



Midwest Research of Michigan, Inc.

Product Information: Subliminal Audio Tapes

Midwest Research of Michigan produces subliminal audio products of the highest quality. All tapes are mastered with our proprietary subliminal mixer which insures that the decibel differences between the masking sounds and the voiced affirmations are maintained within a range that is optimal for the utilization of these products.

The existence of voice messages is often of some concern to consumers since they have no way to test the product. Illustrated below, in Figure 1, is an example of an audible affirmation that has been digitized via computer data acquisition and subjected to a spectral analysis utilizing the Fast Hartley Transform (FHT). This is the only method whereby it is possible to show a real-time demonstration of the existence of voice within a masking sound such as surf. To date, only Midwest Research of Michigan has been willing or able to disclose this kind of information.

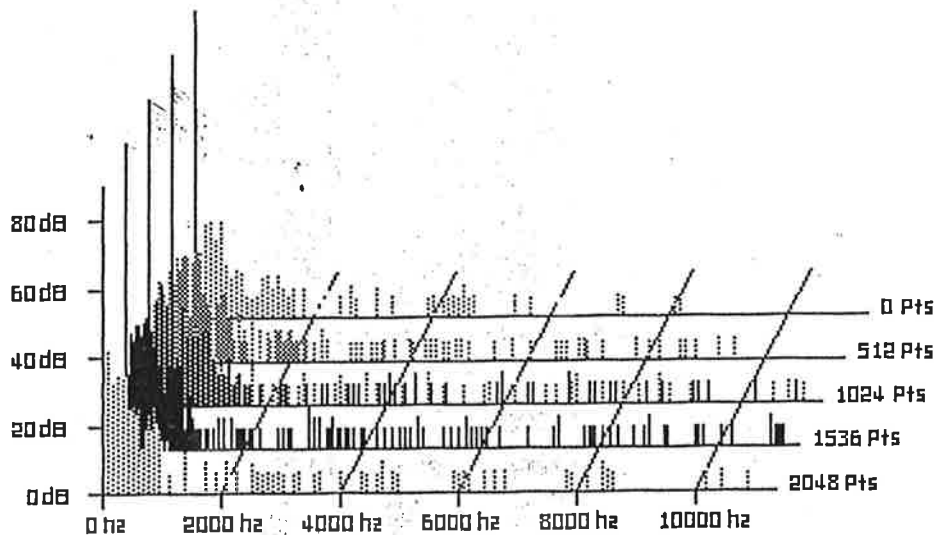


Figure 1

Spectral Transform of affirmation: "Learning is easy and effortless"

Figure 2 is a spectral transform of the masking sound used by Midwest Research of Michigan, which is a recording of ocean surf. Notice that both the amplitude and the frequency range of this sound is quite different from the voice in Figure 1.

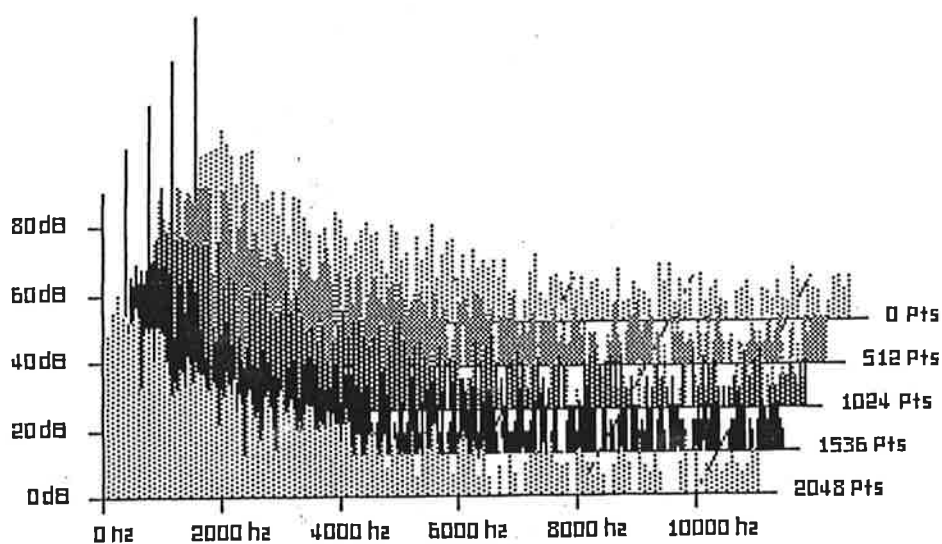


Figure 2

Spectral Transform of Masking Sound: Surf

Finally, in Figure 3 below, we illustrate the actual subliminal audio product which represents the spectrum of both the voice and the surf.

