



The Old Radio Times

The Official Publication of the Old-Time Radio Researchers

Nov / Dec 2017 www.otrr.org 2780 Subscribers

No.94

Next:

**TV show
development
Bing wants
pictures**



Contributed by:
Robert R. Phillips,
Life Member



The first Bing Crosby TV show aired on 3 January 1954 was on 35 mm movie film with edited played back audio.

By 1953 Bing was facing a new problem, television. He was being asked to do television shows instead of radio, but there was no easy way to record a television program as he was doing with his radio show. In 1950 Bing asked Jack Mullin if he could record television on tape the way the radio show was recorded, and Jack told Bing that he did not see why it could not be done. Encouraged by Jack, Bing put money into the Electronic Division of Bing Crosby Enterprises so that Jack could build him a recorder and also encouraged Ampex to build a video recorder. Jack Mullin probably had taken on the greatest challenge of his life. He never said anything to me about not being able to do it. I believe that he and Wayne Johnson thought that it could be done. It was to be a long hard struggle.

The Bing Crosby radio show on CBS con-

tinued until the end of the 1953 season, which was on 30 May 1954. In early 1954 Bing had made the difficult decision to end the production, which meant that many life-long relationships were to change or be severed. The first television show that involved Bing was a telethon on 21 June 1952 that he co-hosted with Bob Hope to help finance the American Olympic team. However, the first big Bing Crosby television show was produced in 1953 and aired on 3 January 1954. It was a mixture of his radio show and 35 mm movie technologies. The audio for the television program was prerecorded and edited in the same manner as his radio show was. The audio was then played back and synced with the 35 mm movie cameras.

The master tape for the Bing Crosby 15 minute shows on CBS, 1954 -1956

The 1954 show was the first real introduction of Bing Crosby to the television audiences. However, he had been doing walk-ons

and other television appearances on shows hosted by other people. To keep his name in front of the radio audiences, Bing prerecorded short radio shows beginning in 1954 and going into 1962. These included shows with Buddy Cole and his group and Rosemary Clooney that were syndicated and distributed to stations that wanted them. Buddy Cole used a recording technique invented by Les Paul, who also was a good friend of Bing. The record over-process is where one person would play or sing different parts. Each part then would be mixed with the earlier parts and recorded over the previous one. Bing gave Les Paul one of the Ampex 400 recorders, and Les modified it with a second playback head. This modification permitted him and his wife Mary Ford to do their famous record-over recordings. Les Paul also worked with Jack Mullin at the Electronic Division to improve the process. The show with Buddy Cole lasted until 1958 when Bing had a video recorder to use. It was during this period that many changes came to tape recording. A lot of them were from Jack Mullin and the Electronic Division of the Bing Crosby Enterprises (BCE) operating out of a small facility in the BCE Building at 9030 Sunset Boulevard. The road to the video recorder was much more involved and slower than Bing would have liked. He always was around to encourage the project, and when Ampex de-

ecided to build their version he was supportive of them. Bing wanted a video recorder.

Bing Crosby Enterprises

When the Electronic Division of Bing Crosby Enterprises (BCE) was created by Basil Grillo in 1946, the main office was located in a small three-story building at 9028 Sunset Boulevard near the corner with Dohney Drive. It was built in 1936 by Bing as his main office. While Everett Crosby was the head, Basil Grillo always was in the background. The day-to-day operations were handled by Larry Crosby who held forth on the second floor. By 1951 the left side of the first floor was a Swedish masseuse, and on the right side was the location of the BCE Electronic Division (9030 Sunset Boulevard). In 1949 it became the sales office for Ampex and 3M products, but by the time I arrived it also was the location for the video tape development under Jack Mullin. Tommy Davis had moved to a small building next to the BCE building, and Frank Healey and his wife Hoppie, who was his secretary, were confined to the front of the sales space with the Ampex recorder display.

Since the recording companies and the radio networks had decided that the Ampex/3M approach was the answer there was no much sales work to be done, except for tracking orders. However, Tommy Davis went searching



for new markets and found that the recording of instrumentation signals was ready for tape. He traveled around with an Ampex in the back of his station wagon signing up new customers. One of his other tasks was to service the recorders, and that was becoming a major job. I was asked to help him in the beginning and learned a lot about tape recorders and the recording process by having to repair them. We traveled to many of the missile, aircraft and nuclear test sites where the recorders were being used. My support to the sales group ended when they hired Robert Hopkin.

Hopkin who took over most of the servicing. The instrumentation of scientific tests was not as simple as the audio market. In 1949 when the Ampex 300 was introduced, paper chart recorders were mostly used to preserve the instrumentation results of these tests. These results were frozen on the paper and could not be played back. The preferred telemetry system at the time was the Inter-Range Instrumentation Group (IRIG) FM/FM system that had a 100 kHz information bandwidth. It consisted of a number of data channels that increased in information bandwidth with the upper channels having the highest bandwidths. One of the manufacturers of this equipment was Electro-Mechanical Research, Inc.(EMR).

Most of the staff of the BCE Electronic Division in the Spring of 1953 (Sunset Boulevard looking east). (back l-r) Chester Shaw, Ed Corey, Mary Jane Snavley, U/I, Frank Healy and Wayne Johnson (front l-r) Frances Able, Gene Brown, Hoppie Healy, Bob Hopkin and Jack Mullin

A number of attempts were made to record this telemetry signal, but nothing was found that could record the entire 100kHz bandwidth except for the Scully record cutting lathe. This massive machine was the same one that was used to make the master record used by the recording companies and used early on by the Bing Crosby show. However, after one play the top channel was lost and after each subsequent play more channels were lost. These contained the important high frequency data

tests that sold the Ampex recorder for the telemetry market was held on board a missile range ship. It ran into heavy seas and the Scully lathes broke loose from their shock mountings. They destroyed the compartment, useable. The Ampex recorders were still ready to record and captured all the telemetry data. While the telemetry could now be recorded on tape, other problems appeared. The high frequency flutter caused by the tape path produced noise and distortions in the telemetry data. Since many of the recorders serviced by BCE were used to record telemetry data, we began to investigate a way to correct for this problem. We had already encountered these problems in our work on the video tape project for Bing Crosby. We knew that we could determine the flutter by using the 100 kHz control signal recorded on the tape. The flutter component could then be used to correct the video signal. Tests showed that this approach produced acceptable results with the telemetry; however, the flutter component had to be derived for each of the telemetry channels to be corrected. A system had to be developed using the analog techniques of that period that would compute a flutter component for each of the telemetry channels. Digital signal processing was still a number of years away, but when digital processing was introduced, EMR built



that was not able to be preserved by any other method. When the Ampex 300 appeared it was viewed as a solution to the telemetry recording problem. The recorder operated at 15 ips with an upper frequency limit of at least 20 kHz. Therefore based on the existing knowledge of the time an increase in the tape speed to 60 ips using a larger capstan, a 100 kHz bandwidth might be possible. The government had separately approached Ampex to find a solution for the telemetry and other recording problems. Ampex tested the higher speed, but did not reach the expected upper frequency limit.

Based on the modifications Jack Mullin had made on the Magnetophon and the video tape work that he and Wayne Johnson had started to do, they suggested to Ampex that they try a combination of pre-emphasis of the higher frequencies on record in addition to some changes in the playback equalization. These changes worked, and a new product line emerged, the Ampex 301. Jack spent time during the early 1950s in helping the telemetry recording process in addition to the video tape work. One of the

the flutter correction technique into their telemetry demodulators.

