

Identifying Your Xbox Revision

Here are the key points covered in this chapter:

- Revision notes
- Methods of identification
- Special/limited edition exceptions

This chapter will help you to perform the all-important step of identifying which version of the Xbox you own. This step is critical in determining what type of mod chip you will need for your Xbox and what you must do to install a mod chip (covered in the next two chapters).

Revision Notes

Before I explain how to identify your Xbox, let's discuss each of the seven revisions that have been produced at the time of this writing.

1.0

The first Xbox, 1.0, was produced in Hungary and Mexico in early to mid-2001. This version was unique in that it featured an active cooling unit (heatsink plus fan) on the GPU. The DVD-ROM was made by Thomson (see Figure 3.1), and the hard drive by Seagate (see Figure 3.2). This first version used the Conexant video chip, which was carried through revision 1.3.

1.1

The first *revision* to the Xbox, 1.1, did away with the GPU fan, leaving only a heatsink. This revision was manufactured in Mexico and China. This version also used the Conexant video chip.

1.2

The second revision to the Xbox, 1.2, was an incremental update with some different hardware used in some factories. The Philips DVD-ROM drive (see Figure 3.3) replaced the Thomson in most of the 1.2 units. Some units featured a Western Digital hard drive (see Figure 3.4) more often than the Seagate. This version also used the Conexant video chip.



FIGURE 3.1 Thomson DVD-ROM unit.

1.3

The third revision, 1.3, along with 1.4, seems to be the most common, so it may have been produced in the greatest quantities. This version saw the introduction of the Samsung DVD-ROM drive (see Figure 3.5), although Thomson and Philips models were still used throughout the production life of the Xbox in lesser quantities. This version also introduced a second Seagate drive (10GB) in some units (see Figure 3.6). This version also used the Conexant video chip.



FIGURE 3.2 First Seagate hard drive used in the Xbox.

1.4

The fourth revision, 1.4, was also produced in great quantities and was perhaps the most produced version of all. Manufactured exclusively in China, 1.4 saw the introduction of yet another Western Digital hard drive (see Figure 3.7), and featured the Samsung DVD-ROM in most cases (though not all). This version



FIGURE 3.3 The Philips DVD-ROM drive.

is identifiable by the use of a Focus video chip, the first change in the video chip since the Xbox was first introduced.

1.5

Revision 1.5 has an interesting story associated with it, though none of this information is official. Apparently, this version was produced only for a short period of time at the factory in China before it was pulled from production, and manufacturing reverted back to revision 1.4. One might assume that there was some sort of mistake in the initial production runs for 1.5 that was not detected right away. For whatever reason, both factories in China and Taiwan switched back to producing 1.4. Revision 1.5 might have seen only limited production afterward because the development of revision 1.6 came soon after. Therefore, the manufacturing date alone is not a reliable factor for determining the revision. Revision 1.5 also used the Focus video chip, and was otherwise similar to 1.4. Many mod chip makers doubt even the existence of the 1.5, believing it to be a refurbished version of 1.4 motherboards with changes made to the LPC to prevent modding. This revision is exceedingly rare, if it exists at all.

1.6

The sixth revision, 1.6, was a radical departure from prior versions with



FIGURE 3.4 The first Western Digital hard drive used in Xbox.



FIGURE 3.5 The Samsung DVD-ROM drive.



FIGURE 3.6 The second Seagate hard drive.

major changes in the Xbox motherboard. The TSOP chip containing the Xbox BIOS is no longer *flashable* (that is, updateable), meaning the usual soft hacks/exploits are not possible, and the BIOS cannot be flashed. Microsoft also removed power *and* data lines from the LPC expansion port utilized by mod chips, requiring extra effort to install a mod chip in this version. A new video chip, known as Xcalibur (with an Xbox logo), was also used in this revision. The apparent changes were meant to make the 1.6 motherboard more compact.



FIGURE 3.7 The second Western Digital hard drive (10GB).

Methods of Identification

There is no single method of identifying your Xbox revision with 100% accuracy, but by using three well-tested methods together, you will be able to determine the version of your Xbox with certainty. The methods are as follows. It is best to perform all of these tests because Microsoft doesn't print the revision number on the Xbox (that would make it too easy for modders!).

