International Association of Sound Archives
Association Internationale d'Archives Sonores
Internationale Vereinigung der Schallarchive

phonographic bulletin

no. 45/June 1986
PHONOGRAPHIC BULLETIN

Journal of the International Association of Sound Archives IASA
Organe de l'Association Internationale d'Archives Sonores IASA
Zeitschrift der Internationalen Vereinigung der Schallarchive IASA

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The PHONOGRAPHIC BULLETIN is published three times a year and is sent to all members of IASA. Applications for membership in IASA should be sent to the Secretary General (see list of officers below). The annual dues are at the moment skr 100 for individual members and skr 230 for institutional members. Back copies of the PHONOGRAPHIC BULLETIN from 1971 are available on application. Subscriptions to the current year's issues of the PHONOGRAPHIC BULLETIN are also available to non-members at a cost of skr 130.

Le Journal de l'Association internationale d'archives sonores, le PHONOGRAPHIC BULLETIN, est publié trois fois l'an et distribué à tous les membres. Veuillez envoyer vos demandes d'adhésion au secrétaire dont vous trouverez l'adresse ci-dessous. Les cotisations annuelles sont en ce moment de skr 100 pour les membres individuels et skr 230 pour les membres institutionelles. Les numéros précédents (à partir de 1971) du PHONOGRAPHIC BULLETIN sont disponibles sur demande. Ceux qui ne sont pas membres de l'Association peuvent obtenir un abonnement du PHONOGRAPHIC BULLETIN pour l'année courante au coût de skr 130.


THE EXECUTIVE BOARD OF THE INTERNATIONAL ASSOCIATION OF SOUND ARCHIVES IASA

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Printed in Vienna, Austria.
ISSN 0253-004X
IASA Business

EXECUTIVE BOARD MEETING REPORT, VIENNA, AUSTRIA, FEBRUARY, 20-21, 1986

Present: Ulf Scharlau (President); Dietrich Lotichius (Vice President); Anna Maria Foyer (Treasurer); Dietrich Schüller (Editor); Helen Harrison (Secretary General)

Apologies for absence were received from David Lance and Peter Burgis. Following a suggestion of the membership at last year's General Assembly the Board had investigated the possibilities of a teleconference with those members who could not attend the meetings due to lack of funding or difficulties of travel. It was agreed to hold a brief telephone conversation with the two absent members on the morning of the second day, to report any business and ask for their comments.

The minutes of the Executive Board meetings in Berlin, DDR were approved.

- Matters arising. There was some discussion about the arrangements which could be made to exchange publications with other organisations, and whether these could be housed in the Documentation Centre of the History of IASA Committees. However the problem with this is that the Documentation Centre, like the Secretariat offices, will keep changing. It was agreed however that Dietrich Lotichius would attempt to gather the material together, including National and Affiliated organisations Newsletters and that items of interest would be extracted and passed on to the membership through the business column of the Phonographic Bulletin.

The Association had received one or two requests from national branches to reprint certain articles from the Phonographic Bulletin in their own Newsletters. This can be arranged by writing to the Secretary General for permission to reprint and acknowledgement of the original source of the article in the Bulletin. Permission will not be unreasonable withheld, but it remains at the discretion of the Executive Board.

Annual Conference, Stockholm

One of the main purposes of the mid-year Board meeting is to plan the annual conference and this item always takes a major part in the discussion. Members should all have received their registration forms by now together with the Preliminary programme. Because
the conference has to be planned well in advance, some of the details have already changed and a more up-to-date programme is included with this Bulletin for members' information. Some of the items of particular interest include the return to a programme of visits relevant to sound archivists, and an alteration in the pattern of the General Assembly and the closing session. General Assembly II. In the past few years IASA business has grown to the extent that two General Assemblies have become a normal event. The agenda for these Assemblies is included with this issue. The first General Assembly will contain the officers' reports as usual, and the second General Assembly will include the National Branch and Affiliated organisation reports and any committee reports which require decision or discussion by the members. There has been much soul searching at the last few conferences about the repetition which was occurring at the second General Assembly and the closing session. Last year in Berlin we tried the experiment of putting all the reports in the second General Assembly and leaving it up to the Secretary General to summarise committee activities for the closing session, partly to relieve committee chairmen from the necessity of repeating themselves twice on the final day. However you cannot please all of the people, all of the time and many people expressed disappointment when the committee chairmen did not give their reports in the closing session. This year we are trying to please a few more, or different, people by including the IASA committee chairmen's reports in the closing session and turning the second General Assembly into a forum for the membership to discuss the business and activities of the Association more fully. It will be interesting to see who disagrees with this pattern! But you can never say the Association is static.

Financial report.
The Treasurer, Anna Maria Foyer, reported the financial account of the Association. The account shows that there was a total of 76,478.50 Swedish kronor at 31 December 1985. Receipts since the previous account 31.7.85 were 24,976 kronor and expenditures 23,975 kronor.

Membership. The Association now has 418 members and 31 subscribers. The Treasurer complained that there are still some recalcitrant payers, and the Board agreed that anyone who has not paid the 1984 and 1985 dues will be removed from the membership immediately. Those who have not paid for 1986 will have received one reminder and a further reminder will come in September after the conference. Non-payers in 1986 will be removed from membership after November 1986.

Anna Maria Foyer asked the Board to authorise the purchase of a personal computer for the preparation of documents, labels, and to maintain lists of the membership at an estimated cost of 9500 kronor, and this was readily agreed.

The balance of the IASA account was healthy and stable, but there are several additional expenditures foreseen in the near future, including more support for Board members as funding for travel and expenses becomes more difficult to obtain. At last year's General Assembly a question was asked about the possibilities of funding personal members in Executive Board positions. It was felt by the membership that personal members should not be prevented or discouraged from nomination to the Executive Board merely because they are unable to obtain funding to attend meetings. The Board recognise this to be a problem and will continue to try and find a workable solution.
Committees.
The Board received reports from the IASA committees and several possible cooperative schemes between committees are being discussed. The Secretary General had written to all committee officers noting the growing number of committees and also the increasing overlap in interests of some of these committees. Already several of the committees do hold joint sessions at conference, and this mutual cooperation will be discussed further at the Executive Board meeting in Stockholm which is attended by committee officers.
The National and Affiliated Organisations committee are also addressing the question of ways and means of funding the National Branches and this will be an item on the agenda in Stockholm.

Publications.
The publications programme was discussed. It is hoped within a year or so to produce the Phonographic Bulletin in an enhanced format and the Editor is currently investigating relative costs and possibilities.
The Directory of Members is due for an update, but it was felt that publication of a full Directory in some detail was not a feasible proposition. The time it would take to prepare and the return in the amount of helpful information which could be incorporated made it a major undertaking. It was suggested that a full Directory was not the present requirement, but a brief questionnaire will be circulated to members this year requesting up to date information on addresses, contacts, purpose of the collection, size of stock and type of catalogue available. This would take less time to produce and could be updated more regularly especially if the material were to be entered on to a database. Other publications are proceeding slowly. The Secretary General submitted the Unesco commission for an archival appraisal of sound recordings in the Records and Archives Management programme, in April 1986, and we await comments.

Relations with other organisations.
The Association continues to maintain close contact with several of the audiovisual archival associations, in particular through the Round Table of Audiovisual Records which comprises Unesco, International Congress of Archives, the International Federation and Film Archives (FIAF), the International Federation of Television Archives (FIAT), IFLA (International Federation of Library Associations, IFTC (International Film and Television Council), and IASA. A report on the Round Table appears later in this column. Several members of the Association have conducted seminars by invitation of these international associations: Dietrich Schüller spent three weeks in St. Lucia during the past year conducting a seminar, and Helen Harrison conducted a two week seminar in South East Asia in January 1986.
FIAF/FIAT and IASA are cooperating in the organisation and presentation of a Technical symposium in West Berlin in May 1987. The seminar is being planned jointly by the Technical committees of the three associations and further details will be given in this issue, together with a call for papers. The symposium will coincide with an exhibition and also a Unesco Consultation of users and manufacturers of equipment for film, television and sound archives. Although this event started as a relatively modest symposium, there has been considerable interest and it has now expanded into a full week of activity.
The last item on the agenda was to receive a report of the forthcoming conference venues, after Stockholm. In 1987 the conference will be held in Amsterdam in the Netherlands from June 21 - 26. There have been other invitations for subsequent years, but detailed offers have not been received and further announcements will be made at the 1986 conference. The meeting concluded with the Treasurer extending a warm invitation through the Board to all members of the Association to the conference in Stockholm and we all hope to see as many of you as possible at that event.

REPORT OF THE ROUND TABLE ON AUDIOVISUAL RECORDS, PARIS, MARCH 20-21, 1986

The sixth Round Table meeting on audiovisual records was held in the Unesco building in Paris, March 20 - 21, 1986. IASA was represented by Helen Harrison, the Secretary General and George Boston BBC/OUPC, a member of the Technical Committee. We both also attended a meeting of the Organising Committee for the Joint Technical Symposium on March 19.

The Round Table was attended by 18 people representing FIAF (International Federation of Film Archives), FIAT (International Federation of Television Archives), IASA, IFLA (International Federation of Library Associations), ICA (International Congress of Archives), IFTC (International Film and Television Council) and Unesco. Sam Kula, representing ICA was elected Chairman and Anne Hanford of FIAT, the rapporteur.

The meeting opened with a short report on the progress of the Joint Technical Symposium. The symposium is being organised by the technical committees of three of the Round Table organisations: FIAF, FIAT and IASA. A previous symposium had been held in Stockholm in 1983 and because of its success and the developing state of the technologies involved it had been felt desirable to hold another one in 1987. The Stockholm symposium had been a joint effort by FIAF and FIAT, and IASA is pleased to have the opportunity to add the expertise of its technical committee to the next event. Sound recording and archives are important elements in film and television as well, and the converging technologies mean that it is logical to consider the three elements together at a joint meeting.

The symposium will be aimed at a high professional level, not basic training, and the purpose is to summarise current archive practices and present and analyse possible future technological developments and their effect on current practice. The symposium, which has the provisional title Audiovisual Archives 1987: Joint Technical Symposium, will be held in the International Congress Centre of West Berlin, May 20 - 22 1987. Major topics for discussion will be conservation, preservation and restoration of materials, the problems of obsolescence of replay and restoration machinery, and an exploration of present and future technologies.

There will be a major exhibition associated with the symposium and a Unesco consultation will follow. This consultation will be for the users and manufacturers of equipment for film, television and sound archives. Members of the technical committees will be invited to attend.
The next item on the agenda of the Round Table concerned the reports of the non-government organisations involved including current activities, future plans and forthcoming conferences. Several cooperative ventures between organisations were suggested and the exchange of information emphasised the converging interests of many of the organisations represented. This is one of the major benefits of the Round Table when organisations learn of other relevant work being carried out or conferences being held. The Secretary General has already reported back to some of the IASA committees and IASA has been invited to participate in the conferences and committee work of several of the other organisations. In particular a need was expressed for more cooperation on basic training programmes for audiovisual archive staff, and it was suggested that several of the organisations draw up training programmes or guidelines for elements which should be presented in a course and present them for discussion and amalgamation at the next meeting.

The other major item on the agenda was a re-evaluation of the relationship of Unesco and the other organisations involved in the Round Table. No conclusions were drawn, but IASA will be involved in rethinking its own position over the next few months.

REMINDERS


For further details of sessions contact the Secretary General, Helen Harrison, Media Librarian, Open University Library, Walton Hall, Milton Keynes, MK7 6AA, England (Tel. 0908 653530 or Telex 62389) or the IAML/IASA Conference Secretariat, Musikaliska akademiens bibliotek, Box 16 326, S-103 26 Stockholm, Sweden.

EXECUTIVE BOARD NOMINATIONS

The next Executive Board of IASA will serve for the term 1987 - 1990. All members are reminded that Nominations have been called for and should now be sent as soon as possible to the Chairman of the Nominating Committee: Dr Rolf L Schuursma, Erasmus Universiteit, Universiteitsbibliotheek, Burg Oudlaan 50, NL-3062 PA Rotterdam, The Netherlands.
The Symposium is organised jointly by the Technical Committees of FIAF, FIAT and IASA.

Subject areas to be covered include:

CONSERVATION.

Preparing material for storage
Storage conditions
Stability tests

PRESERVATION

Restoration methods
Analogue and digital processing techniques
Transfer and copying methods

OBsolescence

Machinery. Problems of maintenance
Building suitable machines
Problems of present and future technologies

During the Symposium there will also be an open discussion on the ethics of preservation.

IASA members who would like to contribute to the symposium and present papers are invited to contact Dietrich Schüller, Phonogrammarchiv der Österreichischen Akademie der Wissenschaften, Liebiggasse 5, A-1010 Wien, Austria or another member of the Technical committee with a summary of the proposed paper as soon as practicable.

If you wish to contact the Symposium Secretariat directly, please write to:
Eva Orbanz, Symposium Secretariat, Stiftung Deutsche Kinemathek,
Pommernallee 1, D - 1000, Berlin 19, Federal Republic of Germany
Sound Archives in Sweden

INTRODUCTION

In this issue some of the sound archives in Sweden are introduced. They have grown out from different needs. Some of them are closely connected, for instance The Swedish Radio Gramophone Archives and the Programme Archives, the primary purpose of which is to supply useful sound illustrations to radio and TV programmes.

The ALB, the National Archive of Recorded Sound and Moving Images, though some of its material is identical with that of the Swedish Radio Archives, has furnishing the total flow of sound documentation to researchers as its principal object. The Sound and Video Archives of the Gothenburg University Library fulfills a similar purpose, that is, making it possible for researchers to compare different theatre performances. The mission of the Swedish Library of Talking and Braille is different, namely offering a substitute for the written word to the blind. The primary function of the Sound Archives of Svenskt Visarkiv is the collection and registration of Swedish folk music, written and recorded, and its secondary function the documentation of Swedish jazz history.

In an issue after the conference some papers of other Swedish archives will be published.

SVEN ALLERSTRAND, ALB

ARKIVET FOR LJUD OCH BILD (ALB) - THE NATIONAL ARCHIVE OF
RECORDED SOUND AND MOVING IMAGES

Background

Since 1661, Swedish publishers have been required to deposit one copy of each of their publications with the Royal Library. The original purpose of this law was, of course, to facilitate state censorship. Gradually, however, the cultural and research significance of this collection of printed material came to be appreciated and the deposit requirement was extended to university libraries as well.

The last few decades have seen a growing awareness of the deplorable discrepancy that exists between the measures taken for preserving the written word and those taken for preserving "modern media".
The establishment of ALB
In the late 1960s, the government set up a committee to consider a more systematic preservation of audio and video recordings. In 1978, parliament passed the Statutory Deposit Act. The Act specified that the deposition requirement that applied to the printed word should be extended to certain audio and video recordings.

The Act also provided for the establishment of a new government institution to be called Arkivet för ljud och bild (ALB) - the National Archive of Recorded Sound and Moving Images. The Act came into force in January 1979 and the ALB was established at that time. ALB is totally subsidized with tax money, and has an annual budget of SEK 7.5 million. It has a staff of 27.

The Statutory Deposit Act
According to the Statutory Deposit Act the following categories of recordings shall be delivered to the ALB:

- Recordings of all radio and television programmes broadcast by any of the four subsidiary companies of the Swedish Broadcasting Corporation, i.e. nationwide and local radio programmes, as well as nationwide and regional television programmes. The companies make continuous recordings of their programmes, and the recordings are delivered to ALB six months after broadcast.

- One print of all 16 and 35 mm films approved by the Swedish National Board of Film Censors and shown to the public in Sweden. ALB does not preserve films in their original form. The film is copied on video tape and returned to the distributor.

- One copy of all videograms produced in Sweden in at least 50 copies and made available to the public.

- One copy of all phonograms produced in Sweden in at least 50 copies and made available to the public.

- One copy of all phonograms and videograms imported to Sweden in at least 50 copies and made available to the public, provided that they have a special Swedish interest, e.g. a Swedish artist or Swedish texts.

In addition to statutory deposits, ALB also requires other audio and video recordings, which may be of interest for research purposes.

