THE FRANKLIN WORDMASTER

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In my August 1988 **Word Ways** article, I described an electronic speller, the Spelling Ace, issued by Franklin Computer of Pennsauken, New Jersey for less than $60. During the summer of 1988, Franklin began retailing a new computer which is called Wordmaster. It can do everything their first model can -- and much more. It is the same size and shape as the Spelling Ace, has a typewriter keyboard, and is powered by four AAA batteries, but that's where the similarities end.

In comparing the two units, the first thing I noticed was that the Wordmaster has words or symbols printed above 15 of its 34 keys, in much the same fashion as many scientific calculators. I'll get to these shortly.

Turning it on, I immediately noticed two things about the display, which is the same size as the one on the Spelling Ace. First, the letters are formed from a 5-by-7 dot matrix instead of liquid crystal line segments. Second, the unit produces both upper and lower case letters.

Entering a word (or any sequence of letters) results in one of four possible formats: Correct, Correct Thes n, List Size n, Sorry Can't Help. The n represents an integer.

To illustrate the first format, entering the word ABACUS results in the display format Correct, followed by ABACUS.

As an example of the second format, entering the word TRAVEL results in the transient display format Working..., followed by Correct Thes 5. This means that the word is spelled correctly and has five sets of synonyms. To view the list, you hit the S key which has the symbol SYN above it. Doing so produces Synonyms 1, followed by the list GO, FARE, HIE, JOURNEY, PASS, PROCEED, PUSH ON, REPAIR, and WEND. Only one word is displayed at a time; to view the next word in succession, you hit a downward-pointing arrow. To get the second set of synonyms, you hit the N-NEXT key. The lead word of this set is COVER. Similarly, the lead words of the other three sets are PASSAGE, JOURNEY, and TRAFFIC. Hitting the N-NEXT key again results in the display format No More. According to the user's manual, the Wordmaster's built-in thesaurus provides over 470,000 synonyms for over 35,000 root words.

To demonstrate the third format, entering TRAVAL produces the transient display format Working..., followed by List Size 11. The first word displayed is TRAVEL followed by TRAVAIL, TRIVIAL, TRI-

VIA, TRAVELS, TEARFUL, TRIVIALLY, TRAVAILS, TREFOIL, TARSAL, and TROPHY.

Finally, entering ZXQJVK results in the format display Sorry Can't Help.

Above the D key are the letters DEF, meaning, not surprisingly, definition. Entering the word TRAVEL and hitting the D-DEF key results in the display format Definition 1, followed by "verb, to move o". The screen is limited to sixteen characters, the last being an arrow, in this case pointing to the right. One of the 34 keys is a rightward-pointing arrow, and depressing it allows you to see an additional letter. If you hold the key down, the definition flows across the screen continuously, much like the newsreel in Times Square or the message on the Goodyear Blimp. So, Definition 1 for TRAVEL becomes "verb, to move on a course (End)". Definition 2 appears by hitting the N-NEXT key and is "verb, to journey over (as by conveyance) (End)". The third definition is "noun, movement or transference from one place or point to another (End)". Two other definitions may also displayed. As with the synonyms, attempting to get a sixth definition results in the display format No More. Just in case you forgot what word you are defining, depressing the O-ORIG key results in TRAVEL. It should be noted that not all the words in the Wordmaster's lexicon are defined; in fact, I suspect that only a small percentage are. When Thes n does not appear in the display upon entering a word, this is an indication that Wordmaster will provide neither synonyms nor definitions for the entered word (as was the case for ABACUS).

One other useful built-in feature is hyphenation. After entering a word, hitting the H-HYPHEN key provides a display showing the break points. For example, entering the word COMPUTER and hitting H results in COM-PUT-ER.

The use of the letters thus far mentioned (S, D, N, O, and H) are referred to as edit commands. There are another five edit commands, as follows: B (jump to the bottom of the list), T (jump to the top of the list), C (display current word), V (view previously entered words), and P (display previous group of synonyms or definitions).

