

Appendix A - File Formats

Dealer4 software can load and save Board Sets in the few different formats:

Examples and descriptions for all formats are shown below . All examples use the following Board Set which consists of 2 boards:

File Format Samples Melbourne 01.01.2013

<p>Board: 1 Dealer: N None Vul</p> <p style="text-align: center;">♠ T2 ♥ J965 ♦ T7532 ♣ 63</p> <p style="text-align: center;">♠ AKQ874 ♥ AQ2 ♦ J8 ♣ A5</p> <p style="text-align: center;">♠ 93 ♥ KT8 ♦ Q96 ♣ JT974</p> <p style="text-align: center;">♠ J65 ♥ 743 ♦ AK4 ♣ KQ82</p> <p style="text-align: center;">N W E S</p> <p style="text-align: center;">♠♥♦♣ 4 4 3 1 3 4 4 2 1 3</p> <p style="text-align: right;">6 HCP 20 13</p>	<p>Board: 2 Dealer: E NS Vul</p> <p style="text-align: center;">♠ T8742 ♥ A ♦ 43 ♣ AT942</p> <p style="text-align: center;">♠ 6 ♥ T42 ♦ Q9865 ♣ KQJ8</p> <p style="text-align: center;">♠ KQJ9 ♥ KQ973 ♦ KT7 ♣ 7</p> <p style="text-align: center;">♠ A53 ♥ J865 ♦ AJ2 ♣ 653</p> <p style="text-align: center;">N W E S</p> <p style="text-align: center;">♠♥♦♣ 2 3 2 2 3 2</p> <p style="text-align: right;">8 HCP 8 14 10</p>
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A1. BRI

BRI format stores hands using a 128 bytes record for each board. The first 78 bytes store information about deal. These bytes are followed by 32 space characters (0x20) and then there are 18 null characters to form 128 bytes record.

Each card in the board is stored as a two digit number with the following arrangement:

- 01 - Ace of Spades, 02 - King of spades, 13 - Two of Spades,
- 14 - Ace of Hearts, 15 - King of hearts, 26 - Two of Hearts,
- 27 - Ace of Diamonds, 28 - King of Diamonds, 39 - Two of Diamonds,
- 40 - Ace of Clubs, 41 - King of Clubs, 52 - Two of Clubs,

First 26 digits store cards for N hand, next 26 for E and next 26 for S. The rest of the unused cards go to W.

Below is example of the two sample boards in BRI format. It is shown in hexadecimal and ASCII view:

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0x00: 30 35 31 33 31 37 31 39 32 32 32 33 33 31 33 34 ; 0513171922233134
0x10: 33 36 33 38 33 39 34 38 35 31 30 31 30 32 30 33 ; 3638394851010203
0x20: 30 37 30 38 31 31 31 34 31 36 32 36 33 30 33 33 ; 0708111416263033
0x30: 34 30 34 39 30 34 30 39 31 30 32 31 32 34 32 35 ; 4049040910212425
0x40: 32 37 32 38 33 37 34 31 34 32 34 36 35 32 20 20 ; 27283741424652
0x50: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 ;
0x60: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 00 00 ;
0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0x80: 30 35 30 37 30 38 31 31 31 33 31 34 33 37 33 38 ; 0507081113143738
0x90: 34 30 34 34 34 35 35 30 35 32 30 39 31 38 32 34 ; 4044455052091824
0xa0: 32 36 32 39 33 32 33 33 33 35 33 36 34 31 34 32 ; 2629323335364142
    
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0xb0: 34 33 34 36 30 31 31 30 31 32 31 37 32 30 32 32 ; 4346011012172022
0xc0: 32 33 32 37 33 30 33 39 34 38 34 39 35 31 20 20 ; 23273039484951
0xd0: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 ;
0xe0: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 00 00 ;
0xf0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....

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A2. DGE

DGE format also uses 128 bytes records for every board like BRI but the cards are coded differently. It uses ASCII characters AKQT98765432 for each card and suits symbols - 0x06 for spade, 0x03 for heart, 0x04 for diamond and 0x05 for clubs. The first 17 characters in the record shows N cards, next 17 - E, next 17 - S and last 17 - W. Each hand starts with spade symbol (0x06) then all the spades cards, then the heart symbol (0x03) and hearts cards, then the diamond symbol (0x04) and diamond cards and the club symbol and club cards on the end.

```

0x00: 06 54 32 03 4A 39 36 35 04 54 37 35 33 32 05 36 ; .T2.J965.T7532.6
0x10: 33 06 41 4B 51 38 37 34 03 41 51 32 04 4A 38 05 ; 3.AKQ874.AQ2.J8.
0x20: 41 35 06 4A 36 35 03 37 34 33 04 41 4B 34 05 4B ; A5.J65.743.AK4.K
0x30: 51 38 32 06 39 33 03 4B 54 38 04 51 39 36 05 4A ; Q82.93.KT8.Q96.J
0x40: 54 39 37 34 00 00 00 00 00 00 00 00 00 00 00 00 ; T974.....
0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0x80: 06 54 38 37 34 32 03 41 04 34 33 05 41 54 39 34 ; .T8742.A.43.AT94
0x90: 32 06 36 03 54 34 32 04 51 39 38 36 35 05 4B 51 ; 2.6.T42.Q9865.KQ
0xa0: 4A 38 06 41 35 33 03 4A 38 36 35 04 41 4A 32 05 ; J8.A53.J865.AJ2.
0xb0: 36 35 33 06 4B 51 4A 39 03 4B 51 39 37 33 04 4B ; 653.KQJ9.KQ973.K
0xc0: 54 37 05 37 00 00 00 00 00 00 00 00 00 00 00 00 ; T7.7.....
0xd0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0xe0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
0xf0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....

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A3. BRE

BRE format uses the same hand coding as DGE but has two differences:

- There are three ASCII lines (finished with CRLF (0x0D, 0x0A) characters) at the beginning of the file. These lines consist of Event, Site and Date information

- each board is separated with CRLF characters instead of NULL. So the length of the record for each board is 70 bytes.

