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Book Design: A Study in Communicating Information Within the Field of Music

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Book Design:
A Study in Communicating Information Within the Field of Music

By

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CONTENTS

THESIS COMMITTEE

R. Roger Remington, Advisor
James VerHague
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Considering the wide scope of processes involved in bookmaking, it was necessary to consult many experts, specialists, technicians, and generally experienced people. Some of these people were only asked a few questions and others gave considerable portions of their time. Of the latter, I would like to mention my thesis committee: Roger Remington, James VerHague, and Joseph Watson, who met as a group on various dates, to check my progress and aid in the design process, and who were also available to me for individual consultation throughout the project.

I would also like to extend my sincere gratitude to the School of Graphic Arts and Photography which helped me on all of the technical aspects of putting the book together. In particular, I would like to mention Michael Soluri who provided the insight and guidance on the photography, Joseph Brown who taught and consulted me on paper properties, Emery Schneider for making the typesetting equipment available to me, Mark LeDonne for providing the plates and printing the cover, NTID Printing Department for shooting the screens, Richard Anderson for assisting me in typesetting, and Werner Rebsamen for helping in the finishing and binding department.

I would also like to thank Steve DiMarco from Seneca Paper Company who provided invaluable time and patience in selection and furnishing of text and cover stocks, Zildjian Cymbal Company in Norwell, Massachusetts for providing a

bountiful supply of information about the instruments, and Lars Hogsfeldt who modelled for all of the photographs.

INTRODUCTION

When I began searching for a thesis topic, I imagined working on a project that would allow me to incorporate all of the skills I had concentrated on and developed during the two year program at Rochester Institute of Technology. With my major being graphic design it would have to provide a workable design problem that would lend itself to an analytical, systematic solution. It would also have to encompass my minor in graphic arts and photographic processes. The ideal project would be to utilize all of these skills and also be a useful tool in learning something that I would be interested in pursuing as a career.

After searching all summer and not finding anything to meet the above criteria, the ideal project turned up quite unexpectedly. My father is the principal percussionist in the Buffalo Philharmonic Orchestra and he had been writing a manuscript with one of his music performance students, Walter Hunt, at the University of Buffalo. The topic of the body of work was cymbal-playing, approached by professionals working in the field. Since there has been no previous publications on the subject for musicians to refer to, the seed had been planted.

At first I was hesitant because the challenge of the job seemed overwhelming: at this point the manuscript was in very rough form consisting mainly of discussions and Wally's observations of performing professionals on stage. There was nothing else...

I thought about it for two weeks wondering if I would be able to start from zero and produce a well-designed manual meeting all of their needs and also fulfilling my criteria. It would mean working with my father, Walter Hunt, and cymbal specialists in getting a more concrete manuscript together, photographing and documenting all the information, and creating an economical and well-designed package to present at the end for possible printing and publication.

I decided that in spite of all of the work involved, it did indeed meet all my criteria and that it would also provide an opportunity to learn everything that goes into publication design: a very real possibility for a career direction.

After discussing the idea with Roger Remington, my chief advisor, it was recommended that I approach the problem from my primary goal of producing a body of work for my thesis project and not from a strict designer/client relationship. Avoiding that situation would allow me to solve the problem from my ability and insight as a graphic designer and not have to be primarily concerned with a clients' desires. It was decided that I would work with the authors only in obtaining and clarifying the factual information.

This arrangement proved to be very satisfying to everyone involved, and to the authors it would provide the first glimpse of their work as a "real" product. A realistic goal considering time restrictions had to be determined. An entire book could not be put together by our deadline. I

decided to design the entire layout of the book but to represent only certain portions of the text and visuals. These portions would of course display all of the elements of the book. If the final "comp" was presented to the authors after completion of the thesis work, and it was well accepted, then plans for publication and production would be the final reward.

I. DESIGN PROCESS

The designers' problem is like that of an abstract painters': to communicate in terms that will reach the subconscious levels of the viewers mind, where response will be automatic reaction rather than conscious thought. The average reader may be quite unaware of design in books, but cannot escape being affected by elements that establish character and mood. "In book design, the creative problem is to interpret and indicate the nature of the content. This indication must be an accurate one too, it should be interesting and pleasing. The book should have a sense of fitness, the design is interesting to the point of being beautiful."[1]

My first step in the creative process was to read and reread the manuscript. I tried to really get to know it. "Every manuscript has a certain character, and this can be analyzed and interpreted whether simple or complicated, the character of the work can be expressed in more or less abstract visual terms."[2] I tried to watch for certain recurring symbols in the manuscript, things the author may have inadvertently repeated. I tried to create random associations by recalling everything from my past experience that was related to the subject: sights, sounds, smells, textures, people, places, pictures, words, colors, etc. I began to keep a journal and everytime I read the manuscript I would write down

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[1]Marshall Lee, Bookmaking: The Illustrated Guide to Design/Production/Editing, 2nd ed., rev., (New York: R.R. Bowker Company, 1979), p. 222.

[2]Ibid.

my feelings and things that I associated with it. I kept this up for about two weeks until my one word associations began to build up to possible visual solutions.

Example:

precise
serious
cultural
quality
clean
sharp
thin
bright
dark
heavy
light
crash
clash
long, slender
sleek
delicate
strong
force
attack
stark
shiny
spontaneity
splash

Appreciative of the arts.

Sharp contrast in photographs.

Graphic with plenty of white space.

Simple, elegant.

Thin book, elongated, like the profile of a cymbal.

When I thought my 'shopping list' was extensive enough, I began doing rough layouts, laying down blocks of type, illustrations, headings, etc. I had to keep in mind that any decision affecting the physical aspect of the book can have expressive value and that every physical aspect of the book contributes to the character and mood.

During this stage of the creative process I had to decide what should be done creatively? I tried to envision the 'ideal' book. What would I like this book to look like and do for the reader? I began to think of a system of 'tabs', if you will, which would allow the reader to flip directly

to a certain section. This seemed to be a clever idea except the additional cost of a die-cut would boost the price of the book over our limit. I began to sketch out some new solutions. This is when I thought of designing a group of symbol signs, each one depicting a different chapter heading. These signs would be kept simple and graphic and be an outstanding element of each page. Instead of flipping through each page of the book to find something, which is not only time consuming but also puts strain on the pages, these symbols would be located in the uppermost corner of each page, easily recognized by the reader, and facilitate easy referencing to a certain section of the manual.

Next I began to think about the color and texture of the book. Cymbals are made of brass, and metal alloys which are highly reflective, shiny, and hard. The instrument is a very uncomplicated structure which is struck by another object. This is where the idea of a gold metallic cover came into being. Since percussion involves very precise movement, and timing is a very crucial factor, I decided to keep the layout very precise and predictable. Text would always appear in the same module of the grid on every page. Subheadings and symbols would appear together and always be placed in the upper corner of each page. I wanted to convey the feeling of consistency and adhere to a standard layout throughout the book. At this point I chose an 11" x 8½" oblong format because I thought a horizontal flow throughout the book would seem logical. I also chose this format because all the books on the market were designed in a vertical

format and I wanted this book to look different, unique, and contemporary. It was this very reason which later made me change to the vertical format. After doing some research and trying different book sizes on the shelf, I found that the oblong shape got lost among the vertical books. It was also a logical decision to switch to the vertical format once I began to put together all the photos and illustrations. They seemed to go together better on the vertical page and it was a more economical use of page area.

As far as texture, cymbals emanate a sleek, sharp feeling. They are cold and hard-surfaced, and highly polished. This led me to think of a smooth-feeling, nicely coated paper stock upon which to print the text. I wanted to get a 'slick', smooth paper and it also had to be very white to keep the printing bold with a high contrast between the blacks and the white page. Color printing was out of the question because of the price. This book was to be sold to students in book-stores and music stores. The average going price for these manuals is anywhere from $5.00 to $9.00. Black and white printing was the obvious choice.

