

# MUSICAL WORDBOXES

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Cryptic crosswords and other word puzzles make frequent use of incongruous word unions. These are the unexpected words which often result when two shorter words are joined together. A few random examples: ASH-ORE, BRAN-DISH, CUR-BED, GALL-ANT, SINCE-RELY and WARS-HIPS. A double-barreled example is the familiar fill-in-the-blanks puzzle with the answer "The NOTABLE doctor was NOT ABLE to operate because he had NO TABLE."

Figures 1a and 1b at the end of this article can be used to construct a set of challenging solitaire puzzles. Photocopy both figures, glue them to stiff backing such as cardboard, and cut them into 36 individual boxes (numbered for ease of reference).

The set of puzzles have been christened "Musical Wordboxes" because the boxes include the words DO, RE, MI and the other notes of the diatonic scale, as well as RING, SING, and the sounds TING and DING.

The aim of each puzzle is to arrange the boxes into a square or rectangle in such a way that every horizontal and vertical join forms a word. In Figure 1a, for example, the horizontal join between boxes 14 and 15 forms the word POTION, and the vertical join between boxes 10 and 14 forms the word RESTING. A rectangular array of  $m$  rows and  $n$  columns requires that  $m(n-1)$  horizontal words and  $n(m-1)$  vertical words be formed.

Here are nine puzzles of increasing difficulty:

1. Make the largest square or rectangle possible in a quarter-hour
2. Make a 3-by-3 square (167 solutions, including three with box 1 in the upper left corner, and nine using only boxes numbered between 1 and 16)
3. Make a 3-by-3 square using boxes 1 through 9 (1 solution)
4. Make a 4-by-4 square (61 solutions, including six with box 1 in the upper left corner, and fourteen using only boxes numbered between 1 and 25)
5. Make a 4-by-4 square using boxes 1 through 16 (1 solution)
6. Make a 5-by-5 square (22 solutions, including four with box 1 in the upper left corner)
7. Make a 5-by-5 square using boxes 1 through 25 (1 solution)
8. Make a 6-by-6 square (1 solution)
9. Make a 6-by-6 square, except that one square of your-choice can be turned over and used as a wild card

One can formulate many additional puzzles having their object the construction of rectangles of sizes 3-by-4, 3-by-5, 4-by-5, etc..

For a two-player game, scatter the 36 boxes face down on the table. Each player chooses one box and places it face-up to begin his or her layout. Each following turn consists of the player's first (optionally) moving any one box already in the layout to another edge of the layout, and then drawing and placing a new box. Note that boxes do not have to form words at their joins. Play ends when the last player has placed his or her last box. The player who has formed the most compounded words wins.

For the puzzles and the two-player game, only common English words are allowed (no proper names, archaic or dialectal forms, abbreviations, or acronyms).

Musical Wordboxes was inspired by David Morice's Alphaboxes, presented in the November 1987 Kickshaws. The unique answers to Puzzles 3, 5, 7, and 8 will be given in the November 1990 issue of Word Ways.



