



MODEL TSM-1 1 SCREW POCKET MACHINE



OPERATOR MANUAL

**Read and understand this manual
before using machine**

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U.S. PATENT No. 5,553,645

***WARNING: DO NOT PLUG THIS
MACHINE INTO ELECTRICAL POWER
UNTIL MACHINE IS FULLY
ASSEMBLED AND YOU HAVE READ
THIS MANUAL***

Your TSM-11 will pocket any material you would normally rout. It is designed for material from 1/2" to 1 1/2". Use of materials thinner than 1/2" is not recommended. Every TSM-11 machine is factory adjusted. If you should find a small amount of sawdust in the bottom of your TSM-11, please don't be alarmed.

SAFETY NOTIFICATION

This machine was carefully prepared for shipment at our factory. Upon receipt of the machine, inspect for shipping damage and report any damage IMMEDIATELY to the freight company, your Castle Market Partner and to Castle at 800-282-8338.

DO NOT attempt to operate the machine if you observe any physical damage.

GENERAL SAFETY RULES

The Castle Model TSM-11 Benchtop Pocket Machine was designed with operator safety as a priority, which is why Castle highly recommends the following:

1. Do not plug machine in until ready to operate.
2. Always wear eye protection when operating or servicing mechanical equipment.
3. Always wear hearing protection when the machine is in operation.
4. Always check for proper tooling tightness prior to use.
5. Do not at any time put hand under the clamp guard, in the path of router bit or drill bit.
6. Familiarize yourself with the clamping action, routing and drilling functions before plugging the machine into electrical power supply.
7. Always be sure to securely clamp stock before routing or drilling any material.
8. Always plug TSM-11 into 110 volt grounded power outlet.
9. Never allow machine to get wet or be used in a wet environment.

INVENTORY

With your Castle machine you should have received the following:

- S90011 TSM-11 Operator Manual with Warranty Activation Card
- V11001 TSM-11 work top
- H11001 (4) Non-slip machine feet
- F51628 (4) 5/16" - 18 nuts
- F44114 (4) 1/4" - 20 x 1" flathead machine screws
- F01420 (6) 1/4" - 20 locknuts
- F01410 (2) 1/4" flat washers
- F14412 1/4-20 x 1/2 socket cap screw
- N11001 Motor mount U-Bolt
- E26902 Porter Cable 6902 router motor
- B00338 3/8" solid carbide 3-flute premium router bit
- D50038 3/8" collet
- E27301 Porter Cable 7301 drill motor
- B02964 9/64" TiN coated premium drill bit w/ 1/4" shank
- B00622 6" square driver bit
- Three (3) Porter-Cable collet wrenches
- T00532 5/32" hex key
- O00231 Bit gauge



To complete assembly of the Castle machine, you will require the following tools:



- (1) 7/16" wrench or ratchet
- (1) 1/2" wrench or ratchet

MACHINE REQUIREMENTS

Electricity:

Your TSM-11 is designed to run on a 110 volt -15 AMP standard 3 prong power supply. 2 prong power adapters are not recommended for use on this machine and could cause electric shock to the user. Be sure your unit is properly grounded. See a qualified electrician if you are in question about your electrical safety compliance.

SETTING UP YOUR TSM-1 1

Always use eye and hearing protection when operating power equipment.

- Remove the machine from the carton and plastic over-wrap, and place on its back as shown. Be careful to place it on a clean surface free of debris to avoid damage to the powder coated finish.



- Secure the (4) non-slip machine feet to the machine using a 1/2" wrench and (4) 5/16"-18 nuts.



- Unpack the Porter Cable trimmer motor and collet wrench. **DO NOT UNTIE THE POWER CORD!** Insert the Castle Premium drill bit until the tapered portion of the shank is approximately flush with the collet opening. Holding the spindle lock button secure the drill bit with the collet wrench. Toggle the motor switch to the "ON" position.



- Carefully insert the 1/4"-20 x 1/2" button head screw into the hole at the top of the case using the supplied 5/32" hex key. The threaded portion of the screw should be fully inserted through the stainless steel motor carriage.



- Install the U-bolt in the Router Carriage as shown using (2) 1/4" washers and (2) 1/4"-20 nylon locknuts. Do not tighten at this time.



- While holding constant pressure on the screw head to prevent it from falling out, position the router motor in the carriage as shown and tighten the screw. Plug the motor into the lower outlet.



- Unpack the Porter Cable router motor and collet wrenches. **DO NOT UNTIE THE POWER CORD!** Screw the 3/8" collet onto the motor and insert the Castle Premium carbide router bit until it is fully seated. Secure the router bit with the collet wrenches. Toggle the motor switch to the "ON" position.



