Letter from the President

Welcome to the Perkins Brailler! Perkins has designed this brailler to be durable and to create high-quality braille. We hope it provides you with many years of use and enjoyment.

The Perkins Brailler, viewed by many as the premiere mechanical braille writer in the world, was first produced in 1951. It is currently sold around the world. The quality and reliability of the Perkins Brailler continues to keep it in production and high demand today, with only minimal changes over the years.

Today, in addition to the Perkins Brailler, Howe Press sells many other braille-related products, including: light and heavyweight braille paper; extension keys (for individuals with limited hand strength or dexterity); Dymo tape holders (so you can braille on Dymo tape with a Perkins Brailler); slates and styluses; protractors and rulers; large-cell, one-handed (unimanual), and electric braillers; and much more. Please feel free to contact us for a catalog, or visit our website for additional information. In addition please visit www.perkins.org to learn more about our history, our services and our other products including many publications.

From its beginnings in David Abraham's basement workshop in Watertown, Massachusetts, the Perkins Brailler has attained a worldwide reputation for its quality and reliability. More than 50 years after the machine was first produced, the Perkins Brailler continues to play a part in bringing education, literacy and independence to people throughout the world.

Sincerely,

***Steven M. Rothstein*, President**
Perkins School for the Blind

Unpacking Your Brailler

Please note that this manual is also available on cassette tape upon request from Howe Press and may be found on our website at www.perkinsbrailler.org.

1. Remove the top Styrofoam insert at each end of the brailler.

2. Put one hand on each end of the brailler below the paper feed knobs and lift it from the box.

3. Remove the plastic wrap covering the brailler.

4. Enclosed with the brailler are two sheets of paper. One contains only braille and shows the results of a quality control and embossing test; the other is a reminder in print and braille to put the dust cover on the Perkins Brailler when it is not being used.

5. There are rubber bands attaching the carriage lever (near the right end of the brailler on the narrow shelf above the keys) to the right paper feed knob. Remove the rubber bands. (See the Machine Layout section below for more information about the carriage lever and paper feed knobs.)

6. Gently pull the carriage lever back to the left. If it slides back to the right when you release it, the carriage lever may have gotten jammed slightly during shipping; press the right edge down and slide the carriage lever over to the right to release it.

In the bottom of the box, you will find a plastic bag containing:

- Print and braille copies of the brailler manual
- Dust cover
- Wooden braille eraser

Getting Started

The Perkins Brailler is guaranteed for one year against defective materials and workmanship. If there is a problem using the brailler, you can contact Howe Press. Phone or e-mail communications are preferred.

HOWE PRESS
Perkins School for the Blind
175 North Beacon St.
Watertown, MA, USA 02172-2790
Telephone: 617-924-3490
Fax: 617-926-2027
Email: howepress@perkins.org
Website: www.perkins.org

Staff will assist you to either solve the problem or make arrangements for returning your brailler.

The dust cover is leatherette and has a slot in the top for the handle, in case you want to carry the brailler while covered. It is very important to keep the brailler covered when it is not in use to keep dust and dirt out of the machine.

Your brailler was thoroughly oiled at the factory. Initially, you may wish to roll a blank sheet of braille paper in and out of the machine a few times to absorb any excess oil remaining inside. This process will prevent any oil spots from appearing on your first pages of braille.

Be sure to keep the carton in which the brailler was shipped to you. Using the carton is the easiest way to ship the brailler back to the factory for repair.

Machine Layout and Basic Functions

Throughout this section, the assumption is being made that the brailler is in front of you with the keys toward you.

Keys. There are nine keys across the front of the Perkins Brailler. The spacebar is in the middle. If you move to the left of the spacebar, you will find the keys for dots 1, 2, and 3, then the line spacing key at the far left. If you move to the right of the spacebar, you will find the keys for dots 4, 5, and 6, then the backspace key at the far right.

Paper Feed Knobs. These knobs project out from the left and right sides of the brailler, and each is about an inch across. They are used for rolling paper into and out of the machine. See the Inserting and Removing Paper section for more information.

