Braille2000 Voice

Braille2000: The Talking Edition is a self-voicing extension to The Document Processing Edition. Self-voicing means that it has a speech interface of its own, without the need for third-party screen reading tools. The Talking Edition can read contracted braille, letting you hear the document in normal speech. You can also have it spell out the print words or read the braille cell-by-cell or even give you the dot numbers. The Talking Edition will, on demand, give you the position of the cursor by page, line, and cell, and it will speak each input operation and menu action to let you hear how you are editing the manuscript. The Talking Edition uses the Microsoft speech engine found in all contemporary versions of Windows. You can use optional third-party voices that are compatible with the Microsoft speech engine, if you have them.

Try out Braille2000 Voice
First, you must use Braille2000 version 2.274 or greater. Second, you must launch Braille2000 using the "Evaluate Only" tab (to access that tab you may need to click the Stop button on the automatic launch window). After clicking "Evaluate Only" select "Talking Edition". Open a braille file and then click Menu / Speak / Read. The system will begin reading the entire document (press ESC to stop the reading). Note that Evaluate Only is demonstration mode: do not Save your file (in demo mode the prose gets marked "demo"). To use the Talking Edition for production work, you need to buy a license (or upgrade) for it. Contact us.

Activating the Braille2000 Voice

To do production braille work with speech you will need a license for Braille2000: The Talking Edition. *(Note: you must be using version 2.274 or greater to use this feature.)* To play with it for demonstration purposes, click the Evaluate Only tab when launching Braille2000 and select Talking Edition. This Edition has a Speak button in the Control Panel at the left. If you are a mouse user, you can click that to select basic voice modes: you can select between Off (no voicing), Location (speaks cursor location when the cursor moves), Cells/Chars (speaks the print character or cell name at the cursor when the cursor moves (the choice of character or cell is made via Speak As discussed below), Words (speaks the word at the cursor when the cursor moves), Lines (speaks the line of text at the cursor when the cursor moves), Paras (speaks the paragraph at the cursor when the cursor moves). When voicing the word, line, or paragraph, the same unit is not spoken again until the cursor moves freshly into it. For example, if you right-arrow through an entire line, each word (via the word option) will be spoken only once, and the line (via the line option) will be spoken only once. Demand voicing commands are discussed below. You will find additional speaking options in the menu via Alt k (Speak) or via the quick speech controls entered via Ctrl+q and additional control letters (all discussed below).

What The Talking Edition Can Say

There are options (reached via Alt k (Menu / Speak) or via Ctrl+q) to get the Braille2000 Voice to say the following things.

Document content:
- the current cursor position
- the current page number (ordinal, braille number, or print number)
- the current line number
- the current field number (if in a table)
- the current cell position on the line
- the current paragraph style
- the current code selection
- the prose of the current paragraph
- the prose of the current line
- the prose of the current field (if in a table)
- the prose of the current word
- the spelling of the current word (print spelling)
- the cells of the current word
- the cell at the cursor
- the dot numbers of the cells of the current word
- the dot numbers of the cell at the cursor
- the prose of the entire document (continuous reading)

Basic control: whether or not to speak*
- menu popups and menu items
- dialog box controls
- status messages

> * via basic control settings you can have the Braille2000 voice remain silent for selected interactions so that another screen reader (such as JAWS or NVDA) can voice those events.

The Menu Versus Control-Q

All voicing operations are available via Menu / Speak (Alt k) as well as through the "Quick Control" mechanism reached via Ctrl+q plus additional control letters. Use whichever approach is most convenient. Menu actions can be recorded as Speedbraille™ keys (Ctrl+q actions can also be recorded using a special technique presented below).

The Speak Menu (Alt k)

The behavior of the Braille2000 Voice can be adjusted via the Speak menu and you can demand immediate voicing of many different kinds of document content.

