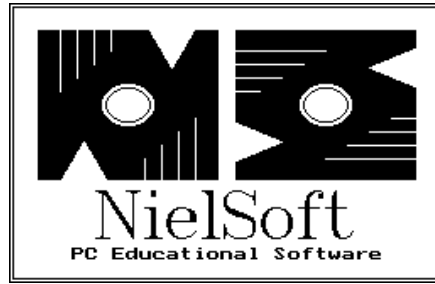


MATCH-ORDER-SORT



N i e l S o f t
(PC Educational and Business Software)

M A T C H - O R D E R - S O R T

Educational Software for the IBM PC and Compatibles
with CGA, (EGA, VGA) or Hercules graphics card

Age Range 3 to 8

SIX PROGRAMS

- | | | |
|---|----------------|-------------------------------|
| 1 | MOONSTRIKE | - Shape/Number/Set matching |
| 2 | FREE THE PARAS | - Shape/Number/Set order |
| 3 | JUGVADERS | - Number order game |
| 4 | STARSORT | - Less/Greater than sorting |
| 5 | TREASURE SHIP | - Binary searching |
| 6 | CHOO CHOO | - Logical thinking (All ages) |

FEATURES

Circle/Semicircle/Triangle/Square/Rectangle/Polygon
Dominoes used to introduce the concept of sets (0-9)
Number ranges 1-5, 0-4, 5-9, 0-9, 0-99, 0-999
Menu driven selection and appealing graphics
Error allowances and musical rewards

OPTIONS

One of two alternative colour palettes (CGA Mode 4)
Scoring sequences for programs 3 to 5 inclusive

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Educational Software for the IBM PC and 100% Compatibles

SYSTEM REQUIREMENTS

- * IBM PC, PC-XT, PC-AT or fully compatible machines running PC-DOS or MS-DOS Version 2.0 or greater.
- * Minimum of 256K Random Access Memory (RAM) required.
- * CGA, EGA or VGA colour graphics card or compatible with Colour monitor. Hercules monochrome graphics card or compatible with monochrome monitor.
N.B. For colour monitors the programs run in 1CGA Mode 41 graphics irrespective of which colour graphics card is present.

COPY AND USE RESTRICTIONS

- * All the software on the disc is copyright material of NielSoft, 1988,90. You are licensed for use on a single machine and to make 2 copies of the master disc for backup purposes only to protect your investment. Use one of these to run the software, one for backup and keep the master safe for future use.
- * The programs are supplied in unprotected form for the benefit of hard disc users who may copy them to a hard disc directory (Only 1 backup copy is allowed for hard disc users).
- * It is NielSoft policy to provide software in unprotected form for your convenience - please support this policy by respecting our copyright.
- * REMEMBER - UNAUTHORISED COPYING OF SOFTWARE IS ILLEGAL !!!

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- * We hope you enjoy your purchase and find the programs both entertaining and educationally rewarding.

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SUMMARY

- * MATCH-ORDER-SORT is a set of 6 educational programs for children in the age range 3 to 8 years. The programs introduce number and set recognition and follow through to number ordering, the concepts of LESS THAN and GREATER THAN, binary searching and logical thinking.
- * The programs are devised to provide a logical progression through these early learning stages. Each program provides exercises which can be selected in order of difficulty to enable the child to progress with the parent/teacher at his/her own rate.
- * Selections are completely menu-driven with simple number/letter key presses.
- * Key presses, where possible, have been kept consistent throughout the range of programs. The Escape, Space and Enter (Return) keys, in particular, all have common usage. Cursor control and the function keys are introduced in the latter programs in the set.
- * Random generation is used throughout the 6 programs and therefore it is most unlikely that any screen will be repeated at a single session.
- * A Command line switch is provided to select an alternative palette of colours for a colour monitor and to select scoring for programs 3 to 5. The default is for no scoring but when invoked by a command line switch a score is given after completion of 5 or 10 exercises.

* * * * *

FILES PRESENT ON DISC

MOS.EXE MATCH-ORDER-SORT program

Always run the program from a copy of the master disc.

See page 8 for details of running the program.

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MATCH-ORDER-SORT

THE PROGRAMS

1 MOONSTRIKE

```
Key presses:  Esc      Restart program
              Space    Move Gun
              Enter    Fire Gun
```

Introduces recognition and matching of shapes, number and sets. The shapes introduced are the CIRCLE, SEMICIRCLE, TRIANGLE, SQUARE, and RECTANGLE. Dominoes are used to introduce the concept of sets. The number ranges are selectable in stages in the range 0 to 9.

A friendly character appears each time a correct match is made although he looks rather sad if he is hit by mistake with a bullet ! No penalties are present in the program.

Completion of all 5 matches on the screen results in the character randomly appearing on the screen to the sound of random notes.

