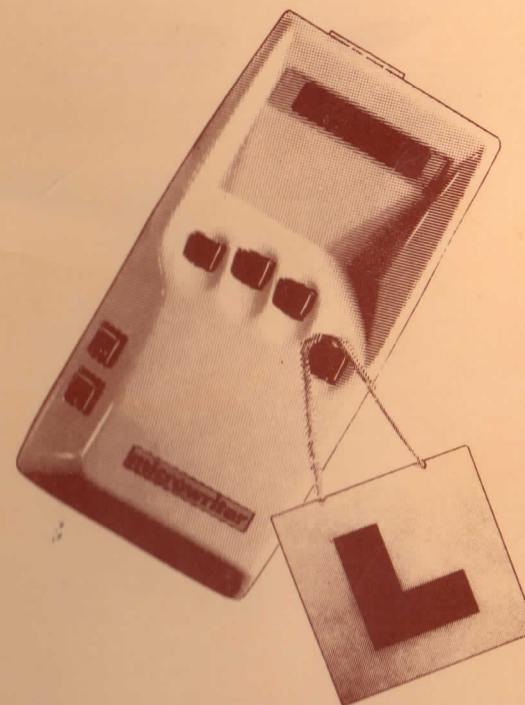


microwriter

NEW USER'S GUIDE



BOOK I

Your local Microwriting Centre

MICROWRITER HEAD OFFICE:
31 Southampton Row, London WC1B 5HJ
Telephone: 01-831 6801/2/3

THE NEW USER'S GUIDE TO THE **microwriter**

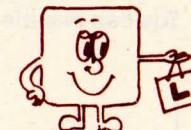
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May 1982

NOW - YOU'RE GOING TO LEARN THE **microwriter**



Can you remember how long it took you to learn to write? Weeks?
Probably months. Maybe a year or more: that's not unusual.

Have you ever tried learning to type (proper "touch typing", that is,
using more than one or two fingers)? Then you know how long it takes
people to get as fast on a typewriter as they can handwrite. Months of
slog usually.

The Microwriter is refreshingly different.

You'll find that you have learned to "touch write" on the Microwriter in
only a short time. Learning to do EVERYTHING the Microwriter can do
(which is a very great deal more than you may ever actually need) then
takes only a little more time.

Then all you need to do is practice your new skill until it becomes
something as automatic to you as handwriting, and as fast.

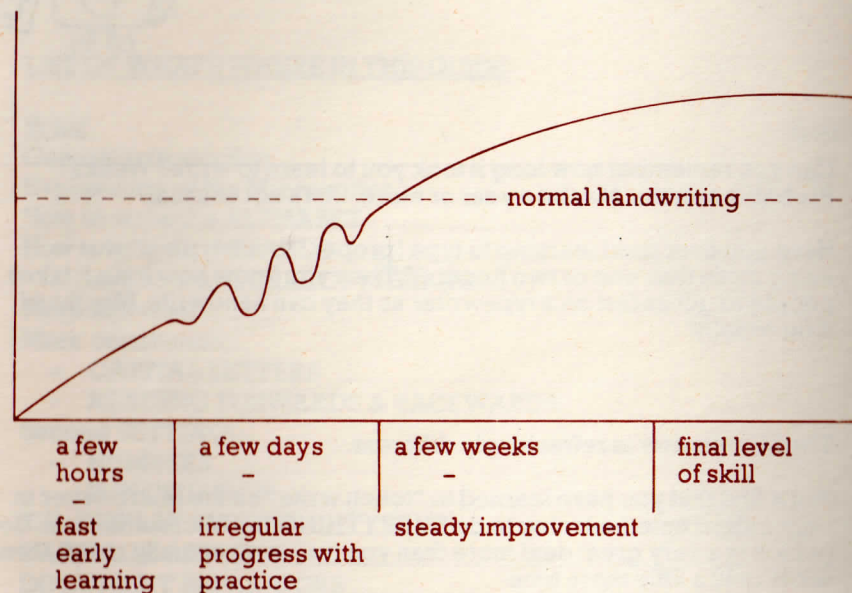
Concentrated use over several days should see you well on the way to
this stage, quite possibly well beyond it.



Your progress as you practice WON'T be a nice
steady progression: people just don't learn that
way. You'll have good days and bad days:
everyone does. DON'T get downhearted when
your fingers decide to behave as nimbly as an
elephant's feet: they'll get over it.

After this second period, you'll continue to get faster on your
Microwriter for several weeks until you finally find that, without thinking
about it at all, you can use it about one and a half times as fast as your
handwriting, maybe faster after a few months.

You can see the stages you'll go through on this chart:



What you'll need:

Before you start, make sure you've got available:

- a Microwriter
- a Microwriter battery charger/mains lead
- this Guide
- a set of "reminder cards"
- a T.V. Interface and T.V. set - or monitor (if you're going to use the T.V. Display system)
- a printer or whatever else you intend to plug your Microwriter into

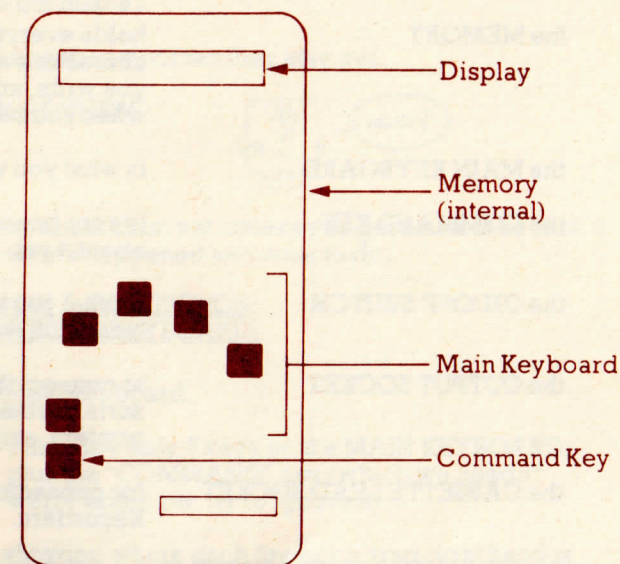
(Don't worry about the last two items just yet: you won't need them at first).

WHAT'S A MICROWRITER?

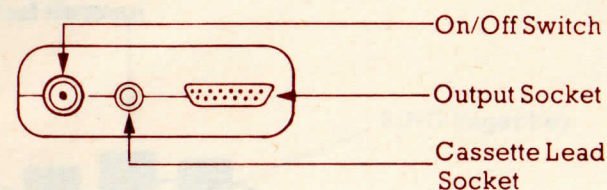


It Looks Like This:

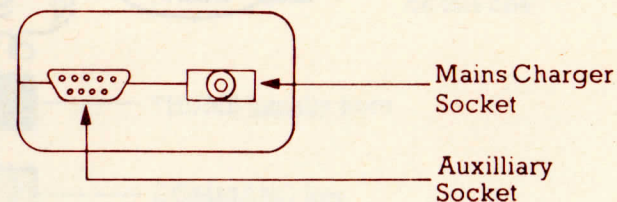
TOP
VIEW



FRONT
VIEW

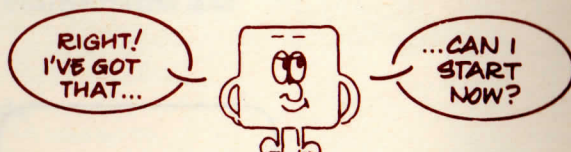


BACK
VIEW



... And The Different Bits are:

the DISPLAY	shows you what you have written.
the MEMORY	holds everything (well, up to 8,000 characters worth = about 5 pages) you write, and keeps it stored even when you switch the Microwriter off.
the MAIN KEYBOARD	is what you write with.
the COMMAND KEY	is very important, but don't worry about it yet.
the ON/OFF SWITCH	is what you turn your Microwriter on and off with.
the OUTPUT SOCKET	to connect the Microwriter to all sorts of other gadgets (T.V.s, printers, etc).
the CASSETTE LEAD SOCKET	for connecting to Cassette Recorders.
the MAINS CHARGER SOCKET	for feeding your Microwriter with electricity.
the AUXILLIARY SOCKET	This is for Microwriter's use, so ignore it for the moment.



NOT YET...

... THERE ARE A FEW THINGS YOU NEED TO KNOW ABOUT FIRST

Firstly, things like these: □ U] ≠ ∓ N √ ∃ P =

When you do start, you'll see signs like these pop up from time to time in different places on the display.

Sometimes they shift about; sometimes they stay put.

AT THIS STAGE, IGNORE THEM.



You don't need to know about them yet, unless you get stuck. If so look it up on page 42 to see what's happened and what to do.