The resulting system in 1952 was a rack full of vacuum tube multi-vibrator dividers that generated the flutter components from the 100 kHz signal for each of the channels. These components were then sent to the channel processors (one for each telemetry channel) to be combined with the channel signal to eliminate the flutter. However, the analog process became so complex that it was not stable, and only a few channels could be processed at the same time. We then turned our attention to finding the causes of the flutter and how correct for it at the source. This research led to the development of the tight loop drive. Flutter is due to the vibration of the tape as it passes the head. By making this segment of tape shorter, the frequency of the flutter was increased to the point it was no longer a problem. The typical segment was about 18 inches; whereas the tight loop drive had a segment of about 1 inch. The tape went past the capstan around the idler and then "pulled" by the same capstan. This arrangement shortened the tape path and controlled the tension of the tape. The resulting flutter was very low within the operating bandwidth. A test recorder was built by BCE and delivered to the government for tests in 1953. While BCE did not build more of these recorders, it became the standard for the telemetry recorder and was used in the BCE video recorder.

The group at BCE also supported a number of other projects for Bing and Ampex. One Saturday morning I was notified that Bing was asked by Judy Garland if he could have her show recorded that afternoon at the Biltmore put dents in the bulkheads and were no longer useable. The Ampex recorders were still ready to record and captured all the telemetry data.

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The group at BCE also supported a number of other projects for Bing and Ampex. One Saturday morning I was notified that Bing was asked by Judy Garland if he could have her show recorded that afternoon at the Biltmore Theater in Los Angeles. He agreed, and Tommy Davis and I went to the Biltmore with an Ampex 400 and microphones to record her show. It was quite an event with the musician's union not knowing of the recording and having to give permission to record it. After a telephone call to their head in Chicago, we were allowed to record it, but the union kept the tape until the details were worked out with Judy. The recording session was uneventful except for the final number. Judy sat on the edge of the stage and sang "Somewhere over



the Rainbow." There was no place for a microphone; so I had to hold the microphone while hiding in the orchestra pit just below her. It was a special moment being between Judy and her audience when she sang that song. I felt as if I was in the middle of an electrical field.

Another event was the demonstration of the Ampex three track stereo recorder in 1952. Jack Mullin working with Bill Cara, a local Ampex dealer, built a special audio system to record and playback the three tracks of the experimental Ampex recorder. We built much of the electronics at BCE including three condenser microphones that used the Western Electric condenser element. They were perfectly matched along with the speakers, and we tested the frequency response of the system to ensure it was flat from about 10 cycles to 25,000 cycles. A number of recording sessions were held, from the steam locomotive and the squeal of brakes at the Glendale station to the Wurlitzer pipe organ in George Wright's house. It included sessions with

Lawrence Welk, the Santa Monica Symphony and other interesting features. A one hour-demonstration tape was assembled and played around the Los Angeles area. It was received with great interest and caused many interesting reactions. One person told us he was sorry that we had to delay the start of the demonstration due to the airplane flying over. It was on the beginning of the tape. Others would look behind the curtain to see if we did not have an orchestra hidden there. Another person with a sound level meter told us we exceeded the threshold of pain with the train brake squeal. These demonstrations went a long way to convince the recording companies to begin stereo recordings, and it also led to multi-track recorder.

The BCE Video Recorder

While there were many interesting experiences working at Bing Crosby Enterprises, none was as challenging as the development of picture from magnetic tape. It was a video of an airplane taking off. The image was very snowy and the airplane was a dark blob, but with the commentary by Frank Healey everyone managed to see the takeoff. Frank was an ex-movie producer.

The BCE Mark II video recorder in early 1953. (l-r) Jack Mullin, Bing Crosby and Wayne Johnson

I started with BCE about a week later and found myself involved in the construction of what I call the Mark II version. The Mark I





system used the top plate from one of the portable Ampex 200 recorders modified to operate at 360 ips (20 MPH) with a modified head that gave it a bandwidth of about 1 MHz. The tape was quarter-inch, and the reels did not have any sides to reduce once-a-round effects. This lack of sides produced large piles of tape if something went wrong. At times I had to go out the front door and down Sunset Blvd. with the tape to get it back on the reel. The drive was an early version of the tight loop

The Mark II version used the same top plate as that of the Mark I, but it was modified for one inch tape. It still operated at 360 ips with the early version of the tight loop drive. Jack Mullin and Wayne Johnson had decided to build the Mark II system before the 11 November demonstration and were actively engaged in its construction. When I started at BCE they were testing various head stacks and working with William Wetzel at 3M to improve the tape quality for the recorder. It was obvious that main problem was how to increase the recorded bandwidth on the tape. We would find out over the next months that there was a lot that was not known about how the head-tape process works.

A discussion over using a rotary head approach to that of longitudinal had taken place. Ampex had shown interest in the rotary head, but there was much doubt that the rotary head would work. It also would have been difficult for the BCE group to implement it because of our lack of the mechanical facilities to build one. The longitudinal approach was selected with multiple tracks. Instead of using a rotary head, the multiple tracks were electronically scanned. The Mark II system had 12 tracks recorded on the 1 inch tape. Ten of the tracks were used for the video, and the other two, one on the top of the tape and one on the bottom, were used for audio, sync and reference signals.

The video signal in the record subsystem was sampled with the rate tied to the video sync signal. These samples or pulses were sequentially recorded across the 10 video tracks. For each set of 10 samples the polarity of the recorded pulse was reversed. This was done to prevent a bias on the tape. The result was a series of pulses recorded on each track on the tape alternating in polarity. The amplitude of the recorded pulse was equal to the amplitude of the video sample, and each channel had a 1 MHz bandwidth.

The playback system had to reverse the polarity of every other pulse and assemble them into a video stream of pulses combined with the video sync signal. The reference signals from the top and bottom tape channels were used to correct for tape speed and skew. This information was used to adjust the sampled video pulses from the tape. The video picture on the monitor consisted of a number analog "pixels" that had to be processed to eliminate the dot structure by averaging between them.

About a month after I started, Dean DeMoss and Chester Shaw were hired to help build and test the new electronics for the Mark II system. Gene Brown provided the mechanical support, and the system was built and operational by early 1952. Wayne Johnson and I were working on the system Friday night, 14



March 1952, and had completed the last adjustment to it. It was ready for its first recording test, and we decided to try it before we went home. A video program was recorded and played back; it could have been classified as a fair picture. However, it did have the “pixels” since the additional processing had not been added. We jumped up and down and cheered. It turns out that we were the only two to see the picture because Wayne came in the next day and dismantled the recorder to “improve” it. Jack Mullin found out on Monday and was not happy that he missed the first successful test recording session. It was not until 30 December 1952 that a demonstration of the recorder was given to the press. Ampex during this period tried several attempts at a rotary head video recorder, and we shared our work with them.

During the 1952 and 1953 period, the major effort was concentrated on improving the frequency response and reducing the tape speed. Many heads designs were tested using different types of magnetic materials, gap sizes and materials, and head windings. To make the heads, a precision optical lapping capability was installed along with a way of winding the coils on the assembled head segments. After trying many different head configurations, it was realized that there was a limitation in

recording high frequencies on magnetic tape. A point was reached where changes in the head configuration and the tape speed made little difference in the upper frequency that could be recorded. It was discouraging. There were a number of other groups that were working on the video recorder. One of these was RCA, and its chairman General David Sarnoff wanted one for his birthday. By 1953 they had demonstrated a system that ran at 360 inches per second like the first BCE machine in 1951. It had better quality using video compression, but only lasted 4 minutes per reel. The same year Sarnoff of RCA and his board of directors visited BCE to see if they could buy our recorder. The party arrived on 13 March 1953 in a number of black limousines. Sarnoff was in the first dressed in gray and the board in the rest, dressed in black. As Sarnoff marched up the driveway the board fell in two-by-two behind him. They went into our small laboratory for the demonstration. Sarnoff sat in the middle and the board on either side of him. After the demonstration they went upstairs to the conference room. Sarnoff told Frank Healey that he wanted to buy the recorder, and Frank told him it was not for sale. Sarnoff told Frank that he would just buy them out; to which Frank replied “You do not have enough money!” The RCA group left.



