

A DISCOTOPOLOGY PRIMER

by

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Credits:

Portions of this article, primarily the original form of the outline on physical description, were formulated as a part of the planning study "A Union Catalog of Commercially Issued Pre-"LP" Classical Music and Spoken Word Sound Recordings," funded by the National Endowment for the Humanities and sponsored by the Association for Recorded Sound Collections. The compilers would like to thank their colleagues on the AAA Cataloging Committee of ARSC for their comments and suggestions and the following staff members of the Yale Collection of Historical Sound Recordings, Yale University Library, for their valuable assistance: Christiane Bosse Price, Renee Dossick, and Emily Frei. George Blacker's "Standard Discographical Data Sheet," commentary on it by Horace L. Spear among others (see Record Research Nos. 125/6, 127, and 139/40), and discussions with George Blacker have greatly helped also.

Introduction:

Despite the legend of the collector who acquired rare records, broke off all parts of them except the labels, and then hung the prizes by the center holes from the walls, most of us record collectors and the others who may be temporarily in our wards really do believe that the main reason for collecting recordings is to listen to them. That plain fact needs emphasis here because this article deals with what one can learn about a recording by inspection and measurement rather than by listening. The compilers wish not to perpetrate a new and perverse hobby (record-gazing) but only to suggest some of the many kinds of information that examination can provide: facts that may help collectors in playback, selection, preservation, organization, and cataloging of their recordings. Many of us have developed effective systems of inspection in our collecting jaunts in order to avoid wasted time and money, strained muscles involved in bringing home from dim attics and thrift-shops discs which are damaged, worn, or already in our collections, and excessive effort spent in sorting, organizing, and weeding quantities of records to find the best or desired items.

Rather than attempting to write an essay that would consist largely of long lists of features and directions, the compilers decided that an outline would be the clearest form of presentation. The one that forms the major part of this article originated in simpler form as the product of Yale's assignment to prepare a position paper on physical description of pre-"LP" commercial phonograph records to assist the AAA/ARSC Cataloging Project in developing rules for archival cataloging. That is one reason discs and cylinders appear in relatively full form while other media appear only as sketches or suggestions. Another reason is limited expertise; those who have sufficient knowledge and experience to do so efficiently, please take up the sketches and suggestions and fill them out.

One discovery made by everyone involved in the AAA/ARSC Cataloging Project, as well as by many others interested in discology, is the lack of terminology in our field (anyone who doubts the truth of this statement needs only look at the diverse types of lists which are all called "discographies"). Some of the terms and their definitions which the project members developed appear in this article; others, which differ from project definitions or which were developed later, are also included.

Those familiar with the Cataloging Project will recall that the basis for the catalog entry was neither the unit of recording nor the physical object or objects embodying the recorded event but rather the composition or designated event (the intellectual unit). Since this article is about the physical unit and the visual clues it offers to the sound which has been captured on it, the compilers have chosen to begin with the basis of the process of recording: the unit of recorded sound, that which a recording machine captures in one normal segment of its operation (for a disc-cutter that would be a side, for a tape machine a take). In relation to an intellectual unit, the unit of recorded sound is arbitrary and may happen to be shorter than, identical in length with, or longer than the intellectual unit: the event or performed composition, which it captures.

While remembering that the primary purpose of the unit of recorded sound is the sound, let us consider the object or physical image that represents the unit. The section of the outline on physical description tries to offer collectors and archivists an outline of all features of known or possible significance that may appear on the object, with no suggestion that all are of equal significance. The outline assumes that interested examiners of recordings will be able to tell numerals from letters from other types of symbols but deals only partially with the meanings of all these types of figures; the subjects of meanings should form another important chapter or more (Steven Smolian's work on the history of labels suggests that "volume or more" may be a more accurate phrase). Also, secondary materials such as containers for discs and cylinders and program notes and illustrations receive little attention. The outline is thus only the beginning of a study of sound recordings' features, and even in its limited field of characteristics that can be inspected and measured it may not be complete (and certainly is not so for tape, wire, film soundtracks, etc.). The compilers present the material in order to provoke thought and investigation and to urge readers to respond with comments, corrections, additions, and extensions of this work that seem important in the study of recordings. Please communicate with the author of this introduction; Richard Warren Jr., at the Yale Collection of Historical Sound Recordings, Yale University Library, Box 1603A Yale Station, New Haven, CT 06520 USA.