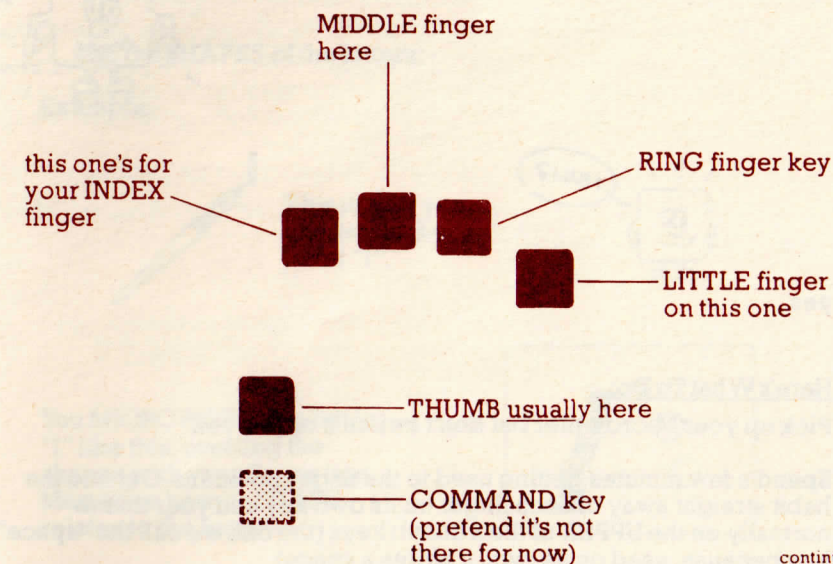
... YOU NEED TO KNOW A FEW THINGS ABOUT THE MICROWRITER KEYBOARD:

It's not like a conventional keyboard.



There are only 5 keys on the MAIN KEYBOARD, plus the "COMMAND" key (which we needn't worry about yet: try to ignore it).

Here's a picture of it, showing where each finger on your right hand is supposed to go:



... and there's a **VERY IMPORTANT RULE**.



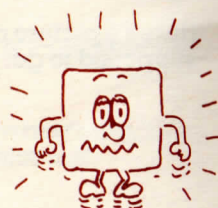
Yes:

DON'T wave your fingers about on the keys or use them on any key other than the one they're supposed to use (as shown in the chart on the left).

Microwriting is using one OR MORE keys together at the same time to produce each one letter, number, punctuation mark etc. The important thing to remember at this stage is that using the wrong finger on the wrong key will slow down your learning and lead to lots of mistakes.

Also, once you start, you'll notice that the keys are very touch-sensitive, much lighter than on a typewriter for instance. This helps you to get very fast, but does mean that you'll make mistakes to begin with. Just ignore them. (We'll come on to corrections later).

PLEASE CAN I START NOW???



yes.

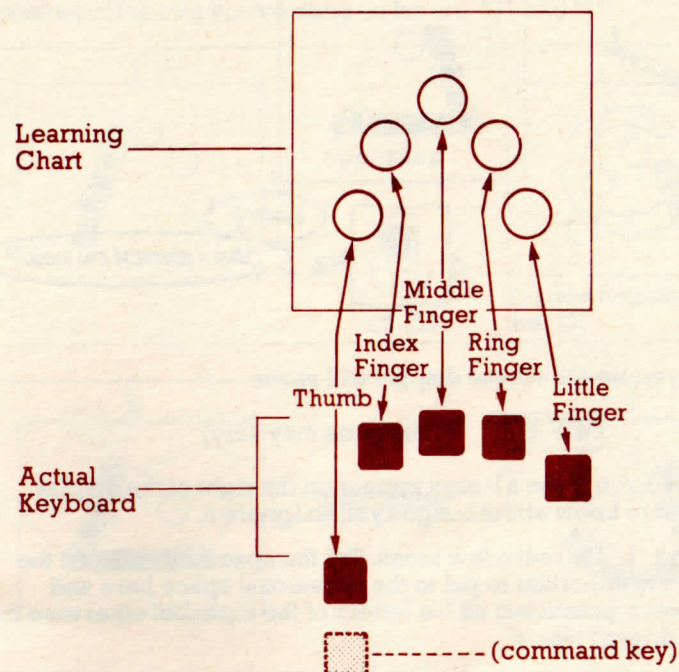
Here's What To Do:

Pick up your Microwriter but don't switch it on just yet.

Spend a few minutes getting used to the finger positions. Get into the habit straight away of each finger on its own key and your thumb normally on the UPPER of the 2 thumb keys (the one we call the "space" key because, used on its own, it writes a space).

HOW TO WRITE THE ALPHABET:

It's all based on this chart:



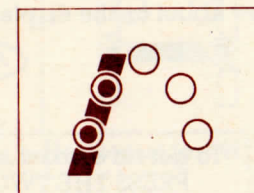
... and the SHAPES of the letters:

Example:



This is how you
handwrite the
letter "I".

You MICROWRITE the letter "I" like this, creating the shapes with your finger tips. Memorise how its SHAPE relates to the keys.



Practice doing the "I" on the keyboard a few times (but still don't switch on just yet).

Now Handwrite "I"



Got the idea?



Then Microwrite "I"



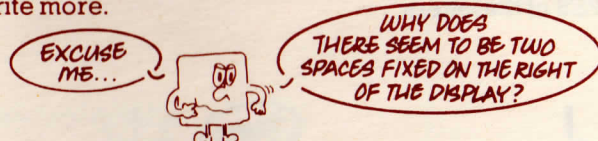
YES - When you switch on, the display will show:

MW 4/10 - (this code may vary)

Hit any key and you'll see a $\downarrow$ sign appear on the right of the display. You don't need to know about $\downarrow$ signs yet, so ignore it.

Try the "I" and "L" for real a few times. Try the space as well (just the thumb key). It is important to put in the occasional space here and there in between practicing all the letters of the alphabet otherwise the Microwriter doesn't like it!

See how each thing you write (including mistakes) appears in turn close to the right of the display, and then moves across to the left as you write more.



That space is reserved for all sorts of "signal letters" they shouldn't have appeared there yet. Like this:

u U n N p P a A I f F M

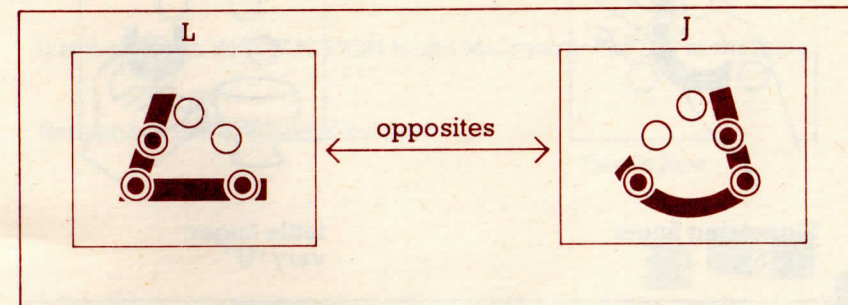
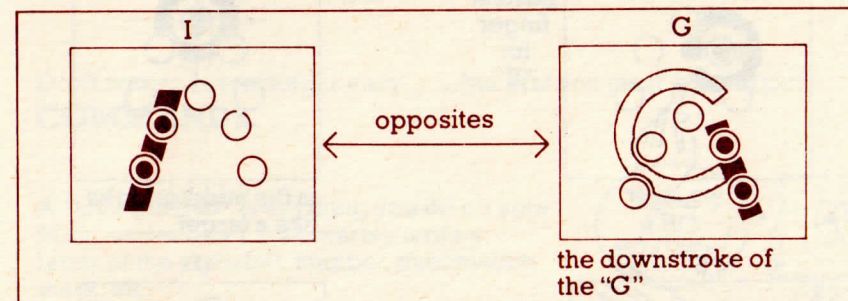
If you have got one of these in that space, you'll get funny things you don't know about on the display when you try to write.



RULE:

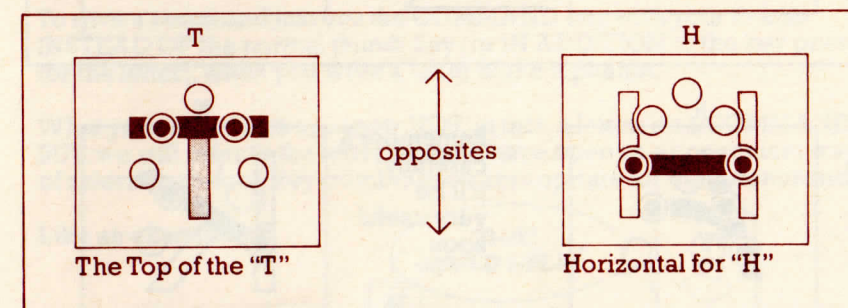
To get rid of most signs on the right you don't want, PRESS THE TWO THUMB KEYS TOGETHER. otherwise refer to page 42

You'll find that a lot of the letters form natural pairs of opposites based on the SHAPES, which can be thought of as "mirror images". Try to remember the letters as these pairs: it's easier. For instance, the opposites of the two you've done so far are "G" and "J":

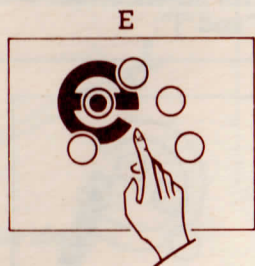


Have you noticed yet that it's NOT when you first press the keys down that the letter is written: it's when you RELEASE the keys? This means you needn't try to get them all down at exactly the same moment, as long as they all go down.

