

INTRODUCTION

Dear Customer,

This product has been produced for people like you who have a need and can appreciate a well-engineered tool. This manual complements the tremendous amount of time that has gone into the development of this sharpening device, enabling you to achieve the highest level of performance from your Tri-Angle Sharpmaker.

So... please take 10 minutes to read it! Lock up the kids, hide in the garage or bring it along with you to your favorite "water closet". The time spent will be returned tenfold. Lastly, we know you will enjoy your Sharpmaker and that in the many years of service it gives, you'll agree that a sharp tool is a safe tool.

Spyderco

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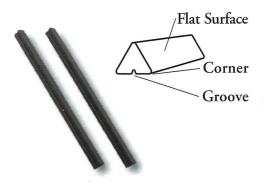


TECH DATA



- Lid
- durable polymer
- Base
- durable polymer
- Unit Total Weight = 14.25 oz (404 g)





- 2 White Stones
- 2 Safety Rods • 5/32" solid brass
- 2 Gray Stones

- fine grit

- medium grit • length = 7" (178 mm) • length = 7" (178 mm) • length = 7" (178 mm)

Spyderco sharpening stones are made of "High Alumina Ceramic", a U.S.A. made material with the ability to cut any metal known to man. They measure 9 on the Mohs hardness scale (out of 10), and neither grit (medium or fine) requires lubricants such as oil or water for use. The medium grit stones will wear out over time (lasting an average of 3 to 5 years with consistent use); the fine grit stones will show little or no wear.

The Tri-Angle Sharpmaker stones can be used to file any type of metal, including:

- Stainless steel (all types)
- Stellite

- Tool steel
- Vasco wear
- Tools made from (or tipped with) tungsten carbide, cobalt or titanium

The Sharpmaker's properly engineered design and construction will sharpen new knives sharper than their factory-delivered edge. The sharpening action produces the proper "scratch pattern", creating a finely polished edge on both plain and serrated knives. Remember, "A Sharp Tool is a Safe Tool".

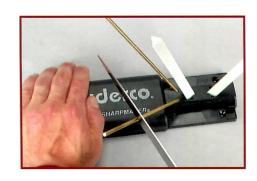
SAFETY FIRST

Caution: Sharpening is an inherently dangerous activity. This product should always be used with the safety rods in place and with the utmost care and caution.

- ALWAYS hold Sharpmaker on flat stationary surface below waist level.
- Safety rods are designed to prevent injury should you slip off stone or tip unit over during sharpening; therefore, ALWAYS keep hand behind and below safety rods, and NEVER use Sharpmaker without safety rods in place (unless otherwise instructed).
- ALWAYS use slow deliberate strokes, as they are more safe and effective than quick motions (which may not sharpen the whole blade).





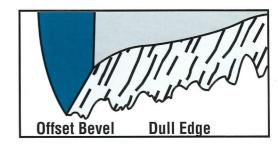


SHARPENING STEPS ~ DIFFERENT GRIT STONES DESCRIBED

Note: The following steps will be referred to repeatedly throughout this book.

Keep in mind as you review these sharpening steps that:

- The gray (medium grit) stones provide faster metal removal, while the white (fine grit) stones provide a final finish.
- Both the corners and the flat surfaces of any stone may be used; the corners cut faster than the flat surfaces.



STEP #1 - SHAPING

• Use the <u>corner of the gray stone</u> to shape an edge or set a bevel (as it cuts the fastest).





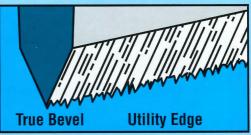


STEP #2 - UTILITY

• Use the <u>flat surface of the gray</u> stone to produce a utility edge.





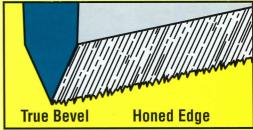


STEP #3 - HONING

• Use the <u>corner of the white stone</u> to produce a very sharp edge.





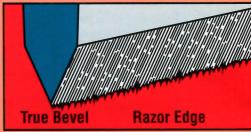


STEP #4 - RAZOR

• Use the <u>flat surface of the white</u> <u>stone</u> to produce a razor edge (as it is very fine).







