## Table of Contents

Prefacei
Table of Contents
CHAPTER ONE: PREPARATIONS, TOOLS AND EQUIPMENT
PREPARATIONS
A permanent work area
REED TOOLS AND EQUIPMENT
Items from local sources
Aquarium tubing, Bassoon Chair, Binder clips, Crochet thread, Dish for soaking cane, Duco
cement, Emery cloth, Nail file, Nail polish, Paint stirrer or wooden yardstick, Pencil, Pliers,
Ruler, Rubber bands, Soaking cup, Scissors, Toothbrushes, Triangular file, Twine (white
cotton), Utility knife, Waterproof sandpaper, Whetstone, Wire
Items from Reed Suppliers or Music Stores
Cane, Cutting block, Mandrels and drying board, Plaque, Reamer, Reed knife, Tuner, Wire
SOME PRELIMINARY INSTRUCTIONS:
Sharpening your knives
Sharpening the Utility Knife, Sharpening a Hollow-ground Knife, Cleaning the whetstone
Making and marking the easel
Making a cutting block
Making sanding boards
Optional items 6
Bassoon stand, Magnifying glasses, Note book, Pen with permanent ink, Tool box
CHAPTER TWO: ASSEMBLING THE REED—PART ONE
Items Needed for Procedures in this Chapter
Selecting the cane
Marking the cane, Beveling the cane, Scoring, Check fold mark and soak cane in hot water
Folding the cane
Even-out butt ends, Wrap folded cane, Re-soak cane in hot water
Prepare wires
Forming the tube, Crimping, Applying the wires
Examine butt opening 10
If unround, Make cross-scoring
Apply wrapping
Covering the wrapping, Trim butt wire, Apply second coat of covering,
Identifying/Marking reed
Reed assembled, Store Reed
CHAPTER THREE: ASSEMBLING THE REED—PART TWO
Items Needed for Procedures in this Chapter
Check middle wire
Verify bocal distance and reaming, Soak reed, Test for butt leaks, Remedying butt leaks
Trim tube edges ledge to middle wire
Creating the ledge
Straighten blade edges from ledge to blade tip
Inspect blade edges for evenness
Apply blade wire
Soak reed, Clip tip, Clip corners, Inspect and adjust tip opening
"The Moment of Truth"—Playing the reed for first time
Testing for pitch
The crow of the reed
Reed plays ready for tuning. Rest reed for 24 hours

CHAPTER FOUR: DESCRIPTION OF FINISHING, TUNING AND ADJUSTMENT TECHNIQUES	
Basic work principles	19
Some important observations	19
Looking at the reed, Using the lamp	
Using sandpaper	20
Using sanding boards, Clipping tip with a knife, Shortening or evening-out tip with a sand-	
ing board, Using the plaque, Using the mandrel, Avoiding "reed-maker's elbow"	
Establish/Clarifying arc	21
Using the knife, The scraping/filing cycle, Making a thickness check	
Establish/Clarifying spine	23
The skyline of the spine, Landscaping the blades	
Adjusting the wires	23
Replacing wires	
Changing the reed's tone	23
The contour of the reed	
A Strategy for examining a reed	24
CHAPTER FIVE: FINISHING, TUNING AND ADJUSTING THE REED	
Items Needed for Procedures in this Chapter	25
The diagnostic order	25
PROCEDURES FOR IMPROVING RESPONSE AND RAISING PITCH	25
Ironing the Blades, Inspect wires for position, tightness, Check bocal insertion, Test for	
butt leaks, Inspecting ledges, Inspect blades for side-slipping	
Matching the blade edges	26
Inspect blade at foot of ledge, Clip tip and corners	
The life of a reed	26
Order of improvement, Play reed, let rest	
CHAPTER SIX: SOLVING REED PROBLEMS	
Trouble-shooting reed problems	28
About playing sharp	40
Characteristics of a Good Bassoon Reed	29
Reed truisms	29
APPENDIX A: Reading List to Take You Beyond Basic Reed-making	21
APPENDIX B: List of Illustrations	31
APPENDIX C: Pitch Nomenclature	33

## Chapter Six

## **SOLVING REED PROBLEMS**

TROUBLE-SHOOTING REED PROBLEMS These remedies produce other results as well as the one for the indicated problem. For example, closing the tip opening changes the pitch, response and air flow. Play the reed first, then examine it to determine what steps to take. "Balance" means match up the size or shape of blades, edges or tip. Test reed after each remedy.

