SUPER MISSILE ATTACK is an entirely new concept in video game enhancements.

SUPER MISSILE ATTACK is not a simple speed-up kit, but a genuine software improvement of the existing software in your ATARI (tm) MISSILE COMMAND (tm) game. Software is the language that a video game is written in - changing the language will change the game. SUPER MISSILE ATTACK by General Computer builds on the software provided by ATARI to give you more challenge, more excitement and, of course, more profit from your existing game.

Features include:

- A new look to the game: different colors, different attract mode, etc. shout 'Play-me!' to the video game enthusiast.

- A new sound to the game: each attack object now has its own brand-new sound that lets everyone know that this is no ordinary MISSILE COMMAND.

- A new play to the game: more missiles, faster missiles and clouds that get smaller as the game goes on add challenge (and profit) to your MISSILE COMMAND box. PLUS a TOTALLY NEW ATTACK OBJECT, the "UFO", which moves faster and more randomly than ordinary planes and satellites and fires a deadly new LASER weapon.

- A new theory behind the game: the old MISSILE COMMAND settled for plain hard - but not hard enough. SUPER MISSILE ATTACK keeps the early rounds easy (to attract those first quarters), makes the intermediate rounds more interesting (to excite the casual player) - then makes sure the expert doesn't play forever!

INSTALLATION

The **SUPER MISSILE ATTACK** game is designed to be installed in a few easy steps. Remember to turn the power off in the MISSILE COMMAND cabinet before you begin the installation. You may also find it easier to remove the Atari game PCB (printed circuit board) the first time you do an installation. IF YOU HAVE ANY PROBLEMS FEEL FREE TO CALL GENERAL COMPUTER AT (800) 343-9500 AND ASK TO SPEAK WITH A FIELD SERVICE ENGINEER. It is important that you understand all of the installation notes before you attempt the field upgrade.

1: Remove the six Atari game ROMs (Read Only Memory) from the MISSILE COMMAND game PCB using an IC extractor tool. The ROMs are at locations H1, J/K1, K/L1, L/M1, N/P1 and R1 on the Atari game PCB. See FIGURE 1 for proper use of the extractor tool. Exercise caution not to bend any of the legs of the ROMs.
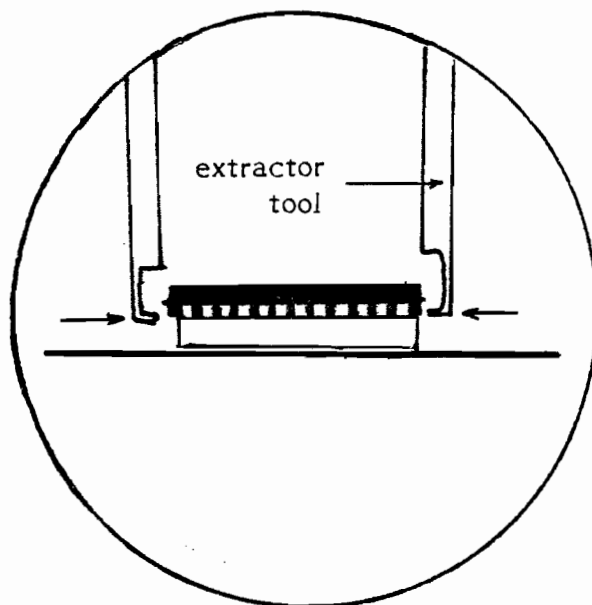