KNIFE SHARPENING

Remember:

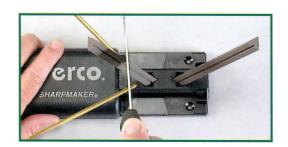
- Use both safety rods, keeping hand behind and below rods.
- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").



PLAIN EDGE (40° ANGLE) STEP #1 & STEP #2

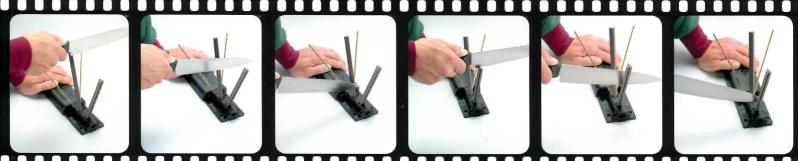


• Use 40° angle slots on base. (corners facing each other) Achieves Shaped Edge





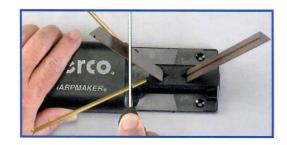


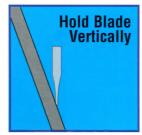


- Start with Step #1 then continue through Step #2, Step #3, & Step #4 (next page for #3 & #4).
- Press hard enough to remove metal (excess pressure does not improve performance).
- Always keep knife blade straight up and down (so knife blade is perpendicular to base) easiest grasp is with thumb on top of blade.
- Always sharpen entire blade from heel to tip, drawing blade towards you as you "slice" down stone.
- For each step, give 20 strokes on each side (alternating strokes between right and left stones for a total of 40 strokes).
- If knife has not reached desired sharpness, repeat process (a knife's first sharpening will require the greatest amount of sharpening strokes).
- When one area of stone is loaded with steel (i.e. to where it is no longer cutting metal), rotate stone in base to clean area.

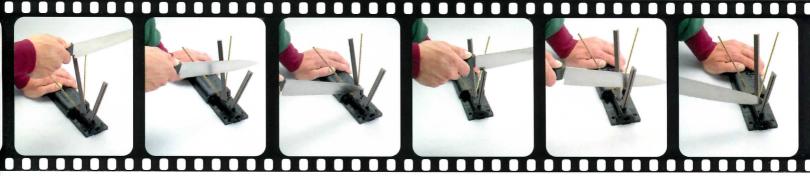


• Use 40° angle slots on base. (flats facing each other) Achieves Utility Edge









PLAIN EDGE (40° ANGLE) STEP #3 & STEP #4



 Use 40° angle slots on base. (corners facing each other) Achieves Honed Edge





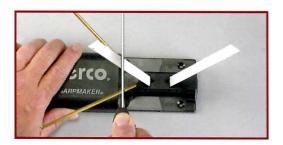




- Start with Step #1, then continue through Step #2, Step #3, & Step #4 (previous page Step #1 & Step #2).
- Press hard enough to remove metal (excess pressure does not improve performance).
- Always keep knife blade straight up and down (so knife blade is perpendicular to base) easiest grasp is with thumb on top of blade.
- Always sharpen entire blade from heel to tip, drawing blade towards you as you "slice" down stone.
- When one area of stone is loaded with steel (i.e. to where it is no longer cutting metal), rotate stone in base to clean area.
- For each of the four steps, give 20 strokes on each side (alternating strokes between right and left stones for a total of 40 strokes).
- If knife has not reached desired sharpness, repeat process (a knife's first sharpening will require the greatest amount of sharpening strokes).

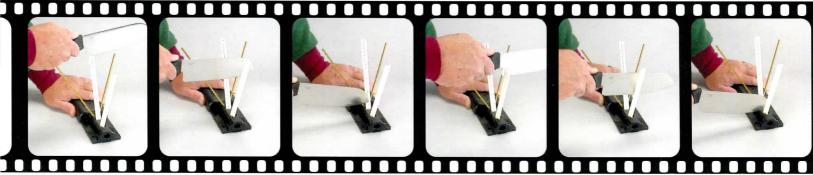


 Use 40° angle slots on base. (flats facing each other)
 Achieves Razor Edge









BACK BEVEL (30° ANGLE)* OPTIONAL STEP A

Note: This step should only be used after steps #1-4 have failed to produce the desired results This step removes shoulders from oversharpened knives.

