HISTORY OF AMOS

The following pages were sent to AMUS by Guruprem Singh Khalsa of Khalsa Computer Systems, Inc. of Pasadena, California. They trace the development of AMOS from version 0.0 through 3.3 and show the number of blocks that each AMOS program occupied for each version. We have also included a blank page of the form that Guruprem used so that you can keep track of the upcoming releases of AMOS.

Next newsletter, we'll include the history of the drivers, command files, LISP programs, and sources.

ALPHA MICRO SCORES ON SAN LUIS OBISBO REPORT

AMUS recently came across a report done by an independant agent that rated a dozen mini and micro systems for ease of programming, multi-user features, cost, service, and other items. Alpha Micro came out tops over an IBM system costing $38K, a DEC system at about $30K and four other systems more expensive than the $14K A/M system. Its a twenty page report so there isn't room to reproduce it here. Alpha Micro plans to publish it and make it available to dealers soon, but if you can't wait, let us know and perhaps we can arrange to get it copied for you.

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSKØ: 1,4		##			##			##			##		
AMS .MON								1					see AMS.DVR
AMSCPY.PRG								1	1	1			
AMSFMT.PRG								1	1	1	1	1	
AMSLOD.PRG								1	1				
AMSORT.PRG												4	
APPEND.PRG									1	1	1	1	
ASCDMP.PRG								1	1	1	1	1	
ATTACH.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
BASIC .PRG	17	15	15	16	19	19	19	20	21	21	22	22	
BASIC1.INI			1										
BASIC1.MON			33										
BASIC2.INI			1										
		##			##			##			##		
BASIC2.MON			47										
BASORT.SBR												2	
BAUD .PRG												1	
BDT .PRG	1			1	1	1	1						
BITMAP.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
BMVR .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
CITY .PRG		1	1										
CLEAR .PRG	1	1	1	1	1	1	1						
CLKFRQ.PRG				1	1	1	1	1	1	1	1	1	
COMPIL.PRG												18	
COPY .PRG	2	2	2	2	2	2	2	2	2	2	2	2	
COUNT .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
		##			##			##			##		
DDT .PRG	11	11	11	11	11	11	11	11	11	11	11	11	
DEL .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DETACH.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DEVTBL.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DIAG1 .PRG				1	1	1	1	1	1	1	1	1	
DIAG2 .PRG												1	
DIAG3 .PRG												2	
DING .PRG				1	1	1	1	1	1	1	1	1	
DIR .PRG	3	3	3	3	3	3	3	3	3	3	3	3	
DIRSEQ.PRG									2	2	2	2	

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSKØ: 1,4		##			##			##			##		
DOCTOR.OPR					3	3	3						on DSK1
DOCTOR.WS					53	53	53						on DSK1
DSKANA.PRG	4	4	4	4	4	4	4	4	4	4	4	4	
DSKCPY.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DSKDDT.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DSKDMP.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DSKFIL.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
DYSTAT.PRG	2	2	2	2	2	2	2	2	2	2	2	2	
EDIT .PRG	4	4	4	4	4	4	4	5	5	5	6	6	
ERASE .PRG	2	2	2	2	2	2	2	2	2	2	2	2	
FDBL .PRG	8												
FILCOM.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
		##			##			##			##		
FILDMP.PRG	1	1	1	1	1	1	1	1					
FIXMIM.PRG					2	2	2	2					
FIXTPR.PRG			2	2	2	2	2						
FLTCNV.PRG												1	
FORCE .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
FORMAT.PRG				1	1	1	1	1	1	1	1	1	
FTIME .PRG	6												
HEDLOD.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
HOG .PRG									1	1	1	1	
ICOM .PRG				20	20	20	20	21					see MONGEN
ICMLOD.PRG								1	1	1	1	1	
ISAM .PRG								12	10	10	10	10	
		##			##			##			##		
ISMBLD.PRG								6	18	18	18	17	
ISMDMP.PRG								16	14	14	14	13	
JOB .PRG	2	2	2	2	2	2	2						see JOBS
JOBMEM.PRG									1	1	1	1	
JOBPRI.PRG								1	1	1	1	1	see SETPRI
JOBS .PRG								1	1	1	1	1	
KILL .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
LINK .PRG	7	7	7	7	7	7	7	7	7	7	7	7	
LISP .PRG					12	12	12	33*	33*	33*	33*	33*	*on DSK1
LOAD .PRG	1	1	1	1	1	1	1	1	1	1	1	1	

