On-The-Spot Recordings
Integral Part of Regular
News Broadcasts at WOR

Listeners Given Quicker Eye-Witness
Coverage of Special News Happenings

Equipped with a transcription library
valued at half a million dollars and a crack
staff of on-the-spot reporters, WOR-New
York has perfected the use of transcrip-
tions in news broadcasts to what probably
is its most mature development. This de-
velopment, increased since the war, results
in more authentic broadcasts and gives
listeners quicker eye-witness coverage of
news events.

Don Plunkett, Chief Engineer of Mary Howard Recordings, adjusts one of the mikes in the
spacious New York studio while an artist sits at the piano waiting patiently for Mary Howard's
cue to begin. Inset: Recording's own, Mary Howard.

Photos by Nancy Lader and Edward O'Jen

Larry Pickard, WOR writer, selects a disc from
the station's huge file of on-the-spot recordings.

When a news story breaks, such as the
search for the missing recluse, Langley
Collyer, WOR reporters are sent to the
scene wherever practicable to record de-
scriptions of the event which are in turn
inserted into regular news broadcasts.
Reporter John Wingate, for example, was
on hand when Collyer's body was discov-
ered, described the event and raced his
recordings back to the station so that
WOR listeners might hear a complete story
before the newspapers had hit the streets.
During recent investigations of the House
Committee on unAmerican Affairs WOR
newscasts were supplemented with record-
ings of actual testimony given during the
hearings.

The wedding of Princess Elizabeth fur-
nishes another example of the way record-
(Continued on Page 2)

The War Gave Mary Howard Her Big Chance to
Make Good in Recording; She Did — And How!

Before the War, many jobs in American industry were con-
sidered "man-sized" positions and therefore . . . for men only. But
the War and its tremendous drain on manpower soon gave the female
a chance to "strut her stuff." And one such lady, who took full advantage of this op-
portunity to prove that it wasn't strictly a man's world after all, was Miss Mary
Howard, daughter of a well-to-do New England family.

Mary Howard had a flair for good music
and records particularly intrigued her. To
satisfy her curiosity, she bought a record-
ing machine and started on her own trial-
and-error course in record cutting. Miss
Howard's interest in recording steadily
grew — and so did her recording equip-
ment. And then . . .

Mary Howard came to New York in
1940 and immediately applied for an engi-
neer's job at NBC. As girls weren't being
hired for that sort of an assignment, Mary
Howard had to be content with a secre-
tary's position in the engineering de-
partment. Then, her big break came. NBC, los-
ing man after man to the armed forces,
(Continued on Page 4)
The series, which Egner described as the biggest and most expensive syndicated recorded program undertaken by the NBC Radio-Recording Division, will be offered on a syndicated basis for spot advertisers over local stations.

Scripts are being written by Tom Langan, veteran radio author and a Radio-Recording Division staff writer, under direction of Gordon Webber, Radio-Recording continuity chief. H. H. Wood, manager of the division’s program department, is producing and directing the series. Special music is composed for “The Damon Runyon Theatre” by John Gart. Ed Herlihy will announce.

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ings are used to give listeners better programs. Highlights of the event, which took place too early in the morning for most American audiences, were transcribed, edited and re-broadcast at times more suitable for listeners. Such news coverage has the authenticity of newspaper plus the added advantage of speed presentation.

Transcriptions also provide a backlog of events and personalities of the past, and the WOR transcription library has on file voices and opinions of almost every national and international leader of the past two decades. When major issues of the past, such as elections or international conferences recur, WOR can summon at a moment’s notice, presidents, dictators, generals and a host of others to give their views on the same or similar problems.

Casual interviews with the unpublicized average citizen, as well as with the great and the famed, form a valuable index to public opinion. The reaction of the ordinary voter to national problems is naturally a consistent augury on political trends.

Few places are inaccessible to the radio reporter since the advent of the recorder and WOR has endeavored to make everyday folk the source as well as the consumer of news.

The use of the transcription in news broadcasting gives the listener better news service in spot coverage, a permanent reference of personalities and trends, and on authentic eye-witness account of events presented in a dramatic manner at a convenient time.

ATTENTION
The Editors of Audio Record welcome contributions from its readers. Any news concerning your recorded programs or other recording activities, that you believe will be read with interest by recordists, can be used. Photographs, drawings, or graphs needed to illustrate your material will be appreciated also. Address all contributions to:—The Editor, Audio Record, 444 Madison Ave., New York 22, N. Y.

By C. J. LeBel, Vice President
AUDIO DEVICES, Inc.
DISTORTION PROBLEMS
Introduction
With the rapid growth of FM radio, and its heavy dependence on records and transcriptions, it is time to reappraise our standards of recording quality. As has been found many times in many parts of the audio field, every time the frequency range of a system is increased, other elements in the performance of the system must be improved also. A wide range system will show up excessive noise and unsuspected distortion in most amazing fashion.