The goal of revision identification is ultimately to determine which type of mod chip you can use, so after you have determined the revision by a single test, it's a pretty safe bet that you have your revision. But just to be cautious, I recommend performing other checks of the revision to be certain.

Manufacturing Date

The manufacturing date of an Xbox is just a "suggestion" for the revision. The manufacturing date is printed on the serial number label on the bottom of the Xbox. You can see this label through a hole in the retail box (used for scanning the serial number at the cash register), so you can try to identify the revision without even removing an Xbox from the box (although a used Xbox is probably lacking a retail box in the first place).

NOTE

The Xbox BIOS is stored on an EEPROM (electrically erasable programmable read-only memory) chip so that the binary BIOS image can be updated. Xbox 1.6 BIOS chips are only EPROM, meaning they can be burned once, and after that, these chips are permanently fixed with a BIOS.

The serial number/bar code label on the bottom of the Xbox includes a “MFG. DATE” value in the format *YYYY-MM-DD*, representing year, month, and day. Table 3.1 will help you to identify your Xbox revision using the manufacturing date (although assembly line and factory appear to be more relevant factors).

TABLE 3.1 Revision by Manufacturing Date

Date Range	Revision	Location
01/2001–10/2002	1.0	Hungary
11/2002–04/2003	1.1	Hungary, Mexico
05/2003–03/2004	1.2–1.5	China
04/2004–?	1.6	China, Taiwan

Hardware Serial Number

If you are browsing the used Xboxes at your local video game store in the hope that you can buy an older Xbox that will work with your solderless mod chip of choice, you will need to use the serial number version test. But what happens if the manufacturing label has been removed? This is a fairly common occurrence that might have something to do with Xbox owners not wanting to change their Xbox Live accounts (which makes one wonder why they sold the Xbox in the first place). Here is how you can decode the hardware serial number if it is available:

LNNNNNN YWWFF

where

- L is the number of the production line within the factory.
- NNNNNN is the number of the Xbox produced during the workweek.
- Y is the last digit of the production year.
- WW is the number of the week of the production year.
- FF is the code of the factory where the Xbox was manufactured, according to Table 3.2.

TABLE 3.2 Factory Codes

Factory	Location	Revision
02	Mexico	1.0 or 1.1
03	Hungary	1.0
05	China	1.2 (or later)
06	Taiwan	1.2 (or later)

Because the factory code method is not very reliable (because there may be some codes missing from this list), let’s try another method of identifying your Xbox to narrow things down a bit. See Table 3.3 for a serial number check that is accurate but not very specific. If your code is not shown, I would recommend using the closest code to yours, leaning toward the previous one if there is a value above and below your code.

TABLE 3.3 Serial Number Check

Serial Number	Revision
LNNNNNN 20 WFF	1.0
LNNNNNN 21 WFF	1.0
LNNNNNN 23 WFF	1.0, 1.1
LNNNNNN 24 WFF	1.1
LNNNNNN 25 WFF	1.1
LNNNNNN 30 WFF	1.2
LNNNNNN 31 WFF	1.3
LNNNNNN 32 WFF	1.3
LNNNNNN 33 WFF	1.4, 1.5
LNNNNNN 42 WFF	1.6

Video Chip Verification

If you have used the preceding two checks to narrow down what you think your Xbox revision is, the next two steps will really give you a concrete answer to the question. Assuming you have already opened your Xbox per Chapter 2, “Disassembling Your Xbox,” you should look for the video chip. It is located on the motherboard, directly below the video output port on the back of the Xbox (see Figure 3.8). This is another excellent verification of the revision, as Table 3.4 illustrates, and may be considered foolproof.

