturi cabinet opening 140 times greater than at the woofer cone!

It has now been significantly improved. See figure 1. The duct has been lengthened, retuned and acoustically



Fig. 1



damped. The result is a highly efficient, clean and tight response over an extended bass range. See figure 2.

## Linearity

Coupled to the remarkable capabilities of the Venturi bass section are equally performing mid and treble range transducers designed to yield high output, low distortion and smooth response.

Crossover network configurations have been meticulously calculated, with circuitry and component values carefully selected to reduce insertion losses and avoid time and phase distortion. Tonal Balance controls function within the desired limits, without upsetting network parameters. Component operating characteristics have been selected to withstand high transient peak voltages and heavy current conditions.

All together, a typical result is the model 66 response shown in figure 3. It is a curve taken using sine waves

(rather than averaged noise) for greater detail and scrutiny of point-to-point variations. Linearity is amply demonstrated.

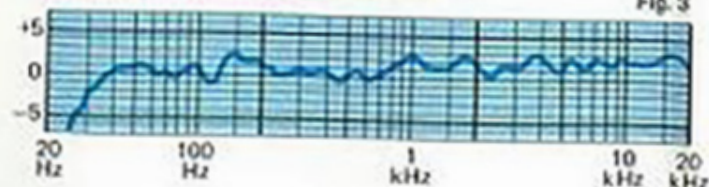
## Efficiency

The more efficient a speaker, the less power needed to produce sound. Such a speaker can thus yield a wider musical dynamic range. It also means that a less powerful and therefore less costly amplifier is required.

However, even expensive amplifiers can create a condition known as "clipping" (a form of amplifier distortion) when used with lower efficiency speakers. Obviously, the more efficient speaker can produce more sound before amplifier distortion occurs.

## Total Protection

In addition to musical distortion, an amplifier can produce as much as four times its rated output power, when



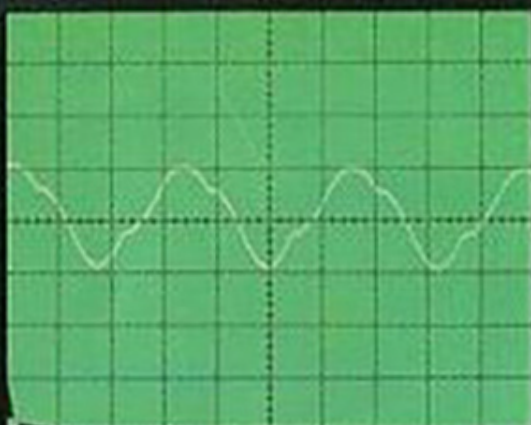
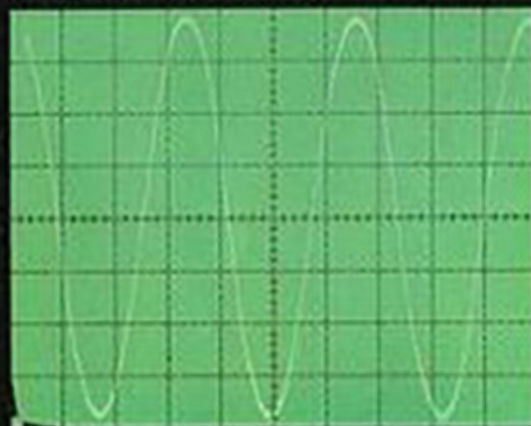


Fig. 2. These oscilloscope photos show how the Venturi-coupled path multiplies and "cleans" the bass output. Above, a 25 Hz waveform taken directly in front of the woofer cone. Below, the same input measured at the Venturi duct is many times greater, and sinusoidal (nondistorted).



#### Model 66

Has the sensitivity to produce 91 db at 1 meter with 1 watt input under anechoic conditions (more in a normal room). Reliably delivers an ear-splitting 111 db, the equivalent of 100 watts of undistorted amplifier music power. Oversized 12" woofer with aluminumized voice coil. Precisely calculated suspension system and magnet structure avoids "bottoming" on massive percussive passages. A 5" mid-range, with heavy-duty power capacity, is acoustically isolated. Treble range instruments are reproduced with exceptional articulation and definition by a twin tweeter array. True stereo imaging, without overblending.