In keeping with the feel of the book I decided to keep the photographs as free from superficial obstacles as possible. I wanted to deal with the body as a simple form to make the instrument and the hands the dominant elements. Since all or most of the photographs deal with placement of the hands or direction of force, I decided it would be very important to keep the photographs and corresponding text in close proximity. I thought the illustrations should also be

very graphic and accurately descriptive of the author's message. Detailed renderings would seem incongruous with the rest of the book so I decided to break objects down to their simplest parts and to work with form and shape when illustrating. Cymbal-playing is a very precisely timed attack, so at every opportunity this is what I wanted to suggest.

Throughout the design process, I found that there is constant change and alterations of decision as the work progresses. Sometimes certain ideas had to be sacrificed because they did not fit the price limitation, or layout decisions had to be altered to fit a more logical choice. There are a few basic decisions, however, which had to be made at the beginning and strictly adhered to throughout the entire process. These decisions are:

1. Retail price.
2. Trim size.
3. Editorial arragements of illustrations.
4. Printing process.
5. Paper.
6. Number of pages.

These basic decisions concern the book as a whole and they each affect the others.

As I stated above, I chose an $8\frac{1}{2}$" x 11" page dimension (trim size), and adhered to that. I decided on offset lithography as the printing process because of the cheap plates and long running ability. Halftones reproduce very clearly by this method also.

The next major step was to go through the manuscript and get a rough character count. I came up with approximately 27,846 characters. Next I broke this down to a line by

line count. I chose a 10/12 pt. type, with an approximate line length of 17 picas to 19 picas. I estimated 40 to 50 pages. This gave me a more concrete idea of how thick the book would be. Stacking 45 sheets of the stock I chose to print on gave me a thickness approximation of about 1/8".

With this information complete, I was able to begin putting together a very representational dummy. I cut out blocks of type and positioned the type according to my lay-outs and line counts. At the time I was using Helvetica Regular because I wanted a sans-serif typeface. I placed dummy photographs and illustrations close to the relevant text and roughed out some of the symbols I was going to use for referencing in the page corners.

By the second committee meeting, Tuesday, March 8, I presented a complete pasted up dummy and bound it by hand in an adhesive bound double-fanned binding. To help visualize what the finished bound version would look like I got a supply of the text paper I had chosen, Potlatch, Vintage Velvet, 80 lb. text, and double-fanned that using the appropriate amount of pages. This gave me a very accurate representation of the binding method, feel of the paper, and most importantly, thickness of the book. I presented both versions at the committee meeting and this gave everyone a concrete object to deal with in discussing my progress and possible improvements.

During the winter quarter I took the following courses to supplement my education on all of the bookmaking processes: Introduction to Paper, Planning and Finishing, and Fundament-

als of Photographic Typesetting. I had also begun to meet with Joseph Brown, with whom I consulted about paper choice, Werner Rebsamen who helped me plan the technical aspects of the layout and finishing process, and Michael Soluri who guided me in selecting the photographic methods and possible solutions. Aside from my weekly meetings with Roger Remington on the design and layout, I also worked with Jim VerHague on the Genigraphics Computer. I began to design a page layout system on the Genigraphics Computer System. This was designed to save time during the layout process and to keep changes in decisions simple.

During the spring quarter I took Lithographic Press, and an independent study in photography. During this quarter I met with Joseph Watson weekly to discuss final symbol sign design, cover design, and final layout in preparation for mechanicals.

All of these topics are discussed in greater detail in the following chapters.

II. THE GRID

The grid served as a valuable tool in helping me to divide space imaginatively on each page. "The coordinates of a well-engineered grid will not only locate and unify the columns of type, but its horizontal and vertical divisions will aid in the placement of headlines and help to determine the size and position of visual elements as well."[3] The grid also helps in creating a sense of continuity in page design.

The specific kind of grid I used in the layout of my book is the typographic grid, therefore, the basic unit of my grid became a 1 pica square (12 pts. x 12 pts.). After I had established the basic unit I began to divide the page into modules. My basic page module was a rectangle measuring 8 picas wide by 6 picas deep. This dimension was chosen because it is fairly proportionate to a 35 mm. photograph, of which many would be used. Each module is separated by a 1 pica gutter. My bind margin measures $4\frac{1}{2}$ picas and the outside margin measures 3 picas. The bind margin must be wider to compensate for the additional room taken in by the binding. This optically centers the page. My tail margin is $4\frac{1}{2}$ picas and my head margin measures one full module deep (6 picas).

After my page measurements had been established I had to set certain standards which would be adhered to on every page. This was to make each page uniform and consistent

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[3]Allen Hurlburt, The Design Concept, (New York: Watson-Guptill Publications, 1981), p. 86.

throughout the book.

A 2 pt. rule would appear on every page at the bottom of the first module. The rule would begin at the bind margin and end at the outside margin measuring 44 picas in total length. Text would always appear in a 2 module wide column on the left side of each page. Text would begin 2 modules down from the top and end 1 module up from the tail margin. The entire text column measures 2 modules wide by 6 modules deep allowing for a maximum of 41 lines of type per page. A 1 pt. rule measuring 1 module wide will always appear in the lower outside corner at the bottom of the module. The folio will appear 1 pica below this rule toward the outside margin.

The photographs and illustrations will always be placed flush left against the upper corner of the module(s) designated for its positioning. All photographs and illustrations will be sized to one of three proportions: 1 module by 1 module, 2 modules by 2 modules, or three modules by three modules.

The chapter headings will always be placed flush left in the second module from the top just above the text column, and never exceed the 17 pica line length. The chapter number will appear 1 module to the right of the heading, flush left. Sub-headings will appear on every page, 1 module from the top, just below the rule, in the outermost column. The line length of the sub-heading will never exceed the 8 pica column width. The symbol sign measures 4 picas by 4 picas and always appears in the head margin just

above the rule, against the outside margin.

Supporting documents are in appendix 3.

III. PAGE LAYOUT ON THE GENIGRAPHICS COMPUTER

Very often graphic designers find themselves in a heap of paper when doing layouts. When a new choice or decision is made it usually requires redrawing several of the same elements and adding a new one, or cutting apart the old layout to add to the next. After approximately two weeks of working with my grid and layouts on paper, I decided there must be a faster way of visualizing my pages. The Genigraphics Computer System proved to be a very effective tool in laying out the pages of the book. Not only did it save time and materials, but at my fingertips I found changes in design, position, text weight, etc. to be instantaneous.

My first step was to create files containing all of my page elements. My first 'materials' file contained different sizes of blank white paper. Now, instead of tearing off another sheet of layout bond, I simply call a paper file and choose a paper size, presto, a clean slate. I created similar files containing blocks of various text widths, photo blocks, illustrations, and symbol signs. My most important file, of course, contains the entire page grid sized exactly to my page dimension. Now when I want to place the page elements into position, I add the grid file and it lays over my 'sheet' of paper to give me instant placement alternatives.

With all of these files now at my fingertips, when I want to change my mind about something all I have to do is capture the object in question and move it, shrink it, grow

it, change the color, or get rid of it. When my overlaying grid is no longer needed I simply delete it.

Supporting documents are in appendix 4.

IV. THE SYMBOLS

"In general, signs are deliberately formed signals. Visual signs are the graphic designers business. They include signs which carry agreed meanings and thus refer to particular facts and circumstances. They are known, familiar, and well-tried as instruments of communication. They speed up communication and give added point to a message."[4]

I developed a set of symbols signs for reader orientation and as a tool for quick reference. It must be understood that these symbols are going to be used by a specialized group of people: Percussionists, not the general public. A layman, unfamiliar with the basic shapes, or not understanding music and its theory, may not understand the meanings of this set of symbols.