PREFACE:

In order to help the reader to keep clearly in mind the concepts of the process from event or performance to published recording, the chart on the next three pages presents a simplified view:

ORIGINAL RECORDING to PUBLICATION -- simplified outline of process, terms, indicators

- I. PERFORMERS
- or
- EVENT
- indicators,
- and
- RECORDING AGENT
- indicators,
- II. THE UNIT OF RECORDED SOUND, the original sound-carrier (Tonträger)
- A. DISC (commercial: in the sense of being intended for processing for publication in multiple copies)
- The recording is cut directly as a master.
- Each unit of recorded sound is fixed at the time of recording and can only be treated or modified as a whole (buffed, dubbed, accepted, rejected, etc.). This is the normal process for "78's" and other "direct-to-disc" recordings.
- More than one recording machine, located in one or more places, can make an image of the same unit of recorded sound; so there can be more than one original sound-carrier for a given unit of recorded sound.
- indicators; may consist of one or more of the following: Prefix - Number - Take indicator - Suffix; this kind of indicator is often called the "matrix number"; some segment of it may indicate a dubbing (e.g., "T" in electrical HMV, "S/8" in acoustical Victor), and some segment may indicate which of more than one recording machine's image is used (e.g., HMV and Victor: -1_ vs. -1A vs. -1B).
- Some agents used a new number for every unit regardless of content and performers (so that matrix and take indicators are one, for example, Brunswick); others used separate take indicators (e.g., Victor); still others sometimes left the take indicator blank for the first take and added it for subsequent takes (e.g., Odeon).
- Other indicators: signature(s), date, contents, performer(s), etc.; location and recordist indicators may appear separately or combined with the sequence of Prefix - Number - Take indicator - Suffix).
- There were usually relatively few takes per unit of material per session.
- B. INSTANTANEOUS DISC (non-commercial)
- This is usually unique for any one agent for any unit of material recorded; more than one machine is possible.
- C. CYLINDER (commercial) - parallel to disc, with more likelihood of multiple machines, especially in the days before molding.
- D. CYLINDER (non-commercial) - parallel to instantaneous disc.
- E. TAPE (commercial)¹
- Possibility exists for takes of separate (sub-)masters to be edited or mixed (separate takes for each performer or section...).
- There can be any number of takes per unit of material per session.
- There can be more than one recording machine...
- F. INSTANTANEOUS TAPE (non-commercial) - parallel to instantaneous disc
- G. WIRE - parallel to tape
- NOTE: Film soundtracks, commercial and non-commercial, and player-rolls have been omitted and await work by experts to produce their diagrams.

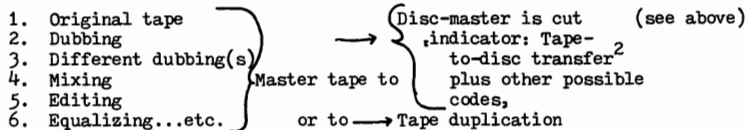
¹This category in particular needs checking, corrections, augmentation by experts.

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Direct image:</p> <p style="padding-left: 40px;">working matrices only:</p> <p style="padding-left: 80px;">mothers,</p> <p style="padding-left: 80px;">stampers,</p> <p style="padding-left: 80px;">"metal parts"</p> <p style="padding-left: 40px;">test pressing,</p> <p style="padding-left: 40px;">etc.</p> <p>2. Dubbing</p> <p>3. Different dubbing(s)</p> | <p>indicators:</p> <p>various kinds may appear:</p> <p>side disc part issue set stamper recording agent manufacturer publisher copyright factory processing date etc.</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1. Dubbing
2. Different dubbing(s) } Normally the end of the process,

Parallel to disc

Parallel to disc



Parallel to instantaneous disc ,Normal end of process,

²This indicator is sometimes called the "matrix number." While the term is appropriate in manufacturing terms, in discography it seems better to avoid confusion with the process of recording by direct cutting by using another term.

IV. SOUND-PUBLICATION

A. DISC

1. Original issue

may be direct image or dubbing

may have issue indicator(s) and other types of indicators as listed under Duplication

may have accompanying material, such as envelope or sleeve, notes, illustrations, etc.

