

# Novag Star Diamond to PC Protocol

This document demonstrates the serial communication protocol between the Novag Star Diamond and an IBM\*) compatible PC (description of commands to be used for the communication between Star Diamond and PC). As a communication interface the Microsoft HYPERTERMINAL\*) program can be used. We recommend reading this document in its entirety prior to connecting the Star Diamond to an IBM compatible PC.

In this document we have listed various commands, which make use of the following conventions:

The two-letter acronym SD is short for Star Diamond.

Any letter with **bold type** represents input by the user and will not be echoed by the Star Diamond.

Any letter with normal type represents response by the Star Diamond.

The command descriptions are listed in alphabetical order.

Should you have any questions regarding the information contained in this document then please feel free to e-mail us at: sales@novag.com or fax us at +852-2810 8177.

## **COMMUNICATION PROTOCOL**

The communications are RS232 based and use the values of 57600 Baud, 8 Data Bits, 1 Stop Bit, No. Parity and no flow control.

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## **COMMAND DESCRIPTIONS**

### **1. Autoclock : A, A ON, A OFF**

Display the current autoclock status or set the autoclock feature on or set the autoclock feature off. When the autoclock feature is set on, the black and white clock will be displayed after 1 complete move is made.

**N**

New Game

**X on**

Xmit on

**A on**

Autoclock on

**M e2e4**

M 1 e2-e4 |

M 1, e7-e5 |

Clock 00:00:00 00:00:01

### **2. Clock : C**

Display the current white and black time.

**C**

Clock 00:06:27 00:00:01

### **3. Flip : F**

Flip SD white move from the top of the chessboard when at new game position.

**N**

New Game

**F**

Flip

Flip color to move from white to black or from black to white.

M 1 e2-e4 |

M 1, e7-e5 |

**F**

Flip --> Black

### **4. Game : G**

Display game move list.

**G**

Game 2

. white black

. 1 e2-e4 c7-c5

. 2 Ng1-f3 d7-d6

## **5. Human mode : H**

Display the board format, move format, information format and game format in human mode.

### **H**

Human Mode

### **P**

Position Board

```
. aa bb cc dd ee ff gg hh
.8 br bn bb bq bk bb bn br 8
.7 bp bp  :: bp bp bp bp 7
.6 ::  :: bp ::  :: 6
.5  :: bp ::  :: 5
.4 ::  :: WP  :: 4
.3  ::  :: WN  :: 3
.2 WP WP WP WP :: WP WP WP 2
.1 WR WN WB WQ WK WB  WR 1+
. aa bb cc dd ee ff gg hh
```

### **V**

Video Mode

### **P**

Position Board

```
.8rnbqkbnr
.7pp pppp
.6 p
.5 p
.4 P
.3 N
.2PPPP PPP
.1RNBQKB R+
```

## **6. Chess ID : I**

Display the SD chess ID.

### **I**

ID. H8S/SD V1.01

## **7. Go : J**

This command acts as a go key function. Please refer to the user manual for different go key operations of various functions.

## **8. Key function : K00,..., K77; KA0,..KA7; KB0,...,KB7; KC0,..., KC7**

This command allows the user to operate any SD chessboard square or keyboard key from the PC by typing in Kxx. Whereby Kxx :-

### **ChessBoard squares K00-K77**

Every square of the 8x8 chessboard square has assigned a unique key code.

Upper left corner chessboard key : 00 (A8 square)

Lower right corner chessboard key : 77 (H1 square)

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |

### **KeyBoard keys KA0,..KA7; KB0,...,KB7; KC0,..., KC7**

| <u>KEY</u>      | <u>key code (Kxx)</u> |
|-----------------|-----------------------|
| Referee         | A0                    |
| Sound           | A1                    |
| Book Select     | A2                    |
| Restore         | A3                    |
| Random          | A4                    |
| Easy            | A5                    |
| Trace Forward   | A6                    |
| Next Best       | A7                    |
| SaveGame        | B0                    |
| LoadGame        | B1                    |
| Pro-op Save     | B2                    |
| Pro-op Delete   | B3                    |
| Pro-op Priority | B4                    |
| Pro-Print       | B5                    |
| Verify-Setup    | B6                    |
| Color           | B7                    |
| NewGame         | C0                    |
| Clear           | C1                    |
| SetLevel        | C2                    |
| Option1/2       | C3                    |
| Training        | C4                    |
| Hint            | C5                    |
| Info            | C6                    |
| Go              | C7                    |

**9. Level : L, L +SD5, L -TR1,**

Display the current play level or set the play level for different color.

