Kahler MADE IN USA

AUTO LATCH™

INSTRUCTIONS FOR THE INSTALLATION AND ADJUSTMENT
OF THE KAHLER® AUTO-LATCH™

[NOTE: Your tremolo must be a KAHLER® SPYDER™ or a KAHLER® 2700series™ tremolo in order to accept this KAHLER® AUTO-LATCH™ accessory without a conversion kit. Conversion kits are not available for all types of tremolos. Please consult your dealer for assistance.]

DESCRIPTION: The KAHLER® AUTO-LATCH™ is a device which keeps a guitar in tune during string breakage, note bending, and palm muting. It latches a tremolo into a non-moveable fixed bridge when the tremolo is not in use. By means of an adjustable indexing mechanism, the latched position may be easily set to match the floating balance position of the tremolo.

INSTALLATION and SET UP:

Part one / AUTO-LATCH™ ARM MODULE ASSEMBLY:

1. If your tremolo is mounted on your guitar, slacken the strings. From the rear of the guitar, remove the back-plate which covers the spring cavity, and detach the springs from the lower block of the tremolo. Carefully lift the tremolo from the guitar. (The guitar strings may remain attached to the tremolo.)

2. If your tremolo is one of the KAHLER® models listed in the **NOTE** above, use the large (3/32nds) allen wrench which is supplied with this unit to remove the two ARM FIXTURE MOUNTING SCREWS which secure the existing ARM FIXTURE to your tremolo. The ARM FIXTURE is a black bracket which is attached to your tremolo's lower block. It is the piece which your tremolo's arm screws into.

[If your tremolo is not a KAHLER®, but you have purchased a conversion kit to adapt this unit to your tremolo, install the conversion kit at this time by following the conversion kit's instructions.]

3. Place the Y-SLIDE into the AUTO-LATCH™ ARM FIXTURE as shown in **Figure 1.** Slip these two parts onto the tremolo's lower block, tapping the bottom of the AUTO-LATCH™ ARM FIXTURE lightly if necessary, so that the holes for the ARM FIXTURE MOUNTING SCREWS line up with the holes in the lower block. Using the 3/32nds wrench (large), install and **firmly** tighten the new ARM FIXTURE MOUNTING SCREWS supplied with this unit.

4. Insert the two Y-SLIDE SPRINGS into the two corresponding holes in the end of the AUTO-LATCH™ ARM FIXTURE, as shown in **Figure 1.** Using the 5/64ths wrench (medium) supplied, install the two Y-SLIDE PUSH SCREWS into these same holes to compress the springs. Turn the screws firmly until they stop; do not over tighten them beyond the point at which they stop. Place several drops of 3-in-1 oil onto the springs where they appear in the window of the AUTO-LATCH™ ARM FIXTURE.

5. Mount the tremolo on the guitar. (See the tremolo's mounting instructions if necessary.)

6. Screw the AUTO-LATCH™ ARM into the tremolo. The arm will encounter drag on about 1/2 of every turn as it is screwed in; this is normal. Continue screwing in the AUTO-LATCH™ ARM until it stops. Then, unscrew the AUTO-LATCH™ ARM 1 or 2 turns.

Part two / MOUNTING THE AUTO-LATCH^{tm} INDEX ASSEMBLY:

7. Position, balance, and intonate the tremolo and strings to your playing preference. Tune the guitar.

8. Rotate the AUTO-LATCH^{tm} ARM so that it points toward the headstock of the guitar. Lay the guitar face down on several padded surfaces (maybe padded blocks of wood or books), so that the rear of the guitar can be easily accessed. Be sure that nothing touches the tremolo and changes its balance.

9. The AUTO-LATCH^{tm} INDEX ASSEMBLY should resemble **Figure 2A**, with the POSITION-SET LEVER in the "TIGHT" position and the SWING-ARM SLIDE fully retracted so that there is no gap between it and the INDEX HOUSING. (If there is a gap, flip the POSITION-SET LEVER up to the "LOOSE" position and move the SWING-ARM SLIDE back so that there is no gap. Push the POSITION-SET LEVER back to the "TIGHT" position.)

10. Looking down onto the back of the guitar, place the AUTO-LATCH^{tm} INDEX ASSEMBLY into the guitar as shown in **Figure 3.** The "front screw" in the tip of the INDEX ASSEMBLY which is pointed to in **Figure 3**, must fall in line with the lower block of the tremolo. Make sure the INDEX HOUSING is accurately aligned perpendicular to the lower block of the tremolo as shown in **Figure 3.** Secure the INDEX HOUSING in place using the two FLAT HEAD MOUNTING SCREWS and the two FILLISTER HEAD MOUNTING SCREWS where shown in **Figure 1**, pre-drilling the screw holes with a 1/16th inch diameter bit. (Be careful that the drill bit does not damage the guitar's pick-ups or wiring.)

