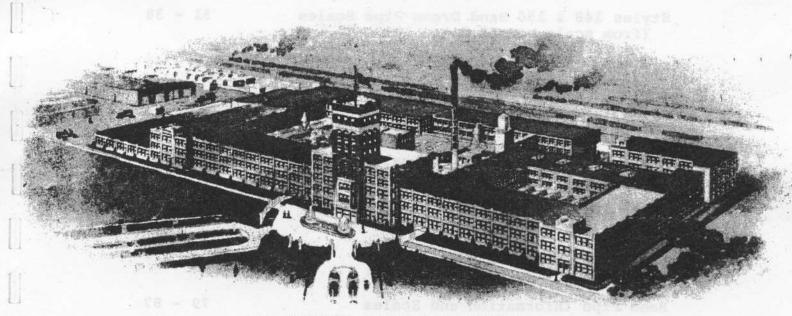


WURLITZER BAND ORGAN PIPE SCALES

COPIED FROM THE ORIGINAL WURLITZER PIPE ROOM SCALE BOARDS

BY Design strated of som more)

DOYLE H. LANE .



THE RUDOLPH WURLITZER FACTORY
NORTH TONAWANDA, N.Y.

RT. 1, BOX 711 MIDDLETOWN SPRINGS, VT 05757

Preface to the digital edition

Wurlitzer Band Organ Pipe Scales

by Doyle Lane

Doyle Lane transcribed the data in this book from wooden "scale boards" used in the Wurlitzer factory and self-published it in 1981 as an 88-page plastic comb bound book.

Although the data are incomplete, the book contains many essential pipe dimensions for the Wurlitzer band organ models: 103, 104, 125, 145-146, 148 & 150, 153, 157, 165, 180, and Caliola. Most of the information deals with cross-sections. Lengths may have been taken from a "length stick" which could be used for several voices, or from sticks which were lost before they could be recorded.

In using the data you should keep in mind the fact that this digital edition is from a scan of a photocopy, and there may be small dimensional errors. My test print pages appear to be correct, but this is dependent on your printer settings..

As Matthew Caulfield has noted on Mechanical Music Digest, many organs built by Wurlitzer differ slightly from the data provided here, particularly in respect to the selection of ranks in Model 165 machines.

At least since Lane's death in 2010 it has been difficult to find copies of the original print-onpaper book. The page copies scanned were provided by Caulfield, who says "Doyle is dead and who has rights to the book ... I don't know. But I have no compunction in making a copy or two for people who want it." I share it electronically in the same spirit.

Wallace Venable

May 2016

CONTENTS

| History and General Comments | | 3 | |
|---|----|----|----|
| How to Read Pipe Scales | 4 | - | 5 |
| Pipe Building Information | | 6 | |
| Style 103 Band Organ Pipe Scales (from scale boards dated 1922) | 7 | - | 10 |
| Style 104 Band Organ Pipe Scales (from scale boards dated 1928) | 11 | - | 19 |
| Style 125 Band Organ Pipe Scales (from scale boards dated 1928) | 20 | - | 22 |
| Styles 145 & 146 Band Organ Pipe Scales (from scale boards dated 1929) | 23 | - | 30 |
| Styles 148 & 150 Band Organ Pipe Scales (from scale boards dated 1923) | 31 | - | 38 |
| Style 153 Band Organ Pipe Scales (from undated scale boards) | 39 | - | 45 |
| Style 157 Band Organ Pipe Scales (from scale boards dated 1921) | 46 | - | 54 |
| Style 165 Band Organ Pipe Scales (from undated scale board) | 55 | - | 67 |
| Style 180 Band Organ Scales (from scale board dated 1922) | 68 | - | 73 |
| Caliola Pipe Scale (from scale boards dated 1928) | 74 | - | 77 |
| Reed Pipe Information and Scales (from various undated scale boards) | 79 | - | 87 |
| Violin Freins & Wurlitzer Parts | | 88 | 3 |

HISTORY AND GENERAL COMMENTS

In 1975 I purchased the remaining assets of the T.R.T. Manufacturing Company in North Tonawanda, New York. T.R.T. Manufacturing was operated by Ralph Tussing, a former Wurlitzer employee, who had purchased much of the remaining band organ equipment and supplies when Wurlitzer closed its band organ works. In the process of cleaning out the building I discovered a collection of boards hanging on the back wall of the dark and extremely damp basement. Upon removal of the dirt and mildew, I realized that these were the band organ pipe scales from the Wurlitzer factory. In the intervening years, as time has permitted, I have organized and copied onto paper the information from these scale boards. the pipe scales, drawings, and terminology on the following pages has been copied directly from the original Wurlitzer scales.

Wurlitzer's production methods necessitated the use of two scale boards for each scale, one in the milling department and one in the pipe assembly department. Thus, the information on the following scales, for the most part, was copied from two boards.

In some cases the mildew and dampness so badly obliterated the scale boards that they were unreadable. Some of the boards and some of the pipe length sticks had fallen into the water on the floor and were completely rotten. Thus, there is some information missing on some scales. The information on reed pipes seems to be particularly scarce. All the reed pipe information is at the end of the book.

Obviously, these scales were prepared to be used by persons familiar with pipe building. No voicing or finishing information is shown on the boards. In some cases the same scale was used in more than one organ. Where such duplications occur a page at the begining of a section indicates the scales that are duplicated elsewhere.

As time goes on, more and more people are building their own band organs. I sincerely hope that this information will be of great help to those who have chosen to undertake such labors of love.

HOW TO READ PIPE SCALES

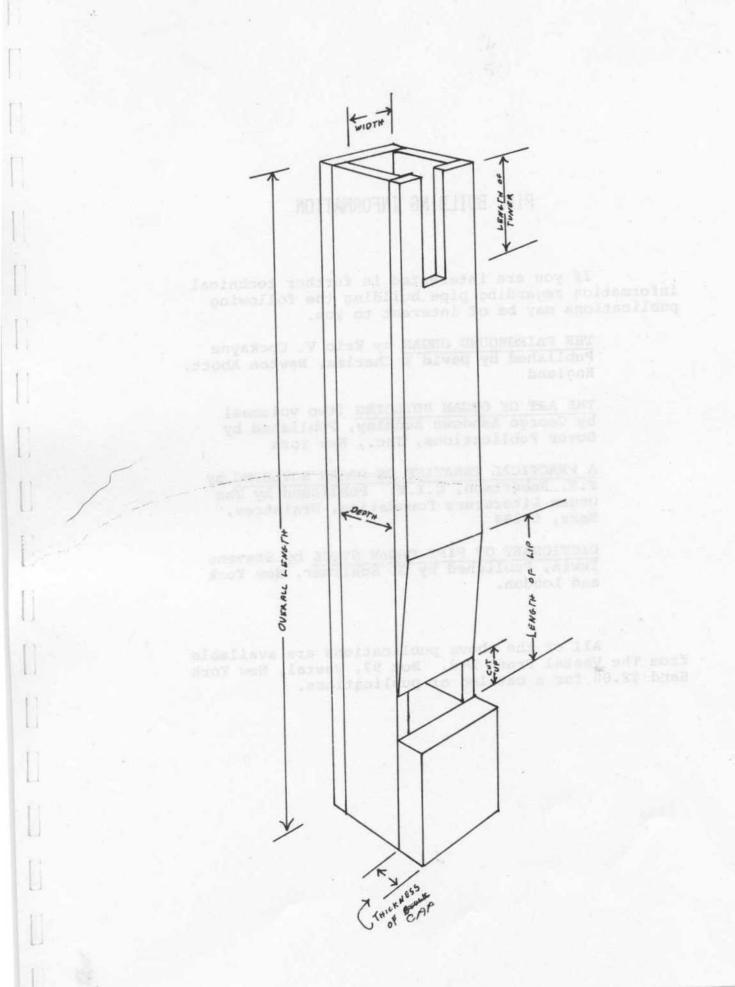
The pipe scales in this book show the exact dimensions of the pipes. To determine a particular dimension for a pipe, measurer the distance up from the bottom or base line to where the vertical line for that note intersects the line for the dimension required. For instance, the distance from the bottom line to the "Depth" line is the exact inside depth of the finished pipe. All measurments are made up from the horizonal base line with one exception. In some cases the cap thickness is added to the top of the scale. To determine the cap thickness in some cases, use the next-to-top line, where the vertical lines terminate, as the base line and measure directly up from there to the top line. This distance represents the thickness of the cap.

No allowance is made in these scales for the corner overlap. Sizes shown for depth and width are the exact inside dimensions. When cutting the stock to be used for the fronts and backs be sure to allow for the thickness of the sides. Also, the sides should be cut a little large to allow for jointing.

The Wurlitzer pipemakers used these scales boards with a set of dividers. They would pick off the dimensions with the dividers and use the dividers to set the equipment. They did not actually measure every dimension with a ruler. This is obvious from the holes in the boards at the intersections of the lines.

In most cases the drawings shown with a scale is actual size cross-section of the largest pipe in the scale.

a section indicates the scales that are duplicated



PIPE BUILDING INFORMATION

If you are interested in further technical information regarding pipe building the following publications may be of interest to you.

THE FAIRGROUND ORGAN by Eric V. Cockayne Published by David & Charles, Newton Abott, England

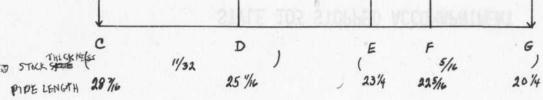
THE ART OF ORGAN BUILDING (two volumes) by George Ashdown Audsley, Published by Dover Publications, Inc., New York

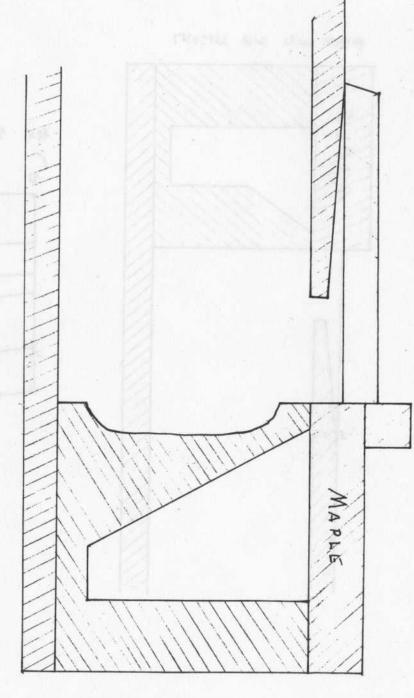
A PRACTICAL TREATISE ON ORGAN BUILDING by F.E. Robertson, C.I.E. Published by The Organ Literature Foundation, Braintree, Mass. 02184

DICTIONARY OF PIPE ORGAN STOPS by Stevens Irwin, Published by G. Schirmer, New York and London.

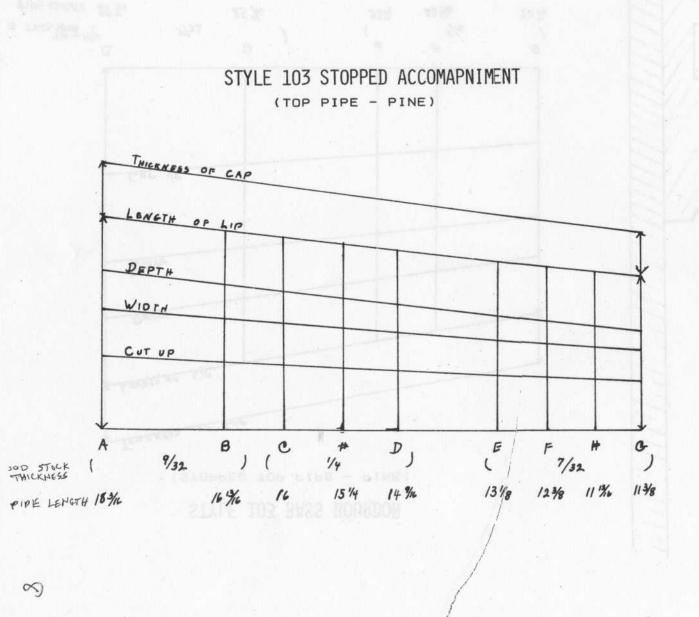
All of the above publications are available from The Vestal Press Ltd. Box 97, Vestal, New York Send \$2.00 for a catalog of publications.

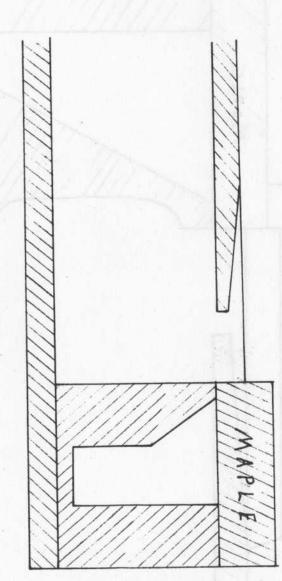
STYLE 103 BASS BOURDON (STOPPED TOP PIPE - PINE) DEPTH WIOTH CUT UP





LARGEST PIPE CRESS SECTION

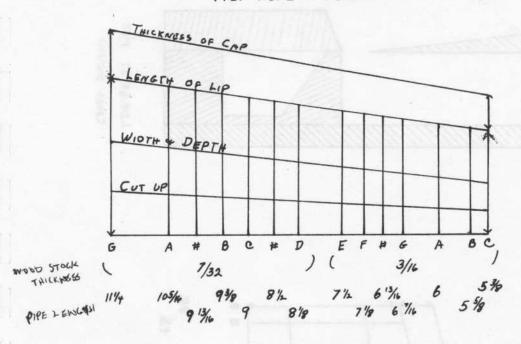


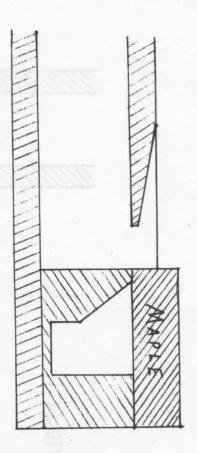


LARGEST PIPE CROSS SECTION

STYLE 103 STOPPED MELODIE

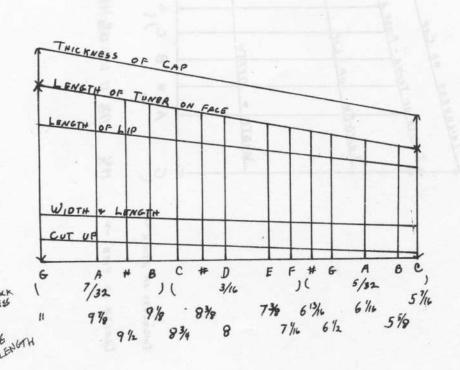
(TOP PIPE - PINE)