#### Model 22

Similar in most respects to the Model 44, the more compact Model 22 requires less shelf space. Mid-range and treble components same as in Model 44, ensuring smooth, clean and articulate response. The 8" woofer, with Dynel surround, aluminumized voice coil, heavy-duty magnet assembly and improved Venturi-coupled enclosure result in "big" system bass! Sensitivity 87 db; maximum sound pressure level 107 db. Handles up to 60 watts of undistorted music.

**Model UB-1 Base** For optional use with Model 66 when speakers are floor-standing. Three settings allow positions level with the floor, or tilted slightly upward. Increases effective vertical radiation angle. Packed in pairs, knocked down; simple to assemble.

#### Model 44

Is equally suitable for shelf or floor-standing use. Exceptional performance for the price. Uncolored, true-to-life sound; musical and emotional nuances that preserve realism. Sensitivity 89 db at one meter with one watt input; 109 db maximum sound pressure level. Handles up to 75 watts of undistorted music. The 10" high-excursion woofer specially designed for the modified Venturi-coupled enclosure. New 5" mid-range with curvilinear cone and inverted dome covers the middle register, uninterrupted to 10,000 Hz. Super tweeter with perforated sound dispersal screen operates to beyond 20,000 Hz.

#### Model 11

The Model 11 sound and performance capabilities belie its small size. New 8" high-excursion woofer and phenolic-ringed tweeter. With the Venturi-coupled enclosure, they yield impressive, musically balanced, high-definition sound. Sensitivity 85 db; maximum sound pressure level 101 db; handles up to 45 watts of undistorted music. The new B-I-C Model 11 leaves little wanting, save for the extension of bass and treble range that only our larger systems can provide.

operating in a clipping condition. And since the waveform (as the condition implies) emulates a square wave, this is somewhat like applying D. C. to the speaker system. This explains why speakers can be damaged even when operated with amplifiers power-rated below that of the speaker!

While B-I-C speaker systems will provide the "head-room" in avoiding amplifier clipping, we recognize that inadvertent or accidental overload can occur. An extra measure of protection is desired.

And since a single fuse or circuit-breaker for the entire system cannot be expected to cover the entire frequency range well enough, each driver in every speaker in the new B-I-C series is individually fused, for maximum protection.

#### Transonic Grille

To preserve the intended sound dispersal and frequency linearity of a speaker system, edge reflections, diffrac-

tion and sound absorption must be avoided in the design of the baffleboard and grille assembly.