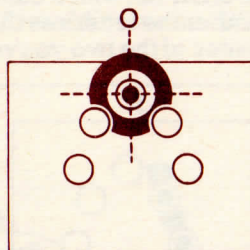
Here's a useful pair to remember as a pair: they're used together so often:



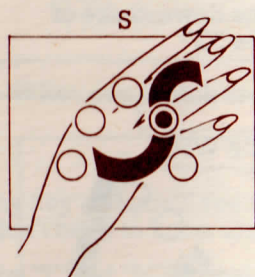
...and these are written using only ONE key:



Easiest
finger
for
"E"



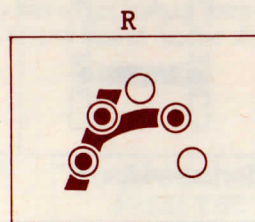
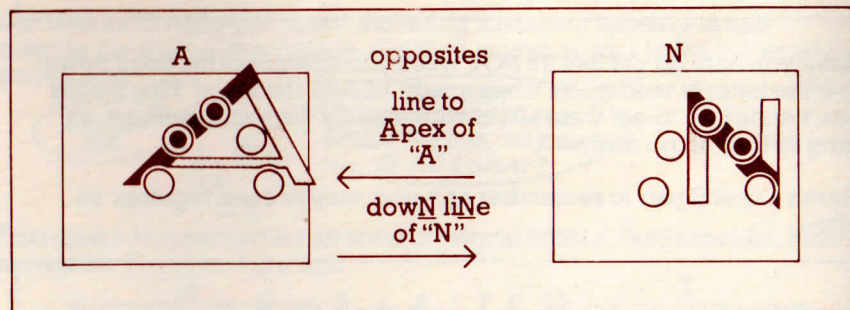
in the middle: looks
like a target



Signet ring finger
for "S"

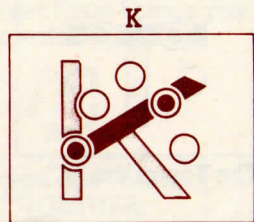


Little finger:
very "U"



Shape of small R

Remember K
carefully:
it'll be
very useful
soon...



Upstroke of the K

Made any
mistakes yet?



Don't worry: correcting is easy but first you must learn about
COMMANDS.

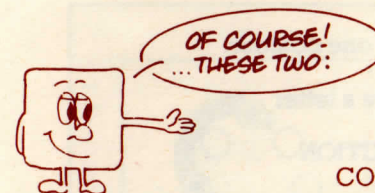
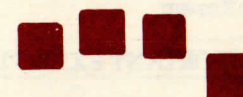
A "COMMAND" is anything you do on your
Microwriter other than merely write a
letter of the alphabet, number, punctuation
mark, etc.



It is instead an INSTRUCTION to the Microwriter to DO something.

Remember the TWO thumb keys?

Here's how ...



space key —

COMMAND key —

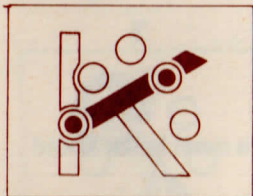
To give a command just use the COMMAND key with your thumb
INSTEAD OF the normal thumb key (or IN ADDITION to the key press
for the letter), when you write a letter of the alphabet.

What you write this way is now NOT, in fact, a letter: it's a COMMAND.
BUT, we still refer to the letter it would have been as a convenient way
of referring to each key-combination appropriate for each command.

Like an example?

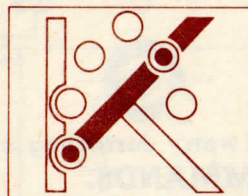


Normal
Letter "K"



EXAMPLE:

"Command K"



In this Guide (and in all other printed material about the Microwriter, like the "reminder cards"), each command is written like this:

As it Would Be Spoken:

command K
command N
command F
command key (on its own)
both thumb keys together

In Writing:

K

N

F

Each different command tells the Microwriter to do something different.

IMPORTANT EXAMPLE:

K tells it to backspace by one position

...so you can overwrite a letter

...to make a CORRECTION

See?

K to Korrect!

Try using K a few times

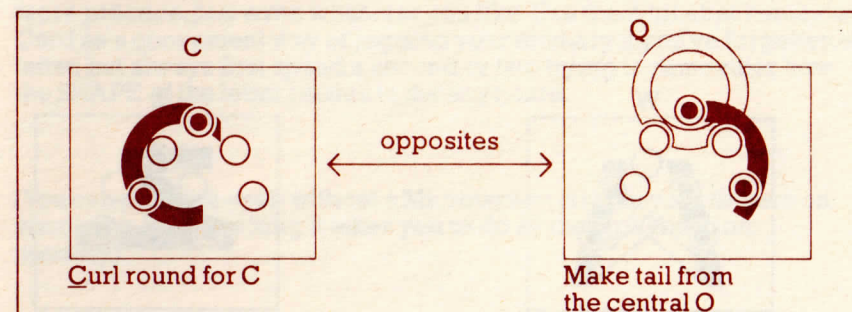
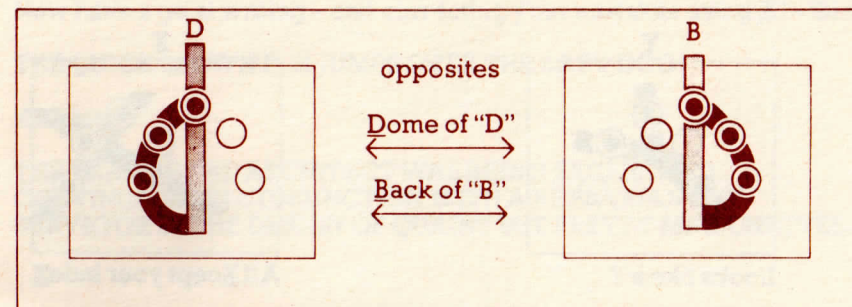
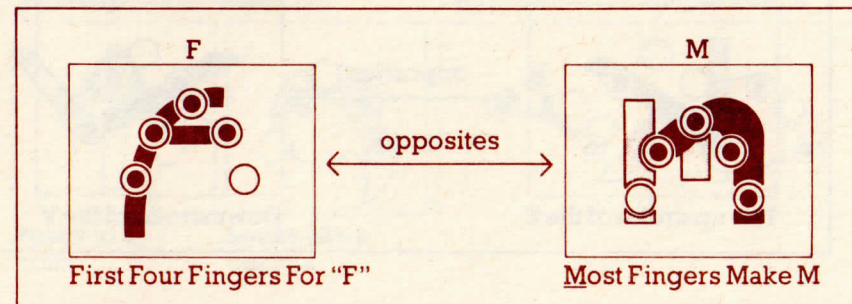
Try writing this from memory, correcting your mistakes as you make them:

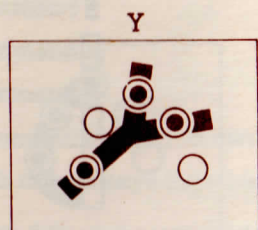
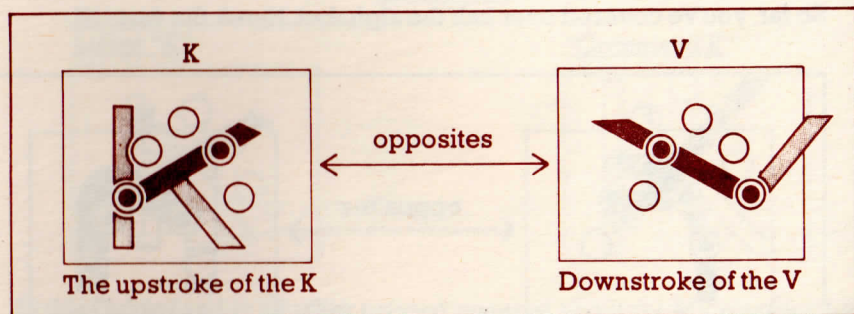
SHE SELLS SEASHELLS ON THE SEA SHORE.

...and this:

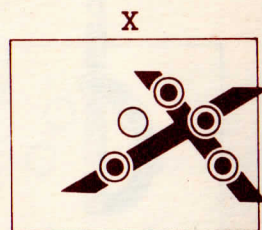
THE TALL GIRL JUST LOST HER LOOSE TOOTH IN THE HOUSE.

So far, you've covered over half the alphabet. Here's the rest:

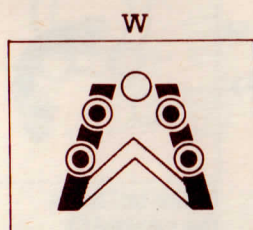




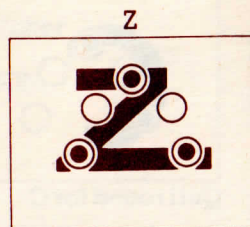
Looks like a Y



All Xcept your indeX



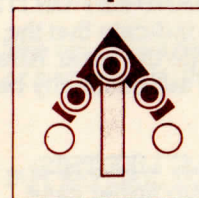
The two sides of the W



Zig Zag between
the keys

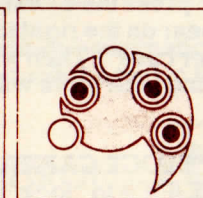
Here's some punctuation as well:

. Full stop



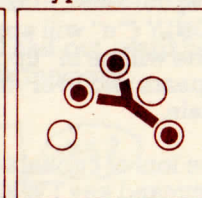
Points to a
point

, Comma

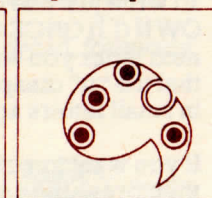


Looks like a
comma

- Hyphen



' Apostrophe



Now have a go at writing – and correcting your mistakes using **K** – this:

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

and this:

THE ZEAL OF THE ARCHITECT WAS BEING EXERCISED
CONTINUALLY IN CONJUNCTION WITH A KEEN QUANTITY
SURVEYOR IN THE DESIGN OF QUAIN T BUT PRETTY MAISONETTES.

