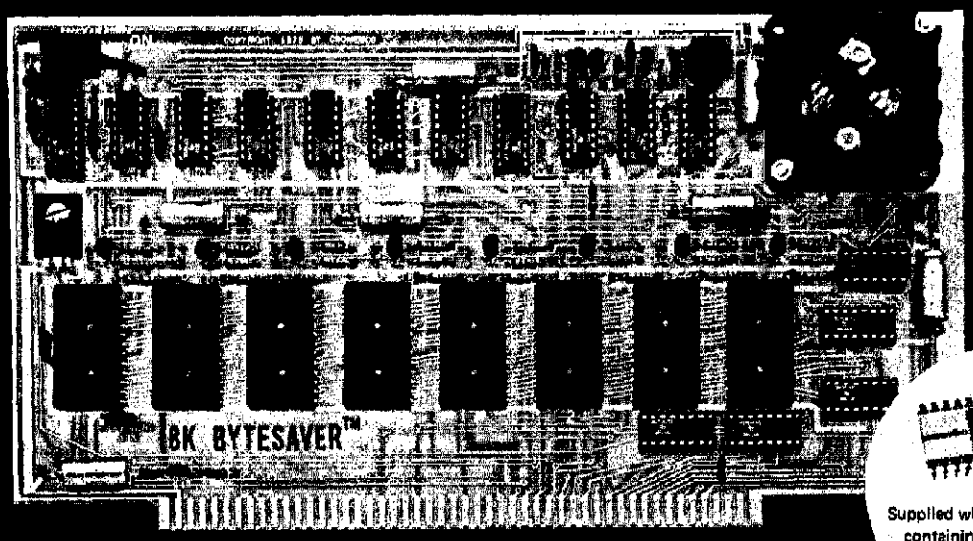
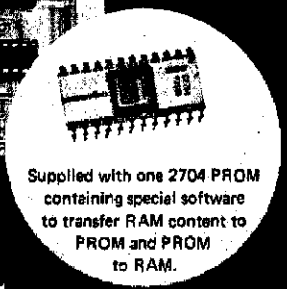




Supplied with one 2704 PROM containing special software to transfer RAM content to PROM and PROM to RAM.

How to save your programs -- and have a PROM programmer, too

Cromemco's popular BYTESAVER™ memory board gives you two of the most-wanted features in microcomputer work:

(1) a simple, easy way to store your computer programs in programmable read only memory (PROM).

(2) a PROM memory board with the capacity for a full 8K bytes of PROM memory storage.

ECONOMICAL

The BYTESAVER™ is both a place and a way to store programs economically. It transfers programs from the non-permanent computer RAM memory to the permanent PROM memory in the BYTESAVER™. Once your program is in the BYTESAVER™, it's protected from power turn-offs, intentional or accidental. The PROMs used with BYTESAVER™ are UV erasable and can be used again and again.

The BYTESAVER™ itself plugs directly into your Altair 8800 or IMSAI 8080.

PROM PROGRAMMER

Many people are surprised to learn that in the BYTESAVER™ you also have your own PROM programmer. But it's so. And it saves you up to hundreds of dollars, since you no longer need to buy one separately.

The built-in programmer is designed for the 2704 and 2708 PROMs. The 2708 holds 1K bytes, four times the capacity of the well-known older 1702 PROM (yet cost-per-byte is about the same). The 2708 is also fast – it lets your computer work at its speed without a wait state. And it's low-powered. With 2708's in all 8 sockets, the BYTESAVER™ is still within MITS bus specifications, drawing only about 500 mA from the +8V bus. A complement of 2708 PROMs gives the BYTESAVER™ its full 8K capacity.

HOLDS LARGE PROGRAMS

The BYTESAVER's™ 8K-byte capacity lets you store the larger and more powerful programs. 8K BASIC, for example, easily fits in the BYTESAVER™ capacity of 8 PROMs. One 1K PROM will hold many games such as Cromemco's DAZZLER-LIFE or DAZZLE-WRITER.

NO KEYBOARD NEEDED

The BYTESAVER™ comes with special software programmed into a 2704 PROM. This software controls transfer of the computer RAM content to the BYTESAVER™ PROM.

So you are ready to go. You don't even need a keyboard. Just set the computer sense switches as instructed in the BYTESAVER™ documentation.

Transfer of memory content to PROM ("burning") takes less than a minute. The BYTESAVER™ software controls computer lights to verify complete and accurate transfer of memory content.

The software also programs any of the other 7 PROM positions in the BYTESAVER™ as readily as the first.

And when used to transfer information from the BYTESAVER™ PROMs to RAM, the special design of the software allows loading a large program such as 8K BASIC in one second.

AVAILABLE NOW – STORE/MAIL

The BYTESAVER™ is sold at computer stores from coast to coast. Or order by mail from Cromemco. Cromemco ships promptly. You can have the BYTESAVER™ in your computer within a week after your order is received.

BYTESAVER™ kit $195
(Model 8KBS-K)

BYTESAVER™ assembled $295
(Model 8KBS-W)

Shipped prepaid if fully paid with order.
California users add 6% sales tax.
Mastercharge and BankAmericard accepted with signed order.

