

This file is meant to be displayed in good ol' Monaco 9 point.  
You are strongly encouraged to read this FAQ before posting to a.n.b.  
If you have any questions or comments about this FAQ, please email

cls6@midway.uchicago.edu. Thanks!

First off, what is Bolo?

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Let's let the author do the talking:

"Bolo is a 16 player graphical networked real-time multi-player tank battle game. It has elements of arcade-style shoot-em-up action, but for the serious players who play 12 hour games with 16 players working in teams in different networked computer clusters around an office or university campus, it becomes more of a strategy game. You have to play it to understand." --- Stuart Cheshire

How do you play Bolo?

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Bolo has a large amount of options and elements to its play. Once you get a copy of the program, you should read and print out the documentation, which is much more detailed than this explanation. Basically, you are a tank that travels around a map, which has trees, rubble, water, trees, deep water, walls, grass, swamps, and roads. Your tank has ammo (commonly called bullets or shells), mines, shields, and the capacity to carry trees. The map is created by a player beforehand. The two most important elements on the map are pillboxes and bases. Pillboxes are originally neutral, meaning that they shoot at every tank that happens to get in its range. They shoot fast and with deadly accuracy. You can shoot the pillbox with your tank, and you can see how damaged it is by looking at it. Once the pillbox is subdued, you may run over it, which will pick it up. You may place the pillbox where you want to put it (where it is clear), if you have enough trees to build it back up. Trees are harvested by sending your man outside your tank to forest the trees. Your man (also called a builder) can also lay mines, build roads, and build walls. Once you have placed a pillbox, it will not shoot at you, but only your enemies. Therefore, pillboxes are often used to protect your bases. Bases are used for refueling your tank. Like pillboxes, they start out neutral, meaning that anyone can run over them, and they will belong to that player. Bases cannot be moved. You can take over a base by shooting it. Therefore, Bolo becomes exciting when you have 3 or more people fighting for control of pillboxes and bases, traveling around the map, and shooting each other. You can also form alliances with other players for team play. Again, this FAQ doesn't exist to teach you the basics of how to play the game. That's what the documentation is for.

What's the current version of Bolo?

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The current version of Bolo is 0.99.2.

What kind of stuff do I need to play Bolo?

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Bolo is only available for the Macintosh. Stuart Cheshire, the author, has made it very clear that he will not port Bolo to DOS or Windows machines. There's rumors of a port to X-Windows, but don't count on it anytime soon.  
Bolo can be played on any Mac. Its preferred memory size is 1,100 K, but you can cut that down by turning off the sound effects. A color

monitor is not necessary, but often useful.

Unless you want to play by yourself, you need to be connected to some kind of network. You can play Bolo over an Appletalk network or over the Internet, if your machine is directly connected to the net and is running MacTCP, which is the standard way of how Macs talk over the Internet. If you're using a high-speed modem, you can play with your friend via Appletalk Remote Access. SLIP connections to the Internet are not recommended, since a direct Internet connection is so much faster, and Bolo works by forming a ring of networked Macs where one player sends the game packets to a neighbor, who sends packets to the next neighbor on the ring, and so on. Therefore, the rest of the players of the game will be waiting on your slow modem connection, which is commonly called lag. Also, note that Bolo is not a client-server system, which is a common misconception. Instead, Bolo creates a ring out of the Macs, using either DDP on

AppleTalk or UDP over the Internet. When a new player joins, Bolo sends a packet to each machine in the game to figure out the delay between it and all Macs, then it adds itself into the ring in such a way as to minimize the total time around the ring. (Thanks to Peter Lewis for that final explanation.)

However, if you're totally isolated and/or have no friends, there is a small bit of hope. See the section on "Brains."

Okay, now that you know about Bolo, where can you get it?

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You can find the bolo package at the usual suspect FTP sites for Mac software, such as [sumex-aim.stanford.edu](http://sumex-aim.stanford.edu) or [mac.archive.umich.edu](http://mac.archive.umich.edu). Don't ask if someone can mail it to you. It's easily available. You can gopher or anon ftp it at [bolo.stanford.edu](http://bolo.stanford.edu), depending on Stuart's whims and the availability of his machine.