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSKØ: 1,4		##			##			##			##		
LOG .PRG	2	2	2	2	2	2	2	2	2	2	2	2	
LOGOFF.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
LPTSPL.PRG	2	2	2	2	2	2	2	2	2	2	2	2	
MACRO .PRG	16	16	16	16	16	16	16	16	16	16	16	16	
MAC1 .OVR	1	1	1	1	1	1	1	1	1	1	1	1	
MAC2 .OVR	4	4	4	4	4	4	4	4	4	4	4	4	
MAC3 .OVR	9	9	9	9	9	9	9	10	10	10	10	10	
MAKE .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
MAP .PRG	2	2	2	2	2	2	2	2	2	2	2	2	
MEMDEF.PRG									1	1	1	1	
MEMORY.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
MEMPLT.PRG									1				
		##			##			##			##		
MEMTST.PRG		1	1										see DIAG1
MONGEN.PRG										1	1	1	
MOUNT .PRG									1	1	1	1	
PACK .PRG	1	1	1	1	1	1	1						
PDLFMT.PRG									7	7	7	7	
PERSCI.MON				20	20	20	20	22					see MONGEN
PERLOD.PRG								1	1	1	1	1	
PRINT .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
QDT .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
QUEUE .PRG										1	1	1	
RAND .PRG	1	1	1	1	1	1	1						
REDALL.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
		##			##			##			##		
RENAME.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
REVIVE.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
RNDRED.PRG	1	1	1	1	1	1	1		1	1	1	1	
RUN .PRG		12	12	12	16	16	16	17	18	19	19	21	
SAVE .PRG	2	2	2	2	2	2	2	2	2	2	2	2	
SCREEN.SBR									1	1	1	1	see ADM3.TDV SOROC.TDV
SEEK .PRG	2	2	2	2	2	2	2						
SEND .PRG	1	1	1	1	1	1	1						
SET .PRG								1	1	1	1	1	
SETNUL.PRG					1	1	1						

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 10.2	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSKØ: 1,4		##			##			##			##		
SETPRI.PRG	1	1	1	1	1	1	1	1					see JOBPRI
SIZE .PRG								1	1	1	1	1	
SLEEP .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
SORT .PRG									6	6	6	6	
SPOOL .SBR												1	
SRCCOM.OLD										3	3	3	
SRCCOM.PRG									3	3	4	4	
SUSPND.PRG	1	1	1	1	1	1	1	1	1	1	1	1	
SYM .PRG	6												see SYMBOL
SYMBOL.PRG		6	6	6	6	6	6	6	6	6	6	6	
SYSACT.PRG	3	3	3	3	3	3	3	3	3	3	3	3	
SYSTAT.PRG	2	2	2	2	2	2	2	2	2	2	2	2	
		##			##			##			##		
SYSTEM.INI	1	1	1	1	1	1	1	1	1	1	1	1	
SYSTEM.MON	21	21	21	20	20	20	20	22	23	26	26	26	
SYSTEM.PRG				1	1	1	1	1	1	1	1	1	
TEE .PRG				5									
TIME .PRG						1	1	1	1	1	1	1	
TLGRAM.PRG									7	7	7	7	
TODCNV.PRG						2	2	2	2	2	2	2	
TRMDEF.PRG								2	2	2	2	2	
TXTFMT.PRG	3	3	3	3	3	3	3	9	10	10	10	10	
TYPE .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
UNPACK.PRG	2	2	2	2	2	2	2						
WAIT .PRG	1	1	1	1	1	1	1	1	1	1	1	1	
		##			##			##			##		
WAMFMT.PRG											1	1	
WNGFMT.PRG											1	1	
XLOCK .PRG									1	1	1	1	

PROGRAM	VERS	VERS	VERS	VERS	VERS	VERS	VERS	VERS	VERS	VERS	VERS	VERS	COMMENT
		##		##		##		##					
		##		##		##		##					
		##		##		##		##					

History of AMOS - Continued from June:

Following is the history of the drivers, command files, LISP programs, and sources. Thanks to Khalsa Computer Systems Inc. we now know the number of blocks for each program for each version.