Cromemco
Specialists in computer peripherals
One First St., Los Altos, CA 94022 • (415) 941-2967

BYTESAVER

ASSEMBLY MANUAL

Cromemco
Specialists in computer peripherals
One First St., Los Altos, CA 94022 • (415) 941-2967

BYTESAVER ASSEMBLY INSTRUCTIONS

The Cromemco Bytesaver™ kit can be assembled in about one evening. All components are mounted on the component side of the pc board (the side with the printed legend) and soldered on the opposite side. Be sure to use high-quality rosin core solder for the assembly and a fine-tipped low wattage soldering iron.

( ) Solder in position the 10 14-pin IC sockets, the 6 16-pin IC sockets, and 8 24-pin IC sockets.

( ) Solder in position the ¼ watt resistors:

R1	47K	yellow-violet-orange
R2	10K	brown-black-orange
R3	180	brown-gray-brown
R4	1K	brown-black-red
R5	9.1K	white-brown-red
R6	1.5K	brown-green-red
R7	1K	brown-black-red
R8	47	yellow-violet-black
R9	1K	brown-black-red
R10	10	brown-black-black
R11	5.6K	green-blue-red
R12	5.6K	green-blue-red
R13	10K	brown-black-orange
R14	5.6K	green-blue-red
R15	180	brown-gray-brown
R16-R39	18K	brown-gray-orange

( ) Next install the 1N914 diodes. NOTE we recommend that no diode be installed in the diode position just below transistor Q0. When using the Bytesaver we recommend that the PROM containing the Bytemover software be inserted in PROM position zero. By not installing this diode there will be no chance of accidentally programming this PROM.

When installing the diodes be careful to orient them properly, noting the position of the cathode (banded) end. Due to the close spacing of the holes in the pc board, the diodes should be mounted on end.

( ) Now install the 23 capacitors as shown on the pc board. Be careful that the electrolytic capacitors are oriented with the positive (+) end as shown.

( ) Now solder the transistors in place taking care to orient them properly. Note that Q8 and Q9 are 2N3906 transistors, and Q10 is a type MPS6560. All other transistors are type 2N3904.

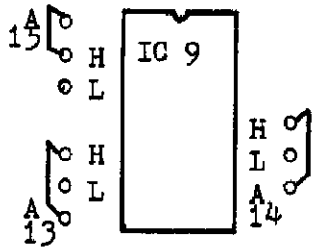
( ) Install the pc board switch, SW1, in the upper left corner of the board.

( ) Install the Cromemco high-speed pulse transformer, model XT8K, in position T1. Note that the leads are asymmetrically positioned so that there is only one correct orientation of the transformer.

( ) Now install IC14, the positive twelve volt regulator IC, using a 6-32 X ¼ screw and nut.

( ) Next install the heatsink in the upper right corner of the board just starting the nuts on the 6-32 x 3/8 screws. Install IC12 and IC 13 being sure to place the insulating washer between IC13 and the heat sink. The nylon screw must be used to hold IC13 in place. (The insulating washer supplied may have to be trimmed with a pair of scissors to clear the protrusions of the heatsink.) Tighten the nuts on the screws in the heatsink assembly only after all screws have been inserted. Take care that the leads on the voltage regulators do not come in contact with sides of the openings in the heatsink.

( ) Next install three jumper wires to select where the Bytesaver is to reside in memory space. Each of the three high order address lines (A15, A14, and A13) may be tied either to the corresponding "H" or "L" terminal. For the Bytesaver to reside in the top 8K of memory space, for example, the three jumper wires would be installed as shown:



( ) Now install the ICs in their sockets being careful to orient pin one of each IC as shown by the small white dot on the pc board at each IC position. Install a PROM containing Bytemover software in PROM position 0.

The assembly of your Bytesaver is now complete. Detailed operating instructions are given in the Bytemover software manual.

PROM AVAILABILITY: Additional 2704 and 2708 PROMs are available from Cromemco. The 2704 is $50 each, and the 2708 is $75. Our PROMs are factory fresh, full speed devices that we purchase directly form the manufacturer.

WAIT STATE: Should you wish to use low speed 2704 or 2708 PROMs in your Bytesaver (with access times greater than 450 ns) there is a provision for a wait state. Simply insert a jumper wire, as shown, between IC10 and IC11. No jumper wire need be inserted here when using full-speed PROMs.

REPAIR: If for any reason you need service on your Bytesaver, you may return it to Cromemco along with a check for $35. The $35 covers the cost of repair and return postage. We reserve the right to not repair any Bytesaver that we judge to be unserviceable.

BYTESAVER PARTS LIST

C1 - C8	0.1 uF
C9 - C15	10uF 50v.
C16	.005
C17	680 pF
C18	.01 uF
C19	680 pF
C20	220 pF
C21 - C23	0.1 uF
D1 - D19	1N914
Q0 - Q7	2N3904
Q8, Q9	2N3906
Q10	MPS6560
Q11, Q12	2N3904
R1	47K
R2	10K
R3	180
R4	1K
R5	9.1K
R6	1.5K
R7	1K
R8	47
R9	1K
R10	10
R11	5.6K
R12	5.6K
R13	10K
R14	5.6K
R15	180
R16-R39	18K
SW1	pc board switch
T1	Cromemco XT8K high-speed pulse transformer.