Both these sentences have all the letters of the alphabet in them. For more practice, just write whatever you like. Use the Alphabet Reminder Card as a convenient way of jogging your memory if you've forgotten a letter, but always first spend a second or two trying to remember how the SHAPE of the letter relates to the keyboard.

(You can practice even without a Microwriter: just tap your fingers on your knee. See how long it takes you to do all the alphabet from memory).

AND NOW SOME MORE COMMANDS:

CAPITAL LETTERS. (Sometimes called "Upper Case").

To write just one capital letter, FIRST press the COMMAND KEY ON ITS OWN (□) ONCE ONLY ("u" will appear on the right to indicate that the next letter you write will be in "upper case"). Then write the letter. After that the "u" disappears and everything you write will automatically be in small letters again.

If you want to write lots of capitals ("BLOCK CAPITALS" LIKE THIS) then press the command key TWICE (□□) to "lock" into upper case. Whenever locked into this mode you'll see "U" in the window where "u" was which indicates "Upper case lock".

Remember that whenever you want to go back to small letters, just press the two thumb keys together(□□).

READING FORWARDS AND BACKWARDS.

□ goes back one letter (as you already know)

□ goes FORWARD one letter (If nothing happens see the note below marked *).

□ for Forward.

Remember though, □ is NOT the same as a space. When you turn on your machine read forwards with □ and DO NOT hit the 'space key' – this will only overwrite your text!

If you want to read through lots of writing in the memory you'd get fed up having to use □ or □ for every single letter. Instead, you can use the CONTINUOUS read-out:

To command a CONTINUOUS read-out, just hit the command key once (□) before using □ or □.

The result is a continuous automatic read-out, word by word, forwards or backwards, through the text in the memory.

BUT BEFORE, YOU TRY IT...



...you'd better know how to stop it once it's going.



To STOP any continuous process on the Microwriter, such as a continuous read-out, just hit the COMMAND KEY, and release it.

□ to Stop.

You can also SPEED UP the speed of the read-out at any time by hitting any key on the MAIN keyboard. To SLOW DOWN again, just hit any key on the MAIN keyboard again.

Have fun: practise reading backwards and forwards, fast and slow, stopping and starting when you want.



That's because □ and □ will only read ahead as far as there is text in the memory: they won't take you into blank memory. If the display does not move when you use either of these commands, it means you're already at the end of the text in memory.

Likewise, □ and □ can only take you back as far as the beginning of the memory.

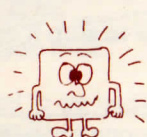
Both continuous read-outs will stop automatically when they've gone as far as they can.

SO,
I CAN DO THE
LETTERS
AND A BIT OF
PUNCTUATION...



BUT
WHAT ABOUT
NUMBERS...AND
THE REST OF THE
PUNCTUATION
?

You need to change **SETTING**.



CHANGE
SETTING

The Microwriter keyboard writes all characters you find on a conventional keyboard – and more besides – mainly out of the main two different **SETTINGS**:



Alphabet Setting

THE
ONE I'VE
BEEN
USING...

- all the letters
- some punctuation

Second Setting (or Numerics)

- numbers
- all punctuation



AND
NOW I'M GO-
ING TO LEARN
THIS ONE!

To **CHANGE** over to second setting, use **[N]** **ONCE ONLY** if you want only the next character to be a number or punctuation mark, or **TWICE** (**[N]** **[N]**) if you want to “lock” into second setting.

When you do **[N]** for one numeric character “n” will appear on the right, and when you ‘lock’ into numerics (**[N]** **[N]**) “N” will appear to indicate the setting and only disappears when you unlock back to lower case alphabet.

Remember that to go back to lower case alphabet, use **[A]**.

HOW TO WRITE NUMBERS:

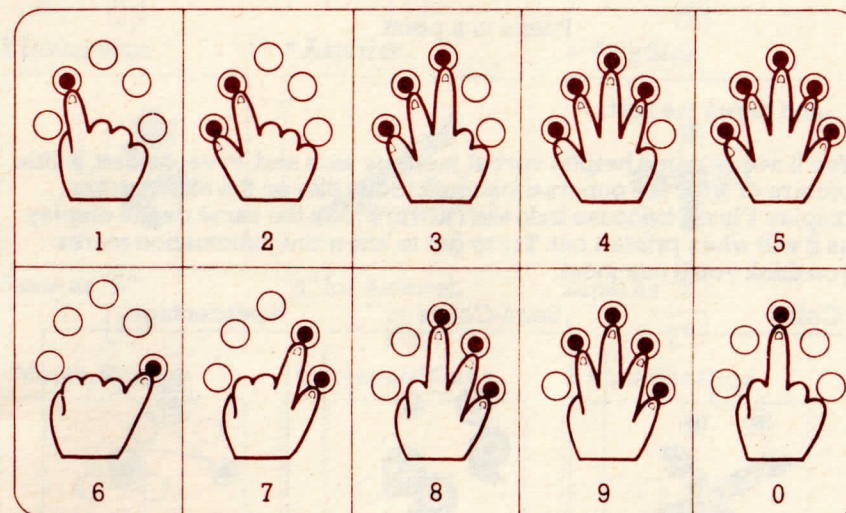
First, lock into second setting. (If you've already forgotten how, just look at the last page. And try and remember it this time).

Got an “N” on the right of the display?

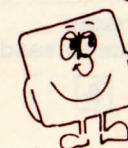


I HAVE !!!

Good: practice doing the numbers like this:



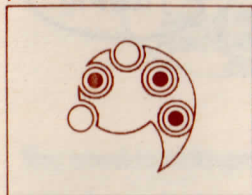
THAT WAS EASY!



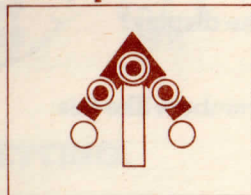
HOW TO PUNCTUATE:

Because they're so useful, the first three are **EXACTLY THE SAME** in both settings:

, Comma

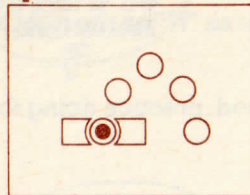


Full Stop



Points to a point

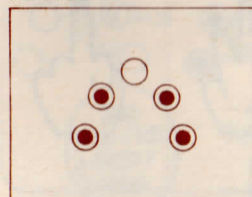
Space



...and here's the rest.

You'll notice some helpful verbal memory aids and, in each case, a little picture of what the punctuation mark looks like on the Microwriter display. This is because it doesn't always look the same on the display as it will when printed out. Try to get to know the punctuation marks you think you'll use most.

: Colon



looks like two colons



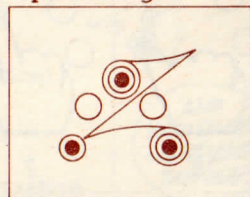
; Semi-Colon



A little less than a colon



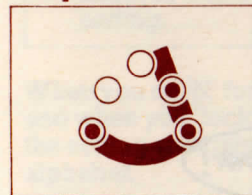
%percentage



Looks like Z



= Equals



J = Just the same



& Ampersand



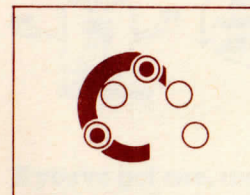
Only straight line on ampersand



@ At



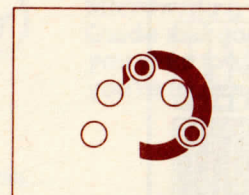
(Left Bracket



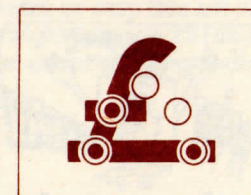
Looks like "C"



) Right Bracket



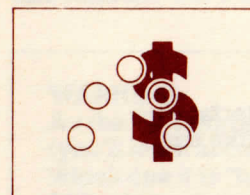
£ Pound Sign



Same as "L"



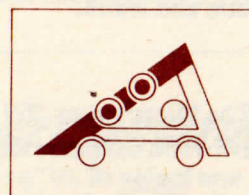
\$ Dollar Sign



Same as "S"



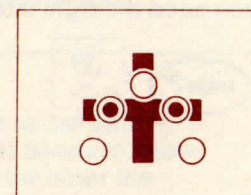
* Asterisk



"A" for Asterisk



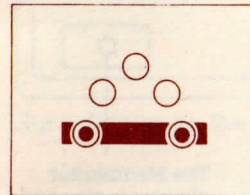
+ Plus Sign



Same as "T"



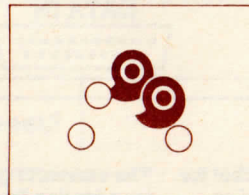
- Minus, Hyphen



Horizontal of H



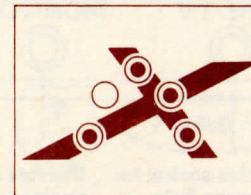
"Quotation Marks



"N" Notes Quotes



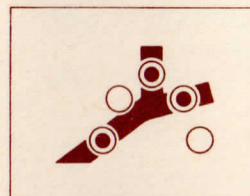
X Multiplication



"X" same as X



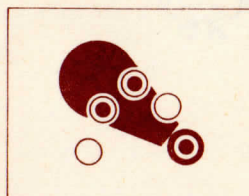
? Question Mark



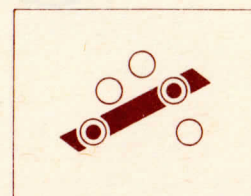
"Y" for "Why"



! Exclamation



/ Oblique



Looks like /

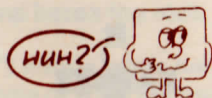


Would you like to be on T.V?...