- Use 30° angle slots on base.
- Start with Step #1 (reference page 4).
- Similar to sharpening plain edge knives (40° angle).
- Use this sharpening angle to displace metal.







- Always follow with 40° angle sharpening (to avoid displacing too much metal).

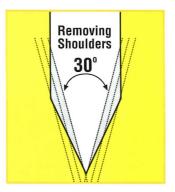
 * This should be of particular interest to food service personnel.
- STEP #1







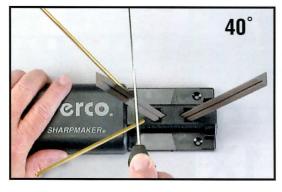


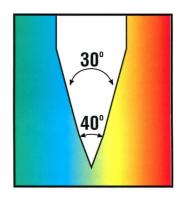














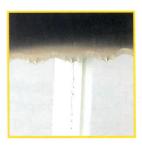
SERRATED EDGE (40° ANGLE) - SPYDERCO RECOMMENDED



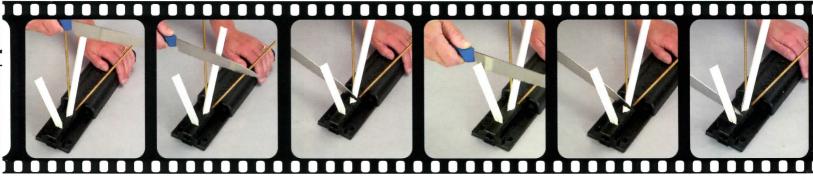
 Use 40° angle slots on base. (corners facing each other) Achieves Honed Edge







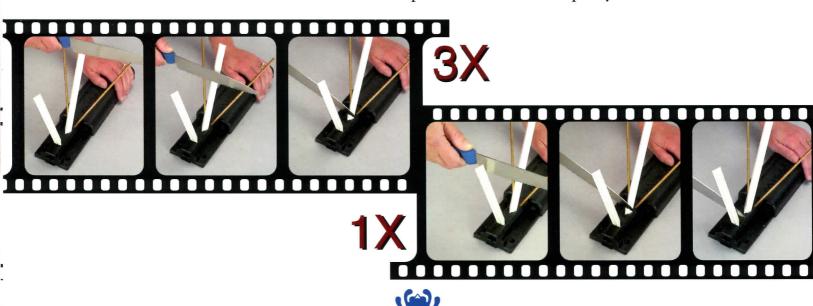
- Use Step #3 only (reference page 5).
- * Done in same manner as sharpening plain edge knives (corners of stones will slide in and out of serrations).
- Sharpen entire blade heel to tip.
- Alternate to sharpen on both sides (even if original sharpening is only on one side) this will create a straighter cut and a stronger edge when using the serrated knife.



SERRATED EDGE (40° ANGLE) - ALTERNATE SINGLE BEVEL



- Use 40° angle slots on base.
- Use Step # 3 only (reference page 5).
- Similar to sharpening serrated edge knives (40° angle Spyderco recommended), except use 3-to-1 ratio to remove burr created (i.e. 3 strokes on side with serrations for every 1 stroke on opposite side).
- Note that 3-to-1 ratio will create a sharper but ultimately weaker serration edge this edge will have a much shorter life and will need to be sharpened with increased frequency to be maintained.

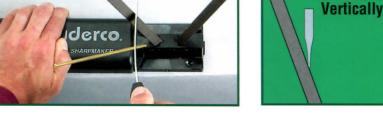


FLEXIBLE BLADE





- Start with Step #1, then proceed to Step #3 (reference page4,5).*
- Sharpen in same manner as rigid knives, but apply sufficient side pressure to sharpen cutting edge.
- Maintain pressure the full length of blade to sharpen tip.

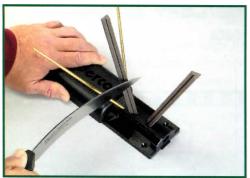




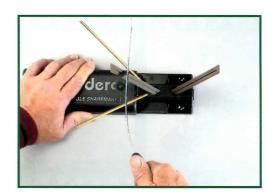
Hold Blade

* Note: Use only these steps because there is only one point of contact between blade and stone.