For example, you can get `bolo-0992.hqx` by anonymous ftp at [sumex-aim.stanford.edu](http://sumex-aim.stanford.edu) in the directory `/info-mac/game/bolo`.

Internet Bolo sounds neat! How can I play, find a game, etc.?

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As mentioned before, you need to have a Macintosh running Bolo

0.99.2, with a direct connection to the Internet with MacTCP installed. Therefore, if you can telnet, gopher, ftp, or check your mail directly with your Mac, you can play Internet Bolo. Just check UDP/IP in the first dialog box, type in the IP address of another Mac playing Bolo, and go!

To find an Internet game, there are various ways to do it. There is a BoloTracker, set up by Mike Ellis, out there that gets and gives information about Internet games in progress. For example, if you start a new game, there's an option to select whether or not the BoloTracker will be notified. If it is, your IP address and other vital information, such as the map's name, number of pills and neutral pills, number of players, etc., will be sent to the Tracker. This information will be updated throughout the game and made available to folks who wish to examine it. If you want to see what games the BoloTracker has registered, just telnet to [gwis.circ.gwu.edu](http://gwis.circ.gwu.edu) 1234. It will give you all the info. you need.

There is also a program called Bolo Finder, by Peter Lewis, which will telnet to the BoloTracker itself and display the pertinent information. You can get it at [mac.archive.umich.edu](http://mac.archive.umich.edu), in the directory

/mac/game/war/bolo/tracker.

You can also organize games and discuss strategy with folks on the IRC channel #bolo.

Now, before you go off "Bolo-Tracking" and start randomly joining games, THINK. If you're in France, and the game is Australia, and you join, you'll cause massive lag, destroying the game for everyone.

Some suggested joining guidelines follow:

- \* If there are more than 6 players in a game... stay out.
- \* If there are more than 4 players and no bases free... stay out.
- \* If there are 2 or more people from outside the country stay out.
- \* If you get the "Network Delay too long" error... stay out. Don't repeatedly try to join.
- \* Most importantly... if someone asks you to leave (esp. if there are no free bases), then it is common courtesy to leave.

Also, while you're joining, check the Network Info box. If you see a massive amount of "Recovering" or "Active/Passive Restart" or "Failed" and a total ring delay over 325, then quit, before you

destroy the entire game. (Yes, we know it will crash your Mac. That will be hopefully fixed in the next release.)

Remember, if someone asks you to leave Q LEAVE. There are plenty of games out there.

How can I find out about games on an Appletalk net?

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Use Distant Early Warning or Bolo Tracker (not to be confused with the Internet BoloTracker), both available at mac.archive.umich.edu, in the directory /mac/game/war/bolo/tracker.

Issues of etiquette

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Besides the Internet etiquette mentioned above, there's some other things you should be aware of.

- \* If someone asks you to leave, leave. There's no excuse for destroying another group's game, due to lag or other reasons.
- \* If it's rather obvious you're losing and want to leave, at least concede the game to the other side. Don't just quit.
- \* Profanity via messaging is frowned upon. Don't harass other players for no good reason. The object of the game is to play to have FUN, not to prove you're master of the universe. If you want to assert your manliness, go kick sand in people's faces at the beach: Don't play Bolo.
- \* Don't cheat or hack Bolo to give yourself advantages over other players. If you suspect someone is cheating, a recommended procedure follows:  
(From Dan Rudman, rudman@engin.umich.edu)

1. Identify the party suspect of cheating. Identify the behavior which is hacked.
2. Message to selected players (with the hacked party UNselected) that you suspect said player of hack, and define the hacked behavior.
3. All other parties should acknowledge in the positive or negative whether or not they agree and can verify.
4. If most of the players verify back with you, then you may announce it to all and see what happens. Smart hackers will admit it and just drop out of the game. If for some reason they do not, please make a note of their player name and IP address and post it to the newsgroup. Be sure to include all the players names who verified.