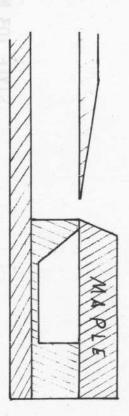




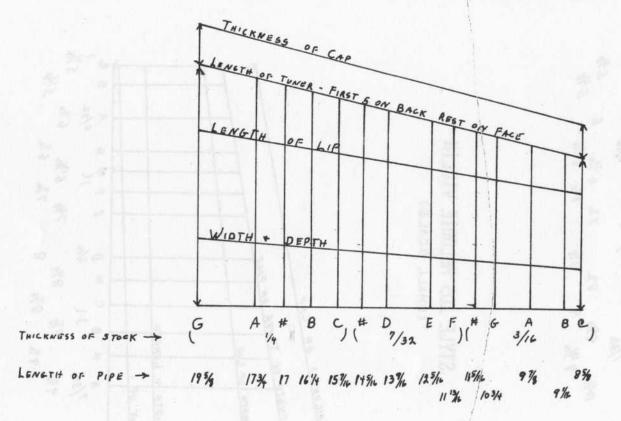
STYLE 103 MELODIE VIOLIN

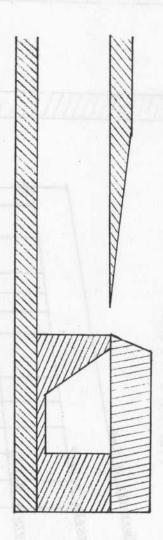
LARGEST PIPE CROSS SECTION



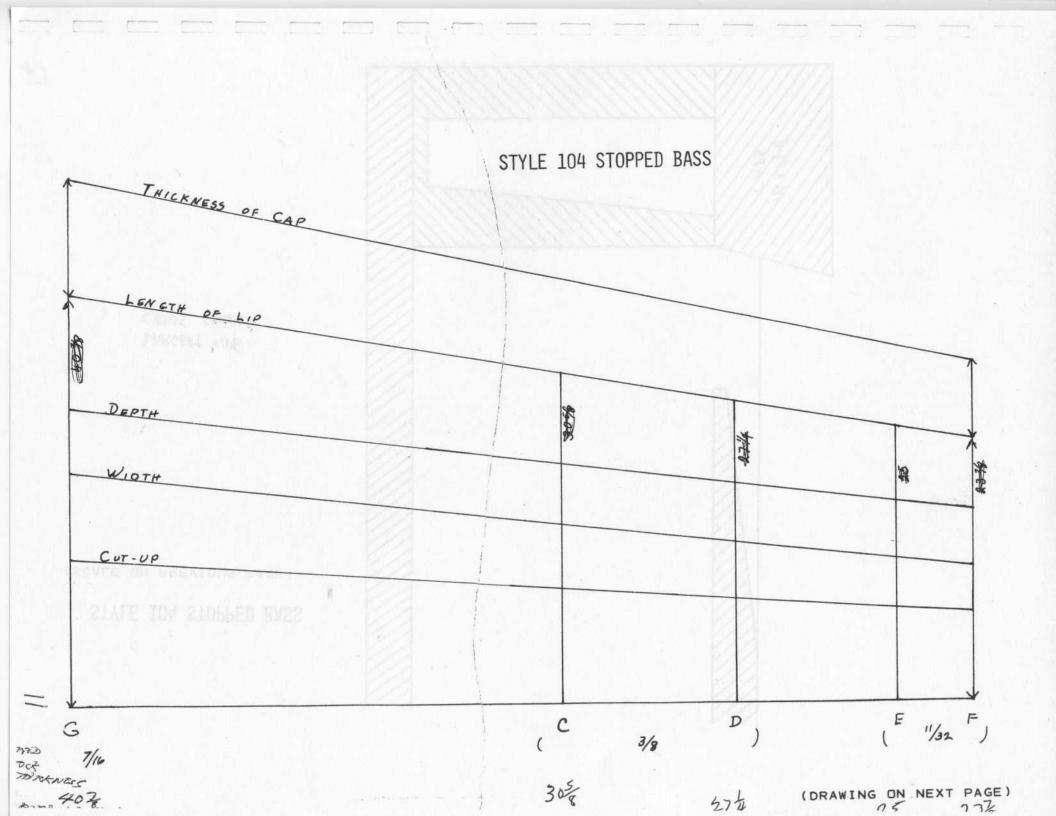


STYLE 103 MELODIE VIOLIN



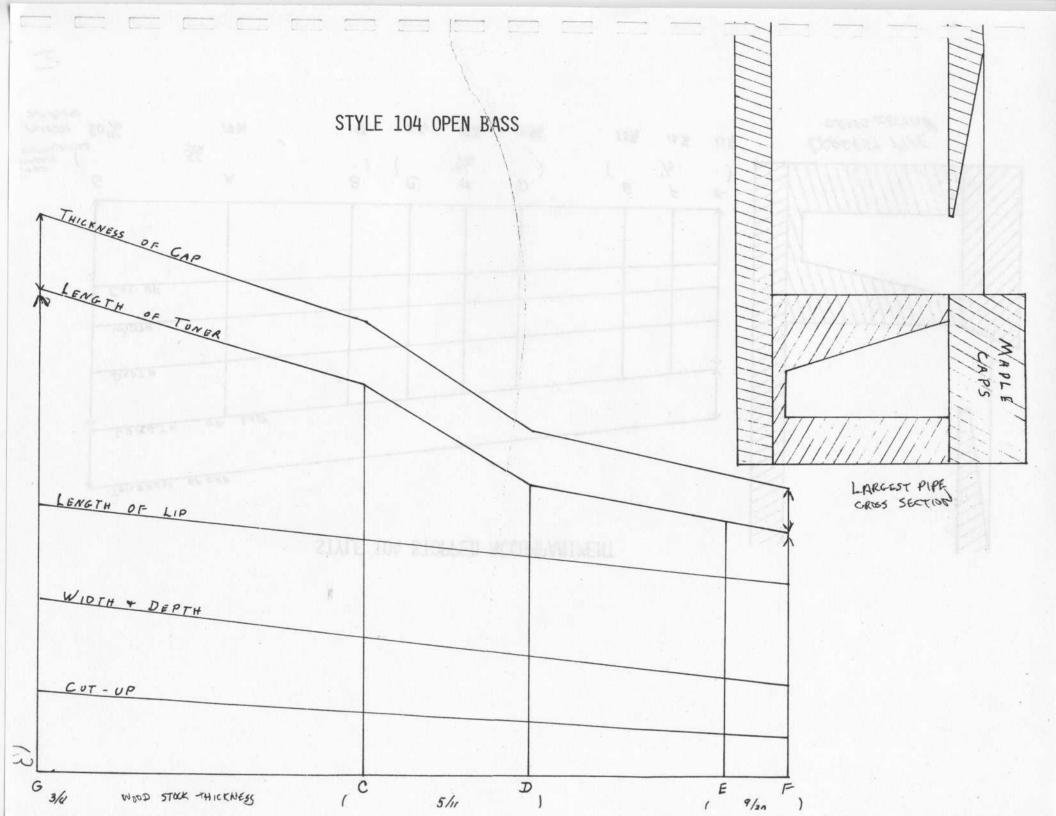


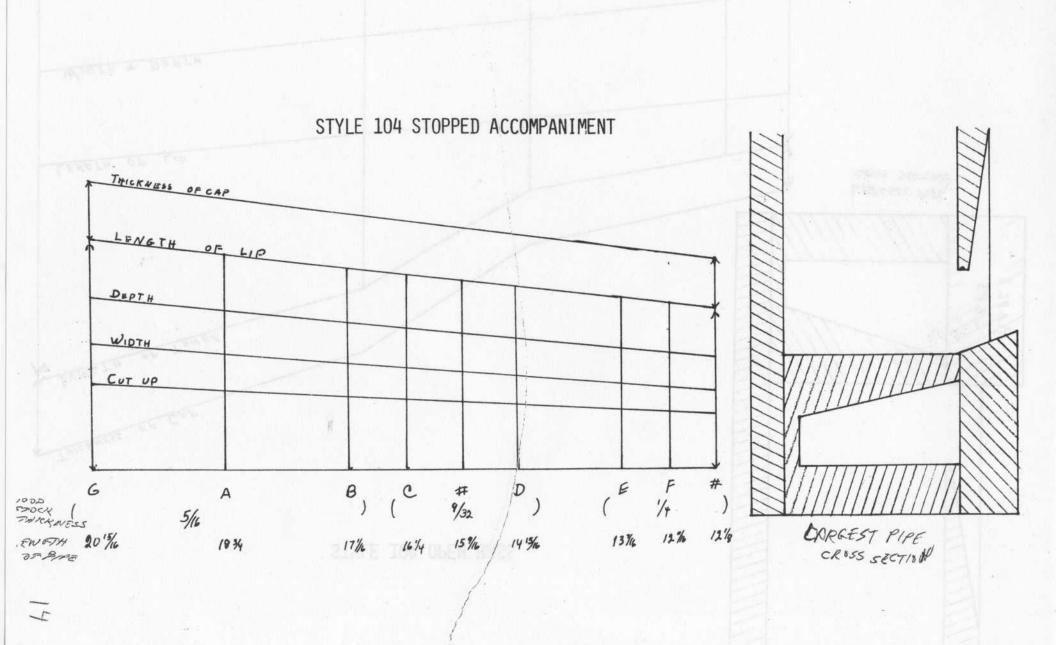
LARGEST PIPE CROSS SECTION

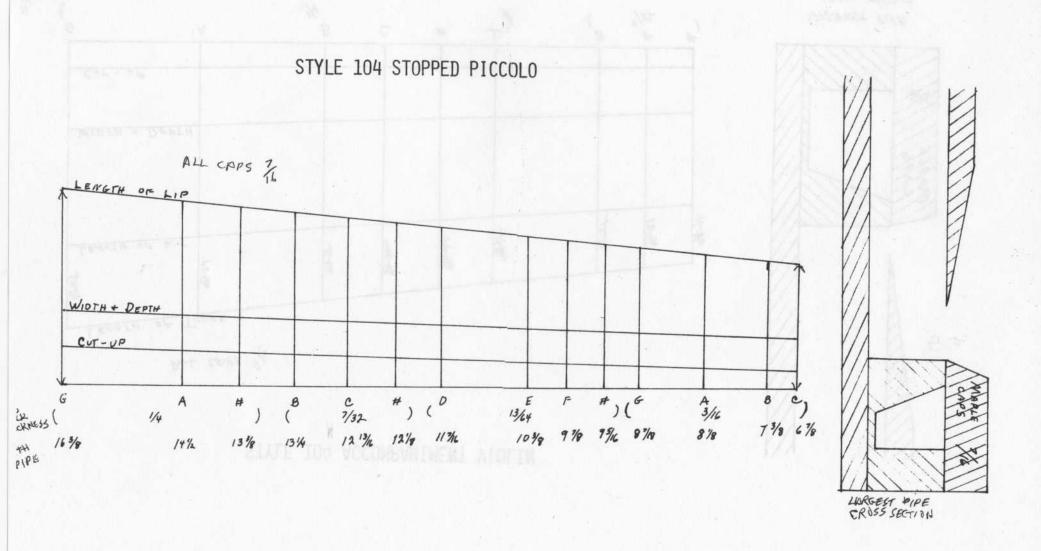


CONVERSE OF MEKA SAME STYLE 104 STOPPED BASS (SCALE ON PREVIOUS PAGE) LARGEST PIPE CROSS SECTION

1

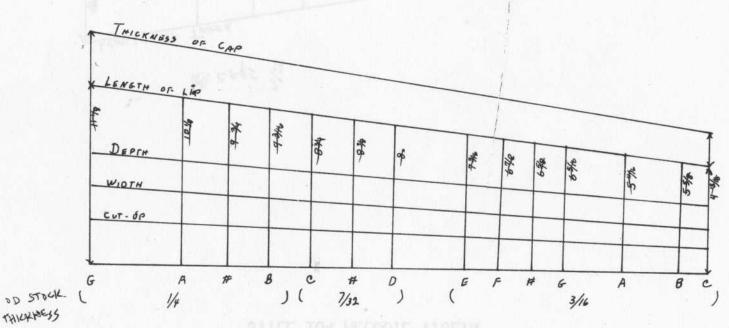






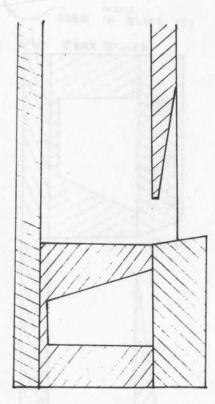
STYLE 104 ACCOMPANIMENT VIOLIN ALL CAPS ? LENGTH OF TUNER LENGTH OF LIP WIDTH + DEPTH CUT - UP B 1/4 F 7/32 LARGEST PIPE LX HCKPUS CROSS SECTION 11% 124 12% WELL STA 18%

STYLE 104 STOPPED MELODIE

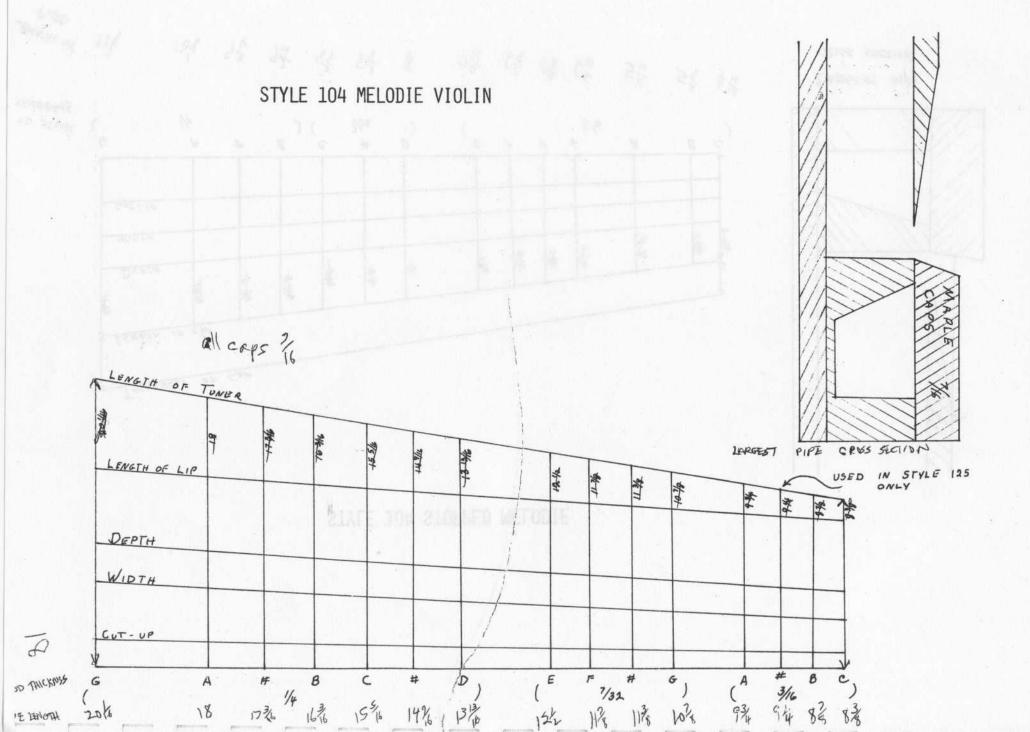


10% 9年 9元 8年 8号 8 7元 6元 6条 6条 5节 5元 4元 FIRETH OF 116

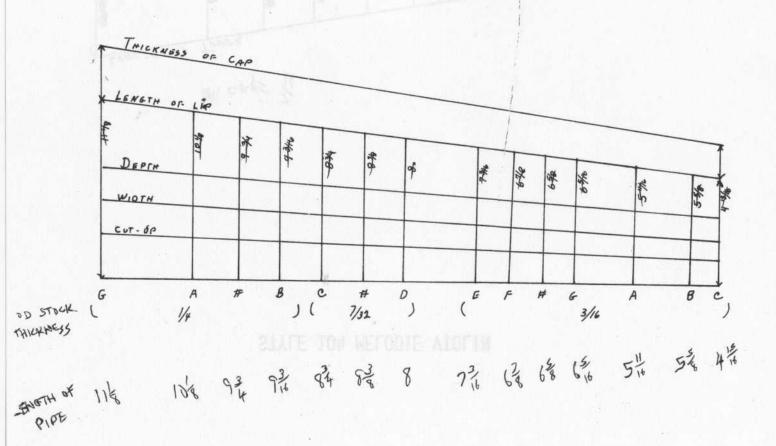
THICKHESS

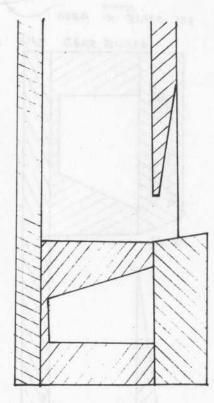


LARGEST DIPE CROSS SECTION



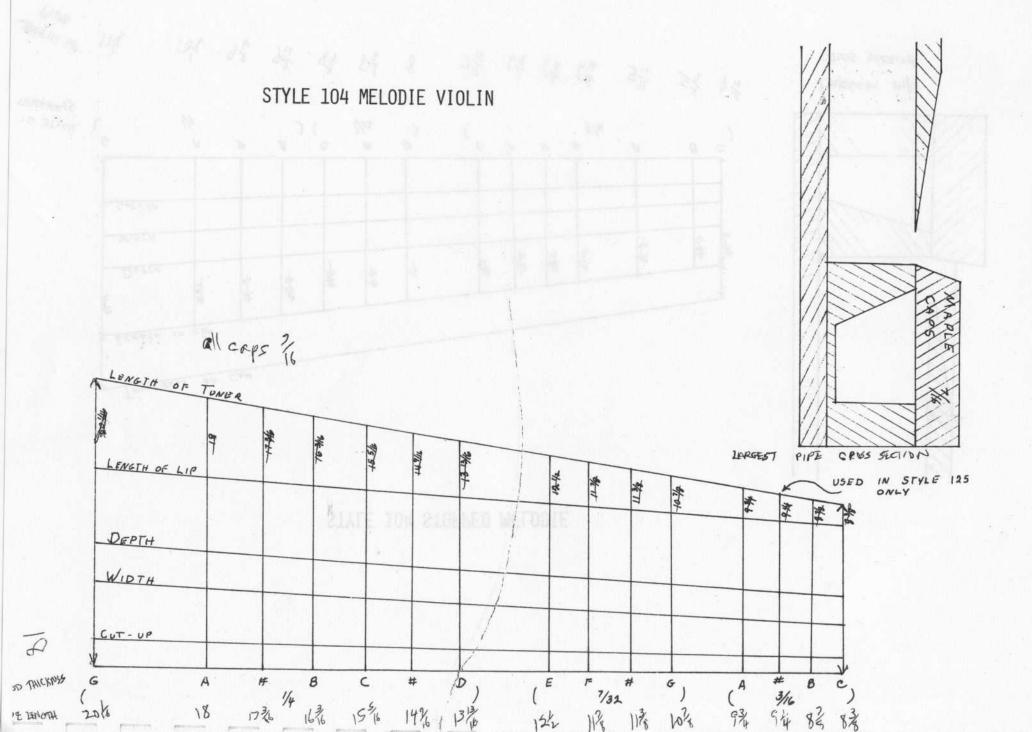
STYLE 104 STOPPED MELODIE



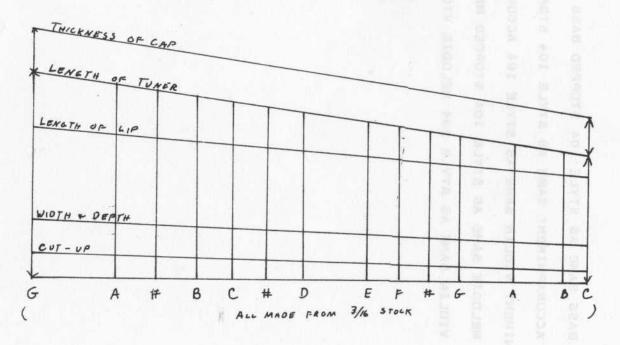


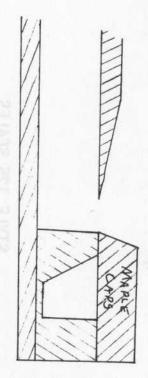
CROSS SECTION

1



STYLE 104 MELODIE FLAGOLET





LARGEST PIPE CROSS SECTION

STYLE 125 SCALES

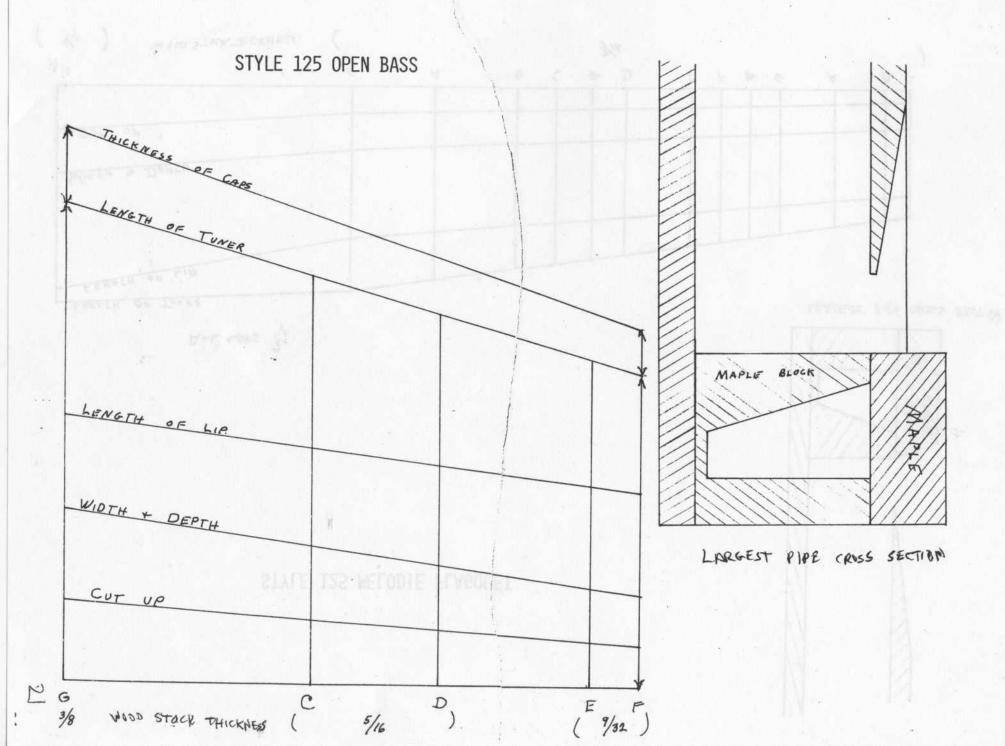
STOPPED BASS SAME AS STYLE 104 STOPPED BASS