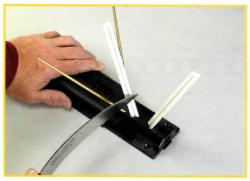




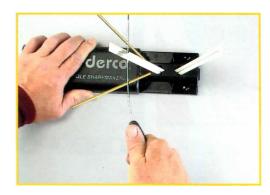


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ELECTRIC KNIFE



• Use Step #3 only (reference page 5).

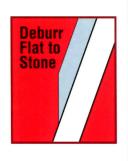


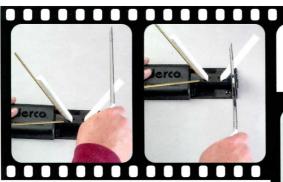




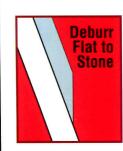
- Sharpen both blades separately (left blade on left stone, right blade on right stone).
- Sharpen beveled side only, holding blade straight up and down like regular knife.
- DO NOT ALTERNATE FROM SIDE TO SIDE.
- Apply 20 strokes to each blade.
- Sharpening on one side only will create a burr on the opposite side after sharpening beveled side, lay blade flat against stone on opposite side and stroke down 1 stroke to remove burr.











RIGHT BLADE/LEFT STONE

DEBURRING



ALTERNATE BLADE STYLES SHARPENING

Remember:

- Use both safety rods, keeping hand behind and below rods.
- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").

When sharpening alternate blade styles:

- Move 204 towards edge of table.
- Adjust to style of blade being sharpened.

HATCHET





• Start with Step #1, then proceed to Step #2 (reference page 3, 4).







- Similar to sharpening plain edge knives.
- Start with heel of hatchet in center of flat stone.
- Keep blade straight up and down.
- Stroke down stone, pulling towards you to sharpen entire blade.
- Alternate from side to side.



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HAWKBILL BLADE

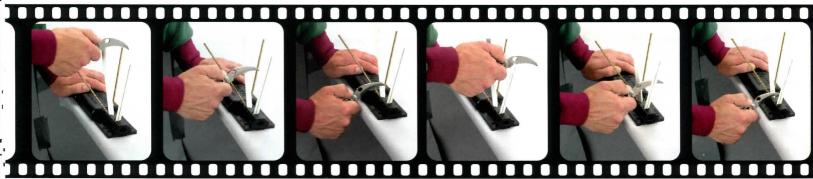


- Use Step #3 only (reference page 4).
- Similar to sharpening plain or serrated edge knives.





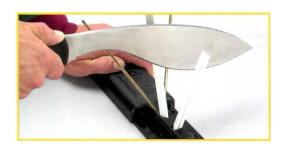




ALTERNATE BLADE SHAPES

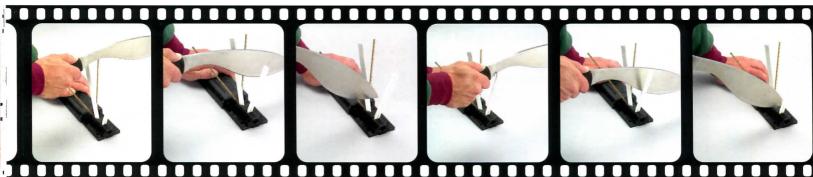


- Use Step #3 only (reference page 5).
- Similar to sharpening plain or serrated edge knives.









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SCISSORS SHARPENING

Remember:

- Use both safety rods, keeping hand behind and below rods.
- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").