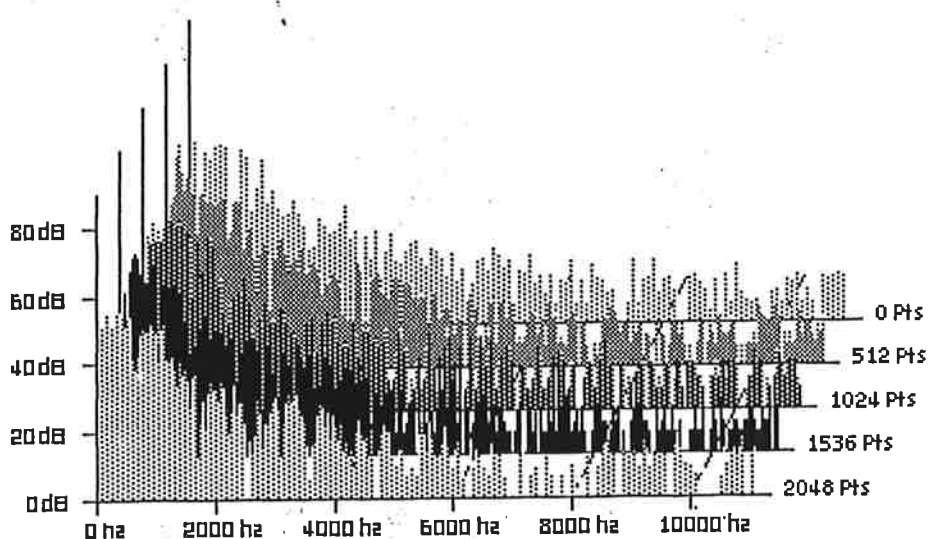


Figure 3

Spectral Transform of Subliminal Audio: Voice mixed with Surf



Midwest Research of Michigan, Inc.

Technical Bulletin

The following information is being presented in an effort to provide reliable information regarding the production and analysis of our subliminal tapes.

1. The 100,000 affirmation controversy

Many people have asked about our claims regarding the number of affirmations on the SCWL tapes. Often these questions have arisen in the course of reading some other subliminal tape company's literature which suggests that it is not possible to get this number of affirmations on tape.

The true fact of the matter is that there is virtually no limitation on the number of affirmations that can be put on a tape, and certainly 100,000 is not the upper limit. Any sound engineer with good equipment and a multi-channel mixing board can easily attest to this fact. The controversy was apparently brought about by individuals unfamiliar with recording technology who incorrectly assumed that a speeded, single voice track was being used in the production of our tapes. Since this is not how our tapes are mastered, this criticism does not apply to any "Midwest Research of Michigan" products.

Another criticism has implied that we at "Midwest Research of Michigan" are unaware of bandwidth restrictions on magnetic tape media that limit the number of recordable affirmations. This issue is related to the frequency changes in voice messages that occur when the voice is speeded up. Everyone has probably played a 33 $\frac{1}{3}$ record at 45 rpm, and knows how this changes the voice sound into a so-called "chipmunk." From a purely sound-engineering point of view, this "chipmunk" sound will take up more space, in terms of bandwidth, on a recording tape than would a normal speed voice. There is in fact a linear mathematical relationship between speeding and bandwidth. This means that if a normal voice requires a 2000 Hz. bandwidth, that same voice, speeded 2X would require a 4000 Hz. bandwidth, or essentially twice as much room. Be assured that we at "Midwest Research of Michigan" are well schooled and very familiar with these sorts of considerations, and that none of our products break any of the rules of good engineering practice. Moreover, we do not make "chipmunk" tapes! It is perhaps worth noting that those issues that others in the industry consider "problems", we at "Midwest Research of Michigan" have long since overcome. However, it is precisely for this reason that "Midwest Research of Michigan" continues to be at the leading edge of subliminal research and development technologies. The consumer can rest assured that "Midwest Research of Michigan" can do exactly what it claims with respect to number of affirmations, and that our products are state-of-the-art in recording technology.

2. The "Blank Tape" controversy

We have recently come across articles and television programs in which alleged "experts" suggest that subliminal tapes are a hoax since they were unable to demonstrate the presence of subliminal messages with their analyses. These claims were supported by what was claimed to be "scientific evidence." The evidence that was presented in one case was a simple oscilloscope reading, while in another it was a sonogram. Because both of these appear to be high technology type of investigations, they are unfortunately believed by consumers unfamiliar with these devices and their limitations.