Stay tuned to the AMUS Newsletter for the information on 3.4.

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSK0: [1,6]		##			##			##			##		
ACTIV .TDV												1	
ADM1 .TDV												1	
ADM2 .TDV												1	
ADM3 .TDV								1	1	1	1	1	
AMS .DVR								2	1	1			see AMS
AM300 .IDV								1	1	1	1	1	
CEN .DVR	1	1	1	1	1	1	1	1	1	1	1	1	
DMEDIA.TDV												1	
HAZEL .TDV											1	1	
ICM .DVR	4	4	4	4	4	4	4	1	1	1			see ICMIMG ICMSTD
ICMIMG.DVR											1	1	
ICMSTD.DVR											1	1	
		##			##			##			##		
IMG .DVR										1			see IMG
IMSIO .IDV								1	1	1	1	1	
LPT .DVR	2	1		1	3	1	1						
MTM .DVR	2	2	2	2	3	3	3	3	3	1	3	3	
MTM .SIO					2	2	2						see MTM.DVR IMSIO
M40 .TDV												1	
PER .DVR	5	5	5	5	5	5	5	2	2	1			see PER
PERAMS.DVR											1	1	
PERIMG.DVR											1	1	
PERSTD.DVR											1	1	
PS3 .IDV								1	1	1	1		
SIL700.TDV								1	1	1	1	1	
		##			##			##			##		
SOROC .TDV									1	1	1	1	
TELTYP.TDV								1	1	1	1	1	see TPR
TPR .DVR			1	1	1	1	1						
TRIT25.DVR												1	
TRIT50.DVR												1	
TRM .DVR								1	1	1	1	1	
WNGAMS.DVR											1	1	
WNGIMG.DVR											1	1	
WNGSTD.DVR											1	1	

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSK0: [2,2]		##			##			##			##		
DOCTOR.CMD					2	2	2						
FORMT1.CMD				1	1	1	1	1					
ICOM .CMD				1	1	1	1	1	1				see MONGEN
PERSCI.CMD				1	1	1	1	1	1				see MONGEN
RES .CMD	1	1	1	1	1	1	1	1	1	2	1		
SYSCPY.CMD	1	1	1	1	1	1	1	1	1	2	1		
DSK0: [7,7]		##			##			##			##		
ISUSYM.MAC								5	6	7	6	5	
SYS .MAC	14	14	13	13	14	14	14	14	15	15	15	15	see FILSER TRMSER
DSK0: [20,20]		##			##			DSK1 [100,1]			##		
FILERR.MAC					3	3	3	3					
FILSER.MAC					26	26	26	27					
TRMSER.MAC					43	43	43	53					

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
DSK1: [1,4]	"				"			"			"		
LISP .PRG								33					
DSK1: [7,4]	"				"			"			"		
DIFF .LSP								20					
DOCTOR.LSP								39					
ILISP .LSP								10					
LISP .LSP								9					
METEOR.LSP								32					
	"				"			"			"		