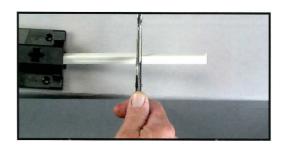
12.5° ANGLE*



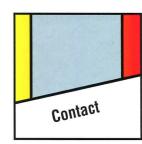






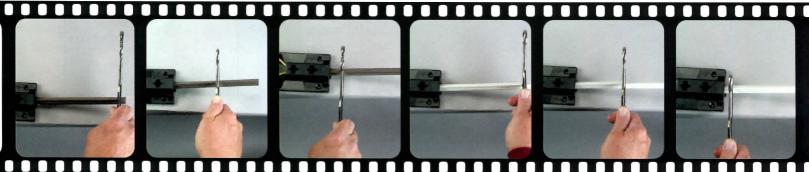


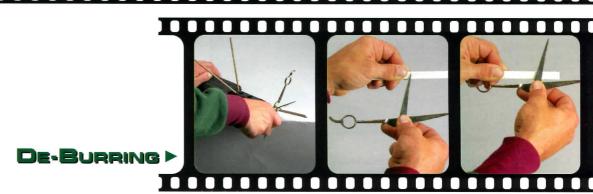




- Use 12.5° angle slot on base.
- Start with Step #1, then continue through Step #2, Step #3, & Step #4 (reference page 4-5).
- Use 3-to-1 ratio to back off burr (as described in subsection titled "Serrated Edge (40° Angle) Alternate Single Bevel" page 7).
- Place one stone in end hole of base with working surface facing upwards (hole is keyed to use both corners and flats of stones).
- Place Sharpmaker near edge of table.
- Hold blade straight up and down.
- Pull towards you, making sure to sharpen heel to tip.
- As with knives, apply approximately 20 strokes on each blade for each of the four steps.
- For lefthanded scissors, reverse position of 204, sharpen using left hand.

* This applies to most scissors.







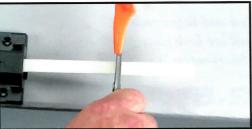
ALTERNATE SCISSORS SHARPENING ANGLE





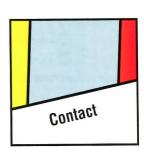




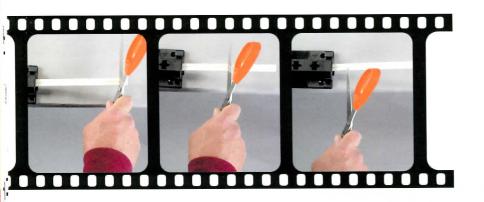


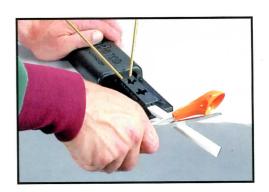


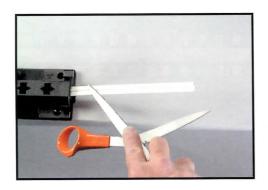


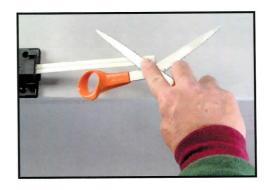


- Start with Step #1, then continue through Step #2, Step #3, & Step #4 (reference page3-5).
- Use 3-to-1 ratio to back off burr (as described in subsection titled "Serrated Edge (40° Angle) Alternate Single Bevel" page 7).
- Some shears have a bevel that is radical by normal standards these are sharpened as regular shears, but instead of keeping blade straight up and down, shear blade may be laid over until bevel is flat against stone (i.e. adjust to alternate factory angle).
- To deburr the blades lead with cutting edge.









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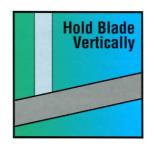
TIN SNIPS

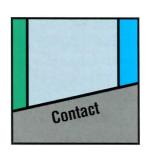




- Start with Step #1, then proceed to Step #2 (reference page 4).
- Similar to sharpening 12.5° or alternate scissors.





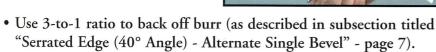


THINNING SHEARS

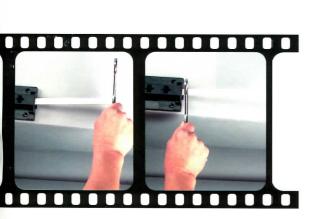


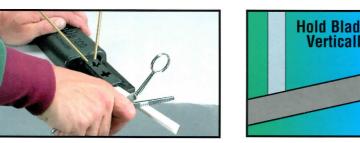


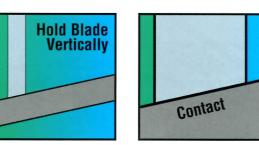
• Use Step #4 only (reference page 5).



- Sharpen only blade side of shear (do not sharpen forked side).
- Similar to sharpening 12.5° or alternate scissors.











SHARPENING USING FLAT SURFACE #1 (Top of 204)

Remember:

- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").
 - (Safety rods are not used to protect hand when sharpening tools in this section).

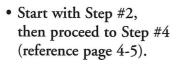
When sharpening using flat surface #1:

• Hold base using stone inserted into 12.5° angle hole.