The message areas for the symbols are each individual chapter heading. Each symbol was designed to illustrate the basic chapter content. In typical signage systems there is no explanatory text to accompany the symbol. However, according to my page grid, the chapter sub-heading falls 1 pica below the symbol in 8 pt. type, bold.

"All visual communication, including symbols, have three distinct dimensions: Semantic, syntactic, and pragmatic. The strengths and weaknesses of every symbol can be evaluated in relation to these basics of graphic design com-

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[4]Anton Stankowski, Visual Presentation of Invisible Processes, (New York: Hastings House, 1967), p. 106.

munication."[5]

SEMANTIC- This refers to the relationship of a visual image to a meaning. How well does this symbol represent the message?

SYNTACTIC- This refers to the relationship of one visual image to another. How well do the parts of this symbol relate to each other? How well does this symbol relate to the other symbols?

PRAGMATIC- This refers to the relationship of a visual image to a user. Can a person see the sign? Can this symbol be enlarged or reduced successfully?

Throughout the design process of my symbols, it was necessary to refer back to these relationships. Recognizing them makes it possible to logically isolate and evaluate specific qualities.

Symbols had to be created for nine chapter headings. The following guidelines were established before the actual symbol designing began: The symbol field shape is a square area with circular corners, black background with white figures for optimal legibility, and a 13 by 13 unit grid used to establish consistency in design.

SYMBOL DESIGN

Chapters dealing with crash cymbals were represented with two cymbals, each with a strap to decipher this specific

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[5]The American Institute of Graphic Arts, Symbol Signs, (New York: Visual Communication Books, Hastings House, publishers, 1981), p. 20.

kind of cymbal from any other. The chapters dealing with suspended cymbals were represented by the same size cymbal on the same type of stand differing only in the cymbals' position or specific situation.

Chapter one: "Selection of a Crash Cymbal"

This was represented by two cymbals facing each other in the typical crash position with straps. The word 'selection' was voted too ambiguous to be effectively represented, therefore, just the specific type of cymbal was represented.

Chapter two: "Selection of a Suspended Cymbal"

Here again, since the word 'selection' was too ambiguous to interpret, I chose a standard cymbal fixed to a standard cymbal stand in a horizontal motionless position.

Chapter three: "Grip and Stance"

Working with the syntactic element of relating the symbols to each other, I chose a full figure holding two cymbals in the typical stroke position and the feet shoulder length apart (the correct stance). Many styles on the human form were tried, varying from pointed appendages (which looked too much like the cymbals), to very blunt appendages (which did not relate syntactically to the rest of the symbol figures). A compromise was made between the two and the final rendering was a narrower blunt end.

Chapter four: "Special Effects for Crash Cymbals"

This was represented by two crash cymbals (with straps), interacting from an unusual angle to imply a deviation from the normal technique.

Chapter five: "Basic Suspended Cymbal Technique"
This was represented by the standard suspended cymbal on a stand being struck by a round mallet. Cymbal is tilted to represent the act of being played.
Chapter Six: "Special Effects for Suspended Cymbals"
This was represented by the standard suspended cymbal on a stand combined with a triangle. Many effects utilizing many different implements are cited in the chapter. However, the triangle was chosen because it was the most recognizable shape.
Chapter seven: "Care and Aging"
This was represented by the standard protective cymbal case. All cymbal-players utilize a similar type of carrying case.
Chapter eight: "Repertoire"
This was represented by a time-signature which signifies a music score.
Chapter nine: "Rudiments/Exercises"
This was represented by a double stroke triplet, a very common rudimental symbol in percussion scores.

Supporting documents are in appendix 5.

V. THE PHOTOGRAPHY

After several amusing perusals through the current technique books on sale at book stores, I decided I had to change the approach of the photography of my book. Unbelievable as it is, the books I looked through have beer-bellied drummers donning dirty T-shirts slouching behind a drum, comical-looking men of age dressed to the hilt in traditional concert tails, ruffled shirt cuffs, obstrusive jewelry, oblique camera angles and you name it.

I began to study the human body as a simple and elegant form. How can I avoid all the above obstacles, yet still have a respectably clothed human being play the instument? I came up with one solution: Take away all the trivialities and leave only the important elements.

Starting from my sketch notebook I began to work with the human shape in the framework of a 35 mm. format. I began to play with the positive and negative areas, always bearing in mind three elements: body form, instrument, and background. I began to think of different peoples' body shapes and what type of model to shoot. Mulling these questions around for several days I came upon my answer. What better model to shoot stance, elegance, technique, and grace, than a dancer? From that I realized that dancers always dress in a simple style so as not to cloud the message given by the body.

My answer to a model came in the form of a Swedish dance student by the name of Lars Hogsfeldt, who is current-

ly studying dance in the United States at the Hochstein School of Dance in downtown Rochester. Through Michael Soluri I arranged our first photo session.

I photographed Lars in different types of clothing, but the answer was definitely a plain black leotard. In some photographs we used a strap leotard which showed his arm muscles when that was important, and in others we used a long-sleeved black leotard which accented the wrist and hand where the sleeve ended. It was exactly what I was looking for. I placed Lars against a white background and used a studio which provided natural north sunlight. I did not want to complicate the process with flash bulbs, umbrellas, bouncing lights, or any other unnecessary technicalities. The effect was built on simplicity and direct attention to the fact of communicating the message using the purest forms and sources available. I worked from my contact sheets with the authors to clarify the information and to ensure proper documentation of it. Lars and I completed the material in four sessions.

I printed the photographs on Kodak Polycontrast F paper to get the best contrast between the white background, the black form of the body, and the grey tones of the cymbals. I had decided right from the beginning to photograph exactly to size to capture the composition I wanted within the given framework. I did not want to crop the photographs once I got to the darkroom. I felt that this would interfere with the elegance of the full frame composition.

After I was satisfied that all the photographs clear-

ly stated the authors' message, I had 100 line halftones shot of each photograph to place on the mechanicals.

Supporting documents are in appendix 6.

VI. ILLUSTRATIONS

I chose to illustrate the text using very bold, graphic shapes. Since most of the illustrations deal with shapes, profile, and direction of force, the most practical and direct method of communication was to use the instrument as a solid black form as opposed to a detailed rendering. "The abstractive language of signs, by contrast to the representational picture, leads to the concept, to rationality, to understanding."[6] I also chose this method because it was similar in style to the rest of the graphics in the book. I enclosed most of the illustrations within a thinly ruled box to position them on the grid and to keep them from 'floating' on the page.

Supporting documents are in appendix 9.

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[6]Anton Stankowski, Visual Presentation of Invisible Processes, (New York: Hastings House, 1967), p. 62.

VII. THE TYPOGRAPHY

My search for a typeface began with an examination of several different text typefaces. I scrutinized each one for legibility, color, and character. I was looking for an open and contemporary style. My first choice was ITC Cheltenham. It is a contemporary modification of the old style with a small serif, tall x-height, very rounded letters, and has a nice even grey tone. A derivative of an older typeface, it has a nice quality of style to it and is very legible. I felt that setting the type myself was an important part of the learning experience throughout the process of my thesis. I ran into some problems gathering fonts and depending on machinery. After a week of searching for the Cheltenham width tapes in the typesetting laboratory in the School of Printing, and finally loading them onto the Mergenthaler VIP, it turned out that they were the old style Cheltenham and obviously was not what I wanted. The ITC Cheltenham was not available. Helvetica was my next choice because of its neat, designerly qualities, it was also available on every typesetter at RIT. After doing some layouts with it, however, I did not think it was legible enough for a book text type.

