

MegaBall

COLLABORATORS

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Chapter 1

MegaBall

1.1 main

Hi! Welcome to MegaBall AGA v3.0. I hope you like this new and improved version!

Please note that this game now comes with graphics modules for both AGA-compatible and pre-AGA Amigas! So NO Amiga owner has an excuse not to get this version!

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This AmigaGuide® document covers both the registered and the shareware version of MegaBall, because they are almost identical. Documentation for the Board Editor is in BoardEd.guide .

Well don't just sit there. Click on stuff!

1.2 Quick Installation

Installing MegaBall is easier than ever. For most users, you just drag the "MegaBallAGA" drawer into your Games directory or wherever you want it installed. If you had a previous version of MegaBall installed on your system, the libraries and fonts are already in place, and you are done! Unlike previous versions of MegaBall, this one likes to be run from a full Workbench, not a special boot disk.

Inside the drawer you will find the game's icon and a few other things. You should see the graphics modules, "MegaBall.Gfx.AGA" and "MegaBall.Gfx.non-AGA". You can erase whichever of these graphics modules does not apply to your system. Don't erase it from an original copy of the registered disk of course (you should leave that disk write-

protected), but you can erase the un-needed gfx file from your hard drive.

**** NOTE **** To use the AGA graphics module, you ***MUST*** have Workbench 3.0 or higher! I have heard about boards like "Retina" that provide "AGA emulation" on older Amigas under 2.0 or 2.1. MegaBall will have to use the non-AGA graphics on these systems, because for AGA graphics, MegaBall requires some 3.0-only OS calls (from graphics.library and datatypes.library). This should not affect any A1200 or A4000 owners (those machines use WB3.x).

* If you have a system that needs mode promotion to deal with low-bandwidth displays, and you have trouble mode-promoting MegaBall, try using the MODEID setting.

* You can tell which graphics file has been loaded by looking at the multi-color "MegaBall" logo on the title screen. If it just says "MegaBall," you are using old OCS/ECS graphics. But, if it says "MegaBall AGA," you are using AGA.

* If there is a disk error, low memory, file not found, or some such problem loading the AGA graphics, MegaBall may use non-AGA graphics instead (even on AGA machines).

There are a few support files that go other places. Under Workbench 3.x, all of these files are optional. Under WB 2.1 and below, one of them (iff.library) is required. To install these files, open a CLI or Shell and CD to the appropriate directory (the MegaBallAGA directory of the shareware archive, or the root of the registered user's disk).

All users type:

```
COPY fonts/MegaBall.font FONTS:
COPY fonts/MegaBall FONTS:MegaBall ALL
```

Workbench 2.x and 1.x users type:

```
COPY libs/iff.library LIBS:
```

Workbench 1.x users type:

```
COPY libs/req.library LIBS:
```

(Note: if you have asl.library v36.x or lower, MegaBall will ignore it and try to use req.library instead. This applies to people with very old versions of Workbench 2.0 (before 2.04). These people should do the above COPY for req.library).

You should now be up and running! To run the game, double-click the "MegaBall" icon. To run the Board Editor, double-click the "BoardEd" icon. What's that you say? You don't have a Board Editor? Perhaps you should read More boards, anyone?

Most of you have probably read enough stuff about installation. A few of you, however, may wish to know What system files does MegaBall use?

1.3 Tune in as Ed tries to remember what system files MegaBall uses.

This section of the DOCs is only for advanced Amiga users who like to know what's cooking on their machines. If you are trying to run MegaBall from a minimal bootup, and it doesn't work, this section may tell you why. (But note that minimal bootup is NOT recommended).

If you are a novice Amiga user, SKIP THIS SECTION.

MegaBall (and the Board Editor) use a number of system files. The files they look for varies depending on what version of Workbench you are running.

Under all versions of Workbench, MegaBall (and the editor) will look for LIBS:diskfont.library. If it finds that, it will look for MegaBall files FONTS:MegaBall.font and FONTS:MegaBall/8. If it gets those as well, it will run with MegaBall's special font, that allows some funny marks and generally looks rather cool.

MegaBall also looks for LIBS:icon.library, which it needs to decode the TOOLTYPES array in it's icon. The TOOLTYPES array holds information about where the music is stored and various other settings and options.

Under Workbench 3.0 and above, MegaBall and the editor will look for LIBS:datatypes.library. MegaBall needs datatypes to decode its graphics files (a function that is performed by LIBS:iff.library on older Workbench systems). DataTypes itself will look for a few files before it can go to work. It expects that LIBS: will be multi-assigned to SYS:Classes, making available such files as:

LIBS:DataTypes/picture.datatype

LIBS:DataTypes/ilbm.datatype

The above two files are actually found in SYS:Classes/DataTypes, but the WB 3.x startup-sequence does a multi-assign which makes them appear to be in LIBS:.. ("assign LIBS: SYS:Classes ADD").

DataTypes also looks for some things in DEVS:

DEVS:DataTypes/ILBM

DEVS:DataTypes/ILBM.info

**** Remember **** The above weirdness with multi-assign and so forth is only for Workbench 3.x machines. It is standard for those machines, so you should NOT have to worry about any of it yourself. If you bought a machine with WB 3 already installed, or if you installed WB 3 with the standard Commodore installer procedure, then the above-mentioned DataTypes system is already in place and ready to go.

Finally, if you are using WB 2.04 or higher, MegaBall will look for LIBS:asl.library, to make the file requesters. If you have WB 1.x, MegaBall will use LIBS:req.library instead (req.library is included with MegaBall).

Novice users: I warned you! But would you listen??