2. Reissue

the same unit of recorded sound as the original issue except for the change to a different image of that unit (dubbing, different dubbing, image from alternate recording machine), including possible changes in form, such as 78-rpm to lp, 78-rpm to tape, etc.

C. CYLINDER - parallel to disc

CYLINDER TO DISC

E. TAPE TO DISC¹ - parallel to disc, but more complex because different disc-masters can be cut from the same master tape; all are "dubbings".

V. PUBLICATION (secondary characteristics)

Note: Changes in these features can occur with no change in what is to be heard (and most can occur in the course of a single pressing run) and are thus non-essential, no matter how important they may appear or may be to those interested in phonographic artifacts

Re-pressing: different label

Re-pressing: different logo

Re-pressing: different imprint

Re-pressing: different stamper

Re-pressing: different chemical composition of material

Re-pressing: different coupling

Different cover-edition

Different notes-edition

Different packaging-edition

Variant issue: different indicator

Variant publication: different company or different country (Victor - HMV, Columbia - Standard, DGC - Decca, etc.)

Any item in Column IV can go with any item in Column V

TAPE TO TAPE¹ - parallel to disc, but all issues are dubbings.

TAPE TO TAPE: some parallels apply¹

NOTE: An issue which involves a change of any unit of recorded sound or of any part of a unit of recorded sound as compared with an original issue is no longer the same recording and must be considered as a Different-sound edition, even if its appearance is identical or nearly identical to that of the original. Changes in the unit of recorded sound which is published are changes of an essential nature to the event or performance which is heard and must be recognized whether visible or not, whether easily detected or not.

OUTLINE OF DISCOTOPOLOGY

I. DISC

A. TOTAL OBJECT

1. SIZE

- a. Diameter (or shape and dimensions)
normal nominal diameters: inches
(cm): 20 (52), 16 (40.8), 14 (35),
12 (30.5), 11 $\frac{1}{2}$ (29), 10 $\frac{1}{2}$ (27), 10
(25.5), 9 (22.8), 8 (20.4), 7 $\frac{1}{2}$ (19),
7 (17.8), 5 $\frac{1}{2}$ (14), 5 (12.8), 3 (7.7),
other.
- b. Thickness (or range of thicknesses, or
description with set of thicknesses)

2. COMPOSITION

- a. Material
 - solid shellac stock
 - shellac stock laminated with board
 - fiber
 - plastic
 - paper
 - plastic (stands firm)
 - flimsy plastic
 - coated cardboard
 - coated paper
 - coated metal (specify type of metal)
 - coated glass
 - wax (specify composition)
 - metal (specify type)
- NOTE: for picture records, those with
transparent surface laminated over
picture &/or design: treat picture
and other material as in label B.4.c
below; treat surface as if it were
a disc with no label
- other

3. COLOR

- a. solid
- b. mottled (random mixtures)
- c. design
- d. other (describe)

4. OPACITY

- a. transparent
- b. translucent
- c. opaque
- d. combination (describe)

II. CYLINDER

A. TOTAL OBJECT

1. SIZE

- a. Length
- b. Outside diameter
- c. Inside diameter
 - i. at edge
(end) where
groove begins
 - ii. at run-off
edge
- d. Thickness

2. COMPOSITION

- a. Wax (specify type)
- b. Other (specify)
- c. Filler ? (if any,
specify composition)

3. COLOR

4. OPACITY









I. DISC

B. DESCRIPTION BY AREA

- 1. EDGE (Edge is defined as the narrow vertical surface at the circumference of the horizontally held disc)
 - a. Topography (description of the surface features, e.g., the shape)
 - b. Figures, if any
Suggestion for notation: begin with the most prominent number, including any letter prefix, and list all figures in order, noting which if any are handwritten and which are raised

- 2. RIM (Rim is defined as the area between the edge and the playing area of a disc - see definition of "playing area" in 3 below)

- a. Topography (description of the surface features, e.g., the shape)

straight slope 
 curved slope concave 
 curved slope convex 
 flat 
 raised ring(s) 
 raised curved slope convex 
 raised stepped rim 
 lowered stepped rim 
 other

- b. Figures, if any
Suggestion for notation: begin with the most prominent number, including any letter prefix, and list all figures in order, noting which if any are handwritten and which are raised