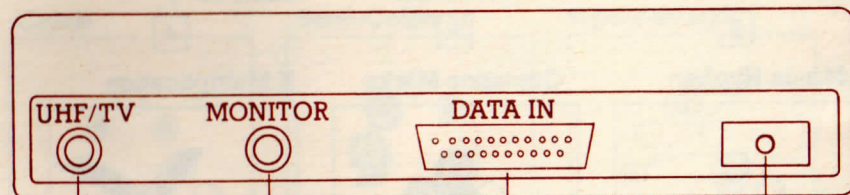
HOW TO USE THE T.V. SCREEN



But you need the right interface and leads.



The Microwriter "TV Interface", the front of which looks like this:



Use this socket for Domestic Televisions. The other end of the lead fits into the aerial socket of the TV.

Use this socket for professional or industrial monitors. The other end of the lead fits into the aerial socket of the monitor.

The connecting lead for this fits into the front of the Microwriter.

The Microwriter charger is plugged into this to provide power to make it work.



...Then buy one from your local Microwriting Centre or skip this bit of the Guide and go straight to page 25 (unless you want to know about all the goodies you're missing!).

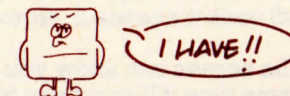
If you've got one, read on...

Once you're connected up and switched on (Microwriter and TV), select a free channel on the TV. and tune it till you find the best spot for the Microwriter display. Don't worry if the first display you get looks like rubbish: that'll all sort itself out once you get started.

WARNING:

As the TV Interface shares the same socket as the printer (you'll learn about this soon) the Microwriter needs to know which one it is "talking" to. To select one or the other the following sequence is needed: ☐ P - it will then show a series of numbers. Ignore these, just hit ☐ to carry on writing. If you cannot immediately write to the TV, use this select code - at this stage we won't go too deeply into this as it is dealt with later.

Got a display on the screen?



See the cursor?



THE CURSOR:

The cursor is this thing:



If it's on its own, it'll keep blinking at you. If it's in the same place as a letter, it'll flash alternately with the letter. This is so you can always easily spot where it is.

The cursor is a sort of marker showing you where the next thing you write will go. It relates to the words in the Microwriter memory, and to the position of the display, like this:

Microwriter letters which show on display

ick br**o**wn fox jumps **o**ver the

words in memory

cursor position

So, if you read forwards or backwards, the cursor will shift about accordingly on the T.V. screen. It will also obey all the "text access" commands that you don't know about yet.

So if you want to make a correction to anything you've written all you need to do is to send the cursor to the right place - using **F**, **K**, **F** or **K** and make your change. You'll see the result instantly on the screen.

The screen can show you up to 16 lines of your writing at a time. At the same time it'll show you what your text would look like if you printed it out straight away (unless, although unlikely at this stage, you write more than 64 characters on one line, in which case the screen will flash the last two of the 64 and put the rest on the next line down).

Note: Moving forward over a document separator (see page 26) has the effect of cleaning the screen.

If you haven't got a T.V. Interface and have skipped the last couple of pages ...

... welcome back!



Carriage - Returns

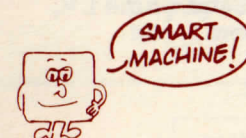


No!

As you write your words into the memory, the Microwriter works out automatically how much will fit on each line of the page on which it will eventually be printed by looking for a suitable space. When actually doing the printing, the Microwriter tells the printer when to go down to the next line on the page.

This is called a "CARRIAGE RETURN". You can see where each one will happen as you write since a **□** sign appears on the display where the carriage return would happen. On the T.V. screen, you see the lines of text building up automatically as you write.

Notice that the Microwriter doesn't split up words: it always makes the carriage-return at a space between words.



Yes, but it's not telepathic.

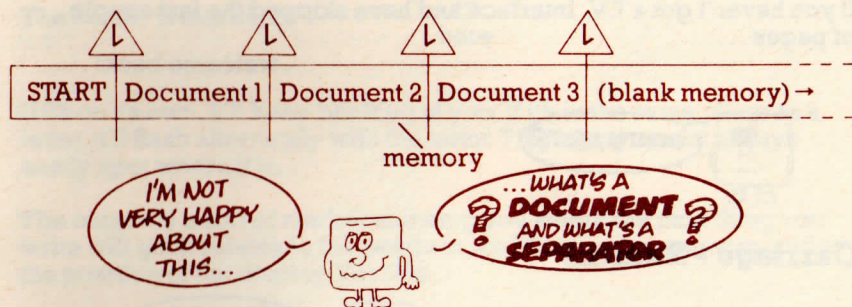
It doesn't know when you would want it to do a carriage-return BEFORE the normal end of a line, e.g. as in the address of a letter. In this case, you have to tell it to do a carriage-return. The command is **C**:

C for Carriage-return.

Each **C** you use winds the paper up by one line, so use **C****C** to leave one clear line between paragraphs. Or use lots of **C**s to make a bigger gap in the text (as for the signature on a letter).

You'll notice that each **C** you use shows a **┘** sign on the display to show you where you've put it. On the T.V. screen, the cursor goes to the next line.

DOCUMENT SEPARATORS



Right:

The memory in your Microwriter can hold up to 5 typical pages of typescript or more. Which is a lot. So much, in fact, that it would often be too much to deal with usefully at one go when you get around to plugging into your printer.

You'll often prefer to chop up the memory into nice digestible chunks – or pages – of text

... which you can call "DOCUMENTS"

... with a sort of sign-post to separate them

... which is what the "DOCUMENT SEPARATOR" is.

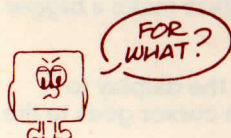
To enter the DOCUMENT SEPARATOR, KEY **L**. This will show a **↓** on the display (which doesn't print out), and, on the T.V., clears the screen ready for the new document.

imagine your documents are letters:

L to separate your **L**etters.

These separators are VERY IMPORTANT when you are printing out your text: if you forget to put them in the places you want them, you'll get the wrong bits printing out.

They're also VERY USEFUL for quick and easy text access.



(All will be revealed on the next page ...)

TEXT ACCESS



... a convenient way of referring to all the different commands that allow you to send the display (and cursor on T.V.) backwards and forwards through the stuff you've already written in the memory.



True: they give you a READ-OUT so you can see the words as you go through the memory.

There is another set of commands that allow you to move from one position in the memory to another almost INSTANTLY.

There are two main groups:

ZIP means "Zip" AHEAD in the memory

JUMP means "Jump" BACKWARDS in the memory

... and here's how they work:

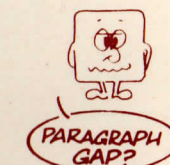
WARNING: If you are not connected to the T.V. but are in the T.V. "mode" (See page 23) the Microwriter will be confused and will execute the following commands VERY SLOWLY. If this happens hit **P** (as explained on page 23) a series of numbers will be displayed, hit **□**.

By Line: **Z** zips forward to the next line end (to a **□** or a **↓**)

J jumps back to the previous line end (to a **□** or a **↓**)

By Paragraph: **P Z** zips ahead to the next "paragraph gap"

P J jumps back to the previous "paragraph gap"



A "Paragraph Gap" is any sequence of two or more **C**'s, such as you would use to separate your paragraphs.

P for Paragraph access.

By Document: ☐ **Z** zips ahead to the next separator at the end of the current document.

☐ **J** jumps back to the last separator at the beginning of the current document.

The Big Hop: ☐ **H Z** zips forward to the very last bit you've got written in the memory, so only blank memory follows. (Can be stopped with ☐) see note below.

☐ **H J** jumps all the way back to the beginning of the memory (to "MW 4/10").

☐ **H** for the big Hop.

Note: ☐ **H Z** and ☐ **H J** can both be stopped by ☐. This is useful when linked to the TV system to stop at a specific place, or when not linked to the TV and you find the Microwriter is "Hopping" too slowly.



...AND NOW I'D LIKE TO SEE
SOME **RESULTS!**

O.K., let's do some **Printing**

Note: If, instead of plugging your Microwriter into an independent printer, you're going to connect to some kind of computer or word-processor, then assume that the word "printer" in this section refers to these.