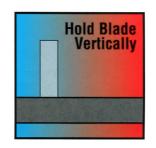
PINKING SHEARS*

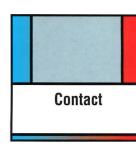




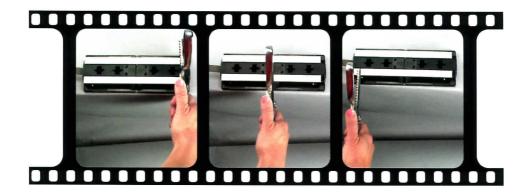








- For each pinking shear blade, hold blade straight up and down.
- Pull towards you while cutting along full length of stone.
- Be sure to sharpen entire blade from heel to tip.
- Never sharpen between teeth of pinking shears.
 - * Be sure to tighten tension screw holding two blades together prior to sharpening.





STRAIGHT RAZOR



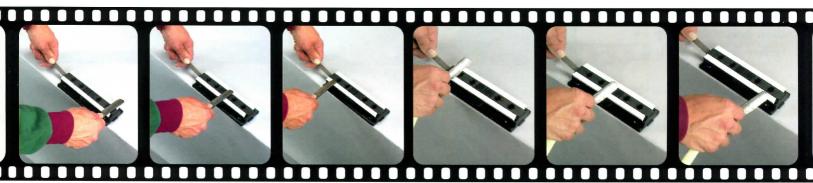
• Use Step #4 only (reference page 5).







- Place cutting edge and back edge flat on stone in flat working position.
- Stroke stone from heel to toe of blade, alternating sides and leading with cutting edge of razor.
- Maintain even pressure and continue until desired sharpness is produced.
- Polish razor on leather strop, trailing with the cutting edge.
- Strop both sides of razor.



There are no safety measures for this activity. Please use carefully as described.



SHARPENING USING FLAT SURFACE #2 (BOTTOM OF 204)

Remember:

- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").
- (Safety rods are not used to protect hand when sharpening tools in this section).

When sharpening using flat surface #2:

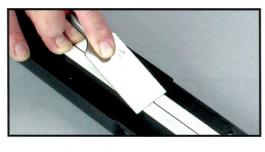
- Treat like a benchstone.
- Use one of three options for support
- lid
- safety rods
- none

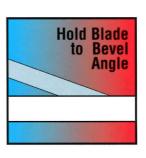
CHISEL

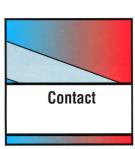




• Start with Step #2, then proceed to Step #4 (reference page 4-5).







- Use stone in flat working position, lying flat in horizontal groove in handle of base.
- Place chisel on flat of stone with one corner on stone.
- Match bevel and stroke length of stone, moving stone diagonally until entire blade is edged.





DEBURRING)

There are no safety measures for this activity. Please use carefully as described.



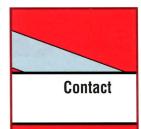
PLANE BLADE



• Use Step #4 only (reference page 5).







- Use stone in flat working position, lying flat in horizontal groove in handle of base.
- Place plane blade on flat of stone with one corner on stone.
- Match bevel and stroke length of stone, moving stone diagonally until entire blade is edged.









There are no safety measures for this activity. Please use carefully as described.



WOOD GOUGE

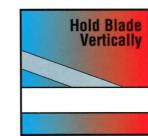


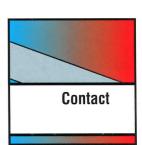


- Start with Step #2, then continue with Step #4 (reference page 5).
- Straight edges:
- Sharpen like a chisel, but sharpen both side alternately.
- Rounded gouges:
- Place stone in flat working position with groove up.
- Set edge in groove at proper bevel and rotate edge from one side to the other while stroking the length of the groove in stone.
- Use corner of white stone to cut off any burr that might develop on concave side of gouge (two or three strokes should remove burr).
- Wood gouges require a very sharp finish and it is recommended that you finish on the white stone.



There are no safety measures for this activity. Please use carefully as described.







SHOP TOOLS SHARPENING

Remember:

- Be sure that 204 and tool to be sharpened are both clean (for instructions on how to clean your 204, please see section titled "Cleaning Your Tri-Angle Sharpmaker").
 - (Safety rods are not used to protect hand when sharpening tools in this section).