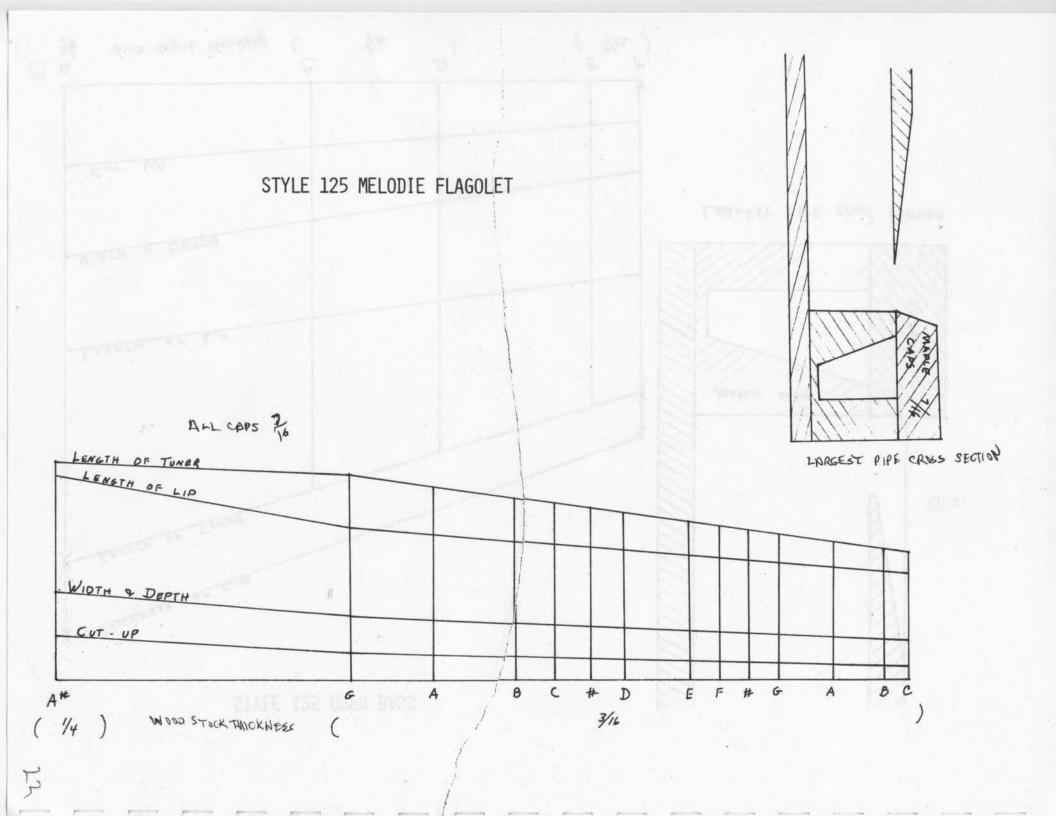
STOPPED ACCOMAPNIMENT SAME AS STYLE 104 STOPPED ACCOMPANIMENT

ACCOMPANIMENT VIOLIN SAME AS STYLE 104 ACCOMPANIMENT VIOLIN

STOPPED MELODIE SAME AS STYLE 104 STOPPED MELODIE

MELODIE VIOLIN SAME AS STYLE 104 MELODIE VIOLIN

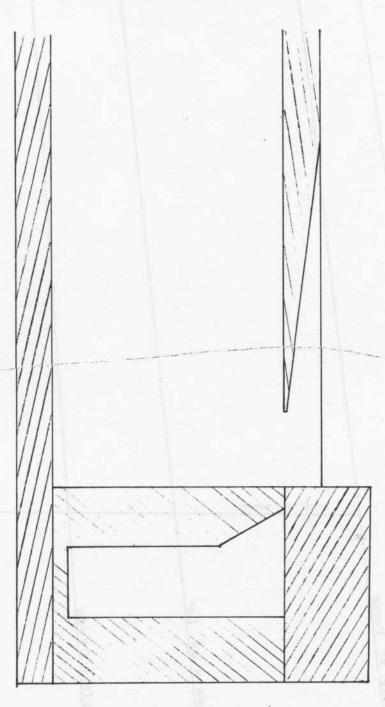




STYLE 146 OPEN BASS THICKNESS OF LENGTH OF TUNER LENGTH OF LIP WIDTH + DEPTH CUT - UP (DRAWING ON NEXT PAGE) D 3/8 WOOD STOCK THICKNESS

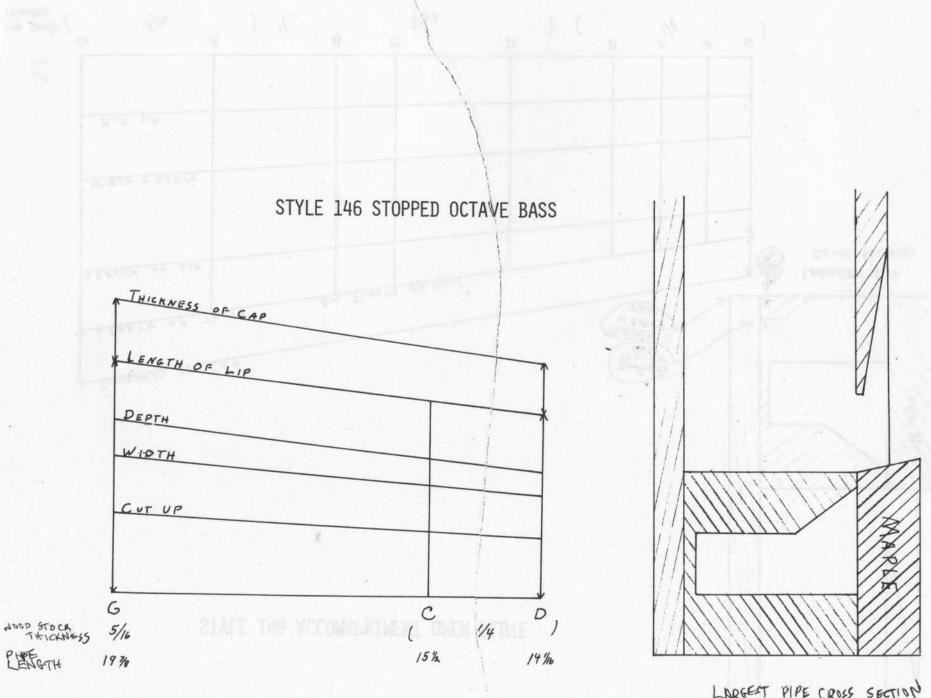
STYLE 146 OPEN BASS

(SCALE ON PREVIOUS PAGE)



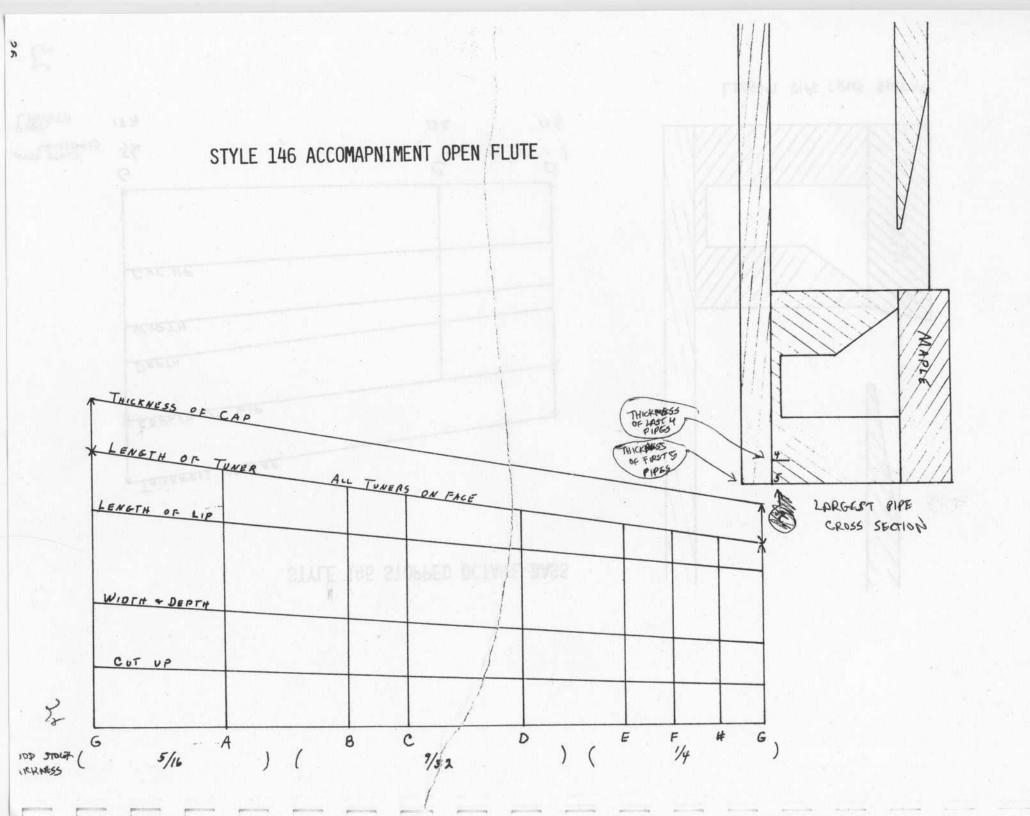
LARGEST PIPE CROSS SECTION

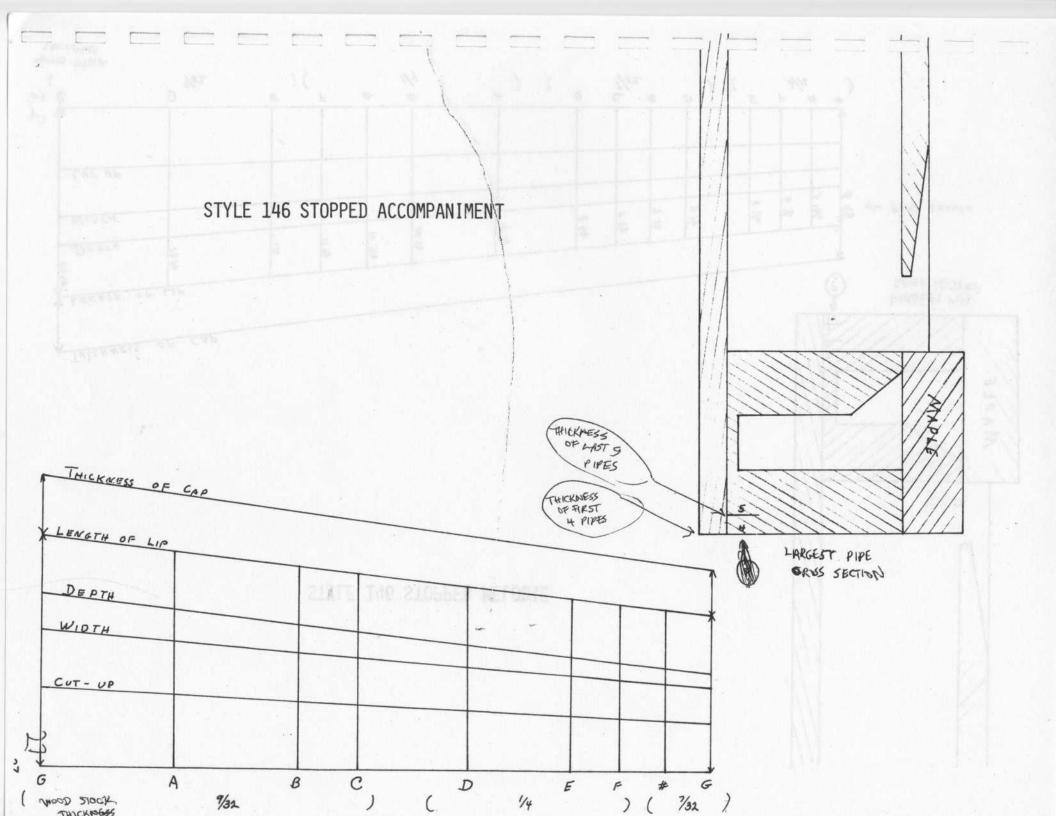
24

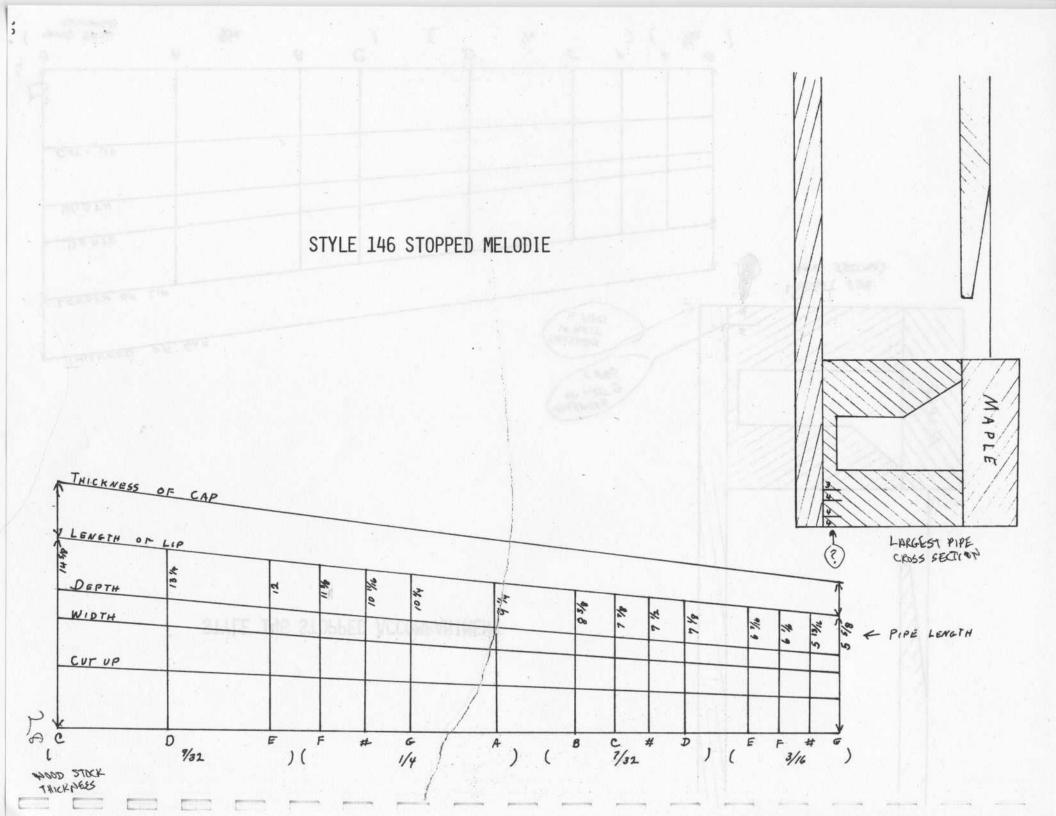


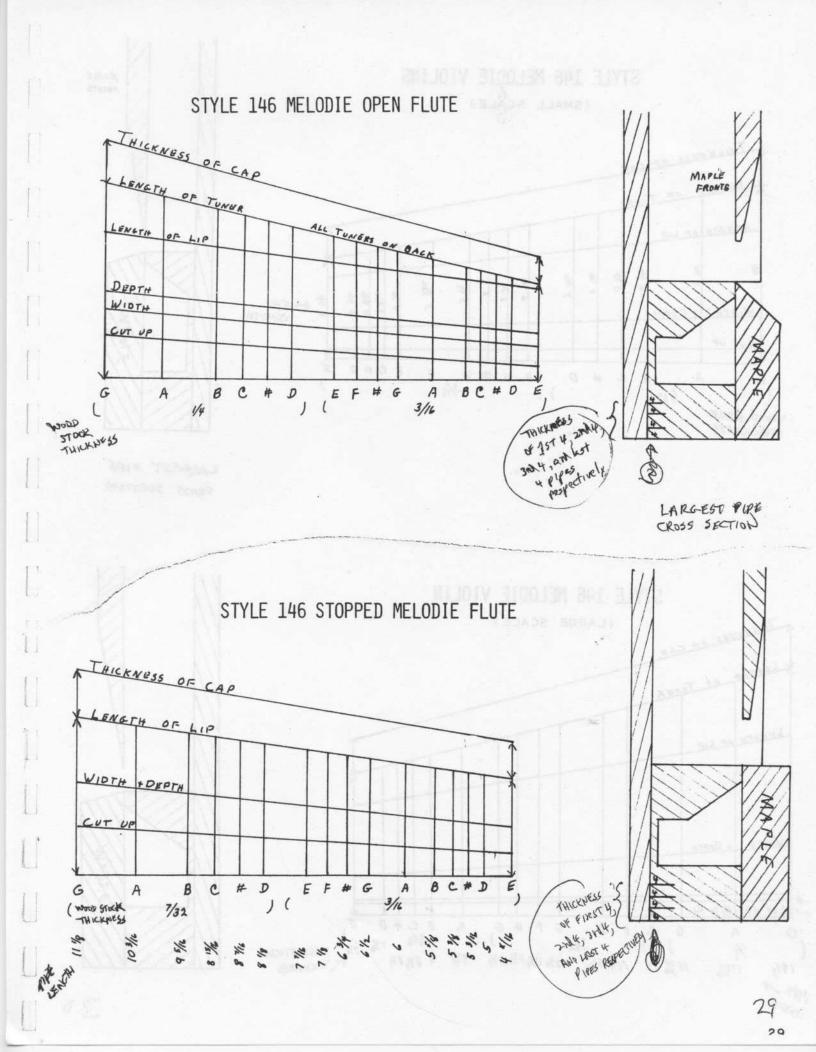
LARGEST PIPE CROSS SECTION

CERTH



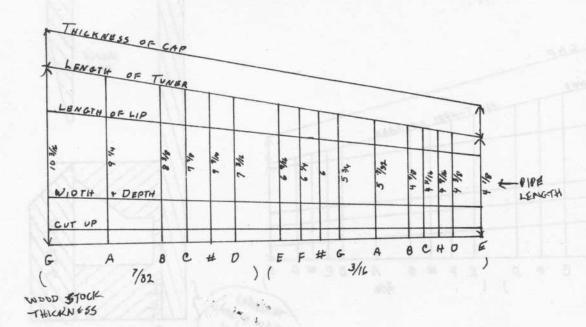


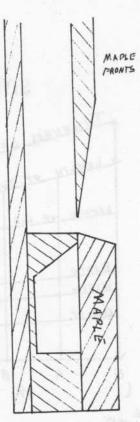






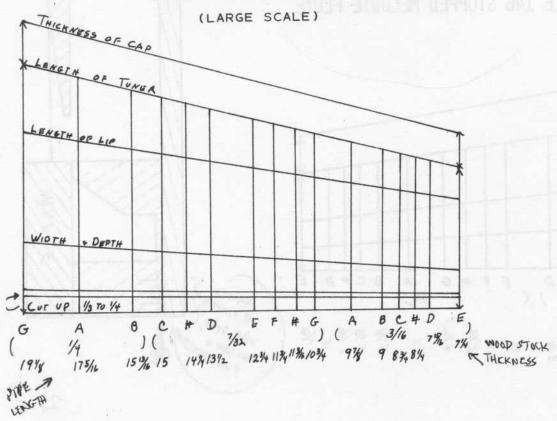
(SMALL SCALE)

