

# MM/1 Module Directory - 07/06/95

Here is the rough draft of an annotated bootmod list for the MM/1 and MM/1a, please send any corrections/additions to [eseielstad@gmail.com](mailto:eseielstad@gmail.com)

I wrapped a few of the long lines, and re-worded a few of the descriptions to make it fit in 80-columns. If nobody objects, I'll probably leave it this way.

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## Update History:

07/09/95 Seielstad Added hawksoft's cd-rom modules  
07/06/95 Seielstad Initial release

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## Things I still need:

- I need to add WINDIO56 to this list.
  - I still need a description for 'mk68901'
  - what's the difference between scsi\_mm1a, scsi\_mm1d?
  - the sc68230 module, does it drive more than just the parallel ports?
  - modules in original 68070 boot-roms
  - modules in hard-drive boot-roms (for 68070)
  - modules in 68340 rom (if there are any)
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fn/module = filename of the module  
ed. = edition number of module  
CRC = CRC of module  
Location = Location (original system disk are the IMS disk 6)  
OK - original system disk, KERNEL directory  
OR - original system disk, RBF directory  
OS - original system disk, SCF directory  
ON - original system dist, NFM directory  
OP - original system disk, PIPE directory  
OW - original system disk, WIN directory  
UR - 'upgrade.ar' distribution RBF directory  
US - 'upgrade.ar' distribution SBF directory  
UM - 'upgrade.ar' distribution MODS directory  
8M - 8-meg upgrade  
MI - midi paddle board  
66 - 68340 upgrade, 68340 directory  
6M - 68340 upgrade, MODS directory.  
CD - CD file manager from Hawksoft.  
W50 - k-windows ed. 50 distribution  
W52 - k-windows ed. 52 distribution  
W54 - k-windows ed. 54 distribution  
?? - mystery (looked like 'upgrade.ar', but included tape drivers, anywhere the mystery disk duplicated the upgrade.ar file, I removed the ?? from the location)

Description = description of module. When I could, I list CPU() and IO() which describe on which board the devices are located. the 'uXX' number is the chip number. for example: the file 'rtcds1287' has a description 'IO(u24): Real-Time Clock ds1287' (the real time clock is a ds1287 on the IO board, chip number 'u24')

fn/module	ed.	CRC	Location	Description
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--KERNEL-----				
kernel	#83	90798	OK	OS-9 v2.4 kernel (68070)
kernel	#83	EED568	66	OS-9 v2.4 kernel (68340)

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init          #20    9B1B0A  66          Init module
init.1mhd     #20    EE4F63  OK          Init 1-meg w/hard drive
init_10meg    #20    ADCEB9  66          Init 10 (really 11) meg MM/1
init_1meg     #20    E1A7DC  8M          Init 1-meg
init_2meg     #20    DCF83E  8M          Init 2-meg
init_3meg     #20    1F6BD1  OK          Init 3-meg
init_3meg     #20    C48D37  UM          Init 3-meg
init_8meg     #20    4DFE3D  66          Init 8 (9 really) meg mm/1
init_8meg     #20    FCF747  8M          Init 8 (9 really) meg mm/1
init_base     #20    B055A8  OK, UM      Init
rtcds1287    #5     10D5D6  OK, UM, 6M  IO(u24): Real-Time Clock ds1287
mk68901      #12    7B0911  OK          CPU(u25):
sysgo        #5     687654  OK          sysgo module (spawns shells)
sysgo.5      #5     D9B2FA  OK          sysgo module
sysgo5       #5     D9B2FA  6M          sysgo module
tk68901      #7     147DA1  UM, 6M      CPU(u25): ticker on 68901
tk68901      #7     4038D2  OK          CPU(u25): ticker on 68901

