



TIMEWINDOW SERIES TW3

The TimeWindow 3 is a handcrafted, high-end loudspeaker capable of astonishing sonic performance. Its life-like, focused soundstage and listening room placement flexibility are without rival in the industry.

MODEL	DCM CORP. TIMEWINDOW 3	ACOUSTAT SPECTRA 1100	B & W MATRIX 804	CELESTION 5000	INFINITY RS8A	KEF REFERENCE 104/2	MAGNEPAN MG 3.3	MIRAGE M-3	POLK SRS 3.1 TL	SNELL TYPE CIV	THEIL CS 2.2	VANDERSTEEN 3
RETAIL PER PAIR	\$1499.00	\$1599.00	\$2200.00	\$1999.00	\$1798.00	\$2400.00	\$2850.00	\$2500.00	\$1999.90	\$2190.00	\$2250.00	\$2395.00
LOW FREQUENCY RESPONSE	24 Hz	35 Hz	31 Hz	49 Hz	33 Hz	36 Hz	32 Hz	30 Hz	35 Hz	27 Hz	35 Hz	26 Hz
SPL RATING 1 WATT / 1 METER	89 db	88 db	89 db	86 db	89 db	92 db	85 db	85.5 db	90 db	88.5 db	86 db	87 db
MINIMUM AMPLIFIER POWER REQUIREMENTS	5 WATTS	75 WATTS	50 WATTS	25 WATTS	50 WATTS	25 WATTS	75 WATTS	100 WATTS	50 WATTS	50 WATTS	50 WATTS	100 WATTS
SELF-RESETTING PROTECTION CIRCUIT	YES	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO
NUMBER OF DRIVERS	4	2	3	2	3	5	3	4	7	3	3	4
USER ADJUSTABLE DISPERSION CONTROLS	YES	NO	NO	NO	YES	NO	YES	NO	NO	YES	NO	YES
IMPEDANCE	8 ohms	8 ohms	8 ohms	8 ohms	4 ohms	4 ohms	4 ohms	7 ohms	8 ohms	8 ohms	4 ohms	4 ohms
CO-AX DRIVERS & TIME EQUALIZED Crossover	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
DIMENSIONS	39X17X12	68X16X17	36X10X10	26X13X13	48X21X8	56X11X7	71X24X2	53X18X9	48X16X13	46X15X12	42X13X12	48X16X10
ENCLOSURE TYPE	6 FT Folded Transmission Line	Hybrid Electrostatic	Vented	Infinite Baffle	Sealed Box	Coupled Cavity	Dipole	Bipolar	Passive Radiator	Ported	Passive Radiator	Transmission Line

SOURCE: Audio's 34th Annual Equipment Directory (10/91) and Manufacturers Literature.
* Specification not published.