1.4 Rules of the game

OK. You all know how to play an Arkanoid clone, right? I don't have to

explain that you have a paddle and a ball and you must bounce the ball into some blocks to score points, right? And I certainly don't need to mention that if you let the ball miss the paddle and drop off the screen you will die, right? And I also don't need to explain about how little pieces can drift down from the blocks and if they touch your paddle they can do anything from giving you free lives to blowing you up, depending on the little pictures on the pieces as they are drifting down, right? Good. I was afraid I'd have to put a lengthy explanation here!

By the way, sometimes the ball "sticks" to your paddle. A small blue force-field appears to hold the ball in place. You can press a mouse button to release it. Also, if you get Lasers (one of the pieces), you use the mouse button to fire them. You may have Lasers and Catch at the same time, and in this case, the same press of the mouse button can both fire the lasers and release the ball. Both the left and right mouse buttons have the same effect.

see also:

- A few good keys to know
- Advanced tips for hot players

1.5 Advanced tips for hot players

If you haven't played MegaBall yet, go to it!! I describe a lot of confusing stuff in here, point values, bonuses, etc., and it's easy for the novice player to think it's all too complicated and walk away. All you need to know to start playing MegaBall is "Avoid the 'Kill' piece". After you get used to the game, come back here to get higher scores.

OK, so, you've been playing a while, and want to get better scores? Well, you came to the right place.

MegaBall has a rather complex scoring mechanism, but In My Opinion a fair one. The basic philosophy behind it all is "don't be greedy." Do you know when to catch a "Kill", or avoid a "Next board"? Do you know why some people get past more boards, but still score fewer points, than others? This section tells all!

I'll start off with the most basic functions of the scoring mechanism.

- You get points for each brick you hit with the ball or lasers. The number of points you get depends only on the speed of the ball. The ball's initial speed makes bricks worth 5 points apiece. The more time the ball spends away from the paddle, the faster the ball will travel. Points-per-brick increases with this speed, one point at a time. Note that bricks which require more than one hit give points more than once! The only exception is gold bricks (the ones you can't destroy), which never give out any points or pieces when hit.

- Any brick (even gold) caught in the blast of an Exploding Brick will give only 4 points, regardless of the ball's speed. So, it's

usually best to try to hit the bricks with the ball or lasers, rather than blowing them up. This is especially true of the many-hit gray bricks (but they're so annoying, you might want to blow them up anyway). Gold bricks should be blown up whenever possible, as otherwise they're worthless.

- Once all non-gold bricks are removed from the board, you move on to the next board, with a 100-point bonus. This is the biggest bonus MegaBall gives for any single action.

- Catching ANY MegaBall piece is worth 10 points. Right off the bat, you have an incentive to catch any piece that comes down. 10 points may not sound like much, but MegaBall doesn't hand out points in big lump sums. Take what you can get, unless it will cost you more than 10 points down the road.

Next comes a list of the MegaBall "pieces" (shown on the title screen). Almost ALL of the MegaBall pieces are good in certain situations and bad in others. If you want to catch the right ones at the right times, you need to think fast. I'm hoping that a few of these descriptions will surprise even the most experienced players.

- Slow ball

This piece, in addition to slowing down the ball, will get rid of any effects from a "Gravity ball" or "Magnetism" piece. The slowdown usually takes 4 points off the points-per-brick value. However, the ball has a minimum speed, so bricks can't be worth less than 3 points each. Slow does not have a specific timeout, where the ball "jumps" back to its original speed. Instead, the ball simply continues to get faster over time at the same rate it did before. The points-per-brick value goes right along with it. In spite of the cost, I almost always collect this useful piece, especially if the ball is moving too fast for comfort.

- Kill (you)

This piece does just that. Some people claim that the "Kill" piece is unfair because there are times when it prevents you from reaching the ball. However, most of these situations are preventable, if you aim the ball away from where a kill is coming down. And in the few times when you couldn't have foreseen the problem, what do you do? Dropping the ball isn't worth squat. So, you catch the kill and get your 10 points!

- Next board

This piece is actually worth 50 points. It moves you right along to the next board. But before you grab it, think about this: The bonus for finishing off a board (ie, without "Next board") is 100 points. If you catch a "Next board", then in addition to those 100 points, you will also be missing out on the point values of all the remaining bricks on that board. A fair trade for 50 points? Not unless the board you're on is threatening you with a lot of gold bricks, Quicksand, Gravity, etc. You did read the part above about "don't be greedy," right?

- Get a life

This piece was originally called "Free Life". But, as a former

roommate pointed out to me, that's a misnomer. It's not free! It will take away Catch, Lasers, and Brickthrough. On the bright side, it also gets rid of Quicksand, Gravity ball, and Magnetism. And of course, it gives you 10 points and a new life. Is it worth it? Depends on which of the above six pieces are affecting you, how much gold is in your way, and so on. The bottom line is, would losing your powers now cost you the life being offered? If so, stay away. Otherwise, grab it before it disappears. Think fast! ;-) Did I also mention, "don't be greedy"??

- Lasers

This piece gives you the ability to fire lasers at the bricks above, just by pressing either mouse button. Even if you already had Lasers, catching this piece again still gives you 10 points. This makes it one of the few pieces that you can always grab for without thinking about anything except whether you would drop the ball in the process.

- Expand paddle

This piece is tricky. Your paddle has a total of four different sizes. You start on size #2. This piece takes you to the next higher size from whatever size you are currently on. Size #3 is a good size (my favorite), but size #4 (the largest) is downright dangerous. At size #4, you are wider than half the screen! This makes aiming a real pain. Also you can't avoid pieces that come down the middle! But, if you are already at size #4, and another "Expand paddle" comes your way, what do you do? You guessed it, grab the 10 points. Then watch for the "Diet Pill" to make you smaller.