Sockets

10	14 pin
6	16 pin
8	24 pin

IC1	74123
IC2	7474
IC3	7402
IC4	7406
IC5	7406
IC6	7402
IC7	7406
IC8	7442
IC9	74LS04
IC10	74LS10
IC11	74LS04
IC12	340T-5.0
IC13	320T-5.0
IC14	~~340T-12~~ 7812
IC15	7432
IC16	74367
IC17	74367
IC18	74367
IC19	74367

Hardware

3	#6 X 3/8 screws
1	#6 X 1/4 screw
1	#6 X 3/8 nylon screw
5	#6 nuts
1	Heatsink

Documentation

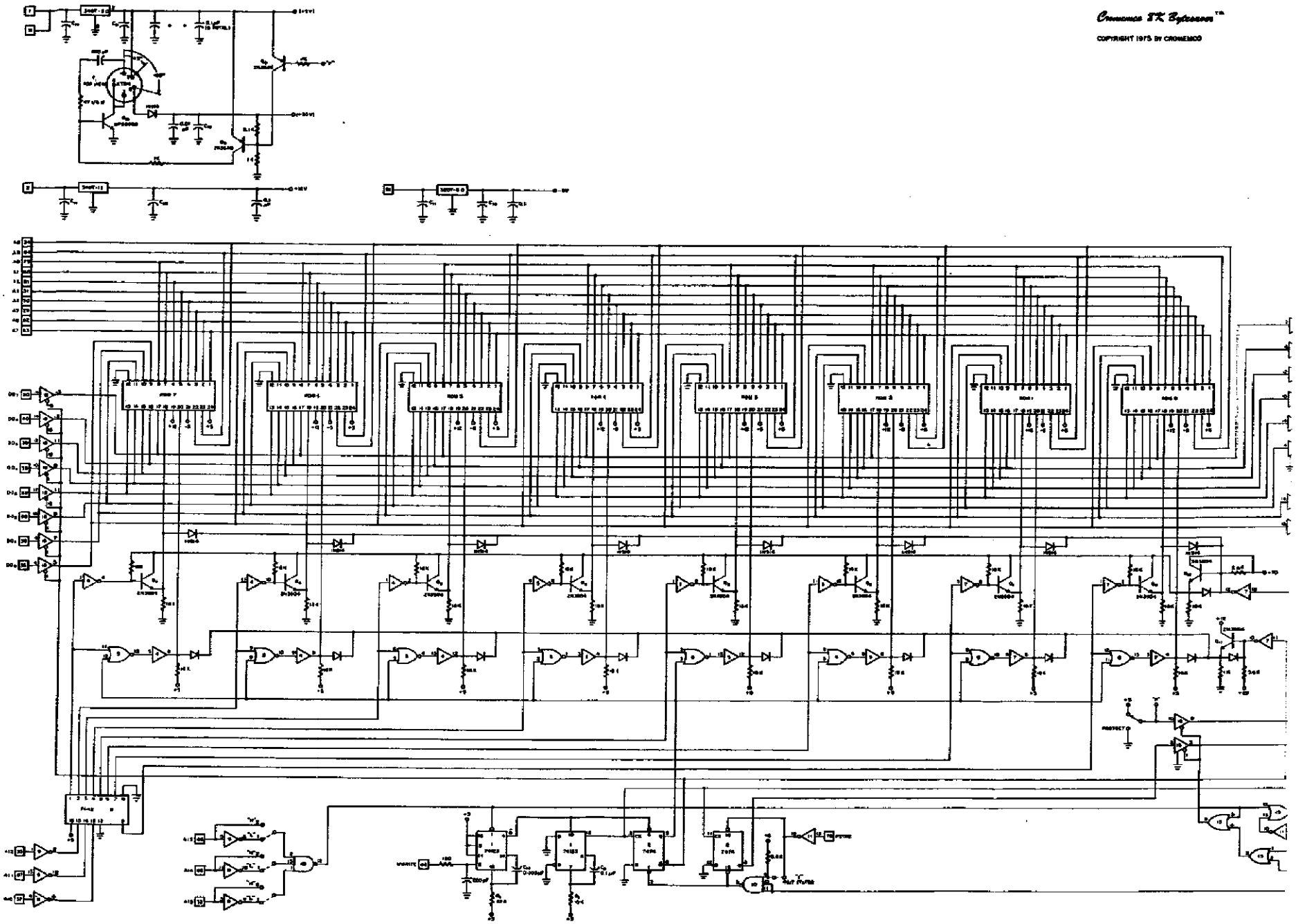
Assembly manual
Bytemover manual
Schematic diagram

Other

Insulating washer to be used under IC13

Bytesaver pc board

Cromemco 8K Bytesaver™



BYTEMOVER

SOFTWARE SUPPLIED WITH THE BYTESAVER

CROMEMCO
ONE FIRST STREET
LOS ALTOS, CALIFORNIA
94022

BYTEMOVER 3.0 OPERATING INSTRUCTIONS

THE CROMEMCO BYTESAVER™ is supplied with BYTEMOVER™ software. This software is pre-programmed into the 2704 PROM that comes with the BYTESAVER.

The 2704 PROM containing the Bytemover software is normally inserted into PROM location 0 on the Bytesaver board. The Bytemover software can be used to program a PROM in any of the PROM locations on the Bytesaver board. The Bytemover software can also be used to transfer programs from PROM to RAM. The operation of the Bytemover software is controlled by the setting of the front panel sense switches on the Altair computer. To use the Bytemover software there must be a RAM board in the Altair beginning at location zero in memory; further, this RAM board must be unprotected for proper execution of the Bytemover software.

STEP-BY-STEP INSTRUCTIONS

1) Before using the Bytesaver you must install three jumper wires to set the location of the Bytesaver in memory space. This is shown in Figure 1. The assembled Bytesaver comes with A13, A14, and A15 each tied to the corresponding "Hi" pad to position the board at the very top of memory. In the following instructions it is assumed that this is the jumper connection used.

