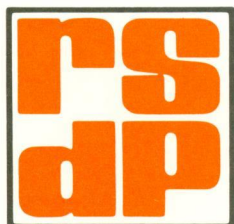




What is 4-Channel Mark 8 Stereo?

As the name implies, it plays four channels rather than two (as with regular stereo). This means four channels for playback through four different speaker enclosures, to *surround* you in sound. Inviting you into the center of things, making you a participant instead of just an audience.



Retail Salesman's Development Program

4-Channel Mark 8 Stereo does for sound what color did for television

How Does It Work?

The RCA 4-Channel Stereo plays eight track stereo tape cartridges. Figure 1(a) shows where each track is located on a tape. The cartridge contains two programs—each about 25 minutes of music.

A 4-channel *program* consists of four tracks of recorded sound. Sounds are recorded upon each of the tracks 1, 3, 5 and 7 shown in Figure 1(a). These four tracks, when played back simultaneously, are one 4-channel selection referred to as Program 1. Upon each of the remaining tracks (2, 4, 6 and 8), there are recorded other sounds, comprising Program 2.

The four tracks of a program are played back simultaneously, each track sending its own sound to its own speaker enclosure. This means the listener has sound coming from four different speaker enclosures. He gets flutes from the right front or trumpets from the left rear—wherever they're supposed to be, that's where you hear them. The listener becomes completely immersed and surrounded in realistic sound.

An Exciting Sound Playback Technique

In a concert hall, the audience hears not only the frontal sounds coming from the orchestra, but also the sound waves reflecting from the back and side walls of the hall. All these sounds make up a "sound field", covering an area of 360 degrees around the listener.

Inside this field, not only the sound level but also the direction of the source of sound may be constantly changing. Clearly, no two microphones could record all the positional information, nor could any number of loudspeakers arranged in *one straight line* reproduce it.

However, four speaker enclosures properly placed in a room, each speaker enclosure putting forth its own sound, can cover 360 degrees to surround the listener in sound. Thus, through 4-channel recording and playback, RCA is able to more accurately recreate for the listener the sensations produced by hearing the real performance. In a much broader sense, 4-Channel Mark 8 Stereo can recreate *many* sounds, including time delays, amplitudes, directions and reverberations in a way never before possible.