By viewing the information in Figure 3 in the time domain rather than the frequency domain of the transformed data, we can also represent the waveforms of a Subliminal audio product as shown below in Figure 4:

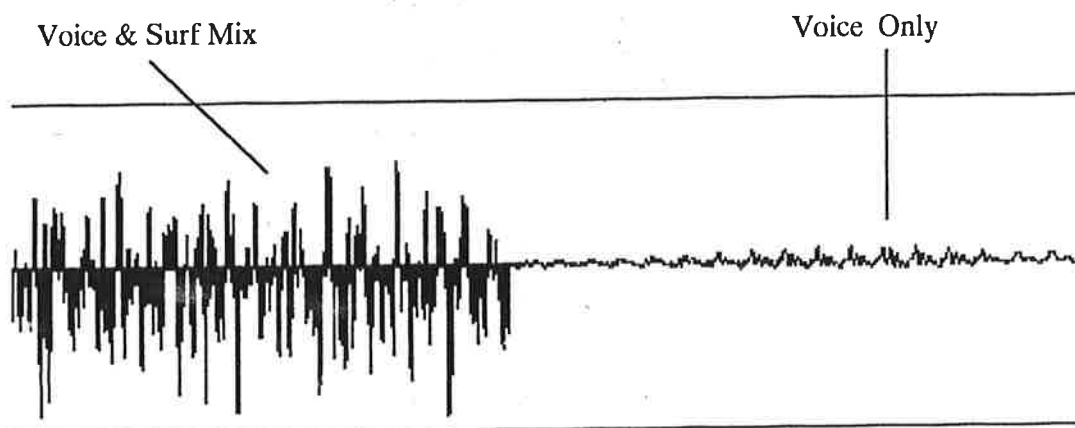


Figure 4

Waveforms of Subliminal Audio Components

However, because of the quality of the Midwest Research of Michigan's proprietary subliminal mixer, the actual difference between the masking sound of the surf and the voice affirmations is quite small, as shown in Figure 5 below;

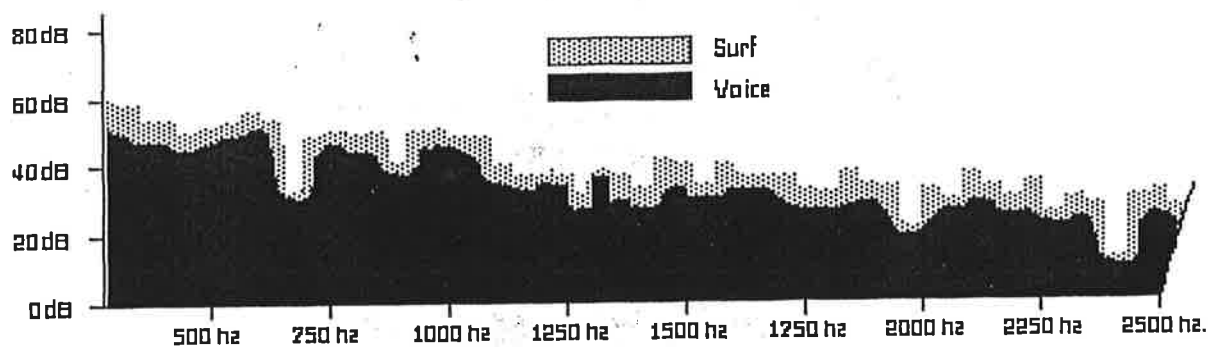


Figure 5

Demonstration of Midwest Research of Michigan Subliminal Mix

This information is provided for the benefit of interested parties as evidence for the content quality of Midwest Research of Michigan subliminal audio products, and as a basic primer on the construction and analysis of subliminal audio tapes. Further questions should be sent in writing to the corporate headquarters of Midwest Research

Michael Urban, Ph.D.
Director of Research

To set the record straight, we have prepared the graphs on the following pages. These graphs represent speech (the statement; "Learning is effortless and easy") and the sound of surf. All graphs were created from actual computer digitized sound. This technique allows us to sample the sound at a rate sufficient to provide us with a high resolution "snapshot" of what the waveforms of these sounds look like.

The purpose of the graphs is to clearly demonstrate the impossibility of using an oscilloscope or a sonogram to determine whether or not messages are contained in a subliminal tape. It simply can't be done! In Fig. 1, we see a segment of the digitized waveform from the statement, "Learning is effortless and easy." In Fig. 2, we have digitized the surf sound common to all "Midwest Research of Michigan" subliminal tapes. You will note that there is a substantial difference between Figures 1 and 2. More interesting is the graph of Fig. 3, in which we have a graph of a computer generated "sound mix" which combines the voice from Fig. 1 with the surf from Fig. 2.

Essentially, Fig. 3 is a waveform representation of a subliminal tape. It should be quite apparent that this graph is visually undistinguishable from Fig. 2, and yet we know it contains the voice message described above. In Fig. 4, we electronically remove the sound of surf, once again to demonstrate the presence of a voice track.