2) With the Altair 8800 power turned off, plug the Bytesaver board into the computer.

3) Be sure that the program power on the Bytesaver is turned OFF (program power switch in the down position.)

4) Turn on the Altair. Raise the reset switch, then raise the stop switch, and then raise the reset switch once again to initialize the Altair.

5) Raise address switches A15, A14, and A13. All other address switches should be down.

6) Raise the examine switch. You are now examining the contents of the first byte of PROM in PROM location zero of the Bytesaver memory board (memory location 340 000). If the PROM supplied with your Bytesaver is in this PROM location the data lights will read "061", the first byte of the Bytemover program.

EXAMPLE: Transfer the Bytemover program from PROM to RAM beginning at location zero in RAM.

1) Raise the reset switch.

2) Depress the unprotect switch (on the Altair front panel).

3) Raise A15, A14, and A13. Raise the examine switch. The data lights should read "061" octal.

4) Now set the sense switches for the task to be done, refering to Fig. 2.

A15 - Down to transfer from PROM to RAM
A14 - Down for the transfer of 1K bytes.
A13 - Down
A12 - Down
A11 - Down
All down since we are transferring from the same PROM that contains BYTEMOVER (PROM 0)

A10 - Down
A9 - Down
A8 - Down
All down for storage to begin at location zero in RAM.

5) Push the run switch. In less than one second the contents of PROM will be transferred to RAM. (Of course the contents of the PROM are unaffected by this operation.

6) Raise the STOP switch.

7) Raise the reset switch. Note that the data lights read "061".

EXAMPLE: Program a 2708 PROM inserted in PROM location 1. This PROM is to be programmed with the contents of the first 1K bytes of RAM beginning at location zero in memory. The Bytemover software is still in the PROM in PROM location zero on the Bytesaver board.

1) Raise the reset switch.

2) Depress the unprotect switch (on the Altair front panel)

3) Raise A15, A14, and A13. Raise the examine switch. The data lights should read "061" octal.

4) Raise the protect switch on the Bytesaver board (i.e. program power switch to the ON position). The protect light on the Altair front panel should go off when this switch is raised.

5) Now set the sense switches for the task to be done:

A15 - Up to program a PROM
A14 - Down (always down for PROM programming)
A13 - Down
A12 - Down
A11 - Up
To select the PROM 1K higher in memory than the PROM that contains BYTEMOVER

A10 - Down
A9 - Down
A8 - Down
All down for transfer to begin at location zero in RAM.

6) Push the RUN switch. Note that panel light A9 is blinking at a rate of about twice per second. When this light stops blinking the PROM programming is complete.

7) Raise the STOP switch.

8) Now note the INTE light on the Altair front panel. If this light is on, the BYTEMOVER VERIFIER has verified that the contents of the programmed PROM are indeed identical to the contents of the selected 1K bytes of RAM. If this light is off, the PROM has not programmed correctly; this could be due, for example, to a defective PROM.

EXAMPLE: Altair 8K BASIC can be stored in seven 2708 PROMs. Given that these seven PROMs are in PROM locations 1 through 7 on the BYTESAVER board, 8K BASIC can easily be transferred into RAM using the following procedure:

1) Raise the RESET switch.

2) Depress the unprotect switch (on the Altair front panel).

3) Raise A15, A14, and A13. Raise the examine switch. The data lights should read "061" octal.

4) Now set the sense switches for the task to be done:

A15 - Down to transfer from PROM to RAM.
A14 - Up for a 7K transfer
A13 - Down
A12 - Down
A11 - Up
} To begin transfer from the PROM 1K higher in memory than the BYTEMOVER program.
A10 - Down
A9 - Down
A8 - Down
} All down for storage to begin at location zero in RAM.

5) Push the RUN switch. In less than one second BASIC will be loaded into RAM (it sure beats paper tape!). Raise the STOP switch.

EXAMPLE: If you do not have BYTEMOVER in PROM, you can program a PROM with BYTEMOVER that is stored in RAM. The BYTEMOVER software (a listing of which is attached) must first be loaded into RAM beginning at location zero in memory. The BYTEMOVER software can then be burned into a PROM using the following procedure:

1) Raise the reset switch.

2) Depress the unprotect switch (on the Altair front panel).

3) Insert an erased PROM into PROM location 0 on the BYTESAVER board.

4) Examine location 000 240 in memory.

5) Raise the program power switch on the BYTESAVER board.

6) Set the sense switches with A15 and A14 and A13 up.

7) Push the RUN switch. When light A9 stops blinking the programming is complete. The INTE light will be on to verify correct programming.

8) Turn off PROM program power by depressing the switch on the BYTESAVER.