Here's what to do:

1. Write something to print, making sure you put a document separator between each document.
2. Put paper in the printer and make it ready to receive text.

3. Plug the printer's connection lead into the "output socket" in front of the Microwriter. (It'll only go in one way, so you can't get it wrong).

4. Switch on the Microwriter.

5. Find the document you want to print. (This simply means making sure that the beginning of the relevant document appears in the right-hand position of the display).

6. Command the Microwriter to print with ☐ **X**.

☐ **X** for **X**ecute

Your Microwriter 'talks' or 'interfaces' with a large number of different printers, word-processors, etc., with a number of different 'settings'. If you cannot immediately print successfully with your Microwriter either ask for advice at your local Microwriting Centre or if you are brave and technically minded look up what to do in Book II. Once set, as long as you don't change printer, nothing need be done again.

The printer will now print the document. It'll stop itself when it reaches the end of the document OR when it's printed out the maximum number of lines it's set for per page (usually 60, though this can be varied. Bit too advanced for you at this stage, though).

You can also stop the printing yourself by using ☐. How long it takes the printer to stop varies according to what sort of printer it is. If you do so, you can re-start printing from where it stopped by hitting ☐ again - OR ANY COMMAND. If you hit any keys other than ☐ it will disengage the Microwriter from the printer and allow you to go back into the text - but this means that if you wish to print again it will start from the last document separator and not where you left off.

EDITING

... purely and simply means changing things you've already written.

There are only 3 possible changes you can make:

- simple CORRECTIONS by overwriting

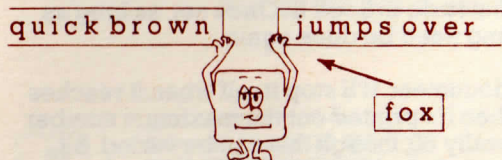


WHICH I CAN DO ALREADY!

... which you can do already

- INSERTING extra bits
- DELETING bits you don't want

Insertion



To "insert" an extra letter or word or more, use **I**.

I for Insert

This makes a sort of hole in the memory at the place the display (and cursor on T.V.) is positioned so you can put in the new bits. You'll see an "I" on the right of the display where you're in insert, and on the T.V., the rest of the text disappears.

Now you can just write your extra text in the usual way

... and then close up the gap by hitting **I** again. The "I" goes away, and the rest of the text re-appears on the T.V. Job done!

Caution: If you switch off your Microwriter whilst in insert, you'll be leaving the hole in the memory where it was, and won't be able to read or zip past it next time you switch on. If you've done this, remember to cancel with **I**.

Deletion



There's 5 ways of chopping bits you don't want out of the memory:

- D** deletes one character only each time it's used. It's the character furthest on the right of the display, or if connected to the TV the one immediately ON THE LEFT of the cursor on TV.

D for Delete

- D** starts continuous deletion word by word which can be stopped at any time by keying AND RELEASING **□**. This process works from RIGHT to LEFT, so start at the END of the text you want to get rid of. You will find it all happens rather fast at first - so be careful.

- W D** wipes EVERYTHING between two document separators. (The beginning of the relevant text should appear in the right-hand position of the display).

W for Wipe

but:



BE VERY CAREFUL

This one is instant death to a document AND CANNOT BE STOPPED.

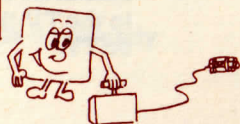
That's why when you key **W**, you'll see a "SINGLE WIPE?" warning appear on the display and T.V. It's only if you NEXT key the **D** that the document is wiped off the memory. If you key anything else, the **W** will be ignored.

Text **W** Text **D** Text

M W D is even more drastic: it wipes off the document you're in when you do it (like **W D** does) and EVERY DOCUMENT ON THE MEMORY AFTER IT.

You'll get the warning "MULTIPLE WIPE?" when you've keyed the **M W**, and the wipe will only happen if you then key the **D**: anything else will cause the **M W** to be ignored.

M W Multiple Wipe



M W M K is TOTALLY LETHAL!! It will wipe absolutely everything relentlessly. Hence the obscure code! (This also shows Multiple Wipe after **M W**).

It will show MEMORY CLEARED afterwards. Hit ☐ to get back to writing on the Microwriter.

FORMATTING

"Formatting" means the various commands that affect WHERE on the page the printer will put the text. If no format command is used, the result is a solid chunk of text running down the page. The format commands let you break the text up - up, down and across the page, in the order you want.



Yes, that's a format command.

There are two other types'

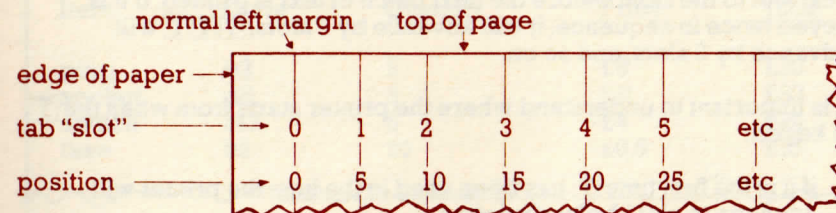
- TABULATIONS
- MARGIN INDENTATION

The Pre-Set Format System

The Microwriter has in its mind (its "program": the built-in set of instructions which control the way it works) a standard picture of a printed page divided up into columns. Each of these columns is usually the width of 5 printed characters (= 5 character positions), but this can be varied (though not until you're more expert than you are at this stage).

Across each line of print, therefore, there is a sequence of pre-set positions at the start of each column. These are called "TAB SLOTS". Each slot has a number, and its position on the page is measured as: its distance from the normal left margin by the number of character positions.

The Microwriter's standard picture, then, looks like this:



Position 0 is thus the normal position of the left margin, and each successive slot across the page marks the various fixed positions available for use with both the tabulation and the margin indent commands.

Note: This Guide assumes that your Microwriter is set to behave according to the pre-set system. If, in practice, you find things are not happening as described look up Tab Adjustments in Book II.

Understand it all so far?



... right, here we go:

Tabulation

"Tabulation" simply means the printing of information in the form of a "table" or "schedule", e.g. statements of account, catalogue lists, etc. In practice, the tab system is also a convenient way of achieving a "one-off" indentation to the right.

The tab command is **T** which shows a **+** sign on the display each time it is used. On the T.V. screen, the use of **T** is visible in that the cursor is re-positioned appropriately.

T = Tabulation

Each time **T** is keyed, it has the effect of advancing the printer to the next slot to the right before the next batch of text is printed. If it is keyed twice in sequence, it will advance by 2 slots, **T****T****T** will advance by 3 slots, and so on.

It is important to understand where the printer starts from when the **T** is keyed:

- if it is the first time **T** has been used in the line, the printer will advance to slot 1 before printing.
- if it is not the first **T** in the line, **T** will cause the printer to advance to the next slot to the right of the one to which it was sent by the previous **T**. Thus, if the printer has just printed text at slot 6, **T** will now advance it to slot 7.

Like an example?



O.K.: Example

Write this:

Item **T****T**Code **T****T**Quantity **T****T**Price **T****T**Total **C** **C**
 plug **T****T**b2 **T****T**5 **T****T**£6 **T****T**£30 **C**
 socket **T****T**d8 **T****T**3 **T****T**£11 **T****T**£33 **C**
 switch **T****T**r47 **T****T**6 **T****T**£4 **T****T**£24 **C**
 fuse **T****T**h2 **T****T**20 **T****T**£0.5 **T****T**£10



... and then print it out. It should look like this:

Item	Code	Quantity	Price	Total
plug	b2	5	£6	£30
socket	d8	3	£11	£33
switch	r47	6	£4	£24
fuse	h2	20	£0.5	£10

In the example, each use of **T****T** was sufficient to advance the printer to a slot BEYOND the text which had just been printed on the line. IF **T** IS NOT used enough to advance the printer to a "clear" slot, it does not overprint the next batch of text on the previous batch: instead it merely prints it continuously on from the previous batch, but the neat format is still lost. It is therefore important to ensure that **T** is used sufficiently to allow for the amount of information to be printed in each column.

Example:

In the previous example, the "item" column is 10 positions wide since **T T** was used to advance the printer to the "code" column. If one of the item names was LONGER than 10 characters, then that line would be out of format:

Item	Code	Quantity	Price	Total
plug	b2	5	£6	£30
socket	d8	3	£11	£33
edge-connectorx14		1	£2	£2
switch	r47	6	£4	£24

In this case, the "code" column should have been positioned 15 positions from the margin to allow for "edge-connector", i.e. **T T T** should have been used:

socket	d8	3	£11	£33
edge-connector x14		1	£2	£2
switch	r7	6	£4	£24

The easiest way to ensure that your columns are wide enough for the information to be printed in them is to build up the format on a T.V. screen. The result is then instantly visible.

Margin Indent Commands

The command is **'**.



... it's "Command-Apostrophe".

Each time you use it, it shows a → sign on the display.

The margin control command also uses the pre-set "tab-slots" held in the Microwriter's program.

If no use of **'** is made, each time a carriage return is made (either an automatic one or as a result of **C**), the printer will automatically start printing the next line from tab slot 0.