The BCE Mark III video recorder in 1955.

During this period the tight loop drive was perfected, and the correction of wow and flutter effects addressed. Much of this work also was used to improve the recording of the instrumentation telemetry. In the summer of 1953, I met Eugene Sakasegawa who was chief engineer of the USC television station. We were still looking for people who were good engineers with video experience, and I encouraged him to join us. He was hired, and his first assignment was to learn how to make magnetic heads. Gene was a craftsman and took up the challenge. After a couple of months of building new types of heads and not making any progress, Gene produced a head that broke the 1 MHz frequency barrier. Jack and Wayne could not believe it.

When asked what he did to make the head, he said that he made some small cuts inside the head to make it look better. He had been lapping the head halves to create a uniform gap and also the head face. These actions did make a small difference in the performance, but

the “beauty treatment” was the key. The head laminations at the head gap were different widths and caused a non-uniform magnetic pattern across the tape (top to bottom). Gene had made a very accurate cut behind the head gap across the laminations. This cut made them the same thickness and caused the magnetic pattern across the tape to be uniform.

A number of different cuts were tested until the proper configuration was found. The result of this head “beauty treatment” led to new designs for recording the video information. First, the tape speed of the Mark II was reduced to 120 ips., but it was soon followed by the “Mark III” recorder that operated at 100 ips with half-inch tape using longitudinal recording and no scanning. It recorded color video and sound with three heads - video, color, and sound/reference. The recorder also employed video compression techniques, and an early version was demonstrated in February 1955. The recorder was further refined and demonstrated in June 1955. Based on the performance of this new recorder CBS ordered three of them, and the summer of that year we worked building them.

Unknown to us in September 1954 Ampex had resumed their development of the rotary head recorder that they had stopped in 1953. Their visits had stopped in early 1954, and it was assumed that they had lost interest in the project. Our head development was made known to them, and it may have been the solution to their problem as it was to ours. The rotary head would not have been able to record the required frequency bandwidth without the modified head. It appears that Bing had been kept informed about the Ampex progress, and in late 1955 he asked Jack Mullin to visit Ampex to see their video tape recorder.

Jack went to Ampex near the end of the year and came back with the news that it was over, Ampex had a better recorder. Bing sent another \$50,000 check to Ampex for the first of their video recorders. It was delivered to

his TV station in Washington State. Ampex demonstrated their rotary head machine on 14 April 1956; CBS cancelled their order with BCE and bought the Ampex recorder. The Mark III recorders were then converted to wide band instrumentation recorders and sold.

The Wideband after Video

The year 1956 began with a new direction for the Electronics Division; the video tape work was over and the group was to be sold. The new direction for the group was established by an order from the Air Force in 1954 for an airborne wideband recorder. Much of the development work done for the video recorder could be used to build a wideband longitudinal recorder; so the core of the BCE technology was not lost. The tight loop drive, high frequency heads and record and playback electronics were used for the airborne recorder. However, we had to make the unit more compact and lighter weight. The other specifications that were new to us were shock and vibration. We had to shake and drop test the top plate on which the motors and electronics were mounted. It was made of cast aluminum with mounting brackets, and during its first drop test it broke.

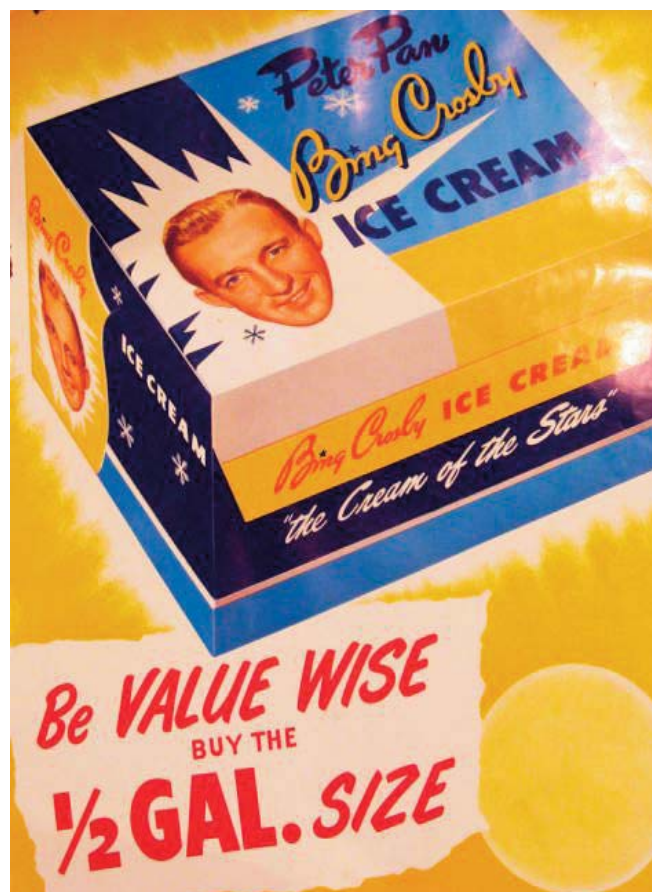
The Mincom (3M) broadband recorder at Sylvania EDL.

It was another case of having to learn a new design approach, the world of military standards. When the top plate was machined the corners of the mounting brackets were made sharp, and that we learned put a lot of stress on the point where the brackets attached to the top plate. Once rounded corners were used, the test was a success. We were not really equipped to do major mechanical operations, and that was one reason for not trying the rotary head approach. Another problem was solved by the bathroom sink and a can of Drano. Aluminum parts had to be anodized, and so this process was done in the sink with Drano. We had the cleanest drains on Sunset Boulevard. Through all of these new standards problems, the recorder took shape and was tested in late 1956. It was installed suc-

cessfully in the spring of 1957.

During 1956 Bing Crosby's brother, Everett, was tasked with finding for a buyer for the Electronics Division. While the video market was lost to Ampex, the success of the wideband recorder was the solution to the new instrumentation problems that required bandwidths beyond the traditional 100 kHz recorders. With Ampex focused on the rotary head technology that chopped some types of signals, there was an opening for wideband longitudinal recording that did not have any head switching. The 3M Company was finding that in order to keep up with the competition it had to move into the equipment market. An agreement was reached with Bing Crosby Enterprises in August 1956 to buy the Electronics Division. The transfer was made in 1957 after the Air Force contract was concluded.

When I returned to California that year from college, I found a different organization.



The changeover occurred while I was traveling across the country. Jack Mullin, who was my trusted mentor, told me that I could stay, but there was much more to the world than where I had spent my last six years. I took his advice, and found myself at Sylvania EDL in Mt View, California. It was quite a change, but before long I was designing systems that had the 3M Mincom wideband recorder in them. It looked very familiar since it was based on the Bing Crosby recorder.

Jack Mullin went to 3M along with many of the Crosby group. Eugene Sakasegawa (Saki) started his magnetic head business, and the Saki magnetic head was known as one of the best. Wayne Johnson consulted with Sony in Japan on video tape recorders and became involved with the Winston tape recorder company that was started by others from BCE.