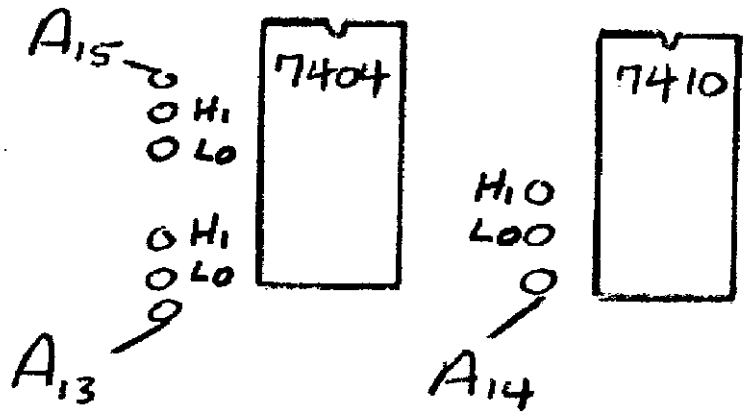


Fig. 1. How to set the Bytesaver address in memory. The built Bytesaver comes with A15, A14, and A13 connected to the corresponding "Hi" terminals so that memory address occurs when these three bits are high. Any or all of these address lines may be connected to the corresponding "Lo" terminal to move the memory board lower in memory. There are thus eight positions in memory that this board can be used.

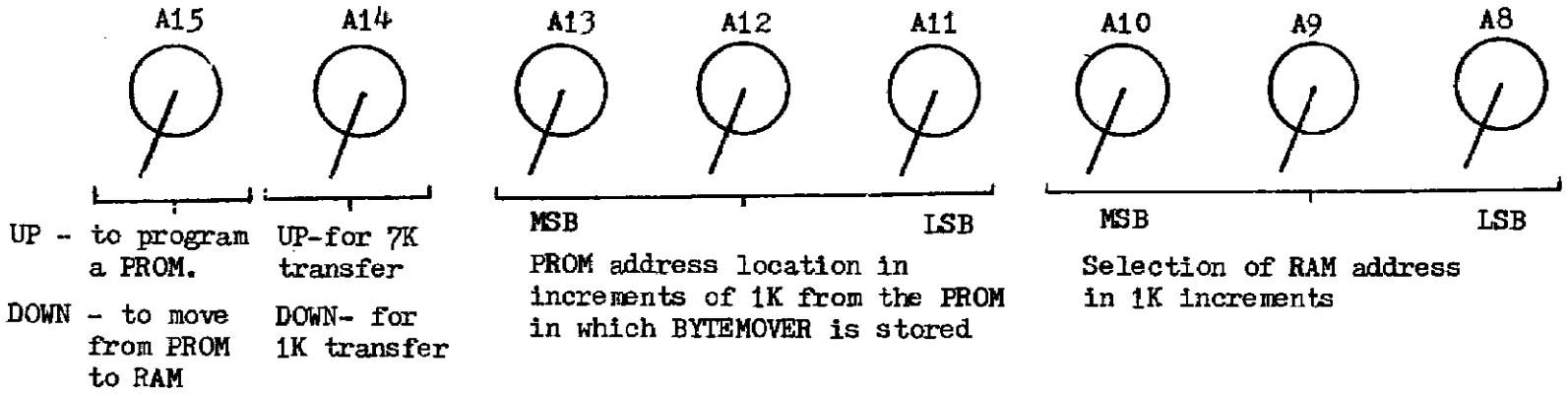
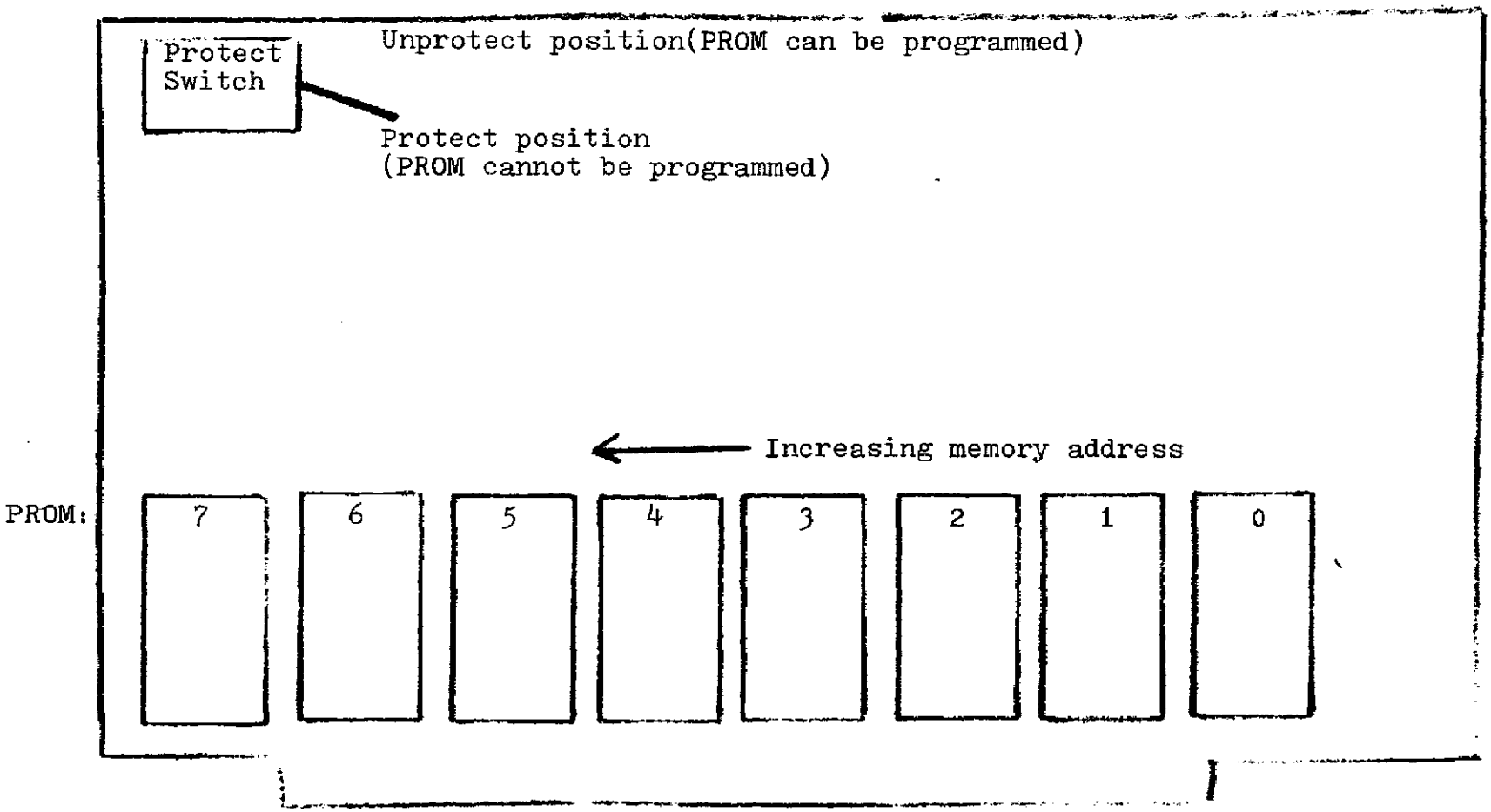