[NOTE: The INDEX HOUSING may need to be shimmed if the guitar's spring cavity is so deep that the INDEX HOUSING does not rest flatly on the floor of the cavity.]

[NOTE: If the NOTCH PLATE as shown in **Figure 3** does not sit deep enough in the guitar to fall within the slot in the tremolo's lower block, it can be reconfigured to attach to the bottom of the swing arm as seen in **Figure 2B.**]

11. Release the POSITION-SET LEVER by pulling it up to the "LOOSE" position as in **Figure 2A.** Slide the NOTCH PLATE out toward the tremolo until its notch falls in alignment with the lower block of the tremolo, as shown in **Figure 4.** Carefully reach around to the tremolo arm and rotate it about 90 degrees in the direction of the guitar's volume knob, until the Y-SLIDE pulls the notch to engage the lower block of the tremolo.

12. Push the POSITION-SET LEVER down into the "TIGHT" position. Using the small (0.050") allen wrench, turn the NOTCH PLATE ADJUSTMENT SCREW 1/2 turn **counter-clockwise.**

13. Reach around the guitar and rotate the tremolo arm toward the headstock again, and depress the arm toward the guitar to "dive-bomb" the tremolo. If the NOTCH PLATE rubs against any portion of the tremolo assembly, turn the NOTCH PLATE ADJUSTMENT SCREW slowly **clockwise** while repeatedly "dive-bombing" the tremolo until the NOTCH PLATE no longer rubs the tremolo assembly. This step adjusts the NOTCH PLATE so that it has clearance from the lower block of the tremolo.

[The AUTO-LATCH^{tm} is now properly adjusted. Refer to the "QUICK ADJUSTMENT" above for minor routine adjustment.]

14. A hole can be cut in your guitar's back-plate to allow easy access to the POSITION-SET LEVER, as shown in **Figure 5.**

QUICK ADJUSTMENT: (...if your AUTO-LATCH^{tm} is already installed...)

A). Rotate the AUTO-LATCH^{tm} ARM up near the strings as if the tremolo were being used, and tune the guitar.

B). Rotate the AUTO-LATCH^{tm} Arm down (toward the volume control) into the lock position. Be sure that the notch of the NOTCH PLATE is engaged with the lower block of the tremolo.

C). Pull the POSITION-SET LEVER out away from back of the guitar, and re-check the tuning. If it has drifted at all, correct it by moving the tremolo very slightly with your fingers. (Do not adjust the fine tuners at this time.)

D). Flip the POSITION-SET LEVER back down.

USER TIPS:

* If a string breaks while the tremolo is being used, simply put the arm into the latched position and pull up lightly on the rear of the tremolo, until the latch automatically snaps in. You will feel a "click" when this happens, and the bridge will be locked in "home position".

* Always be sure that the notch is engaged with the tremolo's lower block before you release the POSITION-SET LEVER during STEP B of the "QUICK ADJUSTMENT". As you look at the back of the guitar, if the notch does not appear to be lining up with the lower block of the tremolo carefully repeat STEP NUMBER 11, above. Do not release (pull out) the POSITION-SET LEVER when the AUTO-LATCH^{tm} ARM is not in the latched (downward) position, as the NOTCH PLATE will slide out of position.

* The supplied medium (5/64ths) wrench has an offset tip at one end to allow access to the six saddle LOCK DOWN BOLTS on the underside of a KAHLER^{R} 2710^{tm} tremolo.

TROUBLE SHOOTING:

Problem: The tremolo arm will not screw in.

Solutions:
* Check to see if you are attempting to screw in the AUTO-LATCH^{tm} ARM, and not an old regular ARM.
* Back out the Y-SLIDE PUSH SCREWS by turning each one of them 2 full turns counter-clockwise.

Problem: The arm is always stiff; it does not easily jump into the latched position.

Solutions:
* If the tremolo's arm clutch screw is touching the arm, unscrew it by turning it several turns counterclockwise.
* Lubricate the threaded portion of the arm.

Problem: The tremolo seems to "slip", even though the arm is in the latched position. The tremolo either slips forward when notes are bent causing the strings to be flat in pitch, or the tremolo slips back when a string breakage or palm muting occurs causing the strings to go sharp in pitch.