If this were the extent of the Wordmaster's capabilities, it would be rather remarkable. But there's more -- much more. Depressing a hyphen followed by any of nine other letters makes some very interesting things happen. For instance, the sequence -B ENTER results in the display format Build Word List, followed by Letters:. Entering TRAVEL results in the display format Min Word Size: 3. Hitting ENTER once again, the display shows Making list n, where n is the current count of words of three or more letters it finds formed from the letters of the word TRAVEL. The count goes up rapidly, as it takes only about two seconds to tabulate about three dozen words. The Wordmaster is programmed to find all words beginning with the initial letter (in this case, T) first, followed by all words with the second letter, and so on. If, instead of entering TRAVEL, you entered AELRTV, the word list would be in

alphabetical order. The factory setting of the display format Min Word Size: 3 can be altered by hitting the upward-pointing arrow which results in Min Word Size: 4. Hit ENTER and again the count goes up very rapidly, taking scarcely more than a second to produce the following twenty-word list: TARE, TALE, TEAR, TEAL, RATE, RAVE, RAVEL, REAL, AVER, AVERT, ALTER, ALERT, VALE, VALET, VEAL, EARL, LATE, LATER, LAVE, and LAVER.

Note that if the minimum word size is set equal to the size of the original word entered, anagrams can be created. The maximum minimum word size is ten, so it cannot be used to find anagrams of words of eleven or more letters.

Speaking of anagrams, the Wordmaster is capable of playing four different word games, one of which is Anagrams. To play Anagrams, the keystroke sequence -A is entered. Doing so results in the display format Anagrams Game, followed by Root Size: 7. The 7 is the factory setting for this game, and can be altered from a low of 4 to a high of 11. Hitting ENTER again results in the display format Min Word Size: 3. As already mentioned, this setting can be varied between 3 and 10. Actually, the basic difference between Anagrams and Build Word List is that in Anagrams the Wordmaster picks the word and tells you how many words can be formed from it of length equal to or greater than the minimum word size you selected. You enter words one at a time, and it lets you know if it is a valid word not previously entered and how many words are left for you to find. Once you reach the point where you can't think of any more, hitting the ? key produces a list of the words you missed.

Another game it can play, somewhat akin to Anagrams, is Jumble. This game is activated by the keystroke sequence -J. It will give you the display format Word Size: n, where n ranges from 4 to 13. The factory setting for n for Jumble is 6. It gives you a group of scrambled letters which form one or more words. Your job is to determine what these words are. For instance, with the word size setting at 5, it displays DABEO 2, which means that you are to find two words from those letters. The words are ABODE and ADOBE. If you pick the right words, it displays You Win!. This game is very similar to the syndicated game of the same name which appears in newspapers, except that in the latter only one word from each group of scrambled letters is formed.

The third of the four games the Wordmaster can play is Hangman, which is initiated by hitting -H. The factory setting for the word size is 5, and can be varied from 3 to 14. Let's say you choose 10. After hitting ENTER, it displays Number Tries: 10. This number, too, can be varied from 3 to 14. Let's say you choose 8. You hit ENTER, and for a split second it displays Getting Word, followed by ___ ___ ___ ___ ___ ___ ___ 8. The game is very similar to the TV game show Wheel of Fortune. You choose letters and the Wordmaster tells you where they appear, if you have chosen a letter you already tried, and the number of tries you have left. If you give up, hitting the ? key will reveal the word. My eight-year-old nephew accidentally discovered that hitting ENTER reveals the location

of one additional letter, rather than the entire word.

The last of the four built-in games is called Deduction, and is a game of logic rather than of words. The object is to determine the correct sequence of four letters, each taken from A to F. The factory setting allows 10 tries, but can be varied from 10 to 20. After each attempt, the Wordmaster provides two hints: P= tells you the number of correct letters in their correct locations, and L= tells you the number of correct letters in incorrect locations. The up and down arrows let you review your choices. As letters can be duplicated, there are six possible choices for each of the four positions, or a total of 1296 arrangements.

In addition to the games, the Wordmaster also contains four other intriguing built-in functions. -W selects random words of a specified length. The factory setting is 6, and can be varied from 2 to 14. As an example, with the setting at 7, it gives PAINFUL, CADENCE, FADDISH, RACIEST, and ERMINED. I can't imagine how one would use this function, but it's there. The sequence -N selects random numbers. The number size setting is 4, and can be varied from 1 to 14. With the setting at 4, it provides as good a way as any to select daily winning number in state lotteries. And for weekly numbers, the sequence -L can be used. L is intended to stand for Lotto or Lottery. The initial display format is Largest Num: 40, which can be as low as 10, followed by Num of Picks: 6, which can vary from 1 to 9. The last and perhaps the most curious of its built-in functions is its ability to roll dice, prompted by -D. The initial display format How many die: 2 can be varied from 1 to 5. Using the factory setting, an example of the sequence of displays is 6 6 ** 1, 1 2 ** 2, 6 3 ** 3.