FIGURE 2. FUNCTION OF THE SENSE SWITCHES IN THE BYTEMOVER PROGRAM.

Fig. 3. Bytesaver physical layout.



```
0000                            0000 * BYTEMOVER (T.M.) SOFTWARE FOR
0000                            0001 * CROMEMCO 8K BYTESAVER (T.M.)
0000                            0002 * VERSION 3.0
0000                            0003 * SELF-RELOCATING SOFTWARE LOCATABLE AT AN
0000                            0004 * 1024 BYTE (1K) BOUNDARY IN MEMORY
0000                            0009 * ROUTINE TO FIND ONESELF IN MEMORY
0000                            0010 SP EQU 6
0000                            0019 * DEFINE FIRST 4 BYTES IN MEMORY AS STACK
0000 31 00 00                   0020  LXI SP, 0
0003                            0029 * SAVE FIRST FOUR BYTES IN REGISTERS
0003 C1                         0030  POP B
0004 D1                         0040  POP D
0005                            0049 * REPLACE BYTE 0 WITH A 'RETURN'
0005 3E C9                      0050  MVI L, 0C9H
0007 00                         0051  NOP
0008 E5                         0060  PUSH H
0009 E5                         0070  PUSH H
000A 00                         0080  NOP
000B 00                         0081  NOP
000C 00                         0082  NOP
000D 31 04 00                   0090  LXI SP, 4
0010 CD 00 00                   0100  CALL 0
0013                            0101 * ROM LOCATION NOW IN BYTE 3
0013 31 02 00                   0110  LXI SP, 2
0016 F1                         0120  POP H
0017                            0129 * RETURN BYTES 0-3
0017 31 04 00                   0130  LXI SP,4
001A D5                         0140  PUSH D
001B C5                         0150  PUSH B
001C                            0159 * STORE ROM LOCATION IN SP
001C F9                         0160  SPHL
001D 0E 00                      0170  MVI C, 0
001F 59                         0180  MOV E,C
0020 69                         0190  MOV L,C
0021                            0199 * INPUT SENSE SW COMMANDS
0021 DB FF                      0200  IN 255
0023 57                         0210  MOV D,A
0024                            0219 * STRIP RAM ADDRESS
0024 E6 07                      0220  ANI 7
0026 07                         0230  RLC
0027 07                         0240  RLC
0028                            0249 * STORE RAM ADDRESS IN BC
0028 47                         0250  MOV B,A
0029 7A                         0260  MOV A,D
002A                            0269 * STRIP ROM ADDRESS
002A E6 38                      0270  ANI 56
002C 0F                         0280  RRC
002D 00                         0290  NOP
002E 4F                         0300  MOV C,A
002F 39                         0310  DAD SP
```

```
0030 2E 00              0320  MVI L, 0
0032 7A                 0330  MOV A,D
0033 EB                 0340  XCHG
0034                    0341 * ADDRESS OF ROM BEING PROCESSED IN DE
0034                    0349 * BRANCH TO TRANSFER OR PROGRAM ROUTINE
0034 E6 80              0350  ANI 128
0036 0F                 0360  RRC
0037 0F                 0370  RRC
0038 C6 2D              0380  ADI 45
003A 21 00 00           0390  LXI H, 0
003D 6F                 0400  MOV L,A
003E 39                 0410  DAD SP
003F F9                 0420  PCHL
0040                    0500 * ROUTINE TO TRANSFER ROM TO RAM
0040 F9                 0510  SPHL
0041 21 0B 00           0520  LXI H, 11
0044 39                 0530  DAD SP
0045 EB                 0550  XCHG
0046 F9                 0560  SPHL    STACK CONTAINS ROM LOCATION
0047 EB                 0570  XCHG    H&L CONTAIN LOOP ADDRESS
0048 11 00 00           0580  LXI D, 0
004B                    0588 * START OF TRANSFER LOOP
004B                    0589 * INCREMENT ROM ADDRESS
004B 3B                 0590  DCX SP
004C                    0599 * MOVE DATA FROM ROM TO RAM
004C F1                 0600  POP 6
004D 02                 0610  STAX B
004F                    0619 * INCREMENT RAM ADDRESS
004F 03                 0620  INX B
004F                    0629 * INCREMENT BYTE COUNT
004F 13                 0630  INX D
0050 7A                 0640  MOV A,D
0051 E6 04              0650  ANI 4
0053 07                 0660  RLC
0054 07                 0670  RLC
0055 00                 0680  NOP
0056 85                 0690  ADD L
0057 6F                 0700  MOV L,A
0058 F9                 0710  PCHL
0059 00                 0716  NOP
005A 00                 0717  NOP
005B                    0719 *  JUMP TO 0081 FROM TRANSFER ROUTINE
005B 3E 56              0720  MVI A, 56H
005D 85                 0725  ADD L
005E 6F                 0730  MOV L,A
005F F9                 0740  PCHL
0060                    1000 * ROUTINE TO PROGRAM ROM
0060 00                 1010  NOP
0061                    1019 * MOVE RAM ADDRESS INTO HL
0061 69                 1020  MOV L,C
0062 7C                 1030  MOV A,H
0063 60                 1040  MOV H,B
0064                    1049 * MOVE RAM ADDRESS INTO SP
0064 F9                 1050  SPHL
0065 67                 1060  MOV H,A
0066 2E 6B              1070  MVI L, 107
0068                    1079 * INCREMENT RAM ADDRESS
0068 01 00 00           1080  LXI B, 0
006B                    1089 * INCREMENT RAM ADDRESS
```

```
006B 3B                 1090  DCX SP
006C                    1098 * USE STAX AND POP 6 (PSW)
006C                    1099 * TO MOVE DATA FROM ROM TO RAM
006C F1                 1100  POP 6
006D 12                 1110  STAX D
006E                    1119 * INCREMENT ROM ADDRESS
006E 13                 1120  INX D
006F                    1129 * INCREMENT BYTE COUNT
006F 03                 1130  INX B
0070                    1138 * B STORES TWO CONSTANTS
0070                    1139 * # COMPLETE PASSES & IN ROM CNT
0070 78                 1140  MOV A,B
0071                    1149 * # PASSES = 32 ?
0071 FE FC              1150  CPI 252
0073 3F                 1160  CMC
0074 1F                 1170  RAR
0075 1F                 1180  RAR
0076                    1198 * SET 64 TO 0 FOR TWO MINUTE TIMER VERSION