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--RBF-(Random Block Filemanager)-----
rbf          #79    F098AF  OR, 6M, 66  Random Block-device Filemanager
--Floppy device descriptors for the rb37c65 driver-----
rb37c65     #7     2D75B0  66          CPU(u12): Dev.Drvr - Floppy
rb37c65     #7     3B4F59  W52         CPU(u12): Dev.Drvr - Floppy
rb37c65     #4     1768E9  UR          CPU(u12): Dev.Drvr - Floppy
rb37c65     #1     8C63E8  OR          CPU(u12): Dev.Drvr - Floppy
c0          #14    6010B2  UR          Dev.Desc for coco format
c1          #14    751647  UR          Dev.Desc for coco format
c2          #14    52BC3B  UR          Dev.Desc for coco format
c3          #14    8BEA4E  UR          Dev.Desc for coco format
d0          #14    1FEC2C  UR          Dev.Desc for MM/1 format
d0.hi      #11    37C400  OR          Dev.Desc for 1.4m MM/1 format
d0.st      #11    58B545  OR          Dev.Desc for 1.4m Atari ST
d1          #14    AEAD9   UR          Dev.Desc for MM/1 format
d1.hi     #11    A7F447  OR          Dev.Desc for MM/1 format
d2          #14    2D40A5  UR          Dev.Desc for MM/1 format
d3          #14    F416D0  UR          Dev.Desc for MM/1 format
hc0        #14    92C08   UR          Dev.Desc for 1.4meg coco
hc1        #14    68D15B  UR
hc2        #14    BFA089  UR
hc3        #14    24E6F8  UR
hd0        #14    82DCC8  UR          Dev.Desc for hd0 floppy
hd1        #14    B6C331  UR
hd2        #14    345049  UR
hd3        #14    AF1638  UR
hs0        #14    DBF0DE  6M, UR      Dev.Desc for 1.4m ST format
hs1        #14    BA0D8D  UR
hs2        #14    6D7C5F  UR
hs3        #14    F63A2E  UR
mm1.d0     #14    69FA68  6M, UR      Dev.Desc for MM/1 format
mm1.d1     #14    1FF595  UR
mm1.d1     #14    4A173F  ??
mm1.d2     #14    5B56E1  UR
mm1.d3     #14    820094  UR
s0         #14    338C47  UR, 6M      Dev.Desc for ST format
s1         #14    268AB2  UR
s2         #14    120CE   UR
s3         #14    D876BB  UR
u0         #14    5D28A7  UR          Dev.Desc for Universal format
u1         #14    482E52  UR          Dev.Desc for Universal format
u2         #14    6F842E  UR          Dev.Desc for Universal format
u3         #14    B6D25B  UR          Dev.Desc for Universal format
--rb33c93--obsolete SCSI device drivers-----
.rb33c93   #6     541702  OR          IO(u10): Dev.Drvr - SCSI Ctrl
              (replaced by rbvccs/scsi_mm1)