The point of this exercise is to illustrate that there is little difference between Fig. 2, the sound of surf, and Fig. 3, the sound of surf with an embedded subliminal. It is apparent that some investigators are looking at a mixed sound like Fig. 3, and mistakenly identifying only the masking sound.

Since the equipment required to do reliable sound analysis requires both equipment far more sophisticated than either an oscilloscope or a sonograph, as well as some highly specialized mathematical techniques, neither of which have been used in any of the studies purporting that subliminals are a hoax, we find all claims of this nature to be lacking legitimate scientific support.

In actual fact, with the right equipment the retrieval of evidence for the existence of subliminal information embedded in a masking sound such as surf, is not a difficult task. We are of the firm opinion that claims to the contrary are due to an inadequate comprehension of the analytical techniques necessary for this type of an investigation. Again, it is our hope that by presenting this information in an open fashion, the subliminal consumer will continue to have confidence not only in their personal experience with "Midwest Research of Michigan" tapes, but also have that same confidence in the technical expertise that goes into every product we make. At "Midwest Research of Michigan", your success is our primary goal, a goal to which we devote our fullest effort.

Figs. 1-4: Digitized waveform representations of speech statement ("Learning is easy and effortless"), and broad-band masking sound (surf).

Fig. 1

"Learning"

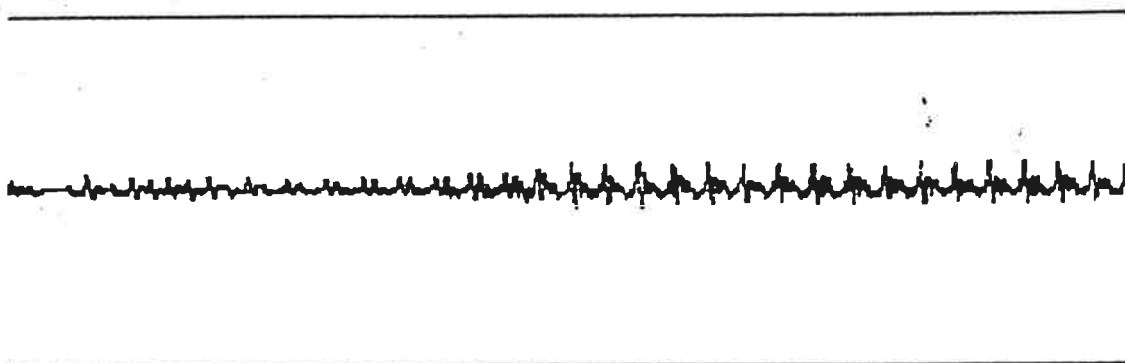
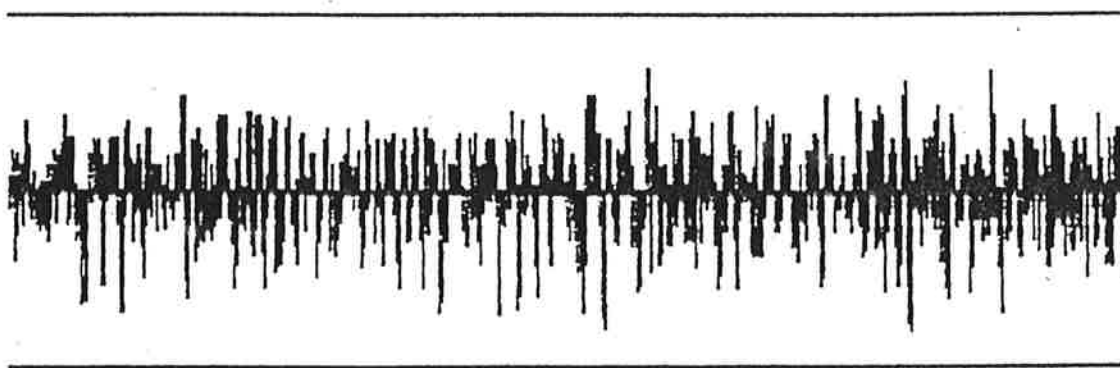


Fig. 2

Surf



Technical Update

by

MIDWEST RESEARCH OF MICHIGAN

In our previous "Technical Bulletin" we addressed several of the more prominent "controversies" in the field of subliminal audio tape production. Based on the response to the "Bulletin" we found that the distributors and users of Midwest of Michigan subliminal products were far more interested in technical issues than we had ever suspected. In response to calls and letters we have received, this "Update" will elaborate on the "blank tape" controversy.