When **'** is keyed, it has the affect of instructing the printer to return to tab slot 1 at the next AND ALL SUBSEQUENT carriage returns, i.e. the subsequent text printed is indented by 5 character positions. If **'** is keyed, the "new" margin is now at tab slot 2, i.e. 10 characters from the usual margin. 3**'**s puts the margin to slot 3 - 15 positions from the left, and so on. Each **'** used also has the affect of reducing the maximum number of characters to be printed on each line by 5.

The next paragraph is an example of the use of **'** before a **C** :

It is important to remember that **'** only takes affect AT THE NEXT CARRIAGE RETURN. To indent this paragraph, therefore, the **'** was keyed BEFORE the **C** **C** which produced the clear line separating the paragraphs.

M' – Margin Re-set

STEPPED PARAGRAPHS

1. In order to describe easily the process of successively indenting paragraphs and then "stepping back out again", each paragraph is numbered. This paragraph is printed from the normal left margin, i.e. tab slot 0.

2. One ☐ has now been keyed to bring paragraph 2 in by 5 character positions. Paragraph 3 shows how a heading for an indented paragraph can easily be written.

3. This is paragraph 3.

All that is necessary is to remember to key the required number of []s BEFORE each "paragraph gap". ([] []) is keyed. Once this has been done, subsequent carriage returns automatically go to the indented margin.

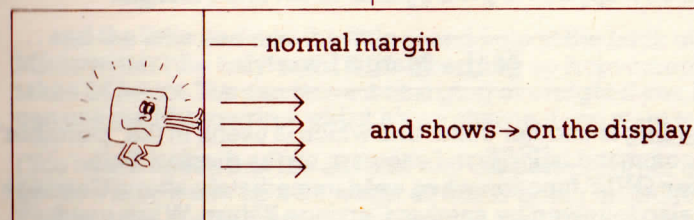
4. To bring this paragraph back again by only 5 positions, ☐☐ was keyed ONCE ONLY before ☒☒. If a return to the main, "normal" margin at tab slot 0 was required, ☐☐ would have been keyed twice. Paragraph 5 will be repositioned at slot 0.

5. Here's where we started from! The **↵** keyed before writing this paragraph effectively cancelled the indentation achieved by using **↵** before writing paragraph 2.

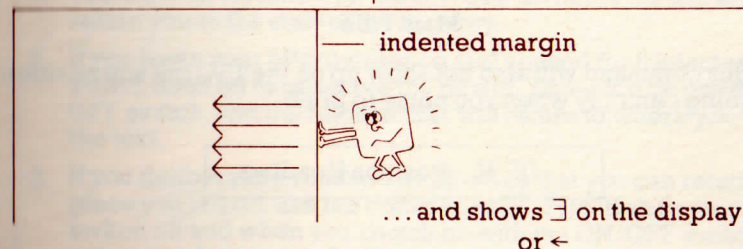
Another frequent requirement is to print paragraph numbers to the left of a sequence of indented paragraphs. The example below is also the explanation of how this is easily done:

- ### Here's a Summary:

1 = page



M ☐ = _____ page
or ☐ ☐ = _____



Two other types of "Formatting" commands are:

- MARGIN INVERT
- POSITION HEADING

Margin Invert command is **M I** and shows **≡** on the display.

If this command is used before a short piece of text, typically a date, AND FOLLOWED BY **A C** then that piece of text will be shifted to line up from the RIGHT HAND margin instead of the left. Thus it has inverted the margin BUT only for that line.

Example: **M I** 1 January **C** - will print against the Right Hand margin like this:

1 January

Note: Since the T.V. enables you to actually see the layout of your text this command is not usually used in the T.V. mode. As a result it does not show up on the T.V. screen if used. However, it will cause the piece of text to which it applies to print against an inverted margin.

M I - Margin Invert

Position Heading is another command and which is useful in the "portable" mode. The command is **P H** and shows **⌞** on the display. This command can ONLY function when used immediately after a Carriage Return and also followed by another Carriage Return. When used before a short piece of text, typically a short heading, the effect is to automatically centre the heading when printing.

Example: **C P H** Main Title **C** - will print like this:

Main Title

Note: This command will also not show up on the T.V., but will position the heading centrally when you come to print.

P H - Position Heading

CHARGING THE BATTERIES

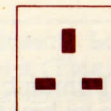
When fully charged your Microwriter should give you 30 hours of continuous use (enough usually for one week of normal use).

Your Microwriter will let you know when it's getting hungry ...



... by showing you an underline mark on the LEFT of the display when it's beginning to run down. This indicates that one hour of charge remains, and you ought to start using it off the mains until you can give it a good charge.

To charge it up again, use only the "mains adaptor" supplied with your Microwriter. Stick the big end into a convenient set of 3 holes in a nearby wall that look like this:



... and the little end into the little round hole at the back of the Microwriter (the only one it'll fit). Charging up from completely flat takes 24 hours. You can leave it charging overnight if you like or you can use the Microwriter whilst it's on charge if you want to.

(You might notice that the adaptor and the bottom corner of the Microwriter warm up a bit whilst all this is going on. DON'T PANIC. This is quite normal: neither of them will melt, burn or explode, etc.).

There are three ways of switching your Microwriter on and off!!

1. The most obvious is with the ON/OFF switch. This will always return you to the start of the memory.
2. If you leave your Microwriter on and unused for 8 minutes, it will switch itself off to preserve the power. To switch on use the ON/OFF switch, and the Microwriter will return to where you left off in the text.
3. If you deliberately want to switch off so that you can return to the place you left off, use the commands **H P** to 'Halt Power'. It will switch off and when you switch on with the ON/OFF switch will return to where you left off.

H P - Halt Power

DISPLAY SYMBOLS

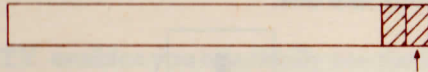
... And What They Mean

All sorts of different symbols appear from time to time on the display. They can appear either fixed on the extreme right of the display, or they can move backwards and forwards along with the text as you read through.

These are WARNINGS and INDICATORS.

Whenever you see one you don't recognise, look it up in this section to find out what your Microwriter is saying to you.

Symbols Fixed On The Right (Slot No. 2)



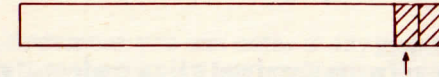
These are the Setting indicators. (Remember you can always get back to lower case alphabet at any time by keying ☐).

Single

Shot	Lock	Upper Case Alphabet Indicator
u	U	For capital letters. See page 16
n	N	<u>2nd Setting Indicator</u> For numbers and punctuation. See page 18
p	P	<u>3rd Setting Indicator</u> For other printable characters. See Book II
a	A	<u>4th Setting Indicator</u> For "ASCII Control Characters". (These get used once you're playing about with various computers, etc., but normally you needn't worry about them. They're dealt with in "The Microwriter User's Handbook - Book II").

When the extreme right position of the display is blank, you're in normal, lower case alphabet.

Symbols On The Right (Slot No. 1)



- M Menu engaged
means you have locked into the Menu Access. At this stage you need not worry about this. See Book II.
- f Full Memory Warning
means you've nearly filled the memory, and only have enough room for another 256 characters (= a shortish paragraph).
- F Full Memory Indicator
means you've filled up the memory and will have to wipe something off to make space to carry on.
- I Insert Indicator
tells you you're in "Insert". Look it up on page 30 if you don't already know about it. (This is a high priority indicator and will overwrite any of the above alternative indicators).

Symbols That Move About

These ones behave on the display just as if they're an ordinary letter, number, punctuation mark, etc. But they're not. They don't result in a printed character. Instead, they mean something:

- ⌋ Document Separator
See page 26
- ⌈ Letter Marker
See page 45
- ⌋ Carriage-Return
Often called a "hard" carriage-return. See page 25
- ⌋ Automatic Carriage-Return
Sometimes called a "soft" carriage-return. See page 25
- ⌋ Automatic Carriage-Return Suppression
Delete or overwrite if you get it by accident. If you want to know more, though, see Book II.

- ⌘ Tab
= "tabulation": see page 34
- ⌘ Tab Adjustment
Delete or overwrite if you get it by accident. If you want to know all about it look in Book II.
- Margin Indent
See page 37
- ← Margin Decrement
See page 38
- ⌘ Margin Reset
See page 38
- ⌘ Underline Start/Stop
Book II.
- ⌘ Position Heading
See page 40
- ⌘ Margin Invert
See page 40
- ⌘ Form Feed to Next Page
Book II.
- ⌘ Exception I
See Book II.
- ⌘ Exception II
See Book II.
- Low Charge Indicator
Always occurs on the left of the display. See page 41
- ASCII Control Character Indicator
Always happens before a letter when locked in ASCII setting. Refer to Book II.

THE LETTER MARKER

This is a neat way of getting instantly to exactly the right spot in the memory.

As you prepare a document, you can enter at any point a "marker" to which you can later zip the display (and cursor on T.V.) precisely and easily by using a special command.

The marker is entered by keying L, which shows a L on the display.

L - Letter Marker

The special access command is Y Z. Keying this zips the display/cursor straight to the next "marker", ignoring all line endings and paragraph gaps which may be present beforehand. If there is no marker on memory after the point at which Y Z was keyed, it will act as Z and 'zip' directly to the end of the document.