I examined several more typefaces and finally settled on Hermann Zapf's Optima. As the name implies it is a very legible typeface, and because of the sculptural qualities it looked nice enlarged for the headings. Optima is a sans-serif typeface under the Lineal Humanist type

classification. The design is based on the proportions of inscriptional Roman caps. The stroke contrast gives it the sculptural quality and it has a nice classical style which I felt was appropriate in dealing with the subject matter of music. Since I chose the Omnitech 2000, a fifth generation laser typesetter for setting the type, my first step was to load the Optima onto my master font disc. I did this with the help of some of the staff at the Mergenthaler Technical Training Center in Wellsboro, Pennsylvania, long distance on the phone. Because some of our equipment was failing, I had to use the editing terminal of an Omnitech 2000 to keyboard and edit the proofs, the typesetting unit of an Omnitech 2100 to set the type, and an RC processor to process the paper. After overcoming the frustration of the equipment availability and failures I must admit that I learned an incredible amount of information on laser typesetting. As an aside, the people from the Mergenthaler Technical Training Center invited me to a five-day applications, maintenance, and repair workshop starting May 23. I was naturally excited and honored to accept the invitation.

I set the type and folios in 10/12 pt. Optima Regular with a line length of 17 picas (2 grid modules). The captions were set in Optima italic, the sub-headings in 8 pt. Optima bold, and the chapter headings in 24 pt. Optima bold. Everything was set ragged right and flush left to the modules of the grid.

Supporting documents are in appendix 7.

VIII. THE COVER DESIGN

As I mentioned before in the design process section, I had chosen a gold metallic cover stock for my book cover. Seneca Paper Company supplied me with several sheets of Appleton Currency, 80 lb. cover. It was the exact color of the metal which cymbals are made of.

I decided to use my symbol signs on the cover because they were representative of each of the chapter contents. This worked well because the perspective buyer of the book could see what the manual contains by looking at the cover. I also wanted to utilize the symbols in a certain way to produce a subliminal message of the sound a cymbal makes. I stacked the symbols in a block, three by three, and began working on a series of interval studies which began with a thick line and moved to a thin line. This was to suggest the initial crash of a cymbal and then the sound dissipating. It was a good concept but it broke up the symbols too much and they became less legible. I decided to use a gradation screen to make the technique more subtle. This softened the interval affect considerably and produced a nice even change from dark to light. I added an extra row of blocks at the bottom to extend the gradation before the word 'cymbals' appeared at the bottom in Optima caps. The lightest part of the screen ended on the rule. The rest of the cover copy falls below the gradation screen, printed in black. The sub-title is printed in bold and the authors names in regular also following the dark to light pattern.

The cover concept was also a sort of play on the words 'cymbals' being the topic of the book, and 'symbols' in the signage system. (A point which had to be clarified again and again during the whole project.)

The cover was designed according to the same grid I used for the text pages. I shot a film reversal of the block of symbols and then the gradation screen was laid over the film during the plate-making process to produce the effect. Mark Le Donne from General Duplicating in the Physical Plant at RIT printed the covers using sheetfed offset lithography.

Supporting documents are in appendix 8.

IX. PRINTING PROCESS/PAPER

For the final presentation I had intended to have the entire book printed by offset lithography, however, after I considered the astronomical price of making all the negatives and plates, not to mention setting up the press for only a few copies of each page, I decided to look for an alternative. I experimented with several different models of laser copiers and found that the Xerox 9210 had remarkable reproduction capabilities. Not only did the halftones reproduce with a high quality resolution, but it would also copy on the text stock I had chosen.

I made an 8½" x 11" mechanical for each of the pages of the book on illustration board. For the pages which I did not represent with text and visuals I made a mechanical with the headings and page number. When this stage was completed I made three copies of the final book. I was very satisfied with the quality.

If and when the book is accepted for publication I would recommend that it be printed by sheetfed offset lithography on the Potlatch, Vintage Velvet, 80 lb. text stock.

Supporting documents are in appendix 9.

X. BINDING

At first I had considered a mechanical binding for the book. This method employs a plastic or metal device which holds the pages together. Originally I liked this method because the book can lie perfectly flat when opened, stand like an easel, or fold back on itself so that it is no larger when opened than closed. I thought this might be a useful option for using the book on a music stand, in the classroom, or as an instructional tool. I had intended on using the wiro binding equipment in the binding laboratory. I later rejected the method mainly because the plastic device and punch holes along the binding greatly detracted from the elegance of the book. Mechanical bindings also cost more than other methods and because of the way they are made, it is most practical to use when only a few copies are made.

I researched other methods of binding. Considering the thickness of the book, the paper, and the cost, I decided on a double-fanned adhesive binding. PVA double-fanning is by far the most durable quality adhesive binding method known. Not only is it strong it also lies relatively flat when opened and the binding does not interfere with the beauty of the book. It was developed by Emil Lumbeck in 1934 in Germany and further refined by Hans Ehlermann. This method binds books by first bending the pages one way and applying a specially formulated, high quality polyvinyl acetate adhesive to the sides of every

page and then fanning the book in the opposite direction to receive a second application. This method 'tips' one page to another. The unusual strength of this binding method is obtained with a straight, even glue line from head to tail, approximately ten thousanths of an inch. It is important in all binding methods to be sure to bind parallel to the grain of the paper, This must be calculated during pre-press set up. I used a simple Library Binder in the bindery laboratory at RIT. In RIT's lab, pull tests have demonstrated great strength in excess of 20 lbs. per linear inch.[7]

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[7]Werner Rebsamen, Planning and Finishing, Rochester Institute of Technology, (Rochester: Class handouts, RIT, 1983), p.23.

XI. CONCLUSION

Upon completion of the project, I had produced three demonstration copies of the book. I presented two of these at the second thesis show in the Bevier Gallery on April 29, 1983. One was displayed on a book stand and another lying opened on a pedestal for browsing. My display was supplemented with a photographic documentation of my page layout system on the Genigraphics Computer.

I feel that I have accomplished a great deal of work and have fulfilled the predetermined requirements set forth in my proposal. Many of the processes involved in book design and bookmaking were new to me when I began and I feel that the education and experience I have gained throughout each of the processes is invaluable to my future in graphic design. Because I took on the position of designer, art director, editor, photographer, illustrator, production manager, typesetter, etc. there were times when I thought I would not be able to finish to my satisfaction. When I finally had the final product in my hands I felt a great sense of accomplishment and satisfaction.

I realized throughout the project that there were many problems specific to the area of book design that a designer must solve. Repeated encounters and experimentation with these problems enable the designer to instantly reject some solutions and move swiftly toward others. It is an analysis which begins with the selection of trim size, paper, printing process, binding, etc. and builds up through

the design process of supporting visually what the author is saying verbally. The complete concept of bookmaking on which it is based includes editorial functions as well as the esthetic element.

The book was presented to the authors for the very first time on May 2, 1983. They were overwhelmed. My final reward had been realized. I have been asked to complete the job in its entirety and plans for the production and publication of Cymbals, the Art and Technique of Cymbal-Playing are in the making.

After completing my thesis I realize that there are a few refinements I would like to make when I complete the rest of the book. I will have time now to re-evaluate the contents of the book and make certain changes where I feel they are necessary. I do feel, however, that I have successfully captured the essence of my original ideas and also created and manitained a clear communication between the authors message and the reader, which is what the graphic designers' role is all about.

APPENDIXES

Appendix 1

Marketing Research
For Cymbal-Playing Book

DATA SHEET

GOAL: There is a lack of information on the market today for percussionists seeking information on cymbals; how to choose the instruments and the fine points of technique. This manual will be the first of its kind and will provide the percussionist with a first hand source of information by experienced professionals in the field.

