

**SDS PROGRAM LIBRARY  
PROGRAM DESCRIPTION**

Page 1 of 10

Model No. 860791-11A00

**TITLE:** DES-1 SYSGEN for NAA system.

**ACCEPTED:** March 16, 1968

**COMPUTER  
CONFIGURATION:** SDS 9300 with 24K memory, a half million  
character RAD, a magnetic tape, a card reader  
and a DES-1 console.

**PURPOSE:** To generate a DES-1 system file on the RAD.

**SUBROUTINES  
USED:** QUBLDR, RAD.

**STORAGE:** 24 K.

**ACCURACY:** N/A

**TIMING:** N/A.

**SOURCE  
LANGUAGE:** Meta-Symbol.

**LOADING  
PROCEDURE:** Use 9300 Universal Loader (Cat. No. 600007).  
to load.

The deck setup for this program should be as follows.

1. 9300 Universal Loader.
2. DES-1 Sysgen (binary deck).
3. Master Exec. (binary deck).
4. Runtime Exec. (binary deck).
5. Update (binary deck).

6. Compile (binary deck).
7. Sublod (binary deck).
8. DES-1 Library Subroutines (19 binary decks) in the following order:

SIN/COS	
SQRT	One card with every
ATAN	bit in columns 1 and 2
INT1	punched (-1) must be
INT2	placed before each of
INT3	the following subroutines:
INT4	
RKG	
AM	SIN/COS
LOGE/LOG10	LOGE/LOG10
EXPE/EXP10	EXPE/EXP10
ASIN/ACOS	ASIN/ACOS
FUN 1	AMC
FUN 2	
FUN 3	
MAX	
MIN	
GAUSS	
AMC	

9. User Library Subroutines (binary deck)
10. EOF card (punch (0, 1, 2, 3, 6, 7, 8, 9) in column 1). (Encoded deck to generate all binary decks are included except the 9300 Universal Loader).

Use loading procedure described in 9300 Universal Loader for loading from cards.

Sense Switch 4 must be set for card input.

USE:	Halts	Location	Instr. Reg.	
		014034	37614546	System file overflow. (Too many user library subroutines).
		014052	01000001	Card reader error (no recovery).
		014112	01614245	Card checksum error (no recovery).
		014155	01000002	Library dictionary overflow (too many external definitions in user library subroutines).
		014173	00302022	Illegal EOF (no recovery).
		014177	01000003	End of successful SYSGEN.

At the end of a successful SYSGEN, the DES-1 BOOTSTRAP card may be used to begin DES-1 operation (as described in DES-1 Reference Manual).

METHOD:

RAD layout for System file SYSRAD.

SYSRAD		= 0000 <sub>8</sub> .
band	sector	
00	00	Master Exec.
	:	
	20	Run Time Exec.
00	21	
	:	
	40	Update
00	41	
	:	
	46	Compile
00	47	
	:	
01	35	Sublod
01	36	
	:	
	52	Subroutine Library Dictionary
01	53	
	:	
	56	DES-1 Library Subroutines
01	57	
	:	
02	51	User Library Subroutines
02	52	
	:	
	:	
17	77	

OBJFILE		= 2000 <sub>8</sub> .
20	00	Object Program
	:	
37	77	

METHOD: Cont.

RAD addresses 2000<sub>8</sub> to 3777<sub>8</sub> are reserved for the object program file<sub>8</sub> (OBJFILE). This same file is used as a scratch file by UPDATE.

Magnetic tape unit 1 is now used only for binary memory dumps and object file dumps.

## RAD DICTIONARY

Word # Address

1	0157	SIN/COS
2	0000	- - - -
3	0161	SQRT
4	0163	ATAN
5	0167	INT 1
6	0171	INT 2
7	0173	INT 3
8	0175	INT 4
9	0177	RKG
10	0203	AM
11	0207	LOGE/LOG10
12	0000	- - - -
13	0211	EXPE/EXP10
14	0000	- - - -
15	0213	ASIN/ACOS
16	0000	- - - -
17	0217	FUN 1
18	0221	FUN 2
19	0223	FUN 3
20	0227	MAX
21	0231	MIN
22	0233	GAUSS
23	0235	AMC
24	0000	- - - -
25	User Name	User's Library
26		Subroutines
27	0252	
28	User Names and RAD Addresses	
256	0000	