TW3™

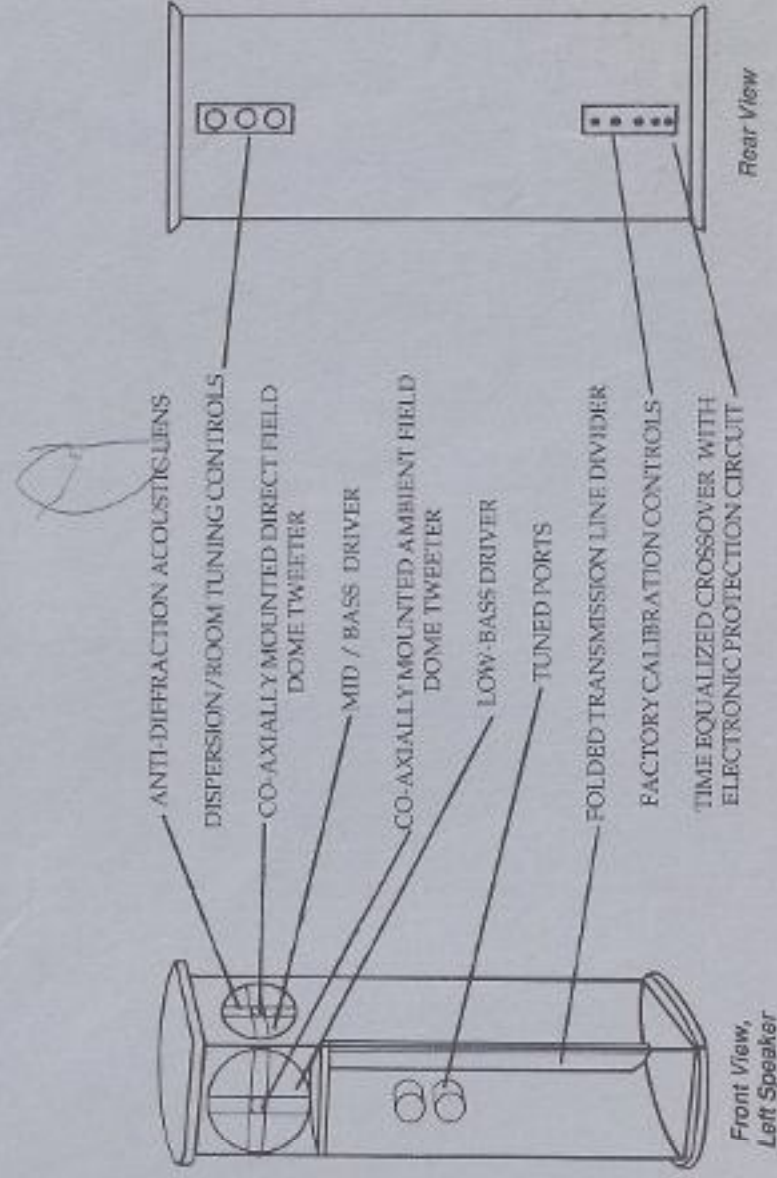
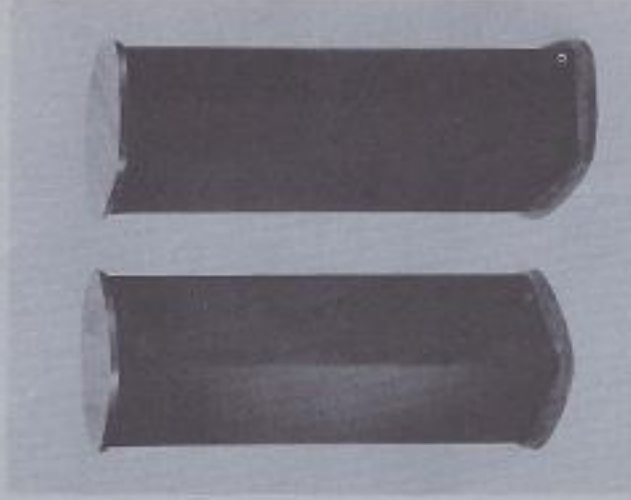
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INSIDE THE TIMEWINDOW 3

The problem with most high-end loudspeakers is that they're usually large, unattractive, rather expensive, and very difficult to position properly. Since 1974, DCM has provided music lovers around the world with a realistic alternative: their critically acclaimed TimeWindow designs.

The TimeWindow 3 is housed in a unique enclosure capable of blending into a listening room far better than conventional, rectangular box designs. The sum of DCM's time equalized crossovers, co-axial drivers and transmission line design has created a loudspeaker without peer in regards to performance and value.



In the entertainment world, there is a key concept called "suspension of disbelief". It refers to creating a mood, a setting, or an era so authentically, the audience believes the performance is real.

The suspension of disbelief when listening to recorded music has always been our goal at DCM. To design loudspeakers that reproduce the clarity, emotional power, and three-dimensional aura of live music so faithfully, you feel you're in the same room with the musicians.

With the introduction of our original TimeWindow™ almost 20 years ago, we demonstrated the success of this approach. Since then, we've expanded our product line, so that there is now a DCM loudspeaker model for every home audio/video system and budget. All DCM loudspeaker models share these performance advantages:

- *The ability to play well at low and high loudness levels*
- *Exceptional musical definition and stereo imaging*
- *Wide, accurate distribution of the full musical spectrum*
- *Long-term listening enjoyment without ear fatigue*
- *Readiness for current and future digital recording technology*
- *Adaptability-acoustically and aesthetically- to your home listening environment*
- *Premium-quality construction and components for long-term durability*

To achieve these performance advantages, DCM has pioneered new technologies, including transmission line enclosures, time equalization of drivers, anti-diffraction acoustic lenses, and other proprietary advances.

So listen to the music you like through DCM loudspeakers. Play it softly and loudly. Sit. Stand. And walk around the room. Close your eyes and pick out each individual performer. Because when you listen through DCM loudspeakers, the difference is clear.

- Steve Eberbach, Chief Design Engineer & Chairman -

TimeWindow Three

Owner's Instructions

Thank you for choosing the TimeWindow Three. We are confident that you will appreciate your recordings more and more as time passes, and discover the many benefits of the advanced technology incorporated into the TimeWindow Three. To ensure the best possible satisfaction, you should read these instructions before setting up your new speakers.