The Sound Collections in particular
As mentioned before ALB's collections consist of different media - films, videograms, phonograms, radio and television broadcasts. To a large extent all of these contain sound. It is, however, above all the phonograms and the radio tapes which are of immediate interest in this connection.

PHONOGRAMS
As early as 1958 the National Archive of Recorded Sound was founded as a department of the Royal Library. At that time its activities were based on voluntary agreements with the record companies, and since the start, about 100 000 78's and about 30 000 long playing
records have been collected. From 1979 the voluntary agreements have been replaced by a statutory deposit duty for the record companies to deliver one copy of each recording. The National Archive of Recorded Sound was merged with the ALB on 1 July, 1979.

Every year, about 2 500 phonograms are delivered to ALB as statutory deposits. Furthermore, continuous work is underway to obtain a complete collection of the Swedish phonogram production, including earlier phonograms.

RADIO RECORDINGS
As mentioned above, the Swedish broadcasting companies make continuous recordings of all programmes. These so-called reference recordings are made primarily for legal reasons and not for archival purposes. The broadcasting companies must keep their reference recordings for six months, after which time they are delivered to ALB according to the Statutory Deposit Act. The Swedish Radio Company broadcasts nationwide in all about 20 000 hours and the Local Radio Company broadcasts almost 35 000 hours a year.

One important incentive for establishing the ALB was a long-felt desire among researchers for access to the collections of the Swedish Radio Company. One of the first tasks for ALB was to come to an agreement, which made it possible to function as an intermediary between the researchers and the Programme Archives. The Swedish Radio Company took up a very generous attitude and an agreement was signed. ALB is allowed to borrow material from the Programme Archives on behalf of researchers. This is a very important step and it is used quite frequently.

ALB and the Copyright Laws
In Sweden there are, as in most other countries, laws relating to copyright. These laws prescribe, how radio and television broadcasts, films, videograms and phonograms may be used. Practically all the material which is kept by ALB is affected by the copyright law. It is obvious that it would be practically impossible to obtain the necessary copyright permission every time the use of a production is needed. So ALB has been granted general permission to use its collections if certain conditions are complied with.

USE FOR RESEARCH PURPOSES
ALB's aim was explicit from the beginning. The archive should serve to-day's and tomorrow's researchers. The facilities for using the collections stated in the copyright laws only relate to "serious research purposes". It is incumbent on ALB to see to it that no material protected by copyright is made available for other purposes than serious research - unless the originators give their permission. Every patron must submit an application to demonstrate status as a researcher entitled to access.

Of course some borderline cases may arise when ALB has to decide if a prospective user really satisfies all the requirements. The archives ambition however is to give the concept of research as broad an interpretation as possible without infringing on copyright interests.

WHAT IS MEANT BY A RESEARCHER?
According to ALB's official policy, people or groups are defined as researchers if the following requirements are fulfilled:
- the work is to be done in a scholarly manner. Consequently one is not admitted into ALB's collections just to satisfy one's own curiosity.

- the aim should be to document publicly the result of the work.

Researchers prove their qualification in two ways:

- through earlier work, for example research training or earlier production, or through a tutor who verifies that the person concerned is expected to work according to the rules

- by means of a more or less detailed work plan for the work which is submitted to ALB in advance.

Other forms of searching for knowledge also approach the traditional methods of research. This could concern fact-finding for reports; journalism; radio, television or filmproductions etc. ALB believes that such work should in principle be equivalent to research.

The archives can of course not prejudge the academic quality of those who declare themselves to be researchers. If the above requirements are fulfilled the applicant is accepted as a researcher and is admitted to ALB's collections.

Mailing address:
Arkivet för ljud och bild
Box 7371
S - 103 91 Stockholm

Visiting addresses:
Malmshallnadsgränd 6
Sibyllegatan 2

Phone numbers:
46-08-14 39 60 (administrative office)
46-08-63 56 95 (research office)
Appendix: PUBLICATIONS

Nationalfonotekets diskografer (Discographies from the National Archive of Recorded Sound):

Label discographies

1. DURIUM/HIT OF THE WEEK (out of print)
   Björn Englund
2. SCALA
   Mats Elfström
3. ULTRAPHON (out of print, 2. ed. see nr 19).
4. SONORA 1 8000-series (out of print)
5. SONORA 2 1000-series (out of print, see nr 14)
6. SONORA 3 1000-series (out of print)
7. SONATA
   Björn Englund
8. SONORA 4 E 5000-, 6000-, 9000- och f 9500-series
9. RESIA
   Karleric Liliedahl
10. DACapo
    Karleric Liliedahl
11. SONORA 5 2000/3000-series part 1
    Björn Englund
12. SONORA 6 2000/3000-series part 2
    Björn Englund
13. SONORA 7 7000-series part 1
    Björn Englund
14. SONORA 2 Swingserien (2. ed)
    Björn Englund
15. DIXI/SILVERTON
    Karleric Liliedahl
16. SONORA 8 7000-series
    Björn Englund
17. TELEFUNKEN
    Björn Englund/Lars-- Göran Frisk
18. MUSICA
    Björn Englund
19. ULTRAPHON (2. ed) part 2
    Mats Elfström/Björn Englund
20. ROULETTE/TRIOJA
    Björn Englund
21. ROULETTE/STOLO
    Björn Englund

Artist discographies:

501. ERNST ROLF
502. ULJA BILLQUIST
503. SVEN-OLOF SANDBERG
504. SVENSKA VIOLINISTER PÅ SKIVA
505. ALICE BABIS
506. HARRY BRANDELJUS
507. ÅKE GRANBERG
508. JOHNNILHEIM HAGBERG
509. RAGNAR SUNQUIST & SVEN HYLÉN
510. JOHN FORSELL
511. GUSTAV FONANDER

Svenska diskografer (Swedish Discographies, published by ALB):

1. TURITZKORNEKENS IKIVÄRKEN
   Sound cassette
   Karleric Liliedahl
   ALBophone AMC 83101
2. CARL ECHARD
   Sound cassette
   Karleric Liliedahl
   ALBophone AMC 83102
THE SWEDISH RADIO GRAMOPHONE DEPARTMENT

HISTORY
It is difficult to establish an exact birth date for the Gramophone Department. One could even claim that in this case the child existed before its parents! Records were played in 1923 when the first experimental broadcasts were made in the Stockholm area. And when regular broadcasting began in 1925, it was discovered, on the second day of operations, that records were needed to fill in the gaps and to even replace programs that did not work out.

In the beginning records were borrowed from individual staff members. But as the need for recorded music grew, records began to be purchased, especially after 1926 when entire programs of recorded music were introduced, including the very popular "Granmofontimmen" ("The Gramophone Hour"). The first request program went on the air on 1928, when a reporter in a bus equipped with a shortwave transmitter interviewed people on the street who could request records.

In the beginnings the Gramophone Department was a shelf with records, but the realization was soon made that someone was needed to regularly buy records and organize and catalog the collection. The first record library employee was hired in 1928. She set up a simple catalog system herself, using a typewriter to make cards with information about composer, title, artist, and record number. The system worked well until the introduction of 33 rpm LPs in the 1950s turned the old cataloging rules upside down.

The Gramophone Department has been well-known to Swedish listeners for several decades. It is now one of the largest commercial radio archives in the world, with more than 600,000 records. Since the 1970s the cataloging system has been computerized, but the original cards are still used for the old 78 rpm records. The growth of the collection reflects also the expansion of radio and television in Sweden. The Gramophone Department provides records for the Swedish Radio Company, Swedish Television, and their 10 regional centers, as well as Sweden's 25 local radio stations and the Swedish Educational Broadcasting Company. The regional centers and the local radio stations have also over the years built up respectable collections of their own.

The Gramophone Department buys around 8,000 different recordings annually. Most (about 70%) are delivered directly from the recording companies or Swedish importers, which regularly send their new releases for consideration. Even if the library cannot return recordings which are, for some reason, not of interest, this rarely happens. All Swedish releases are bought, even where unknown local artists are involved.

To complement the relatively restricted selection available in Sweden, the Gramophone Department has built up a widespread purchasing network abroad. This is partly through newsletters and promotional records coming directly from foreign record companies, and partly through our ordering records from different parts of the world after studying foreign catalogs or magazines. In addition we maintain contact with a number of people in other countries who buy a selection of local productions for us several times a year. Naturally we are also helped by producers from Swedish Radio and Television who travel to places we would not reach otherwise, such as Tanzania, the Seychelles, and the Maldives. While we have direct contact with
the Soviet Union, where Melodiya regularly supplies us with new records, we have great difficulties getting recordings from the relatively close Iceland. Asia and southern Africa are also empty zones on our purchasing map, at least at present.

At least two copies are obtained of each new recording, of which one is an archive copy that must only be handled by the Gramophone Department's own personnel. Many Swedish record companies loan us master tapes which are copied and used for broadcasts. As with other sound archives, we hope that the compact disc will, in the long run, eliminate problems with worn or damaged records.

Before the new records are cataloged, they receive an acquisition number and are registered by the Purchasing Department in a database, where we can always see how many copies of a certain recording we have, and when they were bought. This system serves as the basis for the borrowing system (see below) and shows who has borrowed any particular record.

CATALOGING

In 1968 a research project was begun for the computer cataloging of 78 rpm records, which up until 1977 encompassed more than 40,000 electrical recordings. This experience was built upon later to develop a complete system for all kinds of recordings, which was begun in 1974. The catalogs, which are updated every month, are reproduced on microfiche which are distributed to all major users: departments, regional centers, local radio stations, etc., altogether more than 150 subscribers. Since 1984 the entire catalog has been transferred to a computer database, and today we can use our terminals for searches. Since most users, especially outside Stockholm, still lack access to terminals, we have not been able to replace the microfiche system with terminal searches. Within two years, however, we hope to replace the microfilm files and use only computer terminals. Until then, the current, rather simple, search system is being expanded and improved.

The catalogs today hold more than 4 million search words, by title, author (composer and lyricist), and artist, as well as a subject and genre catalog. The new search system via terminals will combine all these options.

A catalog system demands continuous supervision and improvement. Often accepted, strictly "scientific" cataloging principles conflict with the user's simple and unsophisticated searching needs. It is our ambition that the catalogs should be so simple and obvious that even a completely inexperienced user can quickly learn to use them without assistance.

SERVICES

Even if the catalogs themselves can be used by most borrowers without the aid of the department's personnel, other services are often required. We receive orders for records and enquiries daily per telephone, letter or even telex from our customers outside of Stockholm. Most of the enquiries concern questions about artists' repertoires or musical effects that often make great demands on the staffs' knowledge and imagination. For example, there was the order for "Distinctive music to illustrate the red color inside a bird's mouth". The person who placed the order left the department satisfied!
BORROWING

The Gramophone Department serves more than 2,000 borrowers, who more or less regularly use the collections. Each employee who needs to borrow records for program production receives a borrower's card, and is then personally responsible for the records borrowed. Missing or damaged records are billed to that person's department, which has led to both quicker returns and a marked reduction in the number of "missing" records.

All recordings in the department's collections have a unique catalog number that is indicated with a bar code that is read with a light pen (bar code reader). When a record is borrowed the borrower is first registered (through the bar code on the borrower's card) and then the record's catalog number (which includes the number indicating which copy of the record is being borrowed). The entire transaction is registered within a few seconds by the system, which is part of the computerized system described above. In this way one can always use a terminal to see if a record has been borrowed and who has borrowed it. As a secondary feature, statistics are also kept as to how often a record is borrowed. If a record is not returned in time the borrower is automatically notified every third week. After the first reminder, the borrower's department chief is also notified, with a note that the cost of the record will be billed to that department if the record is not immediately returned.

The number of records borrowed annually has for several years been close to 200,000, while the number that are been out at any one time has hovered around 15,000.

TECHNICAL SERVICES

The Gramophone Department is, as far as we know, unique in that it has its own staff of sound engineers. The advantages are obvious: the handling of irreplaceable archive copies can be limited to a small number of people, which greatly reduces both theft and damage. A borrower does not need to first look for a record and then order studio time for listening or tape copying. Instead borrowers can get this service quickly through the department's staff. This is especially of value when a regional center or a local radio station places an urgent order and wants the recordings transmitted over a line.

The duties of the Gramophone Department's technical staff include playing records in programs (including request shows) as well as tape copying and transmission over lines. An important duty is the maintenance of the collections, which partly includes restoration of historic material (78s and phonograph cylinders) as well as washing records in a special record cleaning machine which can clean 20 records in 15 minutes. A duty engineer is always available for urgent, short term tasks (for example up to 15 minutes' copying).

Finally some words about the contents of the collections. The Swedish repertoire is well represented, but there are some holes, especially in the period up to around 1918. Among the rarities on hand are what is probably the first recording in Swedish - a folk song by an unknown Swedish singer on one of Emile Berliner's zinc recordings from 1889 or 1890. Moreover the department owns one or two of the first Swedish phonograph recordings, made at Panoptikon in Stockholm with that period's best known singers and actors. Among the more than 1,500 phonograph cylinders in the collection are some 30 so-called Kinetophone-Cylinders, that is, recordings for the films Edison produced between 1913 and 1915. Among the 2,000 piano rolls in the collection are recordings of Debussy, Grieg, Stenhammer, Busoni and Granados.
BENGTE BRANNLUND, Swedish Radio, Stockholm

THE SWEDISH RADIO PROGRAMME ARCHIVES

The Swedish Radio Programme Archives are sound archives of exclusively non-commercial recordings. It is made up of two sections: one for temporary storage (Current Recordings) and one for permanent holdings (Archives).

The Current Recordings Section is primarily a service unit for broadcast transmissions. As soon as a programme is produced it is delivered to the Current Recordings Section together with a written report containing information about production number, name of producer, contents, names of participants, technical data etc. A computerized registration takes place making production number, tape number, programme title and data of broadcast retrievable. The computer is also used for the registration of loans.

The staff of the Current Recordings Section is responsible for the delivery of tapes for each day's broadcast including tapes from the Archives Section. Tapes required for broadcast purposes from the regions and from foreign broadcasting corporations are also deposited there. The total bulk of tapes in the Current Recordings Section (about 25,000) is fairly constant owing to their being only temporarily stored.

After the lapse of one year from the recording date, lists printed from the computer are distributed to producers urging them to make the selection for archival preservation. In case of hesitation it is possible to retain the recording for another year in the Current Recordings Section, a measure that is encouraged if the recording is going to be used for repeated broadcast and then erased. If the producer chooses to preserve the recording he is supposed to supply a motivation on the report and fill in complementary information, if necessary, for cataloging in the Archives. If he believes that only parts of the recordings are worth preserving, he makes a note of that on the report and the technician will cut off the superfluous parts. When these decisions have been confirmed by the head of the programme department, the tapes selected for preservation are transferred to the Archives Section. They are placed on wooden shelves in a depository with about 40% relative humidity and about 16°C. Approximately 10 to 15% of all programmes that have been broadcast are selected for archival preservation, which is about 400 tapes a month. The total archival holding for the present amounts to approximately 130,000 tapes.

Apart from archival preservation the Swedish Radio Company is obliged to retain for six months after transmission a tape of copy of all programmes that have been broadcast. The recording is made at slow speed on several tracks and is used if legal proceedings concerning the broadcast are necessary. Since July 1, 1978 these tapes have been delivered to the ALB (National Archives of Recorded Sound and Moving Images) instead of being erased. Thanks to this institution the difficult problem of researchers' access to radio recordings has been satisfactorily solved and it makes it possible for the Swedish Radio Company to restrict its selection policy to programme production purposes. As a matter of fact a government bill has recently been introduced suggesting elimination of duplicated functions and closer cooperation between the two institutions.
The cataloging in the Archives is carried out by a staff of librarians and is based upon the information in the written reports. Very often it is necessary to listen to a recording to arrive at an exact description or in some cases to contact the producer for complementary information. In order to make the catalog intelligible and easily manageable for producers great efforts are made to make the text as correct, concentrated and unequivocal as possible. Besides a short description of the main contents, items of special interest (interviews, live music etc.) are included. Only original recordings are cataloged, not inserts copied from other archival tapes or commercial gramophone records. A final, central control takes place before printing the catalog cards to make sure that the disposition of the catalog text will be as uniform as possible. When the appropriate entries have been typed on the card, they are filled in the following catalogs:

1) Author/title. Entry under author for dramatic performances and readings from literary works. All programme titles in the Archives are entered in this catalog.