0076 E6 40              1200  ANI 64
0078                    1201 * A=64 IF COMPLETED 32 PASSES
0078 2E 7D              1205  MVI L, 7DH
007A 85                 1210  ADD L
007B 6F                 1220  MOV L,A
007C E9                 1225  PCHL
007D 2E 6B              1226  MVI L, 6BH
007F 78                 1230  MOV A,B
0080 E6 04              1240  ANI 4
0082                    1241 * A=4 IF END OF 1024 BYTE PASS
0082 07                 1250  RLC
0083 07                 1260  RLC
0084 07                 1270  RLC
0085 85                 1280  ADD L
0086 6F                 1290  MOV L,A
0087                    1291 * GO BACK TO 1090 UNLESS OVERFLOW
0087                    1292 * THEN GO TO 1380 FOR
0087                    1293 * ADDRESS SUBTRACTION
0087                    1294 * OR 2135 FOR QUITS
0087 E9                 1300  PCHL
0088 00                 1350  NOP
0089 00                 1360  NOP
008A 00                 1370  NOP
008B                    1378 * ANOTHER PROGRAM PASS TO BE DONE
008B                    1379 * ADJUST ROM AND RAM ADDRESSES
008B 7C                 1380  MOV A,H
008C 21 00 FC           1390  LXI H, 64512
008F                    1399 * SUBTRACT 1024 FROM ROM ADDRESS
008F 39                 1400  DAD SP
0090 F9                 1410  SPHL
0091 21 00 FC           1420  LXI H, 64512
0094                    1429 * SUBTRACT 1024 FROM RAM ADDRESS
0094 19                 1430  DAD D
0095 EB                 1440  XCHG
0096 67                 1450  MOV H,A
0097 2E 6B              1460  MVI L,107
0099 78                 1470  MOV A,B
009A E6 F8              1480  ANI 248
009C                    1489 * INCREMENT PASS COUNTER BY ONE
009C C6 08              1490  ADI 8
009E 47                 1495  MOV B,A
009F                    1499 * GO BACK TO 1090
009F E9                 1500  PCHL
```

```
00A0                    2000 * ROUTINE TO LOAD BYTEMOVER INTO ROM
00A0 DB FF              2010  IN 255
00A2 47                 2020  MOV B,A
00A3 E6 E0              2030  ANI 224
00A5 1E 00              2040  MVI E, 0
00A7 4B                 2050  MOV C,E
00A8 57                 2060  MOV D,A
00A9 78                 2070  MOV A,B
00AA F6 1F              2080  ANI 31
00AC 47                 2090  MOV B,A
00AD 67                 2100  MOV H,A
00AE 2E 60              2110  MVI L, 96
00B0 E9                 2120  PCHL
00B1                    2121 * CHECK FOR 7K TRANSFER OF ROM TO RAM
00B1 C6 1A              2122  ADI 1AH
00B3 6F                 2123  MOV L,A
00B4 DB FF              2124  IN 255
00B6 E6 40              2125  ANI 64
00B8 0F                 2126  RRC
00B9 0F                 2127  RRC
00BA 85                 2128  ADD L
00BB 6F                 2129  MOV L,A
00BC E9                 2130  PCHL
00BD                    2133 * PROGRAMMER VERIFICATION ROUTINE
00BD                    2134 * PART 1
00BD 7C                 2135  MOV A,H
00BE 21 00 FC           2145  LXI H, 64512
00C1 39                 2155  DAD SP
00C2 F9                 2165  SPHL
00C3 2E CD              2175  MVI L, 0CDH
00C5 67                 2185  MOV H,A
00C6 E9                 2195  PCHL
00C7 00                 2205  NOP
00C8 00                 2210  NOP
00C9 00                 2215  NOP
00CA 00                 2220  NOP
00CB                    2229 * ROM TO RAM TRANSFER STOP ROUTINE
00CB FB                 2230  EI
00CC E9                 2240  PCHL
00CD                    2248 * PROGRAMMER VERIFICATION ROUTINE
00CD                    2249 * PART 2
00CD 7C                 2250  MOV A,H
00CE 21 00 FC           2260  LXI H,64512
00D1 19                 2270  DAD D
00D2 EB                 2280  XCHG
00D3 2E F1              2290  MVI L, 0F1H
00D5 67                 2300  MOV H,A
00D6 01 00 00           2310  LXI B, 0
00D9 E9                 2320  PCHL
00DA 00                 2625  NOP
00DB                    2629 * 7K TRANSFER COMPLETION CHECK
00DB D6 20              2630  SUI 20H
00DD 6F                 2640  MOV L,A
00DE 7A                 2650  MOV A,D
00DF C6 04              2660  ADI 4
```

```
00E1 57                 2670  MØV D,A
00E2 FE 38              2680  CPI 56
00E4 3F                 2685  CMC
00E5 3E 00              2690  MVI A, 0
00E7 1F                 2700  RAR
00E8 85                 2710  ADD L
00E9 6F                 2720  MØV L,A
00EA E9                 2730  PCHL
00EB                    2879 * RØM PRØGRAMMER STØP RØUTINE
00EB 00                 2880  NØP
00EC 00                 2881  NØP
00ED FB                 2885  EI
00EE E9                 2890  PCHL
00EF E9                 2900  PCHL
00F0 E9                 2906  PCHL
00F1                    2918 * PRØGRAMMER VERIFICATIØN RØUTINE
00F1                    2919 * PART 3
00F1 3B                 2920  DCX SP
00F2 F1                 2930  PØP 6
00F3 EB                 2940  XCHG
00F4                    2949 * CØMPARE FØR GREATER
00F4 BE                 2950  CMP M
00F5 EB                 2960  XCHG
00F6 17                 2970  RAL
00F7 E6 01              3000  ANI 1
00F9 2F                 3010  CMA
00FA 3C                 3011  INR A
00FB 85                 3015  ADD L
00FC 6F                 3020  MØV L,A
00FD 3B                 3030  DCX SP
00FE 3B                 3040  DCX SP
00FF                    3050 * CØMPARE FØR LESSER
00FF F1                 3055  PØP 6
0100 2F                 3056  CMA
0101 EB                 3058  XCHG
0102 86                 3059  ADD M
0103 EB                 3060  XCHG
0104 C6 07              3061  ADI A,1
0106 3F                 3065  CMC
0107 17                 3070  RAL
0108 E6 01              3090  ANI 1
010A 2F                 3100  CMA
010B 3C                 3101  INR A
010C 85                 3105  ADD L
010D 6F                 3110  MØV L,A
010E 03                 3130  INX B
010F 13                 3140  INX D
0110 78                 3150  MØV A,B
0111 E6 04              3180  ANI 4
0113 2F                 3190  CMA
0114 3C                 3191  INR A
0115 85                 3195  ADD L
0116 6F                 3200  MØV L,A
0117 E9                 3210  PCHL
```