PROGRAM	VERS 0.0	VERS 0.1	VERS 0.2	VERS 0.3	VERS 1.0	VERS 1.01	VERS 1.02	VERS 2.0	VERS 3.0	VERS 3.1	VERS 3.2	VERS 3.3	COMMENT
SOURCES		##			##			##			##		
ACTIV .MAC												9	
ADM1 .MAC												10	
ADM113.MAC												11	
ADM2 .MAC												10	
ADM3 .MAC								6			9	9	
AMSLOD.MAC								12					
AM300 .MAC								8			8	9	
CEN .MAC								5				5	
DIABLO.MAC												21	
DMEDIA.MAC												8	
FIXMTM.MAC					3	3	3	3				3	
FIXTPR.MAC					3	3	3	3					
		##			##			##			##		
HAZEL .MAC											9	9	
ICMLOD.MAC								7					
IMSIO .MAC								5				5	
LPTSPL.MAC												6	
MNS .MAC					8	8	8	8				8	
MTM .MAC					19	19	19	19				19	
M40 ,MAC												2	
PERLOD.MAC								14					
PRINT .MAC												6	
PS3 .MAC								4				4	
QUM .MAC												26	
SCREEN.MAC									9	9		9	
		##			##			##			##		
SIL700.MAC												4	
SOROC .MAC											9	9	
TCM .MAC					6	6	6	6				6	
TELTYP.MAC								4				4	
TPR .MAC					7	7	7	7					
TRM .MAC								7					
XLOCK .MAC									10	10	10	10	
DELREM.BAS												5	
FILPRT.BAS												13	
RENUM. .BAS												6	

SIZE OF AMOS MONITORS AFTER SYSGEN

This document is meant to aid you in calculating (precisely) the total room necessary to configure a given kind of AMOS system, without having to actually go through the whole sysgen process. It can be used by a salesman & a prospective customer to figure out whether a particular kind of system will actually fit in a prescribed amount of core. It may also be used by the system programmer to "juggle" system size requirements on paper, without having to kick any users off the system to do so.

In general, the AMOS resident monitor consists of a what we shall refer to as the "Base Monitor", whose size (in bytes) is a constant for any given AMOS release. The SYSTEM.MON found in PPN [1,4] consists of the Base Monitor plus an additional area whose size has been exactly 4314 bytes for at least 3 AMOS releases. (Why 4314 ?). This additional area is where the Disk Driver is contained, and where new drivers are inserted by MONGEN. Most drivers are less than 1000 bytes, and the remainder of this 4314 byte area is left unused. On the system disk, this unused area actually takes up disk room (thus resulting in "apparent" SYSTEM.MON sizes of 13000+ bytes), but during sysgen time this unused area is eliminated in core, so that only the Base Monitor and the Disk Driver occupy (precious) memory.

To determine the exact total size of an AMOS monitor, you must first have the following information :

(1) The AMOS Release Number (e.g. "4.2")

(2) The Disk Driver used in the Monitor (e.g. "PERAMS")

(3) A listing of the SYSTEM.INI file (only those lines that preceed the line "SYSTEM" effect the size of the AMOS monitor).

The AMOS Release Number is needed because the sizes of various programs change with each release. The Disk Driver must be known, because each driver has a different size. Every single line that preceeds the line "SYSTEM" in a SYSTEM.INI file will add to the size of the AMOS monitor at sysgen time; it is possible to insert lines into this part of the SYSTEM.INI file that do not affect the monitor size, but they do not have to preceed the "SYSTEM" line (they can be moved to the area following "SYSTEM").

Page 2 contains a summary of the various contributions to the monitor size. The various constants on page 2 are correct for AMOS Version 4.0,4.1, & 4.2, but there is no guarantee that they will not change in the future. Also, I have not at this time checked any earlier versions.

Page 3 contains the size (in bytes) of various programs for several AMOS releases, with room for future expansion. The user may wish to add a few more programs to this table, based on his own particular needs.

CONTRIBUTIONS TO AMOS MONITOR SIZE

(-) SYSTEM.MON — Size Of Base Monitor
+ Size of Disk Driver

(1) JOBS — For each jobname in a JOBS line :
+ 292 bytes

(2) TRMDEF — For each TRMDEF line :
+ 70 bytes
+ in-width buffer size
+ in-buffer size
+ 2 x (out-buffer size)

For each different terminal driver :
+ 16 bytes
+ Size of terminal driver (e.g. HAZEL.TDV)
For each different interface driver :
+ 16 bytes [I only checked this on 4.2]
+ Size of interface driver (e.g. AM300.IDV)

Note : If a TRMDEF line uses the same IDV and TDV as previous lines, then the monitor size is not increased by these drivers a 2nd time. The pseudo drivers PSEUDO and NULL contribute no additional room to the monitor, but any pseudo-terminal still requires 70 bytes + the buffer sizes (see above).