Many of the following:

- Use Step #2 or Step #4 (or both).
- Use stone as file (i.e. hand held).

STEP #2



- Start with Step #2, then proceed to Step #4 (reference page 4-5).
- Use single stone as file.
- Use your finger as guide to maintain bevel.
- Use gray stone for shaping (rubbing back and forth until edge is sharp), then finish with white stone.

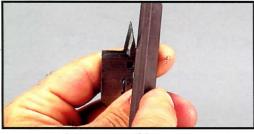


PADDLE BIT





• Start with Step #2, then proceed to Step #4 (reference page 4-5).



- Paddle bits are easily sharpened using single stone as file
- Place bit securely in vise to eliminate movement.
- Use finger as guide to maintain bevel.
- Rub back and forth until sharp.





ROUTER BIT*





• Start with Step #2, then proceed to Step #4 (reference page 4-5).

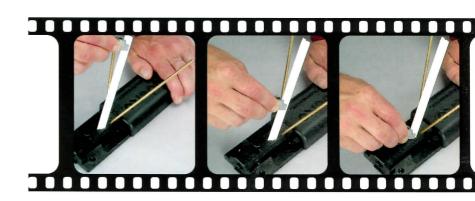


- Use one stone in upright position.
- Use gray stone until edge is sharp, then use white stone to finish.
- Lay inside of flute flush against flat surface of stone and rub up and down until sharp.
- Never sharpen outside of bit, as it changes size and shape of cut.
- One or two strokes on outside bevel should remove any burr that develops.
- Carbide bits take longer to sharpen than tool steel bits.
 - * Be sure to remove any bearing guides prior to sharpening.









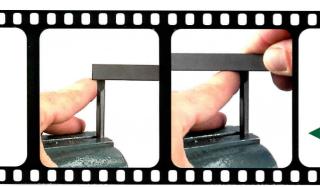
SCREWDRIVERS



- Use Step #2 only (reference page 4).
- Straight screwdrivers:



- Place in vise to restrict movement.
- Use gray stone as file to square off end and sides.
- Phillips screwdrivers:
- Place in vise to restrict movement.
- Use gray stone to straighten insides of grooves.



PHILLIPS HEAD

STANDARD HEAD

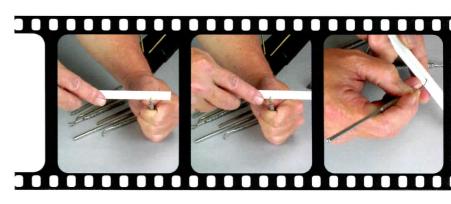
DENTAL TOOLS



• Use Step #4 only (reference page 5).



• Adjust to style of tool being sharpened.





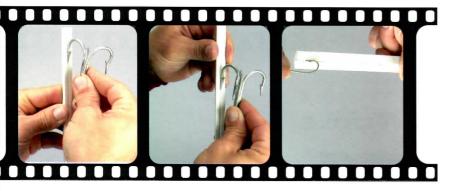
POINTED OBJECTS

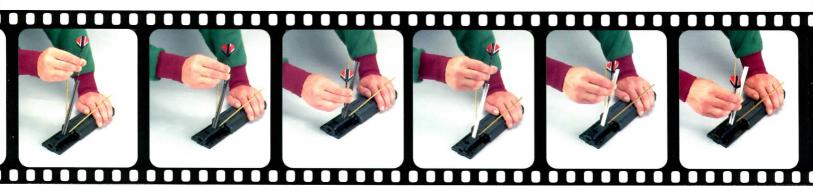






- Fish hooks are sharpened on the tip using one of two methods:
- Rub point of hook up and down in groove while rocking hook from side to side (large hooks).
- Hold two stones adjacent and rub hook back and forth in groove between stones (small hooks).
- Other pointed objects (awls, darts, leather needles, etc.):
- Put one stone in position for knives (flat grooved side up).
- Use groove in gray stone to shape tip; use groove in white stone to sharpen point.
- Hold tool straight up and down and rotate in fingers while rubbing up and down.