2) Composer/title catalog. Entry under composer except light music which is entered under title.

3) Participants/performers catalog. Apart from voices all instrumentalists, conductors, and directors are included. Each entry filed chronologically according to broadcast date.

4) Systematic catalog (a modified application of the SAB-system used in Swedish libraries). Within each subject the cards are chronologically filed according to broadcast date. It has been found very useful, because a most decisive element of the inquiries is the age of the recording.

5) Chronological catalog. Entry under broadcast date or, if missing, under recording date.

6) Number catalog. Entry under production number.

There is also a separate catalog for the folk music collection with regional files for performers and special files for dance types and instruments and for vocal music files for first lines and song types.

Plans for a future conversion into computerized cataloging have reached a fairly advanced stage.

Radio and TV producers are in the majority among the users of the catalog, a telephone service is also offered to researchers, institutions and listeners. Most of the visiting producers manage by themselves to find the recordings they are looking for, but there is always a librarian at hand to assist them. In most cases the archival recordings are used as inserts and illustrations in new productions, but there has also been an increasing demand lately for broadcasting whole programmes from the thirties, forties and fifties. Especially during the 60th anniversary of the Swedish radio broadcasting in 1985 producers from different programme departments were to be found for days at a time in the Archives documenting the history of their fields. Apart from repeated broadcasts some items from the recordings are selected for commercial release either by the Swedish Radio Company or by commercial record companies. Sale of tape copies from archival recordings to listeners and institutions is administered by the Programme Archives. Music recordings are excluded on copyright grounds.
For the benefit of producers who want to check recordings on the spot there are listening facilities in the Archives served by a sound engineer. Loans from the Archives are on principle only allowed for programme purposes and original tapes must not be taken out of the premises, and only sound engineers are authorized to play them.

HISTORICAL OUTLINE
The Swedish Broadcasting Corporation was founded in 1925. There are no sound documents extant from the earliest transmissions, because the first recording equipment was not acquired until 1931. Instantaneous recording on discs was used. Between 1938 and 1945 wire was used for somewhat longer productions, e.g. music and drama. Most of the recordings were made on practical grounds such as difficulties for the participants to come to a radio studio, and there was little consideration for recording for archival purposes. Thanks to the zeal of the technical director some discs were preserved in a separate section of the Gramophone Archives called the Recording Archives. The collection gradually increased from 22 in 1931 to 86 000 in 1957. There are no complete radio programmes on these discs, only inserts, and the cataloging was carried out by means of a simple card system. Owing to the rapid growth of the collection it was considered necessary to make an evaluation. In 1953 an Archival Committee was created for this purpose, and with the assistance of the programme departments a selection of discs for permanent preservation and a sorting out of discs of little archival value was made.

At the end of the fifties the discs were gradually superseded by the magnetic tape recordings, which were stored in the Technical Department. The Archival Committee made a plan for selection of these tapes and of copying of the discs selected for archival preservation in the Gramophone Archives to tapes, which was considered a more permanent audio medium. In the course of about two years beginning 1958, 10 000 tapes were transferred to the Gramophone Archives. The recordings were gradually put in order, and a more refined catalog system was adopted.

In 1961 the Gramophone Archives was divided in two departments: one with exclusively commercial recordings (the Gramophone Archives) and one with exclusively non-commercial recordings (the Recordings Archives). The discs not selected for preservation were not destroyed, and consequently it has been possible in the seventies and eighties to restore and copy recordings on which the lapse of time has bestowed a documentary value not foreseen at the time of their production. In the mid-seventies a major collection of wire recordings was likewise copied to tape by means of a restored wire recording machine.

In order to avoid damage to the tape recordings as a consequence of their growing fragile in the course of time a decision was taken to copy all ten-year-old tapes to new ones, and this procedure continued until 1973, when the tape quality in use after 1963 was considered sufficiently durable. A concern about the non-permanence of tape recordings was felt at a relatively early stage. As they are extremely susceptible to damage through fire, submersion, magnetism, etc. it was decided that some recordings of exceptional, documentary value (e.g. rare recordings of voices of outstanding personalities, authors and composers performing their own works) should be copied to metal matrices. This procedure went on at intervals until 1979, and the present holding of matrices amounts roughly to 3 000. Being too expensive a method to be applied to all valuable recordings, it has been complemented with tape copies of other recordings considered too significant to be left at the mercy of destructive forces. Both the tape copies and the matrices are safely stored in the National Archives.
The afore-mentioned Archival Committee supervised the selection policy of the programme departments. Being made up of representatives from the programme departments and the Archives under the leadership of the programme director, it examined and occasionally questioned the suggestions and motivations for preservation. In the latter case the programme departments had a chance to produce a new and more convincing motivation within a month. In the seventies the attention of the Committee gradually turned to the avoidance of accidental erasings of tapes in the Current Recordings Library. With the foundation of the ALB the Archival Committee has more and more lost its importance, and the programme departments make selections by themselves. A certain control is exercised by the staff of the Archives.

As a result of a reorganization in 1973 the Archives was brought into closer contact with the programme departments. At the same time it was renamed the Radio Archives. An investigation was started in 1975 with the object of improving selection and archival procedures and examining the relationship between the Current Recording Library and the Radio Archives. The main result was the appointment of functionaries in each programme department responsible for the correct handling of archival procedures e.g. making certain that producers make selection decisions as soon as possible and preventing erasure for lack of decision. In 1984 after another investigation it was considered advantageous to fuse the Current Recordings Library and the Radio Archives. The new department is called the Programme Archives.

THE COLLECTION
The collection is unique in its capacity of sound documentation of four decades of cultural and political life in Sweden. Some of the most important groups are:

1) Voices of outstanding personalities in politics, science, letters, art, literature, etc.
2) Recordings from jubilees, royal ceremonies, Nobel Prize festivities, etc.
3) Recordings of oral tradition collected from expeditions from all parts of the country illuminating social life, crafts, customs, folklore, etc. Even sanitary conditions in the whole of the country were investigated in the thirties. After being broadcast the result appeared in print entitled "Dirt-Sweden". In 1948 the Swedish Radio Company started a project to systematically record the living tradition of folk music from different provinces, supplemented with the Swedish tradition in Finland, Estonia, etc. From the beginning of the seventies this activity has been taken over by Svenskt Visarkiv, the Swedish Radio Company nowadays only makes folk music recordings for particular programmes. Especially noteworthy among recording projects in other countries are a journey to the orthodox monastery in Valamo, Finland, and the Danish explorer Henning Haslund-Christensen's expedition to Mongolia and China, which resulted in a wealth of valuable musical recordings. Both journeys were undertaken in the thirties.
4) Recordings of dramatic performances by the Swedish Radio Company and of stage performances broadcast from different theatres.
5) Apart from musical recordings of artists of local and international renown the selection policy favours music by Swedish composers. There is a rich documentation of the radical transformation of Swedish musical life in the 20th century and of the development of the Musical Department of the Swedish Radio into the most important musical institution of the country.
GUN FRIDELL, Universitetsbibliotek, Göteborg

GOTHENBURG UNIVERSITY LIBRARY: THE SOUND AND VIDEO ARCHIVES

The idea of acquiring gramophone records for the university library in the mid-fifties was founded upon the need for sound illustrations to complement the academic literature dealing with humanistic subjects. This meant not only musicology (which then was not yet on the syllabus at the University of Gothenburg), but other disciplines as well, such as Literature, Drama, foreign cultures (via e.g. Social Anthropology, Religious History and foreign languages) and other fields of research where sound examples could provide an additional dimension. Erik Mesterton, former librarian and head of the Acquisition Department at the University Library, founded the sound archive. He was a pioneer in many other respects, as well. On a journey to the Soviet Union in 1958 he had the opportunity of making tape recordings of a number of Russian poets, among them Boris Pasternak, who had then not yet been awarded the Nobel Prize. This unique recording turned out to be something of a literary sensation and it also gave Mr. Mesterton the inspiration to continue tape recordings in other fields as well. He then turned to the theatre stages of Stockholm (Dramatiska teatern, Stadsteatern), Malmö (Stadsteatern), and Gothenburg (Stadsteatern, Folkteatern) to initiate tape recordings of live theatre performances which from then on (this was 1958 in Gothenburg, 1962 in Stockholm, and 1970 in Malmö) have become a necessary routine for the theatres themselves. So at the Sound Archives the drama student today can listen to unforgettable voices in performances not to be heard elsewhere. Also special guest performances have been taped, such as the Peking Opera in 1959 and Piräiden Teatteri in 1962. Today the librarian in charge of the archives follow up the recordings of Gotheburgs stadsteater, and the library receives regularly tape copies from Dramatiska teatern, Stockholm. The collection of theatre performances now amounts to some 630 plays, half of which come from Stockholm and half from Gothenburg.

In recent years recordings on video tape have been discussed among people involved in theatre documentation. But also here Mr. Mesterton pioneered a project in 1969 by recording some important performances in Gothenburg. He then continued these expensive experiments with the assistance of a librarian colleague in spite of many technical difficulties. The first recordings were made on open reels, but later a U-matic cassette recorder was bought, with a black-and-white camera. Today the video archives have acquired some thirty theatre performances on video, including a few copies made from master tapes in colour by the theatres themselves. This has turned out to be of the utmost interest for drama students, whose teacher in seminars have been able to make comparative analysis between certain scenes, e.g. in a performance from Stockholm and one from Gothenburg of the same play but with different stage directors.

Neither sound nor video tapes of theatre performances are available to people other than those from the theatres, or university students, since no public presentation on video is possible without permission from the theatres. The same rule applies to the copying of tapes.

The University Library now looks forward to acquiring a colour video camera, not only to add to the now existing cameras at the institutional theatres, but to use also for such purposes as the education of library users, information on the library's collections and functions for foreign guests, preservation of old negative photo glass plates in the collections, etc. This medium seems to have ever-growing possibilities. A sound tape of a poet's voice could,
with the addition of a video camera, give a wider perspective on the person behind the voice, especially if an interview by an experienced reporter could complement the reading.

Many interesting lectures on several different subjects can also be heard at the archives, such as the inaugural lectures held by new professors, the Felix Neubergh lectures, and lectures in connection with Women's History Collections - a special department at the university library. Most of these speeches and lectures are not available in print.

The Sound and Video Archives are open to the public on weekdays from 8 a.m. to 4 p.m. There are rooms both for individual listeners and for groups. All of them are equipped with a colour video monitor - some of them also with a gramophone and an audio cassette machine. The librarian can also transmit sound and picture from the staff room to the listening room.

A card catalog is in the staff room. The index is listed alphabetically by subject words. The collections are stored in another part of the building. At present the number of records amounts to some 20 000 including CDs and 78 rpms. There are 1 750 audio and 120 video tapes. The number of visitors today ist 250 a year.

There are also interlending facilities between the archives and the National Archive of Recorded Sound (ALB) in Stockholm. Radio and television programmes can be ordered by the visitors from the ALB to the Sound Archives, and be used on the same conditions as in Stockholm. Unique recordings from Gothenburg can be copied and sent to Stockholm for research at ALB.

The staff at the Sound and Video Archives consists of two half-time appointments: one librarian and one assistant. So far, no technical assistance is available.

MARTA RAMSTEN, Svenskt Visarkiv, Stockholm

THE SOUND ARCHIVES OF SVENSKT VISARKIV

Svenskt Visarkiv is the centre for folk song and folk music research in Sweden. Svenskt visarkiv's (SVA) task it to collect Swedish folk song and folk music material; to preserve, classify, index and study such material; and to publish studies and collections of folk songs and folk music. Since 1981 it also has the task of investigating the history of jazz in Sweden.

SVA was founded in 1951. During the first nineteen years it existed as a foundation. At that time work was concentrated on registering and systematizing Swedish song material. During the latter part of the 1960's economic and personal resources grew successively through increased subsidies from the state. Since 1968, when SVA started tape recording, instrumental folk music has been another of the Centre's fields of research. In 1970 SVA was taken over by the state.

In Sweden, as in many other countries, selection of folk music was recorded during the first half of this century on phonograph cylinders and gramophone records. But it was Matts Arnberg of the Swedish Radio Company who in 1949 first organised systematic recording tours of folk music in different regions of Sweden. The 60's saw a growing demand for a more systematic documentation of folk music traditions throughout the country. Documentation of this kind was begun in 1968 with the assistance of various musical institutions and two years later, when the
SVA became a state institution, folk music recording was made a part of its regular duties.

Field recordings in the 70's must of course in the first place be seen as a completion of earlier recording work, which for practical and also ideological reasons were marked by antiquarian interests. By means of interviews and new field recordings we have tried to make an image of the whole music milieu or of the entire repertory of a singer or fiddler. The early years were thus mainly devoted to general recordings of early folk music tradition all over the country. These recordings were almost invariably made by the staff from the SVA, assisted by contacts in various parts of the country. At the same time efforts have been made to record the changes undergone by folk music in the contemporary tradition. Growing emphasis has now come to be placed on this latter aspect.

The recorded material, of course, is continually growing. By 1985 the SVA had recorded about 35,000 items of music -- vocal and instrumental -- from all parts of the country. Moreover there is a collection, approximately as large, of recordings copied from other institutions and from private recordings. Most of the recordings were made during visits to individual folk musicians and singers. But various folk music events in our time are recorded as well, such as folk singing seminars, fiddler's meets, evening dances and the annual "Zorn badge performances". And in collaboration with other institutions, the street musicians in Stockholm and children's traditions in the playgrounds have been documented, just to mention a few projects.

The collection of recordings is open to public, and visitors may listen to our recordings at SVA or order a copy of a special recording. SVA will this spring start work with a computerised catalog of the sound archives. This catalog will be of great help, both in research work and for service to the public. To make the collections easy to access we also publish a selection of recordings on gramophone records in the series "Folkmusik i Sverige" (Folk Music in Sweden) in collaboration with the National Institute of Concerts. All the records have booklets with the commentaries in Swedish and English.

The "folk music vogue" of the 1970's, which brought a revival of interest in the documentation of folk music, revolutionised conditions for recording in Sweden. Municipal authorities, county councils and county associations now tend more and more to regard documentation as a vital cultural concern, and there are many places in Sweden where heavy investments have been made at local level. In some provinces special curatorships for folk music have been founded recently. The development from central to regional folk music documentation is most welcome, and we can only hope that it will be allowed to continue in spite of the adverse financial climate now affecting the arts in Sweden. The SVA plays a vital part as a liaison body for these local recording ventures. The regional "documentation centres" have also proved to have a highly stimulating effect on local music-making while at the same time contributing materials towards a nationwide picture of folk music in Sweden.
THE SWEDISH LIBRARY OF TALKING BOOKS AND BRAILLE, TPB

The Swedish Library of Talking Books and Braille (Talboks- och punktskriftsbiblioteket, TPB) was created as an official body on 1 January 1980 and took over the library functions previously carried out by the Swedish Federation of the Visually Handicapped.

In accordance with government instructions the library is to carry out the following duties:
- The library shall work to provide visually impaired and other handicapped persons with literature, collaborating for this purpose with other libraries in Sweden.
- In particular the library is to:
  1) produce and lend talking books and books in Braille,
  2) furnish information and advice within its sphere of activity.

With regard to the lending of talking books, the library shall concentrate on acting as a lending centre for interlibrary loans and deposit collection.

ORGANIZATION

The library is located in Enskede, a suburb of Stockholm.
It has a staff of about 70 persons.

COPYRIGHT AND BORROWING RIGHTS
The right to produce and borrow talking books is governed by the Swedish Copyright Act and certain agreements relative to the Act. This means that talking books may be produced without the consent of the copyright owner but these may only be utilised on loan and then only for certain groups.

Authors and translators of talking books produced receive reimbursement from the state. The royalties involved are distributed by the Swedish Union of Writers and are calculated according to the running time of the book and the number of copies.