- Gravity ball

This piece creates an odd effect. The vertical speed component of the ball is overridden with the ball's Y-position. Translated into English, that basically means that the ball travels much faster near the bottom of the screen. It doesn't travel in a straight line; it curves down as if under the influence of... gravity!! This piece also cancels out the effects of Magnetism. The only time I collect it is when I'm suffering from Magnetism. This piece can be turned off by "Magnetism" (not recommended), "Slow", or "Get a life".

- Brickthrough

This piece makes your ball *and lasers* not notice that any bricks are in the way. They just pass right through, destroying any non-gold bricks in the process. This piece, like Lasers, is almost always good to collect.

- Catch ball

This piece allows you to "catch" the ball, with a small blue force-field. You can release it with a press of either mouse button. This piece, like Lasers and Brickthrough, is good to catch anytime it wouldn't cause you to drop the ball. Also, this piece adds its powers to those of Lasers and/or Brickthrough. A combination of all three is one of the most powerful weapons in the game.

- Zap Gold (previously known as "Remove Indestruct")

This piece does a lot of nice things for you. It gets those pesky gold bricks off the screen. It also turns one-hit-gold bricks into normal green bricks. It makes invisible 2-hit bricks become visible 1-hit bricks. It even makes 2, 3, and 4-hit gray bricks into 1-hit gray bricks. But in the process of removing all those potential hits, you lose all those potential points! If you have a few grays or invisibles, this can add up to more than 10 points in a hurry. But would fighting all that gold have cost you a life? Think fast, and I'm not going to say what else.

- New Quicksand

This piece became "New" back in version 2.1, and the name stuck. It gives you the same effect as "Catch", but there's a catch: it also does something evil to your board every time you catch the ball. All the bricks on the board sink down one square, until the lowest one touches bottom. As of MegaBall v2.1, when the lowest one hits bottom, the others start to collapse and pile up around it. As of MegaBall v3.0, if a one-hit-gold brick has a brick above it and no way to move down, it becomes a normal green brick. This prevents a pile of one-hit-golds from building up and wrecking your game. With all the bricks piled up against the bottom of the board, only an inch or so from your paddle, game play can get a bit hairy. Whether or not you should get this piece depends a lot on how badly you need "Catch". This piece can also be used to disarm a particularly nasty board, by squashing all the gold bricks at the bottom.

- Dynamite

This piece is new for version 3.0. It looks for any Exploding Bricks that might be on the board. If it finds any, it will place more Exploding Bricks around the existing ones (overwriting any non-exploding bricks that were there already). This, of course, may cost you potential points from multi-hit bricks being overwritten with exploders. Plus, it usually brings a large number of farther-away bricks into the blast range of the exploders (a very cool effect, sure, but remember that exploding a brick is only worth 4 points, whereas hitting it can be worth a lot more).

In spite of all this, I grab for any Dynamite that comes my way. I just can't get enough o' them Explodin' Bricks!

- Diet Pill

This piece is the opposite of "Expand paddle". It just moves you down to the next lower size. Very useful if you are size #4. VERY bad if you are size #2. If you are size #1, you can't get any smaller, so might as well grab your 10 points from this piece. You'll be dead soon anyway. ;-)

- Magnetism

This piece is similar to "Gravity ball". The technical description is the same, with the word "horizontal" substituted for "vertical". In other words, as the ball gets near the bottom of the screen, it curves out to the side. If you are in the right place, it looks like the ball was drawn to your paddle by a magnet. Often, however, you will find yourself in the wrong place, in which case it looks like the ball was repulsed from

your paddle by a magnet. Soon after that, it will look like you died. I usually avoid this piece unless I'm really cornered. This piece turns off the effects of "Gravity". This piece can be turned off by "Gravity", "Slow", and "Get a life".

One last bit of advice here, on aiming the ball. This may seem like a rather basic subject to be in the advanced player's tips, but a lot of people seem to have the wrong idea about how MegaBall figures out where the ball is going to go.

First of all, forget about the laws of physics. It has NOTHING TO DO with the speed your paddle is travelling when you strike the ball. Really, it doesn't!! Guess what, the angle your ball came in at doesn't make one bit of difference either. Some people don't believe me on this, no matter how many times I say it. Perhaps these people are forgetting that I wrote this game myself.

The ball's angle is decided the moment it touches the paddle. If the ball touches any part of the left half of the paddle, MegaBall will plot a course for it heading up and to the left. Likewise, if it hits the right half of the paddle, it will be aimed up and to the right. If it hit near the center of of the paddle, the angle will be a very steep one (the ball goes up much faster than it goes left or right). If it hit near the edge of the paddle, it will reflect at a very shallow angle (the ball goes left/right much faster than up). There is a smooth range of angles in between these two extremes. If you are too small (size #1), these angles will be all bunched up, and it's hard to get to the right one. If you are too big (size #4), these angles are so spread out that it's hard to put the one you need in the right place on the screen.

* Remember * If you see a bad piece starting to come down, aim the ball away from it!! Then position yourself on whichever side of the bad piece you think the ball is more likely to come down on. A lot of people get caught on the wrong side, or in a situation where the ball and a "Kill" come down in the same place, and act like they couldn't have prevented that. Not so!

If you change sizes - via Expand or Diet - your paddle will let go of the ball. This is because otherwise, the ball would appear to shoot off in the wrong direction when you released it. Remember, the reflection angle is computed when the ball strikes the paddle, not when you press the button to release a catch.