Paper Release Levers. There are two levers, one at each end of the brailler on the top surface, near the back. If you move one lever, forward or back, the other moves as well. They are used to secure the paper in place before rolling it into the brailler.

Paper Rollers. There are two rollers that extend from left to right on the back top portion of the machine; they are used to roll the paper in and out of the machine. The top roller is metal, with rubber O rings at intervals to hold the paper more securely in place. The bottom roller is coated with rubber and rotates when you turn the paper feed knobs.

Carriage, Carriage Lever, and Embossing Head. The carriage moves the embossing head across the paper, brailling as it moves from left to right. You can move the carriage by means of the carriage lever, which is on a narrow shelf above the keys. It has an unusual cup shape designed to comfortably

hold one to three fingertips. When you are brailling, the right end of the lever points upward. To move the carriage to the right, you can use the spacebar or gently press the carriage lever down to the right. You can then slide the carriage to any position on the line. To stop the carriage from moving, release the pressure and the carriage lever will return to the original position.

Notice that the embossing head moves when you move the carriage lever. The embossing head will move only when the carriage lever is pressed down or when keys are pressed.

To ensure that the carriage will begin brailling at the left margin, it is recommended that you pull the carriage lever all the way back to the left. The brailler will make a slight clicking noise as the carriage moves, but this does not harm the machine. Avoid roughly slamming the carriage lever to the left, as this can damage the embossing head.

Paper Guide Knob. This small, rough knob is located on the back of the brailler in a slot in the top left corner. If you twist the knob counterclockwise to loosen it, you can slide it back and forth in the slot, which is one-half inch wide. Twist the knob clockwise to tighten it wherever you want it to be set.

For a half-inch left margin, position the paper guide knob all the way to the right. For a one-inch margin, slide it all the way to the left. You should also use the far left position for paper 11 1/2 inches wide, if you plan to punch binding holes in the paper, or if you are using pre-punched paper. This is particularly important with pre-punched paper because the holes need to be less than 19/32 of an inch from the left margin. The brailler has a top-of-paper sensor designed to prevent you from rolling paper too far into the machine. If the holes are too far to the right, they will trigger the sensor, and the rollers will stop, preventing you from rolling the paper into

the brailler.

Left and Right Margin Stops and Bell. The left and right margin stops are located in a long slot on the back of the machine. The bell is fixed to the right margin stop and rings seven cells before the end of the line. By pinching the flat and rounded portions of the margin stops together, you can release the margin, allowing it to slide to the left or right.

Before setting margins, insert a piece of paper of the width you plan to use into the brailler. To position the right margin stop accurately, slide the carriage lever and embossing head to the position where you would like to set the right margin. Make sure the embossing head is still on the paper, as it may catch on the edge if it is too far to the right. It is acceptable, though, if the plate under the embossing head is visible at the right edge of the paper. Pinch and slide the right margin stop to the left until you can't move it any farther, and then release it. Jiggle it left and right a bit to make sure it clicks into place.

To set the left margin stop, move the embossing head one cell to the left of where you would like each line to begin. Pinch and slide the left margin stop to the right until it will not move and release it. It is a good idea to move the carriage across the line after setting the margins to be sure they are set correctly.

Inserting and Removing Braille Paper

The Perkins Brailler is designed to use paper up to 11 1/2 inches wide and up to 14 inches long. It can accommodate up to one sheet of heavyweight braille paper, which is 7/1000 thick (or between 60 and 100 pound weight measurement), or the same thickness as two sheets of newspaper. Paper thicker than this will not fit easily between the rollers.

Lightweight braille paper or any other paper that is relatively stiff (approximately 60 pound weight) is fine. Notebook or copy paper should not be used because it could easily tear and get caught in the paper rolling mechanism. It also will not hold braille dots well.

Please be aware that the use of self-adhesive labels in the brailler can cause difficulties. Over time, glue from these labels can build up on the rollers and embossing pins. Labels can also peel off in the brailler and adhere to the rollers or other parts of the machine. If this should happen, maintenance by a trained repair technician is recommended.

