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# Perkins Braillers (BM36)

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Please retain these instructions for future reference. These instructions are also available in other formats.

## General description

The Perkins Brailler is a versatile mechanical writing machine which enables you to produce braille on many different types of paper, brailon and other materials. Upwards embossing allows you to check as you write and it facilitates up to 42 characters per line. Supplied with a protective dust cover and wooden eraser.

## Orientation

### Nine keys

In the centre towards the front edge of the machine are a series of keys. In the middle is the inverted T-shape spacing key and to the left, in order, are the keys for dots one, two and three, and on the far left, the line spacing key. To the right of the spacing key are the keys for dots four, five and six and to the far right is the back spacing key.

### Paper feed knobs

These are situated on the sides of the machine towards the back edge, one on the left and the other on the right. As you receive the machine, these knobs will probably be in the locked position and cannot be turned. When you turn them later, the top surface of the knob moving towards you feeds the paper into the machine and the top surface moving away from you feeds the paper out. (Always use the line spacer to eject paper).

### Paper release levers

These metallic levers are positioned on top near the back edge of the machine, one either side of the paper insert. Move either one of these levers towards you to release the paper. Moving them away from you clamps the paper. **Please note:** If you are moving the levers towards you, they must move the full length of the slots in which they work. Later on, when you move them to release the paper, you will encounter a midway resistance. Do not mistake this but move them completely back. This is very important.

### Paper support bar and Ringed roller

Both are situated at the top back edge of the machine. The bar supports the paper. The ringed roller presses on the paper and has seven rings equally positioned. There are approximately seven cells per ring. These could be used when setting margins.

### Carriage, Carriage lever and Embossing head

Unlike other braille writers or typewriters, the carriage on the Perkins Brailler does not carry or hold the paper. Instead it carries the embossing head across a fixed paper, brailling it as it moves from left to right. The embossing head, as shipped, will be found at the right, above the paper support bar and it will feel loose. While you are looking at this, you may notice that the part immediately behind the ringed roller is also loose to the fingers. This is also normal.

The carriage can be moved by the carriage lever, which is found just above the nine keys and is recognised by its unusual cup shape, designed to receive one to three fingertips as required. In its normal position, the right end is inclined upwards. To release the carriage to the right, use three fingers on the lever and depress lightly to a horizontal position. You may now slide the carriage to any required position. To stop, release the pressure.

Although the three-finger method allows you to slide the carriage silently right or left, it has been found that sliding the carriage to the left with the right forefinger in the cup of the lever and without downward pressure makes more certain of starting at the correct margin.

This makes a little clicking noise which does no harm to the machine. If the three-finger method is used to move to the left, be sure to release pressure on the lever before carriage is allowed to move to the right.

Practice moving the carriage to the right and left. Notice that the embossing head moves at the same time. Never attempt to move the carriage by using the embossing head. Always use the lever and return the carriage without needless slamming.

### Left paper stop

This is positioned at the upper left rear of the machine and it has a roughened knob. There is a one-half inch movement right or left. To move, unscrew the roughened knob (anti-clockwise when facing the back of the machine). Its extreme right position (viewed from front) is conventional and gives equal margins of one-half inch on eleven-inch paper. The extreme left position gives one-half inch extra margins on left of 11.5 inch paper for binding purposes, if required. (Should be locked at either extreme and not in between).

### Margin stops and bell

The left and right margin stops are located at the back of the machine and work in a long slot. A squeeze of the flat projection and knob will release them.

To position the right margin stop accurately, slide the carriage by means of the carriage lever, placing the embossing head to the position of the last cell required. Slide the right margin stop to the left against the carriage, release squeeze and pull back until it clicks. If this is not used, or positioned properly, the carriage may catch the edge of the paper when it is returned to the left.

To set the left margin stop, move the embossing head as before, one cell to the left of the required position. Slide the left margin stop against the carriage and release squeeze.

The bell is fixed to the right margin stop and rings seven cells before the end of the line.

For duplicating, two light sheets may be used together. Paper 11.5 inches wide may be used by shifting the left paper stop.

If you use paper with binding holes punched in the left margin, when the machine is used with the left paper guide at the extreme left position, the holes must be inside a distance of 19/32 inches from the left edge of the paper.

### Paper bottom stop

This is in rear of the Ringed Roller and runs the full width of the machine, assuring good alignment of the paper.

## Using the product

### Insertion of paper

The maximum width paper that can be used with the Perkins is 11.5 inches. There are light and heavyweight papers supplied by RNIB (product codes BP65 and BP69). oweverSmaller width papers can also be used with the Perkins.