TABLE 3.4 Video Chip Identification

Video Chip	Revision
Conexant	1.0, 1.1, 1.2, 1.3
Focus	1.4, 1.5
Xcalibur	1.6

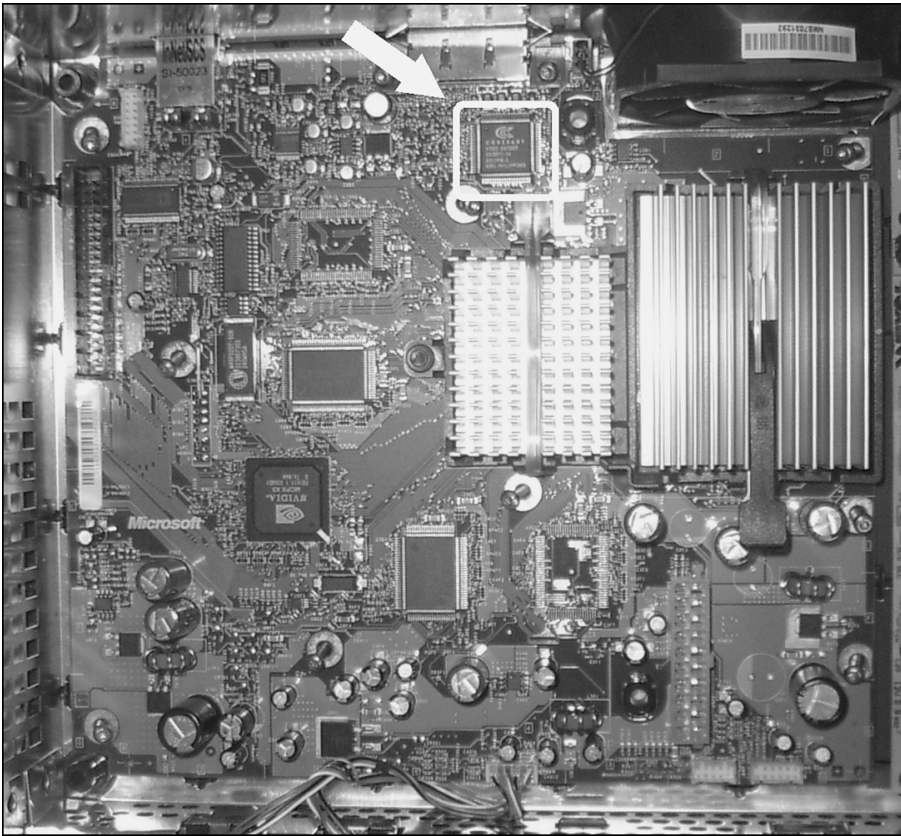


FIGURE 3.8 The location of the video chip on the Xbox motherboard.

Xbox BIOS Version Number

You can use one final check to verify the Xbox revision that you own (or are considering buying): Look at the BIOS kernel version and dashboard version numbers. To view these numbers, boot the Xbox in dashboard mode (by powering up without a disc in the DVD-ROM drive). Go to Settings and then System Info. A disclaimer will scroll down and will eventually show you two version numbers: a K: value for the kernel and a D: value for the dashboard. You can perform an unscientific check of the revision using Table 3.5.

If you are at a video store, this may be your only way of double-checking the revision. Note that revision 1.0 of the Xbox did not provide these numbers, so if you can't find them, it is *definitely* a 1.0. Nevertheless, I will include the 1.0 kernel version in Table 3.5. Some kernel versions may not be shown in this list; if yours is not shown, you can base it on the nearest version to yours. Along with the other noninvasive tests, this should give you a *clear* idea about the revision for a particular Xbox.

TABLE 3.5 BIOS Kernel Versions

Xbox Revision	Kernel Version
1.0	3944,4034,4036,4627
1.1	4817,4972
1.2–1.5	5101,5713
1.6	5838

Special/Limited Edition Exceptions

Microsoft has released several special versions of the Xbox that you should know about because they may (or may not) conform to the guidelines presented in the preceding sections. More than likely they do, but if you own a special or limited edition Xbox, you will be able to quickly and easily identify the revision. The special/limited editions were produced at a single plant for a short time, so they are all identical in hardware.

Halo Special Edition

If you own the Halo Special Edition Xbox with a translucent green case (see Figure 3.9), your Xbox is a revision **1.2**. If you want to verify the revision, you can check the production numbers. This Halo SE Xbox was manufactured *only* in China, during weeks 8 and 9 of 2003, on the manufacturing lines 2, 5, and 6! (How’s that for detail?). In other words, if you have a Halo SE Xbox, the serial number should look like one of the following:

- 2NNNNNN 3WW05
- 5NNNNNN 3WW05
- 6NNNNNN 3WW05

And WW should be 08 or 09. I would like to advise you that it is possible for this version to be manufactured again, in which case you might find a newer Halo SE Xbox.

