SOFTWARE OPERATING PROCEDURES

BASIC BINARY LOADER-
BASIC BINARY DISC LOADER

PREREQUISITE SOP MODULES:

Front Panel Procedures Module

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BASIC BINARY LOADER (BBL) – BASIC BINARY DISC LOADER (BBDL)

This module consists of an introduction to the BBL and BBDL, a procedure for Examining and Modifying the BBL or BBDL and complete listings of the BBL and BBDL as they reside in memory.

INTRODUCTION

The BBL program resides in the last 64_{10} words of memory. The BBL is protected from examination or accidental modification by the computer LOADER switch. BBL can perform three tasks:

1. Load absolute binary program tapes into memory.

2. Read and compare a binary tape with the contents of memory without loading the tape into memory.

3. Perform a checksum operation on a binary program tape without loading the tape into memory.

The BBDL resides in the last 64_{10} words of memory. It is protected from examination or modification by the computer LOADER switch. The BBDL loads absolute binary program tapes into memory, or loads absolute binary programs from disc into memory.

Each computer is shipped with either the BBL or BBDL (but not both) in core, depending on the user needs and hardware configuration.

PROCEDURE 1
EXAMINING AND MODIFYING THE BBL OR BBDL

Examining

To examine either the BBL or BBDL to insure that it is in core or that it is intact, follow the steps outlined below: (A complete listing of the BBL and BBDL as it resides in core is shown in the BBL AND BBDL LISTING.)

1. Unprotect the BBL or BBDL.

2. Set the address of the desired memory location into the computer.

3. Display the address contents in the computer display registers in the same fashion as any other memory location.

4. Repeat steps 2 and 3 for as many memory locations as desired.

5. Protect the BBL or BBDL.

Modifying

To modify any of the BBL or BBDL instructions in core, follow the steps outlined below:

1. Unprotect the BBL or the BBDL.

2. Set the address of the desired memory location into the computer.

3. Load the modified instruction into the memory location specified in the same manner as any other memory location would be modified.

4. Repeat steps 2 and 3 for each memory location that requires modification.

5. Protect the BBL or BBDL.

BBL AND BBDL LISTINGS

BBL

MEMORY ADDRESS		INSTRUC-TION	MEMORY ADDRESS		INSTRUC-TION
0x7700	=	107700	0x7740	=	102000
0x7701	=	063770	0x7741	=	037775
0x7702	=	106501	0x7742	=	037774
0x7703	=	004010	0x7743	=	027730
0x7704	=	002400	0x7744	=	017753
0x7705	=	006020	0x7745	=	054000
0x7706	=	063771	0x7746	=	027711
0x7707	=	073736	0x7747	=	102011
0x7710	=	006401	0x7750	=	027700
0x7711	=	067773	0x7751	=	102055
0x7712	=	006006	0x7752	=	027700
0x7713	=	027717	0x7753	=	000000
0x7714	=	107700	0x7754	=	017762
0x7715	=	102077	0x7755	=	001727
0x7716	=	027700	0x7756	=	073776
0x7717	=	017762	0x7757	=	017762
0x7720	=	002003	0x7760	=	033776
0x7721	=	027712	0x7761	=	127753
0x7722	=	003104	0x7762	=	000000
0x7723	=	073774	0x7763	=	1037cc
0x7724	=	017762	0x7764	=	1023cc
0x7725	=	017753	0x7765	=	027764
0x7726	=	070001	0x7766	=	1025cc
0x7727	=	073775	0x7767	=	127762
0x7730	=	063775	0x7770	=	173775
0x7731	=	043772	0x7771	=	153775
0x7732	=	002040	0x7772	=	1n0100
0x7733	=	027751	0x7773	=	177765
0x7734	=	017753	0x7774	=	000000
0x7735	=	044000	0x7775	=	000000
0x7736	=	000000	0x7776	=	000000
0x7737	=	002101	0x7777	=	000000

x = 0 for 4K memory, 1 for 8K, 2 for 12K, 3 for 16K, 5 for 24K, 7 for 32K.

cc = punched tape reader or teleprinter address

n = 7 for 4K memory, 6 for 8K, 5 for 12K, 4 for 16K, 2 for 24K, 0 for 32K.

BASIC BINARY LOADER (BBL) - BASIC BINARY DISC LOADER (BBDL)

BBDL

MEMORY ADDRESS		INSTRUC-TION	MEMORY ADDRESS		INSTRUC-TION	
0x7700	=	107700	0x7740	=	102055	x = 0 for 4K memory, 1 for 8K,
0x7701	=	002401	0x7741	=	027700	2 for 12K, 3 for 16K,
0x7702	=	063726	0x7742	=	000000	5 for 24K, 7 for 32K.
0x7703	=	006700	0x7743	=	006600	
0x7704	=	017742	0x7744	=	1037cc	cc = punched tape reader
0x7705	=	007306	0x7745	=	1023cc	or teleprinter address
0x7706	=	027713	0x7746	=	027745	
0x7707	=	002006	0x7747	=	1074cc	
0x7710	=	027703	0x7750	=	002041	
0x7711	=	102077	0x7751	=	127742	
0x7712	=	027700	0x7752	=	005767	
0x7713	=	077754	0x7753	=	027744	
0x7714	=	017742	0x7754	=	000000	
0x7715	=	017742	0x7755	=	1z0100	z = 7 for 4K memory, 6 for 8K,
0x7716	=	074000	0x7756	=	0200nn	5 for 12K, 4 for 16K,
0x7717	=	077757	0x7757	=	000000	2 for 24K, 0 for 32K.
0x7720	=	067757	0x7760	=	107700	nn = first disc channel
0x7721	=	047755	0x7761	=	063756	
0x7722	=	002040	0x7762	=	102606	
0x7723	=	027740	0x7763	=	002700	
0x7724	=	017742	0x7764	=	1027qq	qq = second disc channel
0x7725	=	040001	0x7765	=	001500	
0x7726	=	177757	0x7766	=	102602	
0x7727	=	037757	0x7767	=	063777	
0x7730	=	000040	0x7770	=	102702	
0x7731	=	037754	0x7771	=	102602	
0x7732	=	027720	0x7772	=	103706	
0x7733	=	017742	0x7773	=	1027nn	
0x7734	=	054000	0x7774	=	067776	
0x7735	=	027702	0x7775	=	074077	
0x7736	=	102011	0x7776	=	024077	
0x7737	=	027700	0x7777	=	177700	