Whereas transcriptions were generally listened to (on the ordinary AM radio receiver) with an upper frequency limit of 4000 to 5000 cycles, on an FM receiver the usual upper frequency limit has been raised to 7000 to 10,000 cycles. Even a few minutes of listening under such conditions will show that pressings are often not as uniform in quality as their makers believe, for distortion varies from one to the next.

Kinds of Distortion
We will disregard the most easily remedied form of distortion — undesired variation of response with frequency. It is so easy to correct with electrical networks that a recordist with an incorrect response curve has only himself to blame.

Harmonic distortion, of course, is the type which the recordist first thinks of when the word “distortion” is mentioned. It has been a much discussed fault, and certainly should be reduced to a minimum before we worry about more elusive forms. The unit to measure the “minimum” by is not easy to define, however. The rms distortion is a widely used index number, but a poor guide to how objectionable the ear will find the sound. Second harmonic distortion is much less annoying than third, and higher orders are almost intolerable in exceedingly small proportion. This anyone can establish for himself in a few experiments.

Many of us have found numerous cases where harmonic distortion figures provided no guide to the annoyance value. One example the writer recalls was an experimental recording on wax, which bloomed out...
humid summer while awaiting processing. Another example was the distortion measurement being made on an early experimental lacquer formula. The sound was not quite right, so the pickup pressure was increased slightly. The 1000 cycle tone cleared up immediately — the improvement was rather great — but the distortion meter reading dropped only imperceptibly. As still another example, Roys has shown that the audible distortion created by overpolishing a stamper is not reflected in harmonic readings made on the pressings produced by it.

Nevertheless it is quite certain that if the harmonic content is high, we need look no further to explain why listeners are dissatisfied.

If the harmonics are low in value, we may still dislike the sound. In that case the next step would be a measurement of the intermodulation distortion. Whereas harmonic measurement is made with a single input tone, intermodulation testing is a measurement of combination tones produced by injecting a pair of frequencies. This method was first made standard in the film recording field.

We have deliberately omitted any discussion of transient distortion for lack of space. It is a fault not to be ignored, but certainly the industry needs to go further in minimizing better known defects before it worries too much about transient effects.

Intermodulation Tests

Intermodulation distortion provides a good explanation of why some recording systems are clean sounding with a single instrument, but fuzz up hopelessly with a full orchestra. Each tone acquires such a multiplicity of sidebands that definition is lost.

The usual test method is to introduce a low frequency tone and a medium or high frequency. Amplitude of the two may be equal, or they may be in a 4:1 ratio. A commercial unit uses 40, 100 or 100 cycles, and 2000, 7000 or 12,000 cycles. Another commercial unit uses these or other tones. Roys' principal work has been done with 400 and 4000 cycles.

Intermodulation Results

There has been little published work on intermodulation results. Hilliard has very briefly suggested amplifier reproportioning.

On discs themselves, Roys' work on the effect of overpolishing stampers is of great importance. No other data on disc system or processing characteristics has been published, but unpublished data on a number of the best systems presently in operation show low intermodulation as measured on the lacquer. This is not necessarily true of all systems, nor of all lacquers. Unpublished measurements by a number of organizations on the effect of processing seem to indicate it as the worst source of trouble. If we are to turn out transcriptions of consistent top quality, some species of control should be adopted. Overpolishing has been condemned for at least a generation, but it still continues.

Remedies

It has already been proposed that every master contain a few intermodulation test grooves. These could be used to check every pressing, and thereby the stamper wear. This proposal would certainly eliminate the accidental use of worn out stampers. It would not be a perfect check for overpolishing, as the process would simply be more careful in the vicinity of the test grooves!

As a supplementary means, it has been suggested that a test pressing from each stamper be sectioned, polished, and measured under the microscope. There is a certain amount of change of groove radius due to compression of the metal of the stamper, but any excess amount would immediately indicate overpolishing. Certainly, some such means will have to be adopted to narrow the quality difference between the lacquer original and the pressing.

References


In the speech training class at Concordia Seminary (Lutheran Church), St. Louis, Mo., a future minister speaks from a make-believe rostrum while a second student records the voice. Such recordings are made at the beginning and again at the end of each academic year in order that instructors might accurately gauge the student's speech improvement.  

St. Louis Seminary Uses Recording Equipment To Better Student's Speech

Discs Aid Future Ministers in Overcoming Various Speech Difficulties

The chief objectives in speech training at Concordia Seminary (Lutheran Church) in St. Louis, Mo., are to free the students from self-consciousness and performance-reflexes, to equip them for direct speech from rostrum and microphone, and to overcome bilingual patterns incurred through previous environment. Such was the recent explanation of R. R. Caemmerer, Director of Speech at the Missouri seminary.