Limited Edition Crystal Pack

The Limited Edition Crystal Pack (shown in Figure 3.10) was a unique and collectible Xbox, released only in Europe to improve sales. If you own this edition, you may be certain that it is revision **1.4**. This edition was manufactured in China, in week 6 of 2004, on production line 4. In other words, the serial number should look like this:

- 4NNNNNN 30605



FIGURE 3.9 The Halo Special Edition Xbox.

There are rumors that a more recent manufacture of the Crystal Xbox has taken place, and if this is true, then it's possible there might be some of these units with a 1.6 revision motherboard.



FIGURE 3.10 The Limited Edition Crystal Xbox.

Additional Exceptions

I have encountered some very strange exceptions to the guidelines presented in this chapter, where a motherboard has the telltale signs of two different revisions at the same time. Take Figure 3.11, for example. This Xbox was purchased from a retail store in late 2003, but it has signs of being a 1.0 as well as a 1.1 at the same time. The heatsinks are not shown in this figure, but take my word for it, there was no heatsink fan on the GPU, indicating that this is a 1.1 or later.

However, look at the filled-in LPC holes in this figure, along with that very strange sticker on the motherboard, spelling out clearly that this Xbox has a 4034 kernel. That kernel, according to Table 3.5, should be in a 1.0. But here we have what appears to be a 1.0 with no heatsink fan. This is very strange, indeed! Expect to find exceptions to the rule like this case, which is not a problem at all because any 1.0 to 1.4 Xbox will accept a solderless mod chip adapter (which is all that matters).

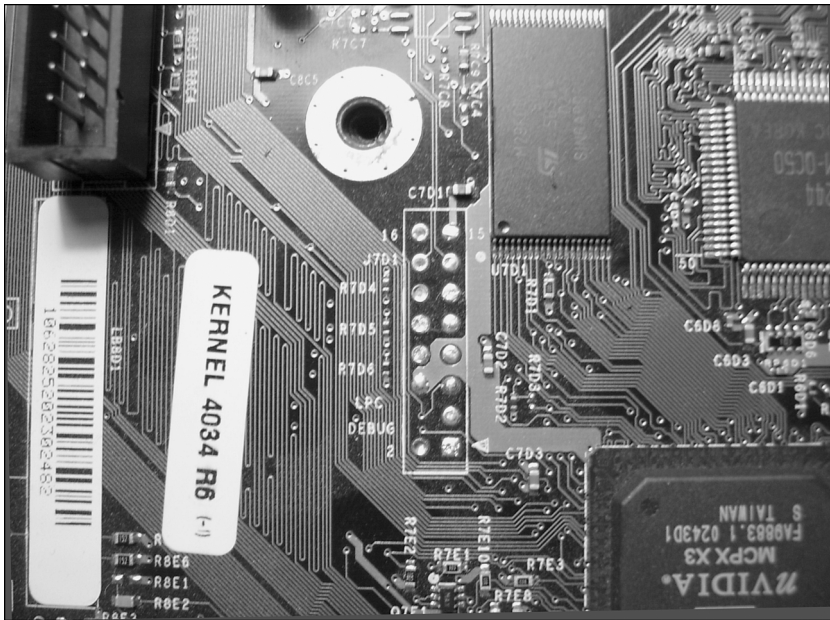


FIGURE 3.11 This unusual 1.0 has no fan on the GPU heatsink (not shown).

Summary

This chapter should help you to identify your Xbox while browsing serial numbers of used Xbox consoles at a store or via eBay or other online sites. If you already own an Xbox, the additional tables and figures will help you to determine exactly which Xbox revision you own.

Much of the information in this chapter was found online at www.xbox-linux.org and www.xbox-scene.com. I would like to thank the owners and users of these sites for the valuable information they provided.

PART II

Mod Chips

- CHAPTER 4** Introduction to Xbox Modding
- CHAPTER 5** Installing a Solderless Mod Chip
- CHAPTER 6** Installing a Soldered Mod Chip