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It is the policy of The Old Radio Times not to accept paid advertising in any form. We feel that it would be detrimental to the goal of the Old Time Radio Researchers organization to distribute its products freely to all wishing them. Accepting paid advertising would compromise that goal, as dealers whose ideals are not in line with ours could buy ad space.

That being said, The Old Radio Times will run free ads from individuals, groups, and dealers whose ideals are in line with the group's goals and who support the hobby.

Publishing houses who wish to advertise in this magazine will be considered if they supply the publisher and editor with a review copy of their new publication. Anyone is free to submit a review or a new publication about old time radio or nostalgia.

Dealers whose ads we carry or may carry have agreed to give those placing orders with them a discount if they mention that they saw their ad in 'The Old Radio Times'. This is in line with the group's goal of making otr available to the collecting community.

We will gladly carry free ads for any other old time radio group or any group devoted to nostalgia. Submit your ads to: bob_burchett@msn.com

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THE NEXT BIG THING IN OLD TIME RADIO FLAC!!!

INTRO:

For some time now (several years!), sound purists of the musical persuasion have engaged the use of lossless audio codecs as

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INTRO:

For some time now (several years!), sound purists of the musical persuasion have engaged the use of lossless audio codecs as a means of archiving, listening, and distributing sound files. Of all the formats used for such purposes, the FLAC codec is perhaps the most popular. As with other things, old-time radio collectors aren't exactly on the cutting edge of anything. It is expected that the last strongholds of MP3 collecting will be radio shows. We'll deal with MP3, its pros and cons, throughout this article as we compare and contrast FLAC with lossey formats.

WHAT IS FLAC?

In brief, FLAC stands for Free Lossless Audio Codec. Like the WAV codec, it represents the full spectrum of sound that we are capable of capturing, in an accomodative way of

speaking. WAV files are often used as an intermediate staging area before conversion to FLAC, although with some recording software this intermediate stage is not necessary. The MP3 format relies on psychoacoustic trickery, tossing out a majority of the data in hopes that your brain will not miss hearing it. (This is a simplified explanation of course. There is a valid argument that all digital sound is lossey, and for that matter, all recorded sound in ANY format is lossey. It is not the purpose



Just got all my collection transfered over to MP3's, and now I have a new program to use

of this writing to argue these matters or to discuss digital sound quality beyond the typical 16 bit/44.1 kHz "CD quality".)

More than just a compression format, FLAC is simply more efficient at representing waveform data than its WAV counterpart. A gallon milk jug makes for a good analogy. Let us suppose that a milk jug represents a WAV file and a refrigerator represents your hard drive. No matter how full or how empty that milk jug may be, it still takes up the same amount of space in your fridge! On the other hand, we have another sort of collapsible container which represents a FLAC file. If the quantity of milk is a gallon, then that container is a gallon in size. If there is only a pint of milk, then the container is only a pint in size. With FLAC, less data equals less space.

A little experimentation will further illustrate this point:

FILE SIZE COMPARISONS

For comparison, let's examine an "empty jug." A WAV file and a FLAC file are created (44.1 kHz, single channel), each containing 60 seconds of silence with the resultant file sizes: WAV = 5,292,044 bytes (5.04 MB)
FLAC = 13,616 bytes (13.2 KB). That is KB as in kilobytes, not MB as in megabytes.

* Zipping a Flac file will not yield smaller file sizes. It will, however, contain it such that if it does not extract, then you know the download is corrupted.

For giggles, let's look at a 64 kbps / 44.1 kHz MP3 file of the same data. Whoa Nelly! 480,235 bytes, or 468 KB! That's a bit heftier than the Flac representation.

For our second example, let us compare "full" jugs by examining files of 30 seconds in length (44.1 kHz, single channel) containing generated white sound, which will on average fill up the frequency spectrum for the duration.
WAV = 2,646,044 bytes (2.52 MB)
FLAC = 2,597,339 bytes (2.47 MB)
If the files were indeed "full," both WAV and

FLAC file sizes would be more equivalent. A 64 kbps / 44.1 kHz MP3 lossey representation of this data is only 234 kb.

More intriguing than the math, a visual spectral frequency analysis may best show what you are hearing (or not hearing). The following pics are spectral view snapshots from the same 1.8 second area of a song in various formats. By the way, this snippet was generated from a CASSETTE copy of a 1943 Fibber McGee and Molly show, proving the superiority of some tapes over some feeble attempts at digital restoration and remastering. Audio for the above four samples (each are 1:46 minutes in length) may be downloaded for comparison by clicking the link for this [mediashare folder](#).

If you think the mp3 samples look bad, have a gander at a 1.8 second spectral analysis from a Gunsmoke episode (below). Here's the kicker: The show aired in 1961, was "restored and remastered" in 2003, and released on COMPACT DISC by perhaps the most well-known commercial old-time radio enterprise of our time. Yep, you're unlikely to hear tape hiss, or much of anything else for that matter. During that period of the company's existence, they stripped away so much sound in an effort to improve quality, that their shows are an unbearable listening experience. There's a lot that could be said about over-processed audio being surpassed in quality by MP3s which come from better sources, but that is another ballgame from what I wish to deal with here. I only bring it up to support this observation: When you see the phrase "restored and remastered," take it with a grain of salt. The statement has become marketing code to make you buy into the idea that the audio sounds better than what you'll find elsewhere. In very few cases the phrase is applicable and truthful. The majority of the time it is a con job. If excellent sound quality appeals to you, sample a company's products first before making any major purchases from them. Quality workmanship builds a reputation. Sources for excellent material are out

there, and your fellow collectors can point you in the right directions (which typically are not the biggest and most expensive business ventures associated with the hobby).

BENEFITS OF FLAC

First let us contemplate the status quo. Simply put, file size is file size. The smaller a file is, the more files you can place in the same amount of space.

So goes the argument for MP3s. It is a valid point. However, the facts surrounding that particular format's present prominent existence has little to do with our present need. Due to bandwidth and speed considerations of the internet dial-up era, the compromise in size and consequent sound quality was necessary for the efficient transport of sound. The MP3 format was an expedient compromise necessary in a low-tech era. Much has changed; MP3s are increasingly becoming shackled dead-weight.

Although file space will remain a factor in how we store and listen to sound, it is a factor which becomes more negligible over time. Consider the advance in media storage in the past few years. From floppy disks we've gone on to widespread use of CD-R, DVD-R, terabyte hard-drives, RAID servers, and even USB flash drives which can hold several uncompressed dvd movies. Rewritable Blu-Ray discs capable of 25 to 50 Gigabytes are here now. Solid state drives are already available, with expected gains in storage capability in the future. Blu-Ray and Solid State drives may not be within the economic grasp for many of us presently, but like every other technology, they are expected to become affordable for the masses. Sometime within the decade they should become downright cheap. Also consider the state of the internet. For America to become more productive, high-speed internet is necessary in all areas of the country. Stuningly, our Congress can even see that. Look for access to be made to all citizens in the near future, and with it an eradication of dial-up services. Spread it man, spread it. Yes, dial-up is still the only way some people can-



We old guys don't want mess with with it

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FLACs will never fit in the amount of space that MP3s do. But does FLAC fit our present and fu-

A lot of us are glad we haven't started with the MP3 yet, and can start with FLAC



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1. See the subtopic on FILE SIZE COMPARISONS above. File size is compressed, but sound quality remains intact. It efficiently represents a digital waveform without loss of data. It is not unusual for mono spoken word audio, such as most of OTR is, to be only 38% to 46% of the size of an original WAV file. I have seen some cases where a flac file was only 34% of the intermediate WAV file. Storage-wise, approximately THIRTY HOURS of the best quality single-channel audio will fit onto one 4.7 GB DVD-R. (How many stereo OTR shows are there? Yup, all you need is mono.) A 50 GB Blu-Ray disc should hold approximately 300 hours of mono audio in this format. Is that enough for ya? So what if a Blu-Ray disc will hold 1,800 hours of crappy sounding MP3s. If you listen to OTR with the intention of understanding what is being said, and only expect to listen to the BEST sounding OTR for 24 hours a day, 7 days a week, then one Blu-Ray disc of full-quality radio shows in FLAC format will keep you busy for 12.5 days. Thirty disks (30) for a full 'round-



I don't have time left to convert my collection so, I'll be content to enjoy cassttes. The sound is fine for the age of my hearing.

the-clock year of audio won't take up so much room that you're forced out of house and home will it?