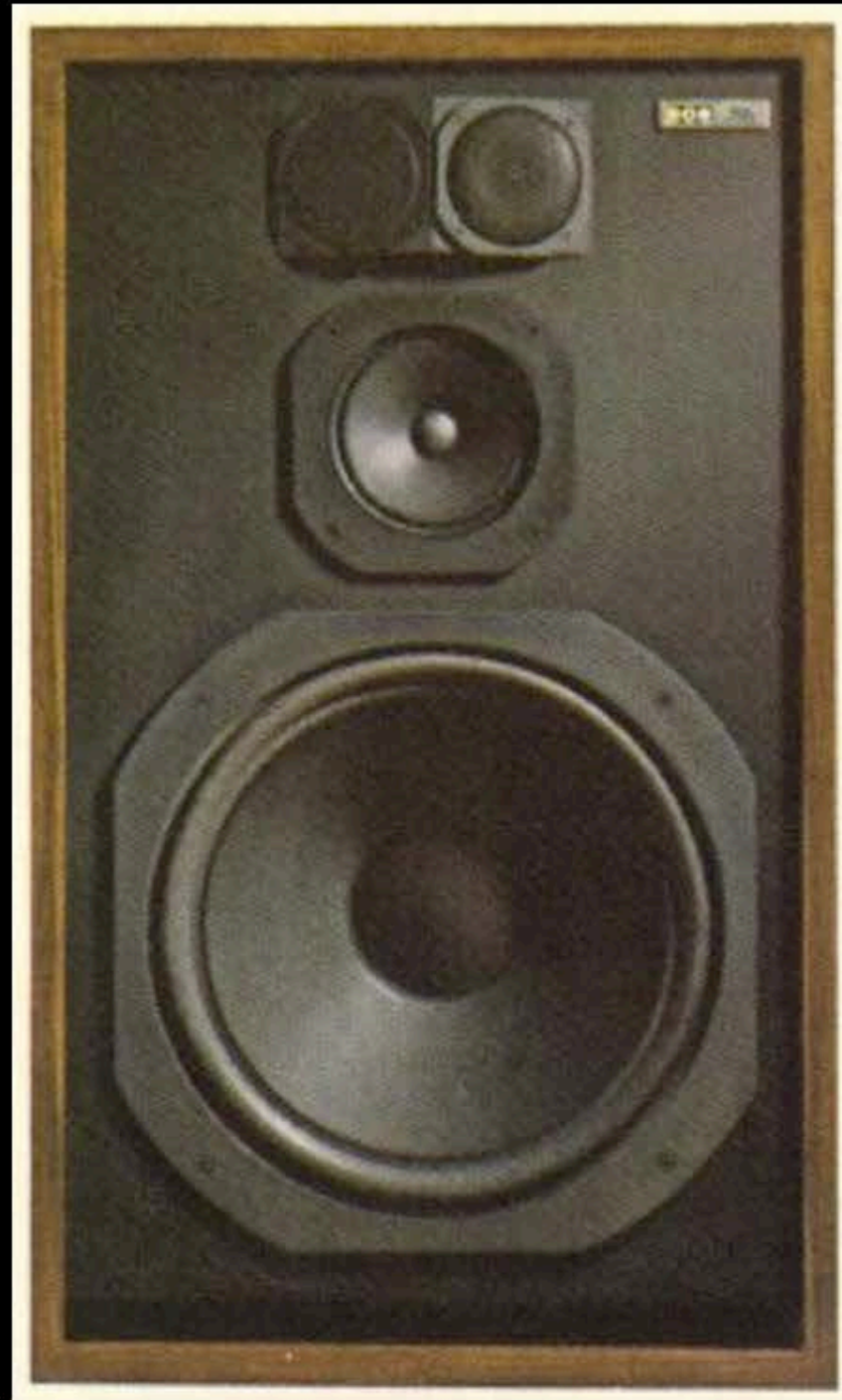
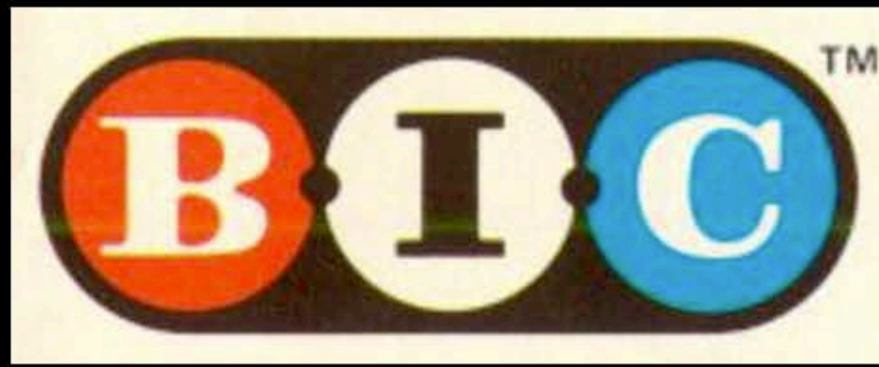
The new TRANSONIC grille on B-I-C speakers comprises a specially shaped molded form of inert material which allows sound to disperse unimpeded in all directions through large carefully designed perforations. A sonically transparent open-weave cloth is permanently bonded to the form. There are no secondary baffleboards, no cavities, no solid edge frames. Sturdy, yet too light to cause spurious vibrations. And when accidentally depressed, it seeks its original shape, unlike other structures in which the cloth may sag or tear. See figure 4.

**We listened, and this is what we believe you said you wanted. Honest engineering, high quality, real value . . . and uncompromisingly good sound. Prove it to yourself. Just listen and compare.**

Fig. 4



# BIC : 66



**These are four way monitor with:**

**12" woofers, 5" mids and dual tweeters**

**8 ohm impedance**

**ported cabinet**

**1-100 watts rms**

**all three freqs fused protected**

**25hz to 20khz (selectable brightness normanl, min and max)**

[To read a chat about this model click here](#)

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# Loud and Proud

HIFIGOTEBORG.se a



WANT TO RELAX TO BEAUTIFUL  
MUSIC

**WELCOME**

WE HAVE GOOD HIFI AT YOUR  
SERVICE

PLEASE WAIT HERE & A MEMBER  
OF OUR TEAM WILL BE WITH  
YOU SHORTLY.

Or press finger HERE