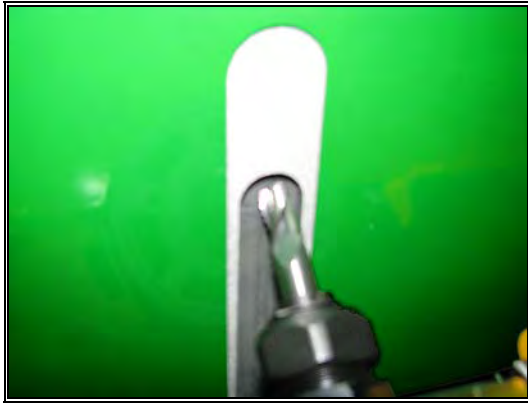
- Install the router in the yellow carriage, carefully noting the orientation depicted below. With the motor firmly engaged against the carriage, tighten the two locknuts with a 7/16" wrench. Work back and forth to insure even thread engagement. Plug the router into the remaining outlet.



- Position the work top as shown, with the grey friction pad directly under the clamp-guard. Using (4) 1/4"-20 x 1" flathead machine screws, and (4) 1/4"-20 nylon locknuts, fasten the work top to the machine. Use the supplied 5/32" hex key and your 7/16" wrench.



- Inspect each motor cord to verify that they are plugged into the duplex power outlet box inside the machine and that they are clear of any moving parts. You may unplug the main machine power cord at this time. Verify the router bit is positioned at the center of the cutout on the underside of the worktop. If it is not, refer to the Machine Adjustments section “Pocket Hole Alignment” before proceeding. Place the machine on your workbench right side up.



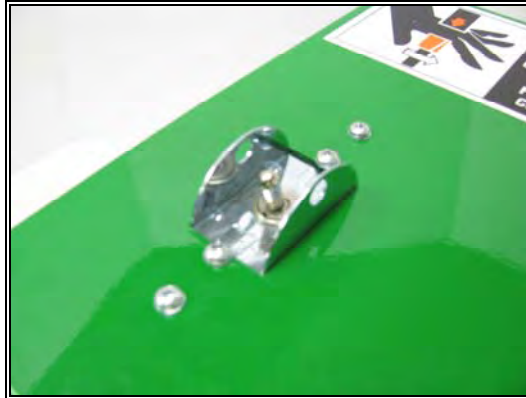
OPERATING INSTRUCTIONS

Always use eye and hearing protection when operating machinery.

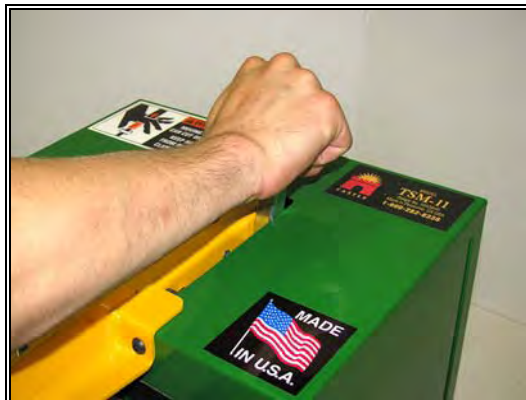
1. Check to be sure the switch on top of the machine is in the OFF position and then plug the TSM-11 into a 110 volt grounded power supply.
2. Place material to be pocketed on work table under clamp and against rear face.
3. Push forward on clamp lever (red handle), confirm that clamp is secure by manually pulling on the material. If material is loose, adjust foot on clamp as necessary to assure material is held securely. **NOTE: NO TOOLS ARE NECESSARY TO ADJUST THE CLAMP FOOT, SIMPLY HOLD THE LOWER NUT BETWEEN YOUR FINGERS, AND LOOSEN THE WINGNUT WITH YOUR OTHER HAND.**



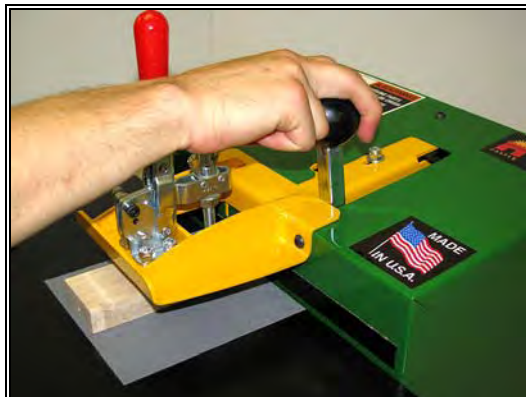
4. To operate, move the power switch to the ON position. Both motors should start. It may be necessary to toggle the individual motor switches.



