

### Mach One LIQUID COOLED SPEAKER SYSTEM

CAT. NO. 40-4029

#### SPECIFICATIONS

Frequency Response:	25 ~ 20,000 Hz
Power Handling Capacity:	160 watts peak program
Impedance:	8 ohms
System Resonance:	65 Hz
Cross-over Points:	1.2 kHz and 4.5 kHz
Speaker Complement:	15" (38 cm) Acoustic-suspension, 34.8 oz. (986 g) magnet woofer with brass voice coil 1 extended range high compliance ferrofluid-cooled horn tweeter Multicellular ferrofluid-cooled horn midrange speaker
Enclosure:	Oiled walnut veneer sealed for extended bass response Removable grille
Controls:	Midrange level control Tweeter level control
Dimensions:	28-5/8" H x 17-3/8" W x 12" D (72.7 cm H x 44 cm W x 30 cm D)
Weight:	65 lbs. (29.5 kg)

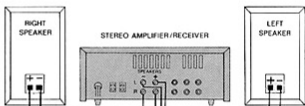


Your Mach One uses a special new ferrofluid-cooled design. Ferrofluid is a magnetic fluid originally developed for U.S. space program. The result is improved power handling and smoother, more linear response. Ferrofluid conducts heat build-up away from the critical voice-coil and 'sinks' it into the speaker structure. This heat sink effect makes it possible for the Mach One to handle higher peak levels of power without burn-out or distortion products which might be produced by mechanical stresses brought about by heat rise.

The 15" (38 cm) acoustic-suspension speaker faithfully reproduces rich bass from 20 to 1000 Hz. The 16 sectoral horn midrange speaker gives exceptionally smooth response from 1000 to 5500 Hz. A heavy-duty bullet tweeter adds silky, distortion-free high-frequency reproduction from 5000 to beyond the response capability of the human ear.

A deluxe inductive/capacitive crossover network achieves precise blending of the response characteristics of these speaker elements, producing a smooth, wide response throughout the entire frequency range. The acoustical-mechanical design of the enclosure and horn midrange speaker and horn tweeter results in unusually uniform dispersion. Incorporation of two controls, MIDRANGE and HIGH FREQUENCY, permit you to adjust speaker performance to the conditions in the listening area and to your own personal taste.


**CONNECTIONS** Both terminals and RCA phono-jacks are provided for speaker connections. Use speaker wire or standard 18-gauge lamp cord (zip cord) for distances up to 50 feet (15 m). For more than 50 feet (15 m) use 16-gauge



wire. If you use Speaker cables with RCA phono plugs, such as Radio Shack Catalog Number 42-2479 or 42-2478, speaker phasing is automatic (assuming your amplifier/receiver is equipped with RCA phono plug outputs for speakers).

**PHASING** The Mach One terminals are coded for proper phasing, + and - (as are all Realistic systems). When you make connections, be sure all terminals with similar markings are connected to each other. For example, the - terminal must be connected to the Amplifier/Receiver output terminal which is marked -, COM or Gnd (ground); and the + terminal must go to the output terminal marked +, "HOT", etc. If speakers are not properly "phased", sound content will not be smooth, especially in the bass area. If you are unsure about the correct phasing, connect your system for stereo. Place speakers one foot apart and facing each other. Tune to a spot on the FM radio dial where there are no stations. Try reversing the connections to one speaker. One connection method will give a "Fuller", broader sound that is immediately noticeable. This broader sound is the position where speakers are correctly phased.

ENGINEERED BY

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**POWER REQUIREMENTS** The acoustical efficiency of the Mach One will permit you to realize the full capabilities of Amplifier/Receivers which have as low as 20 watts (RMS) of power output.

However, we recognize two factors:

1. Music often has transient power peaks which achieve levels of 10 or more times the average power.
2. If you like to listen to your sound system at levels typical of sound levels in a concert hall, you may prefer an amplifier with 40 or more watts of power per channel.

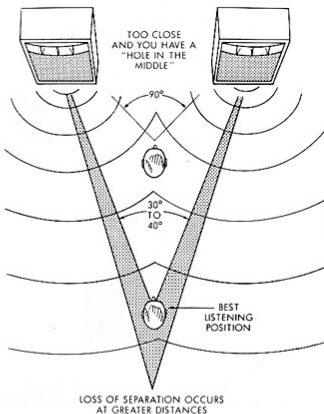
The Mach One is designed to handle such power levels without distortion, breakup or damage (even if transients peak to 10 times the rated power capacity of this speaker).

**POWER HANDLING CAPABILITY** The Power Capacity to this loudspeaker system is a statement of its ability to absorb and reproduce continuous program material without affecting the sound quality and without damaging the speaker. It is more than adequate to handle *music reproduction* from almost any Amplifier/Receiver currently on the market. Notice that we stated "music reproduction": this speaker is designed for music reproduction. Sine-wave test tones should not be used at any excessive levels for extended periods of time. Such sine-wave test tones can be dangerous to any loudspeaker system designed for music reproduction. Special laboratory speakers occasionally are capable of absorbing sustained high levels of such test tones, but "music reproduction type speakers" are not. Any damage from such high level sine-wave test tones is not covered by the warranty.

**PLACEMENT** Speaker performance is highly dependent on the listening environment and its placement; this statement is particularly true of the bass response.

As you move the speaker near a wall or into a corner, bass will be emphasized. If possible, experiment with the placement of your speakers before deciding on a final arrangement.

**For Stereo**, the two loudspeaker systems should be arranged symmetrically (separated 6 ~ 10 feet or 1.8 ~ 3 m) on each side of your listening position. The illustration shows a typical set-up. If you sit too close to the speakers, a sound "hole" will be apparent between the two speakers. As you move back, you will be in the area where sound from both speakers blends to form a "stereo wall of sound." Moving too far back will produce a loss of separation. Again, experimentation is important — often only a small change in position will create a totally different sound from the system.



**CONTROLS** The MIDRANGE and HIGH FREQUENCY controls are provided so you can tailor the sound to suit your taste. In most cases, leave the controls at 0 dB (normal). If you have positioned the speaker near or against a "hard" surface (plaster wall, etc.) you probably will want to use the "-3 dB" or "-6 dB" setting of MIDRANGE. To compensate for the sound absorption of a soft wall (curtains, etc.) rotate toward the "+6 dB" setting. You probably will do a fair amount of listening (and maybe repositioning) before you arrive at the best setting of these controls for the room acoustics and your personal taste.

**Note:** The controls are located behind the grille. For adjustment, remove the grille by pulling the tab on the bottom of the grille.

**CARE OF THE FINISH:** The enclosure is made of fine furniture grade of particle board and veneers. Treat it as you would any fine pieces of furniture. Don't place equipment on top of the enclosure, as this may mar the finish.

#### RADIO SHACK LIMITED WARRANTY

This equipment is warranted against defects for 5 years from date of purchase. Within this period, we will repair it without charge for parts and labor. Simply bring your sales slip as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover equipment subjected to misuse or accidental damage.

This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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