Sound recording cataloging

? Music Cataloging at Yale [1]

- **Biographical sources** for sound recordings [2]
- **MARC tagging**
  - Fixed field codes [3]: Voyager (008 and Leader)
  - Physical description codes [4]: Voyager (007)
  - **The 024 field: UPC and EAN codes** [5]
  - **The 028 field: Manufacturer's number** [6]
  - **The 033 field: Date and place of capture** [7]
    - Geographical area and sub-area codes [8] for the 033 field
- **Historical information** *(to aid in music cataloging only)*
  - Audio time line [9]
  - Retro media: memory (and memories) lost [10]
- **78 RPM recordings**
  - DAHR-to-MARC Cataloging Tool [11]: MARC records for over 165,000 master recordings that were issued on over 120,000 78 rpm discs between 1894 and 1941 as documented in the Discography of American Historical Recordings
    - DAHR to MARC: Leveraging Existing Discographic Data to Expedite Cataloging [12]: presentation about the DAHR-to-MARC cataloging tool from the MOUG meeting in Portland in 2018
  - **The history of 78 RPM recordings** [13] *(a brief guide to aid in music cataloging)*
  - Discographical sources for 78 RPM recordings [14]
  - **Cataloging 78 RPM recordings** [15] *(for the Cataloging Historical Audio Collections project)*
- **LC documentation**
  - New sound recording formats [16] (PDF)

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Audio timeline

Music Cataloging at Yale [1] ? Sound recording cataloging [17]

**Note:** this page was created as an aid for cataloging sound recordings.

Excerpted from *Preparing for the brave new world of sound recordings cataloging*
by Mary Huismann, University of Minnesota; used with permission
See the complete power point presentation [18] from the 2006 OLAC Conference [19]
information also from Wikipedia and other sources

<table>
<thead>
<tr>
<th>Year</th>
<th>Physical format</th>
<th>Content format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870s</td>
<td>Phonograph cylinder</td>
<td>Analog; &quot;hill-and-dale&quot; grooves, vertical stylus</td>
</tr>
<tr>
<td>1895</td>
<td>Gramophone record</td>
<td>Analog; lateral grooves, horizontal stylus</td>
</tr>
<tr>
<td>ca. 1898</td>
<td>78rpm or 78s</td>
<td>disc first produced around 1898; popular from 1910-1950s; by 1910 actual speed ranged from about 78 to 80 rpm; size was 10 or 12 inches</td>
</tr>
<tr>
<td>1930s</td>
<td>Wire recording</td>
<td>Analog</td>
</tr>
<tr>
<td>1940s</td>
<td>Reel-to-reel tape</td>
<td>Analog</td>
</tr>
<tr>
<td>1948</td>
<td><strong>Vinyl record</strong></td>
<td>Analog; lateral grooves, horizontal stylus also known as LP or long-playing</td>
</tr>
</tbody>
</table>