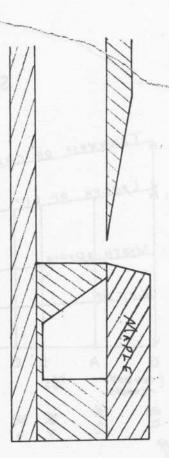


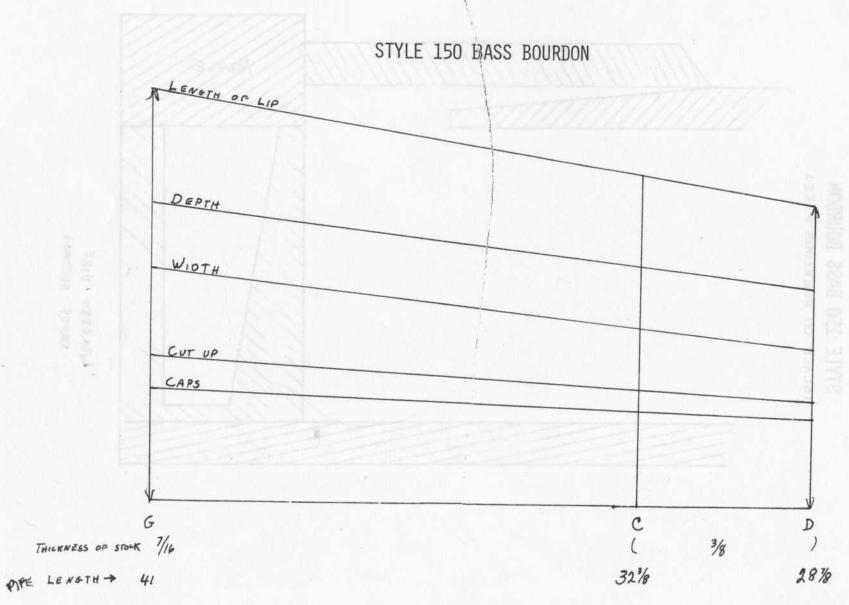


CROSS SECTION

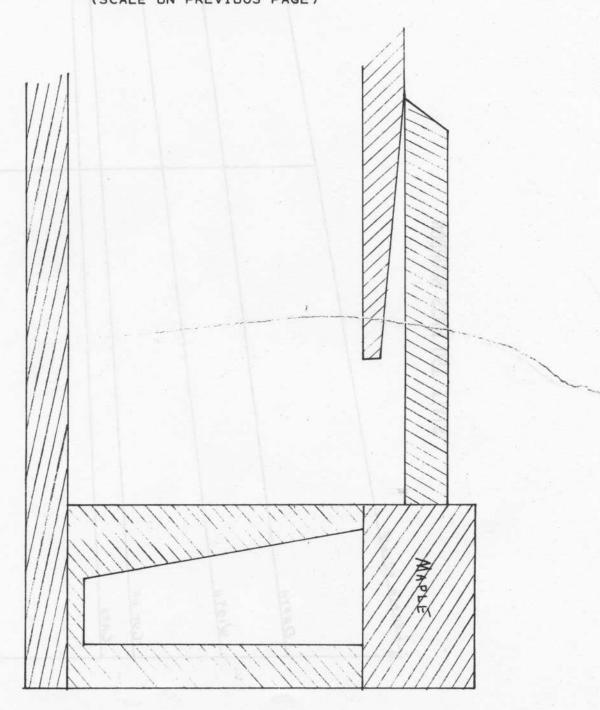
STYLE 146 MELODIE VIOLIN



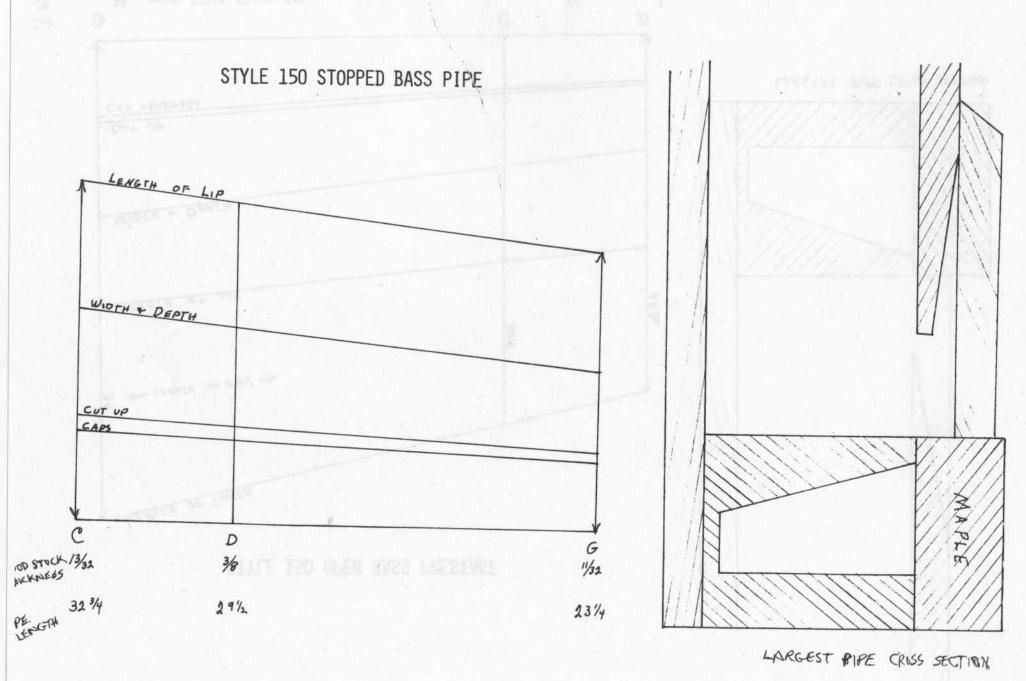


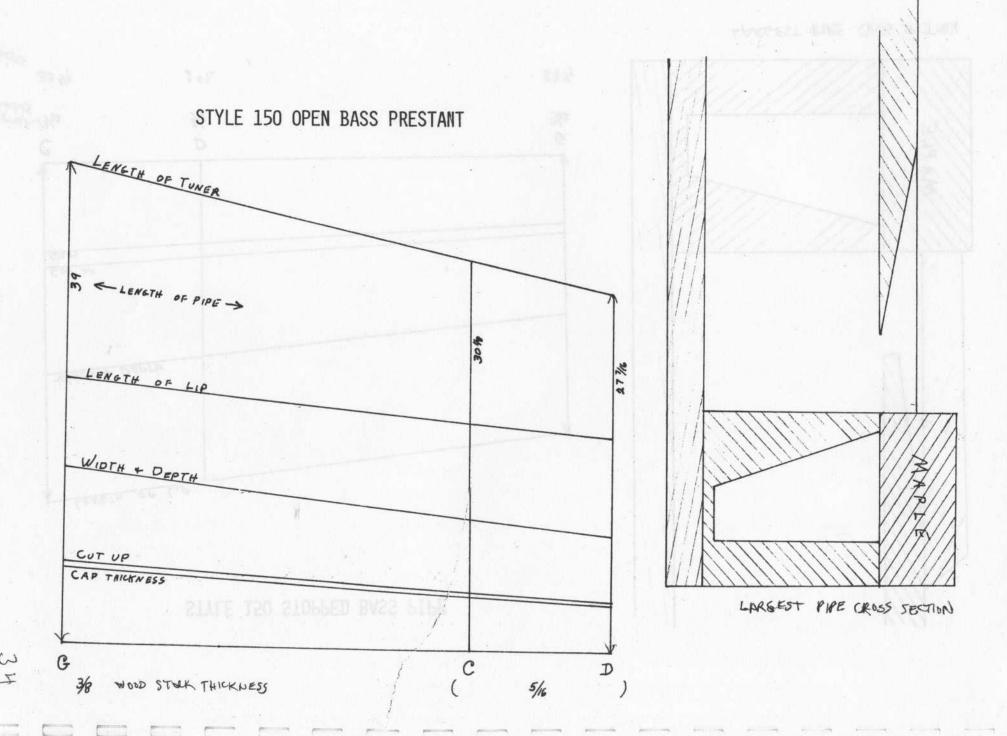


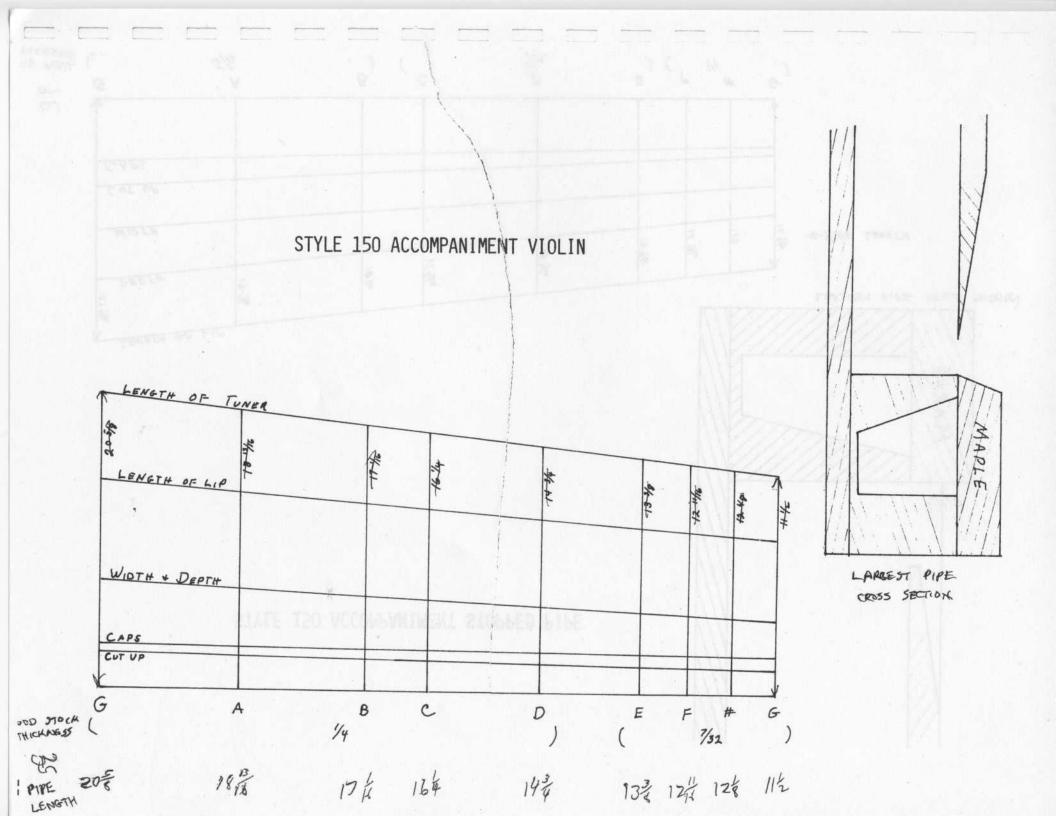
STYLE 150 BASS BOURDON (SCALE ON PREVIOUS PAGE)

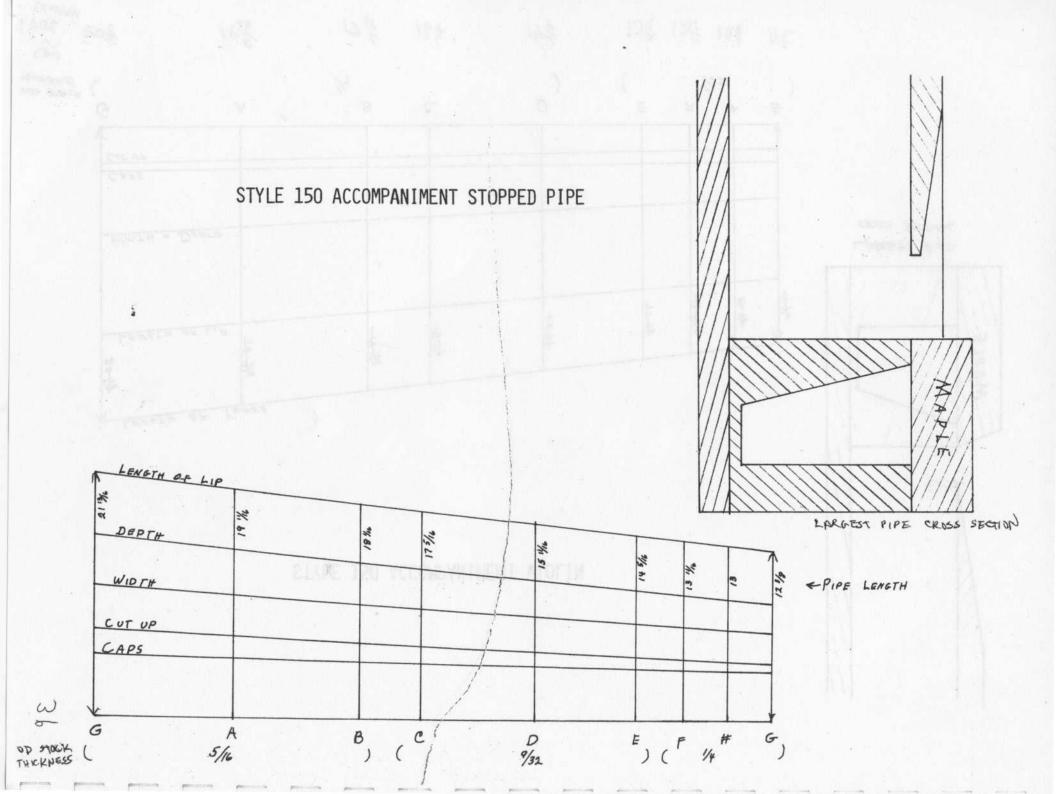


CROSS SECTION









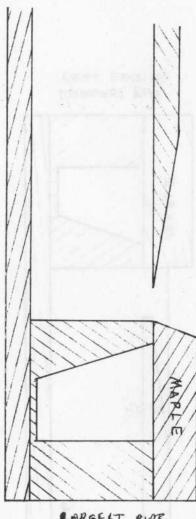
STYLE 150 STOPPED MELODIE PIPE (TWO SETS PER ORGAN) THICKNESS OF CAP WIDTH + DEPTH CUT UP F # G · A) (B C # D PIPE LENGTH 12% 87 8/ 74 7% 18% 10% 9% 9 114

ODD STOCK THEKKESS

MARL

LARGEST PIPE CROSS SECTION

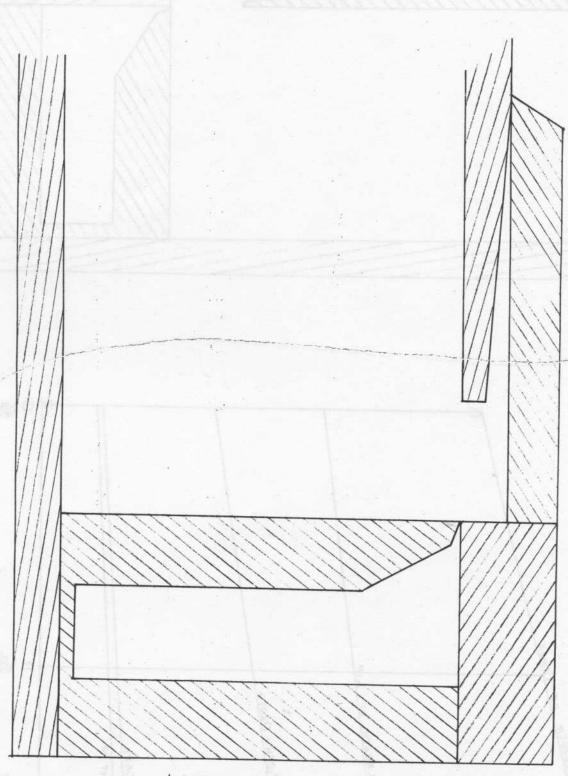
STYLE 150 MELODIE VIOLIN OUFRALL PIPE LENGTH DEPTH WIDTH LARGEST PIPE CROSS SECTION CAPS CUT UP B C # D THICKHERS STOCK



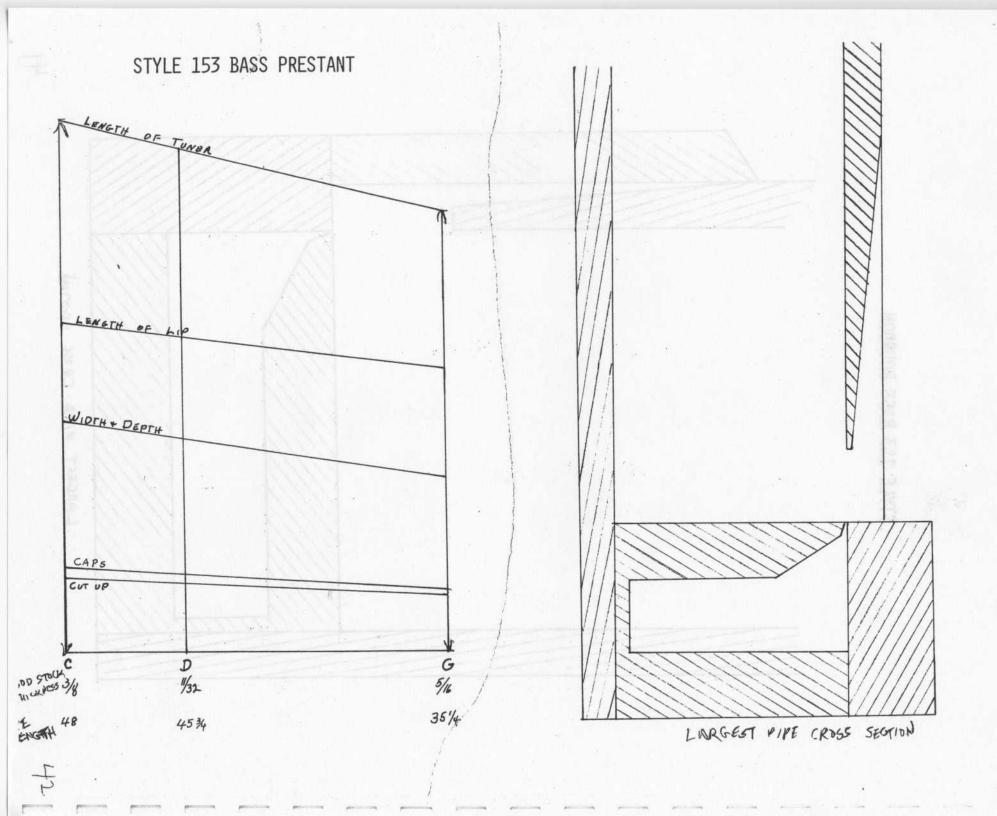
STYLE 153 SCALES

ACCOMPANIMENT BOURDON SAME AS STYLE 146 STOPPED ACCOMAPNIMENT
MELODIE BOURDON (WITH TRUMPETS) SAME AS STYLE 146 STOPPED MELODIE
MELODIE VIOLIN SAME AS STYLE 146 LARGE SCALE MELODIE VIOLIN
OCTAVE BASS BOURDON SAME AS STYLE 146 STOPPED OCTAVE BASS
STOPPED MELODIE FLUTE SAME AS STYLE 146 STOPPED MELODIE FLUTE
MELODIE OCTAVE VIOLIN SAME AS STYLE 146 SMALL SCALE MELODIE VIOLIN

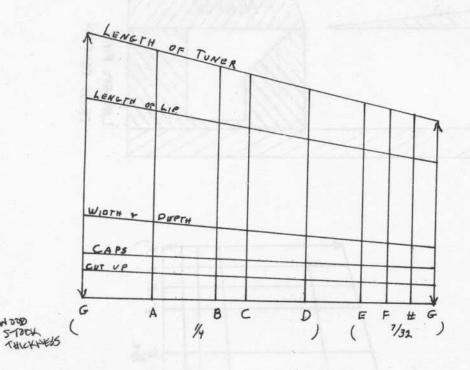
STYLE 153 BASS BOURDON



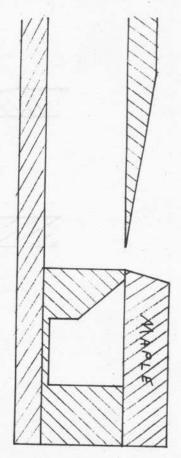
LARGEST PIPE CROSS SECTION



STYLE 153 ACCOMPANIMENT VIOLIN

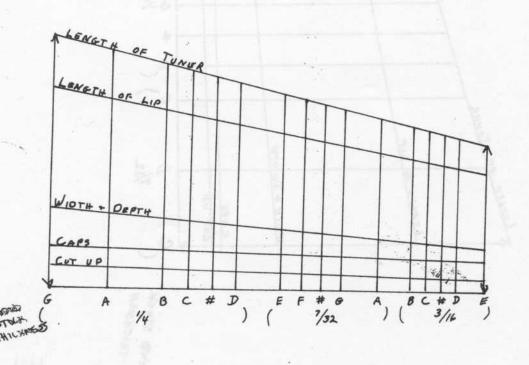


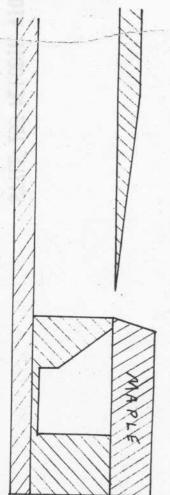
GOG W



LARGEST PIPE CROSS SECTION

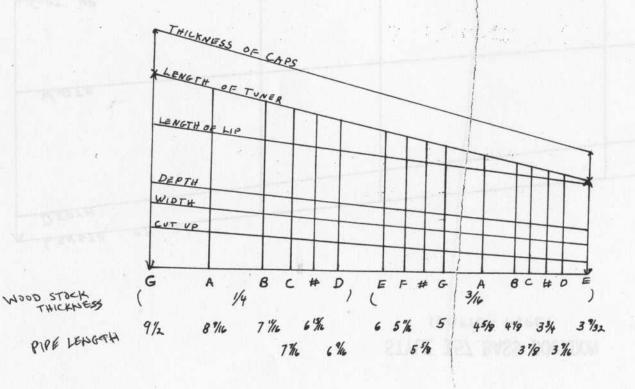
STYLE 153 MELODIE VIOLIN (LARGE SCALE)