GENERAL INSTRUCTIONS

The TimeWindow Three comes in "mirror-imaged" Symmetrical pairs. There are "left" and "right" cabinets, distinguished by arrows on the plates at the top of the back of each unit. These arrows indicate the direction of the "direct sound field", and should point at each other, into the room and away from the side walls.

Make sure that you have one of each, and not two "left" or "right" speakers.

After unpacking your speakers, you should **save the cartons and packing materials**, in case you need to return the speakers for service or updates, or in case you move. The boxes flatten easily if you slit the tape.

Sometimes it is easier to unpack the speakers by opening the bottoms of the cartons, then righting them and lifting the cartons off the speakers.

There is a warranty card packed with each speaker, but you need only to return one card for both speakers. Put the serial numbers of both units on each card, keeping one card for your records.

CONNECTION TO YOUR SYSTEM

Set up the speakers so that the "direct sound field" arrows on the plates at the top of the back of each speaker point toward each other. (See section on "Speaker Placement".)

Connect the TimeWindow Three to your receiver or power amplifier with the banana connectors at the speaker.

Speaker wire: For best results, use 16 gauge, or any heavy speaker connecting wire recommended for audiophile use.

If the amplifier or receiver is located within 10 feet of the speakers, ordinary 18 gauge speaker wire will work satisfactorily. For runs of more than 10 feet, use 16 gauge, or heavier.

Of course, when setting the speakers up for the first time, you will want to leave enough extra wire to make it convenient for you to experiment with speaker placement.

Biamplication is not feasible with the TimeWindow Three. The TimeWindow Three units contain their own passive filters which match the drive units to each other and provide the usual crossover functions. The filters use linear air core coils and mylar capacitors, and contribute insignificant distortion at any signal levels. Besides frequency dividing and amplitude equalization, the networks provide damping and phase linearization of the drivers. Hence, it is not feasible to bypass the filters without losing the technical advantages of the TimeWindow Three system.

Fusing: The TimeWindow Three contains automatic non-mechanical thermal protection devices which protect the bass driver, the midrange driver, and the tweeters separately. They will allow *clean* power of up to 500 watts peak to pass, assuming that you *don't let the amplifier clip*, and that you are *listening to musical material* (whose average power is less than peak power). Fusing is not necessary unless you want additional protection against amplifier malfunction. For this, we recommend a 3-amp fast-blow fuse in series with the "hot" speaker wire *at the amplifier end*.

ADJUSTMENT

Distribution controls: The TimeWindow Three contains two virtual point source radiating systems. One points inward toward the listening area and creates the "direct sound field". The other points outward and creates the "ambient sound field". This ambient sound field is adjustable to suit different room environments and listening preferences. The controls to adjust ambient sound are at the top of the back of each speaker. The topmost control adjusts the tweeter level and is labeled "High Frequency Distribution". The middle control adjusts the midrange level and is labeled "Mid Frequency Distribution".

When the speakers are set up with the arrows on the back pointing toward each other, the "direct sound field" drivers will be pointing into the listening area. The circuits inside the speakers ensure the proper combination of all acoustic radiation from all of the drivers to form an accurate replication of the input signal regardless of the settings of the distribution controls. This is in contrast to more conventional adjustable distribution devices which do not take this criterion into consideration, as is done in the TimeWindow Three.

Setting the controls to "narrow" sends more acoustic energy toward the listening area and results in a more forward and focused image.

Setting the controls to "wide" widens the sound stage and renders a more natural balance between the direct and ambient sound.

People often ask, what setting will result in the most natural balance of sound and the most accurate soundstage perspective? Depending on what material your room is made of, and how you place the speakers, the best settings will vary. If your room or speaker placement is not symmetrical, you will discover that different settings are required on each speaker to balance the stereo image. This feature is unique with the Time Window Three and allows accurate stereo image reproduction in many listening situations where conventional speakers just won't work properly.

Usually, it is best to start with both control settings at "normal" and vary them one at a time slightly in either direction, each time carefully listening for improvement in naturalness and accuracy in pinpointing sonic events on the soundstage.

Tweeter level control: The tweeter level control in the TimeWindow Three controls the high frequency output mostly in the 8 - 15 kHz octave. It's range is ± 2 db and serves to correct the character of the high frequency balance when the acoustic qualities of the listening room make the sound too harsh or too dull.