---

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<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>Stereophonic vinyl record</td>
<td>Analog; lateral/vertical stylus (each channel encoded 45 degrees to vertical)</td>
</tr>
<tr>
<td>1957</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td><strong>Audio cassette</strong></td>
<td><strong>Analog; 1/8 in. tape width; 1 7/8 ips</strong> popular in the US through the 1990s</td>
</tr>
<tr>
<td>1964</td>
<td>8-track tape</td>
<td>Analog; 1/4 in. tape width; 3 3/4 ips in an endless loop cartridge</td>
</tr>
<tr>
<td>1969</td>
<td>Microcassette</td>
<td>Analog</td>
</tr>
<tr>
<td>1970</td>
<td></td>
<td>Dolby noise reduction introduced (cassettes)</td>
</tr>
<tr>
<td>1975</td>
<td>Betamax digital audio</td>
<td>&quot;Dolby Stereo&quot; cinema surround sound</td>
</tr>
<tr>
<td>1982</td>
<td><strong>Compact disc</strong></td>
<td><strong>Digital; usually 4 3/4 in. diameter</strong> first available in Japan in October 1982, in Europe in February 1983, and in the US in March 1983</td>
</tr>
<tr>
<td>1985</td>
<td>CD-ROM</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>Digital audio tape (DAT)</td>
<td>cassette version of the CD; used in the recording industry until 2000; DAT players ceased production in 2005</td>
</tr>
<tr>
<td>1990s</td>
<td>Digital compact cassette</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>MiniDisc</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td></td>
<td>WAVEform (WAV)</td>
</tr>
<tr>
<td>1993</td>
<td></td>
<td>Dolby digital surround cinema sound</td>
</tr>
<tr>
<td>1995</td>
<td>DVD</td>
<td>Dolby theatre system (DTS)</td>
</tr>
<tr>
<td>1996</td>
<td></td>
<td>Sony dynamic digital sound (SDDS)</td>
</tr>
<tr>
<td>1999</td>
<td>Streaming audio</td>
<td>MP3</td>
</tr>
<tr>
<td>1999</td>
<td>Super audio CD (SACD)</td>
<td>Windows media audio (WMA) (higher sampling rate, spatial sound capability)</td>
</tr>
<tr>
<td>2000</td>
<td>DVD-Audio</td>
<td>CD on one side, DVD on the other</td>
</tr>
<tr>
<td>2004</td>
<td>DualDisc</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Playaway</td>
<td></td>
</tr>
</tbody>
</table>

**Cataloging guidelines:**


WAV, WMA, MP3: [Best practices for cataloging streaming media](https://www.oclc.org/bibformats/en/2xx/260.shtm) [21] (OLAC Cataloging Policy Committee)

[OCLC](https://www.oclc.org) gives different dates; see [www.oclc.org/bibformats/en/2xx/260.shtm](https://www.oclc.org/bibformats/en/2xx/260.shtm) [22] under REC guidelines for $c

1 OCLC gives this date as 1954
2 OCLC gives this date as 1965
3 This date is from OCLC

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**Biographical sources for performers on sound recordings**

[Music Cataloging at Yale](https://www.library.yale.edu) [1] ? [Sound recording cataloging](https://www.library.yale.edu) [17]

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**Internet**
Performers' short biographies [23] (short biographies of every performer who has taken part in a recording of Bach's vocal works: mainly singers, conductors, chorus masters, choral and instrumental groups)

yiddishmusic.jewniverse.info [24]: in English, Russian, and Yiddish; performer biographies from the 79 RPM and 33 1/3 RPM eras.

Big bands, jazz, etc.


Solid! [29] online encyclopedia of big band music and classic jazz

Singers

Dutch divas in opera & concert [30] (updates [31])

Grandi tenori [32] | Historical tenors [33] | Biographical list of tenors [34] by John Potter

Great Russian voices [35] (note: archived version of the site)

Great singers [36] from a personal collection; some have dates of birth/death

Malibran-Music [37] specializing in French song

Musicals

Who's who in musicals [38]

Opera


Historic opera [40]

Includes images of singers (with biographical information) (listed near top of page)

and listings of singers without images

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z

Operaone [60]

Print


L128 V872 C8 1994


ML105 K97 G8 1997

Sources for authority work in cataloging popular music [61]: bibliographies of print sources for blues [62], country and folk [63], jazz [64], musical theater [65], and miscellaneous popular music [66]


HSR ML156.4 C8 S9

Cataloging 78 RPM recordings

Music Cataloging at Yale [1] ? Sound recording cataloging [17]

This document is for use by participants in the Cataloging Historical Audio Collections project, a grant funded by the Andrew W. Mellon Foundation. The project funds the cataloging of historical 78 rpm sound recordings issued singly (e.g. not in sets).

General information


Relatively limited information is provided by 78 rpm discs, since most were issued in paper sleeves with no additional accompanying materials. However, there is a general consistency in the types of information included on 78 rpm labels and discs. The record label name (i.e., publisher’s name or record-company name) is usually quite prominent.