Shareware fees

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Listen up, folks. Bolo is shareware, which means if you use Bolo, you should pay the \$25. Without your payments, Stuart can't put the amount of effort that he puts in now to support Bolo. To make sure your payment arrives, follow this procedure. Enclose a SASE with a note to yourself. And ask Stuart to sign the note and stuff it in the envelope and mail it back to you. If it arrives, you know he got the check. If it doesn't arrive, you don't know he didn't, but at least there's a chance you'll get \*some\* info out of it.

I've got a new idea for Bolo! Shouldn't I post it to a.n.b right away?

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NO. Hold it right there, cowboy. In the Bolo package of documentation, there's a file by Stuart which discusses Bolo's future plans. Read that FIRST, before repeating the already-often-repeated. For example, his priorities for the next release include:  
\* 1000 players across the Internet using IP multicast.  
\* Security measures to stop people from cheating.  
\* Sound to accompany incoming message.  
\* Allow man to defuse mines that you can see.

As well, remember: one thing that's nice about Bolo is its simplicity. As Stuart wrote:

One of the main goals in writing Bolo was to try to give it one of the properties that Chess, Othello, and other good board games have -- the "a moment to learn and a lifetime to master" characteristic that gives them lasting interest. The aim is that there are a few simple 'actions' that you can perform in the game, but that they are flexible enough to let you carry out your complex strategies. That's why there is only one kind of tank, one kind of armour, and one kind of bullet. For me to add another major feature, it must add at least as much interest to the game as any of the features that are already there.

Common questions/misconceptions/facts about Bolo

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- \* When a builder is killed, the man comes back to where his \*tank\* was when he died, not to where the man died.
  - \* It takes 9 shots to kill a tank with full shields.
  - \* It takes 15 shots to kill a pillbox with full armor.
  - \* It takes 5 shots to destroy one section of wall.

- \* It takes 1 bundle of trees to build a pillbox.
- \* It takes 1/2 of a bundle of trees to build a road or wall.
- \* A tank can hold 40 mines.
- \* It takes 4 mines to kill a tank.
- \* It takes 5 bundles of trees to build a boat.
- \* Here's how alliances work: (From Stuart's FAQ)
  1. Select a person whose alliance you would like to join on the "Players" menu and select "Request Alliance" on the "Bolo" menu.
  2. If agreeable, that person should then select your name on their "Players" menu and then select "Request Alliance" or "Invite New Allies".
 If you are in an alliance, the menu choices are "Invite New Allies" and "Leave Alliance". If you are not, then the menu choices are "Request Alliance" and "Cancel Request".  
 Take care that you have the correct players selected on the "Players" menu when requesting/inviting.  
 If you are already in an alliance, you must select "Leave Alliance" first before you can join a new one.
- \* If you leave an alliance while sitting on a base, that base will become "neutral" with no shields left, and it will be (at least temporarily) yours. Any pillboxes you're carrying will be yours.
- \* When you shoot an enemy base and run over it, it will not completely be in your possession until it gathers enough strength to defend itself.
- \* From Stuart's FAQ: Bolo is the Hindi word for communication. Bolo is about computers communicating on the network, and more importantly about humans communicating with each other, as they argue, negotiate, form alliances, agree [on] strategies, etc.
- \* Different versions of Bolo cannot communicate with each other.
- \* The more weapons you have, the bigger the explosion when you die.

If you have more one-liners, PLEASE send them to [cls6@midway.uchicago.edu](mailto:cls6@midway.uchicago.edu).

Where can I find other maps or create my own?

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 There's absolutely TONS of maps you can play on. You can get them at [sumex-aim.stanford.edu](http://sumex-aim.stanford.edu), [mac.archive.umich.edu](http://mac.archive.umich.edu), [aurora.alaska.edu](http://aurora.alaska.edu), or [saloon.falconmicro.com](http://saloon.falconmicro.com) for starters. Try different ones out for the different types of play you may use. Some are small and some are gigantic. Sometimes maps are posted on a.n.b.

So, you want to create your own map, eh? Glad you asked. . .