Solutions:
* Double check to see if the notch is engaging the lower block of the tremolo when the arm is in the latched position. If you suspect that the notch is not gripping the lower block of the tremolo, carefully repeat STEP 11 of this manual.
* Tighten the TENSION SCREWS by turning them each about 1/8 to 1/4 revolution clockwise. The TENSION SCREWS are located in the holes in the INDEX HOUSING which are marked by the letters "T". It may be helpful to flip the POSITION-SET LEVER up while making this adjustment. If the POSITION-SET LEVER has not been applying enough pressure, this procedure will increase the lever's locking pressure. (See **Figure 1.**)

Problem: Even though the tremolo is in the latched position, it seems to "have play". It can be easily moved sharp or flat a very slight amount before such movement is resisted by the AUTO-LATCH^{tm}.

Solutions:
* Make sure that you are putting the AUTO-LATCH^{tm} arm into the correct latching position. If the arm is rotated too far or not far enough, the latch may be partially open. The arm will usually jump into the correct latching position when it is swung out of the way of the strings. However, the arm may go too far if it is swung forcefully, or it may not go far enough if you have your clutch screw applying rotational friction to the arm. Experiment with how much force to use to flip the arm into latching position. If you like the arm to have a great deal of rotational resistance from the clutch screw, you may need to be more deliberate as you rotate the arm into latching position.
* Check to see if the INDEX HOUSING is perpendicular to the tremolo's lower block, as described in STEP 10,above. If the INDEX HOUSING is crooked, it may be responsible for a slight amount of play between the NOTCH PLATE and the lower block of the tremolo. To correct this problem, relocate the INDEX HOUSING about 1/8th of an inch further from the lower block (to get away from the old mounting holes), and about 1/16th of an inch toward the treble side of the tremolo (towards the arm). Make sure that it is perpendicular to the lower block.