When it comes to the ball hitting bricks or the sides/top, MegaBall pays a little bit more attention to the laws of physics. Usually, the "angle of incidence equals angle of reflection" rule applies, just like light rays hitting a mirror. Gold bricks, however, follow the less-known rule "angle of incidence usually equals something pretty darned close to angle of reflection". Not many physicists are familiar with this rule. It was introduced in MegaBall v3.0 to help prevent infinite loops.

Well! Now that you know how to make really high scores, I suppose you want some funny marks to put on the score list or something. The following keys work when entering your name. They ONLY show up properly when you are using MegaBall.font, not Topaz.font!

CTRL-B : The classic symbol of a Ball and paddle.

CTRL-F : A "Frown" symbol, for low scores.
CTRL-R : Rolling eyes. Not much better.
"@ " : A smilie-face. Right-side up, not sideways :-)
"Del" : An inverse smilie, for really high scores.
"*" : A snowflake? Maybe? Or something.
CTRL-L : Love. The prerequisite cheesy heart symbol.

Plus the usual array of funny marks and characters in the extended character set. Use your "SYS:Tools/KeyShow" utility to find the rest.

1.6 A few good keys to know

The following keys ONLY work during the game:

Shift-Q : Eventually, you will have a game that gets off to a bad start and you want to abort. So be sure to remember about the SHIFT-Q key which aborts your game. In two-player mode, it only aborts the current player's game. (If it aborted the other player's game, he or she might get pretty angry).
(Also this key makes a really neat sound effect).

DEL : This key kills the current life WITHOUT killing all the remaining lives like SHIFT-Q. Also makes the really neat sound effect.

P or ESC: Pressing either P or the ESC key puts you in PAUSE MODE! This is very useful!! Press a mouse button to leave PAUSE MODE.

B : Added as of version 2.0. This is just like P and ESC except that it sends the MegaBall screen behind all other screens, making it somewhat easier to multitask.

M : This key toggles in-game music on/off. No effect on the music of the title screen or score screens.

? : The question-mark key temporarily displays the name of the last piece of music MegaBall tried to load. The upper-right of the screen may show an error code:
N/A = file not found. MEM! = not enough CHIP mem.
DISK = Disk error. BAD! = Not a proper MOD0/MOD1.

Shift-S : This key toggles sprite/bob graphics for the ball.
see Sprites and Bobs

Shift-L : This key toggles sprite/bob graphics for the lasers.
see Sprites and Bobs

The CHEAT KEYS: I'm not telling you!! (There's a new one!)
(Actually, registered users get to know the CHEAT KEYS).

The following keys work on the title screen:

Shift-Q : Exit MegaBall.

L : The L key will load a set of boards into MegaBall. What's the matter? You say it gives you a message instead of a file

requester? Perhaps you should see More boards, anyone?

- 1 : This key, or a mouse button, begins a 1-Player game.
- 2 : This key begins a 2-Player game.
- C : This key works on the "Final scores" screen, the "High Scores" screen, and the Title screen. It continues the previous game, but with score and lives reset.

And finally, the ESC key has one more function. When a tune has a "special ending" that plays when you complete a board, the ESC key can abort it. This only works AFTER the paddle was warped out and the screen has faded to black. If the tune is still going, and you have no patience whatsoever, you can push ESC to abruptly end the tune. Most tunes end quickly enough not to need this.

1.7 Sprites and Bobs

With any luck, novice users should be able to leave this alone and never have to worry about it. If you are having trouble seeing the ball or the lasers, however, you might need to mess with this.

MegaBall can use two different types of graphics for the ball and lasers. There are little graphics called "hardware sprites" that are good at appearing in front of other graphics without messing them up (the mouse pointer is a sprite). The advantage of these is speed, so they should be used on older or slower systems. However, on some of the newer systems, things like overscan and mode promotion can interfere with the display of higher-numbered sprites. So, in MegaBall 3.0, the ball and lasers can now appear as "normal" graphics moved by the blitter (I'm going to call them "Bobs" for Blitter OBjectS). This takes more time, but on fast Amigas (especially AGA machines) the results are much cleaner and more stable.

Here's how the various MegaBall graphics perform on different systems.

	Old 7 MHz Amiga	AGA Amiga (or better)
Sprites	Looks fine.	Wrong colors, unstable, or invisible.
Bobs	Flickers and breaks up.	Looks fine.

The ball and lasers can be toggled between sprites and bobs. Use whichever one looks better on your system!

The ball's graphics can be changed by Shift-S during the game. The laser graphics are changed with Shift-L during the game. The game gets their initial settings from the BALLBOB and LASERBOBS TOOLTYPES .

1.8 Music and TOOLTYPES

MegaBall now keeps many of it's settings and parameters inside the game's Workbench icon. This is done with the use of TOOLTYPES (The Amiga's standard way of passing parameters to a Workbench program).

* NOVICE USERS: * These TOOLTYPES are already set up for you. You shouldn't change them unless you know what you're doing.

To view MegaBall's TOOLTYPES, do a SINGLE-click on the MegaBall game icon, and select "Info" or "Information" from the Workbench menus. If you're confused about how to edit them, check your Amiga's manual. If MegaBall can't find one that it wants, it will use an internal default (The defaults for each one are listed with the descriptions below).

Some of MegaBall's TOOLTYPES are "booleans". The Booleans will accept "ON", "YES", and "1" for the positive response, and "OFF", "NO", and "0" for the negative response. Use whichever looks nice.

Here are the "Boolean" TOOLTYPES that MegaBall currently uses:

MUSIC=ON or MUSIC=OFF. This controls ONLY the music during the game, from the "TUNExx=" TOOLTYPES. It has no effect on other music (from TITLE, HIGH, DEAD, PAUSE, or LIFE TOOLTYPES). The music can also be turned on or off during any game by pressing the "M" key. Defaults to ON.