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rb33c93      #6      541702  OR      IO(u10): Dev.Drvr - SCSI Ctrl
              (replaced by rbvccs/scsi_mm1)
h0           #11      AA50BE  OR      Dev.Desc for harddisk (rb33c39)
h1           #11      2CAFD5  OR      Dev.Desc for harddisk (rb33c39)
--SCSI controller drivers/descriptors-----
rbvccs      #12      580EF4  UR, 6M  IO(u10): Dev.Drvr - SCSI Ctrl.
scsi_mm1a   #28      F8B0A9  W52     subroutine module for rbvccs
scsi_mm1a   #25      40486B  66      subroutine module for rbvccs
scsi_mm1d   #27      40A52E  CD      subroutine module for rbvccs
scsi_mm1d   #25      3546A3  UR      subroutine module for rbvccs
h0          #14      4B9DF2  66      for h0 (hard-drive 0)
h0          #14      EEB0DA  UR      for h0 (hard-drive 0)
h0a         #14      3983C9  UR      partitioned h0 part. a
h0a         #14      9CAEE1  66      partitioned h0 part. a
h0b         #14      601BCF  UR      partitioned h0 part. b
h0b         #14      C536E7  66      partitioned h0 part. b
h0c         #14      72AAF8  UR      partitioned h0 part. c
h0c         #14      D787D3  66      partitioned h0 part. c
h0d         #14      73F8AA  66      partitioned h0 part. d
h0d         #14      D6D582  UR      partitioned h0 part. d
h0e         #14      2BD7D7  UR      partitioned h0 part. e
h0e         #14      8EFAFF  66      partitioned h0 part. e
h0f         #14      A73D9   UR      partitioned h0 part. f
h0f         #14      AF5EF1  66      partitioned h0 part. f
h0g         #14      694AB6  66      partitioned h0 part. g
h0g         #14      CC679E  UR      partitioned h0 part. g
h0fmt       #14      76A421  66      h0 with formatting enabled
h0fmt       #14      76A53B  UR      h0 with formatting enabled
h1          #14      18371D  UR      for h1
h1          #14      BD1A35  66      for h1
h1a         #14      2E996E  UR      partitioned h1 partition a
h1a         #14      8BB446  66      partitioned h1 partition a
h1b         #14      4188EC  66      partitioned h1 partition b
h1b         #14      E4A5C4  UR      partitioned h1 partition a
h1c         #14      22B183  UR      partitioned h1 partition a
h1c         #14      879CAB  66      partitioned h1 partition a
h1d         #14      55F1DB  66      partitioned h1 partition a
h1d         #14      F0DCF3  UR      partitioned h1 partition a
h1e         #14      36C8B4  UR      partitioned h1 partition a
h1e         #14      93E59C  66      partitioned h1 partition a
h1f         #14      59D936  66      partitioned h1 partition a
h1f         #14      FCF41E  UR      partitioned h1 partition a
h1g         #14      3AE059  UR      partitioned h1 partition a
h1g         #14      9FCD71  66      partitioned h1 partition a
h1fmt       #14      435B19  UR      h1fmt with formatting enabled
h1fmt       #14      8DE8EF  66      h1fmt with formatting enabled
h1fmt       #14      8DE9F5  ??     h1fmt with formatting enabled
h2          #14      26921F  66      for h2
h2          #14      83BF37  UR      for h2
h2fmt       #14      3CC4    UR      h2fmt with formatting enabled
h2fmt       #14      3DDE    66      h2fmt with formatting enabled
h3          #14      7538F0  UR      for h3
h3          #14      D015D8  66      for h3
h3fmt       #14      FB700A  UR      h3fmt with formatting enabled
h3fmt       #14      FB7110  66      h3fmt with formatting enabled
h4          #14      34AF00  UR
h4          #14      918228  66
h4fmt       #14      9B96C5  UR
h4fmt       #14      9B97DF  66
h5          #14      6705EF  66
h5          #14      C228C7  UR
h5fmt       #14      60DA0B  UR
h5fmt       #14      60DB11  66
h6          #14      59A0ED  UR
h6          #14      FC8DC5  66