Entitled to borrow talking books are persons with an impairment which prevents them from reading ordinary books, namely: the visually impaired; certain persons with reduced mobility; mentally retarded persons; persons suffering from aphasia; the word-blind; those with reduced hearing (for hearing training); convalescents; the chronically ill.
PRODUCTION OF TALKING BOOKS AND BRAILLE BOOKS

Talking books are produced in Sweden by TPB and by the Swedish Library Service Ltd (Bibliotekstjänst AB). Recently a firm named Krelib started to produce talking books in cooperation with the Swedish Federation of the Visually Handicapped, through their Talking Book and Braille Unit. There is no regular production of talking books by any commercial publisher. Thus it is not possible to buy talking books in bookshops or other places as one can buy ordinary printed books. Users of talking books are entirely dependent on the service which TPB and the public libraries can give them.

TPB initiates the production of the major part of the 2,000 talking book titles recorded for general library use that are produced annually. Some 300 of these are children's books. In comparison, publication for the sighted by Swedish publishing firms amounts to about 10,000 titles a year. The talking books recorded are mainly newly published works but every year some 300 titles are selected from among older publications.

The library has no studios of its own or copying resources. It makes use of outside producers for what it requires.

The Swedish Library Service Ltd. arranges for the recording of about 150 talking book titles a year and sells these, along with about 550 of TPB's recordings to the public libraries. TPB's stocks also include the Library Service and Krelib recordings. In virtue of a special agreement with TPB, the Library Service is able to sell to libraries most of the titles included in TPB's catalog.

For the largest group of immigrants in Sweden - the Finnish-speaking - TPB acquires talking books produced by the Library for the Visually Handicapped in Finland.

The annual production of Braille books for the library consists of some 500 titles. Many of these are children's books.

TPB AND THE LOAN OF TALKING BOOKS

During the first decade of talking books, visually impaired people got their books primarily from the central library within the Swedish Association of the Blind (later the Swedish Federation of the Visually Handicapped). Subsequently the public libraries extended their services and the central library (since 1980 TPB) has in conformity with the parliamentary decision of 1977, developed increasingly until, as far as the loan of talking books is concerned, it has become the lending centre for the public libraries.

In its stocks TPB has - with few exceptions - the whole of the talking book titles recorded in Sweden. Individual borrowers cannot apply to TPB but get TPB's books through the public libraries. This consists of both individual inter-library loans made through a local library or hospital or old people's home: and deposit collections which the receiving library or institution can retain for a period of four or eight months.

Talking books are also loaned to other countries, mainly to Swedish-speaking borrowers in Finland. TPB also borrows books from talking book libraries in other countries.

LOAN OF BRAILLE BOOKS

In contrast to talking books, library activities in connection with Braille books are con-
centrated at TPB. Borrowing through the public libraries does take place but not to any great extent.

INFORMATION

The lists of TPB's talking books and Braille books are produced in large print and in Braille. These catalogs are important, particularly to the public libraries in their information service to the borrowers and in their ordering of books from TPB.

Since 1981 TPB has cooperated with Library Service Ltd. which means that TPB's stock of talking books is registered in the Library Service's data base: BUMS. The catalog is thus produced through the BUMS base in print and on microfiche.

By means of articles in talking and Braille periodicals, TPB can reach borrowers direct with reading tips.

It is further the task of TPB to provide information on library activities and literature for visually impaired persons and/or others with reading handicaps. This is done, for instance through cooperation in conferences and through publications of various kinds.

TPB publishes a quarterly review (P8 tal). This is designed mainly for the public libraries.

The public libraries have catalogs of their own collections of talking books and make use of regional and local talking journals to provide information to borrowers. Some libraries also produce special information cassettes with reading tips and information on what is new in connection with the library.

COURSE LITERATURE

Visually impaired students at universities and colleges get their course material produced as talking books or in Braille through TPB's Section for Course Literature. The section also produces the necessary material required by professionally employed persons with visual impairments. The section provides service to some 100 people a year.

Since 1964 some 7,000 talking books have been especially recorded for these borrowers. The corresponding production of Braille books has been circa 600 titles. In recent years 300 to 400 talking book titles and about 40 titles in Braille have been produced annually.

Literature produced for students may also be borrowed from TPB's Lending Unit. In this way all borrowers also have access to more specialized literature.

FINANCES

For the budget year 1985/86 the proposed government grant is equal to SEK 40 million of which about SEK 18 million is for the production of talking books and Braille books for general library use. For the production of study material circa SEK 7 million are allocated.
Discography

MARIE P. GRIFFIN, Institute of Jazz Studies, New Brunswick, New Jersey

ACCESS TO PERFORMANCE FROM BACH TO WYNTON MARSALIS
This paper was read at the IASA Annual Conference in Berlin, September 1985

Discography, like the sound recording it documents, is a 20th century phenomenon, which parallels developments in audio and electronic technology. Before the word was coined, however, the manufacturers of cylinders and discs provided early discographical information. From the days of the Edison cylinders record producers kept lists of recordings. Although many performances were poorly documented and some record company files have never been located, scholars have found much essential information in these files, especially for those recorded takes which were never produced and could not be directly examined. Manufacturers' and dealers' catalogs, as well as supplements, have been published since the earliest days of recordings. The Schwann and Bielefelder catalogs for example, continue to be useful discographical references for current issues on disc, including compact disc, and tape.

Published lists of record company masters, include the original Atlantic Master Book #1, (edited, annotated and published in 1975 by record collector Peter Grendysa), which lists the early Atlantic recording sessions chronologically; and the Phonogram, Inc. Master Catalog, arranged alphabetically by artist, which includes the master numbers for titles released by Mercury, Philips, Vertigo, Smash, Fontana, and Limelight prior to January 1, 1976. Segments of company files have been reconstructed and published, such as those for the Prestige, Chess and Savoy labels by Michael Ruppli. A comprehensive catalog of victor recordings, which will undoubtedly exceed the scope and detail of the original files, is now being compiled by Theodore Fagan and Victor Moran.

Early cylinders and discs were marketed first as novelties and then, primarily, as entertainment. But the emerging technology also generated a new hobby - record collecting. Indeed, most of the collections of cylinders and 78 rpm recordings found in sound archives today would not exist if some individual, fascinated by the new technology and its possibilities, had not collected these recordings. The increasing interest in record collecting found expression in trade publications. In 1928 discographical listings began to appear when The Gramophone incorporated its "Notes and
Queries” by “Piccolo”, pseudonym for the Italian columnnist H.F.V. Little, into a new feature entitled “Collector’s Corner”.

The Grammophone began publication in London in 1923. Other early periodicals catering to record collectors include Disques which began publication in Philadelphia in 1930, another Disques which was published in Paris, beginning in 1934, and the American Music Lover which began publication in New York in 1935. (New Grove’s, “Discography”, p. 495. v.??)

Discographical listings of operatic recordings were first published in periodicals. In 1937 the Italian collector Roberto Bauer published a listing of early operatic and vocal records in the "Collector's Corner" column of The Grammophone. A revised and expanded listing of Bauer's column, entitled The New Catalog of Historical Records, 1898-1908/09, was published in London in 1947 by Sidgwick and Jackson. Each artist was identified with significant biographical information (place and date of birth, debut, and death, if applicable) and by voice (soprano, mezzosoprano, tenor, baritone, etc.). The listings for each artist are arranged chronologically by label name. Each listing includes the issue number, the title of the work followed by the title of the aria or excerpt, the names of the other members of a duet, trio or quartet, and the name of the composer.

EXAMPLE: Tetrazzini, Elvira (Soprano) (1867-....)
Black and Silver Columbia, Milano, July 1904
10392 Traviata: Un di felice (w. Santini) Verdi

ORIGIN OF THE WORD DISCOGRAPHY
The word "Discographie" originated with the publication of Charles Delaunay’s Hot Discographie in Paris in 1936. In the same year the first edition of The Grammophone Shop Encyclopedia of Recorded Music, edited by R. D. Darrell, was published in New York City. The Hot Discographie focused on recorded jazz performances, arranged chronologically by performer or performing group. The Grammophone Shop Encyclopedia focused on art music recorded on American and European labels, emphasizing the composers of these songs and the musicians, many already well-known, who performed them. These seminal works set the patterns for discography for the next 25 years: for "serious" or "classical" music, eminent composers and their works would be emphasized; for "jazz" and "popular" music the individual performers and the recorded performance would be emphasized.

First published in London in 1952, The World's Encyclopedia of Recorded Music (WERM), by Francis F. Clough and G. J. Cuming, followed the principles and procedures established by Darrell’s Grammophone Shop Encyclopedia. Entries are arranged by composer, with birth and death dates of the composer included. For prolific composers like Bach, a classification scheme arranges the titles under specific genre, which are further subdivided as needed. For Bach these classifications are: instrumental (clavier, organ, chamber, orchestral, miscellaneous) and vocal (shorter choral works such as cantatas and motets, larger choral works such as masses and passions, and songs and chorals). Within each subclassification the individual titles are alphabetically listed. Bibliographical information is included for each title including the voice or instrumentation, the date of composition, and the thematic index number if applicable; for Bach, the Schmieder number. The recorded performances of each title are listed by artist or orchestra with the instrument played indicated by an
abbreviation (hpsi. for harpsichord; pf for piano), and identified by the label name and issue number of the 78 rpm or LP disc on which it was issued. A brief note identifies the composition on the reverse side of a 78 rpm disc or on the fourth side of a 2-disc set; this includes the name of the composer, if different from the composer listed on the obverse, and the title. An abbreviated entry in the appropriate category is also provided. Minor composers are listed either under "Anthologies" or as couplings.

The basic discography of WERM covers the period 1925 through April 1950. The First Supplement extends this coverage through mid-1951. This supplement includes indexes to both the basic discography and the supplement. There are an index of composers, an index of arrangers, editors and composers of cadenzas, and an index of titles of operas and other stage works including ballets, films and plays. Significantly, there is no index of performers. A Second Supplement, which includes listings of 45 rpm discs, corrections to earlier editions, and some listings for reissues, was published in 1953. The third supplement which purports to cover "the details of the recorded classical repertory at the time of its fullest flowering", includes an Appendix which lists pre-recorded audio tapes.

The compilers indicate that their primary emphasis in WERM and its supplements is on the music recorded -- the score in manuscript or printed form -- rather than on the artist or the circumstances of the recording. The sources used by the compilers are bibliographical (periodicals and reviews, publicity releases from the record producers, and the corrections and additions contributed by record collectors).

Listings of recordings of operatic arias by opera stars such as Enrico Caruso, Nellie Melba and Ernestine Schumann-Heink followed the WERM discographical tradition although marketing publicity usually featured the performer. Opera lovers were catered to by the Victor Talking Machine Company, of Camden, N.J. (His Master's Voice in Europe and later RCA) for whom Caruso and many other opera stars recorded. The record producers treated these opera singers like the stars that they were. Caruso reportedly had the right to determine which take of a recording session could be issued. The names of famous singers like Caruso, Melba and Schumann-Heink were prominently displayed on the disc label. In the early 1920s Victor published The Victrola Book of the Opera, an elaborately illustrated volume which included the stories of the operas followed by a listing of the Victor records that were available. For each aria recorded the listings included the name of the recording artist, the voice, the issue number, the diameter of the disc, and the price.

EXAMPLE: AIDA ACT I
Celeste Aida (Heavenly Aida)
Enrico Caruso, Tenor 88127 12 in. $1.75
Giovanni Martinelli, Tenor 74424 12 in. $1.75

In many instances the text of the aria, translated into English, was also included.

The alternate discographical tradition which emphasized the recorded performance actually began at least a decade before Delaunay published his Hot Discographie. Primitive recording techniques worked most effectively with small instrumental ensembles or featured vocalists, such as blues singers Ma Rainey and Bessie Smith. These early acoustical recordings, which permitted approximately 2-1/2 minutes of recorded sound, tended to concentrate on popular music.
The immediate commercial success of the 1917 Victor recording of "Tiger Rag" by the Original Dixieland Jazz Band established jazz music as a popular phenomenon and ushered in what F. Scott Fitzgerald described as "The Jazz Age". This was followed in 1920 by the equally successful release of Mamie Smith singing "Crazy Blues", a Perry Bradford tune (which, by the way, was not a blues composition in the strict sense of the word).

Most jazz performers of the 1910s and 1920s were unknown to the general public. Usually they were paid $25.00 for a recording session, and the record company decided which take to issue. If the recordings, many of which were sold as dance music, became popular and the original master or stamper was not usable, another take of the session was substituted for the same issue number. On occasion, the same recording was issued by the producer on several labels. Recordings of the Original Memphis Five can be found on several labels; on the Gennett label the group, which sometimes included six rather than five musicians, was listed as Ladd's Black Aces; on the Grey Gull labels as the Bostonian Syncopators.

As jazz musicians became known, record companies began to feature the jazz artist as well as the group. This development was the motivation for Delaunay's Hot Discographie and the discographical techniques refined by discographers Walter Allen in the United States, Brian Rust in England and Jorgen Jepsen in Denmark -- an approach to discography which concentrated on the recorded performance.

What Rudi Blesh describes as "the birth of discography" began in the 1930s when jazz buffs and record collectors began to analyze their early 1920 recordings. For example, as they listened to the Red Onion Jazz Babies on the 1921 Gennett recording of "Nobody Knows the Way I Feel Dis' Mornin'", they realized that the cornet player was Louis Armstrong and the clarinet player was Sidney Bechet. Further listening revealed that the vocalist, listed on this session as Josephine Beatty was actually Alberta Hunter, who used her sister's name as a pseudonym. For these amateur discographers the recorded performance had become the primary source.

Record collectors and jazz buffs transformed their amateur enthusiasm for listening to recorded jazz performances into detailed analyses of the essential elements of any recorded performance. In what were basically cooperative ventures they interviewed musicians to identify not only the Armstrongs's and the Bechet's, whose musical contributions were fairly easy to identify, but every member of the ensemble. Recollections of various musicians were aurally checked by playing the recordings for the musicians. The discographers listened to the recordings and compared the solos with known examples of the soloists work. They studied the files of the recording companies for whatever information these could reveal. Other print sources, such as periodical articles, were likewise reviewed. Notices in publications like The Record Changer requested information on particular musicians or specific recording sessions.

The bio-discography King Joe Oliver, compiled by Walter Allen and Brian Rust (London: Sidgwick and Jackson) is an example of the discographical completeness this painstaking thoroughness produces. The basic arrangements by the principal performer, King Oliver in this instance, is chronological. Individual entries are identified by the title of the performing group or vocalist as it appears on the recording; for each such entry all the performers and the instruments they played are listed. The first entry for King Oliver's Creole Jazz Band identifies the personnel as: King Oliver and Louis Armstrong, cornet; Honore Dutrey, trombone; Johnny Dodds, clarinet; Lil Hardin, piano; Arthur "Bud" Scott or William M. Johnson, banjo; and Warren
"Baby" Dodds, drums. An explanatory "Note" explains the confusion regarding the banjo player, identifying those interviewed, including William M. Johnson. The date of the session is identified (Recorded at Richmond, Indiana (USA); 31st March 1923). This information was usually obtained from recording company files. When precise information was not available, dates were estimated after consideration of the copyright date of the compositions, by comparing matrix numbers with those of known date in the same series, and/or from the release date of the original recording.

The title of the composition is given together with the names of the composers and the date the composition was copyrighted.

A word of caution regarding the copyright date is included. Compositions by jazz performers were frequently performed before they were copyrighted, sometimes as varying titles, and not necessarily copyrighted by the original composer. In this example, the composition is "Just Gone", by Joe Oliver and Johnson (Johnson's first name is not included because it has not been verified). The copyright dates are shown as 11 April 1923 and 21 May 1923.

The various takes, each a unique performance, are identified; Gennett matrix numbers 11383 and 11383A (takes 1 and 2) were rejected. The matrix number on the issued disc Gennett 5133 is identified as 11383B (take 3). Dubbings on other 78 rpm labels as well as on LPs are listed by label name and issue number. All the solos are identified. (The entry for King Oliver's Jazz Band recording "Riverside Blues", recorded in Chicago in November or December 1923, shows a Johnny Dodds clarinet solo for 8 bars over stop-time chords, a trombone solo by Honore Dutrey for 8 bars, an ensemble section led by Oliver on the cornet; a cornet solo by Louis Armstrong for 8 bars, a cornet duet featuring Oliver and Armstrong for the next 4 bars and the coda.)

This performance-oriented discography also includes an index of recorded titles, an index of musicians, and an index of catalog numbers which includes the release date of each issued disc. Release dates were based on the company files, company supplements, or early advertisements.