If you need to make a copy of a document, it is possible to roll two pieces of lightweight braille paper into the brailler at the same time. The dots on the bottom sheet will be sharper than normal, but both copies should be readable.

If you need to use a different sort of paper, try it first to determine if it will work. Contact Howe Press for guidance if you experience poor performance or poor quality of braille. It is possible to make adjustments to your brailler to accommodate non-standard paper weights. This should be done by a trained brailler repair technician.

Inserting Paper

It is easiest to insert paper if the paper guide knob, the left margin stop, and the carriage are as far to the left as they can go. Heavyweight paper is also easier to insert than lightweight paper or paper with bent corners. It is recommended that you set your machine up in this way and use heavyweight paper until you are comfortable inserting paper.

1. Pull the paper release levers toward you as far as they will go. You can use either or both levers.

This lifts the metal roller so you can insert the paper.

2. Turn the paper feed knobs toward you a little, then away until they stop turning. You can do this with either or both hands. The clamp that holds the paper will not engage properly unless the paper feed knobs are in this position. The paper may come out the front slot of the brailler as you try to roll it in if the knobs are not in the correct position.

3. Rest the paper on the shelf below the embossing head.

4. Slide it under the embossing head and between the rollers. You will probably need both hands to do this, one at each edge of the paper.

5. Slide the paper left and right a little to make sure it is as far in as it will go, then slide it all the way to the left. The paper should almost touch the paper guide knob, and should be inserted about half an inch.

6. Hold the paper in place with one hand and push the paper release lever as far away from you as it will go with your other hand.

7. Let go of the paper. The paper should not move if you tug on it gently from either end; it is clamped into the machine.

8. Turn one or both paper feed knobs toward you. If they won't turn, the paper was not inserted correctly; pull the paper release levers toward you and try again. Keep turning the knobs toward you

until you can't turn them any farther. The paper should then be rolled into the machine as far as it will go.

9. Press the line spacing key once (this is the key on the far left of the machine). Doing so engages the line spacing mechanism and positions the top margin correctly. The top margin will vary depending on the length of the paper you are using.

Removing Paper

You can remove paper from the brailler by either pressing the line spacing key repeatedly until it stops moving the paper, or by turning the paper feed knobs away from you until they won't turn. Once you have rolled the paper out all the way, pull the paper release levers toward you and remove the paper. Do not pull the levers toward you unless the paper is completely rolled out. Do not yank or roughly pull paper out of the machine by force.

Brailling Tips

When the paper is rolled in, you have pressed the line spacing key once, and the carriage is at the far left, you are ready to start Brailling. The following tips should help you produce high-quality braille:

- The spacebar will move up and down when you press other keys; this is normal.
- Try to press all the keys for a particular character at the same time. If you press one key a little after the others, it may stick or jamb.

- A consistent pressure when writing will ensure the evenness of your braille. The Perkins Brailler is designed so that once you apply a certain amount of pressure to the keys, extra pressure will not make the dots bigger.

- For comfort, keep your fingers curved rather than extended straight when brailling. (Whatever position works best for you is acceptable.

- Try to keep any fingers not needed for brailling a particular character out of the way of other keys, so that you don't inadvertently press keys or get unwanted dots in your writing.

- Be sure to release all keys completely after writing each character. If you do not release all keys, the carriage may not advance properly along the line.

- If the backspace key is depressed even slightly while other keys are pressed, all the keys may become locked. To release them, move the carriage slightly to the left by pressing down on the backspace key or by pulling back gently on the carriage lever.

- If the carriage sticks or is sluggish as it moves across a line, the paper probably wasn't inserted correctly. Finish the line, then roll the paper out and reinsert it. The spacing between the line you just finished and the one you braille after reinserting the paper may not be quite

right, so if exact spacing is important, you may need to start over on a fresh sheet of paper.