**L** (display current play level for white & black)

Level + tr 1

Level - tr 1

**L SD 5** (set play level SD5 for both white and black color)

Level + sd 5

Level - sd 5

**L -SD3** (set play level SD3 for black)

Level + sd 5

Level - sd 3

Note: Set level for white will always set the black level at the same level as the white level. Set level for black will not affect the level setting of white.

**10. Move : M e2e4**

Make move from PC.

**N**

New Game

**ME2E4**

M 1 e2-e4 |

M 1, d7-d6 |

Note: When making a pawn move to the 8<sup>th</sup> row, the valid promote piece type (/N,/B,/R,/Q) must be entered, otherwise promote to queen is taken as default.

**11. New Game : N**

Start a new game.

**N**

New Game

**12. Origin : O**

Reset the game to the origin starting position.

### **13. Position : P**

To display the current board position or set up the board position.

#### **N**

New Game

**pcpa2ka1bkh8-**

pcpa2ka1bkh8-

#### **P**

Position Board

```
. aa bb cc dd ee ff gg hh
.8 ::  ::  ::  ::  :: bk 8
.7  ::  ::  ::  :: 7
.6 ::  ::  ::  :: 6
.5  ::  ::  ::  :: 5
.4 ::  ::  ::  :: 4
.3  ::  ::  ::  :: 3
.2 WP  ::  ::  :: 2
.1 WK ::  ::  ::  :: 1-
. aa bb cc dd ee ff gg hh
```

**Note :** abb. used

c = board clear

p = pawn

n = knight

b = bishop if follow a valid board sq or b = black color if follow a valid chess piece type

q = queen

k = king

+ = white move at start

- = black move at start

### **14. Replay : R**

To restore the game to the starting position & replay the whole game.

#### **R**

Replay 2

M 1 e2-e4

M 1, e7-e5

### **15. Sendinfo : S, S1,...,S4**

To display the current send info setting or set the send info level.

**N**

New Game

**S 4**

Send Info 4

**M E2E4**

m 1 e2-e4

.= d 01 00.00 00:00:01 Book

m 1 e7-e5

**M H2H4**

m 2 h2-h4

. d 03 00.57 00:00:01 28/29 482/s d7-d5 d1-h5 b8-c6

.+ d 03 00.57 00:00:01 0/29 274/s d7-d5 d1-h5 b8-c6

. d 04 00.19 00:00:01 28/29 466/s d7-d5 d1-h5 b8-c6 f1-b5

.> d 04 00.23 00:00:01 27/29 256/s g8-f6

. d 04 00.42 00:00:01 27/29 418/s g8-f6 g1-f3 d7-d5 b1-c3

.+ d 04 00.42 00:00:01 0/29 496/s g8-f6 g1-f3 d7-d5 b1-c3

. d 05 00.69 00:00:02 28/29 4332/s g8-f6 b1-c3 d7-d5 e4-d5 f6-d5

.+ d 05 00.69 00:00:03 0/29 5798/s g8-f6 b1-c3 d7-d5 e4-d5 f6-d5

. d 06 00.50 00:00:06 28/29 6005/s g8-f6 b1-c3 d7-d5 e4-d5 f6-d5 c3-e4

.+ d 06 00.50 00:00:10 0/29 4340/s g8-f6 b1-c3 d7-d5 e4-d5 f6-d5 c3-e4

. d 07 00.65 00:00:19 28/29 5252/s g8-f6 b1-c3 d7-d5 e4-d5 f6-d5 f1-c4

Note: **Sendinfo** can only be valid while in **Human** mode

### **16. Takeback : T**

To take back move.

**T**

t 2 g8-f6

**17. Referee : U, U ON, U OFF**

To display current referee mode and setting referee mode on or off.

**U**

.Referee off

**U ON**

.Referee on

**U OFF**

.Referee off

**18. Xmit : X, X ON, X OFF**

To display current transmission setting and setting the transmission on or off.

**X**

Xmit off

**X ON**

Xmit on

**X OFF**

Xmit off

**Note:** The Xmit must be set **on** while interfacing the SD with a PC, otherwise no move data will be transmitted by the SD.