For those of you unfamiliar with this so-called "controversy", it was initiated through rather poorly done investigations whose results were uncritically and sensationally reported as the "subliminal hoax". While the reporting of such misinformation is obviously irresponsible, little has been done to correct this misperception of subliminals. We will now attempt to set the record straight.

The Truth about Subliminal Sound

In our previous report we presented the following graph:

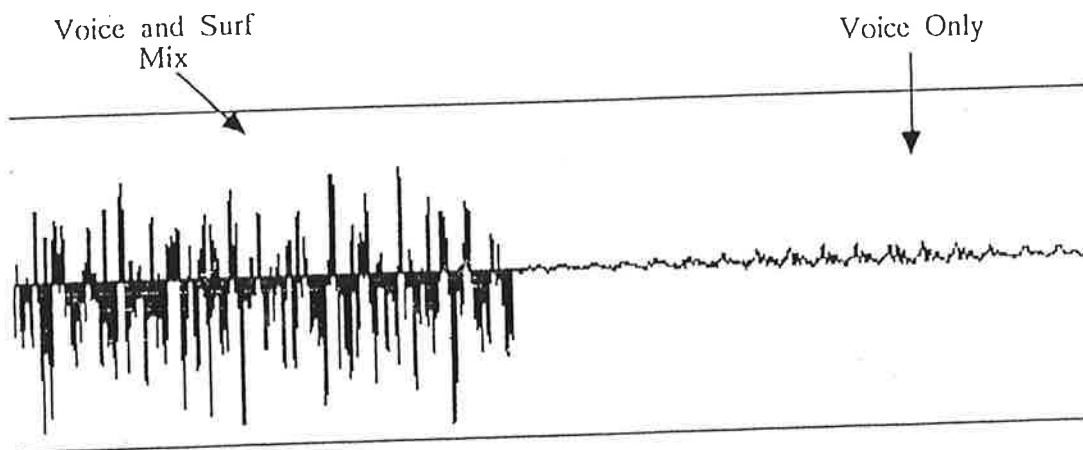


Figure 1

in which the left hand part of the picture represented the digitized appearance of broad-band masking, or surf sounds, and the right hand side showed the wave forms of the affirmation; "Learning is easy and effortless". The picture was meant to demonstrate that the affirmations are invisible, both to the naked eye and electronically, as long as they are masked by a sound such as surf. Of importance in the picture above is the fact that the affirmations are present in their original form when the masking sound is removed. Hence it is possible to retrieve voice from the original mix provided you know what it is that needs to be removed.

Fig. 3

Surf & "Learning" Sound mix (a)

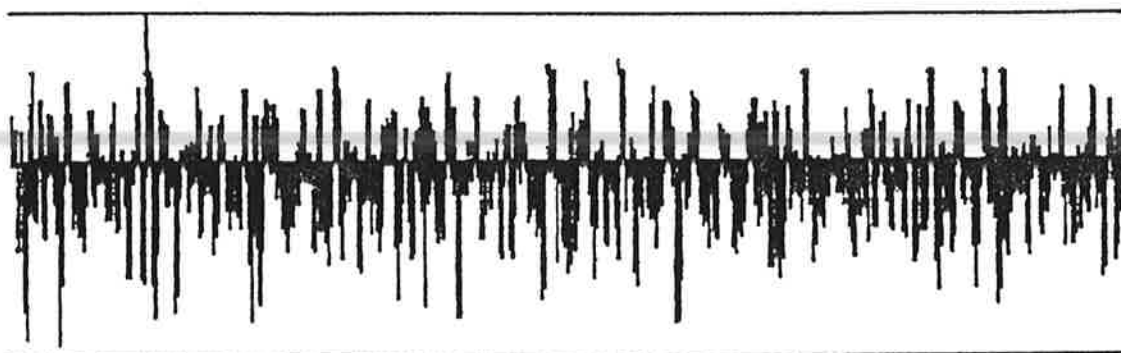
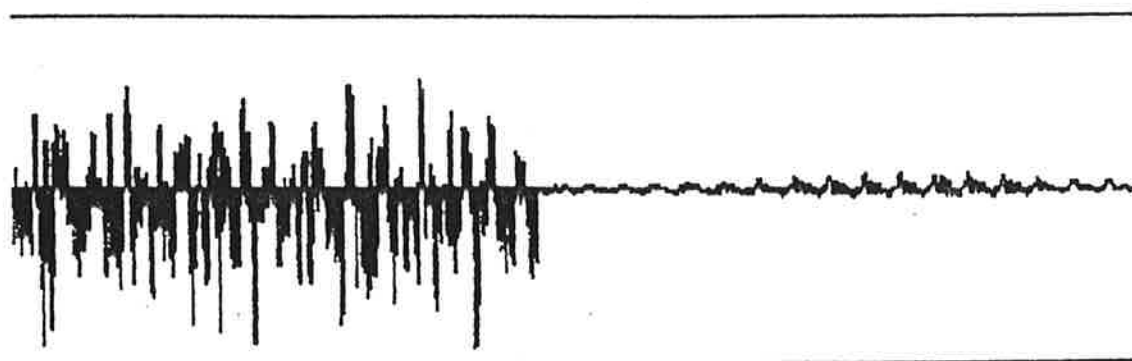