The main level of the Speak (Alt k) menu contains immediate request items plus some settings. The immediate request items are these (hot keys given in parenthesis):

Cell (c) speaks the cell (or print character, see Speak As) at the cursor
Document data (d) speaks the filename, folder path, whether modified, view type, page size
Code (o) speaks the code setting at the cursor
Field (f) speaks the table field at the cursor

Line (l) speaks the line at the cursor
Paragraph (p) speaks the paragraph at the cursor
Read (r) reads continuously from the line at the cursor to the end of the document
(reading can be halted by pressing ESC, or Ctrl+q, or Alt k)
Style (s) speaks the paragraph style at the cursor
Word (w) speaks the word at the cursor
The manner of speaking for cell, word, field, line, and paragraph is determined by the "Speak As" setting.

Speech engine control settings can be set using the Engine Settings menu item (Alt k g) or via right-click to the Speak button in the Control Panel.

The other items in the Speak (Alt k) menu are submenus:
Page Number (n) speak the page number at the cursor
Say Where (e) speak the location of the cursor
Speak As (a) set the manner of speaking (for cell, word, field, line, paragraph)
Tell (t) set options for spontaneous speaking on cursor movements
Voice (v) turn voicing options off/on (toggle) by category of event
The submenus for each of these menu groups are presented next.

Page Number voicing (Alt k n)
Ordinal number (o) the page number in the file
Braille number (b) the braille page number on the page (in a corner)
Print number (p) the print page number on the page (in a corner)
Numbering (n) the page numbering layout ("Quick Setup For" setting)

Say Where (Alt k e)
Page/Line/Cell (e) Say page/line/cell location of the cursor
Cell Num (c) Say the cell position on the line
Line Num (l) Say the line (in page) number
Page Ordinal Num (o) Say the page ordinal (in file) number
In-Para Line Num (i) Say the line ordinal number within the paragraph
Braille Num (b) Say the braille page number
Field Num (f) Say the field number (in a table row)
Print Num (p) Say the print page number at the cursor (not the corner number)

Speak As (Alt k a)
Cells (c) Say the names of the braille cells
Dots (d) Say the dot numbers of the braille cells
Spelling (s) Say the letters in the print spelling
Words (w) Pronounce the words (as in normal reading)
Explicit (x) Pronounce the words while also speaking capitalization, typeforms, and
   punctuation.

Tell (Alt k t) settings for spontaneous speaking, it has a submenu "Where" (e)
Cell (c) Say the cell at the cursor
Code (o) Say the code setting at the cursor
Field (f) Read the field at the cursor (when in a table row)
Line (l) Read the line at the cursor

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Nothing (n) Say nothing when the cursor moves
Paragraph (p) Read the paragraph at the cursor
Style (s) Say the paragraph style at the cursor
Word (w) Read the word at the cursor
Where (e) Say the cursor location (choices below)
  Page/Line/Cell (e) Say page/line/cell coordinates as they change
  Cell Num (c) Say the cell position on the line
  Line Num (l) Say the line (in page) number
  In-Para Line Num (i) Say the line ordinal number within the paragraph
  Page Ordinal Num (o) Say the page ordinal (in file) number
  Braille Num (b) Say the braille page number
  Field Num (f) Say the field number (in a table row)
  Print Num (p) Say the print page number at the cursor (not the corner number)

Voice (Alt k v) toggle the on/off setting for a category of events
  Mute All (a) Silence all speaking
  Telling (t) Speak to tell about where the cursor is located
  Menus (m) Speak when popup menus are used
  Dialogs (d) Speak when dialog boxes are used
  Keyboard (k) Speak when the keyboard is used
  Info (i) Speak status messages

Speech Settings (Alt k g) displays the Speech Settings dialog box
  Default voice settings can be made via the Speech Settings dialog box reached via Alt k g or reached via right-click to the Speak button in the Control Panel.

Quick Command (Alt k q) displays an input dialog box for a "Quick Command" discussed below.

The Quick Control (Ctrl+q)

(The Speak menu (Alt k) presented above uses standard Windows menus to generate voice actions. With some system settings, the menus themselves are spoken and can slow down menu navigation and activation for demand voicing. The "Quick Control" presented in this section provides a non-menu alternative way to get voice actions that is much faster than using Alt k, but because this alternative uses only control codes (you have to hold down the Ctrl key while keying one or more letters), input of some things can be awkward. Quick Commands presented in this section can do everything that the Speak menu can do, plus it can offer some combinations, such as "speak word as dots" that the Speak menu cannot perform directly. If you find using the Ctrl key difficult, Quick Command letters can be input as ordinary text using the Quick Command dialog box reached via Ctrl+qq or via Alt k q (see below). And finally, you cannot record these control-letter sequences as a Speedbraille™ key, but you can record them when entered into the Quick Command dialog box. You can also record the Speak menu items that were presented above.)