RANDOM=YES or RANDOM=NO. This tells MegaBall to randomize the order of the songs played during the game. Defaults to YES.

BALLBOB=YES or BALLBOB=NO. Select YES for a bob or NO for a sprite. Defaults to YES under WB 2.x and above, and defaults to NO under WB 1.x. See Sprites and Bobs .

LASERBOBS=YES or LASERBOBS=NO. This is similar to BALLBOB, but affects the lasers instead of the ball. The defaults are different: It defaults to YES under WB 3.x and above, and defaults to NO under WB 2.x and below. See Sprites and Bobs .

There is also a special MODEID TOOLTYPE.

Here are some other TOOLTYPES that MegaBall will recognize. The following ones each take the filename of a piece of music as a parameter. This piece of music MUST be MED or OctaMED music, (both MOD0 and MOD1 accepted), and no more than 4 voices. Look, folx, this is a game, not a mod player. Someday maybe I'll add support for EdPlayer, but not soon.

TITLE=<filename> The MegaBall title tune.
Defaults to MB_Music/Title.tune

HIGH=<filename> The MegaBall high score tune. Should begin with the sound of an explosion. Defaults to MB_Music/HighScore.tune

DEAD=<filename> The MegaBall game over tune. Should begin with the sound of an explosion. Defaults to MB_Music/GameOver.tune

PAUSE=<filename> This is so silly, I'm not sure why it's here. One day

I had this...uh... "idea" for a tune to play every once in a while when you paused your game. I didn't really expect Al to write this tune, but he did. So, I put the tune in. Every time you pause your game, there is a one-in-five chance it will play this silliness. (Defaults to no "pause" tune).

To specify that there should be no tune for one of these, just erase everything AFTER the "=" sign on that line. Example: If a whole line in your TOOLTYPES reads "TITLE=", it means there is no title tune. Don't make more than one entry for TITLE or any other tune.

The above four tunes, and the "LIFE" tune below, may all get pre-loaded at the start of the game, if you have enough memory. Pre-loaded tunes usually hang out in FAST ram. When the game needs to play one, it will make a temporary copy of just that one in CHIP ram. Tunes that don't get pre-loaded will try to load-on-demand like the "TUNExx=" in-game tunes (below). Load-on-demand tunes always load into CHIP ram because they need to play immediately.

The following tooltypes accept the same sort of <filename> input as the ones above, but with an optional 3-character prefix to the filename. The first character can be a "4" or a "3". "4" means this is a normal 4-voice tune (the default). "3" means that this tune only uses the upper three voices. Voice 0 is then used for sound effects, providing sound and music at the same time during the game. The second character of the prefix can be "F" or "E". "F" means this tune should fade away when the player completes a board (the default). "E" means this tune has a special ending (in position 1) that will play on all 4 voices (even if this is a "3" tune) when the player completes a board. The third character of the prefix is a separator bar ("|", produced by shift-backslash on most Amiga keyboards). It is there for visual clarity.

The coolest tunes are the "3E|" tunes, which give you both sound effects and music, and play a little fanfare when you complete a board.

LIFE=<options>|<filename> This "Extra Life" tune plays when (if?) you reach 20000 points (or a multiple of that: 40000, 60000, etc). The tune should of course be a happy-sounding one, maybe starting with some applause, as the player has just earned an extra life. Defaults to 3E|MB_Music/ExtraLife.tune

TUNE<number>=<options>|<filename> This is the big one. It is the list of all in-game music available. There are no defaults for this. MegaBall first looks for "TUNE1=", then "TUNE2=", then "TUNE3=", and so on, up to "TUNE65535=" or until it can't find any more tunes. It will use these tunes as in-game music (if MUSIC=ON). The tunes will normally be played in random order. If you set RANDOM=OFF, the tunes will play in order by <number> (which may be different from the order they appear in the TOOLTYPES array). REMEMBER: If MegaBall can't find "TUNE12=", it's not even going to look for a "TUNE13=" or a "TUNE14=". All of your tunes must be numbered sequentially with no duplicate <number>s.

Granted, this is not the most user-friendly interface. Just remember that I'm the one who has to set this up; your copy should already be configured and ready to go. If I get some free time (yeah right), I

will make a utility to handle MegaBall's TOOLTYPES in an easier and more powerful way.

Note to MOD authors

1.9 The MODEID TOOLTYPE

The MODEID TOOLTYPE is recognized by both MegaBall and the Board Editor. Remember, if you want to use the same MODEID for both programs, you must put it in both of their icons! This setting is meaningless under Workbench 1.2/1.3, so it is ignored by those systems.

If the MODEID TOOLTYPE is not found, MegaBall uses the standard display on the default monitor type. This is the default, and HIGHLY recommended.

If you have special graphics hardware or a special monitor, you may need to change MODEID. Some systems can't do a standard lo-res display (15KHz or whatever) because the video is only setup to do high-bandwidth displays or has a special monitor with strange requirements etc. See if MegaBall runs on your system before you start changing MODEID.

To pick a new MODEID, use the tiny "MBModeID" program, which should be included with your copy of MegaBall. This program requires asl.library v38 or higher (v38 comes with Workbench 2.1). It brings up a screenmode requester. Pick a mode that will give you a nice 320x200 display, one you know will work on your particular system. MBModeID will print out a line like:

```
MODEID=xxxxxxxx
```

Where the X's are a bunch of hex digits. Copy these digits EXACTLY as you see them to the MODEID TOOLTYPE of MegaBall and the editor.

(Programmers: The digits form a 32-bit number that is fed to OpenScreen() with the SA_DisplayID tag).