Fig. 4

Surf & "Learning" Sound mix (b)



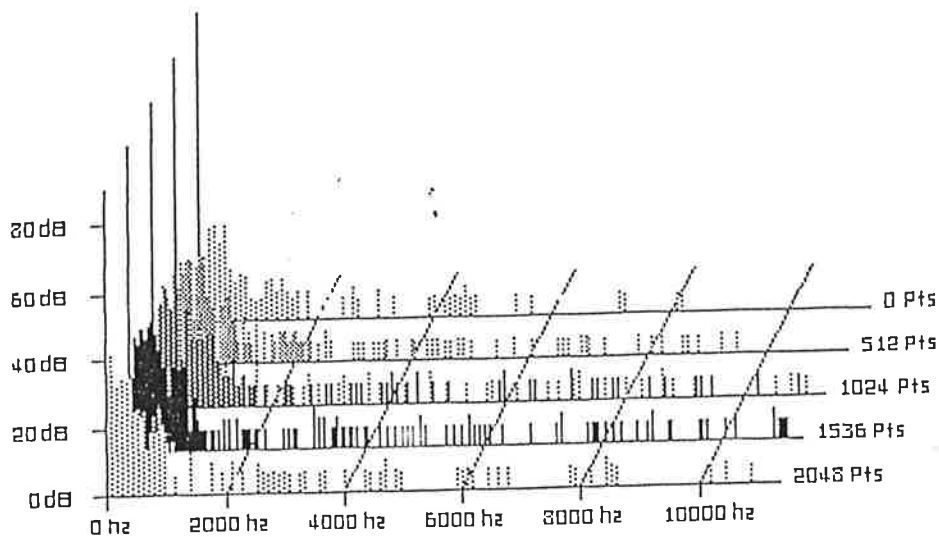
However, in actual practice the problem of retrieving a voice that has been mixed with a masking sound is a formidable task, and one that requires some rather expensive and sophisticated equipment. We were able to generate the data above because we knew in advance what the various components of both the masking sound and the voice were.

Someone who was not privy to this information, who was working from scratch, would find it difficult indeed to reconstitute the original voice as we have done.

Spectrograms

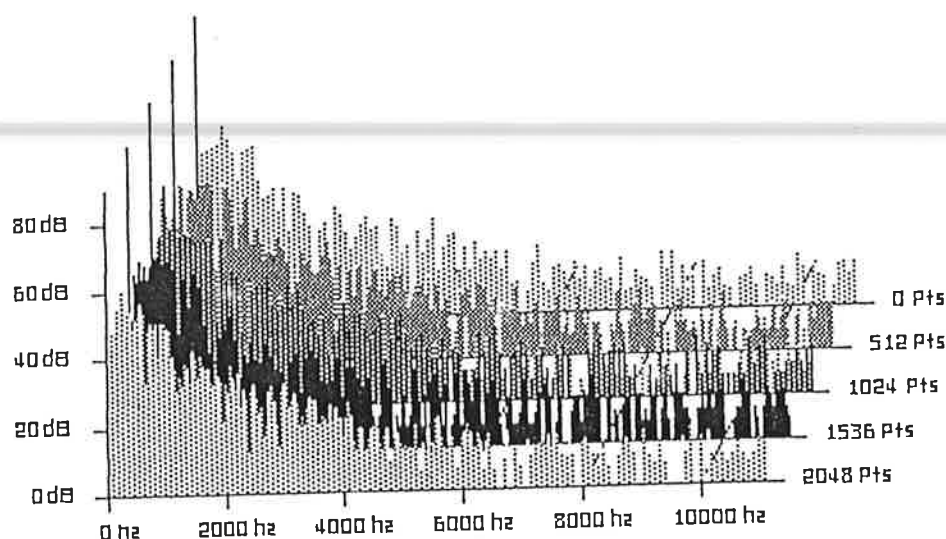
We are all familiar with the phenomenon of a prism, and its abilities to split light into a rainbow of colors. This rainbow represents the components of white or visible light. Sound is quite similar to color in that respect. It is really composed of a "rainbow" of frequencies, which when mixed together form the sounds that we recognize as speech, surf or music. And, again like light, it is possible to separate these sounds through the use of a "prism" although the sound "prism" is a mathematical one.