REMEDY:

E in staff is flat

shorten blade narrow blade close tip opening



REED RESPONSE:

REMEDY:

Hard to blow

close tip opening balance blade edges balance tips of each blade

thin profile narrow spine

Unfocused note starts

seal leaky butt

firm up wires, especially middle

wire

make tips same length

balance tip ream tube

Too hard to sustain notes

close tip opening

reduce overall profile thickness

Tongues too hard

seal leaky butt

firm up wires, especially middle

wire

smooth blades

reduce overall profile thick

Slurs poorly

balance tip thick

balance blade thi

Too easy to blow & flat

Too easy to blow

RANGE:

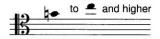
Lowest notes weak

lade edges near ledge



Highest notes hesitant

balance blade edges thin tip corners



Flat overall

close tip opening

move blade and or middle wire forward 1 or 2mm (1/32" - 1/16") shorten or narrow blades use shorter bocal

Sharp overall while playing

use faster air

lower tongue toward "awh"

grip of lips on reed open" throat-avoid chok-

ing air with larynx open tip opening

slightly thin front 1/3 of blade move blade and or middle wire

back 1 or 2mm (1/32" - 1/16")

blades too short/narrow: NEED

**NEW REED!** use longer bocal

next reed lengthen/widen tube next reed lengthen/widen blades

TONE OF REED IS:

Inflexible

REMEDY:

middle wire too round blades too thick overall

Dull

thin down or balance tips reduce overall profile thickness

do scraping cycle(s) narrow spine

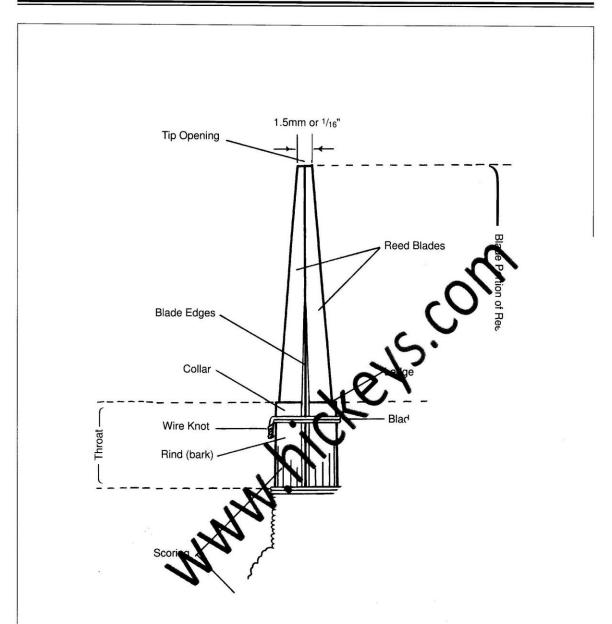
Too bright, reedy or nasal

raise throat arch

make German blade profile

ABOUT PLAYING SHARP It is very common to hear about bassoonists playing sharp. This is rarely a reed problem except when a reed is getting old. Playing sharp is most often caused by one or both of the following: 1) too tight an embouchure too closed, tongue too high in mouth, lips pulled too tight acre the reed; and/or 2) not enough air support. It sounds like a com tradiction, but slower air speed produces sharper not flatter on the bassoon. It does this because the embouchure closes the reed tip when the air support is reduced.

Bassoon embouchure is not just the part you can see the jaw, cheeks, facial muscles (the visible embouchure) it is a the tongue and throat opening (the invisible embouchure). The



Butt Opening



Nomenclature '