AUDIENCE:
* Students of percussion. Students in educational institutes and private students.
* Teachers in the field of music.
* Band members of all ages, high school through college.
* Percussionists of all types of music.
* Music store managers.
* Free-lance musicians.
* No age limit. Will communicate to all age groups with the ability to read and understand basic music theory concepts.

OBJECTIVES:
* Since most technique books on the market are outdated, this manual will have a contemporary look and be a refreshing and necessary tool for the percussionist.
* Will provide 'hands on' information from professionals in the field.
* To incorporate the best possible method of communicating between the author and the reader.
* The reader will have a source of practical knowledge.
* The reader will be able to pick up this manual and easily locate the section dealing with his/her question.
* Through diagrams, illustrations, photographs, and placements of the text, the reader will not feel 'lost' in the arrangement of information.
* Will be helpful in many different percussion-playing situations.

SITUATION STATEMENT: The field of percussion music currently has many books and materials on the market dealing with history, technique, etc. None of these texts deal with practical and fine points of cymbal-playing. There is a need for all these facts to be compiled in an organized and systematic approach to the reader.

ANALYSIS OF PROCEDURES

Bookmaking presents three kinds of problems:

THE MECHANICAL PROBLEM: Turning the manuscript into an efficient and economical book.

THE COMMERCIAL PROBLEM: Prcducing a book that is suited to its market, aid sales, and can be sold profitably.

THE EDITORIAL PROBLEM: Creating a book that properly expresses the authors message.

MECHANICAL ANALYSIS

- Character counts.
- Line for line counts.
- Page counts.
- Illustrations, photographs.

COMMERCIAL ANALYSIS

- Size of printing and binding.
- Nature of the audience.
- Distribution.

EDITORIAL ANALYSIS

- Authors intent.
- Visual presentation.
- Learn about the problem.

CREATIVE SOLUTIONS

- The problem.
- The creative process.

BASIC DECISIONS

- Trim size.
- Choice factors.
- Illustration/photography.
    * editorial requirements.
    * use requirements.
- Printing process and paper.
- Number of pages.
    * manuscript.
    * retail price.
    * press and paper.

THE TEXT PLAN

- Copyfitting.

SAMPLE PAGES/DUMMIES

- Chapter openings.
- Style and feeling.
- Rough layout.
- Chapter headings, sub-headings.
- Initials.
- Typographic choice and design.
- Finished layout.
- Layout tools.
- Margins.

ILLUSTRATIONS/PHOTOGRAPHY

- Size.
- Shape.
- Contrast/variety.
- Consistency.
- Procedure.
- Location.
- Captions.

FRONTMATTER/BACKMATTER

- Title page.
- Dedication.
- Authors' note.
- Contents.
- Notes.
- Bibliography.

BINDING DESIGN

- Function.
- Cover graphics.
- Binding process decision.

TIME LINE

		deadlines
COMMITTEE MEETING	December 7, 1982	
Marketing Research		December 14, 1982
Paper, Trim size, Cost, Printing, Binding methods		January 15, 1983
Character counts, Rough layouts		February 15, 1983
Photography		February 28, 1983
Pasted up dummy, Bound dummy		March 7, 1983
COMMITTEE MEETING	March 8, 1983	
Symbol design		March 20, 1983
Cover design		March 30, 1983
Illustrations		April 7, 1983
Typesetting		April 8, 1983
Mechanicals		April 14, 1983
Print cover		April 15, 1983
Copy and bind final demonstration copies		April 21, 1983
Gallery opening	April 29, 1983	
Written thesis		May 16, 1983
COMMITTEE MEETING		May 17, 1983

The Grid

Appendix 3

Basic Suspended Cymbal Technique

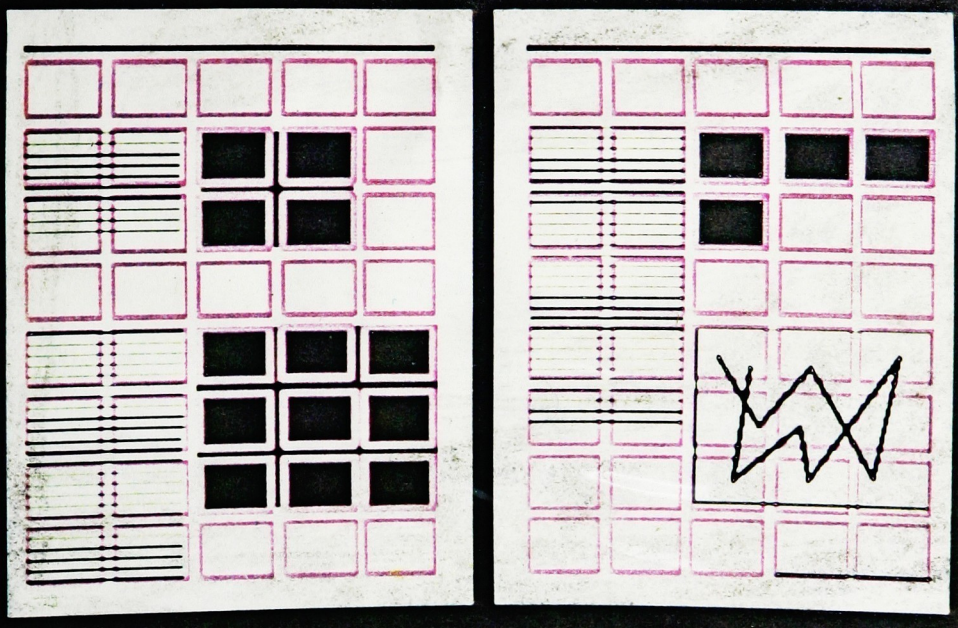
Special Effects Crashes

Genigraphics Page Layout

Appendix 4

FSRGN FRAME MV/GR CAPT JUST EDIT COLOR SKTCH

USING THE GRID FOR PLACEMENT OF PAGE ELEMENTS



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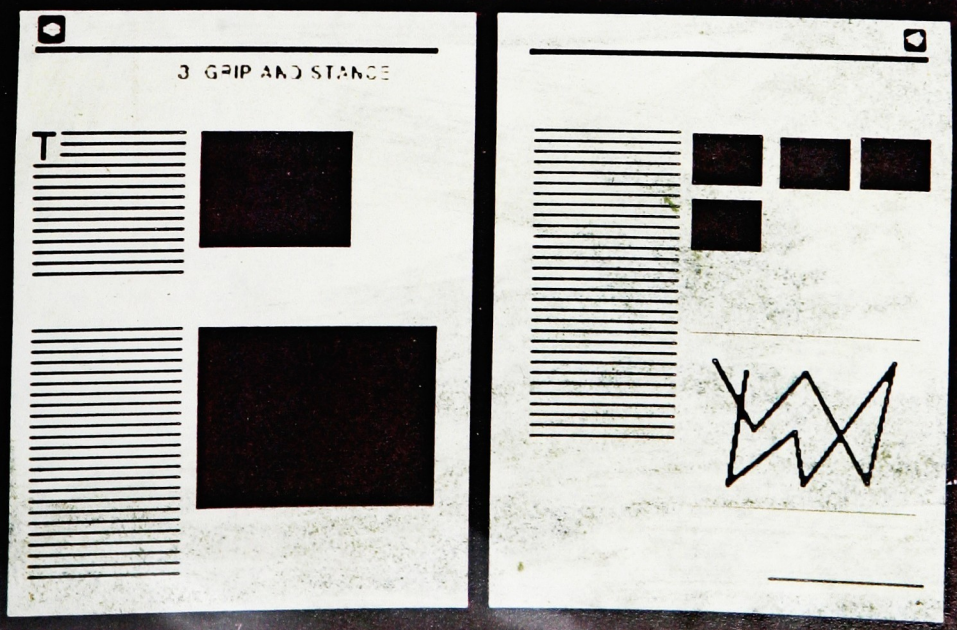