The title of the sound recording is also clearly presented and the genre or medium of performance is sometimes indicated. Performers are often given equal or near-equal prominence to titles. Composers, lyricists, and arrangers, if included at all, are regularly listed by their last names only, in most cases smaller typeface than that used for titles and performers, often separated by dashes or in parentheses, with no indication of specific functions.

When the chief source does not include information about the performers or provides only an abbreviated roster, and a reference source includes a more complete listing, transcribe the statements of responsibility as they appear on the chief source, followed by any supplementary information taken from the reference source in brackets. Include a citation for the source of the information

Place and date of publication are less consistently printed on the chief source. Discographies or record-label catalogs [68] may be consulted. Careful consideration must be taken, however, when a date is determined using a reference source. Usually, the dates listed in discographies and label guides are not the actual dates of publication but, rather, are the dates of recording sessions. While such historical information is valuable, especially when no date of publication is available, a recording-session date provides only an approximation of the date of publication. (When information on the recording session is found in a discography or other reference source, record the information in a note and code the 033 field. Provide a brief citation for the source of the information.)

The physical description of 78 rpm discs is fairly straightforward. All are analog, monophonic recordings. Most are ten-inch discs, although 78 recordings of other dimensions, particularly twelve-inch, were issued.

Both label and matrix numbers [69] (Internet Archive version) can appear on a 78 rpm disc, and in a variety of ways. The label number is a unique identifier for the entire item that is usually printed on both sides of the label (e.g., the same number appears on both sides of the disc). The matrix number is a unique identifier for each side of the 78 that is generally imprinted into the shellac or plastic of the disc, on the smooth surface area between the label and grooves. Matrix numbers may also be printed on the label, and the number appearing on the label may be an abbreviated version of the complete matrix number. Matrix numbers appearing directly on the disc may provide additional information, such as recording locations or particular take designations, that can be used in the description.
Though LCRI 6.7B19 states that matrix numbers should be recorded "only if they are the only numbers shown on the item," for archival and research purposes it is desirable to record all unique identifying elements appearing on the item.

The note "acoustic recording" should be included when describing any 78 rpm discs that were produced using acoustic recording processes, if such information can be ascertained from the item or a reference source.

What to do with OCLC records for Library of Congress preservation tapes

LC has cataloged their preservation tapes of 78 rpm recordings. The bib records include information for the original format in the 300 field, with a 533 field for the preservation copy. Usually there are two 007 fields, one for each format:

LCCN 97750883
007 __ s ‡b d ‡d d ‡e m ‡f s ‡g d ‡h n ‡i n ‡j m ‡k s ‡l l ‡m u ‡n b
007 __ s ‡b t ‡d p ‡e m ‡f n ‡g d ‡h m ‡i a ‡j u ‡k n ‡l n ‡m u ‡n e
300 __ 1 sound disc : ‡b analog, 78 rpm, mono. ; ‡c 10 in.
533 __ Preservation master. ‡b Washington, D.C. : ‡c Library of Congress Magnetic Recording Laboratory, ‡d 1963. ‡e 1 sound tape microfilm reel : analog, 15 ips, 1 track, mono. ; 10 in.

According to Jay Weitz, these records are for the preservation master reel-to-reel tapes, not for the original 78s. The master records should not be edited to change them into records for the 78s themselves. If you are cataloging the actual 78s, separate records for them should be created if they do not already exist.

Examples of 300 fields

300 __ 1 sound disc : ‡b analog, 78 rpm, mono. ; ‡c 10 in.
300 __ 2 sound discs : ‡b 78 rpm, mono. ; ‡c 12 in
300 __ on 1 side of 1 sound disc : ‡b analog, 78 rpm, mono. ; ‡c 10 in. (see 6.5B3)
300 __ 2 sound discs : ‡b analog, 78 rpm ; ‡c 12 in.
300 __ 4 sound discs : ‡b analog, 78 rpm ; ‡c 10 in.

