

9LD 1A AND 9LD02A

EXPLANATION OF OPERATION

THIS LOADER WAS WRITTEN TO USE AS LITTLE OF THE CIRCUITRY AS POSSIBLE AND STILL COMPARE THE CHECK SUMS.

THE CONTROL WORD FOR THE LOADER USES ONLY S TRIGGER, AS DOES THE LOAD CARD BUTTON, THEREFORE, IF THE BUTTON IS OPERATING CORRECTLY THE PROGRAM SHOULD LOAD.

NO INDEXING IS USED THROUGHOUT THE LOADER. THE MAIN FRAME INSTRUCTIONS USED ARE LISTED BELOW.

CLA
TZE
STO

STA
CAL
ACL

SLW
SUB
TMI

THESE INSTRUCTIONS MAY BE ELIMINATED BY IGNORING A CHECK SUM COMPARISON, AND TRANSFERRING MANUALLY. THE LOADER WILL THEN EXECUTE ONLY THREE INSTRUCTIONS, RCDA, RCHA AND TCOA. TO DO THIS PLACE A TRA TO 0001 AT LOCATION 0004, FOR 9LD01 OR TRA TO 77751 AT LOCATION 77754 FOR 9LD02. IF A MANUAL TRANSFER IS UNDESIRABLE PLACE A TRA TO 1 AT LOCATION 0006, FOR 9LD01 OR TRA TO 77751 AT LOCATION 77756, FOR 9LD02

THE CONSTANT AT LOCATION 0023 OR 77773, WHEN SUBTRACTED FROM THE 9L WORD-LOCATION 0026 OR 77776-WILL DECREASE THE DECREMENT-WORD COUNT-BY 1 AND INCREASE THE ADDRESS-INITIAL ADDRESS-BY 1. AFTER THE WORD COUNT IN THE DECREMENT OF 9L HAS BEEN REDUCED TO 0, ALL WORDS WILL HAVE BEEN READ INTO THE CORRECT LOCATIONS, AND THE NEXT SUBTRACTION WILL CHANGE THE ACCUMULATOR TO MINUS. THE CHECK SUMS WILL THEN BE COMPARED AT LOCATIONS 0017 - 0021 OR 77767 - 77771.

LOCATIONS 0006 - 0016 OR 77756 - 77766 CONSTRUCT THE CHECK SUM.

LOCATIONS 0026 - 0027 OR 77776 - 77777 HOLD THE 9L AND 9R WORDS OF EACH CARD. 9L DECREMENT CONTAINING THE NUMBER OF WORDS ON THE CARD AND 9L ADDRESS CONTAINING THE INITIAL ADDRESS. 9R CONTAINS THE CHECK SUM OF THE CARD BEING READ.

THIS LOADER USES A SPECIAL TRA CARD WHICH MAY NOT BE USED FOR ANY OTHER LOADER, NOR WILL THE LOADER READ ANY OTHER TRA CARD.

9L OF THE TRA CARD IS BLANK, AND 9R CONTAINS A PLUS TRA TO THE STARTING ADDRESS OF THE PROGRAM BEING LOADED.

*				9LD01A	
00000	0000	25 0	00003	TEMP	I0CD 3,0,21
					THIS LOCATION IS USED FOR CONTROL TO READ THE REMAINDER OF THE LOADER, AND ALSO AS STORAGE FOR THE INCOMPLETE CHECK SUM
00001	0762	00 0	01321	RCDA	
00002	0540	00 0	00025	RCHA B	CONTROL HAS 5 TGR ON AND WILL READ 9L AND 9R WORDS INTO B&1 AND B&2.
00003	0060	00 0	00003	TCOA *	
00004	0500	00 0	00026	CLA B&1	9L WORD-WORD COUNT ON CARD AND INITIAL ADDRESS, ALSO USED AS CONTROL WORD TO READ REMAINDER OF CARD AFTER CONTROL AT B HAS BEEN EXECUTED.
00005	0100	00 0	00027	TZE B&2	IF ZERO-EITHER TRA CARD OR BLANK CARD.
00006	0601	00 0	00000	STO TEMP	IF NOT ZERO-SAVE. 9L TO BE ADDED INTO CHECK SUM.
00007	0621	00 0	00014	STA *85	ADDRESS OF 8L WORD IN STORAGE
00010	0402	00 0	00024	SUB CONST	L 777777. SUBTRACTING THIS CONSTANT WILL INCREASE THE ADDRESS AND DECREASE THE WORD NO.
00011	-0120	00 0	00020	TMI CONST-4	WHEN ACC BECOMES MINUS THE LAST WORD HAS BEEN ADDED INTO CHECK SUM.
00012	0601	00 0	00026	STO B&1	IF NOT MINUS-SAVE.
00013	-0500	00 0	00000	CAL TEMP	INCOMPLETE CHECK SUM.
00014	0361	00 0	00000	ACL	8L ADDRESS-INITIALLY.
00015	0602	00 0	00000	SLW TEMP	SAVE INCOMPLETE SUM.
00016	0500	00 0	00026	CLA B&1	
00017	0020	00 0	00007	TRA *-8	RETURN TO STORE ADDRESS.
00020	0500	00 0	00000	CLA TEMP	COMPLETE CHECK SUM.
00021	0402	00 0	00027	SUB B&2	B&2 WILL HOLD CORRECT CHECK SUM FROM CARD, UNLESS A TRA CARD. IF A TRA CARD B&2 WILL HOLD THE TRANSFER.
00022	0100	00 0	00001	TZE 1	IF ZERO BACK TO RCDA
00023	0000	00 0	00001	HTR 1	IF NOT ZERO-HALT.
00024	80000000	777777		CONST OCT 777777	
00025	-0000	02 0	00026	B	I0CP B&1,0,2
					CONTROL TO READ 9L AND 9R OF EACH CARD INTO B&1 AND B&2 RESPECTIVELY