Bolo Map Editors  
 section contributed by Pete Gontier  
 (complaints to: [gurgle@netcom.com](mailto:gurgle@netcom.com))  
 =====

A map editor is an application which supports the creation of Bolo maps. There are two sorts: interactive and random.

Interactive editors are similar to the painting and drawing applications with which the reader is undoubtedly familiar. There is most often a variety of tools with which to manipulate the map, adding and changing the various terrain types and objects. When running a random map generator, however, the user might merely

be prompted to enter several parameter ranges within which the program generates a map in an automated fashion.

Interactive editors have the advantage of giving the user great control over the map, but they also has the disadvantage of giving one possible player (the map creator) too much familiarity with the map's geography. Random map generators, of course, solve this problem, but the maps they generate lack the sophistication of a hand-built map. Some people prefer to start with a map generated by a random program and then fine-tune the map with an interactive program.

There is actually a third sort of map editor, but there is only one example of it: Bolotomy.

#### Interactive Bolo Map Editors

##### BoloMapEditor

~~~~~  
version reviewed: 1.0 of March 13, 1993  
author: Thomas Barrett (barrett@pacific.mps.ohio-state.edu)  
distribution: unknown

system requirements: 600K  
documentation: none found in archive

This is a no-frills map editor with few tools. Its advantages include a tiny disk space footprint (64K). However, its disadvantages include no Undo command, no control over player starting positions (they are always the same) and no selection tool (which would allow clipboard operations and other transformations).

##### BoloStar (tm)

~~~~~  
version reviewed: 1.5 of April 26, 1993  
author: Keith Fry (keithfry@engin.umich.edu)  
Dan Rudman (rudman@engin.umich.edu)  
distribution: shareware, \$10  
system requirements: 900K/1024K, System 7  
documentation: extensive (for shareware)

##### BMAPEdit

~~~~~  
version reviewed: 1.2 of June 21, 1993  
author: Carl R. Osterwald (carl\_o@seri.nrel.gov)  
distribution: shareware, \$10  
  
system requirements: 800K/1024K, System 6.0.4  
documentation: average (for shareware); includes Balloon Help

Both BoloStar and BMAPEdit are impressive applications. They each have a feature list as long as you would expect from a 1.X-level release of any commercial software. They each are designed and executed extremely well. A few things, of course, set them apart.

BoloStar has as much well-written documentation as you might expect from a shareware product, complete with a few recommendations on map editing techniques, in addition to nuts-and-bolts operational details. BMAPEdit, on the other hand, makes up for in Balloon Help whatever it might lack in documentation.

BoloStar supports plug-in external command files which can perform operations on the current map selection. One external included with BoloStar, for example, is a versatile random island generator which can relatively gracefully generate additional island space on top of existing islands. BoloStar also supports "scraps", like Bolo map clip art, in a special menu.

BMAPEdit, for its part, has a generally more intuitive interface and has a few more useful built-in features.

### Random Map Generators

#### MapGenerator

~~~~~  
version reviewed: 0.97 of April 27\*, 1993  
author: Markus Julen (julen@inf.ethz.ch)  
Ambros Marzetta (marzetta@inf.ethz.ch)  
distribution: shareware, \$10  
system requirements: 450K  
documentation: none found in archive

\*The program's version data claims this is the release date, but the modification date of the file is the 28th.

This generator is truly random. The user has no control over the randomness. It tends to generate maps of roughly the same size each, but within each map there are widely varying degrees of land, water, forest, etc. This generator also is happy to generate the "man-made" aspects of a Bolo map, including walls, bases, pillboxes, roads, rubble. It even generates some rather complex man-made areas, like ports, mazes, and super-bases, near which are

several bases and several pillboxes.

Unfortunately, this program crashed fairly often in testing, which is not surprising since its version number would seem to indicate it is a pre-release version. However, crashing does not result in much lost work, because the program works quickly and it is easy to reboot and run it again.