When asked to explain just how recording equipment is used at Concordia, Mr. Caemmerer replied: "Each student makes a recording of selected readings, from three to five minutes in length, near the beginning of each academic year. After an instructor has analyzed this recording privately with the student, pointing out special problems to be overcome, the student begins a series of clinical practice periods.

"In this speech clinic," Mr. Caemmerer said, "the student endeavors to remedy problems classified under bilingualism, vocal quality, reflection and interpretation, rate and phrasing. (The therapy is carried out largely by means of the wire recorder.)

"Then toward the end of each year the students make a recording, in pairs, of an extemporaneous conversation. This recording," Mr. Caemmerer added, "is analyzed with the students to point out gains achieved through the therapy or through a less self-conscious situation."

The speech director also explained that full-length recordings are made of projects in radio evangelism and radio dramatics by the seminary's own radio station, KFVO, located on the St. Louis campus.
War Gave Mary Howard Chance to Make Good in Recording; She Did
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decided the comely secretary deserved a chance to cut a disc and be paid for doing it. Mary was a big leaguer from the start and in no time at all, the trade took her on as a master recording engineer.

Her work at NBC gave Mary Howard ideas—big ideas of opening her own recording studio. And just to prove she wasn't daydreaming, Mary Howard invites you to visit her studio (Mary Howard Recordings) at 37 East 49th Street in New York any day you wish.

Since Miss Mary Howard set up her own "shop", a little over two years ago, many of the biggest names in radio have used her facilities. Such outstanding personalities as Alex Templeton, Eddie Duchin, Ethel Waters, Fred Waring, and many others, have come to Mary Howard Recordings because they knew that this Howard woman, when it came to making recordings, was "perfection on parade."

Mary Howard Recordings functions primarily as a recording service and its operations, besides cutting instantaneous masters, includes line and air checks of all descriptions, studio recording and slidefilm work. In the last year Mary Howard Recordings released their own commercial records. The Herman Chittison Trio, Ethel Waters, Lucille Turner and Dale Belmont are a few of the artists who made recordings under the MHR label. And, like the thousands of other recording companies, Mary Howard Recordings is waiting patiently for the Petrillo ban to be lifted so they can 'get going' again.

Cutting equipment in Mary Howard Recordings, according to Chief Engineer Don Plunkett, Mary Howard's able assistant, consists of: Van Eps and Allied Cutting Lathes, Presto 1-D Heads driven by Langevin 101-A Amplifiers. "Our mixing equipment," Mr. Plunkett explained, "is interchangeable by means of patching Our Preamps and Our Program Amps are Langevin. Re-recording equipment at MHR," Mr. Plunkett said, "consists of Allied Transcription Tables and Pickering Reproducing Equipment, which have served us most efficiently of all pickups we have tried. This combination—Allied TT's and Pickering Pickups—we find the most flexible for composite recording."

Audio Record asked both Miss Howard and Mr. Plunkett what their particular techniques were—what they did to insure good recordings. To this query, Miss Howard replied: "We are of the opinion that a compact, consolidated recording and control room, combined adjacent to and visible to the studio is the best method of recording. With this setup a recording technician can actually 'ride gain' but what is more important can see what actual level is imposed on the disc. We feel," Miss

Howard continued, "that the term 'riding gain' is a poor description of the operation involved. The more dynamics achieved in a fidelity recording, even if the frequency response is limited, the more the sound originating in the studio will be approximated. We feel that too much emphasis can be put on the word 'fidelity' and that some of the pre-emphasized and over emphasized high frequencies often result in a sound unpleasant to the ear, which after all is the final judge."

"Dynamic fidelity of course," Mr. Plunkett hastened to add, "is closely allied with surface noise and care must be taken with selection of styli and discs so that low level passages will not be marred by surface noise."

"And then too," the chief engineer went on, "recording quality must be checked constantly and the best check is immediate playback. This is, unfortunately, quite often ignored by many studios, or discouraged by companies as a waste of time."

"Yes, and," Miss Howard, eager to get back into the discussion added, "recording information about cutting characteristics, recording head designs, styli and quality of response equipment is easily obtained. These all enter into the final results. Unfortunately, the interest and ingenuity of the recordist has often been overlooked. Recording," she continued, "is not a dull craft at all if engaged in all its technical phases. There seems to be a prevalence in large organizations for specialization—cutting technicians, studio technicians, maintenance, etc. — which often results in poor recording because of lack of interest or information in all phases of the recording operation. If interest and enthusiasm were carried all the way through the recording organization, and management, perhaps time might be found to raise the general recording standards in America."

"We have tried," she concluded, "to incorporate these methods (?) in our operation and have had success ... or some such thing."

From what Audio Record has been able to learn, that 'some such thing,' Miss Howard refers to, spells success all right ... and with a capital 'S'.

"The following program was transcribed from an earlier broadcast in order that you might hear it at this more convenient time"