MBModeID likes to screen out modes that it does not think are appropriate to MegaBall. It can't screen all of the bad ones out, so be careful. If you think that MBModeID is screening out a mode you need, run it from the CLI or Shell like this:

```
MBModeID ALL
```

Specifying "ALL" tells MBModeID not to screen out any attributes. It will still screen out modes that don't do at least 32 colors. This gives you a far bigger selection of screen modes, and a much higher chance of picking one that won't work. :-)

Be careful! No sanity checking is done by MegaBall on the MODEID that you typed in. It gets passed directly to the OS. The OS does some sanity checking, and if it finds a problem, MegaBall won't be able to open a screen.

This is just one of about twenty different things that could prevent MegaBall from opening a screen. Unfortunately, MegaBall reacts to any failure of screen opening simply by trying the other graphics file, and if that also fails, bringing up the message:

"Error: Can't load graphics! No CHIP mem?"

1.10 Note to MOD authors

Here is some info that might be helpful to anyone wanting to write their own music for MegaBall:

If you compose or write music for the Amiga, you might want to put some of your tunes into MegaBall. If you write with OctaMED, this should be no problem, but remember not to use more than 4 voices (the 5-8 voice player is not in MegaBall because it would take too much CPU time away from the game). If you write with ProTracker, you can get a demo version of OctaMED that will convert your tunes (I told you already, MegaBall is a GAME, not a mod player). Most of the tunes you have already written are probably "4F|" type tunes.

The best type of MegaBall tune, however, is a "3E|" type tune. To make a tune that can use the "3E|" TOOLTYPES option, you must follow some simple rules:

1. Don't use voice 0 (the left-most track). Only use voices 1, 2, and 3. Sound effects from the game will be in voice 0.
2. The beginning of your tune ("position 0") should at some point use the \$B02 command to jump to position 2 (skipping position 1).
3. The end of your tune should have a nice loop back to somewhere near the start. You don't want the user to notice this loop if possible.
4. The second position (position 1) should contain a little fanfare or something to bring your tune to a quick finish. This "ending" will be played when the user finishes a MegaBall board. It must be fully contained in a single position/pattern. However, unlike all the other positions/patterns, this one gets to use all four voices. It should end with the effect \$FFE (stop music). Don't take too long or the user will get bored and hit ESC.
5. Test your tune in MegaBall, and then upload it to local BBSs and send it to FTP sites.

Er, well, actually, rule #5 is not technically a requirement for making a MegaBall tune. But it would be very nice of you to do it! ;-)

1.11 More boards, anyone?

Hold it! Have you tried playing MegaBallAGA yet? If not, go play it and see how much fun it is. ;-)

Yes, I played it. And I'm tired of those boards already!

1.12 What to do, if you're really tired of the built-in boards.

OK, here's the deal. It's called the "Registered MegaBall User's Disk", and here's what's on it:

- The registered version of MegaBall. Works just like the shareware version, but has a "Load" feature that allows you to load new sets of boards into it. Does not have the annoying message asking you to register. Hard-drive installable, multitasking, NOT copy protected.
- The latest and greatest MegaBall Board Editor. This amazing program makes designing boards easier than using a paint program! Challenge your friends, create a masterpiece, or just edit out those really annoying gold bricks from your least favorite board. MegaBall will keep a separate high score list for each set of boards you make. Hard-drive installable, multitasking, NOT copy protected.
- Several hundred pre-made boards for you to explore. They are divided into different sets of varying complexity and skill (so that the high scores from different skill levels don't mix).
- BOOM.BDS - This is, by far, the easiest set of MegaBall boards yet created. It is also the most explosive. It was designed for people who just can't get enough of those exploding bricks. It's a collection of 50 boards with the most interesting and fun-to-watch patterns of firey brick-action. Requires almost no skill.
- Nasty.AGA.BDS - The exact opposite of BOOM.BDS, this set of boards contains 50 of the hardest, most evil and nasty MegaBall boards ever created. "Nasty" and "BOOM" are presented separately here because they are the two extreme cases. The disk also includes plenty of boards covering a more "normal" range of skill levels, to help you build up your skills until you feel ready for the "Nasty" challenge.

So, are you interested in the above stuff? Well, there are a variety of illegal ways to get it. But, if you get it an illegal way, then I don't get any money, and I'd have to get a "real" job somewhere programming UN*X machines or something. I wouldn't be able to write any more Amiga software. That's not what you want, is it? Of course not.

Fortunately, there's a legal way to get your hands on this awesome disk. Send me just \$15 (fifteen US dollars) and it will be on its way to your mailbox. Inside the USA you can send me a personal check. Outside the USA please ask your local Post Office to make out an International Money Order for USD \$15.00. Send along with your name and address to:

Ed Mackey
PO Box 475
Wayne, PA 19087
* USA *

Be sure to request "MegaBall" as I have other software available (currently only EdPlayer, but I expect more in the future).

** MUSIC DISK AVAILABLE ** (Hard drive required). For just an additional \$5.00 (five US dollars), I will also send you a disk full of Al Mackey's music. My brother Al wrote these tunes specifically for MegaBall. All of the songs meet the special

requirements of MegaBall's in-game music (they all let you hear sound effects while the music is playing, without degrading the music). These songs are all original works, and will NOT be freely distributed. Load them onto your hard drive, and let MegaBall play them for you during the game. A little fanfare plays when you complete a board (different for each tune!). Specify "Music Disk #1" (more may become available in the future).

***** Thanks for your support!! *****

1.13 What is EdPlayer?

EdPlayer is a music player I have written. It currently only supports a few music formats (ProTracker, MED) but it has a very powerful AREXX command set, plus an especially cool user interface. The shareware price of EdPlayer is \$10.