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h6fmt      #14      ED0E20  66
h6fmt      #14      ED0F3A  UR
h7          #14      A0A02   66
h7          #14      AF272A  UR
h7fmt      #14      1642EE  66
h7fmt      #14      1643F4  UR
--Device Descriptors for /dd-----
dd.c0      #14      154DE2  UR          makes /dd = /c0
dd.d0      #11      B28571  OR          makes /dd = /d0
dd.d0      #14      9AAD5D  UR          makes /dd = /d0
dd.h0      #11      EF21CF  OR          makes /dd = /h0
dd.h0      #14      ABC1AB  UR          makes /dd = /h0
dd.h0      #14      EEC83   66          makes /dd = /h0
dd.h0a     #14      D3E094  66, UR     makes /dd = /h0a
dd.h0fmt   #14      12E233  66, UR     makes /dd = /h0fmt
dd.hc0     #14      296F2D  UR          makes /dd = /hc0
dd.hd0     #14      22EFD0  UR          makes /dd = /hd0
dd.hs0     #14      7AB39A  UR          makes /dd = /hs0
dd.mm0     #14      602B83  ??         makes /dd = /mm0
dd.mm1.d0  #14      ECBB19  UR          makes /dd = /d0
dd.s0      #14      469155  6M, UR     makes /dd = /s0
dd.u0      #14      482DB5  UR          makes /dd = /u0
--Ram Disk-----
ram        #15      78E8E8  6M          Dev.Driver for ram disks
ram        #12      F4DEDA  OR          Dev.Driver for ram disks
r0         #11      16E075  6M          Dev.Desc for /r0
r0         #11      37AA4E  OR          Dev.Desc for /r0
--Pipes-(use NULL device driver)-----
null       #1       407F81  OP, 6M, OS  Dev.Driver NULL
pipeman    #32      961BDE  ON, OP      File Manager for Pipes
pipeman    #35      D6A976  6M          File Manager for Pipes
pipe       #2       CF450E  OP, 6M      Dev.Desc for /pipe
--PC Format RBF devices-(uses rb37c65 driver)-----
pcf        #24      2A45C3  UR          PC-Format Filemanager
pc0        #7       F99BF8  UR          Dev.Desc for 720k PC format
pc1        #7       CD8401  UR
pc2        #7       4F1779  UR
pc3        #7       D45108  UR
hpc0       #7       E0CA64  UR          Dev.Desc for 1.4m PC format
hpc1       #7       D2C3D8  UR
hpc2       #7       6D2C74  UR
hpc3       #7       2BDF7C  UR
--CDF-(CD-file manager)-----
cdf        #12      C4771   CD          Hawksoft's CD Filemanager
rbrom      #1       F7D3C5  CD          Device Driver
cdr        #1       11F507  CD          cd device descriptor
--SCF-----
scf        #31      B41F17  OS, 6M      Serial Character Filemanager
sc68070    #12      20C994  ??         CPU(u20): Dev.Drvr for 68070
           Serial port (/t0)
sc68070    #4       73F55   OS         CPU(u20): Dev.Drvr for 68070
           Serial port (/t0)
sc68070    #9       70657B  US         CPU(u20): Dev.Drvr for 68070
           Serial port (/t0)
t0         #5       989F7C  US         Dev.Desc. for 68070's /t0
t0         #5       BDC944  OS         Dev.Desc. for 68070's /t0
sc66340    #31      743576  66         CPU(u20): Dev.Drvr 68340
           Serial ports (/t0 & /t5)
t0         #5       18F89E  66         Dev.Desc for 68340 /t0
t5         #5       3EB338  66         Dev.Desc for 68340 /t5
sc68901    #30      277D4C  66         CPU(u25): Dev.Drvr serial ports
sc68901    #28      1886AC  MI         CPU(u25): Dev.Drvr serial ports
sc68901    #25      70DC88  US         CPU(u25): Dev.Drvr serial ports

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sc68901	#18	112E6B	OS	CPU(u25): Dev.Drvr serial ports
t1	#5	1563E9	6M	Dev.Desc for 68901 /t1
t1	#5	1563E9	US	Dev.Desc for 68901 /t1
t1	#5	39FBA6	OS	Dev.Desc for 68901 /t1
mi	#5	CF5598	MI	Dev.Desc for 68901 /mi (midi)
t2	#5	4FA0AA	OS	Dev.Desc for 68901 /t2
t2	#5	D0DE0F	US, 6M	Dev.Desc for 68901 /t2
sc68230	#1	8EB9CC	OS	IO(u21): Dev.Drvr for /p
p	#5	4544DD	66	Dev.Desc for parallel port /p
p	#5	60BAFC	US	Dev.Desc for parallel port /p
p	#5	791FE1	OS	Dev.Desc for parallel port /p
sc68230.polled	#2	DF01D3	US	IO(u21): Dev.Drvr for polled parallel port.
sc68681	#32	6DBF65	66	IO(u23): Dev.Drvr serial port
sc68681	#29	624752	??	IO(u23): Dev.Drvr serial port
sc68681	#25	6F2107	US	IO(u23): Dev.Drvr serial port
sc68681	#15	817A8	OS	IO(u23): Dev.Drvr serial port
t3	#5	AEABE6	US, 6M	Dev.Desc for /t3
t4	#5	62ECBF	US, 6M	Dev.Desc for /t4
scp68230	#8	29D01C	6M	CPU(u25): Dev.Drvr polled
scp68230	#7	99BD46	??	CPU(u25): Dev.Drvr polled
scp68230	#5	E9A859	US	CPU(u25): Dev.Drvr polled
p.polled	#5	791FE1	US	Dev.Desc for parallel port /p
nil	#2	F0652E	OS	Dev.Desc for /nil (uses NULL dev.drvr)
nil	#3	D68A35	6M	Dev.Desc for /nil (uses NULL dev.drvr)