2 FREE THE PARAS

```
Key presses: Esc      Restart program
              Space    Move Dart
              Enter    Fire Dart
```

Introduces number order using shapes, dominoes and numbers. The shapes/balloons must be burst in number order. The shapes range from the TRIANGLE to the SEPTAGON (NONAGON - Hercules mode only) and must be shot according to the number of sides. The dominoes are selectable in the range 0 to 9 and the numbers for the ranges 0 to 9 and 0 to 99.

For each correct burst a paratrooper appears and the shape, domino or number is placed into the area to the left of the screen. Any error in the correct sequence of firing results in a mountain tip being removed. After 3 errors the game is automatically restarted using the currently selected options.

Each game must be completed correctly before a visual/ music reward is given. The game allows the child to hit the paratrooper by mistake without penalty but he doesn't like it very much !

3 JUGVADERS

Key presses: Esc	Restart program
Space or Left/Right cursor keys	Move Jug
Enter or Up cursor key	Fire Jug

Stop the ParaCups invading the Little Brown Jug ! This program reinforces number ordering by introducing time limits for completing the sequence of numbers. Numbers only may be selected in the range 0 to 99.

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The program provides 4 speeds ranging from BEGINNER to EXPERT and to save the Jug the set of numbers must be shot in order. The cursor control keys are now introduced and are recommended for the higher speed levels.

The program waits for a key press before starting the game. Each correct firing will transfer the number to the area set aside on the left of the screen. Shooting a cup out of sequence will result in the game being automatically restarted using the currently selected range.

A visual/music reward is given on successful completion of the sequence.

4 STARSORT

Key presses: Esc	Restart program
Space or	
Left/Right cursor keys	Move Gun
LEFT SHIFT or <	Fire Gun (LESS THAN)
RIGHT SHIFT or >	Fire Gun (GREATER THAN)

STARSORT introduces number sorting using the LESS THAN Set and the GREATER THAN Set and integrates the features of variable error allowances and speed as introduced through the first 3 programs. Dominoes or numbers may be selected in the ranges 0 to 9 and 0 to 999 respectively.

When the game starts a domino/number is chosen at random from the row displayed; avoiding the lowest and greatest values such that there will always be at least 1 domino/number available for either set. The program then waits for a key press before removing the remaining 9 dominoes/numbers from the display. It then selects and displays one of these to start the game and produces the gun at a random position. The next key press starts the countdown and a set amount of time is given to move the gun and shoot the remaining 9 dominoes/numbers as they appear into their correct set.

The firing is now performed using the LEFT SHIFT and RIGHT SHIFT or < and > keys. The former pair are positioned logically just to the left and right of the SPACE bar corresponding to the position of the LESS and GREATER THAN sets on the screen. The more obvious choices of < and > are located adjacent to one another (UK/US keyboards) and could be used more successfully when using the cursor keys to move the gun.

A maximum of 3 errors are allowed for incorrect firing at a star and are indicated by the removal of a moon crater. The number of errors vary down from 3 to 0 depending on the speed selected from BEGINNER to EXPERT and the game will start with an appropriate number of craters on the screen from 4 down to 1. (NO TIME LIMIT always allows the maximum of 3 errors). If the maximum number of errors is exceeded the remaining numbers/dominoes are automatically revealed and popped correct sets.

With a time limit in operation the countdown will start from 90 and reduce to 0 at a rate determined by the degree of

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difficulty selected. (NO TIME LIMIT does not have this display). When the count reaches 10 an audible warning sound occurs on each count thereafter until it reaches zero when the screen is automatically cleared and a new game started using the currently selected options.

Successful completion of the game results in the display of the dominoes/numbers in NUMBER order at the bottom of the screen to musical accompaniment.

TECHNICAL NOTE FOR USERS OF NON UK OR US KEYBOARD LAYOUTS:

Because the program traps use of the shift keys for firing, the < and > keys are actually recognised by their unshifted equivalents of the comma and full stop as on UK and US keyboards. If these are not present on the same keys as the < and > on your keyboard then please revert to the SHIFT keys only for firing.

5 TREASURE SHIP

Key presses: Esc	Restart program
Space or Left/Right cursor keys	Move Submarine
Enter or Up cursor key	Fire Torpedo

This program follows on from the practice in sorting with STARSORT and introduces the process of binary searching. Dominoes or numbers may be selected in the ranges 0 to 9 or 0 to 999.

The computer will now pick ANY number at random from the displayed set of numbers and the test is one of logical deduction to find the treasure (gold bar) contained in the computer's chosen ship. Hints are given for each shot by placing the number hit in the LESS THAN or GREATER THAN set.

Say the computer chooses 7 out of numbers in the range 0 to 9 displayed. A first guess might be 3. The 3 hit would then be placed in the LESS THAN set and therefore the number 3 is less than the computer's chosen number (i.e. 7). Consequently, it should be deduced that the numbers 0 to 2 could be eliminated from further guesses.