INFLUENCE OF TECHNOLOGY ON DISCOGRAPHIC STYLE

Had audio technology remained static, these two styles of discography -- the WERM approach, composer-oriented and closely related to bibliographic sources, particularly the written score; and the jazz approach, performer-oriented with emphasis on the recorded performance -- may have sufficed.

The evolving nature of technology, however, accelerated the process of change. With the development of long-playing records and magnetic tape recording, the recording repertoire expanded immensely. The traditional assimilation and transmission of culture from generation to generation was replaced by an expanding profusion of sounds. Now all the world's music could be heard on a hand-carried tape recorder -- the polyrhythmic percussion of Africa; the blues, spirituals and worksongs of the United States; and the folk songs of England, Hungary, Germany, Russia and Poland. In addition, chamber music and symphonic music could be more effectively reproduced, and jazz and popular music recordings were no longer limited to a 2-1/2 minute time span. As the audience for recorded music expanded so did the general public's appreciation of music. A more discriminating public began to demand authentic performance -- Bach variations and inventions, for example, as Bach himself might have played them. There was
renewed interest in the composer as performer. Modern performers attempt to recreate the sound of this music by careful attention to the score and the use of authentic instruments. Today producers of compact discs base their repertoire largely on reissues much as early LPs did. Discography remains important in the new age of compact discs.

Jazz music, characterized by improvisation and the interpretations of jazz musicians, developed simultaneously with recording techniques. We can say that, for jazz, the sound recording, not the composition nor the arrangement became the primary source. Jazz music, which in earlier centuries might have remained a regional American popular music, traveled to Europe and influenced European composers and performers. After hearing jazz clarinetist Sidney Bechet, jazz soloist with Will Marion Cook's New York Syncopated Orchestra on its 1919 European tour, the eminent Swiss conductor Ernest Ansermet published an essay predicting that the musical innovations inherent in jazz music would form the highway along which the whole world of music would move. Stravinsky's "Ebony Concerto" and Dvorak's "New World Symphony" were jazz inspired. Jazz musicians explored the full potential of their instruments, particularly the trumpet and the saxophone. In this century jazz musicians have given the trumpet vocabulary both greater depth and a wider range than could have been imagined in Bach's time.

With the increasing emphasis on composer/performer for all forms of music and renewed emphasis on authentic performance on period instruments for classical music, the distinctions between composer-oriented discography and performer-oriented discography have largely disappeared. For discographers of classical music, access to the details of a recorded performance (the performer or performers, the instruments played, the place and date of performance) have become increasingly important; and, for discographers of jazz and popular music, bibliographic information on the compositions of performers/composers are equally essential.

COMPUTER TECHNOLOGY AND DISCOGRAPHY

Computer technology makes such comprehensive discography possible. Indeed, with state-of-the-art digital technology an extensive concert performance and all the discographical data needed to identify the performance can be digitally recorded on the same optical disc. It is conceivable that in the future we will receive our Schwann and Bielefelder catalog on diskette and order compact discs for the selections we wish to hear from the master optical discs maintained by the record producers. However, the implementation of new technological systems on an international, even a national, or regional, basis requires extensive financial and political commitment. Computer technology has been available to librarians and archives since the early 1960s, but complete online access to bibliographic/discographic resources in these institutions has yet to be achieved.

Practically, therefore, discographers must rely on existing technology, particularly as these have been developed by the national and international bibliographic/discographic networks, which can accept, manipulate, retrieve and communicate large quantities of data using standard computer protocols such as UNIMARC. Using these systems in combination with accepted procedures such as International Standard Bibliographic Description (ISBD) and the Anglo-American Cataloguing Rules (AACR2), it is possible to create a data file of discographical records, each of which will contain, in machine-retrievable locations, all the essential elements of a recorded performance and to communicate this data electronically to sound archives anywhere in the world.
The computerized cataloging/indexing project initiated at the Institute of Jazz Studies (IJS) in the fall of 1978 with grant support from the National Endowment for the Humanities is an example of a discography derived from such a data base. This project combines the discographical and bibliographical research characteristic of WERM and the seminal jazz discographies with conformance to international cataloging and computerization standards, including the Rules for Archival Cataloging of Sound Recordings, promulgated by the Associated Audio Archives of the Association for Recorded Sound Collections. Each recorded performance is individually cataloged, normally each side of a 78 rpm disc and each track of a 33-1/3 rpm or 45 rpm recording or compact disc. Catalog records in the USMARC format, compatible with UNIMARC, are input to RLIN (the Research Libraries Information Network) and are also tape-loaded on OCLC (the Online Computer Library Center network). Both of these networks, like the national system, are capable of transmitting electronic data internationally.

This type of analytical cataloging identifies, in machine-retrievable locations in the catalog record, all the essential elements of recorded performance: the names of all performers, performing groups, composers, lyricists, arrangers, conductors and directors; the instrumental and vocal configuration; the specific date and place of performance; the title of the selection, as determined from the first published edition of the music, and variant titles appearing on record labels, liner notes or album covers; the label name and issue designation; the matrix and take number where applicable; the date of issue and/or reissue; and the physical characteristics of the recording (kind of sound, i.e. stereo, mono, acoustical, digital; speed; dimensions; kind of cutting; special reproduction characteristics, if required, i.e. digital, Dolby; type of production i.e. instantaneous, private pressing, mass-produced; and description of the label, if needed for archival purposes).

From the cumulated magnetic tapes which comprise the IJS data base, the Rutgers Center for Computer and Management Services produces the IJS Jazz Register and Indexes by performer/title; Performer/performing group; Composer, arranger, director, etc.; Title, including variant titles; and label name and issue number. These are distributed by subscription on computer-output-microfiche (COM) with an effective reduction ratio of 42:1. Entries are arranged by IJS number, a number which identifies both the physical disc and the recorded performance, and the register is the source document for the indexes, which are keyed to the register by IJS number. Thus, the indexes provide direct access to the essential discographical information needed for reference and research.

The components of the single-line indexes are fixed-length character strings, each identified in the machine-readable record by a distinctive field and subfield location. The flexibility of this approach permits many permutations of the data in a variety of configurations. Additional indexes (for example, by date or place of performance) could be produced with minimal additional programming. The IJS approach can be adapted for any kind of discography (classical, operatic, ethnic or popular) as easily as for jazz and for any physical format (cylinder, wire, disc or tape). The basic premise is that each performance need only be cataloged once. From that master record, similar records could be produced for reissues and alternate takes; or, subsets could be derived for manipulation on mini- or micro-computers. The intellectual effort required to complete such records, however, is the same as that required of the jazz discographers like Delaunay, Allen and Rust, who considered discography a labor of love. Volunteers of that calibre are still vitally interested in such projects, but it is difficult to incorporate
such volunteers effectively in institutionalized bibliographical/discographical control systems.

Instead, amateur discographers, and some institutions, have turned to mini-computers or micro-computers. This is especially true for compilers of book-length discographies of performers, composers, and for record collectors interested in obtaining some control of their private collections. Problems arise, however, when discographers want to merge these disparate data bases into some sort of comprehensive system. It is relatively simple to down-load a subset of a master record from a main frame computer to a mini- or micro-computer. To up-load an acceptable record which conforms to national and international standards invariably requires extensive human interventions. Perhaps some adjustments of the standards, particularly AACR2, will be needed. Perhaps more effort in communication protocols should be encouraged.

Resolving the many facets of these problems is part of the challenge facing the IASA Discography Committee.
Technical Matters

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DIGITAL PROCESSING AT COMMERCIAL RECORD COMPANIES

This paper was read at the IASA Annual Conference in Berlin, September 1985 within the Open Session arranged by the Radio Sound Archives Committee in cooperation with the IASA Technical Committee.

Digital audio recording has opened new opportunities for commercial record companies to exploit older recordings in today's marketplace, and at the same time to preserve them on newly-made digital copies and to discover the advantages (and drawbacks) of the new medium.

The first duty of a record company is to make recordings and sell copies to the public. They are in this way unlike broadcasting stations and archives which record and copy their tapes primarily for program production and preservation. How each company goes about its business naturally varies from label to label. At Decca, for instance, the original edited master tape has for years been used to cut master discs and to prepare copy tapes for affiliation. Careful records are therefore kept of each time a tape is withdrawn from the Decca library and used. Over the years, some tapes have been handled over fifty times since original recording and editing, creating wear and tear that is one of the chief reasons Decca began to use digital recording as a way of producing new mastering tapes.

At RCA in New York, on the other hand, such wear and tear has been minimized, primarily by the creation of an equalized work master tape that is used for disc-cutting and copy tape preparation, leaving the edited master (often at 30 ips) untouched for long periods of time.

At CBS, the original session masters since the late 1950s have been on three, four or more track originals from which two-track mix-downs have been made for subsequent processing. It is from these multi-track tapes, newly remixed and mastered, that CBS's flood of new digital CD's flow.

It is interesting to note how little preservation as such figured in the plans of commercial companies until the arrival of digital recording. Most companies are reluctant to commit
original tapes to the well-recognized limitations of analog copying, particularly when they also recognize the limitations of all the other parts of the duplicating chain that follow as records are made for the public. Preservation has usually meant rejuvenating old splices in tapes as they are removed from the shelf for cutting or copy-tape preparation. From time to time, copy tapes for internal use have been made, but usually for the purposes I have already described, and not to replace an original, unless that tape is in danger of complete disintegration. A record company's original tapes are its most prized possession, an official told me, one that preserves in the best possible form a treasured musical performance, and one that the company will return to time and again, even if a digital copy now exists for CD reproduction.

It is not hard to recognize that what record companies think will sell today gets first priority for digital remastering. A tape has to be more than just old -- it has to be popular. At Decca such recordings are placed in the company's Analog-Digital Remastering program; at CBS, they are considered for new multi-track remixing and remastering; at EMI, they are included in a program of digital restorations under the direction of veteran Balance Engineer Christopher Parker. Ideas for new remastering projects can emerge in seemingly casual ways, for at long-established companies engineers and producers are often assigned (or assign themselves) to work on tapes they originally recorded at now long-ago sessions. What gets done also reflects what affiliates, in this case mainly Japan and the US, want to release in their own markets.

The actual process of digital restoration contains common elements at all companies, since the physical and magnetic properties of audio tape cross the usual label boundaries. The condition of the oxide coating, the durability of the tape backing, the placement and condition of splices, and the number of times a tape has been used for production purposes all figure in the restoration equation. On occasion there will be unfortunate discoveries, such as the poor condition of tapes used for mastering at Decca and EMI in the mid-1950s.

When a general review of a tape is complete, the mastering process begins: Azimuth alignment, splice integrity, tape warpage, playback EQ and frequency response, speed and pitch, and other factors associated with proper physical and magnetic reproduction are checked. Each company uses different machines for playback: EMI and Decca have Studer A 80s, RCA uses Ampex 300, 350-2 and -3 or 440-2 machines, and CBS a variety of multi-track players. EMI and Decca also use their A 80s for mono replay, evidence of which, aside from personal confirmation to me, can be heard in Decca's Walter/Ferrier Das Lied von der Erde (Decca CD 414 194-2) and EMI's 1953 Callas Tosca (CDC 747 175-2). RCA depends for mono reproduction on an Ampex 300, outfitted with both single and two-track heads, whose signal is fed into the original (and now recycled) Dynagroove production console.

Some EMI stereo tapes exist only in a staggered-head format, one that can be replayed on its Studer machines only with digital delay applied to one channel to recover the proper left and right stereo signals. Though this process is not always completely successful (adding left and right channels of these recordings reveals the effects of small phase errors caused by tape warpage and stretching) the final results are still amazingly good.
After attending to tape replay details, the real work of digital restoration starts. It is well to keep in mind that this work (which adjusts the reproduced sound for contemporary public taste) is undertaken with worthy purposes in mind -- gone are the days (we hope) of fake stereo and gross manipulation of the musical signal. As evidence of the new attitude, here are three spokesmen on the subject of digital restoration:

Jimmy Lock, engineer at Decca Records, and principal force in its ADRM program: "My aim is to make sure that these heritage recordings are preserved, sounding as fresh as possible."

EMI's Christopher Parker: "(We seek to achieve) the most 'natural' sounding result obtainable from the original, trying to avoid distortions of all kinds."

Polygram USA's former Classics President Gianfranco Rebulla: "One of the major advantages of the Compact Disc is that it not only brings forward the new recording techniques, but is also incredibly valuable for making available again, in the best possible form, the treasures of the catalog."

With these thoughts in mind, let us turn now to some of the techniques applied to realize the potential of older tapes. These include frequency equalization, both to compensate for original microphone frequency response, and also to correct for session mike placement. Extraneous noises, such as hum, clicks, subway rumble and hiss are attacked with equipment found in any decently equipped sound restoration studio. Digital editing clears up and improves old splices -- Decca, for example, often digitally reedits tape joins as it prepares its digital masters. Editing can also compensate for dropouts and oxide flaking on old tapes. Dynamic range and stereo image and size are reviewed and sometimes altered to match the capabilities of the digital medium and to compensate for compression introduced at the recording session. For an example of the former process, listen carefully to the EMI Tosca mentioned before, which has had its upper and lower dynamic extremes adjusted, both to enhance the performance's musical content, and also to depress the low-level hiss and noise floor of the original tape. Multi-track originals, offer further opportunities for fine-tuning, the results of which are most clearly heard on CBS's CD incarnations of venerable performances from its 1950s Szell, Walter and Bernstein catalog.

These manipulations are, naturally, analog only -- digital desks are not yet used in commercial companies, and, as Lloyd Stickells could point it out, might still be considered to be in a quasi-developmental stage. Digital enters the picture when the altered signal is ready to be recorded; and it is at this point that disagreement about restoration occurs, for in spite of the surface optimism for the new medium, reservations still exist about its sound quality and viability as a storage medium, even at companies that long-ago took the digital plunge.

Before considering these objections in detail, let us review for a minute the kinds of digital machines in use today. There are two types: video-based equipment, of which the Sony PCM-1610/1630 and its associated U-Matic recorder is the most notable example; and reel-to-reel systems, which are about to reach the market using various formats (e.g. DASH), a variant of which can be found in Decca's digital mastering machine, which use IVC 2-inch tape transports with Decca-designed and built analog-to-digital circuits and a digital editor.
The risks for long-term storage of both systems are not quite clear. And while one of the main attractions of digital recording is its superior editing ability, a factor that should have less importance for archives than it does for record companies, some caution should be exercised by those of us who are thinking seriously (or have taken the plunge) into digital recording.

These doubts are not always shared in the record industry, though only experience will tell if the following comment from an official Polygram is justified or not:

"The important thing is to get the older masters, if they are deteriorating, on a medium that will take them through the next century."

Those of us with large inventories of old tape recordings -- or even more fragile media -- should consider carefully how digital recording alters our responsibilities as sound custodians.

To date the experience in large companies I have contacted has been mostly positive. We must keep in mind that digital recording is still in its infancy, and that improvements in its electronic and storage capacities will be made. Record companies are in many ways in the lead in using bits and bytes to preserve sound. Their experience -- good and bad -- will show the way for the rest of us.

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THE RESTAURATION OF HISTORICAL SOUND RECORDINGS BY MEANS OF DIGITAL SIGNAL PROCESSING: PSYCHOACOUSTICAL ASPECTS

This paper was presented at the annual conference of the Association for Recorded Sound Collections, New York City, April 16-19, 1986.

INTRODUCTION

The purpose of this paper is to present a slightly different approach to earlier applications of digital signal processing applied to the enhancement of historical sound recordings. It is our opinion that the restoration of historical recordings must take into account human perception in general and psychoacoustics particularly, because the listeners are motivated by perceptual and cognitive considerations rather than relying on mathematical models. Starting out from the main objective to improve the overall quality of sound recordings three kinds of severe signal degradations have to be considered in detail:

(1) transient peaks caused by dirt and damage, scratches and cracks on the original discs or wax cylinders,
(2) background hiss and broadband noise due to the imperfections of the recording surfaces of the materials used,
(3) unnatural sounding caused by resonances which are present in the historical recording equipment.
SIGNAL ENHANCEMENT PROCEDURES

It has been pointed out by several investigators in the speech research (see James S. Lim for a comprehensive overview) that appropriate signal processing algorithms can be applied to eliminate signal degradations as mentioned above. Though computational and technical problems of efficient signal enhancement algorithms are still valid the power of modern computer technology and software development has reduced them significantly.