--K-WINDOWS(windows, mice, keyboard, sound)-----

windio.070	#54	593A56	W54	K-windows Dev.Drvr (uses scf) 68070 specific version
windio.340	#54	FFD932	W54	K-windows Dev.Drvr (uses scf) 68340 specific version
windio.52	#52	D70DB7	W52	K-windows Dev.Drvr (uses scf)
windio	#50	1CBA76	66	K-windows Dev.Drvr (uses scf)
windio	#22	B84501	0W, W50	K-windows Dev.Drvr (uses scf)
keydrv.mm1	#48	A8EA84	W54	System: xt-keyboard driver
keydrv	#46	9AAE1D	66, W52	System: xt-keyboard driver
keydrv	#1	9E4F38	0W, W50	System: xt-keyboard driver
ms68901	#2	78AEE2	0W, W50	Dev.Drvr for ms mouse
ms	#5	A4F4E0	0W, W50	Dev.Desc. for ms mouse
msdrv.901	#8	9635B1	66	Dev.Driver for mouse
msdrv.901_340	#8	B4729F	W52	Dev.Drvr for mice 68340 spec.
msdrv_340.901.ms	#8	EA2518	W52	Dev.Drvr for mice 68340 spec.
term	#5	5B4BA9	0W, W50	Dev.Desc for /term
term	#5	9953D8	66	Dev.Desc for /term
term	#5	E80327	US	Dev.Desc for /term
snddrv	#4	17DC0D	W52	System: sound driver.
snddrv	#1	64A72B	0W, W50	System: sound driver.
stdfonts	#1	3C55DD	0W, W50, 6M, 66	Standard Fonts
w	#5	CB91D8	0W, W50	Dev.Desc for /w
w	#5	E2B990	66	Dev.Desc for /w
w0	#5	E1A7EC	66	Dev.Desc for /w0
w1	#5	112C5D	66	Dev.Desc for /w1
w1	#5	380415	0W, W50	Dev.Desc for1 /w
w10	#5	6E2A35	66	Dev.Desc for /w10
w11	#5	123B	66	Dev.Desc for /w11
w12	#5	4AAA53	66	Dev.Desc for /w12
w13	#5	24925D	66	Dev.Desc for /w13
w14	#5	56CA6E	66	
w15	#5	38F260	66	
w2	#5	D635E3	66	
w2	#5	FF1DAB	0W, W50	
w3	#5	8D88B9	66	
w3	#5	BDEAC1	0W, W50	

w4	#5	C954F4	OW, W50
w4	#5	E04BA2	66
w5	#5	8BA39E	OW, W50
w5	#5	A2BCC8	66
w6	#5	4CBA20	OW, W50
w6	#5	51625A	66
w7	#5	139530	66
w7	#5	E4D4A	OW, W50
w8	#5	C8EAB0	66
w8	#5	D532CA	OW, W50
w9	#5	8A1DDA	66
w9	#5	97C5A0	OW, W50

--SBF-(Serial Block Devices - like tape drives)-----

sbfc_ck	#9	21988F	??	Serial Block Filemanager
sbteac	#10	601885	??	Dev.Drvr - Teac
sbteac_45s	#11	C47276	??	Dev.Drvr - Teac_45s
mt0_sbteac	#5	423492	??	Dev.Desc - Teac /mt0
sbviper	#25	19C3AF	??	Dev.Drvr - sb viper
mt0_sbviper	#5	6545C3	??	Dev.Desc - sb viper /mt0

--NFM-(Network File Manager)-----

nfm	#43	CB25E9	ON	Network File Manager
n6850	#4	A47111	ON	Dev.Drvr
n9026	#40	43CB8E	ON	Dev.Drvr
nc9026	#43	726612	ON	Dev.Drvr
n0	#43	5F1FA8	ON	Dev.Desc /n0
n0nc	#43	1B2043	ON	Dev.Desc /n0
ns2	#43	43365	ON	Dev.Desc /ns2
ns3	#43	64CE98	ON	Dev.Desc /ns3

--Non-Device-Driver-Modules-----

cio	#6	E9ADF1	66	C trap library
math	#13	46C5DC	66	Math trap library
shell	#52	BFD301	6M	os-9 shell

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Please send any additions/corrections to [eseielstad@gmail.com](mailto:eseielstad@gmail.com)

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