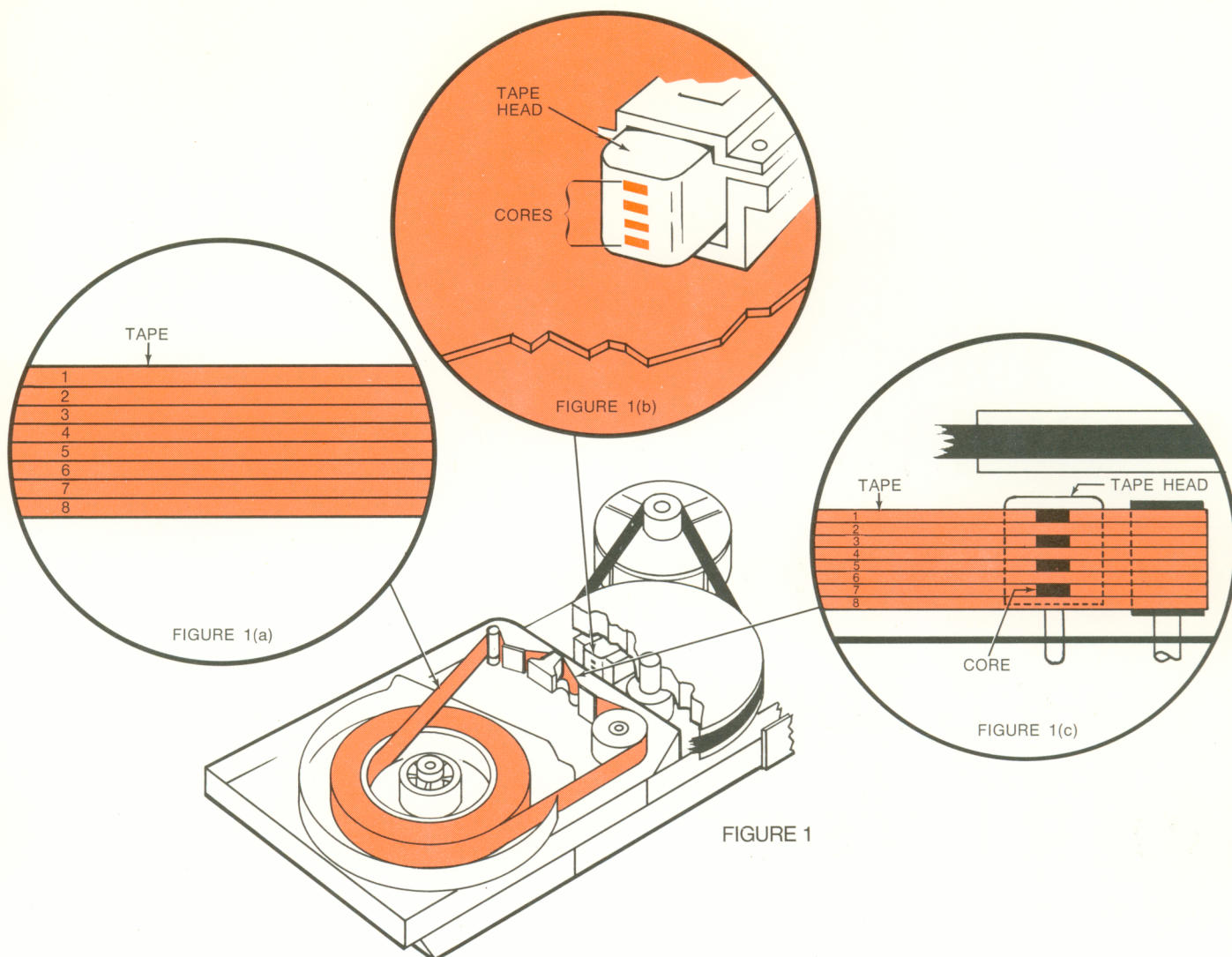


FIGURE 1

Tape Reading Head

Figure 1(b) shows a cutaway of an RCA 4-Channel Tape Player. Notice the tape head. On its front surface, there are tiny elements called "cores" (indicated in red). The cores act as tiny "pick-ups" to remove the sound information as the tape moves across the tape head. As you can see, there are four of these cores, and this, of course, is because the sound has to be removed simultaneously from four different tracks and sent to four different speaker enclosures.

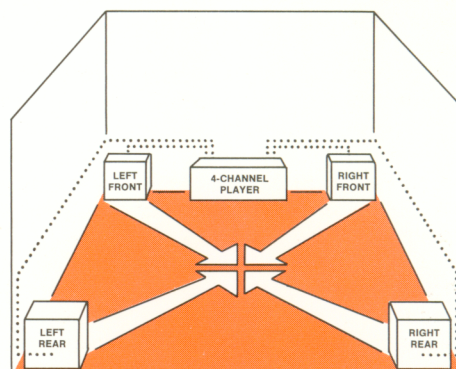
Track Selection

Figure 1(c) shows the tape head playing the first program of a four channel tape. Notice that the cores are removing information from tracks 1, 3, 5 and 7. At the end of the first program, the tape head will drop down slightly and play the remaining four tracks which comprise Program 2.

2-Channel Playback

Two of the cores on the tape head *can be shut off* when the listener wishes to hear a standard 2-channel tape. Thus, in this application, it will play simultaneously only two tracks.

The playback of two channel tapes through an RCA 4-channel player differs from the usual 2-channel player in that it plays the sound through all four speaker enclosures rather than only two speaker enclosures. This adds an additional touch to 2-channel stereo.



A Typical 4-Channel Layout

System puts the listener into the middle of things, surrounding him in sound.

What are the **consumer benefits** of the **RCA** **4-Channel Mark 8 Stereo?**

- **TOTAL SOUND . . .**

The listener is completely surrounded and immersed in realistic sound.

- **AN EXCITING SOUND PLAYBACK TECHNIQUE . . .**

Recreates sensations never before possible with 2-channel systems.

- **ACCOMMODATION OF 2-CHANNEL OR 4-CHANNEL TAPE CARTRIDGES . . .**

Plays both 4-channel tape cartridges and standard 2-channel cartridges. 2-channel playback goes through all four speaker enclosures, giving an additional touch to 2-channel stereo.



PRODUCED BY THE RCA SALES TRAINING DEPARTMENT

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