- c. Width, as segment of disc radius

- d. Lead

none
 raised spiral ring
 raised concentric ring(s)
 spiral groove, 1 revolution or less*
 spiral groove, more than 1 revolution*
 other

*or: specify number of revolutions

II. CYLINDER

B. DESCRIPTION BY AREA

- 1. EDGE (Edge is defined as the end with the larger inside diameter)
- a. Topography - same as for disc
- b. Figures, if any - same as for disc

- 2. STARTING RIM

- a. Topography - same as for disc

- b. Figures, if any - same as for disc

- c. Length

- d. Lead, if any (describe)

I. DISC

B. DESCRIPTION BY AREA

3. PLAYING AREA (Playing area is defined as the area from the position of the beginning to the position of the end of the recorded groove. Previous definitions, such as those related to the area within which the spacing and pitch of the groove remain relatively constant, fail to allow for the overlap of recording into the leads)
- a. Radius
 - b. Spacing bands
 - none
 - divider(s) - number of - location(s)
 - feed(s) - number of - location(s)
 - lock(s) - number of - location(s)
 - c. Modulation pattern
 - lateral
 - vertical
 - other (describe)
 - d. Modulation source
 - acoustical (mechanical)
 - electrical
 - monaural microphone
 - monaural beam of light
 - stereophonic
 - compatible
 - quad (specify type)
 - binaural
 - electronic stereo
 - other
 - other
 - e. Groove width (nominal forms given; alternative is to measure and specify)
 - coarse (the 78-rpm "standard", which is really anything but standard)
 - transcription
 - microgroove (the current "standard")
 - other
 - f. Groove pitch (Groove pitch is defined as in machinery; the distance between corresponding points on adjacent threads of a screw)
 - constant
 - variable can be measured and specified

II. CYLINDER

B. DESCRIPTION BY AREA

3. PLAYING AREA - see disc
- a. Length
 - b. Spacing bands - same as for disc
 - c. Modulation pattern: assumed vertical
 - d. Modulation source: assumed acoustical
 - e. Groove width:
 - 2-minute
 - 4-minute
 - other
 - f. Groove pitch: specify

I. DISC

B. DESCRIPTION BY AREA

3. PLAYING AREA

- g. Groove depth
- h. Direction of rotation
 - clockwise
 - counterclockwise
- i. Start
 - edge
 - center
 - both (specify sections)

j. Mastering information

- instantaneous
- original
- dubbing
- master-matrix (negative image of original master)
- working matrix
 - mother
 - stamper
 - other
- pressing
 - test
 - advance
 - normal (for commercial sale)
 - special (specify)
- pressed dubbing (a playable artifact not pressed from a matrix of the original master - can be of any type above under pressing)

k. Speed

- nominal
- actual

4. CENTER (Center is defined as that part of the surface of a disc circumscribed by the inmost part of the playing area. NOTE: Records with no discrete labels should be considered to have only a center, i.e., to have NO inside margin)

II. CYLINDER

B. DESCRIPTION BY AREA

3. PLAYING AREA

- g. Groove depth
- h. Direction of rotation
 - rotation
- i. Start (assumed not applicable)

j. Mastering information

- instantaneous
- molded from original
- dubbing

k. Speed

- nominal
- actual

4. RUN-OFF RIM

- a. Length
- b. Topography

I. DISC

B. DESCRIPTION BY AREA

4. CENTER

- a. If there is a paper, printed, embossed, or etched label, proceed to b. & c.
If there is no discrete label, examine:
- i. Width, as segment of disc radius
 - ii. Topography (features can be measured)
 - flat
 - raised ring(s)
 - ridge(s)
 - sunk area
 - flush
 - raised area
 - replacement, if any - diameter
 - other
 - iii. Lead
 - none
 - raised spiral ring
 - raised concentric ring(s)
 - concentric groove(s) (lock-groove)
 - spiral groove, 1 revolution or less*
 - spiral groove, more than 1 revolution*
 - *or: specify number of revolutions
 - single eccentric
 - double eccentric
 - raised ridge(s)
 - other
 - iv. Autograph(s), if any - specify if raised
 - v. Figures, if any
 - Suggestions for notation:
 1. Establish a right-side-up based on a majority of the figures; impose an imaginary clock-face on the disc, and report figures clockwise beginning at 12:00. Indicate any figures that appear not to be upright, any that are handwritten, and any that are raised.
 2. If 1. is impossible because no orientation is possible, establish an arbitrary 12:00 and read clockwise. Indicate any figures that appear not to be upright, any that are handwritten, and any that are raised.
 3. If 1. is impossible because all figures have their tops, or their bottoms, toward the playing area, start in a logical place and read left-to-right. Indicate any figures that are handwritten and any that are raised.