2. Flac files support tagging. Yes, one of the nice things about MP3 is the ability to insert text information into the file that can be displayed by your media player. This too is available for Flac. Both formats have the upper hand over WAV in this regard. (If wavfiles support tagging info, I haven't seen it.)

3. Flac files can be converted into other lossless formats. Here is a definite advantage. Nothing is given up in the conversion. In contrast, anything converted to MP3 becomes significantly inferior, and the lost data can never be replaced.

4. If you can play MP3s, chances are excellent that you can play FLAC files TODAY. Depending on your preferred media player, you may instantly be able to play FLAC files. Or, you may simply need to download a small plug-in to help your media player decode the files. At the very most you will have to download a new media player, and you can likely get a good one for FREE. Apparently many portable players such as ipods can also take advantage of Flac with software or firmware upgrades. As the momentum of this format mounts, expect to see support from more devices such as stand-alone CD, DVD, and Blu-Ray players for homes and horseless carriages. See the subtopic "Where Can I Get Flac?" for more info.

5. Digital restoration is possible with Flac. Lossless by definition, new enhancements can be applied when they are developed. With lossey format files such as MP3s, so much is damaged or missing that digital restoration is virtually moot.

WINNERS AND LOSERS

So who are the real winners and losers in the audio format wars?

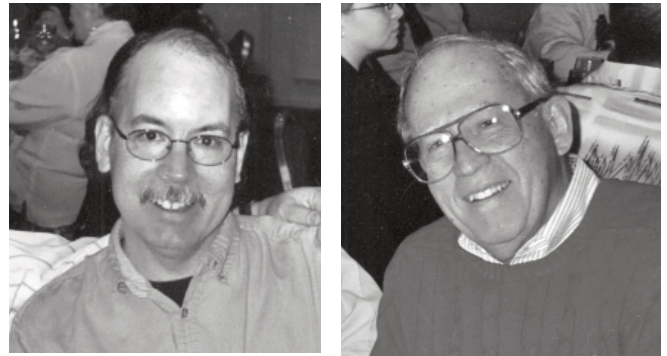
As individual collectors, we fall into one or the other.

Those who are so resistant to change that the inevitable swallows them up before they can upgrade their collections will not

be the winners. Witness the digital revolution. Collectors who ignored it and hoped it would go away got caught with their pants down. Most OTR cassette dealers went out of business. Piracy has just about finished off what complacency couldn't.

Those who adhere to a dead digital format will not be winners. Those who switched to MP3 and dumped their original tapes and transcriptions are about to be left out in the cold. Why? Because there is no room for improvement in that house, and it could stand much renovation. Cutting off one-twelfth of the Mona Lisa, making mimeograph copies of that small portion, and then passing them out to one billion art patrons, does absolutely NOTHING to preserve that work of art! Those who properly converted their materials into a lossless format such as WAV, or retained their first and low generation reel-to-reels, transcriptions, and cassettes, have the best chance for evolving with technology. Some series on cassettes which could be found in abundance a few short years ago are now in short supply, or just impossible to find today in good quality. Many of us well remember the beginnings of MP3, when folks who had very lousy lossey realaudio files transcoded them into MP3. What an outcry!! How dare they foist their inferior copies on us?! As the acceptance of Flac and other lossless media blossoms, you know a flood of lossey MP3s will be transcoded over to the newer standard formats. Once again, collectors will have to weed out the bad from the good. Sellers and trading collectors who pass off inferior materials will be known as mud.

Is there any doubt that MP3 is a dying format? One only has to look at what is being traded online. MP3 sound groups on usenet are dying off, being replaced by very active lossless groups. Movement within the OTR MP3 groups on usenet is slow as molasses. Much of that can be explained by the yahoo and other snail-mail distro groups and a 'permanent' home for some mp3s readily available on the archive.org site. The fact remains that OTR collectors are saddled with MP3



These two guys can't convert MP3's and don't want any thing to do with FLAC.

while the rest of the world is slowly but surely moving on... and they're picking up speed. Where will you be when the lights go out? Yes, the winners will be those who look ahead and make viable plans for the future. Collectively, the hobby of old-time radio collecting will be both a winner and a loser. Some withered portion will survive for future audiences. Sadly, the skeletal remains of many radio shows will only be found in mp3 files. Sufficient preparation for preservation will have been overlooked for many shows. The best copies that will EVER be available of certain series will be icky poo poo MP3s, because some dimwit destroyed the original copies!!!

WHO CAN USE FLAC?

Do you use Linux, Mac, Windows? Flac decoders are available for you. Do you use Winamp? It has native Flac support. VLC media player? No problem. Do you use Adobe Audition for editing? There is a free plug-in available for you. Although Microsoft has yet to officially support Flac at the time of this writing, there are third party plug-ins and tag support which allow Flac to work with Windows Media Player. A host of plug-ins are available which will allow you to use Flac on virtually any computer. Do you have an Apple ipod, Archos, iriver, or other mp3 player? www.rockbox.org may have open source firmware for you.

WHERE CAN I CATCH SOME FLAC?

Go to <http://flac.sourceforge.net/> for the codec, links to plug-ins, news of artists who re-

lease digital downloads in this format, etc.

WHY CAN'T I TELL THE DIFFERENCE IN SOUND QUALITY BETWEEN MP3 AND FLAC FILES?

There may be several reasons why you can't distinguish the best sound.

1. You may have hearing loss. Age can be a deciding factor. However you can also ruin your hearing by listening to crappy music. Sorry, but there may be no help for you.
2. If a Flac file has been transcoded from an MP3 or other lossy format file, it will not sound any better than the original.
3. If an MP3 is encoded at a sufficiently high bit-rate, it may retain just enough data that you can't tell the difference. More often than not, people who can't tell the difference are those who don't have the originals for comparison. The question remains, why destroy 9/10 of the data when it is unnecessary and time consuming to do so?
4. Your equipment makes all the difference. Are you listening via computer desktop speakers? They may not be sufficient to reproduce the true quality of the sound file. Connect your soundcard to your stereo equipment's inputs. Remember component stereos? Whether you consider your stereo to be a peripheral of your computer, or the other way around, linking the two should be as natural as attaching a television to a dvd player or vice versa. Stereos and computers are star-crossed; they're fated to be together. If that isn't a good solution for you, try using headphones. Headphones, however, may reveal more detail than you're comfortable with hearing.
5. Your environment affects how you listen. Clickety-clack ---- If you're riding on a train or public transportation, quality sound doesn't matter so much when you can't hear above the noise anyway. Although, it can also be said that in a noisy situation, a good clear-sounding file stands a better chance at being understood than a muddy low bit-rate MP3. Good music and other forms of audio entertainment are best enjoyed where there are



This young man can't wait to get started

fewer distractions. In this wireless age, you should be able to listen to what you want in any part of your house. With wireless transmitters and speakers, you can move from one room to another without missing a beat.