It has been found that until you get used to the machine the insertion of the paper is easier if the carriage is against the left margin stop with the margin stops set to extreme right and left. When the paper is rolled in all the way, the knobs will stop automatically and the paper will not go in too far. This is regardless of length - up to 14 inches. Both your hands will be free to turn the knobs alternately, that is, first with the left hand and then with the right. This gives the smooth motion desired.

When you try turning the paper feed knobs forward, no movement indicates the locked (start) position. Having the knobs turned forward until they stop is important, otherwise the clamp inside the machine will not be in position to clamp the bottom edge of the paper properly and the paper may start to come out of the slot at the front of the machine.

Move the paper release levers fully toward you. (If they have already been moved, you will not feel the midway resistance). This movement raises the ringed roller and lowers the paper bottom stop into position.

Insert the paper with 11 inch width at the back over the paper support bar, taking care to slide the paper under the embossing head and the ringed roller until it is in contact with the paper bottom stop. Feel this stop out by sliding the paper slightly left and right, finally sliding to the left against the left paper stop (**this is very important**). Now place the tips of your fingers on the centre of the paper over the paper support bar to hold from swivelling. Then move the paper release levers away from you to clamp the paper.

Care should be taken when inserting the paper if you are correcting mistakes. (**Please note:** Paper with bent corners may be difficult to insert).

When sliding the paper to the left paper stop, the edge of the paper should almost touch the roughened knob. This is very important because the checking device located at this point is intended to ride on the left edge of the paper, allowing the paper feed knobs to turn and to roll the paper into a point where the check drops off the end of the paper and prevents the paper feed knobs from turning.

To roll the paper in, rotate the paper feed knobs backward. (The top surface moves towards you). If they do not move, the paper is not against the left stop correctly.

With the paper rolled in, be sure to depress the line spacing lever (extreme left) a full length of one stroke and then release. This engages the line spacing mechanism and provides the correct top margin and first line position. The top margin may vary with different size sheets of paper.

### Removing the paper

Please do not move the paper release levers yet and do not pull the paper out by force.

The paper may be rolled forward and out by repeated strokes of the line space lever until it resists motion or by rotating the paper feed knobs until they definitely stop, this means you have reached the last line. The paper will not fall out.

Move the paper release levers towards you, to the full extent of the slots, catching the paper with your free hand. The machine is now in the "ready" position to receive the next sheet of paper, but always check the paper feed knobs by trying to turn them forward before inserting the next sheet of paper.

### Operation of keys

With the paper properly inserted, the line space lever depressed once, and the carriage to the extreme left, you are ready to begin writing.

When depressing the keys, do not thump them, as on the old type of writers. Do not worry about the evenness of pressure at the bottom of the stroke but do try to start depressing as simultaneously as possible. If you do not, you may feel a slightly greater resistance on some keys which will cause unnecessary wear and breaks the operator's rhythm. A little patience and practice will develop the "new touch". Due to the unique action, after a certain pressure is used on the keys, any extra pressure will be wasted effort. When typing, try to keep fingers not in use clear of remaining keys as a light depression may bring in unwanted dots. It is best to use this machine with the fingers bent rather than extended flat.

It is important to allow the keys to return upwards completely before starting the next downstroke. If this is not done, the carriage may fail to move along and cause sticking. It is normal for the spacing key in the centre to move at the same time as the dot keys.

When the carriage with the embossing head and lever has reached the right hand side, the keys will be locked on the last movement and make no dots.

Using your left hand, depress the line spacing key (extreme left), moving the paper out. Now return the carriage to the extreme left with your right forefinger in the cup of the carriage lever and continue to write. If the carriage appears to stick or is sluggish in its movement to the right, it is probable the paper is not inserted properly.

If you have brailled the entire page and in the case of 11.5 inch width paper made 25 lines, the line spacing key will automatically resist motion to notify you.

If you have only produced a few lines, do not move the paper release levers yet, but roll the paper out by using the knobs or the line spacing key until the stop position is reached. Then you may move the levers towards you all the way with one hand, taking care of the paper with the other hand.

When your Perkins Brailler is not in use, cut an approximate three inch strip of paper from an 11 inch sheet and insert the paper as you would a full sheet. This procedure reduces the pressure of the grooved roller on the rubber paper feed roller.

If the Braille keys, space or backspace are accidentally depressed, even slightly, all the keys may become locked. To remedy this, move the carriage slightly to the left using the backspace lever or carriage lever.

### Methods of correcting

If the paper is inserted in the Brailler according to the general instructions and ejected by means of the linespace lever without rolling the paper back and forth in short spasms, the spacing of the lines will be accurate within five thousandths of an inch. This is considered most suitable for practical purposes. However, if the paper is rolled back and forth intermittently, it will creep and the line spacing will be incorrect. This is true of any machine using rollers which bend the paper. The amount of creepage depends on the thickness and stiffness of the paper as well as the degree of bending and distance rolled.