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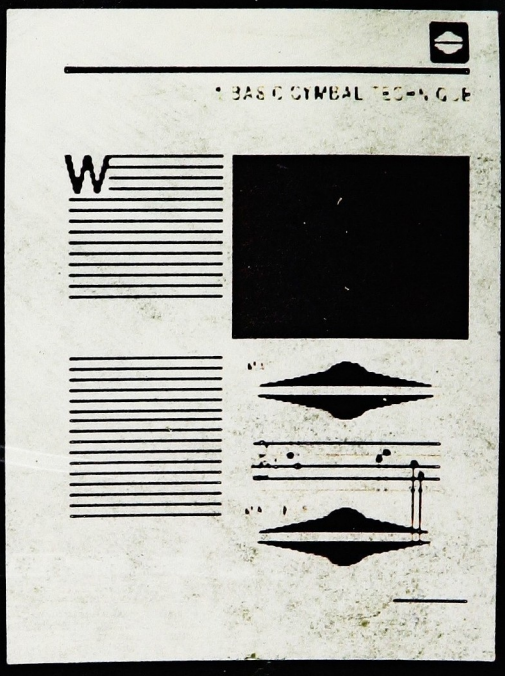
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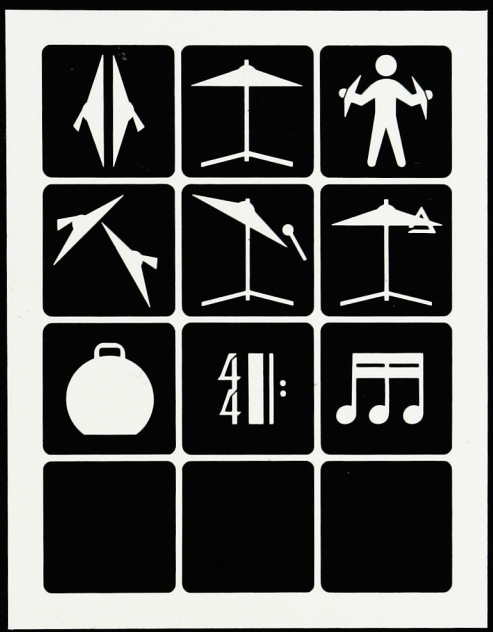
The Symbols

Appendix 5



Contents:

Symbol tabs representing the chapter contents are provided in the upper corner of each page to facilitate easy referencing to a specific section of this manual.

The Photographs

Appendix 6

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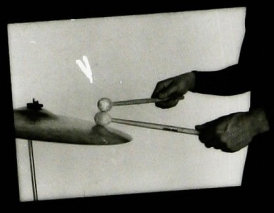

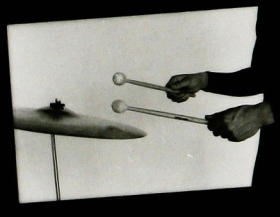

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KODAK SAFETY FILM

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(Continued from Page 377)

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OPTIMA 10 POINT SET MINUS ½ UNIT

ROMAN, ITALIC, BOLD, BOLD ITALIC

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The main purpose of letters is the practical one of making houghts visible. Ruskin says that all letters are frightful thin

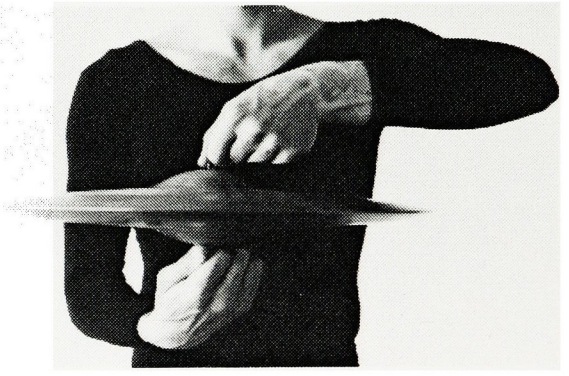
CYMBALS

The Art
and the Technique
of Cymbal-Playing

Lynn A. Harbold
and
Walter S. Hunt

Selection of a Crash Cymbal

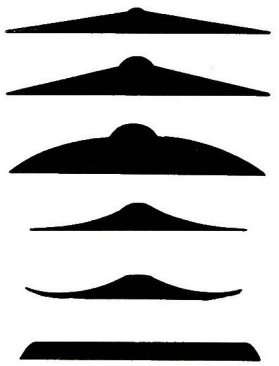
There are many factors that affect the quality of sound that a cymbal produces. The most significant of these are thickness, size, and shape.



Thickness is important in determining the fundamental pitch. The authors have found that the thicker cymbal will usually have a higher fundamental than the thinner. The thicker cymbal will produce a brighter sound while the thinner one will produce a darker sound. The thinner cymbal will also respond faster and the sound will decay sooner.

The size of the cymbals is important in relation to their function. Nineteen inch Zildjian cymbals are reccommended for their versatility. They are a medium range cymbal and are considered to be the workhorse of the trade. They respond well from pianissimo to fortissimo. Larger cymbals usually have an immediate decay in sound and are usually used for a splash effect.

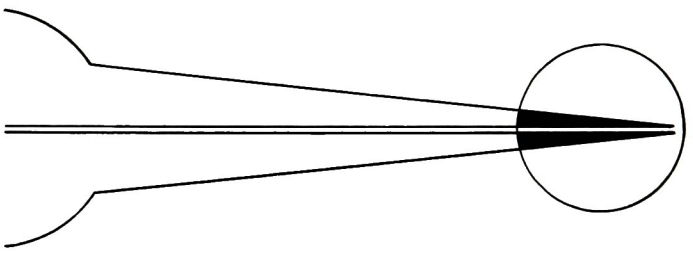
When played at a low volume, larger cymbals are much darker in sound and produce a less defined attack. Smaller cymbals are brighter and produce a more defined attack. Care must be taken not to overplay small cymbals to the point of distortion. Younger players might find 16'' to 18'' cymbals easier to control but should be able to handle 19'' cymbals by high school age.

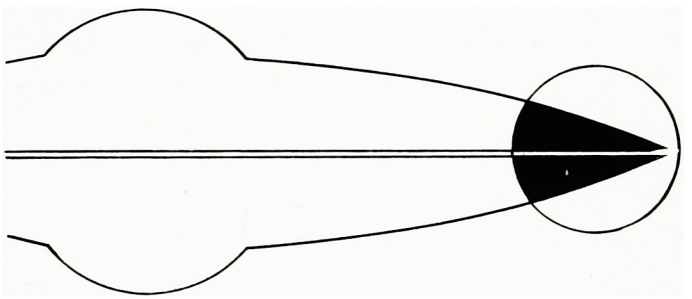


Symbols are made in a variety of shapes. Each shape has a characteristic sound.

The shape of the cymbal is very important to the quality of sound. Seek out flatter cymbals because they are more responsive and produce a blending quality. A bowed or curved cymbal has a gong-like quality which is due to its pronounced fundamental. Depending on the technique chosen, the flatter cymbal will be easier

to control and less likely to produce unwanted airlocks when crashed. The flatter cymbals have more surface contact around the edges and tend to force the air out before they come in contact with each other. Cymbals with a bowed shape have much less surface contact around their edges and therefore create an air pocket when they come in contact with each other. This problem causes slippage between the cymbals and produces a"sloppy"sounding crash. Depending on the severity of the airlock, there may be no sound at all.