Discographical sources for 78 RPM recordings

Music Cataloging at Yale [1] ? Sound recording cataloging [17]

General | Dating 78 RPM recordings: print | online | Catalogs by: company name: print | online | genre, medium of performance, etc.: print | online | performer: print | online | Library catalogs and national archives: print | online | Miscellaneous

General

The 78rpm record home page [70]

Discography of American historical recordings [71]
Dating 78 RPM recordings

Print sources

HSR ML156.2 D186 A5

HSR ML1055 G244 A7+

HSR ML156.2 B268 A4+

HSR ML156.2 B268 A4 1992+

LSF ML156.4 V872 P3

In Process

Online sources

Australian and New Zealand78 label dates [72]

Early or historical sound recordings collections [73] and other 78 & cylinder sites of interest

The online discographical project [74]

Stanton, Ted. 78 rpm labels. [75]

Der yidisher Gramofon [76]: 78 rpm recordings of European Jewish music

Catalogs

Catalogs by company name A-D

This section is limited to record labels beginning with the **A-D**. The Yale University Music Library and Historical Sound Recording Archives will be cataloging 78 rpm recordings in the record label range A-D.

Print sources

HSR ML156.2 R946 A3


Smith, Michael. *Columbia* Graphophone Company, ltd.: English celebrity issues: D and LB series, L and LX series, X and PB series, 7000 and PX series, ROX and SDX series, YB series. [Lingfield, Surrey]: Oakwood Press, [1970?] HSR ML156.4 V872 V8 v.8

Temporary catalogue of the *Columbia* Phonograph Co.’s musical records: for use on graphophones and phonographs. SML Fiche B2264 2937

**Decca** Record Company. Main catalog: alphabetical and numerical. London. HSR ML155.3 D291

Ruppli, Michel. The *Decca* labels: a discography. Westport, Conn.: Greenwood Press, 1996. HSR ML156.2 R946 D2

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**Online sources**

**General**

Abrams, Steven; with contributions from other collectors. The online discographical project [settlet.fateback.com/](http://settlet.fateback.com/) [77]

*Catalogue of Finnish records 1901-1945* [78] recordings held in the innish Institute of Recorded Sound

The database [of] Swedish 78-rpm records. [database] [79]

The E-discographer. [www.hensteeth.com/e_discog/](http://www.hensteeth.com/e_discog/) [80] a bibliography of chiefly print discographies, with links to online discographies

Fitzgerald, Michael. Jazz record label listings. [www.jazzdiscography.com/Labels/index.html](http://www.jazzdiscography.com/Labels/index.html) [81]

Settlemier, Tyrone. Tyrone's record and phonograph links. [www.proaxis.com/~settlet/record/links.html](http://www.proaxis.com/~settlet/record/links.html) [82]
scroll down to "labels," very near to the the top of this very long page.

Thomas, Mike. Dance band encyclopaedia: label index [83]

By label

Settlmier, Tyrone. American Record Company.
www.angelfire.com/or/settle/AmericanMatrix.htm [84]

APGA (Association Phonique des Grands Artistes); Excel zip file from Truesound online discographies; scroll down to find list of labels
www.truesoundtransfers.de/disco.htm [85]

Atlantic Records Discography Project includes session indexes
www.jazzdisco.org/atlantic/ [86]

Artiphon; Excel zip file from Truesound online discographies; scroll down to find list of labels
www.truesoundtransfers.de/disco.htm [85]

Huenemann, Robert Gilchrist. The original Audiophile discography.
home.flash.net/~bobgh/nunncat.htm [87]

Bethlehem Records Discography Project includes session indexes
www.jazzdisco.org/bethlehem/ [88]

Blue Note Records Catalog: 78 rpm series - single index includes session indexes
www.jazzdisco.org/bluenote/78r-cat/ [89]

Bray, Colin J. and Jack Litchfield. The Canadian Columbia group of labels 1921-1931: how to distinguish Canadian from American.
www.geocities.com/SoHo/Museum/8764/colcan.htm [90]

Englund, Björn. Engelska Columbias mattriskronologi 1925-1946.
www.ljudochbildarkivet.se/SLBA/NOTISER/discografi/engelskacolumbia.htm [91]

wwwsys.informatik.fh-wiesbaden.de/weber1/grammo/n-columa.htm [92]