Through the application of mathematical "transforms" such as the popular Fast Fourier Transform (FFT) or in our case, the Fast Hartley Transform (FHT), it is possible to break sound down into its component frequencies. Shown below in Figures 2 and 3, are the spectral transforms of the same waveforms shown in Figure 1 of the previous page;



Spectrogram of Voice Affirmation:
"Learning is easy and effortless"

Figure 2



Spectrogram of "Surf" sounds

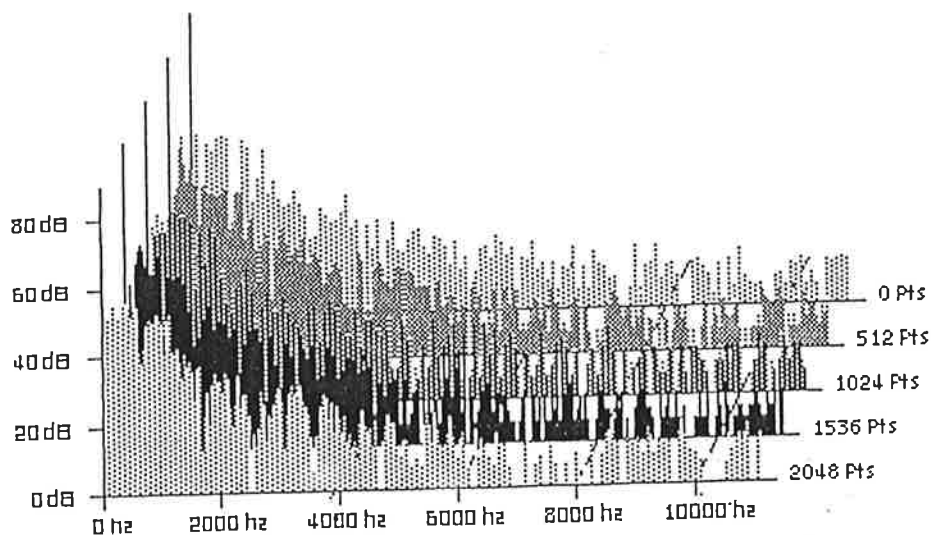
Figure 3

One can see by simple comparison, that the analysis of a digitized waveform in Figure 1, yields much less information than the analysis of the spectral components as displayed in Figures 2 and 3 above. In the case of the voice spectrum (Fig. 2), it now becomes clear that the fundamental frequencies are concentrated in a bandwidth of about 2000 Hz. with an amplitude of about 60 dB. In contrast, we can see that the surf spectrum (Fig. 3) reveals a broad range of frequencies, extending well above 10,000 Hz at an amplitude of 70-75 dB. What does this tell us? Well, for one thing, it now should be apparent that a sound composed of the spectrum of our "voice" can quite easily be "hidden" within the spectrum of the "surf" sounds.

Why then, a person might ask, has such controversy arisen over this issue? There are several answers to this, first; to the best of our knowledge, only Midwest Research of Michigan has taken the time and gone to the expense of gathering the kind of information we are presenting here. Spectral analysis has, until very recently, been an extremely

difficult and time consuming enterprise, and one that required a rather strong mathematical background. None of our critics have ever taken the time to run rigorous spectral analysis of our products. If they had, there would be no controversy at all.

However, even with the ability to do a spectral analysis, it is still quite difficult to retrieve an unchanged voice message from within a masking sound. Figure 4, seen below, shows the spectrum of the voice message mixed with the sound of ocean surf. Compare it to Figure 3, the spectrum of surf alone. Can you see a difference?