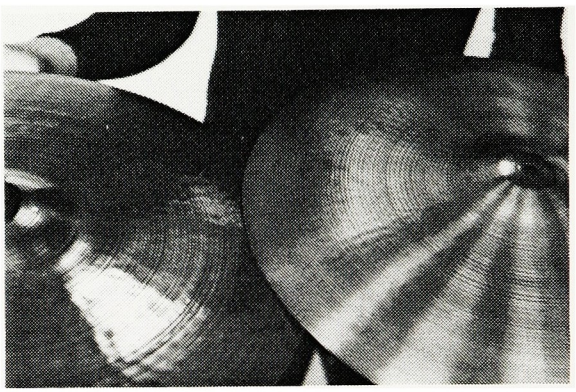


In any case, it should be stressed that having a variety of cymbals to compare is the best way to judge. In a store, listen to all of the cymbals before making a purchase. In performance, it is a good idea to have six to eight good pairs of cymbals available to make a selection. Depending on the accoustical situation or the music hall, any number of combinations might be appropriate, however, it is the responsibility of the performer to enhance the music with the quality of the crash he produces.

Other than Avedis Zildjian, there are other fine cymbal companies, such as K Zildjian and Piaste. Be aware that there are also cymbals of inferior quality on the market. As has been stressed before, listen to a variety of cymbals to get an idea of what the ranges of good and bad sounds are like.

K Zildjian cymbals have an aura of mistique about them because they are increasingly difficult to find. Many of the great orchestras use K Zildjians exclusively. This does not mean that all K Zildjians are better but that they are different and this difference must be understood. K Zildjian cymbals were the original cymbals made in Turkey, although they are

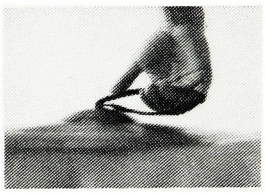
now made in the United States. The main difference between them and Avedis Zildjians is that K Zildjians are hand hammered during the production process. This means that the quality control is different and there tends to be more variety in sounds that a single size will produce. This variety compounds the problem that exists because of their scarcity. It is very difficult to find a store with enough good cymbals to find a match. If you are interested in K Zildjian cymbals you will have to do a lot of searching, and look especially for used cymbals.

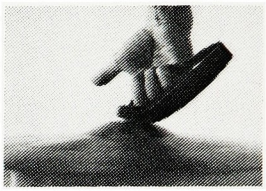


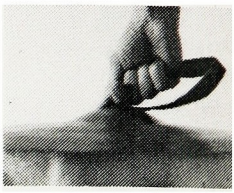
Notice the hand-hammering done on the K Zildjian vs. a machine-pressed cymbal.

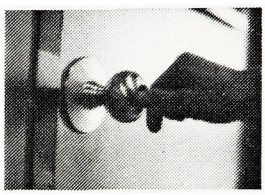
An expert hammers a cymbal. According to Armand Zildjian, the critical hammering process "strengthens the cymbal and helps bring out its musical properties".

To attain the proper grip, lay the cymbal on a table with the strap flat against the cymbal. 1. Slip the fingers under the strap and move the index finger toward the top of the bell. 2. Next, pull the strap tight and grip it firmly with the lower three fingers. 3. Place the pad of the thumb against the strap with some contact on the bell. This placement of the thumb and index finger is the fulcrum and is only point where contact with the cymbal is made. 4. This should resemble the grip on a key turning a lock. The lower three fingers must firmly grip the strap to support most of the weight of the cymbal.









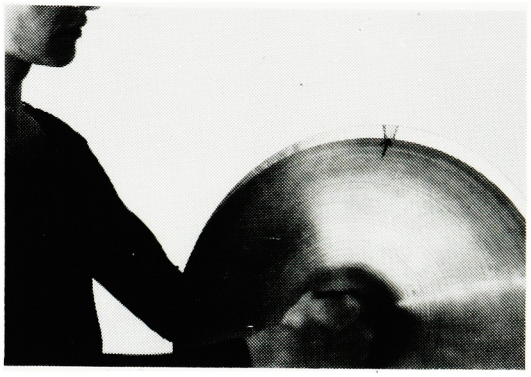
The proper grip can be compared to turning a key in a lock.

Check the cymbals to find the heavier one (the higher fundamental) and hold it in the stronger hand. If you are right-handed you will probably use the right hand. This will be referred to as the striker. The purpose of this is to facilitate control, produce the maximum potential from the instruments, and produce a crash with clarity and definition.

For the proper stance, stand up straight with the feet shoulder length apart and weight evenly distributed. For a big crash, the lead foot (right if the striker is in the right hand) should be slightly moved back. The cymbals should be held at chest level and the authors have found that the cymbals are easier to balance and control if held at an angle between 30 degrees and 60 degrees with the striker on top.

The striker should be the heavier cymbal (with the higher fundamental) and held in the stronger hand.

Once the correct grip and stance have been achieved, rotate the cymbals against each other to find the point where surface contact is maximized. It is a good idea to mark the exact point on the cymbals that will work the best together for the sake of quick reference and security.

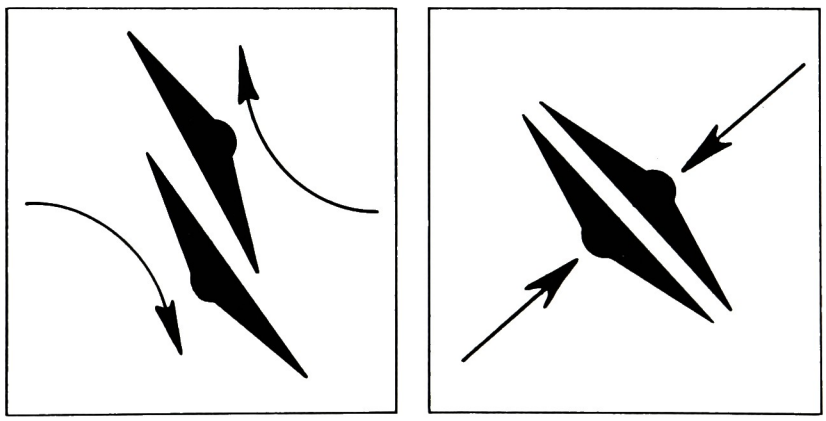


Mark the cymbals for quick reference.

The direction of motion into which the cymbals are cast is often the major problem with inexperienced players. The cymbals should not be crashed with a sliding or glancing blow, this is the prime cause of airlocks. Instead, the motion should be more direct, like the natural motion of clapping hands.

The principles of cymbal crashing are the same as any other percussion instrument. For example, techniques change on the snare, mallets, timpani, bass drum, and triangle to alter the tone, color, or attack. The difference with cymbals is that either or both of the cymbals can take on the role of the impliment.

For most crashes, where power and fullness are desired, both cymbals should be set in motion. For more accuracy, control, and dynamic range, only the striker should be set in motion. As previously mentioned, the striker is the heavier object setting the lighter object into vibration. Because the lighter object will be more active, this crash will tend to have a darker sound. In the opposite case, when a lighter object sets a heavier object into vibration, the result will be a brighter but less full-bodied crash. This is because the lighter object will have a lesser affect on the heavier object when striking it.



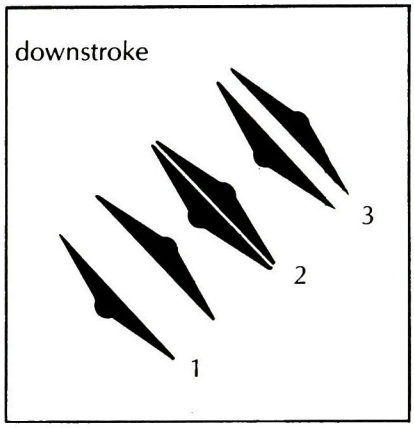
Glancing blows are a prime cause of airlocks. The motion should be more direct, like the motion of clapping hands.