That's all the meanness I got for now, Hoss.

Jim B. Well, I have bit the bullet and made the switch to FLAC. I will be getting these from several sources, including another private buyers group I belong to and from Ted, and the Purchasing Group. But not everyone is willing to make the switch to FLAC and for the time being, it will be a mixed bag Here are some that I just posted to the Library that are supposed to have been previously unavailable.

At Ease - #1508 - AFRS - Victor Young & the Orchestra (cleanedRAcoQ).mp3
Ellery Queen's Minute Mysteries - 0130 - 00-00-00 - Mysterious Murders.mps
Enchanted Hour #123 AFRS.flac
FBI in Peace and War 531021 #188 The Treasure Hunt AFRS.flac
Father Knows Best 540304 #150 Spring Cleaning AFRS.flac
Jack Benny 540207 #367 AFRS.flac
Let's Pretend 540717 #328 Jason and the Golden Fleece AFRS.flac
Mr and Mrs North #119 Malice Toward None AFRS.flac
My Little Margie #34 AFRS.flac
Name That Tune #40 1 st Tune Dixie AFRS.flac
Our Miss Brooks #162 AFRS.flac
Symphonette #131 AFRS.flac
The Whistler 530816 #287 Curtain AFRS.flac



Going strong for 30 years, the **Metropolitan Washington Old Time Radio Club** brings people together who have an interest in Old Time Radio (OTR). This is done through monthly meetings consisting of presentations about OTR stars and programs, and recreations of classic OTR shows, plus occasional performances of member-penned scripts produced in the OTR style.

Radio Recall is our illustrated twelve page journal published every other month, edited by Jack French, OTR historian and author. Articles by Jim Cox,



RADIO RECALL

Metro Washington Old Time Radio Club



Martin Grams, Jr., Karl Schadow, Jim Widner and other OTR researchers. OTR book reviews, upcoming OTR events, and historical footnotes. Available in full-color PDF via email, B&W hardcopy via USPS, or distributed to members at meetings.



Gather 'Round the Radio (GRTR) has been a monthly e-Newsletter feature of the Club since 2005, containing book and

music reviews, bits of nostalgia, and essays by Club members. Recently the GRTR has morphed into The GRTR Studio Edition which is a fanciful use of the format of old-time radio variety shows, and the popular NPR talk-show "Fresh Air." GRTR brings lively information about entertainment and nostalgia.

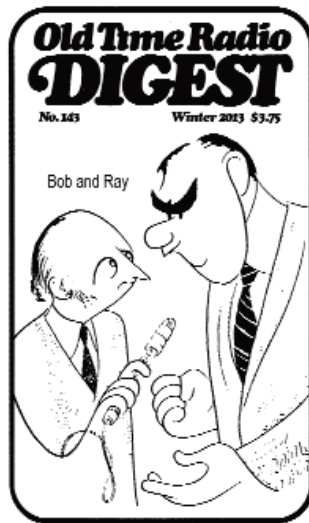
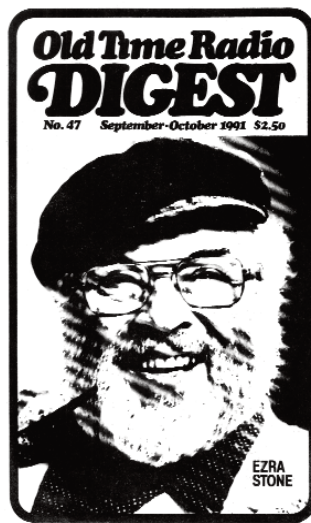
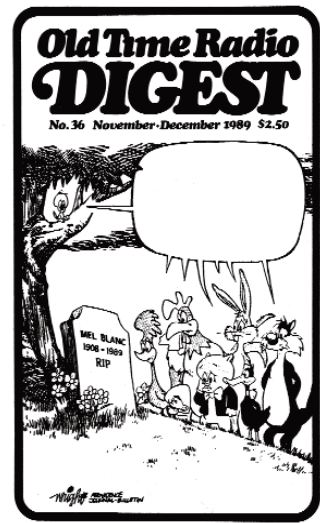
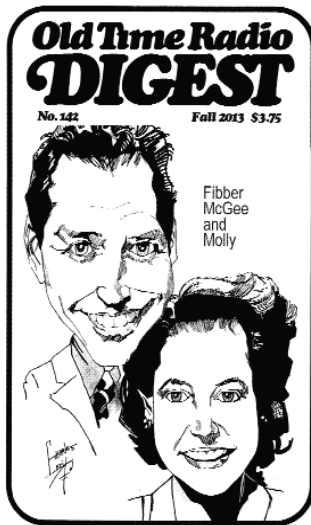
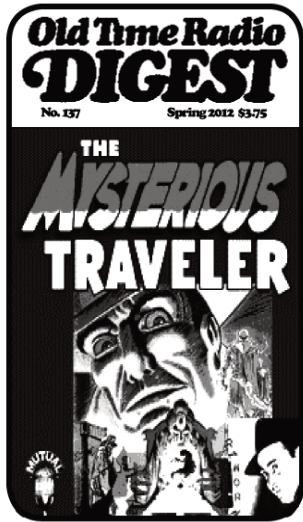
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LUM and ABNER



BASED ON
CHARACTERS
CREATED BY
CHESTER LAUCK
AND
NORRIS GOFF

In a 1933 *Lum and Abner* broadcast, Lum, Abner, and Grandpappy Spears "foller th' East Star" through the snow with supplies for a poor young couple forced to spend a cold night in an abandoned barn. In a manger, the wife, tended by Doc Miller, gives birth to "a fine baby boy." This touching story, symbolic of the Biblical account of the birth of Christ, was reenacted annually until *Lum and Abner* left the air. "Lum and Abner's Traditional Christmas Story" was revived in syndication and can be heard to this very day.



Donnie Pitchford

Merry Christmas!

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For more info: www.lumandabnersociety.org + Facebook: "Lum and Abner Comic Strip Group"

LUM and ABNER #39
BASED ON CHARACTERS CREATED BY
CHESTER LAUCK & NORRIS GOFF

'CORDIN' TO TH' ALMANAC...
1984: The National Lum and Abner Society was formed to help preserve the heritage of Lum and Abner!