By correct strategy of binary searching the game is always solvable in 4 tries but is made more difficult when the numbers are displayed in RANDOM rather than in NUMBER order. Only 3 incorrect guesses are therefore allowed as indicated by the removal of portholes from the submarine. After a 4th incorrect guess the computer's number is flashed on the screen revealing the gold bar and the remaining numbers are popped into the sets either side.

A direct hit on the treasure ship reveals the gold bar and results in the ORIGINAL display of ships being repeated at the bottom of the screen to musical accompaniment.

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6 CHOO CHOO

Key presses: Esc Restart program
 F1..F10 Reverse the first N numbers, where
 N is the number on the function key.

CHOO CHOO is based on an old mathematical favourite and is a test of logical thinking. Dominoes or numbers may be selected in the ranges 0 to 9 or 0 to 999.

The screen shows a train standing at Choo Choo Station. Unfortunately the loco, guard's van and carriages are all mixed up and before the train can leave the station it is up to you, the Station Master, to ensure that everything is in the correct order. The loco will always be the lowest number and the guard's van the greatest.

You perform the task in as few moves as possible by pressing the function keys marked F1 to F10 located at the left or top of your keyboard. Each press of a function key will reverse the corresponding number of carriages at the left of the train.

Suppose the numbers on the carriages are in the order:

5 1 3 9 8 4 2 6 0 7

and you want to reverse the first 5. You would press F5 and program would reverse the first 5 carriages such that the resulting order would be:

8 9 3 1 5 4 2 6 0 7

By repeatedly pressing your selected function key the program will continue to reverse the corresponding number of carriages counting from the left of the train. It is up to you to develop the 'knack' through logical thinking to solve the puzzle and end up with the train in its correct order.

When the train is in order it can then leave the station to a musical accompaniment.

Don't despair if you don't succeed initially, the puzzle IS solvable. However, as a last resort you can write to us at the address given on page 1 for a solution enclosing proof of purchase.

* * * * *

RUNNING THE PROGRAMS

- * Place the disc into drive A after first booting the system with your DOS disc. (Hard disc users may wish to copy the programs to a hard disc directory subject to the copy and use restrictions on as given on page 1).
 - * At the DOS prompt type MOS and press Enter/Return.
 - * The MATCH-ORDER-SORT opening screen will first appear. Press SPACEBAR at this screen to reveal the PROGRAM MENU. The programs may be selected pressing the appropriate number key (1 to 6).
- N.B. For users of the Hercules mode all the menus will appear

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occupying the left hand half of the screen only.

- * The opening screen of each program reminds you of the key presses that may be used. After pressing the SPACEBAR to continue the 1st selection menu is shown and selections from this and subsequent menus (if applicable) are made using simple number or letter selections.
- * After completion of a game press the SPACEBAR to automatically restart the game using the currently selected options or ESCAPE to return to the 1st menu.
- * Pressing the escape key at any time during the program will return you to the 1st menu. Pressing ESCAPE at the 1st menu will return you to the opening menu where you may press Q to quit the program and return to the program menu.
- * To quit the program press Q at the program menu and then Q again at the MATCH-ORDER-SORT opening screen.

* * * * *

SCORING for JUGVADERS, STARSORT and TREASURE SHIP

For these programs the facility is provided to score a set of completed exercises. By default no scoring is used and to invoke the scoring system a command line switch must be included when the programs are started from DOS.

Avoid pressing the Escape key during a scoring sequence as this will reset the score record back to zero and return to the 1st menu.

On completion of 5 or 10 games a score screen is shown showing the selected exercise options and the number correct out of 5 or 10. Full marks will result in the full tune from the appropriate game being played.

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OPTIONAL COMMAND LINE SWITCH

- * Command format: MOS [/palette [score number]]

where palette may be 0 (Default) or 1
and score number may be V (Five) or X (Ten)

- * palette = 0 selects the colour set:
(Background, Green, Red, Yellow)
= 1 selects the colour set:
(Background, Cyan, Magenta, White)

The background colour is set by the program and cannot be changed.

For a monochrome monitor displaying the Hercules mode this parameter is ignored. However, the palette number must be included should you wish to invoke the scoring system. Use 0 in this case.

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- * score number = V invokes scoring up to 5 completed exercises.
= X invokes scoring up to 10.

Example	Action
MOS	Default palette 0 for colour monitor No scoring
MOS /1	Palette 1 selected No scoring
MOS /1V	Palette 1 selected Scoring up to 5
MOS /0X	Palette 0 selected Scoring up to 10

* Scoring is only available for JUGVADERS, STARSORT and TREASURE SHIP.

FOOTNOTE

NielSoft aims to produce quality educational software which both teachers and parents can feel confident in using both at school and in the home. Future educational titles are in preparation and any suggestions or comments will be gratefully received and considered. Our address is on page 1 of this manual.

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