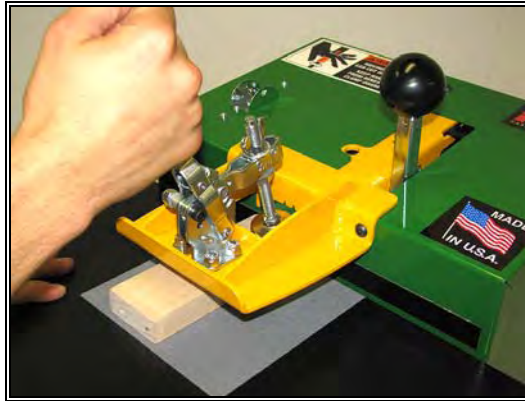
5. Push the black handle forward briskly until it hits the stop. This routs the pocket. If you release the black handle, the machine will move to the neutral position on its own. It is not necessary to release the black knob before proceeding to step 6.
NOTE: THE FIRST POCKET YOU CUT WILL CREATE A THROUGH SLOT IN THE WORKTOP. TO INSURE A CLEAN CUT, MAKE SURE A WORKPIECE IS SECURELY CLAMPED IN PLACE.



6. Pull black handle toward you briskly until it hits the stop. This drills the pilot hole.



7. Release the black handle. The operating lever returns to the neutral position by itself.
8. Pull the clamp lever (red handle) toward you to release the material clamp



9. For additional pockets repeat steps 2 through 8.



General Information: The hand clamp should be tight enough for a “Brisk” travel of both the routing and drilling strokes. If your material moves during the cycle, tighten the clamp slightly.

Note: Bit “burning” (router or drill bits) is caused by either dull tooling, too slow of a movement of the operating lever or both. Remember, the TSM-11 is powered by two high speed routers and is designed to aggressively enter the material being pocketed. *If you think your tooling is burning while using the TSM-11, chances are you are probably not moving the operating lever fast enough!*

MACHINE ADJUSTMENTS

Your TSM-11 comes factory-adjusted to handle typical pocket-hole needs. Some additional adjustment may be necessary.

Note: Before making any adjustments please make sure that the machine is disconnected from the electrical power outlet.

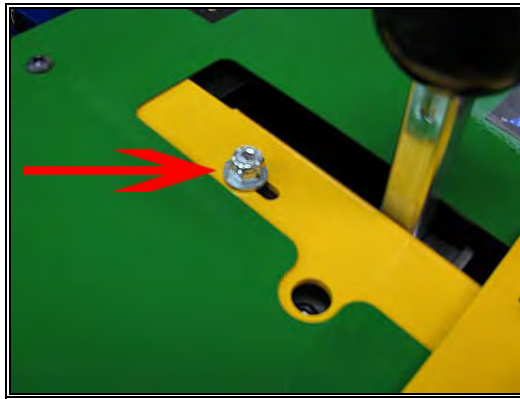
Pocket Hole Alignment:

If the pilot hole is off center of the pocket, reach into the right side of the machine, and loosen the wing-nut ½ turn CCW. Make small adjustments to the nylon thumbscrew (1/2 turn or less) until proper alignment is achieved. ***A clockwise rotation of the screw will result in the router moving to the left, and a counter-clockwise rotation will move the router to the right.*** Retest between adjustments by pocketing another piece of material. When the pilot hole is positioned in the center of the pocket, tighten the wing nut to secure the yellow carriage in position. The nylon machine screw is designed to ride along the wall of the machine.



Web Adjustment:

To move the pocket (routed portion) closer to or further from the edge of the material, use a 7/16" wrench and loosen the Nylock nut next to the operating handle. Moving the nut away from you will make the pocket cut closer to the edge of the material, pulling the nut toward will make the pocket farther from the edge of the material. Tighten the nut each time before testing. This is a trial and error method until you get the pocket where it suits you best.



Adjusting for thinner material:

Make a shim the size of the work top from 1/8" plywood material. Lay it on the work table then place the 1/2" material on the 1/8" plywood. Adjust the clamp hold down arm if necessary and rout through both pieces. When finished, remove the 1/8" plywood and readjust the clamp if necessary. You are again ready for your regular thickness material.

SERVICE & MAINTENANCE

General

In order to ensure productivity and longevity for your Castle Benchttop Screw Pocket Machine, it is essential to follow a few simple steps. How often these steps are performed depends upon the number of hours the machine is operated each day. As a general rule, operators should visually inspect the machine at the start of each work shift in the following manner:

Router Bit Replacement:

- A. Unplug the TSM-11 from the electrical outlet.
- B. Lay the machine on its back so the bottom of the machine is accessible. Loosen the (2) locknuts and remove the router motor.