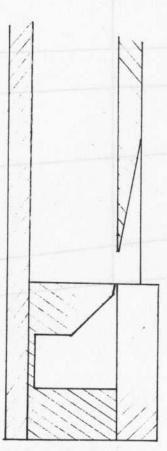




STYLE 153 MELODIE VIOLIN (WITH TRUMPETS) PENCIA OF TANEY PENETH OF PIL WIOTH + DE PTH CAPS CUT UP BC E F # 6) THICKNESS 8/32 LARGEST PIPE CROSS SECTION

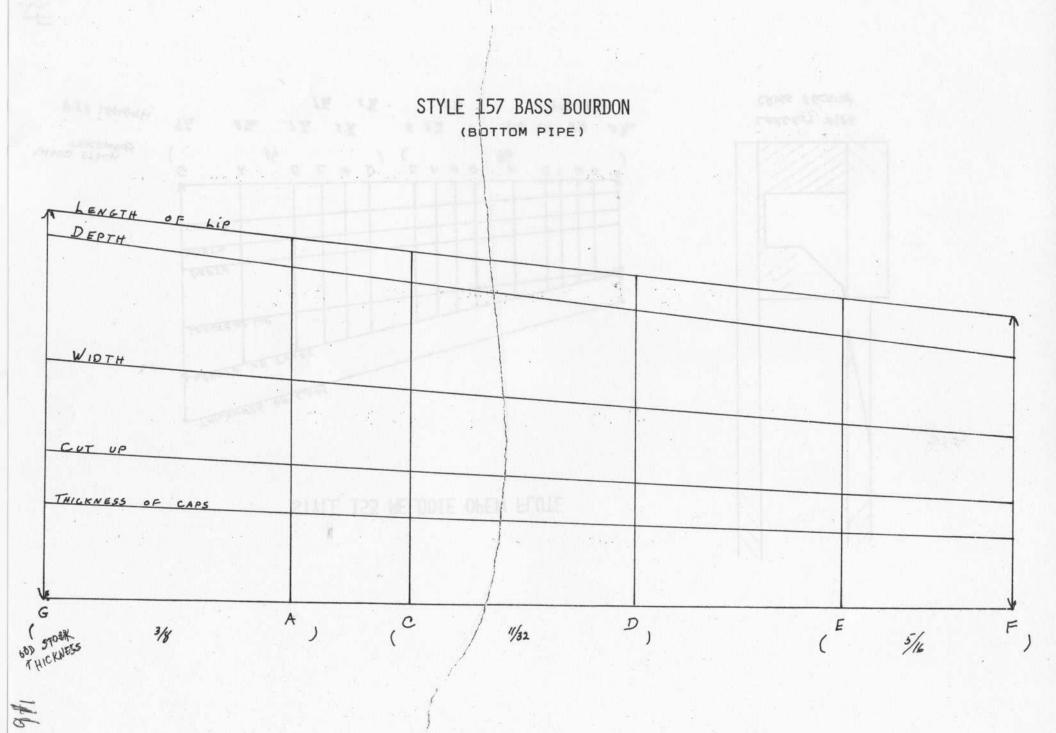
STYLE 153 MELODIE OPEN FLUTE

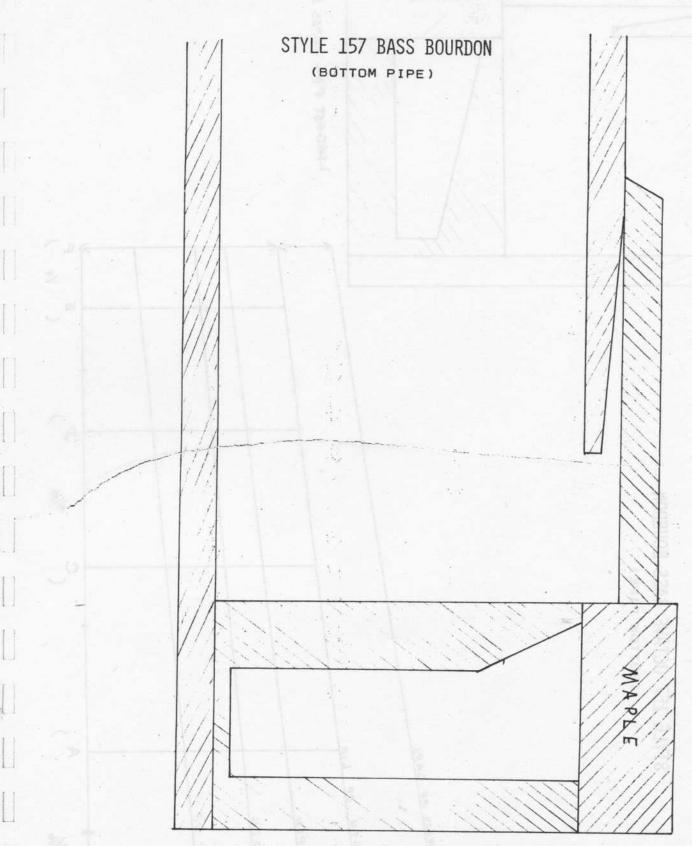




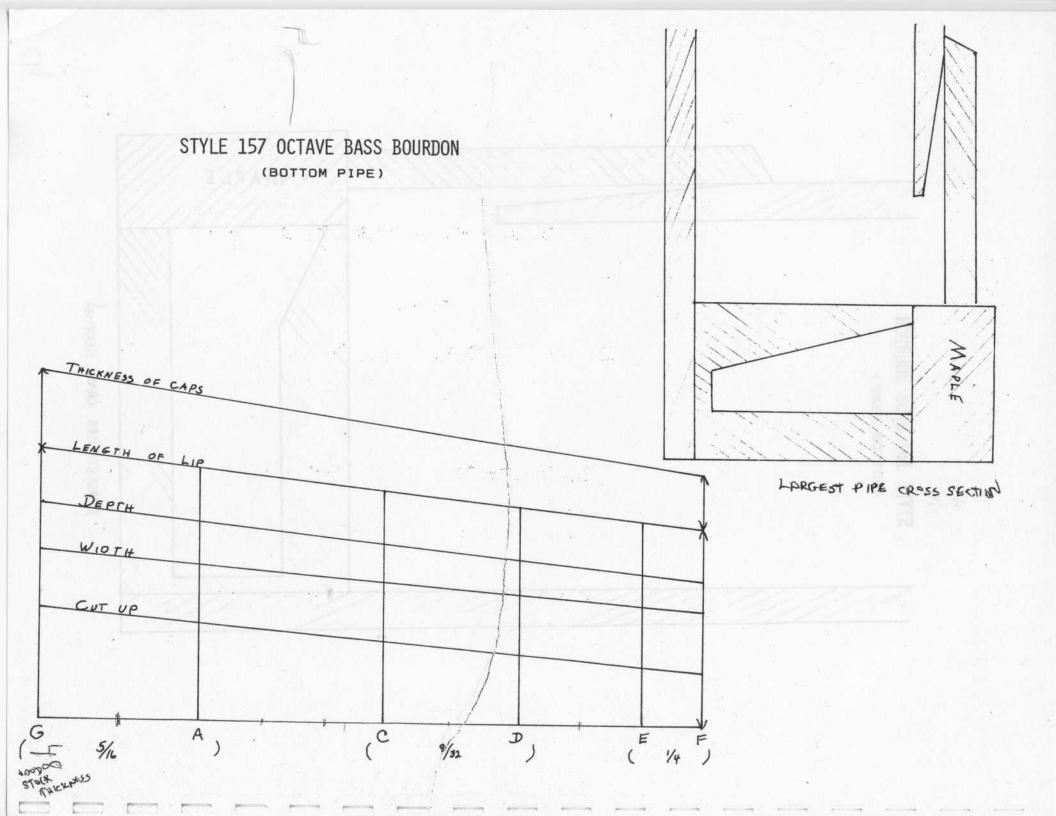
LARGEST PIPE CROSS SECTION



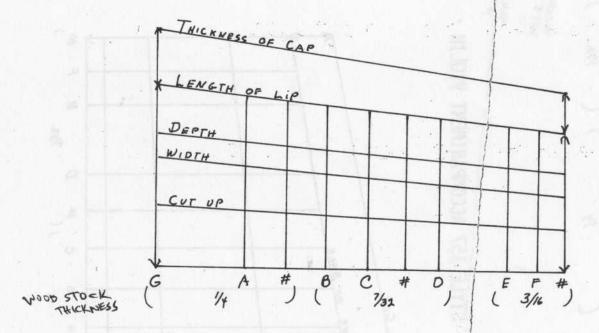


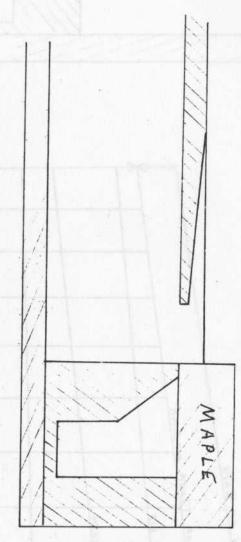


LARGEST PIPE CROSS SECTION

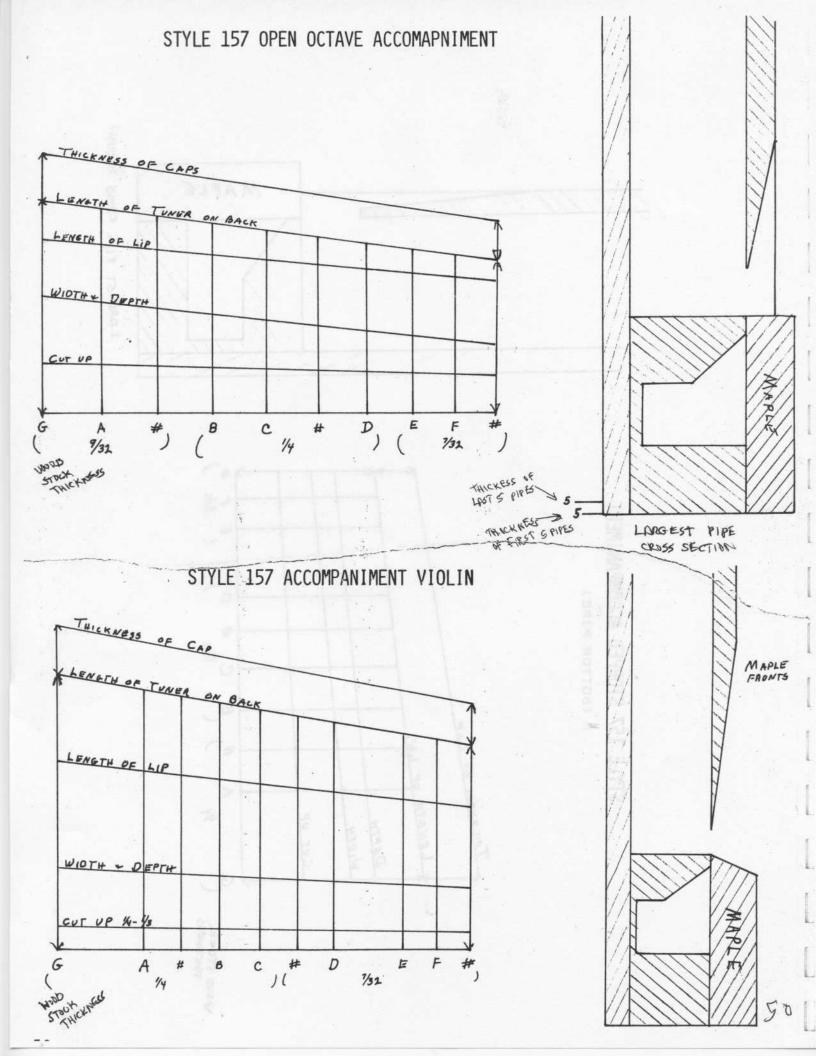


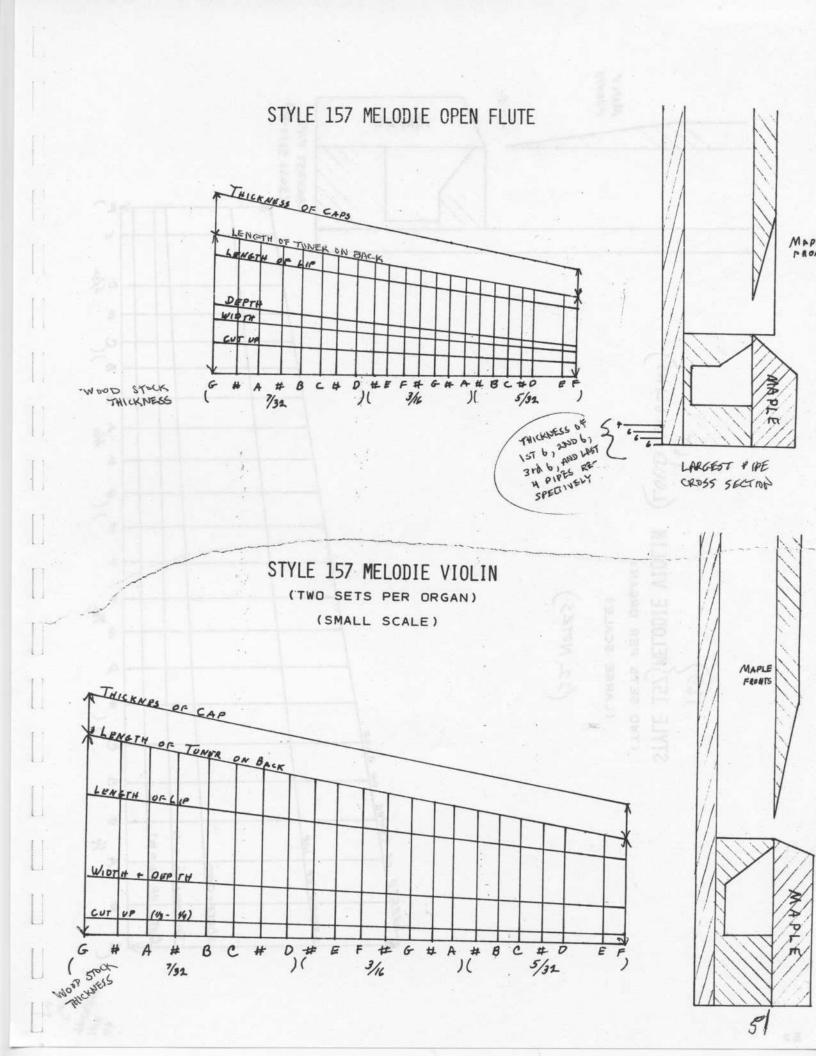
STYLE 157 STOPPED ACCOMPANIMENT

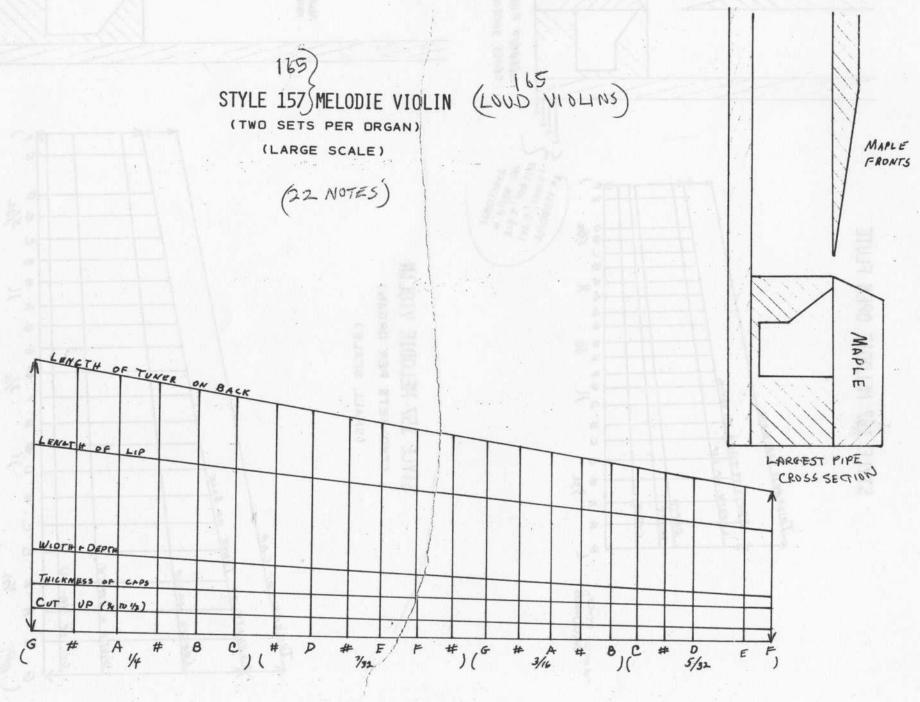




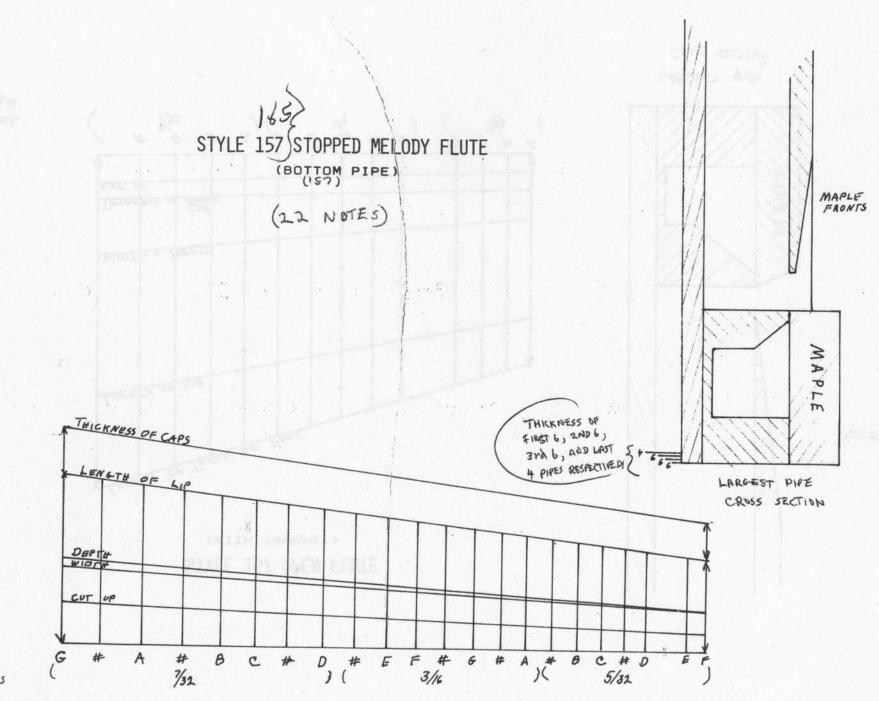
LARGEST VIPE CROSS SECTION







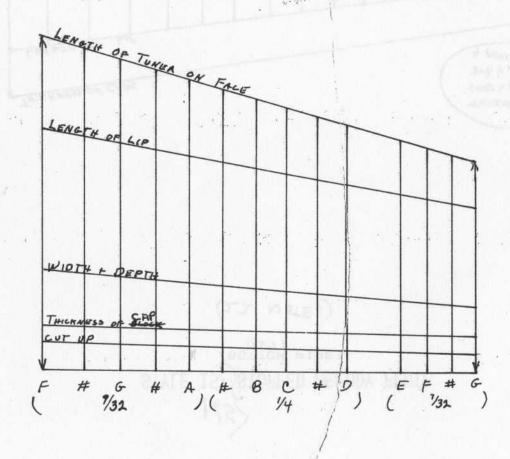
THICKNESS THICKNESS



NOOD STOCK THICKNESS

3

STYLE 157 OPEN FLUTE



LARGEST PIPE CROSS SECTION

LHICKNESS MARD ELRCK

STYLE 165 SCALES

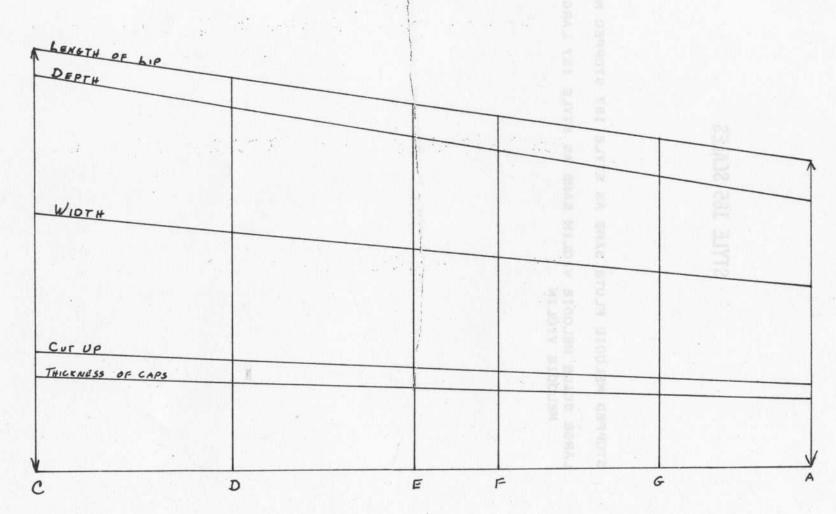
STOPPED MELODIE FLUTE SAME AS STYLE 157 STOPPED MELODIE FLUTE

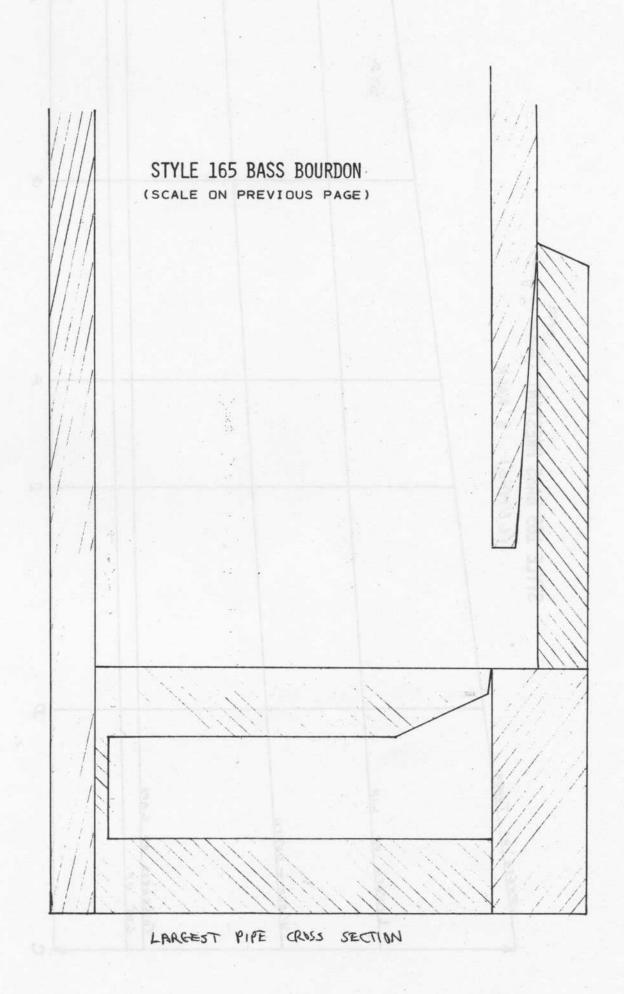
LARGE SCALE MELODIE VIOLIN SAME AS STYLE 157 LARGE SCALE