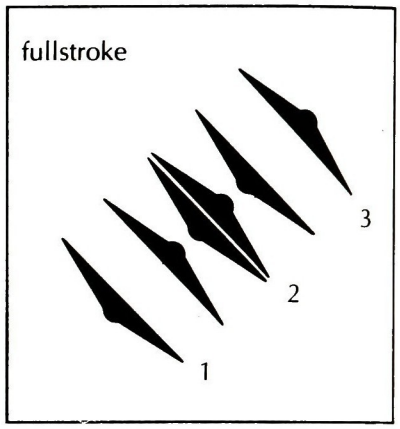
For all of the above mentioned techniques, additional nuances can be elicited regarding the fullness of sound and the degree of attack desired. There is a strong similarity here with basic snare drum technique.

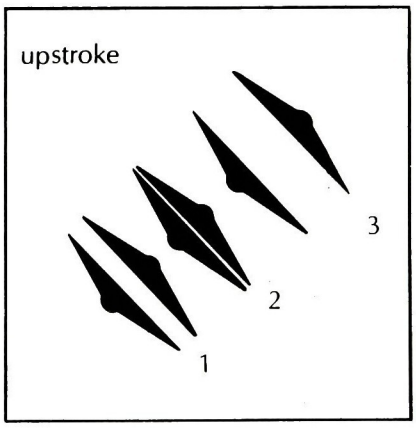
For a strong percussive attack and a full-bodied crash, begin the crash in the stroke position and with force (and no effort to impede that force) crash the cymbals and end in the tap position.

This can be compared to a downstroke in snare drum technique also called the instrument's "natural rebound sound", a term coined by Fred Hinger. For a crash with the same fullness and power but with less attack, begin at the stroke position, crash in a similar manner, but return by adding more energy in pulling away to the stroke position. This can be compared to the fullstroke. A crash beginning in the tap position, and with force pulling away to the stroke position, will result in the least attack and fullness. This crash is similar to the upstroke and can be used very effectively where restraint is necessary. It is easiest to play this crash at a soft dynamic level but like all techniques, should be practiced at all dynamic levels.

Another requirement, similar to the playing of other percussion instruments, is the relaxation necessary from the wrist. At the point of impact, as little tension as possible should be concentrated on the cymbals. When the cymbals are allowed to interact, alot of bad sounds and airlocks can be avoided. To encourage this, slightly relax the thumbs on the strap while the cymbals are in motion. Except for muffling, there should be as little extra contact on the cymbal as possible.





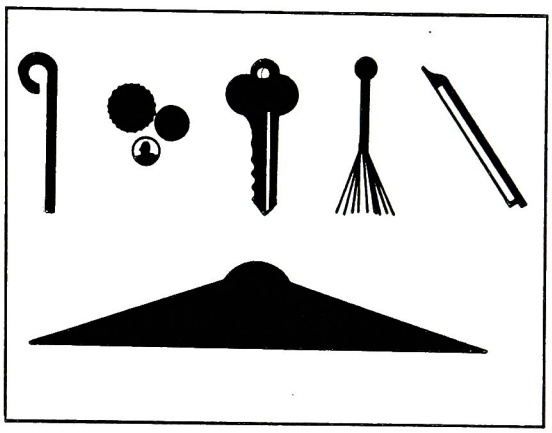


At the point of impact, as little tension as possible should be concentrated on the cymbals.

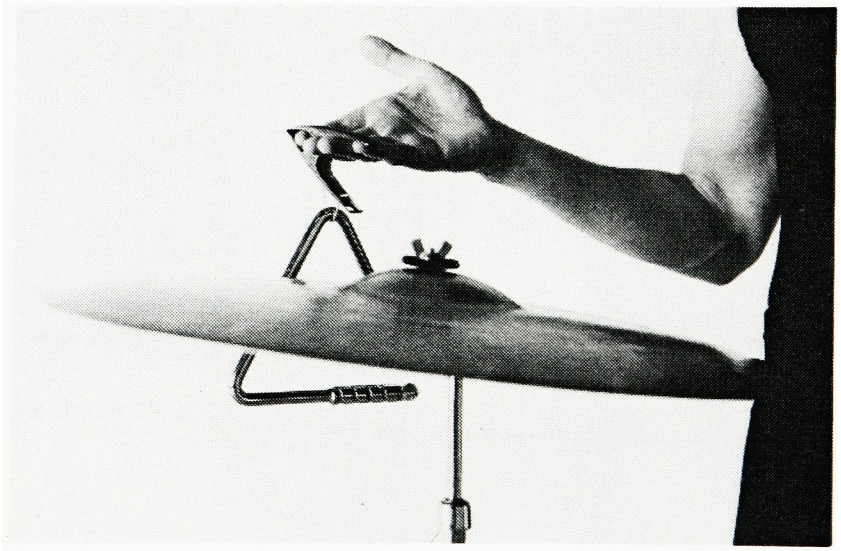
Special Effects for Suspended Cymbals

6

Music in the twentieth century has opened the door to many new sounds and techniques possible on percussion instruments. On a suspended cymbal, many interesting sounds can be obtained by using unusual implements such as triangle beaters, coins, door keys, brushes, or other metal objects scraped against the grooves. Bowing the edge of the cymbal is possible with a bass bow or even a snare drum stick. Walton's Facade uses a very interesting technique of striking the cymbal edge with a triangle to get the combination of metal over-tones from both instruments. Different areas of the cymbal should be explored for special effects, like the bell, the inside of the bell, and the very edge. By suspending the cymbal at different angles, different qualities of the same cymbal can be emphasized, but remember to check the felts and the sleeves when suspending a cymbal vertically so that the metal does not come in contact with the stand.



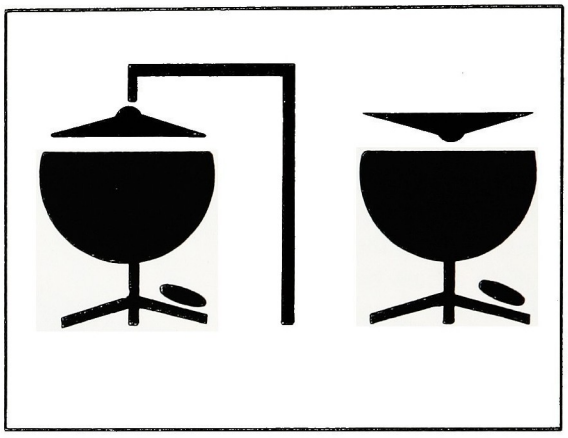
Many new sounds and techniques are possible on percussion instruments. Using some of these objects can produce some very interesting effects.



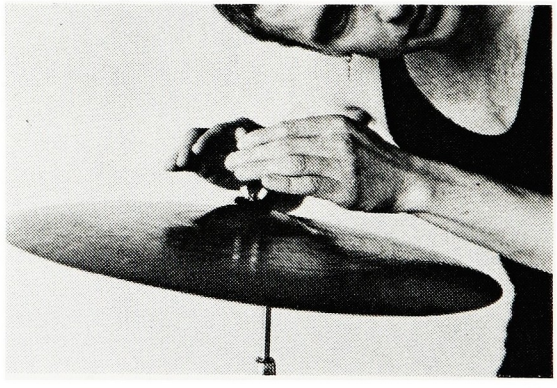
Striking the edge of the cymbal with a triangle will combine the metal overtones from both instruments.

Special Effects for Suspended Cymbals

In Avant-Garde music, an interesting effect has been discovered. By hanging a cymbal loosely by the strap two inches over a timpani head, rolling on the cymbal very softly and moving the timpani pedal, the pitch of the cymbal sounds as though it is being bent. This can also be achieved by placing a suspended cymbal upside-down directly in the middle of a timpani head.



The effect of vibrato can be achieved by cupping the hands and waving them over the bell of a ringing cymbal.



Using the hands to produce a vibrato effect.

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