```

0x00: 46 69 6C 65 20 46 6F 72 6D 61 74 20 53 61 6D 70 ; File Format Samp
0x10: 6C 65 73 0D 0A 4D 65 6C 62 6F 75 72 6E 65 0D 0A ; les..Melbourne..
0x20: 30 31 2E 30 31 2E 32 30 31 33 0D 0A 06 54 32 03 ; 01.01.2013...T2.
0x30: 4A 39 36 35 04 54 37 35 33 32 05 36 33 06 41 4B ; J965.T7532.63.AK
0x40: 51 38 37 34 03 41 51 32 04 4A 38 05 41 35 06 4A ; Q874.AQ2.J8.A5.J

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0x50: 36 35 03 37 34 33 04 41 4B 34 05 4B 51 38 32 06 ; 65.743.AK4.KQ82.
0x60: 39 33 03 4B 54 38 04 51 39 36 05 4A 54 39 37 34 ; 93.KT8.Q96.JT974
0x70: 0D 0A 06 54 38 37 34 32 03 41 04 34 33 05 41 54 ; ...T8742.A.43.AT
0x80: 39 34 32 06 36 03 54 34 32 04 51 39 38 36 35 05 ; 942.6.T42.Q9865.
0x90: 4B 51 4A 38 06 41 35 33 03 4A 38 36 35 04 41 4A ; KQJ8.A53.J865.AJ
0xa0: 32 05 36 35 33 06 4B 51 4A 39 03 4B 51 39 37 33 ; 2.653.KQJ9.KQ973
0xb0: 04 4B 54 37 05 37 0D 0A ; .KT7.7..

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A4. DUP

DUP format is a format that is used for Duplimate machines. The record length for each board is 156 bytes. The first 78 bytes is the board in BRI format. Next 68 bytes is the same board in DGE format. So each board is recorded twice in different formats and both parts have to be the same. Last 10 bytes have special meaning and are used for controlling the dealing process-

byte: 147 - indicate if boards are random (Y or N)

byte: 148 - if Y dealing is backwards, N - for normal dealing

bytes: 149-151 - first board number in the Board Set (left alignment with space character (0x20) on unused bytes.

bytes: 152-153 - number of copies for each board (left alignment with space character (0x20) on unused bytes.

bytes: 154 - 156 - last board number in the Board Set (left alignment with space character (0x20) on unused bytes.

Dealer4 software does not use bytes 147,148 and 152-153. If the First and Last Board Numbers are present - boards will be loaded according to them. Please note that most third party software does not write bytes 147-156 and fill them with space characters (0x20) or even NULL characters (0x00).

```

0x000: 30 35 31 33 31 37 31 39 32 32 32 33 33 31 33 34 ; 0513171922233134
0x010: 33 36 33 38 33 39 34 38 35 31 30 31 30 32 30 33 ; 3638394851010203
0x020: 30 37 30 38 31 31 31 34 31 36 32 36 33 30 33 33 ; 0708111416263033
0x030: 34 30 34 39 30 34 30 39 31 30 32 31 32 34 32 35 ; 4049040910212425
0x040: 32 37 32 38 33 37 34 31 34 32 34 36 35 32 06 54 ; 27283741424652.T
0x050: 32 03 4A 39 36 35 04 54 37 35 33 32 05 36 33 06 ; 2.J965.T7532.63.
0x060: 41 4B 51 38 37 34 03 41 51 32 04 4A 38 05 41 35 ; AKQ874.AQ2.J8.A5
0x070: 06 4A 36 35 03 37 34 33 04 41 4B 34 05 4B 51 38 ; .J65.743.AK4.KQ8
0x080: 32 06 39 33 03 4B 54 38 04 51 39 36 05 4A 54 39 ; 2.93.KT8.Q96.JT9
0x090: 37 34 59 4E 31 20 20 31 20 32 20 20 30 35 30 37 ; 74YN1 1 2 0507
0x0a0: 30 38 31 31 31 33 31 34 33 37 33 38 34 30 34 34 ; 0811131437384044
0x0b0: 34 35 35 30 35 32 30 39 31 38 32 34 32 36 32 39 ; 4550520918242629
0x0c0: 33 32 33 33 33 35 33 36 34 31 34 32 34 33 34 36 ; 3233353641424346
0x0d0: 30 31 31 30 31 32 31 37 32 30 32 32 32 33 32 37 ; 0110121720222327
0x0e0: 33 30 33 39 34 38 34 39 35 31 06 54 38 37 34 32 ; 3039484951.T8742
0x0f0: 03 41 04 34 33 05 41 54 39 34 32 06 36 03 54 34 ; .A.43.AT942.6.T4
0x100: 32 04 51 39 38 36 35 05 4B 51 4A 38 06 41 35 33 ; 2.Q9865.KQJ8.A53
0x110: 03 4A 38 36 35 04 41 4A 32 05 36 35 33 06 4B 51 ; .J865.AJ2.653.KQ
0x120: 4A 39 03 4B 51 39 37 33 04 4B 54 37 05 37 59 4E ; J9.KQ973.KT7.7YN
0x130: 31 20 20 31 20 32 20 20 ; 1 1 2

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