When you have brailled as much as you want on a line, press the line spacing key and pull the carriage back to the left margin. Note that if you braille all the way to the right margin, the keys will lock, and you will be unable to braille anything until you move the carriage back to the left.

Correcting Brailling Errors

If you want to correct errors on a page, it is best to correct them as you go, or to finish brailling the page, erase any unwanted dots, then reinsert the page and work through it, adding necessary dots in the order you find the errors. This is because repeatedly rolling the paper back and forth can cause it to creep, or move out of alignment, so that the additional characters you braille are higher or lower than those already on the line, making correcting mistakes difficult. The more you roll the paper back and forth, the more noticeable the creeping becomes. The amount of creeping also depends on the thickness and stiffness of the paper you are using. If you roll a sheet out of the brailler and reinsert it using the method discussed above, text should be aligned within five thousandths of an inch, which is fine for most practical purposes.

If you find a dot you need to erase on the current line, move the carriage so the embossing head is one or two spaces to the right of the character. The plate under the embossing head provides a hard surface for manually erasing the dot. Note that if you need to both add and erase dots in the same character, it's best to add dots first; brailling in a cell where you have previously erased dots may push them up again.

Care and Storage

When you are not using your Perkins Brailler, push the paper release levers away from you, and cover it with the dust cover. Dust combines with oil to form an abrasive paste which can damage the machine over time.

Try not to drop your brailler. Though it is designed to withstand normal wear and tear and deliver years of service, it is a precision machine which can be damaged by a fall.

The brailler is thoroughly oiled at the factory with non-oxidizing oil, so you should not oil it yourself. Only non-oxidizing oil should be used. Oiling should be done by a trained brailler repair technician; otherwise, your brailler may be permanently damaged or made inoperable.

The brailler is made of aluminum, with enamel baked on to protect it. Though hard, this surface will chip if knocked about. The keys, knobs, and carriage lever are made of hard plastic. Though durable, a sharp object can scratch them. Please handle your brailler with care.

Don't leave the brailler in hot places such as on a radiator or in direct sunlight. The rubber on the bottom of the machine and in the paper feed roller could degrade.

Though the brailler is designed to withstand corrosion, try not to expose it to excessive dampness. Exposing the machine to salt water and spilling liquid into it are particularly damaging.

If you travel with your brailler, use the carrying case if you have one. Try to keep the brailler from getting jostled, and don't check it as baggage if at all possible. A soft-sided carrying case for the Perkins Brailler is available from Howe Press and works especially well for transporting the machine or storing it when

not in use.

Returning the Brailler for Repair

Please do not attempt to take the brailler apart unless you have been trained to do so and have all the proper tools. The brailler has over 350 unique parts that are very small, and these parts must be placed exactly in the correct location for proper operation of the machine.

If you are having minor difficulties with your brailler, contact Howe Press to see if the problem can be solved without sending it in. If you do need to return the brailler, send a letter along with the machine describing the problem. Be sure to include your contact information and the serial number of your machine. The serial number is on a metal sticker on the front of the brailler, directly below the spacebar.

If there is an obvious structural problem with your new brailler, return the machine for a replacement.

When packing up your brailler, please do the following to protect it during shipping:

1. Do not send the dust cover or carrying case with the brailler.

2. Push the paper release levers away from you as far as they will go.

3. Move the carriage all the way to the right and secure it there by putting several rubber bands around the carriage lever and over the right paper feed knob.