------------. Columbia (English/German/French).
wap03.informatik.fh-wiesbaden.de/weber1/grammo/n-columb.htm [93]

Contemporary Records Discography Project includes session indexes
www.jazzdisco.org/contemporary/ [94]

Debut Records Discography Project includes session indexes
www.jazzdisco.org/debut/ [95]

------------. Decca (American).
wap03.informatik.fh-wiesbaden.de/weber1/grammo/n-deccaa.htm [96]

------------. Decca (English/German).
wap03.informatik.fh-wiesbaden.de/weber1/grammo/n-deccab.htm [97]

Dial Records Discography Project includes session indexes
www.jazzdisco.org/dial/ [98]

Odeon (including Fonotopia); Excel zip file from Truesound online discographies; scroll down to find list of labels
www.truesoundtransfers.de/disco.htm [85]

Page 8 of 16
Mercury Records Discography Project includes session indexes
www.jazzdisco.org/mercury/ [99]

Odeon (including Fonotopia); Excel zip file from Truesound online discographies; scroll down to find list of labels
www.truesoundtransfers.de/disco.htm [85]

The Prestige Labels: Prestige SP series (10" 78 rpm), New Jazz SP series (10" 78 rpm), Prestige EP series (7" 45 rpm), New Jazz EP series (7" 45 rpm); includes session indexes
www.plosin.com/milesAhead/prestigeLabel.html [100]

Riverside Records Discography Project includes session indexes
www.jazzdisco.org/riverside/ [101]

Savoy Records Discography Project includes session indexes
www.jazzdisco.org/savoy/ [102]

Verve Records Discography Project includes session indexes
www.jazzdisco.org/verve/ [103]

Encyclopedic discography of Victor recordings
victor.library.ucsb.edu/index.php [104]

Dating Victor 78s
members.tripod.com/~Vinylville/faq-9.html [105]

International Zon-o-phone: Excel zip file from Truesound online discographies; scroll down to find list of labels
www.truesoundtransfers.de/disco.htm [85]

Catalogs by genre, medium of performance, etc.

Print sources

HSR ML156.4 F64 F6+

LSF ML156.4 H8 M1

HSR ML156.4 O64 A7

HSR ML156.4 M977 R2 1998+

Online sources

Acoustic opera sets [106]
Coverage is from the earliest acoustic sets (ca. 1907) until the introduction and almost immediate dominance of electrical recordings in 1925.

Historical opera recordings from 78rpm discs [107]: complete and abridged sets

Historical Operetta Recordings from 78rpm discs [108]: complete and abridged sets
ODE [109] (Opera discography encyclopedia)
78opera [110]

Catalogs by performer

Online sources

Complete recordings of John McCormack [111]
Finnish vocal art on records, 1902-1945 [112]

Library catalogs and national archives

Print sources

HSR ML156.2 V771 D5+

HSR ML156.2 R691 D5+

Weihermüller, Manfred. Deutsche National-Discographie. Serie 3, Discographie der deutschen Gesangsaufnahmen [= Discography of German Operatic and Lieder]. Bonn : Birgit Lotz, c1995-
HSR ML156.4 V872 W4

Online sources

Bibliothèque et Archives nationales Québec. Disques 78 tours [113]

Database of the Finnish Institute of Recorded Sound [114]

SONIC (Sound ONline Inventory and Catalog): a portion of the Library of Congress Audio Collection: database [115] (with searches by commercial 78s, 45s, and cassettes or by music only, etc.)