Y J works jumping back in precisely the same way, searching for the nearest preceding letter marker

When preparing standard text which will be used more than once, with variable text being entered each time (e.g. quotation letters, contracts, etc.), a marker can be entered at each successive point in the text at which variable text will be inserted. As each "issue" of the standard text is prepared, it is then necessary only to use Y Z or Y J to shift directly from one variable item to the next. The marker itself does not print, so it is not necessary to delete it from the text prior to printing - however, be careful not to overwrite it as you may need it next time around.

EXTRA SETTINGS

In addition to the main two settings described so far, there are two additional settings which are dealt with in full detail in Book II.

THE THIRD SETTING

This gives the remainder of the (normally) printable ASCII characters

The command to switch to 3rd setting is **[P]**.

– **[P]** Switches to 3rd setting for the next character only and shows “p” on the display.

– **[P][P]** Locks into the 3rd setting and shows “P” on the display.

The characters are dealt with in Book II.

THE FOURTH SETTING

This gives the “ASCII Control Characters” and are accessed using **[H]**, as usual once and twice off as suitable (though only when the relevant “menu” setting permits!). Keying **[H]** or **[H][H]** shows “a” or “A” (for ASCII) in the setting window.

SHIFT INVERSION

For use in code numbers, etc:
i.e. post codes: EC4Y 2ZX

When locked into any setting (lower case, upper case, numerics, 3rd or 4th setting) you can lock directly into any other setting WITHOUT going back into lower case alphabet by using double commands as per normal.

Equally, a once off command will also work (e.g. will give one upper case alphabet while locked into numerics, and will then revert to numerics automatically). A once off shot into lower case alphabet will not register – it will always unlock permanently into lower case alphabet.

CASSETTE STORAGE

Introduction.

This system provides a facility for storing part or all of the text on the Microwriter memory for use at a later date.

The quality of cassette recorders varies, and it is important to observe our ‘housekeeping’ rules on page 51. Several “mini-cassette” recorders do not have an output socket, and cannot therefore be used.

When using a recorder for the first time, it may be necessary to experiment with the volume level when going through the “read from tape” routine (see point 4, page 49).

Note: Throughout these notes “WRITE” means the Microwriter writing ON TO the tape and “READ” means the Microwriter reading the information back FROM the tape. (Writing merely copies the Microwriter memory and doesn’t erase it).

To WRITE On To Cassette:

1. Decide which document or sequence of documents you want to record on to cassette. Place **TWO CONSECUTIVE** document separators at the end of the last document to be recorded.
2. Locate the **FIRST** document to be recorded in the same way as for printing/transmitting.
3. Load a cassette in the recorder and wind forward or backward to the part of the tape on which you want to record the information – preferably a blank section.
4. Dictate a title on to the tape so you can easily identify the information later. (This is not essential, but is strongly recommended).
5. Plug the cassette connection lead into the “cassette socket” on the front of the Microwriter, and into the “microphone” or “input” socket on the recorder.

6. Switch the recorder to "RECORD" and THEN command the Microwriter to write on to cassette by keying ☐ **W**.

☐ **W** to Write on to tape.

The information will now be written on to tape. The Microwriter shows 'ON TO TAPE' on the display and a slow pulsing line as transmission occurs.

How long it takes to write all the information depends on its length. A full memory takes just under three minutes to be written on to tape.

7. When the process has been completed, the Microwriter display reverts to text to show the last 14 characters of the information recorded.
8. Should you wish to halt the write process prior to the end of transmission, hit ☐ (It will have a delayed reaction to this).

The Information On Cassette

Having completed the process of writing on to tape, the cassette now contains the following sequence of information:

1. Your dictated "title" (if you recorded one)
2. A clear, high-pitched tone lasting about 2 seconds which is automatically recorded to denote the start of the text.
3. The text itself, which makes a buzzing noise.

Note:

- (A) Depending on the length of tape, cassette you use, it is possible to record the equivalent of many full memories on one tape. Some microcassettes, for instance, can store up to about 100 A4 pages of text. We do not recommend 'crannming' in too many pages.
- (B) If recording high volumes of information on tape, your dictated "titles" become very important in subsequently locating a particular item.
- (C) It is also wise to make a list of the titles. If your recorder has a counter, then the reading at the start of each recording should be noted.

To "READ" Back Into Microwriter Memory.

1. Load the appropriate cassette into the recorder.
2. Find the clear tone at the START of the particular information you want to read back into your Microwriter, and stop the recorder at this position (and NOT before or beyond the tone).
3. Plug the cassette connection lead into the "cassette socket" on the front of the Microwriter, and into the "earphone", "play-back" or "output" socket on the recorder.
4. Turn the volume control on the recorder to its optimal level. (For most micro-cassette recorders recommended, this level is usually close to maximum volume, though as noted previously some experimentation might be necessary first time around.
5. You must have clear memory to write into otherwise it won't work and will read out TAPE ERROR when you try to read. If at the beginning of the memory MAKE SURE you step past the ✓ by keying ☐ **F**.
6. Key ☐ **R** on the Microwriter so it is ready to Read, and THEN switch the recorder to "play" (being careful not to switch it to "record" by mistake).

☐ **R** to Read from tape.

The Microwriter will now read the information from the tape. During the process, the display will show a plus (+) sign on the left and right of the display and read 'FROM TAPE' in the centre. This may take a few seconds to appear.

The + indicates the optimum volume level of the Cassette Recorder. If it shows as a minus (-) sign this means the volume is too low. Turn it up until the + is becoming defined. Then halt the process and try re-reading. (Equally if it shows a vertical dash (|) the volume has been set too high).

Similarly, should the memory be filled up because there was insufficient memory space to accept all the text from tape, the process will stop as if it was the end of transmission.

8. Once the process is complete, the Microwriter display shows 'TAPE ERROR = 000'. This shows how many errors have occurred in the transmission and, of course, ideally the readout should be 000.

If it shows a figure it does not mean that 007 (for example) equals 7 errors. The readout is based on a complicated formula relating to the number of corrected errors. The maximum number of uncorrected errors that can occur is one error. After this it will show POOR TAPE. If 'POOR TAPE' shows on the display you will need to re-read it.

Once the transfer has happened successfully the recorder can be switched off and the information now in the Microwriter memory handled in the usual way. The tape is NOT erased during the read process and may be re-used as many times as needed. It is wise, however, to store tapes away from sources of dust, heat or magnetic fields (e.g. NOT on top of a television set).

Note: In electronic terms, the read process is very sensitive to interference and it may be necessary to attempt to read a tape more than once to achieve an accurate transfer to memory. If the information shows a high degree of error once in memory, or partially or totally fails to be read, the volume level should be checked. If difficulty persists, fresh batteries should be used in the recorder. Low charge in the Microwriter may also interfere with the process.

"Inserting" Text from Cassette

Text on tape can be read into memory with the Microwriter switched to Insert Mode. All that is necessary is to key **I** immediately prior to keying **R** as above, and then again when the read is complete.

IMPORTANT FOR CASSETTE USERS

The quality of cassette recorders and tapes varies considerably, though it has improved considerably in the last few years. We therefore recommend the use of a 'newer' recorder wherever possible.

Whilst Microwriter's hardware and software has been designed to give users reasonable reliability, the Microwriter cannot remove all sources of error and users will achieve better results if the following safeguards are observed:

- Ensure tape is in good condition.
- Correct tape for recorder should be selected (i.e. FEO₂, CRO).
- If speed on recorder is variable, the same tape speed should be selected for reading and writing.
- Do not 'overwrite' tape too often.
- After long periods of use the tape heads in cassette recorders tend to get 'magnetised'. Occasional de-magnetising is recommended. Equally, cleaning tape heads every so often is recommended.
- Normally tone control will have little effect on playback although maximum treble response is normally preferred.
- On playback ensure optimum volume is set.
- Ensure no large items of electrical equipment are switched on and off in the vicinity.

Users who require higher levels of accuracy should use digital cassettes with RS232C input/output or a suitable micro-computer with discs.

Whether using cassettes or other media for storage of texts and data it is important to keep a printed copy of any texts so that in the event of failures texts can be reconstituted.

SO NOW YOU KNOW IT ALL ...

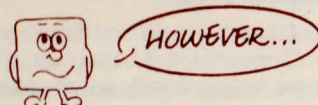


... except you don't!



It's true that, if you've learned all the basic stuff in this Guide, then you've learned enough to be able to use your Microwriter for a very wide range of writing, editing, formatting and printing uses.

However ...



... however, your Microwriter is a very powerful and versatile little device. Don't be deceived by its size: it's really a little computer in its own right, and there's lots more that can be done than we've covered in this Guide.

For instance, there's a thing called a "program menu" that allows you to change lots of the ways in which the Microwriter behaves which this Guide treats as unchangeable (such as standard line length, page length, line spacing, etc.). You can also do a whole load of technical things through the keyboard to enable your Microwriter to link into a tremendous range of other devices.

All this is covered in:

Microwriter General Systems Manual - Book II

So, if you want - or need - to, then that's your next step.

If you don't, then just carry on as now.

Enjoy it!

Bye!