(3) MEMDEF — + 18 bytes for the first MEMDEF line
+ 12 bytes for any additional MEMDEF lines

Note : This data only reflects some simple PIISCEON memory board sample cases; it may require modest revisions.

(4) DEVTBL — + 18 bytes for the first device
+ 8 bytes for any additional devices

Note : If there is no DEVTBL line whatsoever, then (by default) the system still technically has the device "DSK0", but "DSK0" is to be ignored in all our calculations.

Note : Line "DEVTBL DSK1,AMS0,AMS1" has 3 (not 2 or 1) devices.

(5) BITMAP — For each BITMAP line
+ 26 bytes
+ 2 x (size of bitmap in words)

(6) QUEUE — + 16 x (number of additional QUEUE blocks)

Note : This multiplier was 10 in Version 4.0, 16 in 4.1 & 4.2

(7) SYSTEM prog — For each program made resident :
+ 12 bytes
+ Size of program

(-) SYSTEM — [ends all changes to monitor size]

SOME PROGRAM SIZES (in bytes)

Program Name	3.2	3.3	3.4	4.0.0	4.0.2	4.1	4.2
SYSTEM.MON	13122	13122	13122	13256	13236	13328	*13364
Base Size	?	?	?	?	08922	09014	*09050
Unused	?	?	?	?	04314	04314	04314
Disk Drivers							
HWK500.DVR	-	-	468	486	486	486	486
PERAMS.DVR	472	472	478	478	478	478	*(844)
PERSTD.DVR	476	506	512	512	512	512	*(844)
WNGAMS.DVR	336	340	346	346	346	346	*(844)
WNGSTD.DVR	370	374	380	380	380	380	*(844)
Other Drivers							
AM300.IDV	342	342	342	342	342	342	342
IMSIO.IDV	100	100	100	100	100	100	100
ADM3.TDV	268	268	246	246	300	300	300
HAZEL.TDV	288	288	294	294	278	314	314
HAZEL.KCS	-	-	-	-	296	296	296
SOROC.TDV	288	288	288	288	300	300	300
MEM.DVR	-	-	-	308	308	298	298
MTM.DVR	1028	1028	1028	1028	1028	1028	1028
RES.DVR	-	-	-	-	-	196	196
TRM.DVR	188	188	252	252	252	252	252
AMS,HWK,STD	(look up under original name under Disk Drivers, above)						
Other Progs.							
BASIC.PRG	11002	11056	11056	11198	11198	11332	11492
RUN.PRG	9658	10440	10502	10982	11000	11064	11234
DYSTAT.PRG	902	902	902	902	902	902	902
TODCNV.PRG	524	524	524	524	524	524	524
EDIT.PRG	2844	2844	2844	2994	2994	2994	2994
VUE.PRG	-	-	-	5960	8604	9310	9308
ISAM.PRG	4782	4660	4694	4846	3918	3912	4258
XLOCK.SBR	218	218	218	218	218	218	218
FLOCK.SBR	-	-	-	-	1018	1078	1078
BASORT.SBR	-	841	877	878	878	878	878
AMSORT.PRG	-	1886	1952	2018	2118	2118	2118
FLTCNV.PRG	-	498	498	498	498	498	498

Notes (*) : Monitor Sizes --- MONGEN has problems in Version 4.2; as of now, I am not sure exactly what the size of SYSTEM.MON is really supposed to be, but the above 4.2 sizes were derived from a Persci-AMS system. The corresponding values for a Hawk System were 13494 & 13364. Note that both of these values are different from the Persci System, but that the Unused Monitor Area is still 4314 bytes.
Driver Sizes --- The 4.2 drivers are created using FIXDVR.