I'm thinking about doing a massive re-write of EdPlayer. I want to add AGA graphics, RTG friendliness, support for the latest OctaMED Pro and lots of other music formats, XPK support, the ability to appear on Workbench, and lots of other cool things.

Possibly one of the coolest things I want to add to EdPlayer is sound effect support. EdPlayer, or the tiny "EdPlayer Junior" module, would be able to multitask with a game like MegaBall. Then, the game itself would not have any audio routines at all - sound or music - but would just send messages to EdPlayer. EdPlayer would be the audio system of the game, and play all of the sounds and music for it. This would have the advantage of letting game programmers everywhere easily add support for customizable music from a number of different music formats, while still playing their own sound effects. Every time EdPlayer learned a new music format, all of the games that used EdPlayer would automagically support that new format.

Unfortunately, not very many people have registered EdPlayer. Will any of these features ever get written?

1.14 Author & Copyright

Some legal stuff for MegaBall AGA:

MegaBall AGA, the MegaBall Board Editor, the MegaBall Graphics Files, the MegaBall and Board Editor documentation files, and the MegaBall Music files are all copyright ©1991-1994 by Ed Mackey, all rights reserved. The only exceptions to the above are (1) the music playing routines are mostly taken straight from the freely distributable replay routines of OctaMED Pro V4 by Teijo Kinnunen, and (2) the self-destruct sound effect.

The Board Editor and its documentation may not be distributed. The "registered" version of MegaBall, which has the ability to load board sets, may not be distributed.

The "shareware" version of MegaBall, which does not have the ability to load board sets, may be distributed under the terms given in the scroll text, shown here:

...It is freely distributable, as long as it remains unmodified, and stays with its documentation, graphics files, and other support files. Spread it via BBSs, PD disks, Fish Disks, DevWare disks, CD-ROMs, online services, and any other way imaginable, as long as all files are present and unmodified. Dealers are specifically invited to bundle this version with Amigas and Video Toasters they sell.

The "files" mentioned above are: MegaBall.guide, MegaBall.Gfx.AGA, MegaBall.Gfx.non-AGA, fonts/MegaBall.font, fonts/MegaBall/8, MB_Music/Title.tune, and any related ".info" files. These files should stay with the "shareware" version of MegaBall when it is distributed. The two library files "iff.library" and "req.library" may also travel with it.

Some legal stuff for AmigaGuide:

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NO WARRANTIES ARE MADE. ALL USE IS AT YOUR OWN RISK. NO LIABILITY
OR RESPONSIBILITY IS ASSUMED.

Some legal stuff, QUOTED directly from the OctaMED Pro V4 readme:

© The OctaMED player routines and player libraries may be freely used and ©
© distributed with both commercial and non-commercial programs. No ©
© permission is required for distributing them. ©

And some credits of my own:

All programming in "MegaBall" and "BoardEd" except the music routines:
Ed Mackey

Most graphics and all music:
Al Mackey

For the full list of greetings and thanks, you can read the infamous "scroll text" on the title screen of the game. A lot of great people are mentioned in there!

How to contact me: Send email to emackey@BIX.com
(THIS HAS CHANGED. Don't send mail to my previous "elm4" addresses, as they are gone!)
IRC nickname: "LineNoise" (not on very often).
Or call Somerton Telecomm II BBS

How to contact Al: Send email to MACKKEY@enigma.rider.edu
IRC nickname: "Mackey"

How to contact either of us via US mail:

Ed or Al Mackey
PO Box 475
Wayne, PA 19087
* USA *

1.15 History

Version 3.0 note: 11/22/93

A whole lot of stuff is new and improved in this version. Many thanks go to my registered MegaBall users. Their past contributions gave me an A3000, that could run Workbench 3.x and let me write code for AGA machines. These contributions also gave Al a new musical synthesizer and an A1200, so he could write some awesome music and design some spectacular graphics.

Below is the impressive list of improvements to MegaBall that resulted from this. Without the continued support of our registered users, upgrades on this scale would just not be possible. Thanks people!!

Some of the new features:

- * Graphics redesigned - now supports both AGA and pre-AGA machines! (Looks much better on AGA machines, of course).
 - * Music completely re-written. The old NoiseTracker code has been thrown out, replaced by the OctaMED Pro player. Al has written many new tunes to make use of it.
 - * Documentation re-written. It's more readable, more informative, and it's all in two AmigaGuide® hypertexts!
 - * Customizable music - Put your own OctaMED MODs into MegaBall!
 - * Continuous music (optional) - no need to wait for a "Music" piece.
 - * Ability to play Music and sound effects at the SAME TIME.
 - * Ability to have "special endings" on songs, that give you a little musical fanfare when you finish a board.
 - * Music loading between screens. No need for all the music to be in memory at once. Certain key tunes may be pre-loaded if memory permits.
 - * Special "Extra Life" tune plays when you reach 20000 points.
 - * Invisible ball bug - Fixed FOR THE LAST TIME. In previous versions of MegaBall, the ball was a hardware sprite (for speed). Hardware sprites do not always show up properly under all configurations, especially newer machines like AGA. So, I killed them. The ball is now a blitter object (like most other MegaBall graphics) on the new machines but can still be a sprite on the old (slow?) machines.
 - * The lasers can now be blitter objects too. This means that ->NONE<- of MegaBall's graphics depend on sprites! YAY!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
 - * There are now * 24 * new colors of MegaBall bricks, on both AGA and non-AGA systems. MegaBall boards look MUCH more colorful now!
 - * There is a new type of brick: An EXPLODING brick! You hit it, and it destroys the bricks around it. Put many exploding bricks in a row for a chain reaction!
 - * There is a new piece. The "Dynamite" piece makes a cluster of exploding bricks grow larger! This replaces the "Music" piece.
 - * The function of the "Music" piece (to turn in-game music on and off) has been replaced by the "M" key on the keyboard. More convenient.
 - * Many settings and options can now be saved in MegaBall's icon's TOOLTYPES, changeable with Workbench's "Info" or "Information" menu items.
-