4. If you have the original packing material, pack the brailler as you received it. If not, do the following:

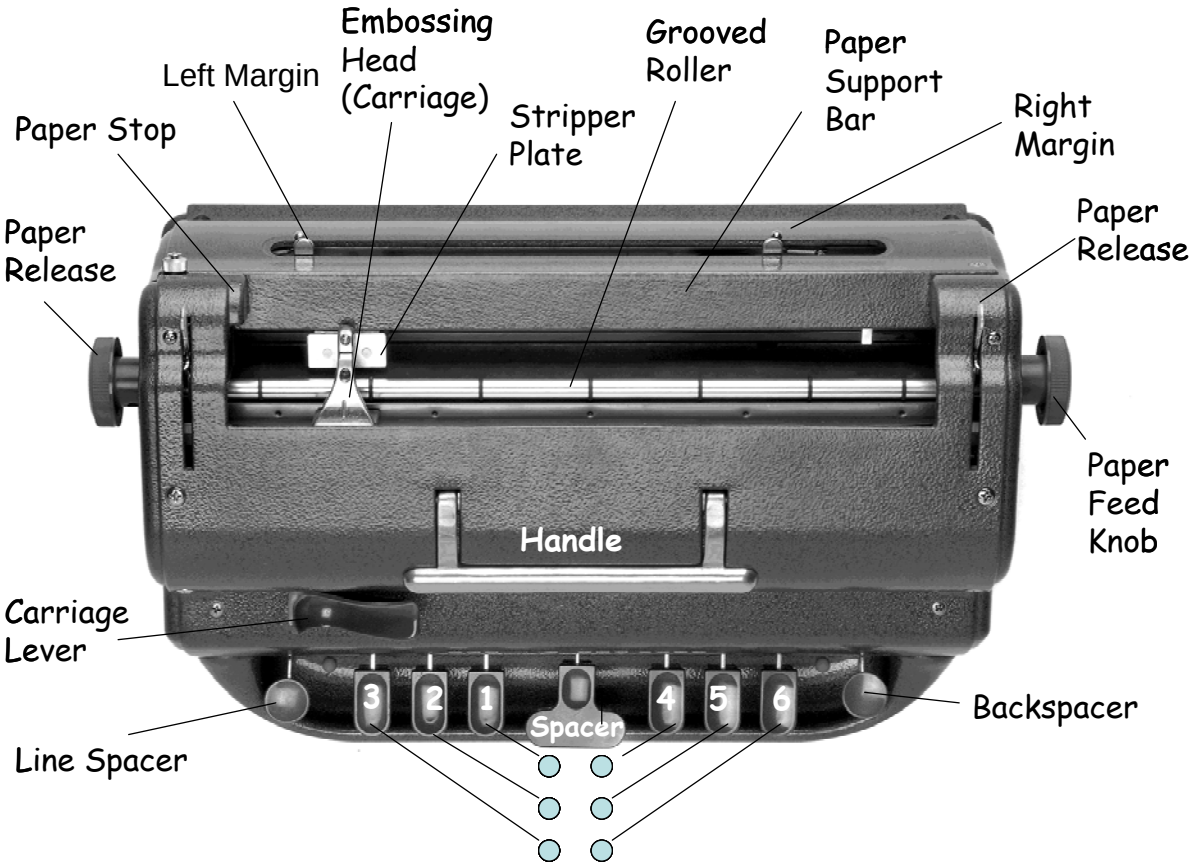
5. Wrap the machine in paper or plastic.

6. Put the brailler in a large, strong box and pack crumpled newspaper around it. It is especially important to pack the ends well so that the paper feed knobs are at least two inches from the sides of the box. Do not use small packing material such as packing peanuts because these can get inside the machine and create problems.

   Send the brailler to Howe Press, Perkins School for the Blind, 175 North Beacon Street, Watertown, MA, 02472, USA. If you are mailing your brailler from within the U.S., write "Braille writer returned for repairs" on the box. This allows you to send it without postage, in accordance with Free Matter for the Blind, Public Law 87-793.

   Howe Press does NOT pay for shipping damage, so it is recommended that you insure your brailler. U.S. Postal code will allow the sender to pay for additional insurance on braillers shipped as "Free Matter for the Blind".

   Once your brailler is received, a repair technician will examine your machine, identify problems and make necessary repairs. You will then be contacted with the cost of those repairs. Once your payment for the needed repairs is received the unit will be shipped back to you. We realize the inconvenience of a broken machine and will repair and return your brailler as soon as possible.



Arrows on paper feeder knobs indicate direction for turning to locked position and for rolling paper out.