BYTEMOVER 3.0 OCTAL LISTING

BYTEMØVER VERSIØN 3.0

ØCTAL LISTING

```
061 000 000 301 321 056 311 000 345 345 000 000 000 061 004 000
315 000 000 061 002 000 341 061 004 000 325 305 371 016 000 131
151 333 377 127 346 007 007 007 107 172 346 070 017 000 147 071
056 000 172 353 346 200 017 017 306 055 041 000 000 157 071 351
371 041 013 000 071 353 371 353 021 000 000 073 361 002 003 023
172 346 004 007 007 000 205 157 351 000 000 076 126 205 157 351
000 151 174 140 371 147 056 153 001 000 000 073 361 022 023 003
170 376 374 077 037 037 346 100 056 175 205 157 351 056 153 170
346 004 007 007 007 205 157 351 000 000 000 174 041 000 374 071
371 041 000 374 031 353 147 056 153 170 346 370 306 010 107 351
333 377 107 346 340 036 000 113 127 170 346 037 107 147 056 140
351 306 032 157 333 377 346 100 017 017 205 157 351 174 041 000
374 071 371 056 315 147 351 000 000 000 000 373 351 174 041 000
374 031 353 056 361 147 001 000 000 351 000 326 220 157 172 306
004 127 376 070 077 076 000 037 205 157 351 000 000 373 351 351
351 073 361 353 276 353 027 346 001 057 074 205 157 073 073 361
057 353 206 353 306 007 077 027 346 001 057 074 205 157 003 023
170 346 004 057 074 205 157 351 000 000 000 000 000 000 000 000
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