#### RandomMap

~~~~~  
version reviewed: 1.1.0 of July 1, 1993  
author: Peter N. Lewis (peter.lewis@info.curtin.edu.au)  
distribution: freeware  
system requirements: 293K, System 6  
documentation: sufficient

This random map editor allows a fair amount of control over the parameter ranges of generated maps. Parameters: rows, columns, percentage of land, percentage of forest (on the land), number of bases, number of pillboxes, and base maximum supplies. Unfortunately, while allowing more control, RandomMap does not generate such things as roads or mazes.

#### Miscellaneous Map Editing Tools

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##### Bolotomy (tm)

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version reviewed: April 29, 1993

author: Alan Witmer (fostex!alan\_witmer@dartvax\*)

Jerry Halstead (fostex!jerry\_halstead@dartvax\*)

distribution: shareware, \$8

system requirements: color, possibly System 7, possibly a Quadra\*\*

documentation: sufficient

\*It's possible your mailer will know where dartvax is, but it's not likely. The authors should mail the FAQ maintainer with better addresses.

\*\*This is informal software, folks; the authors haven't had a chance to test on much else.

This is a tool to convert any PICT into a Bolo map. It uses sophisticated image analysis algorithms to pick terrain types, sizes, and placements. It doesn't have a huge feature list; it gets its job done and gets out of the way; but there are some adjustments for the user to make so that the transfer goes as desired.

#### What are some of the guidelines I should follow for making maps?

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(From Matt Slot, fprefect@engin.umich.edu)

Some maps are neat, others play well, and some just suck. Maps that have a particular shortage of trees, a poor layout of the islands, or most annoyingly start positions beyond the edge of the explored universe. Maps should be well thought out so that:

\* There is a well distributed selection of bases. No clumps of more than 3 within a 30 square diameter.

\* Trees are in abundance, and more can grow back easily everywhere.

\* Land should not have Deep Water embedded into it or without a suitable shallow water buffer.

\* Start positions should be well spread out around the island(s), and not located in the middle of deep sea.

\* If you need to make a big map, make it easy to traverse it. If you make one with lots of islands, make them close enough to be visible to each other.

\* Remember realism is as important a playability -- but both can make a map *very* enjoyable.

\* Large Maps, Small Teams - When playing a 2 on 2 or a 3 on 3, the map should definitely be no bigger than 100 by 100. For 4-6 players, maps between 50 by 50 and 75 by 75 are optimal. For 6-8 players, maps from 70 by 70 to 90 by 90 are optimal. For more players, maps should still be less than 120 by 120.



A large map slows the game down to a crawl, where a player must make a long foray into heavily mined territory to find a single base/pillbox, kill it and return home without refueling. To defend more than a small area involves a large network of roads which are easily mined. In general, in either case the game is not one of skill, but who has the most patience (and time!).

Now what's this about Brains?

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Brains are small bits of code that allow the computer to control your tank for you. The first brain was Stuart's autopilot. You can use brains for various uses. You can set a slew of brains to fight it out on a new map to determine its playability. You can use them as allies. You can fight against them for practice. Remember, though, for each brain, you have to use a separate copy of Bolo. For example, I sometimes run 3 brains on my Ilci at work, and run a 4th copy of Bolo to play myself. That's how you can play by yourself. Just choose

Appletalk (even if the machine is isolated), and run three or more copies of the application, with separate Brains folders (which hold the different Brain codes), and join in yourself. Ally them to make it more interesting.

Where can I get brains?

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You can get brains at [sumex-aim.stanford.edu](http://sumex-aim.stanford.edu), [mac.archive.umich.edu](http://mac.archive.umich.edu), [saloon.falconmicro.com](http://saloon.falconmicro.com), or [aurora.alaska.edu](http://aurora.alaska.edu). Each site has different versions and varieties. They are often posted to a.n.b directly. The following list contains the known and publicly available brains.

Indy 1.2  
Dumbot 0.3  
Standard Autopilot (comes with the Bolo package)  
Helper Autopilot .02  
Tonto 1.0 (Formerly Milo's Autopilot)  
Rover .01  
Maxwell 1.4

How do you write brains?