If transient peaks can be detected, they are removed by replacing the degraded signal by undistorted material prior or after the peak, or by simply removing short peaks. Perceptually a smooth jump in phase or as small gap in the sound is far less offensive than a sharp click or pop. The detection of sharp peaks can be done by computer programs but usually considerable variations of the click waveforms have to be taken into account, varying from recording to recording, depending on the kind of damage of the recording medium.

Background hiss and continuous broadband noise can be reduced significantly by applying highly sophisticated adaptive digital filter techniques (Deutsch & Noll, 1984). These degradations are most prominent especially in very early recordings which have been made under nonideal recording conditions, as in the field under unfavourable climatic conditions (high temperatures and humidity) and without properly maintained studio equipment. In many cases the original recordings have been lost and today only poor copies or metal matrices of poor quality are available. Nevertheless, if the statistical characteristics of the signal and the background noise can be identified, adaptive filtering techniques can be applied with good chances of success.

Last not least the compensation for unpleasant horn and system resonances can be done by carefully equalizing the recordings with high resolution digital filters. Practically no technical limitations exist in frequency resolution or filter bandwidth. The problems still arise if no reliable guess of the system transfer function can be obtained because little or no information about the historical recording equipment is available. There are extensive discussions (Brock-Nannestadt, Owen & Fesler) how to measure horn and system resonances in combination with the recording mediums used. In many cases the system transfer functions have to be extracted from silent periods of the recordings, a method which relies not directly on the physics of the recording equipment. There is some further experiences which led us to proceed with caution, because slight ill conditioning of the equalization inevitably causes significant deterioration of the whole enhancement process. Certainly it is better to do no equalization instead of introducing a wrong one.

PSYCHOACOUSTICAL ASPECTS OF SIGNAL ENHANCEMENT

The listeners habits in hearing historical sound materials are characterized by the experience that acoustic recordings sound hollow and dull, that hiss, broadband background noise and cracks are present, the frequency range is very limited and the signal to noise ratio is low. Even electrically recorded 78 rpm discs produce usually more or less acceptable amount of hiss, representing a historical document.

Modern digital stereo records have a frequency range of virtually 20 kHz and a full dynamic range of more than 80 dB. In addition to the program signal they preserve the room characteristics of the recording studio and in life performances the acoustical environments, as accurate as possible, due to highly sophisticated multichannel recording techniques and stereo mixing.
Let's imagine a simple psychacoustical experiment: first we mix continuous background (pink) noise with a modern recording in order to simulate the signal to noise ratio of historical recordings (i.e. 15-20 dB). Then we feed this artificially degraded signal into the noise reduction system, and the result will be a clean high fidelity recording with a signal to noise ratio almost original. If we apply the same amount of noise reduction to a historical recording, we will never obtain a higher frequency range as the original had, and expanding the signal to noise ratio of the "poor" original to the value of a modern record, which is technically possible, will produce a strange, unusual sound. It will be clean, completely free of noise, but the dynamic relationships are not correct. Moreover the problem of the limited frequency range of early acoustic recordings (typically 200 - 4000 Hz) will increase to intolerable prominence in the total absence of any high frequency components. This leads to the conclusion that it is undesirable to produce a "figure" without any background, an experience which is widely documented in the perception of visual information and which is valid in audition too. Frequently it happens that a continuously sounding weak and neutral background is plausible and better than none.

Thus the main objective to improve the overall quality of the sound recordings, in case of hiss and background noise, can be formulated more exactly from the psychoacoustic point of view: the primary signal has to be enhanced reasonably and the uncorrelated background noise has to be reduced to a certain amount, in order to install almost natural signal/background conditions.

Digital signal enhancement has been applied to the following published historical records of our sister institute, the Phonogrammarchiv der Akademie der Wissenschaften:
To the only recording of Johannes Brahms on PHA EPS (although the extremely poor quality of the original does not allow for much improvement) and PHA EP6 (Viennese actors). A demonstration of digital signal enhancement for the voice of Emperor Franz Joseph has been given at IASA's Annual Conference in Washington D.C., 1983. The method in its latest development has been applied to PHA EP7, k.k. Hofopernsänger.

In this last case we refrained from eliminating hiss and broadband noise completely and consequently a continuous background with an acceptable level can be heard during silent periods of weak signals. This background is composed of several low frequency signals, but only the rumble of the turntable gear can be distinguished clearly. During strong signals in the original recording we used the well known psychoacoustical "masking" effect which increases the subjective hearing threshold of a second tone in the presence of a strong primary tone; i.e. whenever strong spectral components of the singer are present, they mask high frequency noise up to a certain range themselves (exactly: within one critical band). This resulted in a relevant reduction of the overall processing necessary and many signal portions are left almost original. However, the noise can not be heard due to the psychoacoustic masking effects. Continuous fine tuning of the parameters of the adaptive filtering algorithm has to be done, including the application of frequency and amplitude dependent rules, to obtain maximum noise reduction when it is necessary from the psychoacoustical point of view and to suppress it otherwise, without producing the well known "pumping" effects.
CHRISTOPHER H. ROADS and LLOYD STICKELLS, British Library National Sound Archive, London

NEVE DIGITAL PROCESSING DESK AT THE BRITISH LIBRARY NATIONAL SOUND ARCHIVE

The delivery of a special and unique archival version of a digital audio processing desk to the National Sound Archive in November 1985 was almost headline news. It was not surprising that delivery took almost a year later than the originally promised date. It had not proved easy for Neve Electronics and the National Sound Archive to work out an acceptable specification for a desk which would meet all present and potential requirements. In fact it became apparent during the long gestation that the Archive would have to settle for a compromise. Nevertheless, the desk which Neve finally delivered was only the fourth to be constructed for the manipulation of digital audio.

The National Sound Archive possesses a very large collection of around half a million 78s and thus frequently encounters the need to restore deteriorated recordings to something approaching their original state. Previous to the acquisition of the Neve desk our technicians worked in the analogue domain: now they have the option of working in either or both. The Neve desk is not so much revolutionary for its digital audio approach as for the immense facility it conveys to its operator to reproduce virtually at the touch of a button any previous combination of settings that may have been employed for restoring comparable recordings. Of course, it has many other features which make the sound restorer's task easier - these are adumbrated in Lloyd Stickell's paper - but it is epoch-making for the greatly increased level of efficiency it permits to be attained than for its ability to undertake sound restoration outside the capability of ordinary analog equipment.

The concept behind the new equipment is exactly as one would expect in a modern system. Basically, one purchases a set of hardware capable of being furnished with software on an up-datable basis. As matters stand at present and as a direct product of a special research agreement entered into with Neve and the Department of Engineering at Cambridge University, the National Sound Archive expects to work steadily over the next few years on a programme of developing
software for an associated computer and, when finally satisfied that it meets operational re­
quirements, having the Neve engineers convert it into plugboards or, ultimately, printed cir­
cuit boards for the processor itself. We accept that there will be some requirements in the
restoration of sound which will, perhaps for years, need to be done out of real time but it
is our intention to pass from our linked computer equipment to the Neve processor as much of
the software we develop for such things as click suppression and echo reduction as possible.

The Neve equipment is housed in as comfortable working environment as can be achieved. This
entails, inter alia, the separation of the equipment into two units. Only the desk itself is
positioned in the auditorium. Since the restoration of sound is so subjective an issue the
room in which the desk is sited is furnished in a restful and relatively sumptuous fashion
with arm-chairs for those listening to the product. Curtains cover the walls, a deep pile
rug carpet the floor and every effort has been made to reduce the incursion of external noise.
A battery of original sound reproducing equipment is concealed behind curtains, but is still
immediately available to the operator. At present the only serious problem that has been
encountered in the utilisation of these facilities is the heat generated by the equipment
and spot lighting. As seems inevitably to happen, cooling can be achieved only by the use
of equipment which itself produces noise. The Archive is experimenting with roasting its
operator rather than deluging his environment with unwanted sound.

The equipment was placed on display to the press at the time of its delivery. It can be
seen at any reasonable hour by visitors who make arrangements with the staff beforehand. How­
erer, we hope that it will be exhibited at the proposed international audio-visual equipment
technological exhibition and seminar in West Berlin from 20-24 May 1987. This event is strongly
supported by UNESCO but is actually under the joint auspices of IASA, FIAT (International
Federation of Television Archives) and FIAF (International Federation of Film Archives).
Details have yet to be worked out with the manufacturers since the regulations governing the
exhibition limit exhibits to those who manufacture or distribute equipment, but it is likely that
the equipment will be demonstrated in full operation.

Although it might seem that the cost of this equipment places it in a bracket likely to be
accessible only to a very small number of archives, it is certainly possible to argue that with
careful programming and batching of work the output to be expected from it is many times that
which can be anticipated for comparable analog equipment. Moreover, the possibility of working
the equipment on a double or even triple shift system should not be overlooked. Perhaps the most
difficult part of its manufacture was its testing which occupied more than six months. This
is not surprising considering the immense number of control settings and conditions which had
to be checked. As is to be expected, this process could not and did not cover every possibility
thrown up by the Archive's operation of the equipment. However, it is encouraging to note that
after a few months of close working with Neve's engineers it has now settled down and seems to
be reliable and easily maintained. Sufficiently so in fact for the Archive to have elected at
the termination of the original guarantee to bear the direct cost of any servicing and mainte­
nance rather than to enter into a service contract.

All in all, though the equipment as at present constituted falls slightly behind original ex­
pectations in terms of its total capability, there is little doubt in our minds that our present
joint research project will result, within three or four years, in an equipment with unique per-
formance. The advantages of switching to digital audio in terms of cheapness of storage and cheapness of reliability of associated equipment have frequently been discussed in the recent past. There is no doubt that possessions of this archival processor is a natural concomitant to the adoption of a digital audio format, a step which the National Sound Archive took last year. It is often alleged that taking delivery of prototype equipment is an extremely dangerous step. Whilst it is true that this digital processor is the first of its kind it is also a fact that the components upon which it depends have been tested and proved in the other half dozen or so comparable equipments manufactured by Neve. Moreover, the company has undertaken to replace any components free of charge in the National Sound Archive processor which are improved through its experience with the other machines. It is therefore very much the view of the National Sound Archive that getting in at the beginning under these circumstances has little risk and the great deal of advantage. The most obvious advantage is that the specification of the equipment can be closely and precisely tailored to the Archive's requirements. So far the 'partnership' between Neve, Cambridge University and the National Sound Archive has been extremely satisfactory in every material respect.

Christopher H. Roads

Digital technology, as far as mixing desks are concerned is still in its infancy, and at the moment at least, tends to be very expensive. Neve's initial quote was felt to be more than even a sympathetic British Library management could be expected to agree to. So some time was spent with the Neve engineers in an attempt to simplify their original proposals with a view to reducing the enormous cost, but still leaving most of the desirable features.

By taking out some of the functions that are considered vital in studio or broadcasting work, but which seemed less necessary for sound archiving, we managed to reduce the initial estimate by about 25%, but any archive thinking of buying a desk with similar features to those about to be described will have to think in terms of at least six figures in sterling.

For those unfamiliar with digital processing, the normal (analog) signal first has to be converted into digital form. This process is known, unsurprisingly, as Analogue to Digital conversion. To do this, the instantaneous value of the analog signal, in say, milli-volts, is measured by a special electronic circuit, then the 'normal' value thus derived is converted to a binary value by another special circuit. The number of binary digits or 'bits' in the binary value determines the precision that the analog value will have in its binary form.

The BBC consider 13 bits to be the minimum required for adequate fidelity, the Japanese EIAJ standard has 14 bit linear coding, but most current digital audio systems use 16 bit conversion. This gives 65,536 different steps into which the signal level may be devided as opposed to the 16,384 available to the 14 bit system, or the 8,192 steps of the 13 bit system.

Another factor that decides the ultimate fidelity that can be achieved is the 'sampling rate'. That is, the numbers of times that the instantaneous value of the analog waveform can be measured per second. For mathematical reasons the upper frequency that can be recorded or produced cannot be greater than half the sampling frequency. Again, the BBC, who having been using digital audio in their countrywide studio-transmitter feeds for a number of years, found that for their purposes, a 32kHz sampling frequency was adequate. In this case dictated by the
15kHz upper frequency limit allowed for FM transmissions. However to cover the full 20kHz range normally accepted as desirable, if not necessary, for 'high fidelity' reproduction, the sampling must be done at a frequency greater than 40kHz. (Studio reel to reel digital machines usually have a 48kHz sampling frequency). The frequency chosen for compact discs is 44.1kHz, as is that for the Sony PCM F1/701 digital converters. Since the archive had already begun to do certain recordings on this convenient, high quality, and not least, cheap format, this desk was devised to operate with the Sony domestic system, rather than the more usual 1610 (now 1630) professional system.

The handsome looking desk finally delivered to the NSA last November has six input and two output channels, i.e. three stereo inputs and one stereo output. Two of the inputs are analog and four are digital, allowing two digital sources to be mixed without having to first convert them back to analog. The outputs are digital but with D/A converters as well to allow analog copies to be made.

There are buttons that allow selection of different operational modes. Stereo puts Left I/Ps to Left O/Ps, Right I/Ps to Right O/Ps. Mono mixes Left and Right I/Ps to both O/Ps. Left puts Left I/Ps to both O/Ps. Right puts Right I/Ps to both O/Ps. A useful feature of this is that it has been arranged that Stereo, Mono, Left of Right selection causes no perceptable change in loudspeaker monitoring, thus allowing instant aural comparison of Left, Right, Stereo or Mono, without suffering the level changes normally expected between these conditions.

Other facilities are those that would be found on any good quality mixing desk, equalising, limiting, compressing, expanding, and one possibly unique feature, three tunable notch filters, each with a 'Q' of 25 and notch depth of 36dB.

Another difference from the normal run of controls is that the 'tone controls' are asymmetric, allowing 12dB of boost, but 24dB of cut. This was felt to make better use of the total available 36dB of control than the 18dB originally offered, on the premise that 12dB is about a practical limit to signal boosting without unacceptable side effects, whereas there is no limit to the amount of cut that may be desirable at times. Another variation on 'normal' desks is that the degree of lift or cut applied to any of the selected bands is by 'up' and 'down' buttons rather than by rotary or slider controls usually employed.

The 'equaliser' panel of the desk has several separate sections that can be switched in or out separately or together. Going from left to right, first is a high and low pass filter. The high pass section turnover frequency can be varied in approximately 1/8 octave steps from 20Hz to 280Hz. The low pass section from 1.8kHz to 14.4kHz in approximately 1/10 octave steps. A further option is the ability to switch between 12dB and 24dB per octave slopes. Next comes a high pass shelving equaliser that can boost 12dB or cut 24dB at 'turnover' frequencies selectable between 30Hz and 600Hz.

Following this are two peaking equalisers, again with 12dB boost and 24dB cut capability and with four selectable 'Q' values between 0.5 and 5.0. The lower of the two covers the range of 100Hz to 1200Hz and the upper one from 600Hz to 12 kHz.

The last section is an upper frequency shelving equaliser, going from 1.2kHz to 15kHz in 1/10 octave steps approximately.
All the foregoing have the turnover or peaking frequencies selected by 21 step rotary controls that have no end 'stops'. When the extremes are reached, there are no further changes, but the first movement in the reverse direction has an immediate reaction.

Except where stated, the spacing between steps is approximately 1/6 octave. The exact frequencies selected are shown by 7 segment LED displays and the degree of cut or boost is indicated by a row of LED lamps against a numbered scale. Red for boost, green for cut and yellow at the 'flat' position.

The steps of cut or boost vary according to the variation from 'flat', being in 1dB steps about the normal position, expanding to 2dB steps around 6dB, and 3dB above the 12dB mark.

What is marked on the 'configuration' buttons as DRC is the Dynamic Range Control section, with four parts, limiter, compressor, expander, and noise gate. All, or any, of these may be used individually or together.

Threshold, attack time, release time and slope are all independently adjustable over quite a wide range, and an interlock system to prevent nonsenses such as attempting to insert the compressor at a higher level than that to which the limiter has been set. Again, attack time, release time, threshold point and slope of each section is shown by 7 segment LED displays. Only one set of displays is used for all sections, the display being switched to show the chosen parameters for each section.