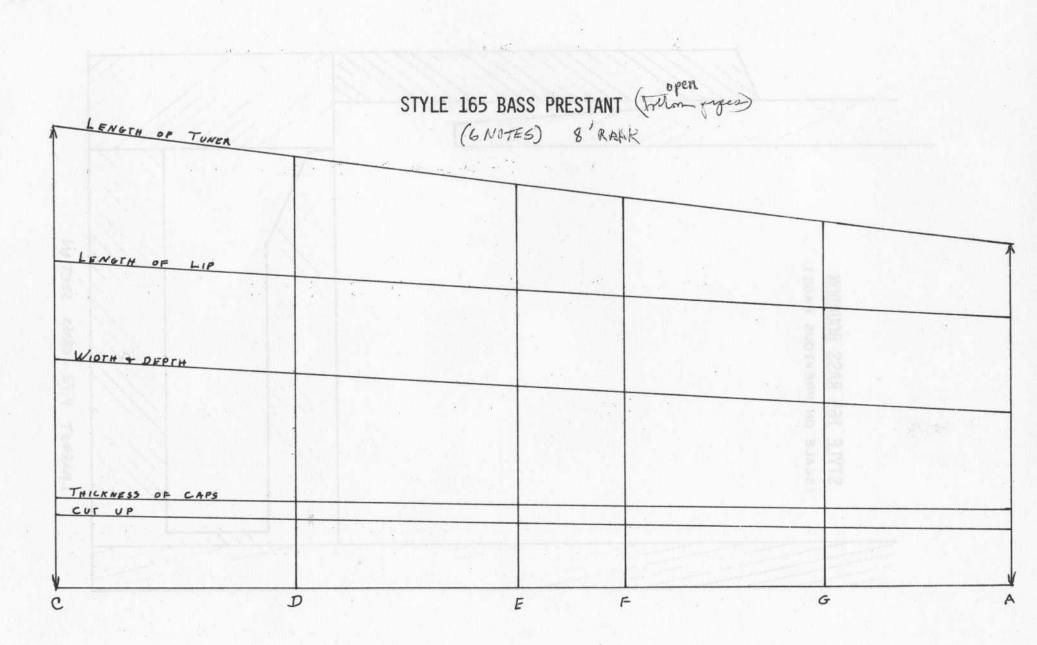
MELODIE VIOLIN

STYLE 165 BASS BOURDON (5topped, bothom proposes)

(6 NOTES) 8' RANK

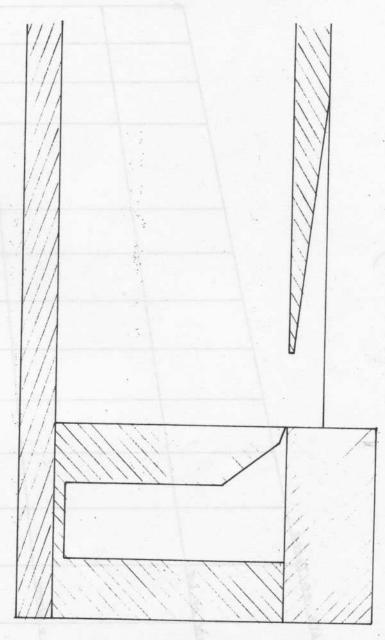






S

STYLE 165 BASS PRESTANT (SCALE ON PREVIOUS PAGE)



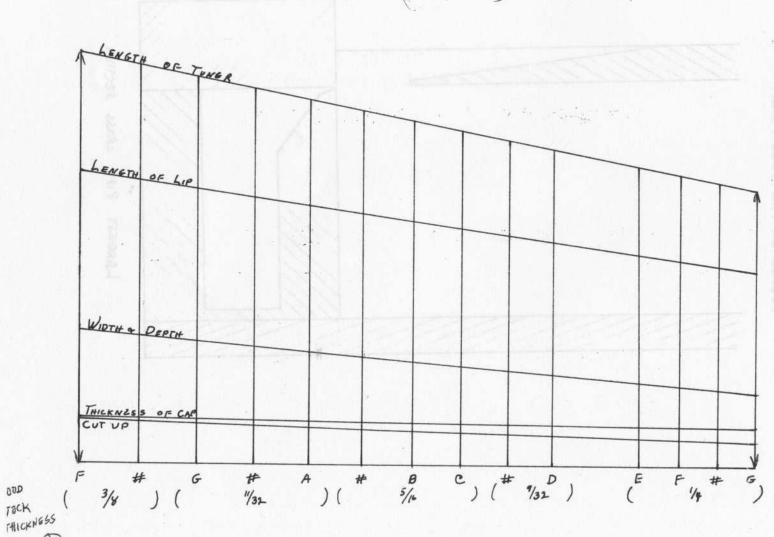
LARGEST PIPE CROSS SECTION

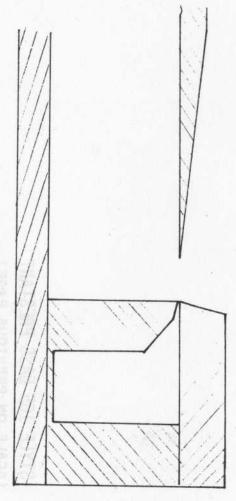
QUO

TOCK

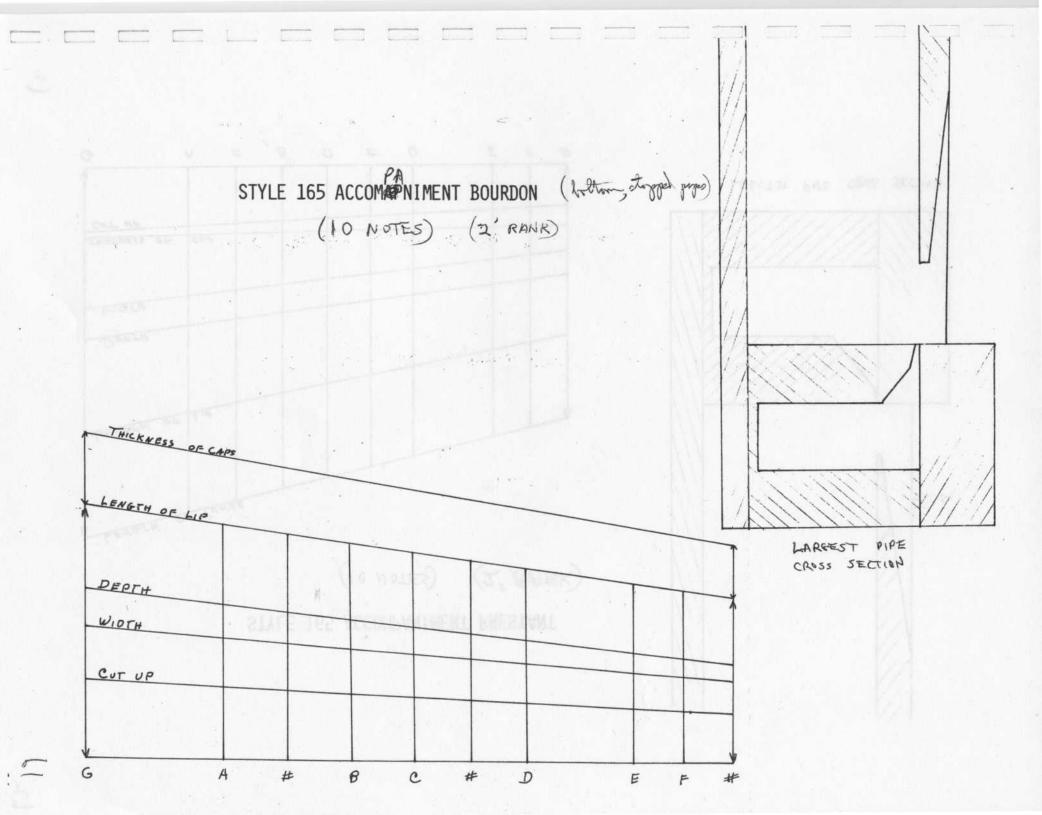
COUNTER MEDDY NIOLAS STYLE 165 ACCOMPANIMENT VIOLING

(14 NOTES)



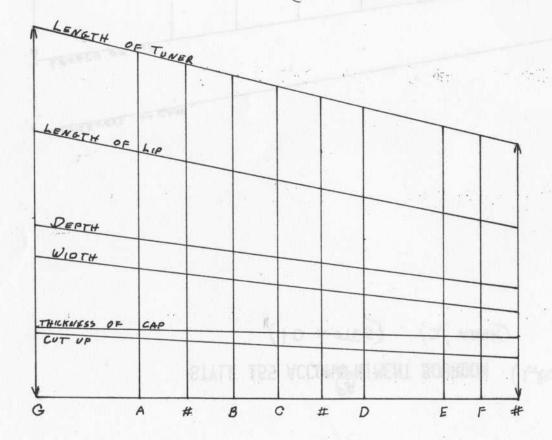


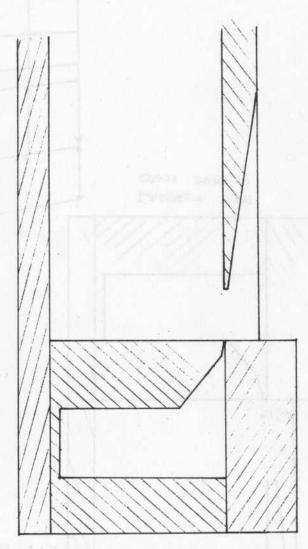
LARGEST PIPE CROSS SECTION



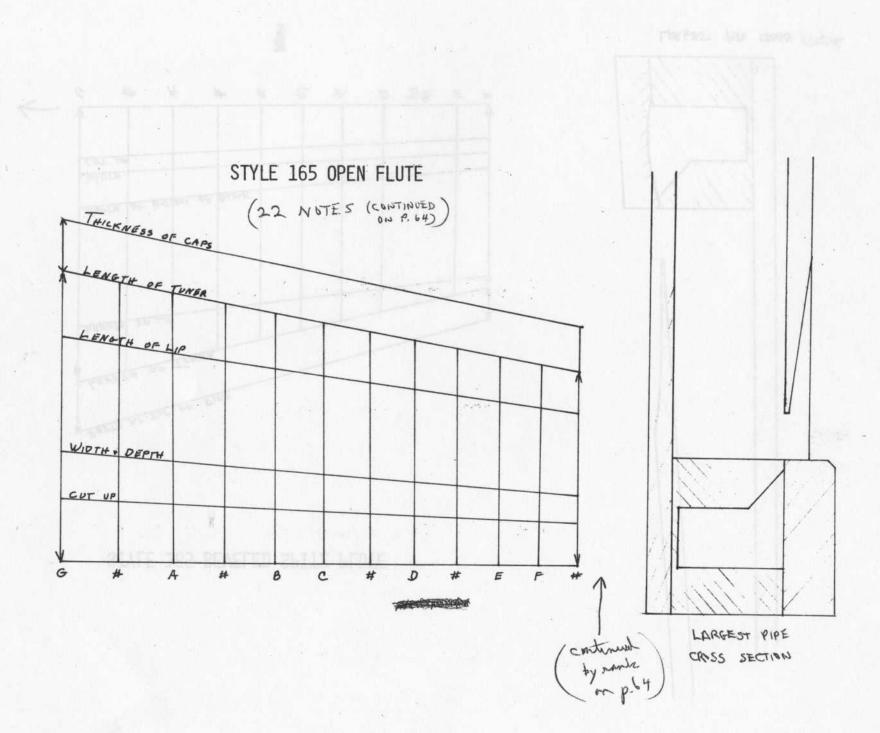
STYLE 165 ACCOMPANIMENT PRESTANT

(10 NOTES) (2" RANK)





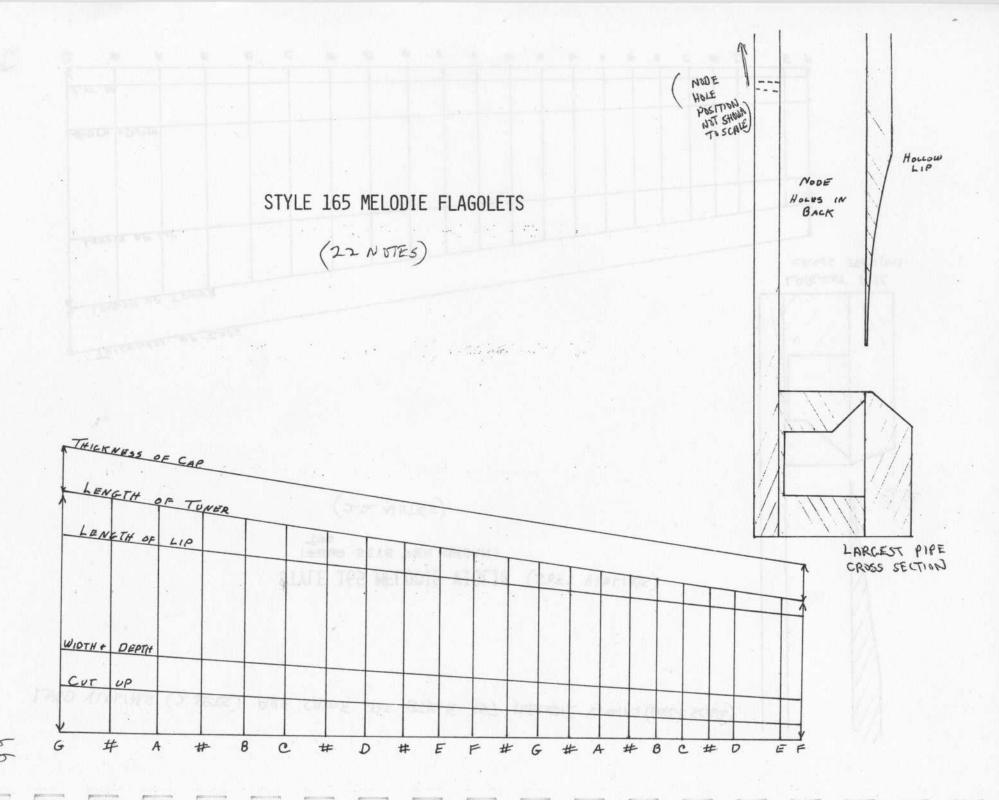
LARGEST PIPE CROSS SECTION

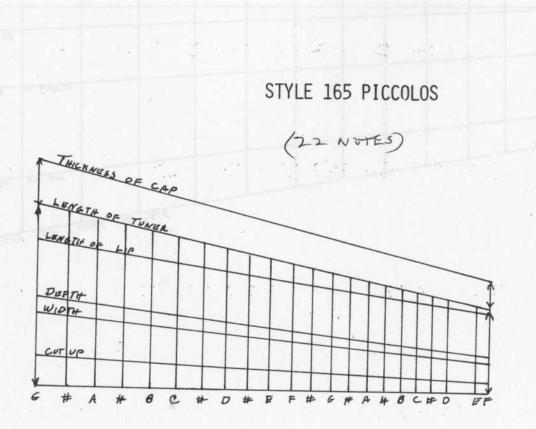


STYLE 165 BEVELED SPITZ FLUTE WIDTH CUT UP B D DA LARGEST PIPE CROSS SECTION

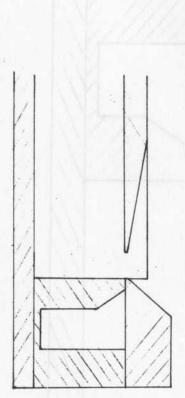
of rankson G

LOUD VIOLINS (2 SETS) ARE SAME AS STYLE 157 MELODIE VIOLINS (LARGE SCALE) STYLE 165 MELODIE VIOLIN (SOFT VIOLINS) (FOUR SETS PER ORGAN) (22 NOTES) e Jan Jan Janes LARGEST PIPE CROSS SECTION LENGTH OF GIP WIDTH + DEPTH CUT UP