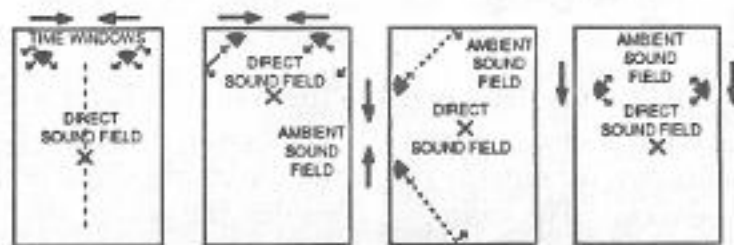
The "normal" setting is calibrated at the factory to give flat response at close range (1 meter) from the speaker. Generally, "normal" or lower settings give the most pleasing sound balance, as well as the most accurate impulse response.

PLACEMENT

The TimeWindow Threes are best positioned symmetrically 6 to 8 feet apart, facing the longest dimension of the listening room. They should be kept out of corners, but may be placed against the wall or out in the open. Deep bass response tends to increase when speakers are near a wall.

The speakers should be positioned so that one face of the V-shaped cabinet front points inward toward the listening area and the other face points away. Best sonic performance is obtained with the speakers aimed *straight ahead* rather than toed inward.

An exception to this is when the speakers are placed on opposite walls facing each other. The normally right and left speakers are reversed, while the arrows indicating "direct sound field" will still point toward the listening area.

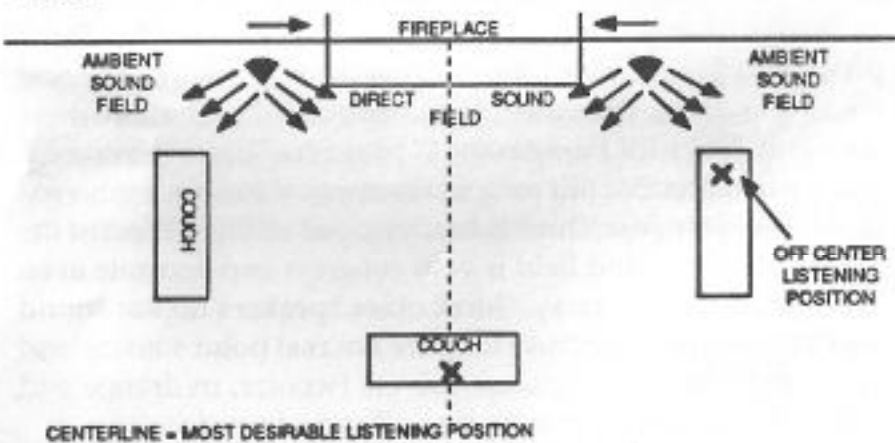


Because it is a point source, the TimeWindow Three produces very accurate tonal balance throughout the listening room. However, because of its wide sound distribution, there is less tendency for the speaker to project or "beam" the sound a large distance. For this reason, the unusual accuracy inherent in the TimeWindow Three is *best* enjoyed within 12 feet of the speakers. The sound field is very coherent and accurate even less than three feet away. Most other speakers do not sound best at close range because they are not real point sources and you would hear the separate drivers (woofer, midrange and tweeter) working separately if you listened up close.

If the listening room has poor acoustics, you can overcome its limitations by placing the speakers close together (say 4 to 6 feet apart) and listening near them. Since the Time Window Threes have a well-controlled directivity characteristic, the sound will be accurate and relatively unaffected by room acoustics. Close-up listening, which is uniquely beneficial with the TimeWindow Three, is a particularly effective technique when critically auditioning equipment or recordings. This is possible because the near-field pressure output of the TimeWindow Three in its "direct sound field" is a very close replica of the original acoustic pressure at the microphone, when fine equipment is used throughout the recording-reproduced chain.

Another, less obvious, benefit is that satisfying subjective sound level and visceral perception is achieved at a *natural loudness level*, while more conventional speakers, with their greater phase shift in the bass region, often require up to 6 db "louder than life" levels to achieve the same "mind and body" satisfaction.

Off-Center listening: The TimeWindow Three is unique in that it has been designed to project a clear, listenable soundstage illusion far outside the normal listening space between the speakers. For example, consider the setup illustrated below:



In the illustration on the previous page, the interior decorator has placed the speakers on either side of the fireplace, and arranged the conversation area with the fireplace as the focus. Conventional stereo speakers would sound good only to the listeners on the couch directly between the speakers, and the listeners on the side couches would hear only the nearest speaker. By adjusting the dispersion controls on the back of the TimeWindow Threes, it is actually possible to create the illusion of centered stereo sound for people sitting on all three couches simultaneously.