II. CYLINDER

B. DESCRIPTION BY AREA

4. RUN-OFF RIM

- c. Lead, if any - specify
- d. Autograph(s), if any; specify if raised
- e. Figures, if any:
Suggestion for notation: Begin with the most prominent number, including any letter prefix, and note all figures in order. Indicate any figures which are handwritten and any which are raised.

I. DISC

B. DESCRIPTION BY AREA

4. CENTER

b. INSIDE MARGIN (Inside margin is defined as the space between the playing area and the circumference of the label. Discs with no discrete labels should be considered as having no inside margins but as having centers only)

i. Width, as segment of disc radius

ii. Topography (features can be measured)

flat
raised ring(s)
ridge(s)
sunk area
flush
raised area
other

iii. Figures, if any (treat figures that begin in the inside margin and proceed under the label as if they are in the label area)
See suggestions for notation in a. above.

iv. Autography(s), if any - specify if raised

v. Lead

none
raised spiral ring
raised concentric ring(s)
concentric groove(s) (lock-groove)
spiral groove, 1 revolution or less*
spiral groove, more than 1 revolution*
*or: specify number of revolutions
single eccentric
double eccentric
raised ridge(s)
other

c. LABEL (first try to examine the lowest label, i.e., that closest to the surface of the disc or on it; if that is not readable, attempt to determine those features that are visible and then proceed to deal with the superimposed label or labels; if the lowest label is partially exposed, provide as much information as possible)

II. CYLINDER

B. DESCRIPTION BY AREA

5. RUN-OFF EDGE (defined as the edge at the end of a cylinder that has the smaller inside diameter)

a. Shape

b. Topography

c. Figures, if any (use suggestions listed under Run-off rim)

6. LABEL (use appropriate categories from Disc 4c to describe the slips used as inserted labels on cylinders; otherwise the information will either have been gathered as figures from the various areas or will be found in recorded announcements)

I. DISC

B. DESCRIPTION BY AREA

4. CENTER

c. LABEL

- i. Topography (features can be measured)
 - flat
 - ring(s)
 - sunk
 - flush
 - raised
 - raised area
 - replacement, if any (diameter)
- ii. Nature
 - etched (i.e., figures sunk)
 - embossed (i.e., figures raised)
 - printed (directly on surface)
 - laminated
 - paper
 - combination (specify)
 - other
- iii. Style of paper label
 - plain
 - printed
 - handwritten
 - handstamped (rubber-stamped)
 - combination (specify)
 - other
- iv. Color(s)
 - none
 - pigment (rubbed into etched figures)
 - paper or background
 - print or writing
 - design(s) or decoration(s)
 - other(s) - specify
- v. Shape & size
 - circle - diameter
 - other - define and measure
- vi. Logo
- vii. Pattern or design
- viii. Type-face(s) or type(s) of script
 - numerals of largest size
 - principal title
 - principal performer name(s)
 - other styles used, with their functions
- ix. Stickers - shape, size, color, etc.
- x. Pictures - shape, size, content, etc.
- xi. Autograph(s)
- xii. Figures under label, if any
 - Suggestion for notation: read left-to-right,
 - top-to-bottom, applying suggestions under
 - a.v. above

I. DISC

B. DESCRIPTION BY AREA

4. CENTER

e. LABEL

xiii. Superimposed labels (use appropriate categories above)

Partial
Total

d. CENTER HOLE

Absent

Present

If circular: diameter

If not circular: shape & dimensions

Special features (e.g., brass ring)

- describe

Additional holes

location(s)

shape(s)

dimensions

special features

5. UNRECORDED BACK

Suggestion: treat as one large circle and apply appropriate portions of categories for recorded sides. Note: the categories listed below are NOT exclusive

a. Smooth

b. Embossed

c. Etched

d. Grooved (describe)

e. Topography (describe)

f. Label (describe)

g. Design (describe)

h. Logo (describe)

i. Figures (use suggestions for notation under 4.a above)