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Stuart included some sample code and directions for writing brains in the Bolo package. Also, there is a mailing list which discusses brain programming. To subscribe, send mail to [listserv@ncrpd.curtin.edu.au](mailto:listserv@ncrpd.curtin.edu.au), with any subject, and body

subscribe brain Your Name

You can mail to the list by sending to [brain@ncrpd.curtin.edu.au](mailto:brain@ncrpd.curtin.edu.au).

Finally, how about some strategy tips?

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Well, okay. Here you go:

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From Steve Kives ([kives@ruhr.engin.umich.edu](mailto:kives@ruhr.engin.umich.edu))

I think most anyone can take a lone pb within a half-minute if they are not worried about: 1) running their armor down to zero, and

2) lurkers in the woods nearby.

My standard strategy is this:

Shoot two spaces near the pb for buildings. These spaces are usually spaces #2 and #3 in a straight line away from the pb. But don't build yet.

Rush in and pile on the shots. Plan on receiving one hit, and circle away with no more damage. The pb is 1/3 damaged and angry. Build your buildings and line yourself up, not on the same straight axis with pb/buildings, but just one lane over.

This allows careful placement of the crosshairs on the pb, while the pb must shoot through the buildings before any shots hit you. If you have a pb, use a pb in space #3. Keep the cursor on the pb after building.

Saddle up the lane after a few seconds, when the pb is only slightly mad, and pour in the glancing blows. If you just built buildings, some shots still get through, and you must tear away after about 2 seconds.

If you built a pb, then don't move! When enemy pb is dead, charge forward, simultaneously clicking the mouse button. Man fixes your pb, which is irate. If a vulture comes out of the woods, he is meat. This is a good and realistic strategy in a game crowded with cunning players and many tricks-up-the-sleeves. The whole move takes 30 seconds. Shoot for mines, and shoot the pb in one quick movement. Build obstructions and clear defending mines when waiting for pb to

cool a little. Then move in for coup-de-grace and fix your pb in a deft stroke (when shots are \*not\* hitting you -- don't get your man killed). This strategy generally deals with problems 1 and 2 mentioned previously.

Also, lay a minefield several spaces behind you, and right outside the margins of nearby forests. This helps punish the vultures.

As far as base-defenses go, I think the most successful strategy is to lay scattered mines (not chain-reactable) throughout the entire firing rage of your pbs, and a little beyond. Especially lay mines right next to pbs and your bases, though it can make refueling a little delicate. There is nothing more satisfying than seeing an enemy spiker blow his man up. Time to bum-rush his pillboxes!

A very important element of pb-defenses is adverse terrain. A swamp is great, otherwise use lots of craters. This severely inhibits enemy builders doing bad things to you, and road-building into your base shows up like a beacon on the pillbox-view function.

For the devious, a proven strategy is to sneak up directly behind the enemy attacking your base/pbs. This means, of course, a very wide circle flanking movement, because you cannot let him see you. When sneaking up behind, just charge right in and shoot! Why does this work? Because auto-scroll has a number of failings, and this is one of them. His autoscroll will continue to view your pbs at 10 spaces away, while you sneak up to within a couple of spaces on the other side. This tactic is lethal every time.

Of course, nothing beats the pb-gathering tactics of a couple of old-

pros who can decoy-kill at lightspeed. One game, I hooked up with "Stranger" and we did this without any verbal(typing) communication of any kind. Wasn't necessary. Took a pb every 20 seconds for a few minutes (refueling when we had to) and the game was a joke. The other team evaporated to other games when they saw the pbs disappearing that quickly from the status window. If the other team doesn't have similar tacticians, they haven't a chance.

A wonderful example of this tactic occurs when you find an enemy (uninhabited) base with two pbs flanking. Draw an imaginary line from one pb, through the other pb, and extended on out several spaces. Shoot for mines first!

Put a building on this line (space #1 away from enemy pb). Put a pb on this line next (space #2). Your friend gets behind friendly pb just as you shoot (from furthest possible distance) the \*farthest\* pb from

your friendly pb. If you do this right, this pb will start blowing away the other enemy pb, which consequently starts to blow away the building, then the friendly pb. But both enemy pbs are dead before anyone is scratched! And your friend should instantly repair friendly pb to help ward off well-armed vultures.