Figure 1
Use of the IC extractor tool

   2: Insert the six Atari game ROMs into the six sockets
on the **SUPER MISSILE ATTACK** PCB. The correct location and
orientation for each of the Atari ROMs on your new General
Computer PCB is indicated on FIGURE 2. Each Atari ROM must
be inserted into the General Computer PCB so that the Atari
ROM's pin 1 (indicated by a notch in the chip shown on
FIGURE 3) corresponds to the notch in the socket in the
Super Missile Attack PCB. Permanent damage to the Atari game
ROMs will result if they are inserted into the sockets in
the wrong orientation. There are two ways to insert a ROM
into a socket -- only one way is correct!   Please check
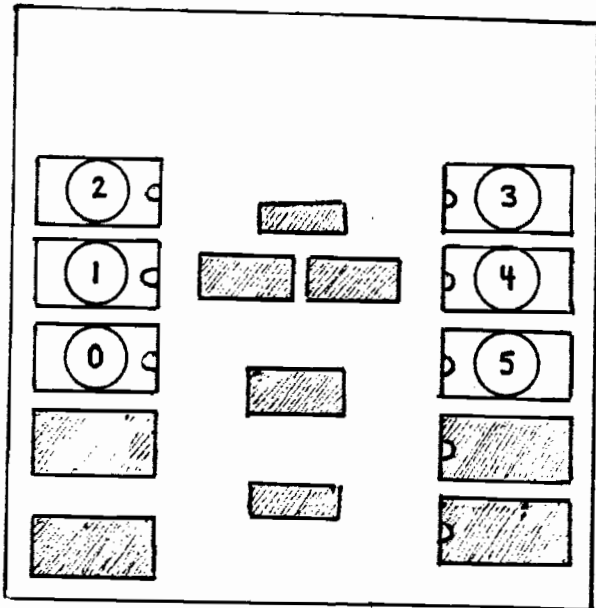your.work carefully before proceeding to next step.

Figure 2
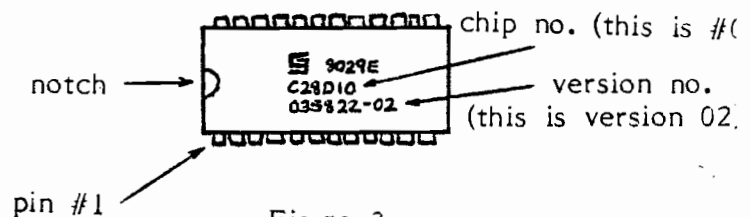Where to position ATARI ROMs
in the, SMA board.

Figure 3
Explanation of the markings
on an ATARI ROM.

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3: Insert the six jumpers into the now empty game ROM
sockets on the Atari board. The six inch rainbow colored
ribbon cable plugs into socket R1. The twelve inch rainbow
colored ribbon cable plugs into socket H1. The four socket
cable assembly plugs into sockets N/P1 thru J/K1. The
individual connections of the four socket cable assembly are
as follows: the socket with the red wire is inserted into
N/P1; the socket with the white wire is inserted into L/M1;
the socket with the green wire is inserted into K/L1 and
the socket with the black wire is inserted into J/K1. Pin 1
on the two rainbow colored ribbon cables is indicated by a
small triangle on each plug. Pin 1 on the single wire sockets
is on the same end of the socket as the tie-wrap. Pin 1 on
each jumper must match pin 1 of each socket on the Atari game
PCB.