00026 80000000000000

OCT 0

LOCATION FOR 9L OF EACH
CARD WHICH WILL BE USED
AS A CONTROL WORD AFTER
EXECUTION OF WORD AT B,
ALSO AS TEMPORARY STORAGE
FOR CONSECUTIVE ADDRESSES
AND WORD COUNT AFTER
SUBTRACTING CONST.

00027 80000000000000

OCT 0

OR WORD OF EACH CARD WILL
READ INTO THIS LOCATION, AND
WILL CONTAIN THE CHECK
SUM FROM EACH CARD, UNLESS
A TRA CARD. IN THIS CASE
9R WILL CONTAIN A STRAIGHT
TRANSFER TO THE START
OF THE PROGRAM.

00000

END

9LD02A

77745 0000 25 0 77750 A
77746 0060 00 0 00001
77747 0020 00 0 77750
77750 0762 00 0 01321
77751 0540 00 0 77774

77752 0060 00 0 77752
77753 0500 00 0 77775

77754 0100 00 0 77776

77755 0601 00 0 77777

77756 0621 00 0 77763
77757 0402 00 0 77773

77760 -0120 00 0 77767

77761 0601 00 0 77775
77762 -0500 00 0 77777
77763 0361 00 0 00000
77764 0602 00 0 77777
77765 0500 00 0 77775
77766 0020 00 0 77756

77767 0500 00 0 77777
77770 0402 00 0 77776

77771 0100 00 0 77750
77772 0000 00 0 77750
77773 800000077777
77774 -0000 02 0 77775

ORG 32741
IOCD A&3,0,21
TCOA 1
TRA A&3
RCOA
RCHA B

TCOA *
CLA B&1

TZE B&2

STO TEMP

STA *85
SUB CONST

TMI CONST-4

STO B&1
CAL TEMP
ACL
SLW TEMP
CLA B&1
TRA *-8

CLA TEMP
SUB B&2

TZE A&3
HTR A&3
CONST OCT 77777
B IOCP B&1,0,2

CONTROL TO READ REMAINDER
OF LOADER.
DELAY TILL COMPLETE
LOADER IS IN
TRA TO UPPER SECTION
OF LOADER.

CONTROL WORD HAS 5 TGR ON
AND WILL READ 9L AND 9R
OF EACH CARD INTO B&1
AND B&2 RESPECTIVELY.
WAIT FOR COMPLETE CARD
9L WORD WHICH WILL
CONTAIN THE INITIAL ADDRESS
OF THE CARD AND THE
NUMBER OF WORDS ON THE CARD

IF ZERO-EITHER TRA CARD
OR BLANK CARD.

IF NOT ZERO-SAVE. 9L TO BE
ADDED INTO CHECK SUM

ADDRESS OF 8L WORD IN
STORAGE
L 777777. SUBTRACTING
THIS CONSTANT WILL
INCREASE THE ADDRESS
AND DECREASE THE WORD NO.

WHEN ACC BECOMES MINUS
THE LAST WORD HAS BEEN
ADDED INTO CHECK SUM

IF NOT MINUS-SAVE.
INCOMPLETE CHECK SUM
8L ADDRESS-INITIALLY
SAVE INCOMPLETE SUM.

RETURN TO STORE ADDRESS

COMPLETE CHECK SUM
B&2 WILL HOLD CORRECT SUM
SUM FROM CARD, UNLESS A
TRA CARD. IF A TRA CARD
B&2 WILL HOLD THE TRANSFER.
IF ZERO BACK TO RCOA
IF NOT ZERO-HALT

CONTROL TO READ 9L AND
9R OF EACH CARD INTO
B&1 AND B&2 RESPECTIVELY

5

77775 &0000000000000

OCT 0

LOCATION FOR 9L OF EACH
CARD WHICH WILL BE USED
AS A CONTROL WORD AFTER
EXECUTION OF WORD AT B,
ALSO AS TEMPORARY STORAGE
FOR CONSECUTIVE ADDRESSES
AND WORD COUNT AFTER
SUBTRACTING CONST.

77776 &0000000000000

OCT 0

9R WORD OF EACH CARD WILL
READ INTO THIS LOCATION, AND
WILL CONTAIN THE CHECK
SUM FROM EACH CARD, UNLESS
A TRA CARD. IN THIS CASE
9R WILL CONTAIN A STRAIGHT
TRANSFER TO THE START
OF THE PROGRAM

77777 &0000000000000

TEMP OCT 0

TEMPORARY STORAGE FOR
IN COMPLETE CHECK SUM.

00000

END