MCX32-FDJ Hardware Information

Memory Map

E000 - FFFF	EEPROM or Internal ROM
C000 - DFFF	Internal ROM (Alice 32 / 90)
BE00 - BFFF	Keyboard / Sound / VDG / Joysticks
BC00 - BDFF	RAM / Status & Control / FDC
B000 - BBFF	External RAM with Exclusions
5000 - AFFF	External RAM (Internal RAM on Alice 90 only)
4000 - 4FFF	Internal RAM
3000 - 3FFF	Internal RAM (Alice 32 / 90)
2000 - 2FFF	External RAM
0100 - 1FFF	EEPROM
0080 - 00FF	6803 On-Chip RAM or EEPROM
0020 - 007F	EEPROM
0010 - 001F	6803 Status and Control Registers
000F	EEPROM
0008 - 000E	6803 Timer Registers
0004 - 0007	EEPROM
0000 - 0003	6803 I/O Ports

When the EEPROM Write mode is enabled, the selected 16K bank is addressed at this location.

BF30 : Right Joystick
BF34 : Left Joystick

See details on following pages.

Controlled by bit 6 of RAMCR ($0014)

Memory Map Detail : B000 - BBFF

This 256 byte pattern appears
12 times from B000 to BBFF.

BxB0 - BxFF	80 Bytes of RAM
BxA0 - BxAF	Undefined
Bx90 - Bx9F	16 Bytes of RAM
Bx80 - Bx8F	Undefined
Bx30 - Bx7F	80 Bytes of RAM
Bx20 - Bx2F	*Copies of the EF9345 VDG (Alice 32/90)*
Bx10 - Bx1F	16 Bytes of RAM
Bx00 - Bx0F	Undefined

Memory Map Detail : BC00 - BDFF
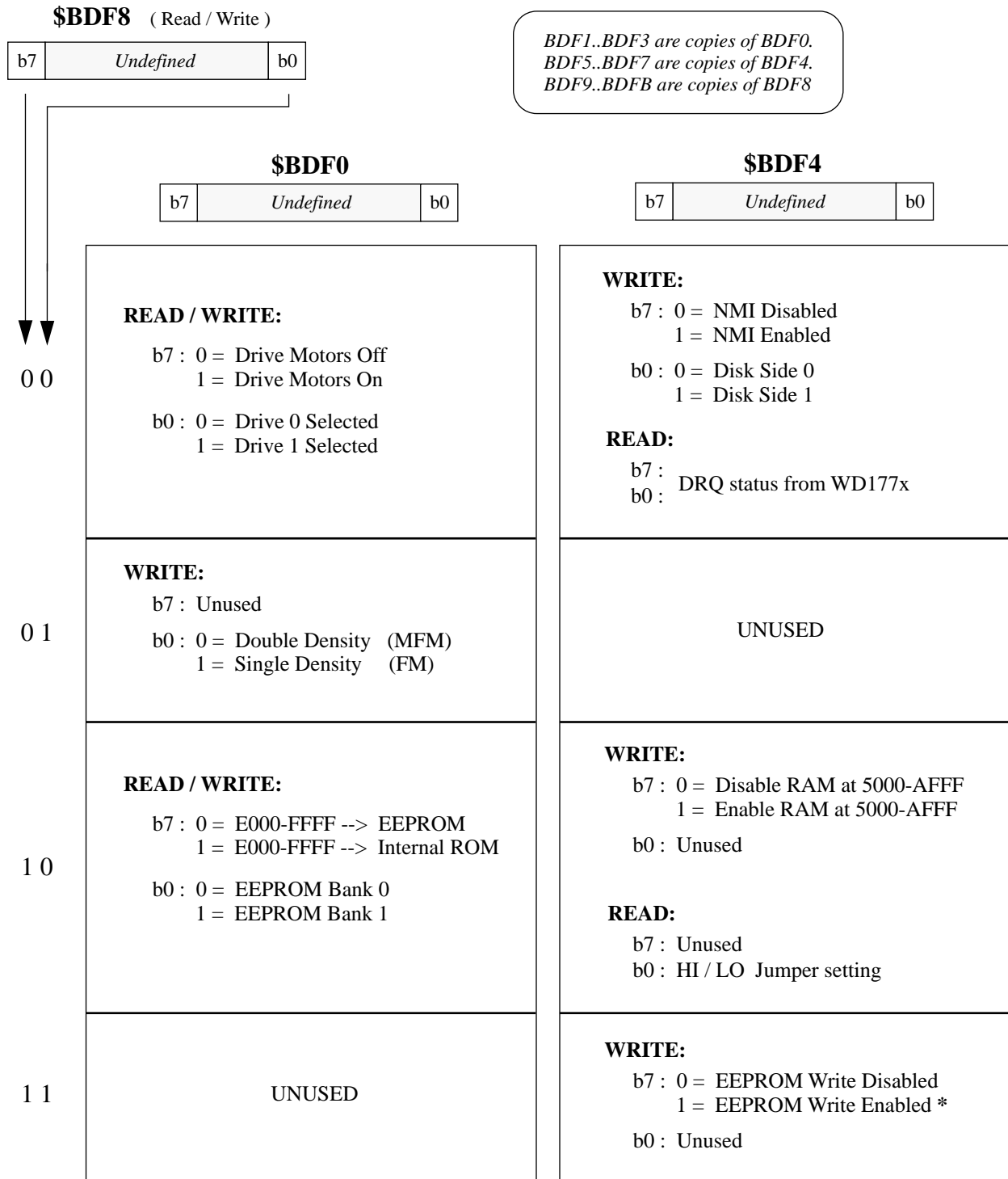
This 256 byte pattern appears
twice from BC00 to BDFF.