To obtain perfect line spacing and proper register when correcting, either of the following methods may be used:

#### Method one

Read each line as brailled and correct as you go. This may be done by sight or feel without rolling the paper back and forth. After you find where erasures are needed, you can erase two spaces next to the embossing head by pressing the paper on the stripper plate, which is under and moves with the embossing head. Should extra dots be required in the cell where erasures have to be made, it is best to insert them before erasing to prevent the erased dots being pushed up again. If you notice an error after you have line spaced, it is best to let it go until you can reinsert the page completely.

#### Method two

This method is to braille the whole page, leaving corrections until last. Space with the line spacer key. Do not use the feed knobs for line spacing purposes. Do not roll the paper back and forth. You can read each line as brailled without turning back the paper. Remove the sheet, note corrections to be made and if no dots have to be inserted, press out the unwanted dots on a flat surface. If dots have to be inserted, reinsert the paper according to the general instructions and make your corrections as described above in the same sequence as brailled.

If either of the methods are used, the paper can always be inserted again with the assurance that any changes will be neat. These methods are more exact than using the bar, which supports the paper at the back of the machine.

## Hints and Tips

### Servicing and care

The Perkins Brailler is a precision machine, proportioned and treated to withstand wear and deliver years of good service. The enclosed design protects the mechanism. However, abuse such as dropping can cause damage.

Oiling is done at the factory. The enclosed design contains a liberal amount of expensive non-oxidising oil that is applied at our factory. Therefore, we recommend that no oiling, unless done at the factory, be attempted. Because the machine is turned all ways in transit, oil may appear on the first paper inserted. This may be remedied by inserting a sheet of blotting paper.

Dust is bad for any mechanism. It combines with oil to make an abrasive paste. The enclosed design protects the machine to a great extent. However, the use of the dust cover is required to protect the many lubricated surfaces from dirt. A slot is provided in the cover to enable the handle to be reached for carrying.

The surface is hard and durable but will chip if knocked. The keys, knobs and carriage lever are a tough plastic but a sharp instrument will scratch them.

Because rubber is used on the bottom of the machine and in the paper feed roller do not leave the machine on heating radiators or exposed to hot sun in front of windows.

Experience has shown that users of braille writers have an endless variety of paper and materials on which they would like to braille. This machine is designed to use up to one sheet of heavyweight paper. If you have any doubts send us a sample of your paper for examination. We may be able to modify your Perkins brailler to suit your special requirements. (A charge maybe incurred).

Because these machines are going all over the world into various climates we have tried to protect against corrosion. Exposure to excessive dampness, particularly salt water and spilling of liquids into the machine is to be avoided.

This machine is guaranteed for one year against defective material and workmanship. We would be the last to deny the owners' ability and enjoyment to work on their own property but advise against anyone but the manufacturer taking the machine apart. Special tools are used in assembly and parts must be disassembled in proper sequence.

When the machine is first received, if it cannot be operated properly when instructions are followed correctly, or in the event of an obvious breakdown, please contact RNIB Helpline. The cause of the difficulty may be damage in transit or a misunderstanding of instructions. We may be able to diagnose the trouble.

In all possible returns correspondence, refer to the serial number. This is located on the underside of the machine, near centre-front.

### Perkins in transit

Adhere strictly to the following as far as possible because passage through the mail is risky. Pack the machine as it was received. Release the carriage and move to the extreme right, secure with several rubber bands around the carriage lever and over the right paper feed knob. Push the paper release levers back.

If the original packing is not available wrap the machine in paper or lintless cloth. Place in a strong ample carton and insulate the machine from the carton with crumpled newspapers, particularly at the ends to prevent the knobs touching the carton. These should not be less than two inches from the sides of the carton. It is not advisable to ship the machine in a carry case.

Our guarantee does not cover damage caused in the mail. Therefore, you are well advised to insure it. Do not include the dust cover or other accessories. Because we realise the inconvenience of an inoperative machine, our policy is to repair and return your Brailler as soon as possible.

You know your Brailler is getting good treatment when in your own hands. If you have a carrying case, it is preferable to carry it yourself when travelling and avoid checking it through baggage transfers if possible.

## How to contact RNIB

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Address: RNIB, Midgate House, Midgate, Peterborough PE1 1TN

Online Shop: shop.rnib.org.uk

Email for international customers: exports@rnib.org.uk

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For all returns and repairs contact RNIB first to get a returns authorisation number to help us deal efficiently with your product return.

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