SIZE OF AMOS MONITORS AFTER SYSGEN

This document is meant to aid you in calculating (precisely) the total room necessary to configure a given kind of AMQS system, without having to actually go through the whole sysgen process. It can be used by a salesman & a prospective customer to figure out whether a particular kind of system will actually fit in a prescribed amount of core. It may also be used by the system programmer to "juggle" system size requirements on paper, without having to kick any users off the system to do so.

In general, the AMOS resident monitor consists of a what we shall refer to as the "Base Monitor", whose size (in bytes) is a constant for any given AMOS release. The size of this Base Monitor is found at location #ZSYDSK (see SYS.MAC); simply type "PRINT WORD(136)" in BASIC to get this number. The SYSTEM.MON found in PPN [1,4] consists of the Base Monitor plus an additional area whose size is usually about 4000 bytes (see tables for exact size in each AMOS release). This additional area is where the Disk Driver is contained, and where new drivers are inserted by MONGEN. Most drivers are less than 1000 bytes, and the remainder of this 4000+ byte area is left unused. On the system disk, this unused area actually takes up disk room (thus resulting in "apparent" SYSTEM.MON sizes of 13000+ bytes), but during sysgen time this unused area is eliminated in core, so that only the Base Monitor and the Disk Driver occupy (precious) memory.

To determine the exact total size of an AMOS monitor, you must first have the following information :

(1) The AMOS Release Number (e.g. "4.4")

(2) The Disk Driver used in the Monitor (e.g. "PERAMS")

(3) A listing of the SYSTEM.INI file (only those lines that preceed the line "SYSTEM" effect the size of the AMOS monitor).

The AMOS Release Number is needed because the sizes of various programs change with each release. The Disk Driver must be known, because each driver has a different size. Every single line that preceeds the line "SYSTEM" in a SYSTEM.INI file will add to the size of the AMOS monitor at sysgen time; it is possible to insert lines into this part of the SYSTEM.INI file that do not affect the monitor size, but they do not have to preceed the "SYSTEM" line (they can be moved to the area following "SYSTEM").

Page 2 contains a summary of the various contributions to the monitor size. The various constants on page 2 are correct for AMOS versions 4.0 thru 4.4A, you will note that some of them have changed during this time period, and there is no guarantee that they will not change in the future. Also, I have not at this time checked any earlier versions.

Page 3 contains the size (in bytes) of various programs for several AMOS releases, with room for future expansion. The user may wish to add a few more programs to this table, based on his own particular needs.

CONTRIBUTIONS TO AMOS MONITOR SIZE

(-) SYSTEM.MON — Size Of Base Monitor (=WORD(136))
+ Size of Disk Driver
+ 2

(1) JOBS — For each jobname in a JOBS line :
+ 292 bytes

(2) TRMDEF — For each TRMDEF line :
+ 70 bytes
+ in-width buffer size
+ in-buffer size
+ 2 x (out-buffer size)

For each different terminal driver :
+ 16 bytes
+ Size of terminal driver (e.g. HAZEL.TDV)
For each different interface driver :
+ 16 bytes [I only checked this on 4.2 and after]
+ Size of interface driver (e.g. AM300.IDV)

Note : If a TRMDEF line uses the same IDV and TDV as previous lines, then the monitor size is not increased by these drivers a 2nd time. The pseudo drivers PSEUDO and NULL contribute no additional room to the monitor, but any pseudo-terminal still requires 70 bytes + the buffer sizes (see above).

(3) MEMDEF — + 18 bytes for the first MEMDEF line
+ 12 bytes for any additional MEMDEF lines
SYSMEM — + 10 bytes if present (AMOS 4.3 or later)

Note : This data only reflects some simple PIISCEON memory board sample cases; more elaborate cases require more memory.