- C. Remove the router bit using the wrenches provided. Insert the replacement router bit until it is fully seated. Secure the router bit with the collet wrenches.
Note: If you prefer a slightly deeper cut, scribe a line on the supplied bit gauge to help you remember the preferred depth to which the bit should be inserted.



- D. Re-install the router in the yellow carriage, carefully noting the orientation depicted below. With the motor firmly engaged against the carriage, tighten the two locknuts with a 7/16" wrench. Work back and forth to insure even thread engagement.



Pilot Bit Replacement:

- A. Unplug the TSM-11 from the electrical outlet.
- B. Remove the cap screw which holds the drill in place, and pull the drill out of the machine.



- C. Remove the dull bit using the wrench provided. It may be necessary to lightly tap the collet to loosen the bit. Insert the replacement drill bit until the tapered portion of the shank is approximately flush with the collet opening. Secure the bit.



- D. Reinsert the cap screw, and while holding constant pressure on the screw head to prevent it from falling out, re-position the router motor in the carriage as shown and tighten the screw. *Note: It is not necessary to remove the router motor to perform this action. It has been removed in the picture below for clarity.*



Motors and Bits

Because the motors are enclosed in the machine, it is important that the maintenance guidelines provided in the manufacturer's instruction manual be strictly observed.

- Periodically during operation, blow out the air passages on both motors with 30 PSI compressed air. *Caution: always wear safety goggles when using compressed air.*
- It is suggested that a two flute, carbide tipped **B00138** Castle bit be used when pocketing particleboard, Melamine, MDF, etc. This leaves a clean cut and offers economically longer bit life.
- When cutting pockets in solid woods such as maple, oak, ash or alder the **B00438** 4-flute HSS Cobalt bit can be used. Use of this bit is NOT recommended in particle board.
- If pockets are being cut in both types of materials (i.e., particleboard and hard wood) or if an exceptionally long bit life is desired, then it is suggested that the **B00338** solid carbide bit (shipped with your machine) be used. All three bits are available through Castle, Inc.
- The pilot hole is made with a $\frac{9}{64}$ " drill bit, **B02964**. This size drill bit comes with your machine. Also available are a $\frac{7}{64}$ " and $\frac{3}{16}$ " size drill bit.
- Contact your local Castle Market Partner or our Castle Parts Department at 800-282-8338 for information and pricing on tooling and accessory products for your TSM-11, or shop our convenient Web Store for online ordering. www.castleusa.com/web-store.html

WARRANTY INFORMATION

Castle, Inc. uses only the highest quality materials available for the construction of our machines. Your TSM-11 Bench Top Pocket Machine is warranted for one full year from the date of purchase against workmanship or material defects under normal use and service. We are not responsible for negligence, misuse or accidents. We suggest any and all machine maintenance or repair be discussed with an authorized Castle Representative prior to any disassembly. We will gladly answer any questions you may have prior to any part removal.

Castle, at its sole discretion, may either repair or replace machines that are found to be defective. This shall be the End User's sole remedy under this warranty. **Castle will not, under any circumstances, be liable to the End User for consequential, incidental, special or exemplary damages, or for loss of profits, revenue or use. Further, Castle disclaims any warranty, expressed or implied, as to the merchantability or fitness of a Castle product for any particular purpose.**

Porter Cable warrants their router motors for one (1) year from date of purchase. We suggest that you keep your bill of sale and motor serial numbers in a safe place. You will need a copy for any repairs or replacements.

For Technical Assistance, Parts & Tooling contact your nearest Castle Market Partner or Castle Inc. at 800-282-8338 Monday through Friday, 7:30am – 3:00pm, Pacific Time

TABLE OF CONTENTS

INTRODUCTION.....	PAGE 1
SAFETY NOTIFICATION	PAGE 1
GENERAL SAFETY RULES	PAGE 2
MACHINE INVENTORY	PAGE 3
MACHINE REQUIREMENTS.....	PAGE 4
SET-UP & INSTALLATION.....	PAGE 5
OPERATING INSTRUCTIONS	PAGE 8
MACHINE ADJUSTMENTS.....	PAGE 11
POCKET HOLE ALIGNMENT PAGE	
WEB ADJUSTMENT	
ADJUSTING FOR THINNER MATERIAL.....	PAGE 12
SERVICE & MAINTENANCE	PAGE 12
ROUTER BIT REPLACEMENT	
PILOT BIT REPLACEMENT	
MOTORS & BITS	PAGE 15
WARRANTY INFORMATION.....	PAGE 16