This tactic fails when the enemies return too soon and start bickering. But this tactic works WAY too often when the maps are humongous.

If you like to lurk, find a well-traveled road through the woods. Check for mines in the ambush site, then lay 3-4 mines in a row right next to the road (in the trees). Wait precisely on the opposite side, in the trees. When sucker comes through (even if going slowly for mine-caution) you start shooting first, damaging him \*and\* pushing him into opposite row of mines. A few more shots and it's over.

As far as safe-guarding your man goes (dead man is several times worse than dead tank) many players on the Internet need some serious help! I see the same mistakes made time and time again, by players that should have seen the light much sooner. Lesson #1: mines abound! Especially around enemy bases. Doing something with the man? Shoot the prospective location(s) first.

It's worth the ammo. By far. Lesson #2: people love to shoot little defenseless enemy builders. I know I do! When sending the man out, and there are enemy tanks around, the man should NEVER cross anything but pavement and grass (or trees, but only if you're being sneaky). Some players are so anxious to repair a pb, that they spuriously send the man over 6 craters and 4 swamp spaces. Gun fodder.

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From Tobin C. Anthony, tca712@rs710.gsfc.nasa.gov

My pb strategy is somewhat different on UDP than AppleTalk. On AppleTalk, I just sidled up to a box, move my crosshairs to full range and rest them on the opposite edge of the pb and blast away. The pb depletes a lot of your armor but it pushes you away with each shot. Finally, you are out of range but with little armor. You just wait a minute and gather wood and wait for the pb to chill. Then you can blast it straight on again providing you waited long enough.

This method all but depletes your armor but even with the chill-out

time it is the fastest way to get a pb. I found that there are no prizes for getting pb's retaining most amount of armor. The thing you want to minimize is the time spent grabbing the pb before your enemy does a pb check and comes blasting away. If one of my bases is close enough, I will even take that cool-down time to replenish my armor. I am not proud.

On UDP, I find that netlag usually works against you. You might end up killing the pb but you will get blown to bits as well. It's frustrating to blast a pb and wait there anxiously as the net grinds to a halt. You only see a few shots changing hands but you end up materializing somewhere else far away from the pb with a tantalizing but short-lived 'x' on the status board.

You can use a lot of the other methods mentioned previously to attack a pb under UDP but there is no substitute for having an ally to act as a decoy (Bolo raison d'23tre??). Two allies can start out near a friendly base and end up mowing down a swath of enemy pb's in no time.

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From Eric Hiris (hirisej@ctrvax.vanderbilt.edu)

Using Pillboxes (offensively):

- 1) spiking the enemy base(s) - that is, placing a pillbox next to the enemies base (for you novices out there, this works best if you place your pb right next to the enemy base - watch out for mines though).
- 2) attacking enemy pb's. That is using your pb as a superwall to shoot around when attacking a pb. Just be forewarned: there are vultures out there waiting to capture both your pb and the one you are attacking.
- 3) shooting your own pb when other are near - kablooie! (or is this defense?)

Bases: Despite what you might think from discussions in this newsgroup, bases are how the game is won or lost. If one team has all the bases, then everyone else has lost. Period. Therefore, take as many as you can early in the game and defend them to the best of your ability. If you are satisfied with two early in the game, well, uh, good luck. If you take 10 bases right away, you will lose some of them, but so what? You got 8 more. :)

Base placement during map making: Personal Opinion: If you are making a map, please please, please do not put bases adjacent to each other.

Forests: The importance obviously depends on the map. If there is forest everywhere, trees are almost a non-issue. If there are few forests, by all means, go hide in the enemies for a bit and when no one is around take the forest or destroy it. In some sense, it is like killing all your enemies' men if the remaining forests are guarded well. Another thing to be aware of is that water, walls, roads, and swamp adjacent to forest will eliminate or greatly reduce the regrowth of forest. Use this to your benefit or against your enemies to the best you can. As stated recently in this newsgroup, forest grows back most rapidly on grass when it is surrounded by other trees. Harvesting trees in a checkerboard pattern will result in the fastest regrowth of trees if you are concerned about ecology :)