I. DISC

II. CYLINDER

C. CONDITION

C. CONDITION

Proceed by area in order of
Description

Proceed by area in
order of Description

1. Edge
2. Rim
3. Playing area
4. Center
5. Inside margin, if any
6. Label, if any
7. Center hole, if any

1. Edge
 2. Starting rim
 3. Playing area
 4. Run-off rim
 5. Run-off edge
- See outline for Disc

1. A list of possible categories to consider:

- a. Crack
 - hair
 - separated
 - lamination
 - star
- b. Crater
 - chip
 - flake
- c. Bite
- d. Scratch (length, width, depth, etc.)
 - needle run
- e. Scrape (dimensions)
- f. Pressing fault
 - blister
 - pit
 - bump
 - grind
 - heat fault
 - ridge
 - etc.
- g. Wear
 - location
 - extent
 - degree
- h. Scuff (dimensions, severity)
- i. Mold
- j. Mildew
- k. Dirt (from the disc's point of view)
 - lipids from skin
 - dust
 - cobwebs
 - foodstuff - analysis
 - shoe polish
 - wax
 - etc.
- l. Warp
 - extent
 - maximum distance from plane
- m. Water-damage
 - location(s)
 - extent(s)

I. DISC

C. CONDITION

2. Permanent (as related to playback, with the assumption that loose dirt can be removed)
 - a. Intact
 - b. Mutilated
 - separated crack(s)
 - severe groove damage (bite or bites, crater or craters, fungus or other damaging material deposited in groove - "The Creature from the Depths of the Surface")
 - extreme wear
 - severe pressing fault(s)
 - warp

D. EXAMPLES OF MEANINGS OF FIGURES

1. Matrix indicator
2. Take indicator
3. Side indicator
4. Disc indicator
5. Part indicator (multi-side items)
6. Set indicator
7. Other issue indicator
8. Modulation pattern
9. Modulation source
10. Groove indicator
11. Start indicator
12. Speed indicator
13. Label-name indicator
14. Manufacturer indicator
15. Imprint indicator
16. Selling agent
17. Recording agent
18. Item indicator
19. Title(s)
20. Author/composer/other participants in responsibility
21. Performer(s)
22. Place of recording
23. Date of event
 - recording
 - issue
24. Instrument indicator(s)
25. Location of recording
 - publisher
 - issue
 - etc.
26. Price indicator
27. Status indicator (celebrity level, etc.)
etc.

III. WIRE (preliminary outline, extended from disc and cylinder)

- A. The wire itself (visible)
 - 1. diameter
 - 2. composition
 - 3. length
 - 4. condition
- B. Container (has no necessary relation to any particular piece of wire)
 - 1. Primary (reel type, diameter, center, etc.)
 - 2. Secondary (bag, box, carton, etc.)
- C. Playback information (invisible)
 - 1. Speed
 - 2. Equalization
 - etc. (condition and such)

IV. TAPE (preliminary outline)

- A. The tape itself (visible)
 - 1. Width
 - 2. Thickness
 - 3. Length
 - 4. Composition
 - a. base (material & color)
 - b. Oxide (material, color, degree of shininess)
 - c. Backing (material, color, degree of shininess)
 - d. Leader (material, color, degree of shininess)
 - e. Sensor (material, color, etc.)
 - f. Splices (type, material of base, material of adhesive, color, degree of shininess)
 - 5. Attached label
 - a. Composition
 - b. Color
 - c. Content
 - 6. Condition
- B. Playback information (invisible)
 - 1. Number of tracks
 - 2. Width of each track
 - 3. Number of channels
 - 4. Direction(s) of recorded signal(s)
 - 5. Modulation source(s)
 - 6. Equalization(s)
 - 7. Speed(s)
 - 8. Alignment of track(s)
 - 9. Condition
 - etc.
- C. Container (has no necessary relation to any particular piece of tape)
 - 1. Primary
 - a. Hub (type, type of center hole, size, composition, color, etc.)
 - b. Reel (same kinds of characteristics as for hub)
 - 2. Secondary (bag, box, carton; dimensions, composition, color, etc.)
 - etc.

V. CARTRIDGE (and/or CASSETTE), as a combination of tape and container, might be treated separately or as separate subsection(s) of TAPE

VI. FILM SOUNDTRACK