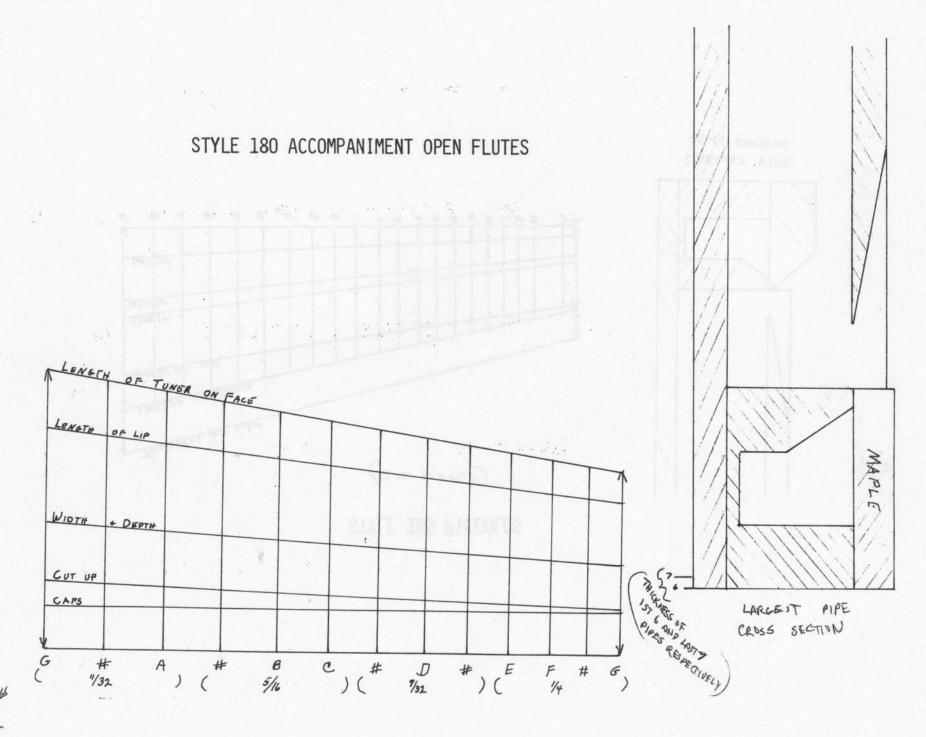




STALE 180 ACCOMPANIMENT OPEN FLUTES

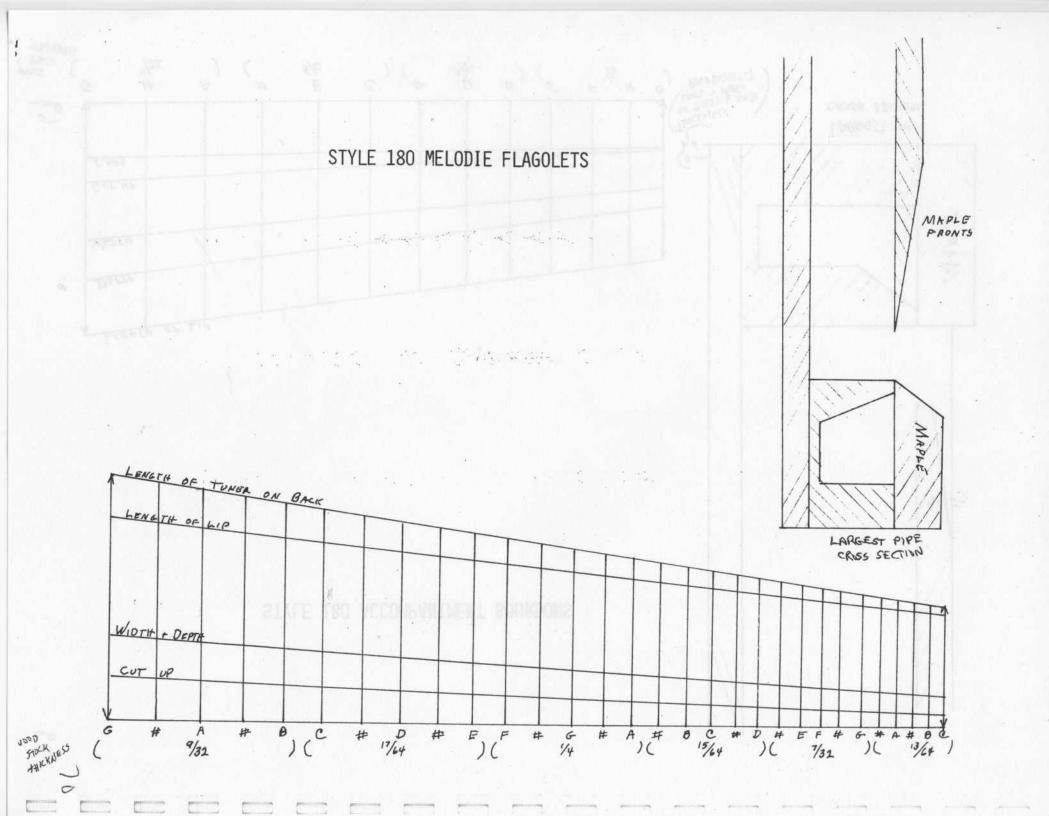


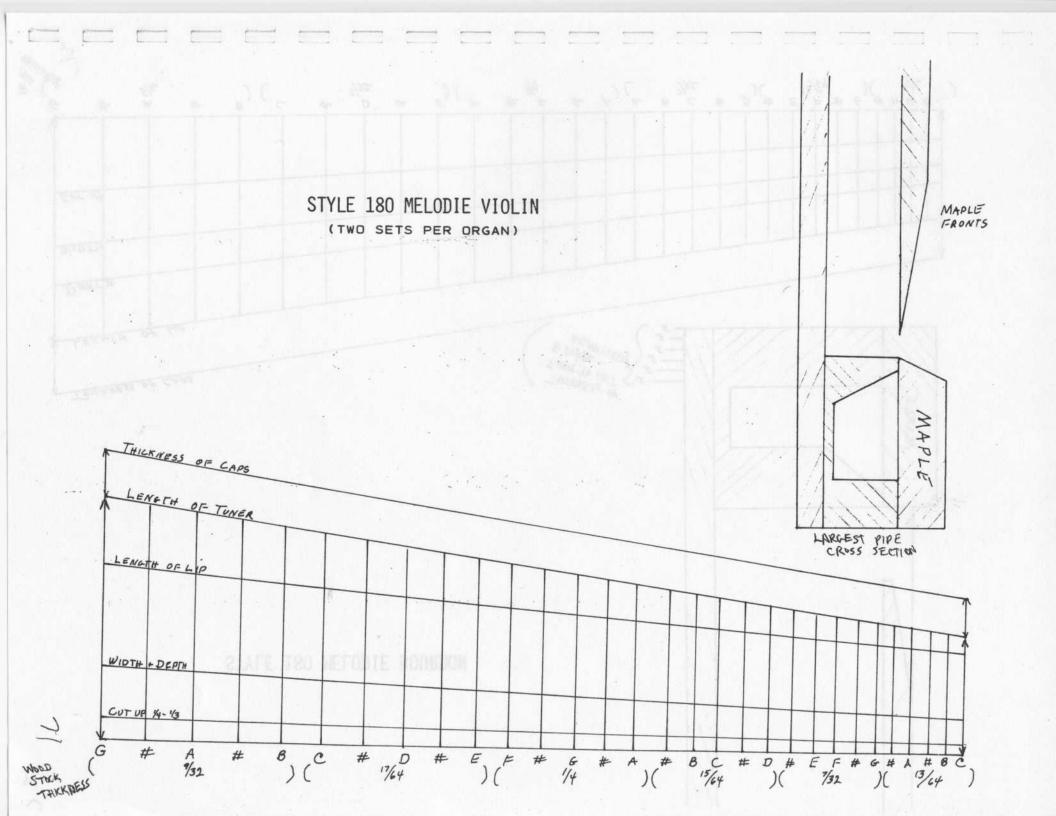
LARGEST PIPE CROSS SECTION

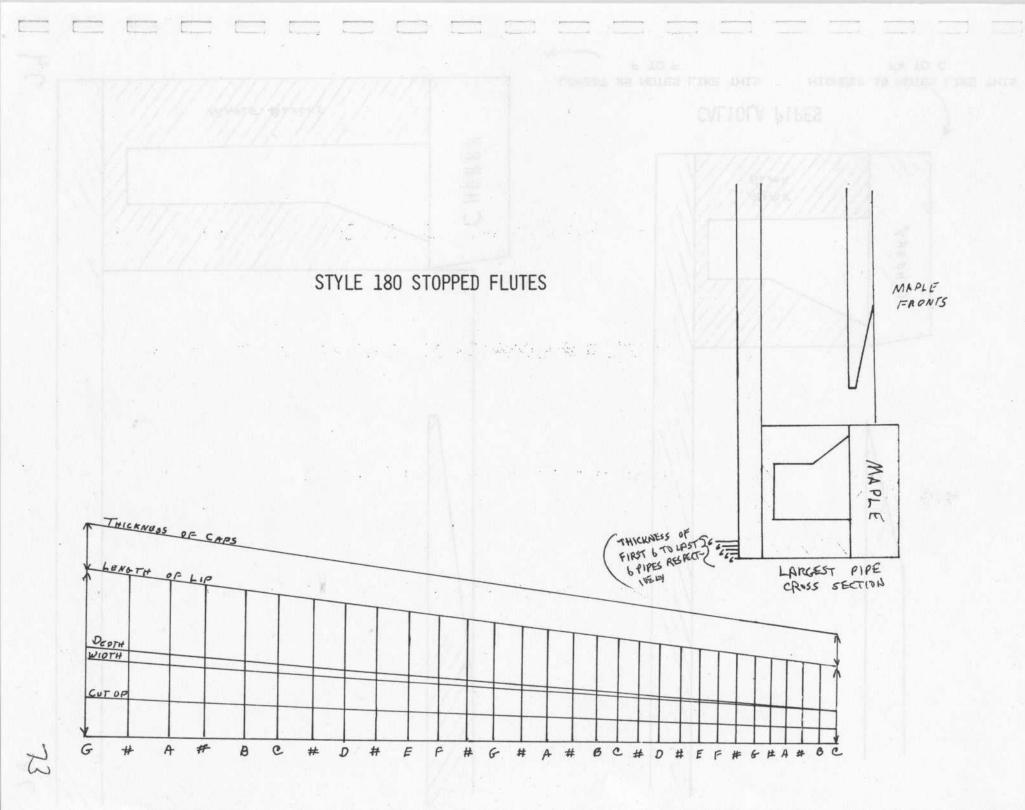


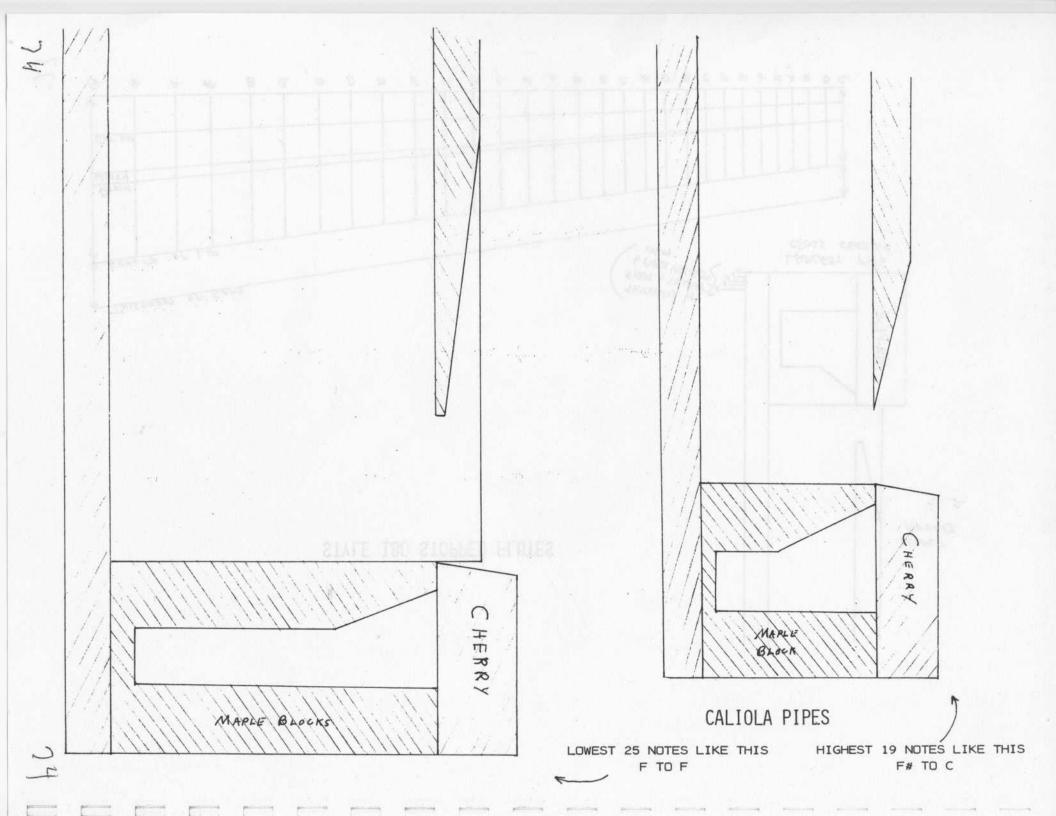
STOLK MESS

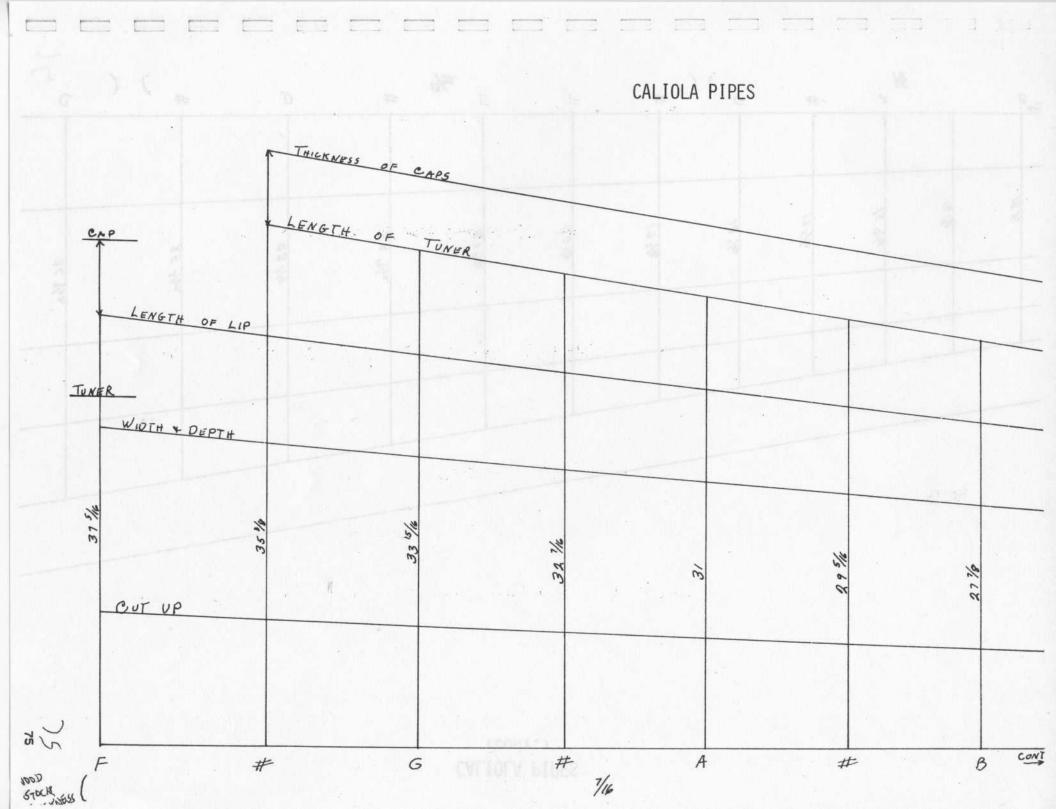
January.

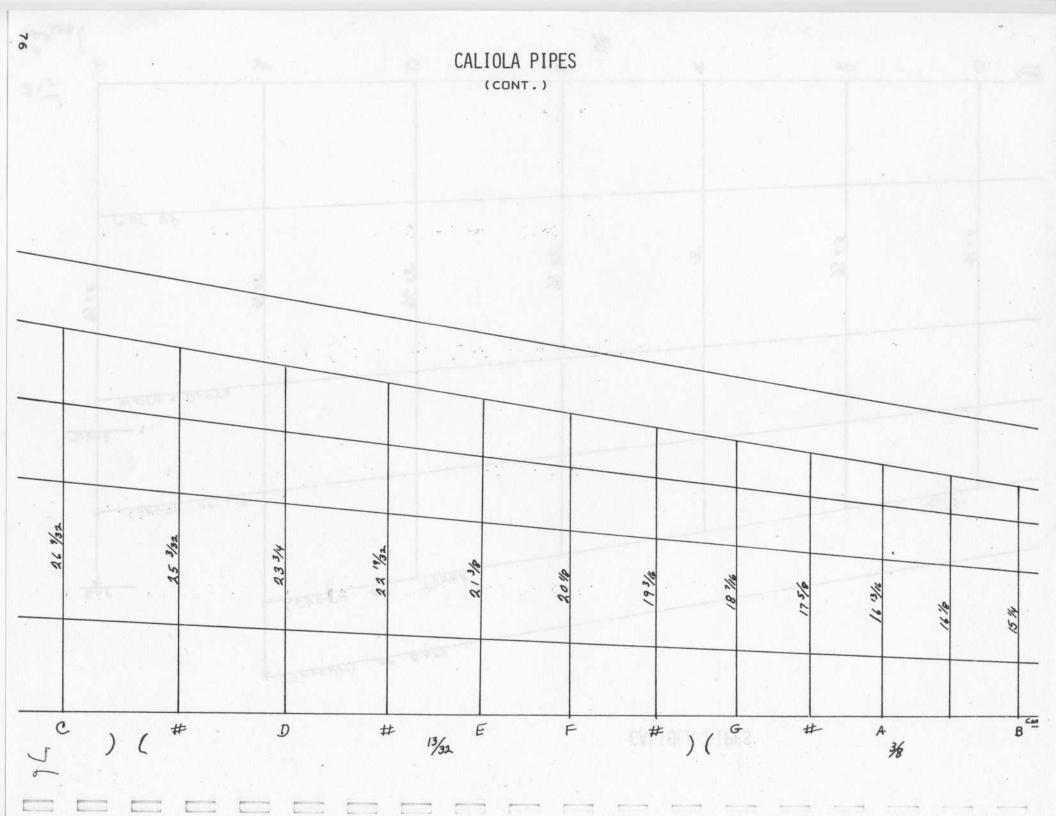




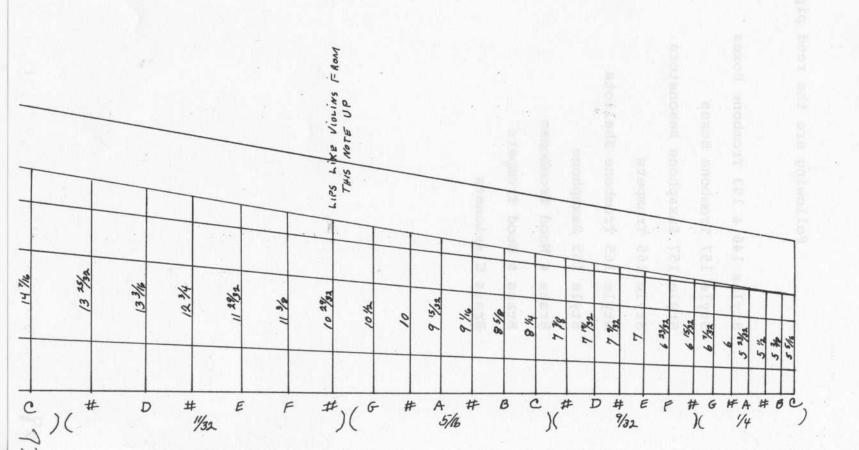








CALIOLA PIPES

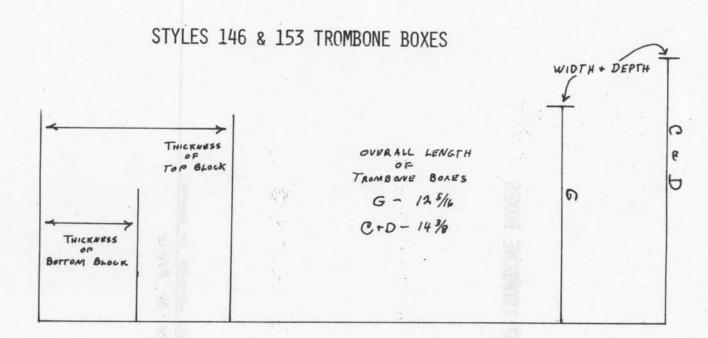


REED PIPES

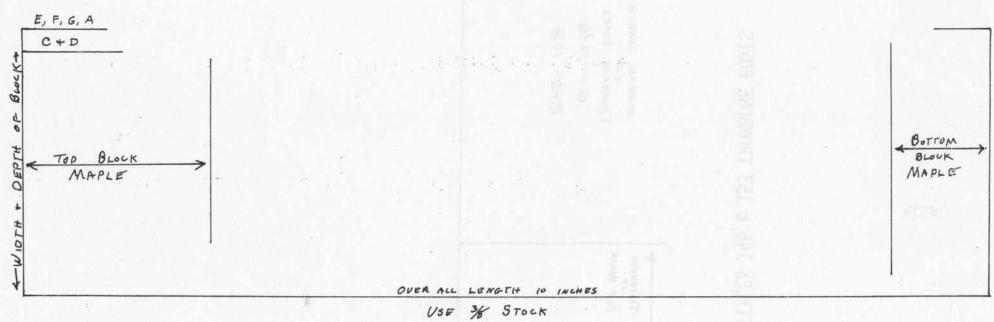
Following are the reed pipe scales:

| Styles 146 & 153 Trombone Boxes | 79 |
|---------------------------------|----|
| Style 157 Trombone Boxes | 80 |
| Style 157 Saxaphone Resonators | 81 |
| Style 165 Trumpets | 82 |
| Style 165 Trombone Shallots | 83 |
| Style 165 Saxaphone | 84 |
| Brass & Wood Trombones | 85 |
| Brass & Wood Trumpets | 86 |
| Brass Clarionets | 87 |