Having mentioned the 'Configure' button, this is perhaps a time to point out the other control buttons that occupy a central panel beneath the Peak Programme Meter. (Which is incidentally, a standard twin movement analog type, chosen largely for sentimental reasons, though it does have a digital peak hold facility). In the top left of this panel are the 'Tone' and 'Slate' buttons, with associated gain controls and readouts. 'Tone', (at any of eight frequencies between 27Hz and 16kHz) which overrides programme, can be sent straight to the output, or through the signal processing section to check various parameters if necessary. 'Slate', (or talk-back) overrides everything when selected. Below these are the monitoring buttons, allowing loudspeaker and meter readings of desk output, analog input, or analog recording machine output.

The centre of the panel is taken up with a numeric keypad associated with the desk store-and-recall facility and the LED alpha numeric display of store numbers, names, descriptions and processing faults. Another row of buttons beginning with one marked 'Configure' allows a choice of whether to include equaliser, filters, notch filters, and dynamic control - or not - and in any order.

There is another button in the 'Configure' set, one marked, perhaps optimistically, 'Scratch Reduction'. The original idea was the inclusion of a signal processing section that would remove clicks, scratches and perhaps surface noise from records. In fact this section of the desk would have been the one that set it apart from what could be achieved by normal analog means, but because this meant totally new research and development as far as Neve was concerned, and would thus have delayed delivery of the desk, this section was left for later inclusion, and is still under development at Cambridge University engineering department, though the final version is likely to end up as a 'stand alone' system based on an IBM micro computer, and not be directly incorporated into the desk hardware.
One of the attributes of a digital system is that it needs the minimum of controls, since the
same control can be switched between channels, or even between functions, but as part of the

cost pruning exercise the only concession to 'assignability' of controls that this desk has is
the facility to have totally different filter settings on left and right channels, by pressing
buttons marked Left or Right before ordering the 'Configure' buttons or adjusting the equaliser
controls.

If neither button is pressed, the desk assumes stereo operation. Unless a particular section
has been 'configured', the associate displays do not light up, and the controls have no effect
whatever.

Another attribute - and drawback - of digital systems is the 'step' nature of every aspect of
both signal and control.

In the case of controls the absolute repeatability of settings can be turned to good advantage
in that all the settings of each control can be stored in a computer memory and recalled at a
later time. The current memory is automatically and constantly updated with control position
information, and no action on the part of the operator is required. Only 'dump' one par­
ticular store to the floppy disc. This particular desk can hold up to thirty different sets
of settings in its internal memory, and twenty total desk memories can be put onto a floppy
disc.

Thus a floppy disc can store 600 desk settings that can be recalled. A keyboard allows a ten
character title, and two twenty four character lines of further descriptive text. Recall can
be by store number or title. This makes it very easy to achieve exactly the same control
settings used for a particular application, a day, a week, a month, or a year later, almost
literally at the push of a button.

Lloyd Stickells

FRANZ LECHLEITNER, Österreichische Akademie der Wissenschaften, Phonogrammarchiv, Wien

A NEWLY CONSTRUCTED CYLINDER PLAYBACK MECHANISM FOR ALL FORMATS

Since Thomas Alva Edison succeeded in preserving the human voice on a vertically cut cylinder
tin foil for the first time in 1877, this recording technique has undergone rapid technical
and economic development. Wax- and celluloid cylinders of different sizes flooded the market
at the beginning of this century and disappeared only when the gramophone record began its
triumphant progress.

The gramophone record was far more practical in many ways. It was easy and cheap to produce,
had a longer playing time, and the storage space required was much smaller. With the exception
of a few commercial companies, the phonograph-cylinder was used only for scientific field re­
cording for a longer period of time.

Modern society is becoming increasingly aware of the cultural significance of historical sound
documents hidden away in public and private collections. Thanks to concerted efforts previous
cultural assets can be saved and preserved for future generations. This applies especially to the wax cylinder which, because of its chemical composition, is subject to an almost self-destructive aging process. This process can also be accelerated by improper storage. The playback of historical cylinder material, however, is often very difficult because of the different formats. In very few cases a sound archive is equipped with a modern playback unit, which allows to play back not only the more common two-minute-and-four-minute-standard-cylinders with 2in diameters but also the 5in diameter concert cylinders, Pathé Saloon-cylinders or Dictaphone-and Columbia cylinders of 6in length. The problems actually already start with the playback of the standard cylinders with 2in diameters.

Cylinders with an inner diameter of less than 1.7in do not fit in with the Edison standard mandrel. A perfect reproduction of such cylinders requires modifications to the mandrel or to the cylinder by carefully reaming. The latter, however, implies a certain amount of risk. The sometimes not quite concentric shape of some - mainly private - cylinders due to inaccurate workmanship or to improper storage is another important aspect which should not be underestimated. Historical phonographs later equipped with a modern pickup-system in most cases deliver signals which are strongly influenced by the concentricity of the cylinder itself or are not capable of tracking at all.

The greatest difficulties are liable to occur when pushing the cylinder onto the mandrel. The cylinder may become loose and unstable during the reproduction if applied with too little pressure. This causes tracking problems and playback distortion. On the other hand the cylinder will crack if applied with too much pressure. For the reasons mentioned before, it neither seems to be useful to modify a historical phonograph for archival transcriptions - inspite of several advantages - nor to equip a modern playback machine with a mandrel according to the historical model as the problems cannot be solved satisfactorily. For these reasons we have been looking out for new solutions.

The new cylinder playback unit to be developed suitable for all common formats had to be equipped with two main features:

1) The inner pressure caused by forcing the cylinder on a mandrel had to be kept at a minimum,
2) the cylinder had to be fixed as concentric (perfectly round) as possible.

If we assume that only the playback surface of the wax cylinder had been manufactured accurately, the cylinder had to be held in playback position on this surface. Thus inside pressure on the cylinder was simultaneously avoided. For the prototype this was achieved by means of a concentric three-jaws-system at the starting position and of fitting rings at the end of the cylinder respectively. The fitting rings have a suitable profile and can be locked onto the driving shaft.

The three-jaws-system has an error of less than 0.1mm (0.004in) over the whole radial range, therefore any disturbing eccentricity determined by the design will be kept within negligible limits. The driving shaft is equipped with double sliding bearings with bronze bushings on the driving side. The open end is supported by means of a tailstock with ball bearings which can be turned down.

Both the cylinder and the tone arm are DC-powered and belt-driven by means of two electrically coupled DC motors. The motor driving the tone-arm is combined with a planetary gearing system having a reduction ratio of 165 : 1 which can be switched to half speed for 4 minute cylinders.
Speed control takes place on the driving shaft and is equipped with a digital read-out.

The tangential tone-arm works on the well-known Rabco principle; the main item consists of a Rabco ST7 carriage. For reproduction an AKG P10 pickup system is used which is selected with respect to channel symmetry and low compliance. The low compliance together with a short tone-arm increase the pick-up resonance frequency to such a degree that cylinders running off center strongly can be tracked, too. It also guarantees exact groove contact with big styli.

The vertical adjustment of the tone-arm to track the different cylinder sizes is achieved by means of putting spacing blocks under the tone-arm drive. Practical experience has confirmed the theory that the cylinder has to be suspended at both ends. Conceiving non-concentric cylinders the sound quality is much better in comparison to the traditional suspension employing the Edison standard mandrel.
Reviews and Recent Publications

Available from CLPGS (Books), 80 Boltons Lane, Pyrford, Woking, Surrey GU22 8ZN, Great Britain.

Complete listings of English Columbia records have been represented so far only by the English Celebrity Issues volume in the series published by the Oakwood Press. Now Frank Andrews has put us in his debt with a carefully researched and prepared book devoted to the dark-blue 10" series from its inception in 1906 till 1930. The numerical listing gives not only the usual detail of record number, artist, title and composer, but also the date of issue month by month and a very high portion of matrix numbers. With the advent of electrical recording many titles were remade using the same catalog number followed by the suffix R. These recordings are duly shown following the original issue. The usual feature of an index of recording artists with added disc numbers provides a ready reference to the main part of the book.

This 10" series of course, largely consisted of popular material, much of which may not now be regarded as particularly significant, yet such recordings as the 18 sides devoted to the politicians of the 1929 General Election constitute a valuable historical document since few such recordings were made in that era. Despite the small proportion of classical music material to be found in these listings, nevertheless the names of such fine artists as Albert Sammons, Heddle Nash, Velli d'Aranyi, Harold Williams and William Murdoch are to be found in the index. Nor was the choice of repertoire entirely unadventurous. Two records of Cyril Scott's music featured the composer himself, there is little-encountered music by Delius as well as a Sonata for flute, cello and piano by Pierre and Respighi's Pini di Roma, each on 6 sides, which must have been adventurous issues in 1929.

The virtual swan song of this no-prefix series was Volume I of the "Columbia History of music by Eye and Ear" by Percy Scholes issued in 1930, a famous set of records in its day. Subsequent volumes of the history appeared in the 10" DB series which was the successor to the one under review and which survived till the advent of LP and beyond. It is to be hoped that Mr. Andrews will have sufficient success with the present volume to encourage him to explore the DB series, or the 12" dark blue series or even both.

Eric Hughes

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During the 1920s a number of British and American musicians were responsible for bringing jazz to Germany. Many stayed on to play with local dance bands and as studio musicians. Hence the obscurity of such figures as Mike Danzi, Wilbur Kurz and Billy Bartholomew due to the relative neglect of European dance music which was not considered hot enough for jazz. For this reason these names will not be found in Rust's Jazz Records and we must turn to the pioneering work of Horst Lange's Die deutsche "78er"-Discographie der Jazz- und Hot-Dance-Musik (Berlin, 1956) for the earliest, detailed, discographical information.

The current generation of discographers of European jazz and dance music frequently acknowledge their debt of gratitude to Lange. Among the most active of these are the authors of this latest bio-discography, no.27 in the essential series of Jazzfreund Publikationen.

Billy Bartholomew was born in London in 1901. He performed in Hamburg in 1924 and spent the next fifteen years performing and recording in Germany. In 1939 he was advised to leave Germany and he continued his playing career with ENSA. After the war and well into the 1950s he toured Britain as a solo act, the highlight of which appears to have been to play two saxophones and a clarinet at once - so Roland Kirk wasn't the first - dressed like Coco the Clown. Some rather obscene photographs testify to this extraordinary feat. But it is the German period, when the recordings were made, on which the authors concentrate.

Lotz and Bergmeier have added considerably to the information in Lange. Most of the recordings on which he is known or believed to be present are listed but due to the nature of the music (as already mentioned) his presence as a sideman is still a matter for investigation. Sensibly the authors avoid speculation although the words "probably" or "most probably" do occur rather frequently in the text. As expected, all the essential information is present: matrix numbers, recording dates, personnels (if known), titles and composer credits. Information has generally been taken from the original record labels, the most accessible of primary source material but at the same time notoriously prone to misspellings and other inaccuracies. For example, on page 52 we find a photograph of the Odeon label for "Troika-Fox". The composer credits read "Frederick Hippman/W. Gorges". This is transcribed (but without any comment) as Frederick Hippmann - W. Georges, presumably the string player in Bartholomew's Tanz Orchester, Walter Georges, as identified on page 50.

An appealing feature of this discography, and of others I have seen in this series, is the inclusion of different sized blobs to indicate, in the author's opinion, the degree of "hot-ness". The blobs also serve to enable collectors to indicate, by colour coding, their holdings of the items listed.

The biographical content is very usefully interspersed with the information about the recordings, again a feature of the series, but better laid out than many of the previous numbers. It is largely based on interview material with acquaintances and relatives (Bartholomew died in 1972) and the authors have clearly re-written and updated material published on Bartholomew's contemporaries which previously appeared in journals such as Storyville. The facts of his life and career are presented objectively, without any of the rose-tinted sentimentality which often clouds material on these times.
The English text is generally fluent and colloquial but material cited from German articles and reviews is left untranslated. Without wishing to appear chauvinistic, I wonder how many non-German speaking collectors will be able to benefit fully from the inclusion of these extracts without translations.

The authors and Jazzfreund should be congratulated for their pioneering work in this area and for adding another exemplary number to their series. The IASA Discographical Committee need look little further than the work of these authors for a set of discographical standards.

Chris Clark


Available from Norbert Ruecker, Verlag & Versandbuchhandlung, Postfach 14, D-6384 Schmitten 1, BRD.

This extensive discography of the U.S. AFRS (Armed Forces Radio Services) "Jubilee" transcriptions provides, for the first time, comprehensive coverage of recorded black jazz in America during World War II and the immediate post-war years. These "Jubilee" shows, especially the earliest programs, are of tremendous importance because these recorded performances usually featured black jazz artists. Moreover, because commercial recording had come to a virtual standstill due to the recording ban imposed by the musicians' union between 1942 and 1944 and, again, from late 1947 through 1948, for many performers these "Jubilee" transcriptions are the principal recorded output for this period. In addition, for the jazz scholar, these performances document this historically significant transitional period which extends from traditional jazz and swing to bebop.

The idea of the "Jubilee" shows was conceived in 1942 by Major Mann Holiner, who was assigned to the Radio Section of the U.S. Armed Forces Special Services Division, later AFRS. Production began in October 1942 in New York City as a series of variety shows, featuring outstanding black orchestras, vocalists, instrumental groups and comedians, performing for live audiences of American servicemen. Most of the artists, many of whom were members of the American Federation of Radio Artists and/or the musician's union, donated their time as a patriotic contribution to the war effort. The project was transferred to California in January 1943. As the series progressed studio productions were also used; and, beginning in 1944, an AFRS orchestra consisting of enlisted musicians accompanied many of the vocalists. Some white artists were presented during the war years; later in the series they were featured more frequently. From these instantaneous recordings the thirty-minute "Jubilee" transcriptions were assembled. During the first few months of the program, AFRS transcriptions were pressed so that the first half of one program was on one disc and the second half on a second disc; after May 1943 all programs were pressed back-to-back on a single disc. This practice continued until the series was revived in 1952 with the issue of no. 366, when the "Jubilee" programs were coupled with another transcription series called "Sports Answer Man". The AFRS transcriptions were broadcast on short-wave radio by the U.S. Office of War Information for American servicemen in the U.S. (east and west coasts) and re-broadcast by various overseas short-wave radio-stations, later by Army radio stations overseas, for U.S. military personnel in Europe and Asia.
Volume 1, compiled by Lotz, lists the "Jubilee" program transcriptions in numerical order, from no. 1 to no. 433, the last numbered issue, followed by the Christmas shows for 1945, 1947, 1948 and 1952. To the extent that the information was available to the compiler, each numbered transcription is described as follows: "AFRS Program Announcer", the announcer responsible for the opening and closing program identification; "Master of Ceremonies", the master of ceremonies for the program (when the program moved to California in 1943 Ernie "Bubbles" Whitman became the regular master of ceremonies continuing in this capacity through April 1945); "Date of Dubbing", actually the date the thirty-minute "Jubilee" program was assembled or re-recorded for broadcast on a 16-inch electrical transcription (in some instances, this data is obtained from the AFRS "Jubilee" program lists); "Date of Broadcasting", usually the same pre-set hour on Friday nights, cleaned from the penciled notations station libraries added to the record labels or paper sleeves indicating the date of broadcast; "Label information" which, for the early programs, listed the names of the performers, and generally included the program number and the program time (an explanation of the label designs used in the program is included in the preface to Volume 1); "Notes", in some cases from AFRS ledgers, which supplement the information provided by the labels and aural evidence; "Wax information", based on the inscribed data on the electrical transcriptions which were available for observation; "Tune Credits", based in all cases on aural evidence because tune listings were never included on the labels; "Recording Dates", usually 10-16 weeks prior to the date of broadcast; "Personnel", based on the actual announcements and/or standard discographical reference works. Only those performers whose identity was established beyond a reasonable doubt are listed without a preceding question mark; all others are presumed to be educated guesses. The performing artists are linked to the tune titles using a numerical code. Supplementary notes add pertinent information such as the V-Disc number on which specific selections were later released, explanations derived from aural evidence, and other observations.