One other command, -I, provides an index of all edit and thesaurus function keys.

Using the Wordmaster's count feature, I was able to determine with little difficulty the number of words of a given length beginning with each letter of the alphabet it has stored in its memory. For instance, to determine the number of three-letter words beginning with the letter A in its lexicon, simply press A??, followed by ENTER. It will display Working..., followed by List Size 50, followed by the first word on the list. (The Spelling Ace would display only the words and not the actual count; you had to count them yourself.) Continuing this process for each letter of the alphabet, I got a total of 671 words of three letters. It should be noted that some of the "words" it displays are actually abbreviations, such as ADM and AMA; ABC is also considered a word. Included in the count of 671 are the plurals of many two-letter words. In similar fashion, I got counts of 2351 four-letter words, 4694 five-letter words, 7787 six-letter words, and 11,116 seven-letter words. At this point I gave up. Due to space limitations in the Wordmaster's memory, the maximum number of words it will display decreases with increasing word size. For example, counting five-letter words beginning with C, you might be led to believe that the count is 122 when in reality it is 380. Using the B edit command, the bottom of the first list is the word CHIRP. To get the

next group of 122 words, depress the N-NEXT key, revealing a list which goes from CHIVE to CONGA. Similarly, the third group goes from CONGO to CURIE, and the last fourteen words, in a fourth group, go from CURLS to CZECH. For four-letter words, the list size limit is 146, for six-letter words it is 104, and for seven-letter words it is 91.

The Wordmaster contains in its lexicon well in excess of 900 words of sixteen letters or more, including 523 of length 16, 264 of length 17, 93 of length 18, and 49 of length 19. Unfortunately, the longer the word, the longer it takes to find it. It took the unit one minute and twenty-two seconds to compile 36 words of length 19; when I tried it for words of length 20, the unit shut off before it found them. To get around this problem, one must ask for 20-letter words beginning with a specified letter; for example, A has one (ANTI-AUTHORITARIANISM) and C has five (COMPARTMENTALIZATION, CONVENTIONALIZATIONS, COUNTERREVOLUTIONARY, COUNTERREVOLUTIONIST, CROSS-FERTILIZATIONS). Note that an internal hyphen counts as a letter. The longest word I have found so far is the twenty-two letter COUNTERREVOLUTIONARIES.

Other feats of recreational wordplay can be performed using the Wordmaster. What you can do with it is limited largely by your imagination. Space does not permit me to elaborate on all the things I've done with it. For example, I keyed in E??E??E??E??E and hit ENTER. It gave me the word EFFERVESCENCE. The thing is amazing.

I purchased my Wordmaster at Bradlees for $99.99. It is also available from catalogs that specialize in small electronics items, or from the manufacturer, Franklin Computer, Rt. 73 and Haddonfield Road, Pennsauken NJ 08110 (609-488-0600).

QUERY

Momma: Don't tell me, Francis...you were fired!
Francis: Heck, no, Momma...This isn't one of those crummy companies...It's a class outfit...They discharged me! Momma, I'm getting up in the world...Next time I'll probably get **terminated**. *And who knows but some day your little guy will be asked for his* **resignation**...

As this June 14, 1988 Mel Lazarus comic suggests, the end of employment these days seems increasingly to involve evasive jargon. In Britain, one is made **redundant**. *Here, there is a* **job classification elimination** *or an* **involuntary resignation** *or one is* **unlisted** *or* **disclassified** *or* **terminated** *or* **excessed**. *The old evasiveness of* **let go** *(as if the person thrown out desired passionately to leave and the employer was reluctantly acquiescing) or simply* **discharged** *(instead of simply* **fired***) is getting out of hand. Leonard Ashley challenges* **Word Ways** *readers to produce a comprehensive list of synonyms.*