The Quick Control mechanism has a keyboard interface involving only control keys (you hold down Ctrl while using it) and you exit the Quick Control mechanism by releasing the Ctrl key. The Quick Control interface does not show on the screen. When it is active, the main window title bar goes gray and there is no blinking cursor.

To use Quick Control, enter the following letter sequences, always beginning with q, all while holding down the Ctrl key. The symbol + indicates that a second letter is also required (keep the Ctrl key pressed throughout). The letter sequences are the same as the hot keys in the Speak menu discussed above.

ALL letter sequences in this section are input while the Ctrl key is held down. The first letter is ALWAYS q.

Demand Speaking (the requested information will be immediately voiced)

    qc the cell or character content at the cursor
    qd data about the document
    qe+ where the cursor is located
        qee page/line/cell (the on-screen cursor location readout)
        qep print page number at the cursor (not the corner number)
        qeb the braille page number
        qeo the page ordinal number in the file
        qel line number (on the page)
        qec the cell position on the line
        qef the field number (column number) in a table
        qei the in-paragraph line ordinal ("first of two", "second of two" etc.)
    qf the field content at the cursor (in a table row)
    qh speak Quick Control help
    ql the line content at the cursor
    qn+ the page number for the page at the cursor
        qnp   print reference number on the page
        qnb   braille number on the page
        qno   page ordinal number in the document
        qnn   page numbering settings (quick setup for)
    qo the code selection at the cursor
    qp the paragraph content at the cursor
    qr the document content at the cursor (continuous reading)
        (reading can be halted by pressing ESC, or Ctrl+q, or Alt k)
    qs the paragraph style at the cursor
    qw the word content at the cursor

The above sequences give immediate voicing. Only one of the above letter sequences may be used at a time.

The following letters set speaking preferences. The symbol + denotes one additional letter, the symbol * denotes one or more additional letters. The qa+ sequence may follow qc qf ql qp qr or qw from the above list to set the manner of speaking for that one request (if used by itself, it sets the default manner of speaking).

    qa+ "speak as" sets the manner of speaking
        qac   speak as cells (cells referred to using standard transcriber jargon)
        qad   speak as dots (speaks dot numbers)
        qas   speak as spelling (print spelling)
        qaw   speak as words (pronounced as the speech engine is capable)
        qax   speak explicitly (speak as words with spoken capitalization, typeform, and
              punctuation information)
    qt* telling (spontaneous voicing when the cursor changes location)

(the letters qt are followed by one or more of the following)

e+ say where the cursor is

    ee page/line/cell (the on-screen cursor location readout)

    ep print reference number at the cursor

    eb the braille page number

    eo the page ordinal number

    el line number (on the page)

    ec the cell position on the line

    ef the field number (column number) in a table

    ei the line-in-paragraph ordinal ("first of two", "second of two" etc.)

p   read paragraph

l   read line

f   read field (in a table row)

w   read word

c   read cell/character

o   code setting

s   paragraph style

n   nothing (stops all telling)

(note: qt allows multiple codes, to have it "tell" several things when the cursor moves; for example qtps will read the paragraph and say the paragraph style)

qv+ voice (toggle a speech mechanism off/on)

    qva Mute all (this is a toggle to mute and unmute)

    qvt Turn telling off/on

    qvm Turn menu event voicing off/on

    qvd Turn dialog event voicing off/on

    qvk Turn keyboard event voicing off/on

    qvi Turn status message (info) voicing off/on

qg display the settings dialog box

qq display the Quick Command dialog box to input the above codes as plain text

Using a+

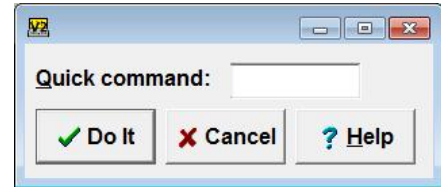The "speak as" directives (qac qad qas qaw qax) used alone set the default speaking manner. When used (without leading q) immediately following a reading directive (qc qf ql qp qr qw) it affects just that reading action, i.e., the default manner of speaking is unchanged. For example, qlac reads the line at the cursor as cells regardless of default speaking manner.