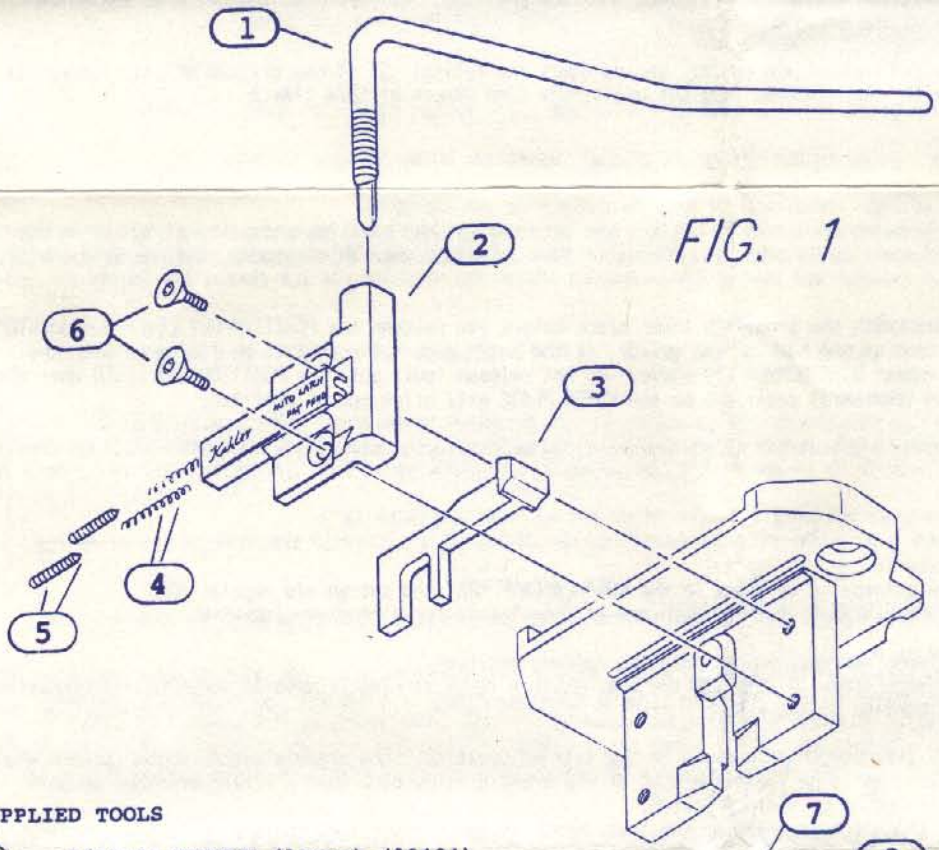


FIG. 1

AUTO-LATCH ARM MODULE ASSEMBLY

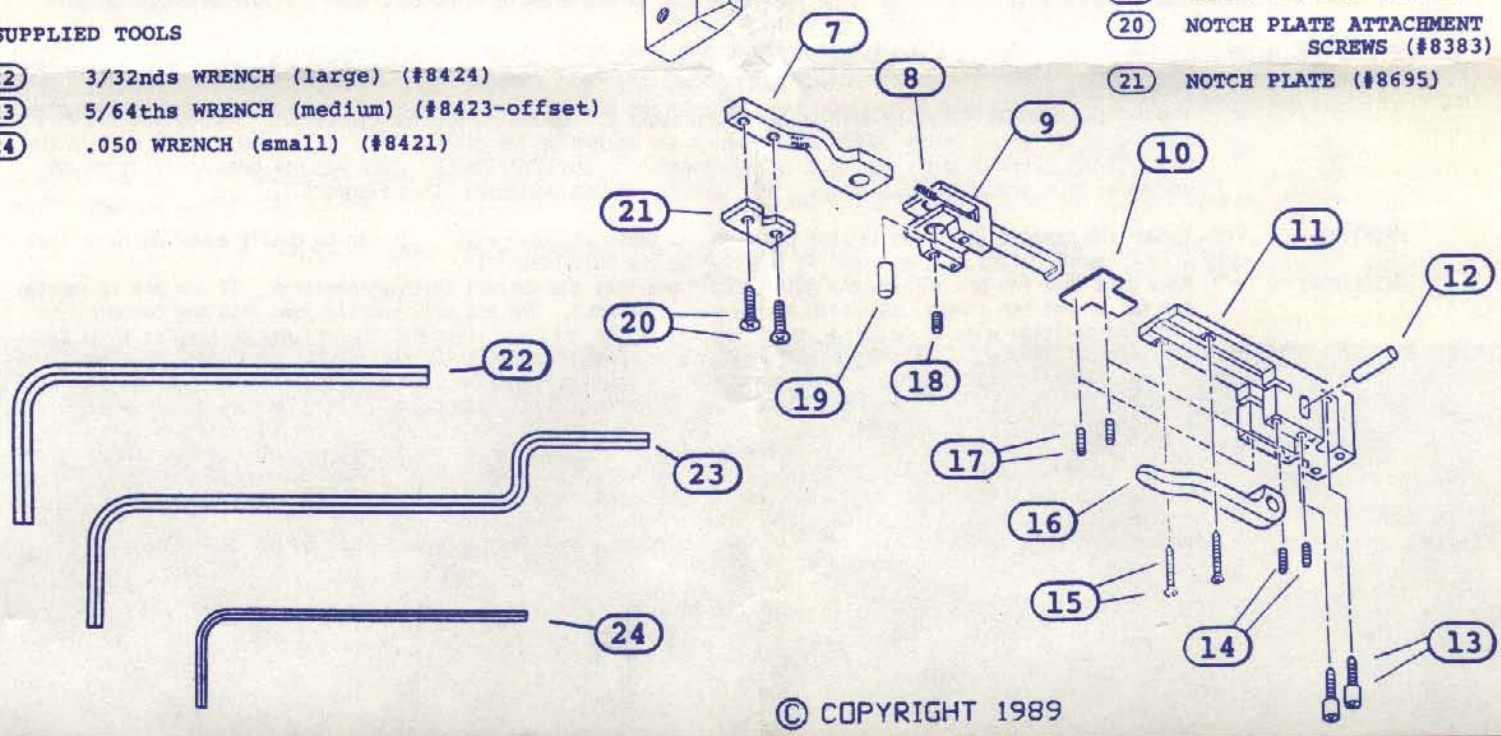
1. AUTO-LATCH ARM (#8338)
2. AUTO-LATCH ARM FIXTURE (#8600)
3. Y-SLIDE (#8690)
4. Y-SLIDE SPRINGS (#8446)
5. Y-SLIDE PUSH SCREWS (#8332)
6. ARM FIXTURE MOUNTING SCREWS (#8420)