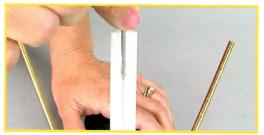




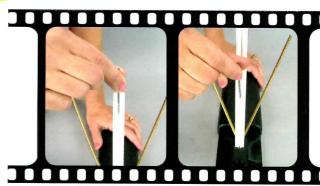
NEEDLES



- Needles:
- Use Step #3 only (reference page 5).



- Put one stone in position for knives (flat grooved side up).
- Use groove in white stone to sharpen point.
- Hold tool straight up and down and rotate in fingers while rubbing up and down.



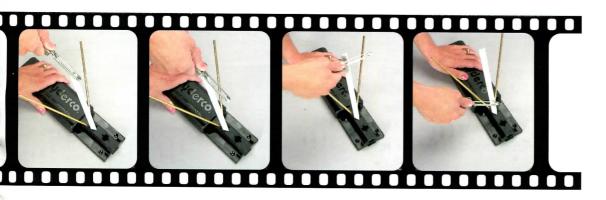
POTATO PEELERS



• Use Step #3 only (reference page 5).



- Using corner of stone, rub back and forth from inside of peeler to deburr and align cutting edges.
- Lightly run corner of stone from heel to tip (like peeling a carrot).





NAIL CLIPPERS



- Use Step #4 only (reference page 5).
- Hold clippers with blades open.
- Place thumb and forefinger on either side to keep stone from sliding off edge.
- Stroke across entire edge with stone.



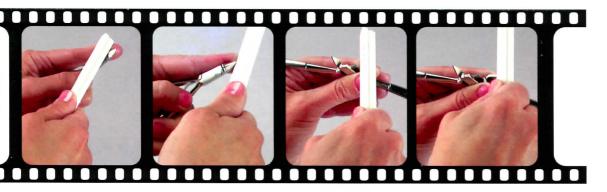


CUTICLE NIPPERS



- Use Step #4 only (reference page 5).
- Use single stone as file.
- Use your finger as guide to maintain bevel.





CLEANING YOUR TRI-ANGLE SHARPMAKER

When the abrasive areas of your stones are covered with steel, it is time to clean them. All of our stones are dishwasher and autoclave safe. In addition, steel particles can be removed from any of the stones using a powdered abrasive cleanser and a scouring pad. Do not be concerned if the ceramic does not clean completely for the first few washings - this is normal.





FAIR, HONEST & PROPER WARRANTY

Authentic Spyderco products - the results of our best efforts - are fine-tuned from design to materials and craftsmanship. When properly maintained, these high performance tools make a worthy investment.

Spyderco is a unique and innovative company and we rarely follow the lead of others. Our warranty policy is also unlike that of most manufacturers. We are committed to sharing honest information and solutions with you, the end-line user of our products. We design and build products that will normally last a lifetime or longer if they are used and cared for properly. As with any tool, you may use up their value prematurely or they may fail to perform if they are not used or cared for properly. If a product fails to function as it was designed, regardless of its age, we will examine its condition upon return, identify why it failed and respond in a fair, honest and proper manner. If we determine that a Spyderco product has defects in manufacturing or materials, it is our responsibility to repair or replace that product with the same model (or one of equal value). In the case of loss, or in the case of damage caused by abuse, misuse, accident, neglect, disassembly, or improper use, a product will not be covered by Spyderco's warranty. However, if a repair is possible, we will use our best judgement in improving the condition of a product not covered by the warranty (usually at no charge). If we are unable to improve the condition of the product, we will return it to you with a recommendation that it be retired from use.

Please direct all inquiries regarding warranties to our mailing address, toll free number, fax, email, or URL (see below). Packages directed to Spyderco should be sent UPS or registered mail (for tracking purposes) with a complete name, UPS-deliverable street address, daytime phone number, and a description of the concern. Outbound warranty shipments from Spyderco will be returned to the dealer or retail customer as directed, and will be prepaid as a service to our customers.

Spyderco, Inc. Attn: Customer Service 20011 Golden Gate Canyon Rd. Golden, CO 80403 U.S.A.

Phone: (800) 621-1065 or (303) 279-8383 Fax: (303) 278-2229 or (303) 277-1429

Email: custsvc@spyderco.com URL: http://www.spyderco.com/

Any dispute arising from or concerning this warranty shall be finally settled by binding arbitration to be held in Denver, Colorado. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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