- * MegaBall now supports a user-settable "MODEID" ToolType that allows it to appear on strange screen formats, to support the many different types of monitors. Read the docs before you use it!!
- * A tiny new program, "MBModeID", helps even a novice user to pick a reasonable setting for the MODEID ToolType. (Requires Workbench 2.1 of course. Older systems don't have to worry about MODEID!)
- * Imagery of several pieces reworked to be much more visible.
- * "Remove Indestruct" renamed to "Zap Gold". Easier name, same action.
- * Gold bricks can deflect the ball at slightly imperfect angles. This keeps the ball from getting jammed in an infinite loop.
- * ASL file requesters added to both the game and Board Editor.
- * Background "graphics pages" removed.
- * On AGA systems, the fades are 24-bit now. So smooth, you'll think you're watching TV and someone in the studio said "Fade to black!"
- * "Jump-to-any-board" feature finally added.
- * Board Editor upgraded to use MegaBall.font, and have the "NewLook" window borders under 2.x/3.x. Looks very nice now.
- * Board Editor now uses the same graphics modules as the game, so it will show your board in its true colors and appearance.
- * The game will automatically "skip over" any board that is completely blank. No need to fill out all 50 boards of a set. No need to create your boards in order, either.
- * Board Editor now starts up with 50 blank boards. The "default" board set has been moved to a separate file (currently MB30.BDS).

Version 2.1 note: 9/20/92

This is the first version of MegaBall to be released since I got my new Amiga 3000. I have to thank a few hundred registered users of previous versions of MegaBall for helping me afford this new hardware. I have improved some parts of the MegaBall game to work better on the 3000, without losing 1.3 compatability.

Here they are:

- * Invisible ball finally fixed.
 - * Music code modified -- should not skip notes on fast machines now.
 - * Board Editor no longer messes up the display with too-large fonts under WB 2.0.
 - * The ball still jitters a bit under 2.0 sometimes. Try removing commodities and other things from the input stream. Unfortunately there is no way I can really fix this for MegaBall. Games I make in the future will have NO hardware sprites, you can be sure.
 - * Paddle crashing through wall bug during overscan fixed. However, there is also a "bug" where on systems that used to have the paddle-thru-wall bug, clicking the left mouse button too far to the right would pause the game. This is because intuition is letting you click outside the screen -- MegaBall gets a message that the user has started using some other program, so it pauses.
This is likely to happen if you have an overscanned WB 1.3 screen, or if your overscanned WB 2.x screen is visible somewhere. It is just the way the OS works. If it happens to you, then don't use the left mouse button! The right mouse button and the left mouse button have precicely the same functions in MegaBall. So if the left is causing the game to pause at unwanted moments, use the right!
 - * A certain form of cheating (without using the cheat keys) has been brought to my attention. Some people would pause the game as the ball was coming down, think about where it was going to land,
-

position the mouse pointer over that spot, and continue the game.
These people are in for a suprise.

- * The paddle is a bit more responsive this version. I tried to accelerate it just a bit, without losing that MegaBall "feel."
- * The default board set has changed. There are 50 new boards!
- * Quicksand has changed. Muhahahha.
- * Because of the above two changes, the name of the high score file has changed from MegaBall.scores to MegaBall2.scores. This will have the effect of resetting most people's high score list for the default board set. The original boards can be found in a file in the Boards subdir called "TheOriginal.BDS". If you want to put your old high score list on this file, you should open a CLI, and type something like the following:

```
cd dh0:games/megaball      ;or wherever you have MegaBall installed
copy MegaBall.scores Boards/TheOriginal.BDS.scr
```

A lot of people asked me how to reset a high score list. All you have to do is delete or rename whatever file contains the scores. All MegaBall score files are compatible; the format has not changed.

- * Funny colors in top-left corner fixed.

Version 2.00 note:

- * Now with full file requesters via the req.library!
Special thanks also go to Ron Schlosser for sending me a disk with the req.library and its programmer's documentation, making custom board files MUCH easier to load. Probably only registered users will ever need this, because only they can make custom boards. So the game can run just fine with or without this library. You just get a stupid filename entering mechanism without the req.library.
- * SHOW-THRU BALL FIXED. The ball used to show through to all screens when multitasking. Not any more...
- * PAUSE & SEND TO BACK. The ESC and P keys have always been pause keys, but now there is a third: The B key not only pauses the game, but sends the game screen to the back. This is useful for WB 1.3 users who cannot flip through all the screens like you can with WB 2.0 or with a neat program called Flip2 (by Timm Martin and Mike Monaco).

Version 1.20 note: CHIP BARRIER BROKEN!!! YEAH!!!!

Four out of five songs can now be loaded on any 1 Meg machine (I think). All five songs can now be loaded on a machine with 512K CHIP RAM and MORE than 512K of FAST RAM. But if you only have 512K of CHIP, try not to multitask very much... MegaBall still takes LOTS of CHIP...

Version 1.1x never existed for some reason.

Version 1.01 note: I fixed a bug in the sound effect routine that caused MegaBall to sometimes crash the computer by writing to low memory. Thanx to Alex Matulich for helping me find and stomp this bug! NOTHING else has changed, i.e., no new buttons or features since the

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