AUTO-LATCH INDEX ASSEMBLY

7. SWING ARM (#8650)
8. SWING ARM SPRING (#8447)
9. SWING ARM SLIDE (#8660)
10. CLAMP PLATE (#8685)
11. INDEX HOUSING (#8670)
12. LEVER PIN (#8312)
13. FILLISTER HEAD MOUNTING SCREWS (#8364)
14. TENSION SCREWS (#8335)
15. FLAT HEAD MOUNTING SCREWS (#8353)
16. POSITION-SET LEVER (#8680)
17. CLAMP PLATE SCREWS (#8397)
18. NOTCH PLATE ADJUSTMENT SCREW (#8331)
19. SWING ARM PIN (#8310)
20. NOTCH PLATE ATTACHMENT SCREWS (#8383)
21. NOTCH PLATE (#8695)

SUPPLIED TOOLS

22. 3/32nds WRENCH (large) (#8424)
23. 5/64ths WRENCH (medium) (#8423-offset)
24. .050 WRENCH (small) (#8421)



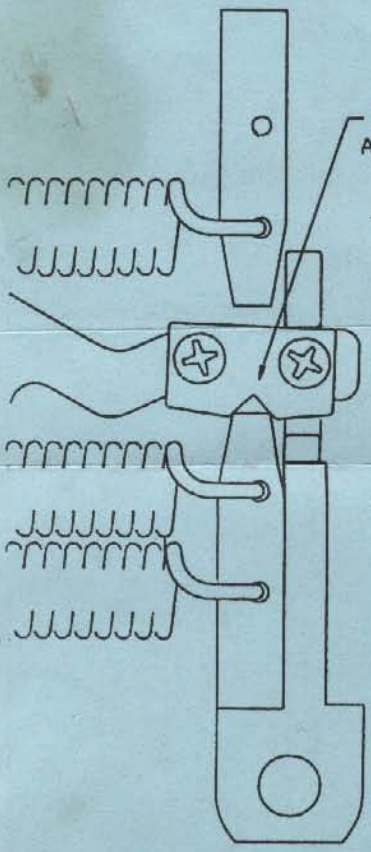


FIG. 4

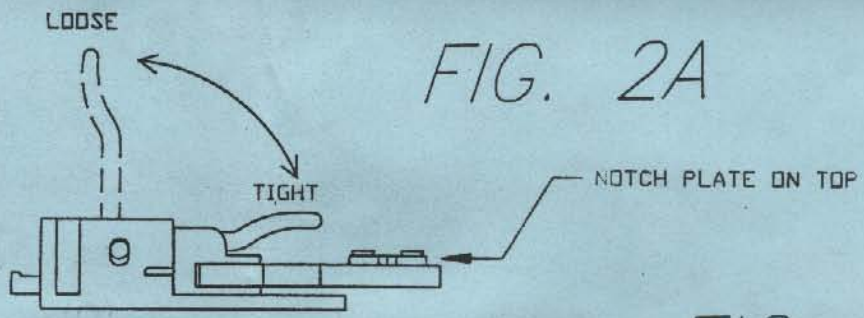


FIG. 2A

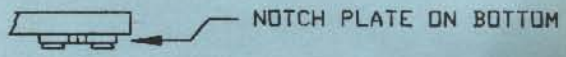


FIG. 2B

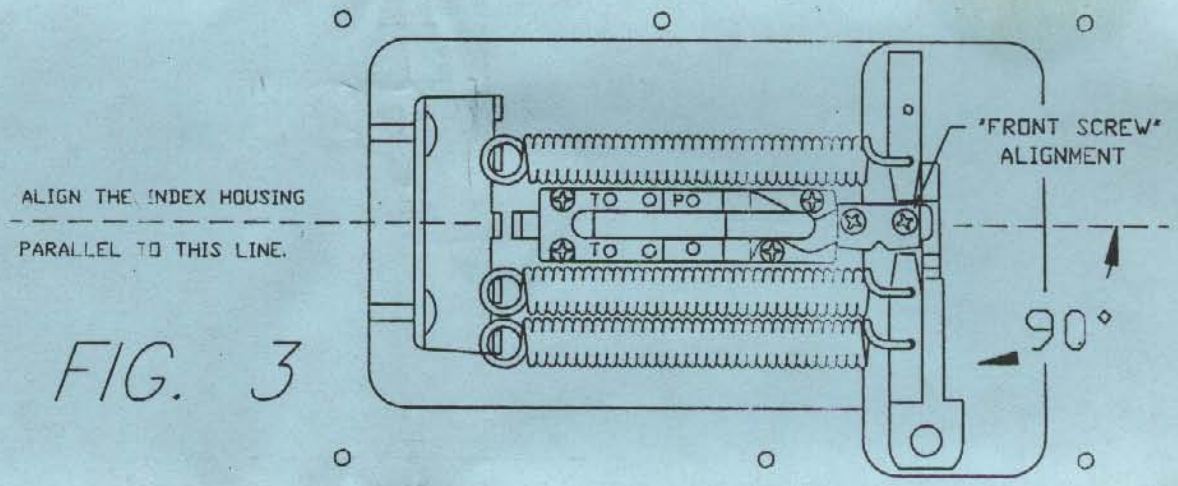


FIG. 3

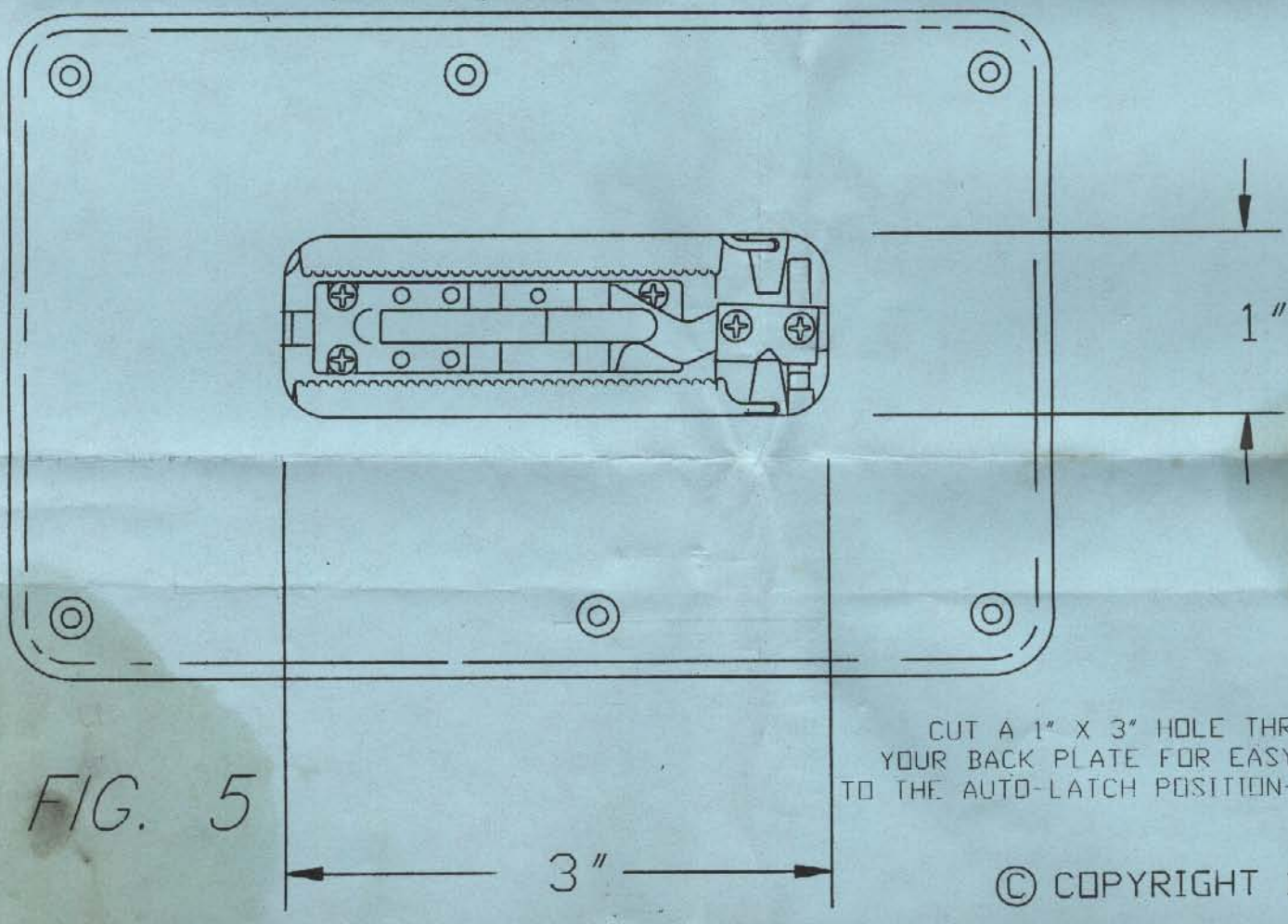


FIG. 5

CUT A 1" X 3" HOLE THROUGH
YOUR BACK PLATE FOR EASY ACCESS
TO THE AUTO-LATCH POSITION-SET LEVER.