Walls: Some people like them, some people don't. They are mostly used offensively - to hide behind when attacking a pb. Others try to use them defensively, but my experience suggests that except for special situations, walls are generally not effective in defense. The best use for the walltool is to make boats.

Roads: Nice, but if you make them, people have a tendency to mine them right away. Roads are best used to cover up gravel and mine blasts in your 'home' area, a place where people will get pb'd to death if they try a mining run. Also two roads will block a waterway that the enemy has been using (or a road and a wall)

Mines: I don't know if I want to start this again, but: 1) the most effective use of a mine (I think) is to one mine on squares that share a border with your pb. Therefore, when people try decoy tricks, the man will die trying to build wall if they are not careful. If they do manage to kill the pb, your enemy will hit the mine(s) before and or after the pb and be weakened and slowed down, allowing you time to return for easy revenge. Another note is that placing a pb on or within an area of slow terrain (swamp, mine blasts, rubble) makes it a real pain for a pb to be retrieved after it has been killed - again allowing you time to return for revenge. 2) making water ways. This keeps enemy men with devious plans away from your bases. Also, in regards to the 'big mine controversy' that raged in this group recently: make waterways with mines. As of yet there are no sea mines, so you are perfectly safe going through mined enemy territory on a boat. Let them spend all their time mining! 3) Mine randomly. Yes, this counts as a strategy, I hate it, others love it, but until further notice this is a strategy, like it or not. This strategy allows you to slow the pace of the game down to almost 0. Be warned

that your enemy will do the same and the enemy may just circumvent all your mines by making a waterway. Personal Opinion: use in desperation only.

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From Robert Fullmer (fullmer@owlnet.rice.edu)

If you can't take a pillbox without dying, 9 times out of 10, or don't know how to run a two man, or are generally not quite an expert at the game yet, spike only after careful consideration and approval from teammates.

Clearly, there are cases where this rule doesn't apply (when you're not an expert but your allies are even greener, for example), but I've had problems in the past with allies that pick up two or three pills from one of my heavily fortified bases and spike them deeper than we're ready to take. We lose the pills, and if they repeat the exercise for long enough, the game.

Spiking is an art. It can make the difference when used properly, but can lose the game when misapplied. So this is a call to newbies: If you're thinking about spiking with a pillbox you didn't just capture yourself, check it out with your allies first.

----- End of alt.netgames.bolo FAQ

This is the sig of the person who's SUPPOSED to be maintaining this FAQ.  
I plan to maintain it for as long as I have interest in doing so. Other  
than that, I have no connection with the author or this faq.

----- Maintained by Cory L. Scott, cls6@midway.uchicago.edu

\*\*\*\*\* Note: On blaming SLIP or PPP players

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If any thing went wrong with the link  
it was the SLIP player's fault!

I've had numerous multi player games  
on my SLIP configuration that have been  
as good as any EtherNet game I've played.

(BTW, the SLIP setup I have is 14.4k buad  
with compression turned off.)

Games really get messed up when:

- 1 ) People join in the middle of a game  
--the map load takes a severe amount of net time.  
(even for non dial in links)
- 2 ) When the link gets high traffic.  
[The internet link can lag quite a bit on its own  
and DOES, not to mention a Bolo game's own traffic.]  
[\*\*Note--A person on AppleTalk can have a person on his net  
send something to be printed causing heavy traffic  
on his end, then immediately blame the SLIP player  
who has a private link to his server!]

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If you do play SLIP:

- 1) Turn off your compression.  
(Not error correction (had one  
guy try to tell another to turn  
off error correction))
- 2) Only join games during the countdown  
phase before the game begins.  
(This goes for all players in fact, and tragically  
when some non SLIP player joins in the middle of  
a game guess who takes the heat--the SLIP player.)
- 3) Only use SLIP if you have a high speed modem  
\*\* this one's obvious \*\*\* I hope :)
- 4) If you going to blame a SLIP player for net lag, ping him  
or check his link rate in the network status window.  
You could very well be the problem and NOT him.

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