THE NATIONAL
LUM & ABNER
SOCIETY
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*"CAPTAIN COSMOS" © 2017 NICOLA CUTI
THUS ENDS OUR MYSTERY, "MURDER! IN PINE RIDGE?" Donnie Pitchford

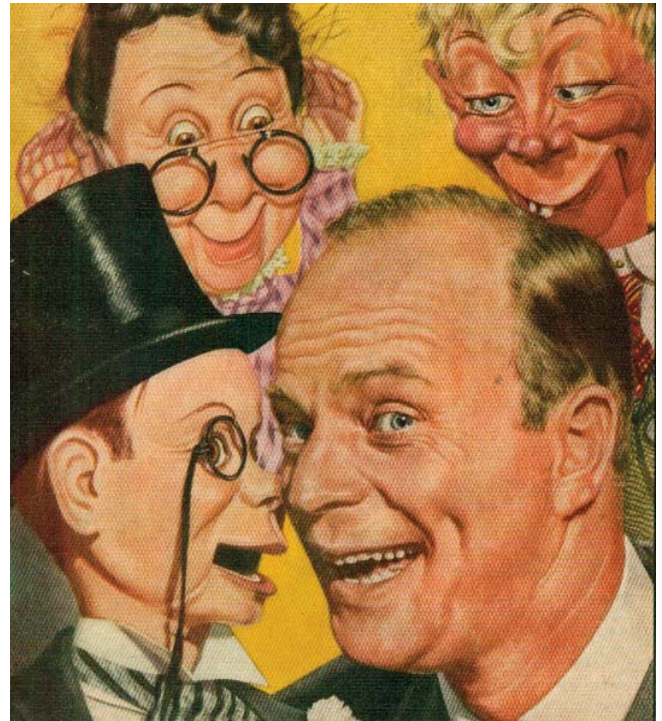
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For more info: www.lumandabnersociety.org + Facebook: "Lum and Abner Comic Strip Group"

Cultivated Groaner

During the past seven years Edgar Bergen has made himself a national figure largely by talking to himself. He has done this with the aid of an apparatus called Charlie McCarthy, which has become an even more popular national figure, and probably more human to a larger number of people than any inanimate object in world history. It takes only the mildest indulgence in the world of fantasy to be persuaded that Charlie, a fellow of infinite and raucous wit, is actually alive.

Last week, as usual, millions of U.S. citizens gathered at their radios (NBC, 8 p.m., E.W.T.) to hear McCarthy confront and confound one of the nation's names. This time it was McCarthy (who, of course, always has Scriptwriter Bergen on his side) blithely opened up: "Oh, Orson! ••• Oh, Wellesie! ••• Where is old fatso?" Welles came out of the wings at NBC's Manhattan studios, and McCarthy chirped: "Whdon't you release a blimp for active service?" Once before, Welles had taken even worse abuse from his radio host. That time the actor had asked "the Magnificent Splinter" what he thought of the Welles efforts on the air. Said McCarthy: "At first I thought something had died in my radio."

Welles took it handsomely, as do most of McCarthy's targets, who are invariably delighted to be ribbed by such a super-eminence. In his wooden insouciance, Charlie gets 'away with a candid vein of comment which is unprecedented in radio. Via a small-boy character (which helps), Bergen manages a titillating form of malice-without-malice. To judge by his audiences, it is all hugely satisfying to the U.S. public. Charlie called Gossipist Louella Parsons an "old blabbermouth," while confiding in an aside that "every- thing will be all over town tomorrow." He referred to Emily Post as "a vulture for cul-



ture" and dismissed her with: "It's been a charming evening. By the way, Miss Emily, you don't have a .toothpick on you?" He asked rippling Paulette Goddard with elaborate sweetness: "Take away your face and your figure and what have you got?" Of Beatrice ("Advice to the Lovelorn") Fairfax he naughtily inquired: "Where do you learn all the things you tell the young folks not to do?"

Magic and Black are so irresistible is McCarthy's personality-saucy, lethally precocious and irreverent-that it is all but impossible for listeners to remember that he is a ventriloquist's dummy. The instinct to forget it is natural; no such coldly mechanical term could possibly describe the complex psychological relationship between Charlie McCarthy and Edgar John Bergen. through high school and almost through his life. He began by putting Bergen Northwestern University, and got him into Delta Upsilon. Charlie was whittled out 25 Charlie has supported Bergen most of years ago by a Chicago barkeep named Mack (price: \$35). He

was modeled on a sketch Bergen made of a reared-headed Chicago newsboy. Bergen was then 16, the gawky, moody second son of a Swedish immigrant named Berggren who had run a retail dairy business in Chicago and a farm near Decatur, Mich. At eleven, Edgar Bergen had found that he could throw his voice (his mother was forever answering the door in response to pleas of mysterious old men who begged to be let in). The boy was further inspired by Herrman's 'Ards Manual, Secrets of Magic, Black Art, Mind Reading' and Ventriloquism (including a chapter on "how to cut a man's head off and put it into a platter a yard from his body"). Charlie McCarthy was just what Bergen needed. The little dummy was such a social success (unlike Bergen alone) that he lured Bergen from his university premedical studies into vaudeville. For ten years, through the decline of vaudeville, into the nightclubs of the middle '30s, they made a living, but that was all ventriloquists were classed with jugglers and acrobats.

"I'll Mow-w-w-w You Down." The turn in their luck came in Chicago. Out of work and deeply discouraged, Charlie and Bergen got a week's tryout at the Chez Paree nightclub. At 3 o'clock one morning they came on for their final performance. The club was almost empty. In the middle of their act, Charlie suddenly reared up, turned to Bergen and said: "Who the hell ever told you you were a good ventriloquist?" Bergen blushed, fidgeted, tried to put his hand over Charlie's mouth. "Don't shush me," Charlie continued. "I'll mow-w-w-w you down. You better go back to the farm and leave me alone. I'll get by, but you're all through, brother, all through."

Charlie then turned on the customers and told them they were a disgrace to civilization. Bergen put him on a chair and backed away. Charlie went right on giving the customers a piece of

Bergen's innermost thoughts. The management was getting nervous, but the patrons howled with laughter and pounded the tables. Backstage later Bergen was saying: "I just had to get that off my chest."

But he was a hit and he stayed on, until Manhattan's lofty Rainbow Room bought Charlie's raillery. In keeping with this swank setting, McCarthy appeared in top hat & tails. Then Rudy Vallee put him on the air. Bergen had finally found his proper medium of communication: the microphone. Previously, many of Charlie's asides and much of their patter had been lost to the audience. Swift give-and-take (mostly give) is the essence of McCarthy's humor. How everybody could hear it.

Who Made Whom? The McCarthy-Bergen relationship has often caught the eye of psychologists who analyze it in such terms as split personality, inferiority complex, the subconscious expressing itself. No one of their analy-



MCCARTHY, BERGEN & DUMMY (1921) At 3 o'clock one morning Charlie spoke his piece.

ses has satisfied Bergen. Says he: "I will say that Charlie's personality is as opposite from mine as it can be, and that I envy him. I wish I could walk into a room like CharlieTo me it's quite remarkable that this carved piece of wood ... should be so ... important. He can be invited to the White House, consulted by OWI, received by the royalty of Europe, ... It's ridiculous, even, that my appearing any place without Charlie is a complete failure. I do think it's a case of the tail wags the dog.

"But no matter what he says, no matter what he says about me, I have made him everything he is today The public insists I am a little eccentric. That is not for me to judge. I may be a little jealous of Charlie, Sometimes it is hard for me to explain why I have to have Charlie there to get the laughs. But he did a good show last Sunday and then I liked him."

Edgar Bergen's friends think they know why he has to have Charlie there. Pink-cheeked, blue-eyed, 41-year-old Bergen, as Scandinavian as a troll, is as shy a Charlie is brash (Charlie: "He's an emotional hermit"), He is neat & clean to the point of obsession. He takes vitamin pills, daily exercises, Swedish baths, keeps fruit handy on a side table. His normal voice is soft and reminiscent of Charlie's. His idea of a perfect Saturday afternoon is to go home alone and pore for hours over his suitcases of old magic tricks.

In public, he can be brilliantly witty -- even bawdy, but without Charlie he is more likely to be musing, easily bored, prone to doze and dream. Charlie McCarthy is his sly vehicle for a set of highly irreverent opinions on society in general. Charlie has also been of considerable sentimental aid to the bachelor Bergen.