The Swedish National Archive of Recorded Sound and Moving Images [116]

The virtual gramophone: Canadian historical sound recordings: search [117]

Miscellaneous

Bauer, Roberto. The new catalogue of historical records 1898-1908/09. 2nd ed. London : Sidgwick and Jackson, [1947]
MARC holdings for 78 RPM recordings

Examples of MARC holdings for 78 RPM recordings in the Historical Sound Recordings Collection

Tag 852 = call number
   Indicator 1: 8 = local classification
   Indicator 2: 0 = single disc
   Indicator 2: 1 = multiple disc set

Tag 866 = volume holdings (for multiple disc set)
   Indicator 1: 4 = detailed extent of holdings information
   Indicator 2: 1

‡b = holding library (‡b mushsr)
‡t = copy number (‡t 1, ‡t 2, etc.)
‡x = staff note (box number)

single disc, with single number:
852 8 0 ‡b mushsr ‡h [label name] [label number] ‡x Box __

![Example 1](image1.png)

single disc, with nonconsecutive multiple numbers:
852 8 0 ‡b mushsr ‡h [label name] [label number] ‡x Box __

![Example 2](image2.png)

single disc, with consecutive matrix numbers:
852 8 0 ‡b mushsr ‡h [label name] [label number] ‡x Box __

multiple disc set:
852 8 1 ‡b mushsr ‡h [label name] [label number] ‡x Box __
866 4 1 ‡8 0 ‡a disc [ ]-[ ]
Multiple disc set in more than 1 box:

<table>
<thead>
<tr>
<th>Tag</th>
<th>I1</th>
<th>I2</th>
<th>Subfield Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>852</td>
<td>8</td>
<td>1</td>
<td>✱b mushsr ✱h Columbia 90/36570-36572 ✱x Box 254</td>
</tr>
<tr>
<td>866</td>
<td>4</td>
<td>1</td>
<td>✱8 0 ✱a disc 1-3</td>
</tr>
</tbody>
</table>

Multiple copies require a separate MFHD for each copy. Use ✱t [ ] to indicate 1st, 2nd, etc. copies:

For copy 1:

852 8 0 ✱b mushsr ✱t 1 ✱h [label name] [label number] ✱x Box __

For copy 2:

852 8 0 ✱b mushsr ✱t 2 ✱h [label name] [label number] ✱x Box __

Multiple copies of a multiple disc set require a separate MFHD for each copy:

For copy 1:

852 8 1 ✱b mushsr ✱t 1 ✱h [label name] [label number] ✱x Box __
866 4 1 ✱8 0 ✱a disc [ ]-[ ]

For copy 2:

852 8 1 ✱b mushsr ✱t 2 ✱h [label name] [label number] ✱x Box __
866 4 1 ✱8 0 ✱a disc [ ]-[ ]

### The history of 78 RPM recordings

[Music Cataloging at Yale](1) [Sound recording cataloging](17)

This is a brief guide to aid in cataloging

#### Sources:


Bill's 78rpm beginner's page [118]; *Explanation of side coupling for 78rpm sets* [119]; *Grove Music Online: A history of vinyl* [120]; *Wikipedia; Recording Industry Association of America* [121] (RIAA) website

Any flat disc record, made between about 1898 and the late 1950s and playing at a speed around 78 revolutions per minute is called a “78” by collectors. The materials of which discs were made and with which they were coated were also various; shellac eventually became the commonest material. Generally 78s are made of a brittle material which uses a shellac resin (thus their other name is shellac records). During and after World War II when shellac supplies were extremely limited, some 78 rpm records were pressed in vinyl instead of shellac (wax), particularly the six-minute 12” 78 rpm records produced by V-Disc for distribution to US troops in World War II.
78s come in a variety of sizes, the most common being 10 inch (25 cm) and 12 inch (30 cm) diameter, and these were originally sold in either paper or card covers, generally with a circular cutout allowing the record label to be seen. Since most 78 rpm discs were issued in paper sleeves with no additional accompanying materials, relatively limited information is provided by the items themselves.

Earliest speeds of rotation varied widely, but by 1910 most records were recorded at about 78 to 80 rpm. In 1925, 78.26 rpm was chosen as a standard for motorized phonographs, because it was suitable for most existing records, and was easily achieved using a standard 3600-rpm motor and 46-tooth gear (78.26 = 3600/46). Thus these records became known as 78s (or "seventy-eights"). This term did not come into use until after World War II when a need developed to distinguish the 78 from other newer disc record formats. Earlier they were just called records, or when there was a need to distinguish them from cylinders, disc records.

