

SYSTEMS ENGINEERING LABORATORIES PROGRAM LIBRARY

PROGRAM DESCRIPTION

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Catalog Number 300012B

IDENTIFICATION: SEL 810A/B BCD to ASCII

AUTHOR: Systems Engineering Laboratories

ACCEPTED: January 22, 1969

PURPOSE: To translate a buffer of data from BCD to ASCII.

COMPUTER CONFIGURATION: SEL 810A/B

SUBROUTINES REQUIRED: None

STORAGE: 105 octal locations.

TIMING: Approximately 35 + 35 cycles per location.

USE: Calling sequence is:

LAA	X
CALL	BCDASC
DAC	BUF
DATA	N

Where BUFF is address of first location of buffer.
N is the number of words in buffer.

For values of X:

- a. If Bit 0 of the A register is zero, the BCD character is obtained from Bits 0-5 of the buffer word; otherwise, the BCD character is obtained from Bits 10-15.
- b. If Bit 1 of the A register is zero, the ASCII character will be stored in Bits 8-15 of the buffer word; otherwise, it will be stored in Bits 0-7.

METHOD: N/A

0002	00000	00000000	*		
0003	00000	00000000	*	TRANSLATE BUFFER FROM BCD TO FULL ASCII	
0004	00000	00000000	*	IF BIT 0 OF REG ZERO PICK DATA FROM BITS 0-5 ELSE	
0005	00000	00000000	*	PICK DATA FROM BITS 110 TO 15	
0006	00000	00000000	*	IF BIT 1 OF A REG ZERO STORE DATA IN BITS 8 TO 15 ELSE IN 0-7	
0007	00000	00000000	*		
0008	00000	00000000	*	CALLING SEQUENCE	
0009	00000	00000000	*	LAA FLAG	A POS LEAVES IN LH 8 BITS
0010	00000	00000000	*	CALL BCDA	A NEG LEAVES IN RH 8 BITS
0011	00000	00000000	*	DAC BUF	
0012	00000	00000000	*	DATA N	
0013	00000	00000000	*		
0014	00000	00000000	*	REL	
0015	00000	50000000	*	NAME BCDASC, BCDA	
0016	00000	00000000	*	BCDA *** **	
0017	00001	02100043	*	LBA RS10	
0018	00002	00000024	*	SAP	OUR WE TO STORE ASCII IN RH 8 BITS
0019	00003	02100045	*	LBA NOP	
0020	00004	04100022	*	STB SHFT	
0021	00005	00000116	*	LSL 1	
0022	00006	02100044	*	LBA RSL8	
0023	00007	00000024	*	SAP	
0024	00010	02100045	*	LBA NOP	
0025	00011	04100033	*	STB SHF	
0026	00012	01300000	*	LAA* BCDA	BUFFER
0027	00013	03100041	*	STA IND	FORM INDIRECT WORD
0028	00014	14100000	*	IMS BCDA	
0029	00015	01300000	*	LAA* BCDA	COUNT OF BUFFER LENGTH
0030	00016	00000002	*	NEG	
0031	00017	03100042	*	STA CNT	
0032	00020	14100000	*	IMS BCDA	FORM EXIT ADDRESS
0033	00021	01300041	*	AGN LAA* IND	
0034	00022	00000000	*	SHFT *** **	RSL 8
0035	00023	00000006	*	IAB	
0036	00024	00000003	*	CLA	
0037	00025	00001713	*	FLL 15	DIVIDE CODE BY TWO
0038	00026	00000006	*	IAB	

0039 00027 02500046 LBA
0040 00030 00000024 SAP
0041 00031 00001013 FLL 8
0042 00032 00000004 TBA
0043 00033 00000000 SHF *** **
0044 00034 03300041 STA IND
0045 00035 14100041 IMS IND
0046 00036 14100042 IMS CNT
0047 00037 11100021 BRU AGN
0048 00040 11300000 BRU BCDA
0049 00041 00000001 IND BSS 1
0050 00042 00000001 CNT BSS 1
0051 00043 00001215 RS10 RSL 10
0052 00044 00001015 RSL8 RSL 8
0053 00045 00000033 N8P N8P

INDIRECT BUFFER
COUNT OF NO OF WORDS LEFT IN BUFFER

Address	Field	Value	BCD	ASCII	MDL	Date	Char
0054	*				MDL	1/10/69	*B
0055	*				MDL	1/10/69	*B
0056	*				MDL	1/10/69	*B
0057	TABL DATA	*130261	00,01	260,261	MDL	1/10/69	*B
0058	DATA	*131263	02,03	262,263	MDL	1/10/69	*B
0059	DATA	*132265	04,05	264,265	MDL	1/10/69	*B
0060	DATA	*133267	06,07	266,267	MDL	1/10/69	*B
0061	DATA	*134271	10,11	270,271	MDL	1/10/69	*B
0062	DATA	*130275	12,13	260,275	MDL	1/10/69	*B
0063	DATA	*123672	14,15	247,272	MDL	1/10/69	*B
0064	DATA	*137300	16,17	276,300	MDL	1/10/69	*B
0065	DATA	*120257	20,21	240,257	MDL	1/10/69	*B
0066	DATA	*151724	22,23	323,324	MDL	1/10/69	*B
0067	DATA	*152726	24,25	325,326	MDL	1/10/69	*B
0068	DATA	*153730	26,27	327,330	MDL	1/10/69	*B
0069	DATA	*154732	30,31	331,332	MDL	1/10/69	*B
0070	DATA	*157254	32,33	336,254	MDL	1/10/69	*B
0071	DATA	*124243	34,35	250,243	MDL	1/10/69	*B
0072	DATA	*156242	36,37	334,242	MDL	1/10/69	*B
0073	DATA	*126712	40,41	255,312	MDL	1/10/69	*B
0074	DATA	*145714	42,43	313,314	MDL	1/10/69	*B
0075	DATA	*146716	44,45	315,316	MDL	1/10/69	*B
0076	DATA	*147720	46,47	317,320	MDL	1/10/69	*B

	PAGE	0003	810A/B	BCD TO FULL	ASCII	CAT.	NA.	30-0128	
0077	00072	00150722	DATA '150722	50,51	321,322	MDL	1/10/69	*8	
0078	00073	00120644	DATA '120644	52,53	241,244	MDL	1/10/69	*8	
0079	00074	00125335	DATA '125335	54,55	252,335	MDL	1/10/69	*8	
0080	00075	00135700	DATA '135700	56,57	273,300	MDL	1/10/69	*8	
0081	00076	00125701	DATA '125701	60,61	253,301	MDL	1/10/69	*8	
0082	00077	00141303	DATA '141303	62,63	302,303	MDL	1/10/69	*8	
0083	00100	00142305	DATA '142305	64,65	304,305	MDL	1/10/69	*8	
0084	00101	00143307	DATA '143307	66,67	306,307	MDL	1/10/69	*8	
0085	00102	00144311	DATA '144311	70,71	310,311	MDL	1/10/69	*8	
0086	00103	00137656	DATA '137656	72,73	277,256	MDL	1/10/69	*8	
0087	00104	00124733	DATA '124733	74,75	251,333	MDL	1/10/69	*8	
0088	00105	00136337	DATA '136337	76,77	274,337	MDL	1/10/69	*8	
0089	00106	70400000	END						
ERRORS	0000	00000							