BxFC - BxFF	**WD177x FDC Registers**
BxF0 - BxFB	**Control and Status Registers**
BxE0 - BxEF	16 Bytes of RAM
BxD0 - BxDF	*Copies of the Control and FDC Registers*
BxB0 - BxCF	32 Bytes of RAM
BxA0 - BxAF	Undefined
Bx90 - Bx9F	16 Bytes of RAM
Bx80 - Bx8F	Undefined
Bx70 - Bx7F	*Copies of the Control and FDC Registers*
Bx60 - Bx6F	16 Bytes of RAM
Bx50 - Bx5F	*Copies of the Control and FDC Registers*
Bx30 - Bx4F	32 Bytes of RAM
Bx20 - Bx2F	*Copies of the EF9345 VDG (Alice 32/90)*
Bx10 - Bx1F	16 Bytes of RAM
Bx00 - Bx0F	Undefined

BDFC : Command / Status
BDFD : Track Register
BDFE : Sector Register
BDFF : Data Register

See description on
the following page.

*Only the address range from
BDF0 to BDFF should be used
to access the Control, Status
and FDC registers.*

Control and Status Registers

$BDF8 (Read / Write)

b7	*Undefined*	b0

BDF1..BDF3 are copies of BDF0.
BDF5..BDF7 are copies of BDF4.
BDF9..BDFB are copies of BDF8

$BDF0

b7	*Undefined*	b0

$BDF4

b7	*Undefined*	b0

0 0

$BDF0:

READ / WRITE:

b7 :　0 = Drive Motors Off
　　　1 = Drive Motors On

b0 :　0 = Drive 0 Selected
　　　1 = Drive 1 Selected

$BDF4:

WRITE:

b7 :　0 = NMI Disabled
　　　1 = NMI Enabled

b0 :　0 = Disk Side 0
　　　1 = Disk Side 1

READ:

b7 :
b0 :　DRQ status from WD177x

0 1

$BDF0:

WRITE:

b7 : Unused

b0 :　0 = Double Density　(MFM)
　　　1 = Single Density　　(FM)

$BDF4:

UNUSED

1 0

$BDF0:

READ / WRITE:

b7 :　0 = E000-FFFF --> EEPROM
　　　1 = E000-FFFF --> Internal ROM

b0 :　0 = EEPROM Bank 0
　　　1 = EEPROM Bank 1

$BDF4:

WRITE:

b7 :　0 = Disable RAM at 5000-AFFF
　　　1 = Enable RAM at 5000-AFFF

b0 : Unused

READ:

b7 : Unused
b0 : HI / LO Jumper setting

1 1

$BDF0:

UNUSED

$BDF4:

WRITE:

b7 :　0 = EEPROM Write Disabled
　　　1 = EEPROM Write Enabled *****

b0 : Unused

* After setting the EEPROM Write Enable bit (b7 of BDF4), you must also change the setting of BDF8 such that b7=1 and b0=0. This is the only combination that permits writing to the EEPROM.