The exact orientation for each of the jumpers is
graphically indicated in FIGURE 4. The same general warnings
that applied to the ROMs also applies here. Check your work
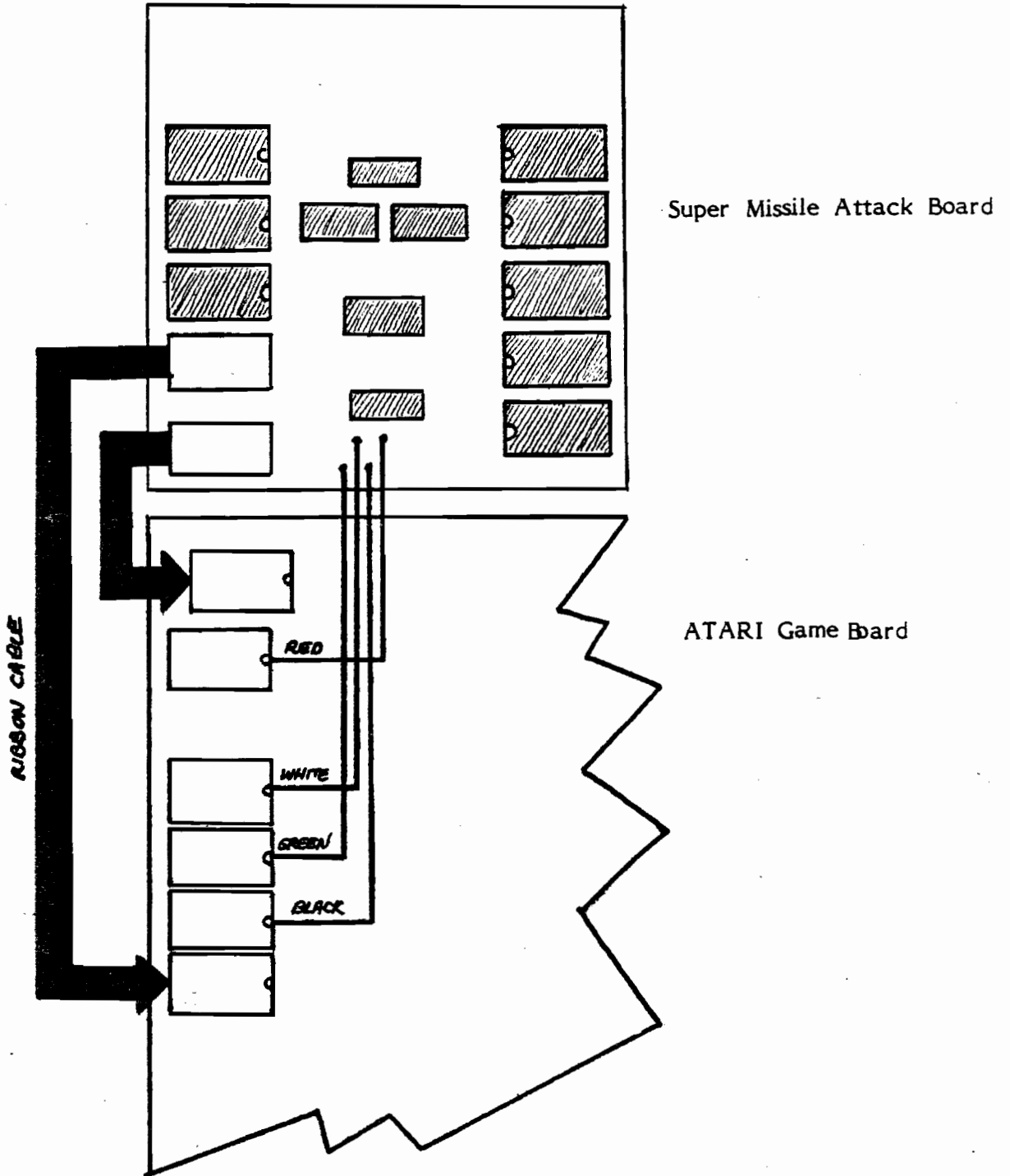carefully before turning the power on.

Super Missile Attack Board

ATARI Game Board

RIBBON CABLE

RED

WHITE

GREEN

BLACK

Figure 4
Installation of jumpers.

4: Place the bottom edge of the **SUPER MISSILE ATTACK** PCB into the wooden track above the Atari Game PCB. The bottom edge is the edge from which the ribbon cables project. Fasten the new board to the side of the cabinet using the Velcro strip that has been provided. The position for the **SUPER MISSILE ATTACK** board within the cabinet is found in FIGURE 5.