It works because the point source driver modules facing outward can be reduced in level to the correct proportion causing the *nearer speaker to sound further away*, while at the same time maintaining the correct tonal balance enabling listeners off center to hear the music with clarity and accuracy.

When first setting up your speakers, you should experiment with the distribution controls and also try turning the speakers *very slightly* inward. Check out the sound at all listening positions. Generally, you will find that the controls only subtly effect the sound on center, while varying the sound to the outside quite a bit. Sometimes it is easier to start with all of the dispersion controls set to "narrow" and increase the level in small steps until the nearer speaker sounds clear but still somewhat distant.

The center listening position will, of course, always provide the best stereo image, because the on-center listener hears both level and time-difference cues stored in the recording. Listeners off-center lose the time cues, but can still hear the level differences between the two channels when the dispersion controls are set properly. The sonic effect is that the stereo soundstage remains between the speakers, but is playing toward a listener seated on center between the speakers.

CALIBRATION

Each TimeWindow Three is tested and calibrated against a reference standard at the factory. On the plate at the bottom of the back of the speaker, above the input jacks, is a series of trimmer potentiometers ("trimpots") which are adjusted at the factory for a performance match to the reference standard. It is possible to alter the frequency balance by adjusting these pots, but we don't recommend that you experiment with them without noting their exact positions first, so you can set them back to their original settings later. Proper adjustment requires the aid of a high-resolution spectrum analyzer and is best left to the factory personnel who are familiar with the calibration procedure.

Function of the Calibration Controls: The range of adjustment on the tripots is approximately ± 2 db. Together they are sufficient to compensate for tolerance variations in the various components. These controls adjust filters with unique phase characteristics, which means that their effect is different from what could be achieved by any "normal" active equalizer. When controls are properly adjusted, the impulse response of the speaker is a neat, clean, overshoot-free replica of the input signal.

- "CAL. 1" adjusts tweeter level and time-domain compensation of 4 kHz relative to 12.5 kHz.
- "CAL. 2" adjusts tweeter level at 4 kHz off-axis.
- "CAL. 3" adjusts midrange time-domain compensation.

CARE OF YOUR TIME WINDOW THREES

The lacquered wood finish may be cleaned with commercial furniture polishes such as Guardsman or Pledge. Use no solvents. If watering plants on top of the speakers, take particular care not to let water drip onto the wood or the grille. Direct sunlight may discolor the wood and fade the grille. Keep the speakers away from radiators, forced air heating registers, or other heat sources. Dust may be wiped from the grille cloth with a piece of felt, or carefully vacuumed if necessary.

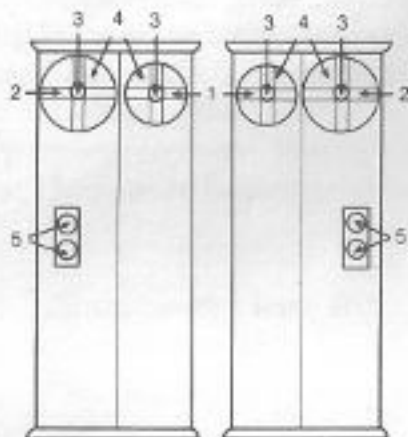
CONCLUSION

If you have any questions concerning these speakers or these instructions, please feel free to contact the factory by letter or phone. If you write, please include your phone number.

We hope that your TimeWindow Three loudspeakers will provide you with countless hours of listening pleasure for many years to come.

TimeWindow Three Technical Specifications

Sensitivity	89 dB
Useble Power Range	5 watts min. 400 watts max.
Impedance	8 ohms
Frequency Range	24-20,000 Hz
Enclosure Type	Folded transmission line system
Driver Complement	2- 3/4 soft dome tweeters 1- 6 1/2 inch driver 1- 8 inch woofer
Dimensions	39 1/4 X 16 1/2 X 12 3/8 " H x W x D
Weight	45 lbs. each



The diagram above shows the mirror-imaged placement of:

- [1] 6.5" (19.5 cm) midrange and low frequency driver
- [2] 8" (20.3 cm) low and mid-frequency driver
- [3] 3/4" (1.9 cm) soft plastic dome tweeter
- [4] Acoustic lenses
- [5] Tuned ports

DCM[®] *TimeWindow Series*

TIMEWINDOW™ THREE

OWNER'S INSTRUCTIONS



The difference is clear