78

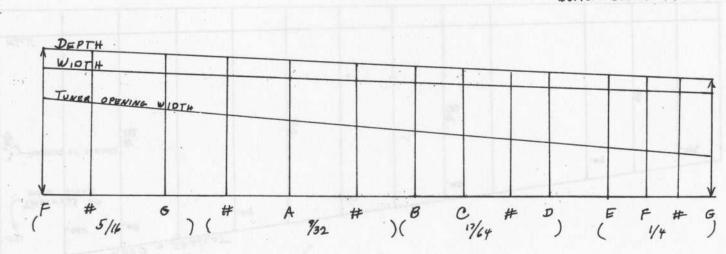


STYLE 157 TROMBONE BOXES



STYLE 157 SAXAPHONE RESONATORS

TOP BLOCK 1/4 INCH THICK
BOTTOM BLOCK 3/4 INCH THICK



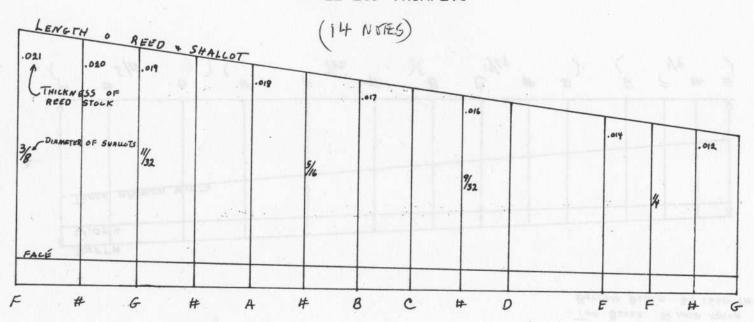
THICKNELS

1 1

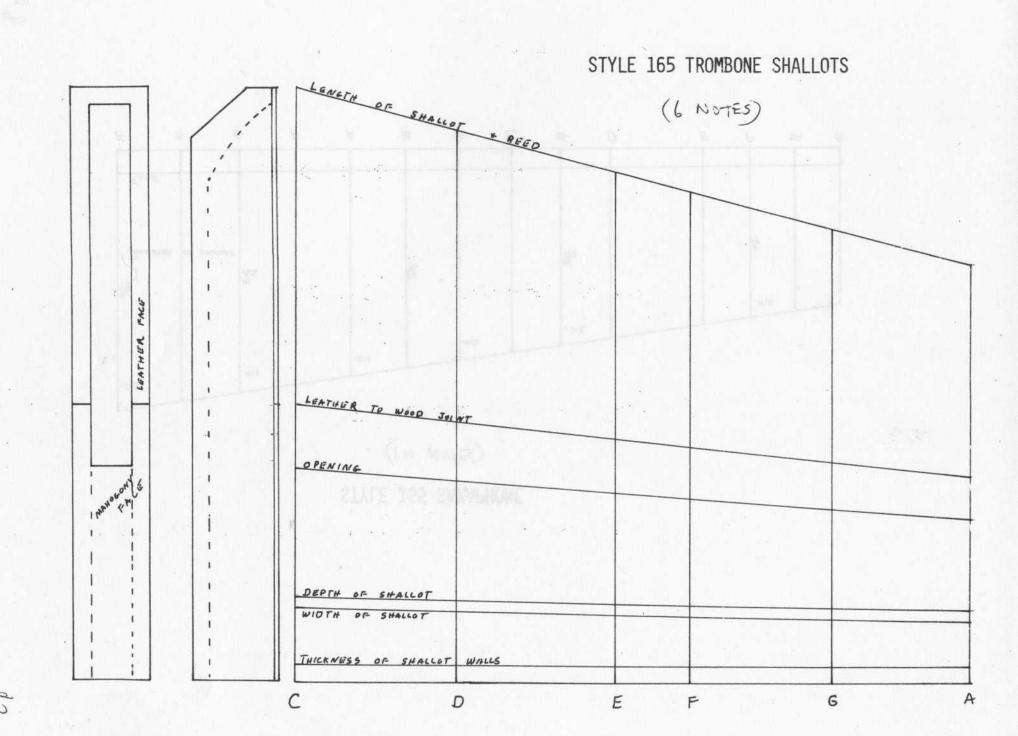
STYLE 185 TRUME

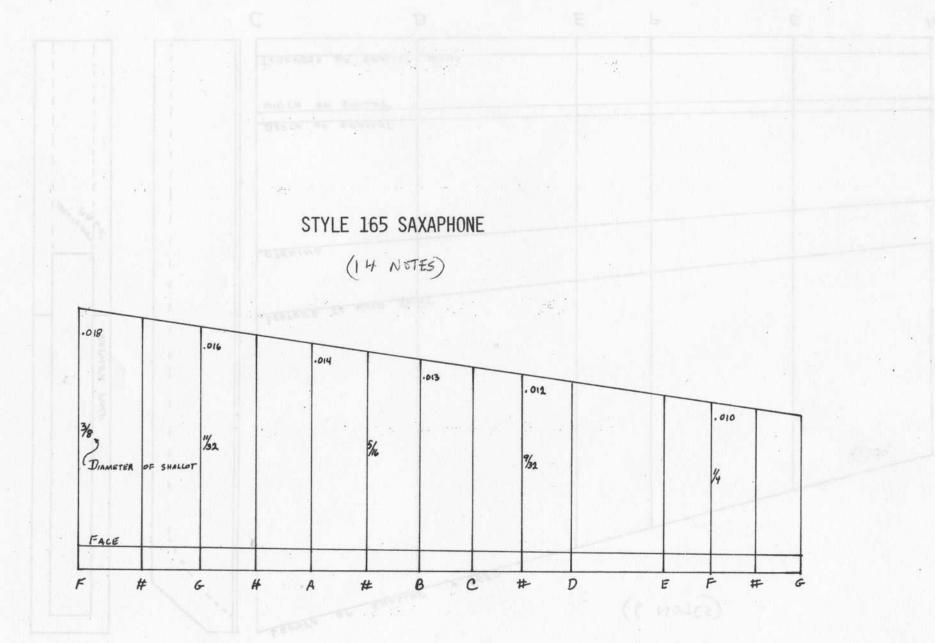
my A

STYLE 165 TRUMPETS

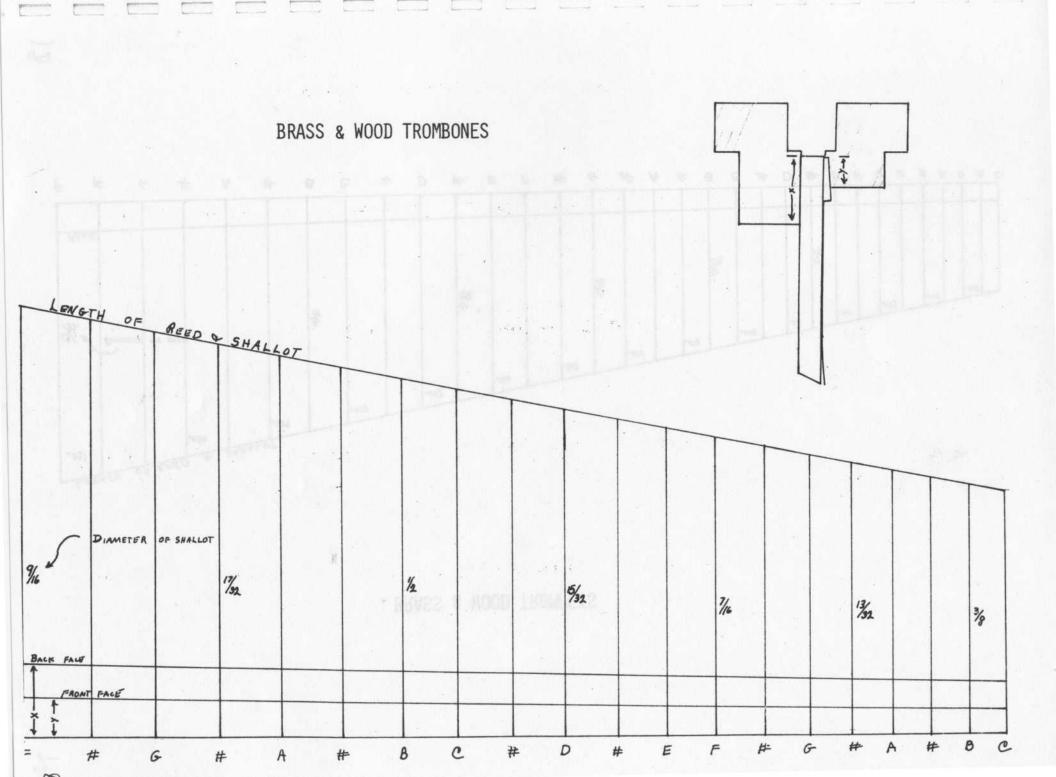


STYLE ISV SAVAPHONE RESONATORS

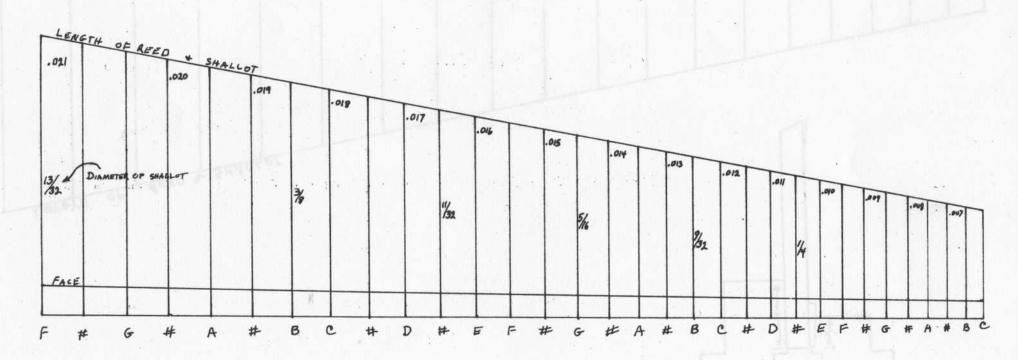




STYLE 165 TROPBONE SHALLDTS

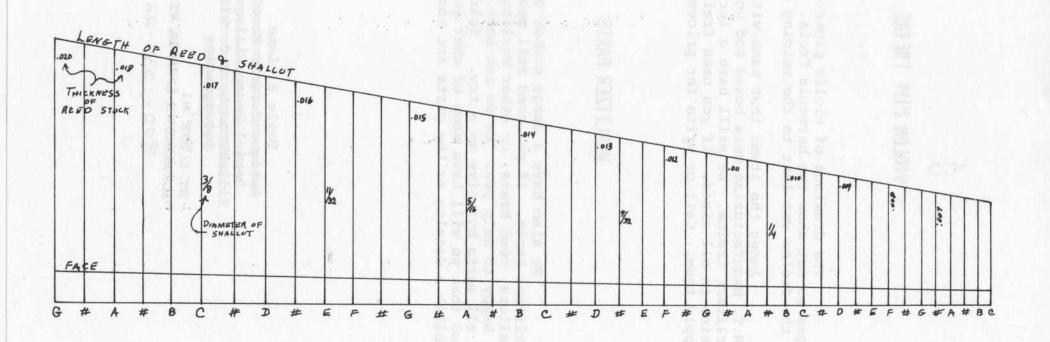






BRASS & WOOD TROMBONES

BRASS CLARIONETS



VIOLON PIPE FREINS

The drawings of violin pipes on the forgoing pages so not show the harmonic frein. Installation of the freins was left to the voicing department.

Among the items that came with the assets of T.R.T. Manufacturing were boxes and boxes of original Wurlitzer freins. We still have a large number of these freins in all sizes. If you need freins we are happy to supply them. Call or write for prices.

WURLITZER PARTS

We also have a large number of other original Wurlitzer parts. If you need roll mechanism parts, shallots, reed brass, or other Wurlitzer parts we would be happy to help you. We do not have a complete stock of all parts but give us a try. Your chances are quite good that we will have some of what you need. We do not publish a catalog as the parts are too numerous and varied.

Doyle H. Lane
Antique Music & Wheels
Daniel Boone Village
Hillsborough, N.C. 27278
919-732-7136

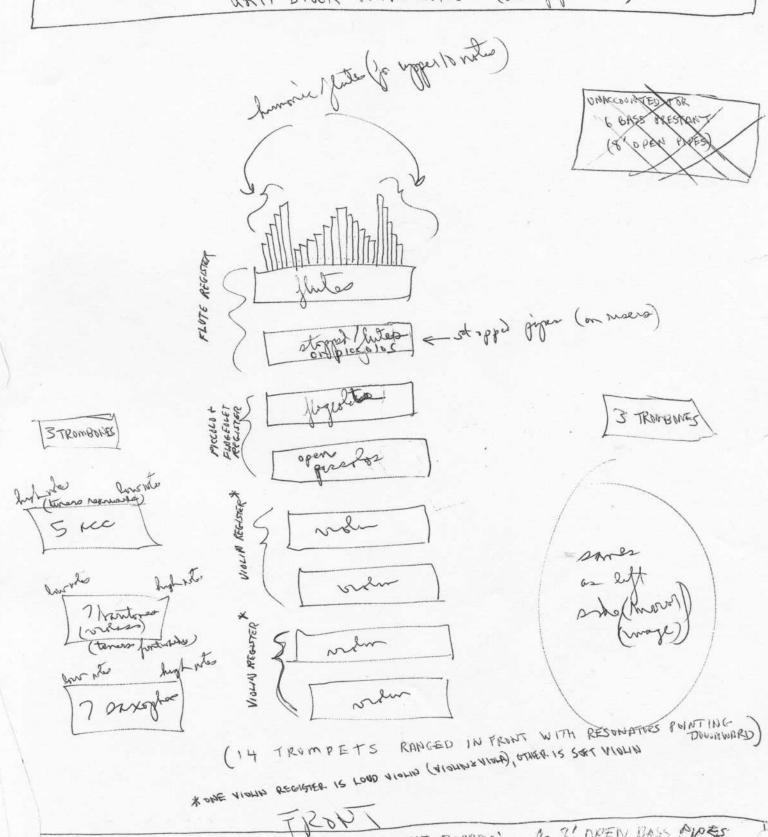
RT. 1, BOX 711 MIDDLETOWN SPRINGS, VI 05757 802 - 235 -2299

88

口口口口口 383. 口口口口口口口 DDDDDD

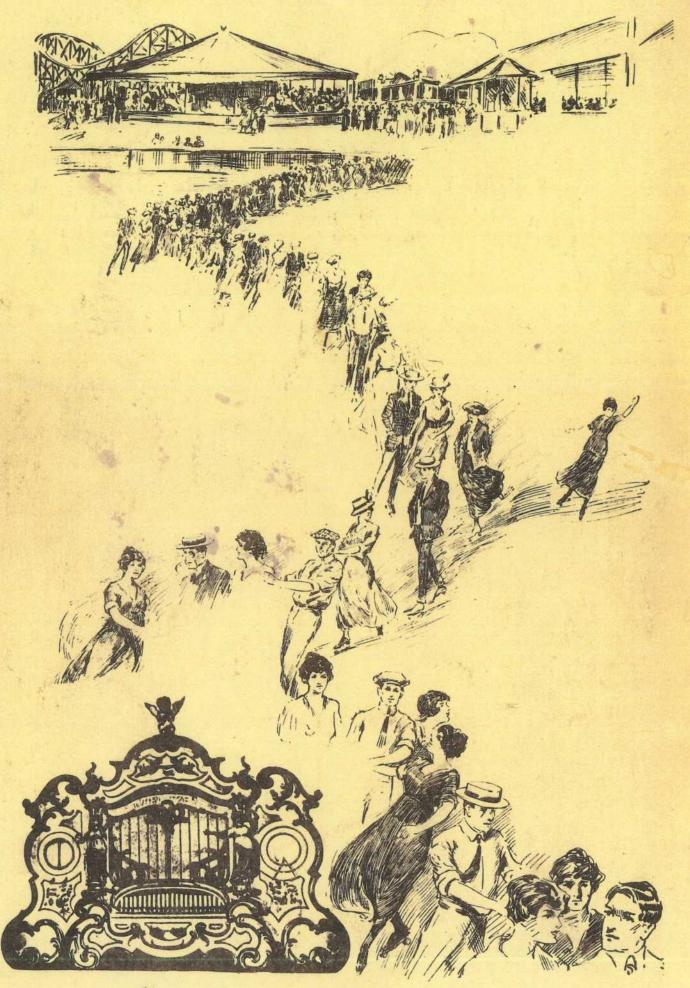
CKI CHULL (DODDDC) DDDDDDDD DDDDDD I U U U D D Z

unit block valve chest (below pige chest)



UNDER LASE: 6 BASS BOURDON (8' STUPPED PIFFS) IO ACCOMPANIMENT BOURDEN'S

& 8' OPEN BASS PIPES



Style 165