Super Missile Attack Board

ATARI Auxiliary/Regulator Board

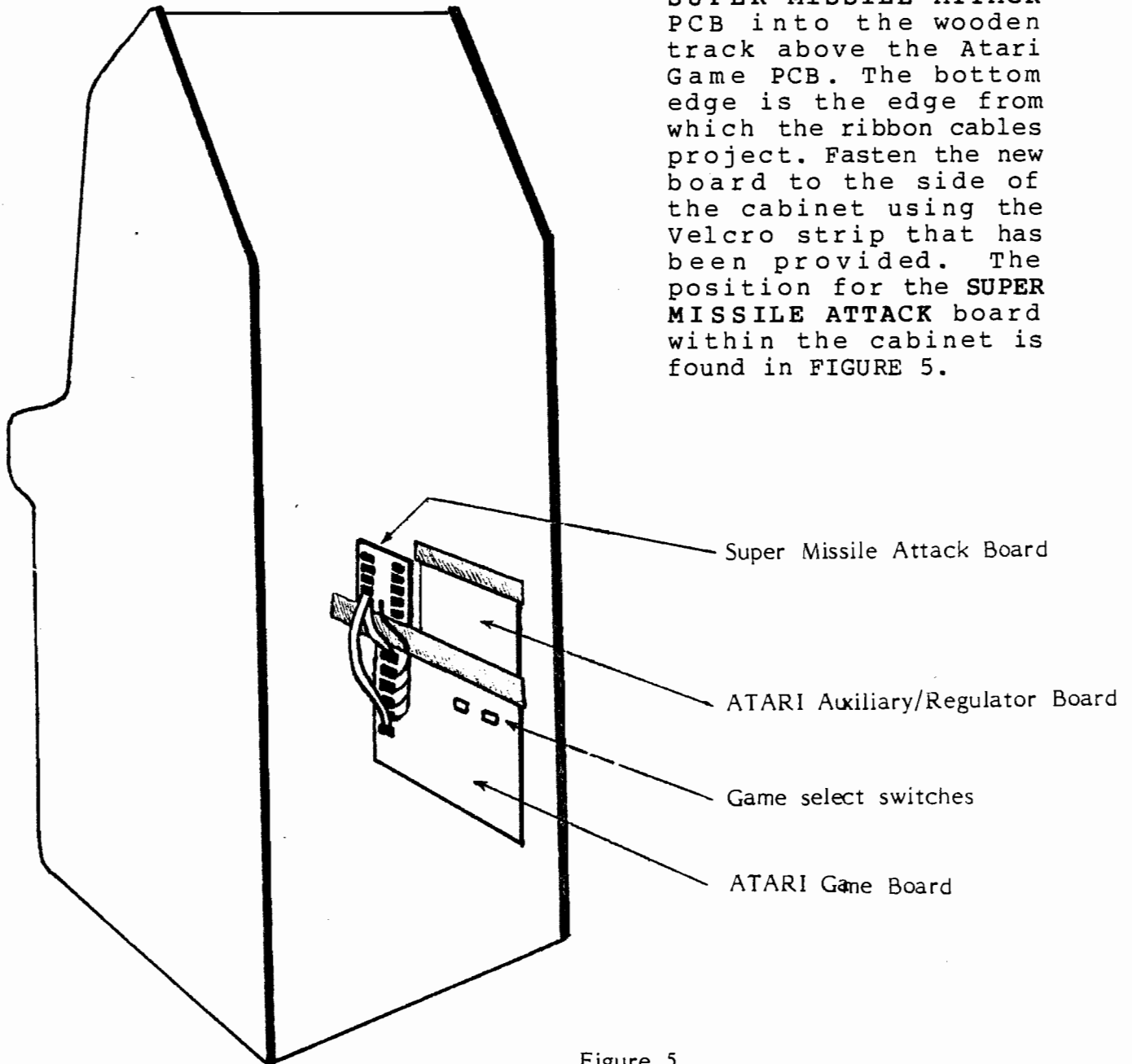Game select switches

ATARI Game Board

Figure 5
Completed Assembly

OPERATION

The **SUPER MISSILE ATTACK** game has four operator selectable levels of difficulty. They are selected through the use of toggle switches on the Atari game PCB.