(4) DEVTBL — [following is for AMOS 4.0 to 4.3]
+ 18 bytes for the first device (NOT including DSK0)
+ 8 bytes for each additional device

[following is for AMOS 4.4]
+ 32 bytes for the first device (NOT including DSK0)
+ 16 bytes for each additional device
+ 60 bytes for each bad track device (including DSK0)

Note : Line "DEVTBL DSK1,AMS0,AMS1" has 3 (not 4,2,1) devices.
Note : Bad track devices currently include only Phoenix Disks

(5) BITMAP — For each BITMAP line without the "/S" option
+ 26 bytes (AMOS 4.0 to 4.2)
+ 34 bytes (AMOS 4.3 to 4.4A)
+ 2 x (size of bitmap in words)

Note : Any shared BITMAP line counts as only 1 BITMAP line above

(6) QUEUE — + 10 x (# of extra QUEUE blocks) (AMOS 4.0)
+ 16 x (# of extra QUEUE blocks) (AMOS 4.1 to 4.4A)

(7) SYSTEM prog — For each program made resident :
+ 12 bytes
+ Size of program

(-) SYSTEM — [ends all changes to monitor size]

SOME PROGRAM SIZES (in bytes)

Program Name	3.2	3.3	3.4	4.0.0	4.0.2	4.1	4.2	4.2.5	4.3	4.4	4.4.A
SYSTEM.MON	13122	13122	13122	13256	13236	13328	*13494	13494	13520	13778	13778
Base Size	?	?	?	?	8920	9012	*9178	9178	9334	9426	9426
Unused	?	?	?	?	4316	4316	4316	4316	4186	4352	4352
Disk Drivers											
HWK500.DVR	-	-	468	486	486	486	486	496	530	530	530
SMD410.DVR	-	-	-	-	-	-	-	542	570	664	664
PERAMS.DVR	472	472	478	478	478	478	*	*	*	*	*
PERSTD.DVR	476	506	512	512	512	512	*	*	*	*	*
WNGAMS.DVR	336	340	346	346	346	346	*	*	*	*	*
WNGSTD.DVR	370	374	380	380	380	380	*	*	*	*	*
200DVR.DVR	-	-	-	-	-	-	844	844	848	852	884
Other Drivers											
AM300.IDV	342	342	342	342	342	342	342	342	342	342	342
AM310.IDV	-	-	-	-	-	-	-	-	408	374	374
IMSIO.IDV	100	100	100	100	100	100	100	100	100	100	100
ADM3.TDV	268	268	246	246	300	300	300	300	300	300	300
HAZEL.TDV	288	288	294	294	278	314	314	314	314	300	300
SOROC.TDV	288	288	288	288	300	300	300	300	300	300	300
MEM.DVR	-	-	-	308	308	298	298	298	298	298	298
MTM.DVR	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028
RES.DVR	-	-	-	-	-	196	196	196	196	196	196
TRM.DVR	188	188	252	252	252	252	252	252	252	252	252
AMS,HWK,STD	(look up under original name under Disk Drivers, above)										
Other Progs.											
BASIC.PRG	11002	11056	11056	11198	11198	11332	11492	11492	11526	11756	11756
RUN.PRG	9658	10440	10502	10982	11000	11064	11234	11234	11310	11494	11494
DYSTAT.PRG	902	902	902	902	902	902	902	902	902	902	902
TODCNV.PRG	524	524	524	524	524	524	524	524	524	524	524
EDIT.PRG	2844	2844	2844	2994	2994	2994	2994	2994	3000	3030	3030
VUE.PRG	-	-	-	5960	8604	9310	9308	9308	9308	14314	14314
ISAM.PRG	4782	4660	4694	4846	3918	3912	4258	4258	4270	4270	4270
XLOCK.SBR	218	218	218	218	218	218	218	218	218	218	218
FLOCK.SBR	-	-	-	-	1018	1078	1078	1078	1078	1078	1078
BASORT.SBR	-	841	877	878	878	878	878	878	878	1064	1078
AMSORT.PRG	-	1886	1952	2018	2118	2118	2118	2118	2130	-	-
AMSORT.SYS							-	-	-	1702	1702
FLTCNV.PRG	-	498	498	498	498	498	498	498	498	498	498

Notes (*) : Monitor Sizes --- Some 4.2 Persci-AMS Monitors were released that were bad; they had a monitor size of 13364 bytes, and a base monitor size of 9050 bytes.
Driver Sizes --- From 4.2 on, all floppy drivers are created out of 200DVR.DVR and have the same size as 200DVR.DVR