The durations of 78 RPM recordings is about three to five minutes per side, depending on the disc size:
12": ca. four to five minutes
10": ca. three minutes

As late as the 1970s, some children's records were released at the 78 rpm speed.

The older 78 format continued to be mass produced alongside the newer formats into the 1950s, but had faded from the scene by 1955.

**Recording techniques**

Before 1925, all 78s were recorded by means of the artist singing or speaking into a horn, the power of their voice directly vibrating the recording stylus and thus cutting the wax of the master disc. Collectors call these discs "acoustic" recordings.

The acoustical era: 1877–1925

The earliest methods of sound recording are described as "acoustical" and employ only mechanical means for both recording and playback. The sounds to be preserved are directed into a large horn, which at its tapered end is connected to a cutting stylus. In response to the vibrations of air in the horn, the stylus cuts a spiral groove in the thick wax coating of a cylinder or disc, rotated steadily by means of a crank. The cutting process creates variations in the groove analogous to the varying frequency and amplitude of the vibrations; the stylus moves up and down in "hill-and-dale" or "vertical cut" recording and from side to side in "lateral cut" recording.

Acoustical recording never yielded high fidelity, its dynamic range was limited.

[By the 1910s] flat discs were the predominant medium for sound recording.

Edison's Diamond Discs were available 1910 in 7, 10, 12, 14, 16, and 21 inch formats. They were played at around 78 rpm and contained up to 8 minutes of sound. The disc was made of an early plastic known as Amberol, which "gave it little surface noise and superb clarity, [but] was incompatible with any other system. It employed a vertical, rather than lateral cut, groove and could not be played on any other machine."

Recording and playing speeds ranged from 72 to 86 rpm before the standard settled at 78 (though Columbia, for example, issued 80 rpm discs for some time after 1920).

The electrical era: 1925–47

Electrical recording was first used in 1925. After about 1925, 78s were recorded by the artist singing or speaking into a microphone and amplifier which then cut the master record. This allowed a wider range of sound to be recorded. Records recorded by this process are called "electrical" recordings. Collectors can identify these discs by either by listening or by means of small marks in the record surface close to the label.

The first electrical recording was issued in 1925.

By around 1920 lateral cut recording was the norm; a less exacting technique than vertical cut, it produced a level
of fidelity adequate to the standard of the equipment the general public could afford to buy.

The physical format of electrical recordings remained the same as that of the many acoustical ones utilizing the lateral cut technique.

The term "electrical recording" is normally used in contradistinction to "acoustical recording" (in the preceding era) and "magnetic tape recording" and "microgroove recording" (in the succeeding era) the term "electrical recording" is not customarily used after the introduction of magnetic tape in 1947.

In electrical recording the sounds to be preserved are gathered by a transducer (a microphone) and the vibrations converted into an analogously varying electrical signal, which is amplified and applied to another transducer (a stylus), which cuts a spiral groove in a waxed or (later) lacquered disc.

**Hill-and-dale [vertical cut] recording:**
A term applied to a sound-recording technique in which, in both recording and playback, the stylus moves up and down in the spiral groove on a cylinder or disc.

**Vertical cut recording:**
A term applied to a sound-recording technique that utilizes variations in the depth of the spiral groove on a cylinder or disc.

**Lateral cut recording:**
A term applied to a sound-recording technique in which, in both recording and playback, the stylus moves from side to side in the spiral groove on a disc.

### 78 RPM sets

Many 78 RPM sets, particularly electrical sets, were issued in up to three side couplings:
- Manual side
- Slide automatic
- Drop automatic

In a hypothetical set comprising four records, the alignment of the sides would have been:
- Manual: 1/2, 3/4, 5/6, 7/8
- Slide automatic: 1/5, 2/6, 3/7, 4/8
- Drop automatic: 1/8, 2/7, 3/6, 4/5

**Source URL:** https://web.library.yale.edu/cataloging/music/sound-recording-cataloging

**Links**

[1] http://web.library.yale.edu/cataloging/music
[8] http://web.library.yale.edu/cataloging/music/033code
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