Toggle Settings of 8-Toggle Switch on Game PCB (@R10)

8	7	6	OPTION
on	on	on	ordinary MISSILE COMMAND
on	off	on	easy **SUPER MISSILE ATTACK**
off	on	on	reg. **SUPER MISSILE ATTACK**
off	off	on	diff. **SUPER MISSILE ATTACK**

Ordinary MISSILE COMMAND -- The regular version of Atari's Missile Command is still available by setting the toggle switches. This feature is useful when the game is moved to a new site which doesn't have skilled Missile Command players . When the players become skilled and revenues decrease due to increased duration of average game you may consider switching to ...

Easy SUPER MISSILE ATTACK -- One of two of our suggested settings. It is the easiest of the three versions of **SUPER MISSILE ATTACK** available. New colors and sounds alert the regular player that this game is no longer ordinary Missile Command. The screen multiplier progresses 1X (twice), 2X (twice), ... , 10X (until end). Each screen has two more attacking missiles and one more smart missile per screen than Atari's Missile Command Game. At 4X the new attack object, the UFO appears, and on 5X the UFO begins to fire his high powered laser. The novice will play for nearly as long as he would on ordinary Missile Command, but the skilled player must modify his strategy or be out of the game. At higher multipliers, the explosions generated by the defensive missiles begins to shrink in size and duration. The expert must carefully place his shots or lose. In the later screens, the incoming missiles begin to travel faster than ever before.

Regular SUPER MISSILE ATTACK -- The second of our
two suggested settings. It is a very challenging version of
SUPER MISSILE ATTACK. The screen multiplier progresses 1X
(once), 2X (once), ... , 10X (until end). Each screen has
four more attacking missiles and two more smart missiles
per screen than Atari's Missile Command Game. This setting
gets increasingly difficult more than twice as fast as easy
SUPER MISSILE ATTACK. This is the recommeded setting for
very high skill locations where players regularly score
1,000,000 points. A million point player will be limited to
50,000-80,000 very fast points.

Difficult SUPER MISSILE ATTACK -- The most difficult
of the three versions of SUPER MISSILE ATTACK. The screen
multiplier progresses 1X (once), 2X (once), ... 8X (until
end). Each screen has six more attacking missiles per
screen and three more smart missiles than the ordinary
Missile Command game. The difficult setting's initial
screens are difficult. They also get more difficult at a
faster rate than the easy and regular settings.

All the operator selectable features of the original
Missile Command are still available except for two small
changes. Only one language is available to the operator.
Yours is English. Please contact the factory for other
languages. The other difference is that in order to run
self-test mode, you must remove the SUPER MISSILE ATTACK
board and re-insert the Atari ROMs.

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TROUBLESHOOTING

1.) Q: I plug in your board and ordinary Missile Command appears on the screen.

Ans.: The toggle switches on the Atari game PCB must be set to one of the SUPER MISSILE ATTACK settings. See the OPERATION section of the manual for details.

2.) Q: I can't get Spanish, French or German to run on my game after I plug in your board.

Ans.: The board you received only displays English prompts. Please contact General Computer Corporation about other languages.

3.) Q: The game seems to partially start when the power is turned on, then dies. The screen goes blank. What is wrong?

Ans.: The first thing you should do is verify that you have -02 Atari game ROMs. Our software works perfectly with Atari's -02 game ROMs, which constituted a bulk of the production run of Missile Command. If you don't have -02 game ROMs, one solution is to obtain -02 game ROMs from another Atari Missile Command you may own or purchase a copy of the ROMs from your Atari authorized distributor. General Computer Corporation is developing software that is compatible with other Atari game ROM versions, most notably the -01 game ROMs. Please contact us directly with any problems that you may have with different versions of Missile Command.

4.) Q: I have an Atari 035822-03E ROM. Do I use the -03E ROM with your board or the original ROM that the -03E ROM replaced?

Ans.: The SUPER MISSILE ATTACK board you have will work identically with either ROM.

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