Using t*

The "tell" directive can include multiple letter subsequences (although using several will be impractical because of too much speaking). For example "qtepen" (all entered with Ctrl) will cause the print reference number and the braille page number to be voiced at each cursor movement. The telling directives r p l f w and c are conceptually mutually exclusive (the largest unit is what is read). Entering qtn turns telling off (no spontaneous voicing when the cursor moves). Cursor motion implied by keyboard input does **not** trigger telling.

On moving the cursor (i.e., using arrow keys), the system voices the information designated by the telling setting, but only when that information changes. For example, if using "qtee" (a control sequence defined above) to tell the page/line/cell cursor position, the system will announce the page and line and cell numbers once and then it will announce those items as they change. This means that as you use left or right arrows and the cursor stays on the same line, only

the cell position is announced. If you move up or down, the new line number is announced. If you use an arrow key that moves the cursor from the end of one line to the start of the next line that happens to be on a new braille page, then page, line, and cell numbers will all be announced.

If you are using "qts" to announce paragraph style, the style will be announced once. After that, it will not be announced again until the cursor moves into a paragraph with a different style. In this way, by moving the cursor through the document (e.g., via repeated down arrow), you can determine the consistency of paragraph styles. The same kind of behavior applies to braille code, as might be revealed by "qto". Remember that getting a re-speak of information is always available via demand voicing, as with "qo" to immediately speak the current braille code designation.

The Quick Command Dialog Box

In the section above, all letters are entered with the Ctrl key held down. This is fast for simple things but perhaps awkward when both left-hand and right-hand parts of the keyboard need to b used (one hand may be occupied holding down Ctrl). You can do the above codes as plain text if you display the Quick Command dialog box using Ctrl+qq or by using Alt k q.
The Quick Command dialog has one input area where you type any of the above sequences as plain text and then click OK or press Enter. **You do not need to type the leading q.** For example, to do "qtepen" mentioned above, an alternative way to handle it is to key Ctrl+qq and then type the plain text t e p e n Enter. (Pressing Enter closes the dialog box.)

The Voice Settings Dialog Box

By right-click to the Speak button in the Control Panel or via Menu / Speak / Engine Settings (Alt k g) or via Ctrl+qg you get the Voice Settings dialog box. It has three panels selected by tabs: Settings (s), Voice (v), and Options (o).

The Settings panel has checkboxes for the kinds of system events that will be spoken. If you are using Braille2000 Voice with a screen reader, you probably want Braille2000 Voice not speaking menu and dialog box events, but you may want it to speak keyboard actions and tell about where the cursor is located and/or read the prose at the cursor (both enabled via "Tell about cursor location").
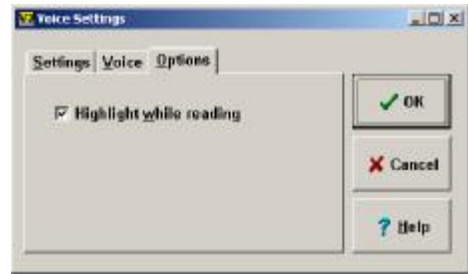
The checkboxes are these:
    (a) Mute all (no Braille 2000 voicing)
    (m) Speak menu events
    (d) Speak dialog box events
    (k) Speak keyboard actions
    (t) Tell about cursor location
    (i) Speak Info messages

The Voice panel has controls for the speech engine itself. Speech output is generated by the Windows SAPI

mechanism and the voices choice (often only one voice is available) lists the voices that came with your version of Windows. You can acquire additional Microsoft-compatible voices on your own at your option. You can adjust the rate of speaking and the loudness. The Apply button will let you hear sample speech to check your settings.

The Options panel presents some additional options.

If "Highlight while reading" is active, then during continuous reading, the paragraph being spoken is highlighted on the screen.