Their relationship, a profitably aired between them, has long since become one of the most

public properties. "What would you be without me?" asks Berge and Charlie answer : "Speechless." They haggle over Charlie's weekly stipend of 75¢. Bergen is sensitive about his balding head, but Charlie isn't. Advised that Bergen has a girl friend who loves to run her fingers through his hair, Charlie adds: "Or pat the roots."

Belly-Prophet_ Charlie's personality was real to many people almost from the first time' he went on the air. Bergen did nothing to discourage this. Then the great W. C. Fields joined the program for a season and railed away at Charlie's vital fabric ("blockhead, woodenhead, flop-house for termites") with threats of axing him to death, otherwise treating him as a dummy. Despite such campaigns- as Fields's, the illusion that Charlie is a person remains. People often call Bergen Charlie. When Charlie greeted Eleanor Roosevelt for the first time, she spontaneously started to shake hands with him.

Other ventriloquists may be more technically adept than Bergen, but he has the great illusion-making power which springs out of imagination, taste and an accurate sense of comedy. He is a scholar as well as a student of his art, and wrote the Encyclopedia Britannica's article on it. The Greeks called their ventriloquists "belly-prophets," and Bergen feels that the art undoubtedly lay behind the ancient speaking statues and other temple oracles. As to the requirements, Bergen says: "Ventriloquism is a cultivated groan. It is as much of a gift as a good singing voice. If you have the gift and if you are a good mimic, then you have a start in the right direction. It is something you can learn as you can learn to be a good singer." But once achieved, the ventriloquial quality can be lost. Bergen works hard on his vocal exercises, practicing high notes, keeping Charlie's

voice separate from his, etc.

"He Really lives There." Charlie lives the life of Riley now. He and Bergen are not millionaires (their belated success coincided with high income taxes and Charlie gets no income-tax exemption), but they are very well off. Chase & Sanborn pays them \$7,500 weekly (\$10,000 beginning next January); they now get \$150,000 for a motion picture; and their toys, games, etc. yield another \$75,000 annually.

Charlie travels in style in a plush-lined trunk. His bedroom in Bergen's comfortable home on a hilltop outside Hollywood is just a shade smaller than Bergen's huge one. Bergen's conceit is to give Charlie a bed, furniture, tile bathroom with built-in shower, an array of perfumes and toilet waters. Charlie also has a dresser to get him into his \$75 suits (of which he has scores) and \$15 shoes (18 pairs). Among his other appurtenances are his Boy Scout uniform, jockey's silks, a ease-monkey's zipper suit, a chamber pot of the proper size. A dirty shirt hangs over the back of a chair (Bergen: "To show he really lives there"). Charlie's stationery bears his motto: E Pluribus Mow 'Em Downus. On his desk is a letter written, Bergen swears, in Charlie's own handwriting, addressed to his teacher: "Please excuse Charlie for being absent from school yesterday as he had lara laryn [crossed out] as he attended his grandmother's funeral."

Alter Ego. If Edgar Bergen (with pressagent help) has made himself a totem, few men have ever had more provocation. Bergen, who is fond of children, is seldom far from Charlie. He hires several gagwriters now in order to get some time to himself. But what they contribute to the show is mainly situations. Bergen gives the copy his own flavor. With the possible exception of Fred Allen, he is the most original gagwriter in the U.S. He finds brief intervals for his work-

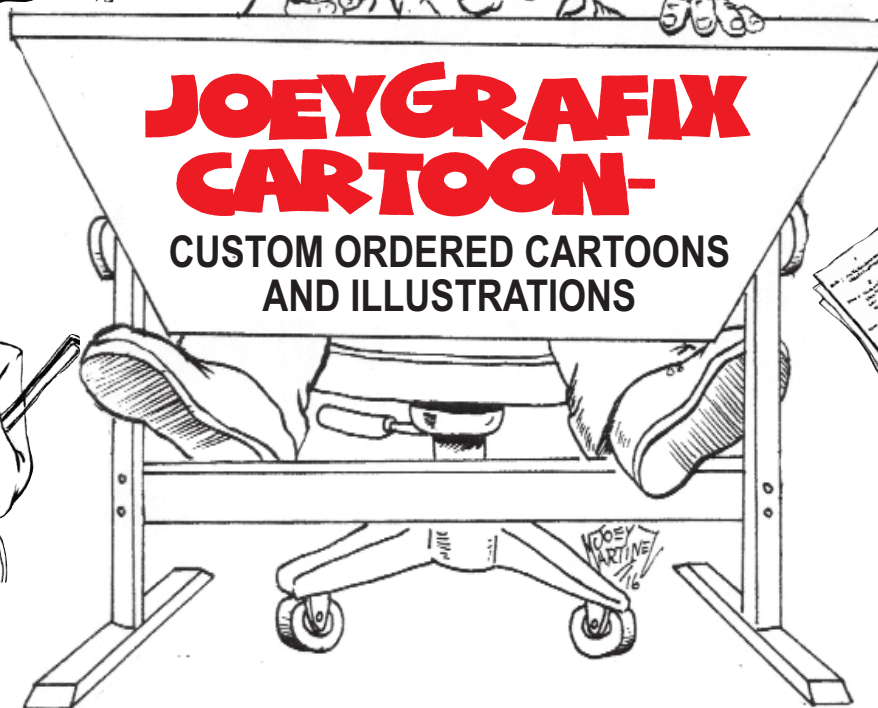
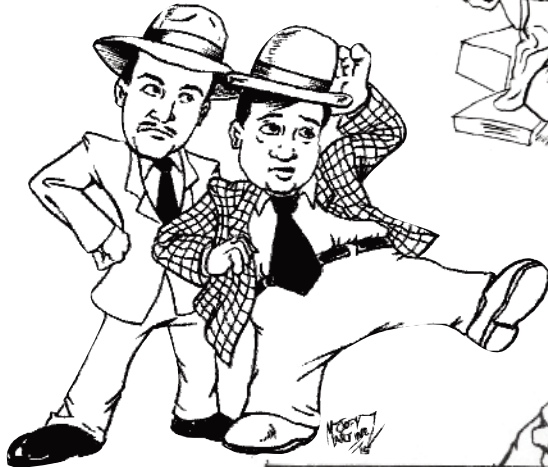
shop, where he builds steam engines; his desert ranch, where he likes to harvest the alfalfa; a ceramics business, a gold mine, a nonprofit foundation to help girls who want to study nursing. Says he: "I have to try to convince myself that I can stand on my own feet without Charlie. That is why I go into these businesses."

Out of challenge to himself, as much as anything else, Bergen created the different character of Mortimer Snerd, Charlie's gap-toothed, appleknocking pal. (Bergen: "Mortimer, how can you be so stupid?" Mortimer: "It ain't easy.") His still more recent helper, Effie Klinker, a lady and bachelor girl ("not an old maid ... she turned down three offers and has an independent income"), came into being for the same reason. There is also a stand-in dummy for "dangerous scenes" in Charlie's pictures. "But," says Bergen, "I have no love or sympathy for him."

Bergen has recently alleged a general restlessness: "I have reached rather an unfortunate time of my life. There is nothing more tiring than looking forward to five or six more years of radio. I am a creative artist and this is routine work now." But it is a reasonably safe bet that his original alter ego will never seem routine to him. Bergen has always been touchy about the backlap through which he manipulates Charlie McCarthy's movements. Once an insensitive friend stuck his hand through the flap, Bergen remained impassive, but Charlie sharply protested: "My God, is nothing sacred?"

TIME, NOVEMBER 20, 1944





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