Spectrogram: Voice masked by Surf

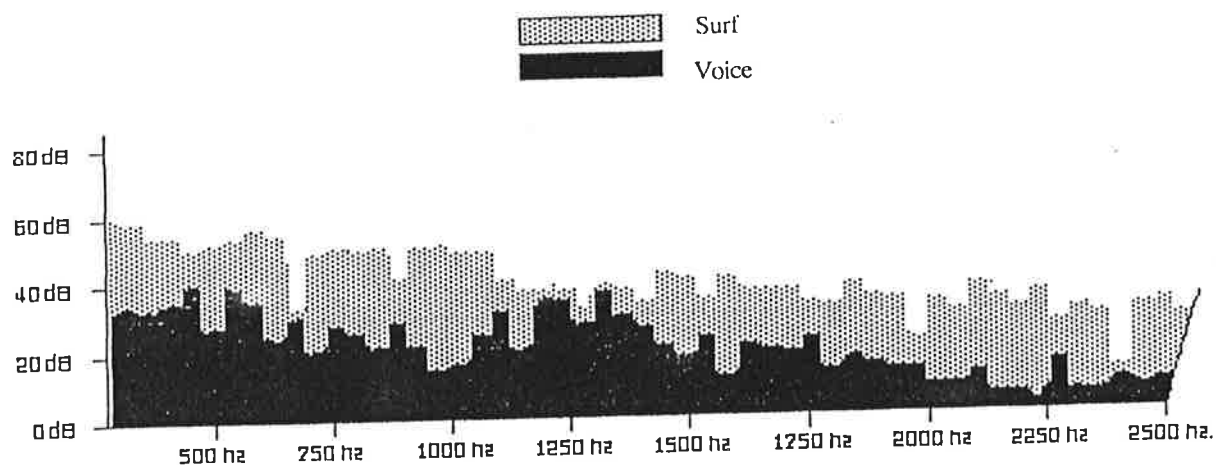
Figure 4

Obviously it is quite difficult to distinguish between the graph of pure surf sounds and the graph of mixed surf and voice sounds even when we have done a spectral analysis.

Since it is virtually impossible to visually identify the presence of a subliminal message even in a spectrogram, it should be apparent and unequivocal that one cannot by any stretch of the imagination, prove or disprove the presence of a subliminal message by using the "oscilloscope" type of graph that we showed you on page one. Yet this is precisely what our detractors and sceptics have attempted to do. They simply have failed to do their homework and seemingly do not understand the technical aspects of a good subliminal audio product.

What Makes MIDWEST Subliminals Different

There is a right way and a wrong way to make subliminals. The wrong way is to combine a track of voiced affirmations with a track of masking sound on a studio quality mixing board to produce an audio subliminal. This is in fact what many other companies do. The result is illustrated below in Figure 5;



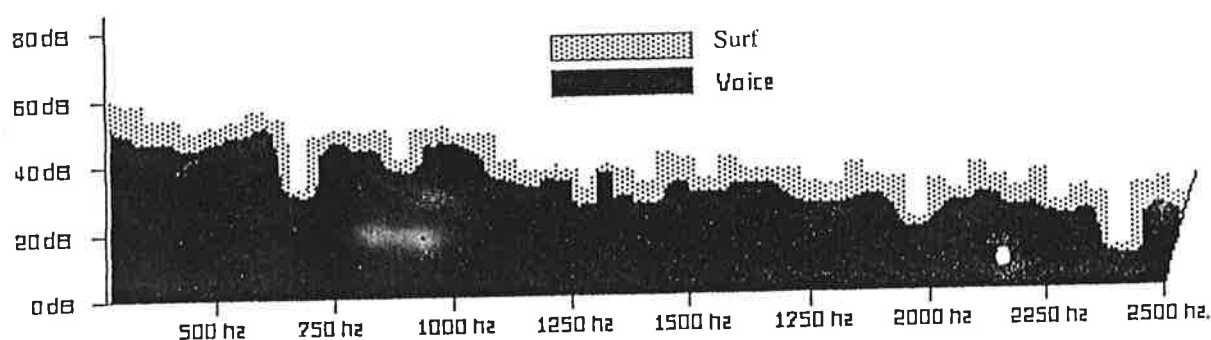
Spectral Comparison: Voice ^{vs} Surf

Simple Mix

Figure 5

As can easily be seen from this illustration, when a tape is produced by this method, the voice is unevenly masked, sometimes by as much as 30 dB, and othertimes actually "bleeding through" the masking sound. This uneven masking will contribute to a perceptual distortion and markedly diminish the effectiveness of the tape.

Midwest Research of Michigan has engineered a proprietary subliminal mixer that gives us a product that is unparalleled in the industry. Our method maintains a constant difference between the voiced affirmations and the masking sound, and looks somewhat like the illustration in Figure 6, below;



Spectral Comparison: Voice ^{vs} Surf

Proprietary MIDWEST Technique

Figure 6

Notice the constant difference, which is usually less than 10 dB, between the voice and the surf masking. The Midwest method optimizes the ability of the brain to retrieve the affirmations, and may be one reason that our customers have such excellent results with our products.

In the past we have chosen to let our satisfied customers do our talking for us. This time we're speaking up for our customers to let them know that they have chosen well by purchasing a Midwest product. We are totally committed to providing consumers the best subliminal product on the market, period!

Hopefully this brief journey into the arcane science behind subliminal audio tapes has helped you understand a bit more about our product and why we think ours is the best that money can buy. Hopefully too, you will no longer be misled by those hoping to discredit subliminal technology or Midwest Research. Be assured that we deliver exactly what we claim, and that unlike our critics, we do understand our product!