Volume 2, which effectively complements the numerical listing of "Jubilee" programs outlined in Volume 1, was compiled by Neuert. It contains a performer discography with a reissue guide, a tune index and an artist index. The name discography lists the performers and/or performing groups in alphabetical order, with separate entries for featured vocalists unless they were regular band members at the time of performance. For each named entry the personnel of the group are identified. Performances are arranged chronologically, to the extent that this is possible, and each performance of a tune is identified by an alpha-numeric code, similar to that used by Sears in his V-Disc discography (Richard S. Sears, V-Discs: a history and discography. Westport, CT and London: Greenwood Press, 1980). Each item is keyed to the numerical listings in Volume 1 by the inclusion of the "Jubilee" program number or numbers. In addition, for those selections which were later issued on V-Disc, Navy-Disc, other U.S. Armed Forces releases and/or commercial reissues, the label names and issue numbers are identified. Supplementary notes and cross references are also included. The reissue guide is arranged by the name of the commercial LP label and issue number, in some cases with an indication that the LP was transcribed from a V-Disc. To identify the V-Disc number, it is necessary to refer back to the name discography. The various recordings of each tune, including individual medley selections and tunes used as introductory or signoff themes, can be identified using the tune index. Each tune is keyed to the numerical listings in Volume 1 by the inclusion of the "Jubilee" program number or numbers on which it appears. The artist index which includes all listed performers plus some additions from more recent name discographies and band routes published in Down Beat, completes the volume. Each artist entry is keyed to the numerical listings in
Volume I by the inclusion of the Jubilee program number or numbers on which he/she performed.

In the preface to Volume I Lotz acknowledges the assistance of other scholars and lists the sources he has consulted. Lotz points out that there are gaps and blanks and that many entries are incomplete. He lists additional potential sources he was unable to examine and expresses the hope that other scholars with access to these publications will eventually contribute to a more comprehensive edition. As both Lotz and Neuert indicate, contributions are needed to fill in the blanks and verify the information, so much of which is based on aural evidence. Musicians, researchers, collectors, discographers and archivists are requested to volunteer the missing data so that this can be incorporated eventually in a subsequent edition.

In his foreword Sears aptly describes this two-volume set as a "research landmark". This monumental work, which provides the most comprehensive discographical coverage to date of recorded black American jazz performances during World War II and the immediate postwar period, is highly recommended for scholars, archivists and collectors. No archive with a collection of historical recordings should be without it.

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Bartók hangfelvételi centenáriumi összkiadás:
I. Album. Bartók zongorázik 1920-1945. (Bartók at the piano)
Hungaroton: LPX 12 326/33 (8 LPs, mono)

Erhältlich u. a. von Helikon Musikverlag GmbH, Heuauerweg 21, D-6900 Heidelberg 1, BRD.


Diese beiden Kassetten, die bereits vor einigen Jahren veröffentlicht wurden und jetzt erneut im Westen offiziell vertrieben werden, kommen einer solchen Forderung sehr nahe. Sie enthalten


Martin Elste

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Clavichord and harpsichord commemoration recital (by) Arnold Dolmetsch (and) Rudolph Dolmetsch. Historic recordings from the early thirties. Originally produced (…) by the Columbia Gramophone Company Ltd. Reissued by The Dolmetsch Foundation. (…) (no label:)
ARC 1017 (1 LP) (P) 1984.
Available from The Dolmetsch Foundation, Secretary, Mrs. Pat Dutton, Derwen, Star Hill, Churt, Surrey GU10 2HS, Great Britain, at £ 4.09 + 1.75 p & p.

A collection of 14 recordings made between 1929 and 1933. Though recording locations and dates are given, discographical information supplied is scarce. There are no original record numbers and matrix numbers listed and the pieces recorded have not been identified according to proper work catalogs. Nevertheless this is a welcome opportunity to hear again some of the first recorded examples of historically oriented performances.

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La collection universelle de musique populaire enregistrée Edition par / The world collection of recorded folk music edited by Constantin Brailoiu. Rédition intégrale / Complete re-edition. VDE: 30-425/30 (6 LPs)

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SPECIAL FEATURE: RECENT RECORDINGS OF CONTEMPORARY MUSIC ISSUED BY OR ON BEHALF OF NATIONAL COMPOSER’S SOCIETIES.

a) Austria. These recordings are available from record dealers.


Ernst Krenek: Symphonien 1 – 3, opp. 7, 12 & 16. ORF-Symphonie-Orchester/Lothar Zagrosek, Ltg.; Amadeo 415 825-1 (2 LPS)


Erich Urbanner: Requiem. Solisten/Arnold Schönberg-Chor, ORF-Chor/ORF-Symphonie-Orchester/Lothar Zagrosek, Ltg.; Amadeo 415 829-1 (1 LP)


Hans Gál: Idyllikon. 4 Sätze für kleines Orchester. ORF-Symphonie-Orchester/Karl Etti, Ltg.; Ders.: 3 Präludien aus den 24 Präludien für Klavier. Hans Gál (Klavier);

Egon Wellesz: Prosperos Beschworungen. 5 symphonische Stücke op.53. ORF-Symphonie-Orchester/Milan Horvat, Ltg.; Amadeo: 419 072-1 (1 LP)

Anestis Logothetis: Anastasis. Ein musikalisches Sprachabenteuer. Claudia Brodzinka-Behrend (Stimme)/Trio Exvoco: Silvia Ochi & Takashi Ochi (Mandolinen); Siegfried Fink (Percussion)/Siegfried Behrend (Gitarre, Regie, Ltg.); Ders.: Wellenformen. Computermusik, programmiert und realisiert vom Komponisten im EMS Stockholm;

Ders.: Styx für Zupforchester. Das Deutsche Zupforchester/Siegfried Behrend, Ltg.; Amadeo: 419 074-1 (1 LP)

b) Canada. These recordings are available from record dealers. In case of difficulties they may be obtained directly from CMC Marketing & Distribution, Canadian Music Centre, 20 St. Joseph Street, Toronto, Ontario M4Y 1J9, Canada.

Claude Vivier: Shiraz. Louis-Phillippe Pelletier (piano); --: Pulau Dewata. Beverley Johnston (percussion)/Henry Kucharzyk (piano)/Douglas Perry (viola); --: Lonely child. Marie-Danielle Parent (soprano)/Orchestre Métropolitain du Grand-Montréal/Serge Garant, cond.; Centrediscs: GMC 14-1584 (2 LPs)

Première. André Prévost: Ahimsa. Sandra Graham (mezzo soprano)/Robert Aitken (flute)/ (Orford String Quartet/Elmer Iseler Singers/Elmer Iseler, cond.; Srul Irving Glick:


Sequence. John Beckwith: Upper Canadian hymn preludes; Alain Gagnon: Pastourelle; Talivaldis Kenins: Sinfonia notturna; Denis Lorrain: Sequences. Patrick Wedd (organ); Centrediscs: CMC 1784.

c) The Netherlands. These recordings are available from Donemus, Paulus Potterstraat 14, NL-1071 CZ Amsterdam, The Netherlands.

The complete works of Matthijs Vermeulen. Vol.IV: Symphonies nos.1,2 & 7; The flying Dutchman. Various orchestras and conductors. Composers' Voice: 8384-4 (2 LPs)


Peter-Jan Wagemans: Romance for violin and orchestra op.17. Jaring Walta (violin)/Residentie Orchestra/Dthmar Maga, cond.; --: Muziek I for winds and percussion op.7. Residentie Orchestra/Friedemann Layer, cond.; --: Octet op.16. Soloists/Ernst Bour, cond.; Composers' Voice: 8503 (1 LP)


Bertus van Lier: Symphony no.1; Jan van Gilse: Symphony no.2; Gelders Orkest, Arnhem/Georges Octors. Composers' Voice Special: CVS 1985-1

Louis Andriessen: Mausoleum. Louis Landuyt, Lieuwe Visser (bariton)/The (enlarged) Netherlands Wind Ensemble/Lucas Vis, cond.; --: De Snelheid. The (enlarged) Netherlands Wind Ensemble/Lucas Vis, cond.; Composers' Voice: 8601

400 Jaar Nederlandse Muziek. 2 record boxes with six LPs each. no label ((Residentie-Orkest)): 6812 901/06 & 6814 781/86. Available from Het Residentie-Orkest, Postbus 82 090, NL-2508 EB Den Haag, The Netherlands. A collection of music by Dutch composers from the 16th century to today performed by the Hague Philharmonic under various conductors.

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Audio key. The record, tape & compact disc catalog. 2nd edition. Winnipeg, Manitoba: Audio Key Publications, 1986. ISSN 0829-1691. Available from Audio Key Publications, P.O.Box 2036, Winnipeg, Manitoba, Canada R3C 3R3. * * * * * *
Published in the United States by Schirmer Books, A Division of Macmillan, Inc.


Business history review. lix (1985) No.1 (Spring 1985) ISSN 0007-6805. Individual issue available at $ 7.50 from Business History Review, Gallatin D-126, Soldiers Field, Boston, MA 02 163, USA. The issue contains among others:
Jones, Geoffrey: The Gramophone Company: An Anglo-American multinational, 1898-1931. (pp.76-100)


IJS jazz register and indexes. Microfiche edition, quarterly cumulation (annual subscription: $ 25.00 for institutions, $ 15.00 for individuals). Edition under review: print-out dated 2/28/86. Available from Institute of Jazz Studies, Rutgers, the State University of New Jersey, 135 Bradley Hall, Newark, N.J. 07 102, USA.


Available from Storyville Publications and Co. Ltd., 66 Fairview Drive, Chigwell, Essex IG7 6HS, Great Britain.


Music week directory 86. The comprehensive guide to the UK music industry and ancillary service companies. London: Spotlight Publications, ((1986)). 258 pp., 21x15 cm., ISBN 0-86213-078-6, ISSN 0267-3290: ~10.00 (pbk.)
Available from Meanne Henderson, Morgan-Grampian plc, Royal Sovereign House, 40 Beresford Street, London SE18 6BQ, Great Britain (price includes p & p).

Available from Music Department, Institute of Papua New Guinea Studies, P.O.Box 1432, Boroko, Papua New Guinea.

Neuauflage des bekannten Verzeichnisses der gegenwärtig im Handel erhältlichen Schallplatten mit Werken schweizerischer Komponisten.
Berlin (West): Sender Freies Berlin, 1984. xii, 341 S., 21x15 cm., (SFB-Archiv Bd.2)
(Nicht im Handel erhältlich)

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incl. p & p (cloth.).
Available from Mirage, Sthärnvägen 9, S-352 41 Växjö, Sweden.
This is not a study of performances, as the title might imply, but a normative analytical
instruction how to perform music.

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Swanekamp, Joan: English ayres. A selectively annotated bibliography and discography.
Westport, Conn.; London: Greenwood Press, (c) 1984. xii, 141 pp., 24x16 cm.,
ISBN 0-313-23467-1: ± 35.00 (cloth.)

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Towler, Edward: British dance bands (1920-1949) on 12-inch long-playing records.
Harrow, Middlesex: General Gramophone Publications Limited, (c) 1985. (12,) 268 pp., 21x14 cm.,
ISBN 0-902470-14-0: ± 6.06 (U.K.) or ± 6.30 (overseas) (pbk.).
Available from General Gramophone Publications Limited, 177-179 Kenton Road, Harrow,
Middlesex HA3 0HA, Great Britain.

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AFAS PUBLICATIONS

L'ORAL EN FICHES. A manual for the cataloguing of sound recordings developed by the

L'ORAL EN BOITE. A basic guide to the collection and conservation of sound recordings.

The publications can be ordered (accompanied by payment please) from the Secretariat,
AFAS, 2 rue de Louvois, 75002, Paris, France.
News and Notes

NBC GIVES LIBRARY OF CONGRESS MAJOR COLLECTION OF ITS TELEVISION PROGRAMS

The U.S. commercial network, National Broadcasting Company, on the occasion of its 60th anniversary is donating to the Library of Congress its entire collection of some 20,000 early television programs covering the period from 1948 to 1977. The programs were preserved on kinescope and film, and the Library will transfer them to videotape.

Together with the NBC Radio Collection consisting of 80,000 hours of programs from the radio years 1926 to 1970, which the network donated in 1978, the Library of Congress now owns the largest archive of broadcasting available to scholars and researchers in this country.

The NBC Television Collection is at present being prepared for shipment to the Library of Congress facilities in the Washington, D.C., area. Delivery will commence this July.

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THE ARCHIVE OF CONTEMPORARY MUSIC

The ARCHive of Contemporary Music is a non-for-profit Corporation (pending) dedicated to the preservation, cataloging and promotion of all forms of popular music. Its Board of Directors seek to establish a permanent home in New York City that will make the recorded history of popular music, and particularly Rock & Roll, available to all. The ARC will be a living cultural institution that will eventually house an exhibition space, photo collection, film/video viewing rooms and listening carrels. All data will be accessible on in-house computer as well as via any telephone modem. The first steps have been taken. A full operating office and storage for 15,000 records now exists. Record companies have promised new releases. They are joined by other organizations that have pledged valuable contributions of video, magazine subscriptions, advertising space and financial assistance. For more information please contact the ARCHive of Contemporary Music, 110 Chambers St., New York, NY 10007 (212)964-2296.

(from ARSC Newsletter)

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THE SOUND OF THE EIGHTEENTH CENTURY

A recent newspaper article reports the release of a recording of an 18th century barrel organ which contained several Handel organ concertos. Oliver Roux, an employee of Radio France, had heard about such an instrument in the early 1960s and which was rumored to exist somewhere in England. After running up several blind alleys in 1980 he had the fortune to meet C.F. Colt, an Englishman and dedicated collector of musical instruments. The barrel organ Roux had been seeking had just come into Colt's possession from an antique dealer who had recently died. It stood 5.5 feet (1.7 meters) high and had a walnut and mahogany casing. Nineteen golden dummy pipes showed themselves through openings in the front. Inside there were 112 pewter and 28 larchwood pipes. The sixteen interchangeable barrels that came with the instrument contained a number of Handel works (organ concertos Opus 4, nos. 2 and 5; excerpts from the "Water Music"; and a number of airs from various operas).

The instrument had originally been built by an English builder named Holland. A handwritten booklet that accompanied the organ gave details about the circumstances surrounding the construction of the barrels. A former pupil of Handel, John-Christopher Smith (1712-95), rendered the musical interpretation and the maple-wood barrels were appropriately studded with brass pins that acted as fingers on a keyboard (although they raised rather than lowered the keys) causing each note to be played at the right moment. The sound was produced through the pipes by air from a bellows. Usually the position of each pin was indicated on a large sheet of paper, which was then wrapped around the barrel and the pins were driven into the wood.

Because the instrument was in need of repair, Roux consulted with Remy Royer, an expert restorer, who pronounced that the screws of the instrument were undoubtedly made in the latter part of the 18th century, between 1780 and 1800.

One of the most interesting discoveries involving the instrument is the interpretation of the music. Roux felt it was important to make some recordings after the instrument could be restored to the best possible condition. Royer was commissioned to do the work. The French recording company, Erato, agreed that the venture was worthwhile and the recording was actualized in January of last year. One year later the recording has been released in France under the title "A period recording: a barrel organ from the 18th century".

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FEDERAL CYLINDER PROJECT: Jesse Walter Fewkes' Recordings

The American Folklife Center announces the availability of another entry in the twelve-volume catalog series The Federal Cylinder Project: A Guide to Field Cylinder Recordings in Federal Agencies (Studies in American Folklife, No. 3). Volume 2, Northeastern Indian Catalog and Southeastern Indian Catalog, which combines two separate catalogs within one cover, is the third of the series published to date. The volume is edited by Judith A. Gray and Dorothy Sara Lee with assistance from Gregory Pontecorvo.

The Northeastern Indian Catalog includes the earliest ethnographic field recordings ever made - thirty cylinders recorded by Jesse Walter Fewkes (1850-1930) in 1890 among Passamaquoddy Indians in Calais, Maine.

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Prices include postage by surface mail. Orders, together with payment shall be sent to the Treasurer Anna Maria Foyer, Sveriges Riksradio, Programarkivet, S 105-10 Stockholm, Sweden. Checks shall be made payable in Swedish Kronar to the International Association of Sound Archives.
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