

A statement to the xbox community. About xbox Capacitors.

I'll start with this. https://en.m.wikipedia.org/wiki/Capacitor_plague?wprov=sfla1

Now, Thank you to these xbox communities.

Xbox evox images files and xbmc4gamers boot video plus rough guide on building images for your aladdin chip:

<https://drive.google.com/open?id=1KHZ62HoghUJpBxToDkxW0YoFsiGE717M>

Hi. I have been in the xbox community for about two years. Fairly new. I have had help, and found some members to be extremely awesome, helpful and friendly. RMX members like James Reed, people like John S Allen, Josh Lineberry, Frank Da RetroPro, David Spain, Natalie, Blake, Wendle, and John Conn and Ciann Cunningham. These are the main people who spring to mind when I think about the great xbox community being friendly and helpful. There are more, but it's a pretty long list. Seems pretty awesome Right? Well it is. The XBOX mod community is awesome.

In general, I try to be helpful, share freely, and overall be a kind, helpful person, like many of you are/were to me.

I have come under fire for my stance on 1.6 clock capacitors, and *using too much hot glue inside boxes where you can't see it* I am sorry that we have disagreed. I will no longer recommend removing or bridging ANY Caps. If you say you want to do it right, replace them all. I also no longer use hot glue if anyone cares lol

I am going to list here the capacitors, purchase links and some reference videos, so hopefully the entire issue is somewhat laid to rest. Links to great places to purchase capacitors and Nemesis's compiled list of capacitors are below.

Again, Thank you to this excellent community. If anyone needs a file or help, and I am able I will help.

Capacitor replacement guide

<https://capacitorlab.com/replacing-motherboard-capacitors-howto/>

Link to a great video on capacitor life

<https://www.youtube.com/watch?v=yGHV7xeKGcE>

Link to helpful videos about what a capacitor is and the common uses.

<https://www.youtube.com/watch?v=L6cgSxpGmDo>

Links to helpful videos about Thru hole capacitor replacement

<https://www.youtube.com/watch?v=YCSNWi3UHf4>

<https://www.youtube.com/watch?v=x8AO3zAaVXc>

Soldering tip care and general soldering tips

https://www.youtube.com/watch?v=_exJEnZN9QI&t=20s

<https://www.youtube.com/watch?v=gq-q64ncivM>

<https://www.youtube.com/watch?v=Pn6ZESPgxpQ>

https://www.youtube.com/watch?v=_exJEnZN9QI

Drag solder / ram upgrade

<https://www.youtube.com/watch?v=Ee3SsR97EKA>

<https://www.youtube.com/watch?v=0xMn2JFd5GU&t=627s>

LINKS TO PURCHASE CAPACITORS

<https://www.digikey.com/>

<https://www.arrow.com/en/products/eeu-fs0j332b/panasonic>

<https://www.mouser.com/>

RAM PURCHASE LINKS

https://a.aliexpress.com/_cnNpSU

I HIGHLY recommend using HIGHER voltage rated capacitors if possible.

ShoutOut To Nemisis for providing the Cap sizes etc. here

<https://www.xbmc4xbox.org.uk/forum/viewtopic.php?f=13&t=4222>

<https://www.xbmc4xbox.org.uk/forum/viewtopic.php?f=13&t=5262&p=34801&hilit=Mobo+Caps#p34801>

Understanding and knowing the bad/good capacitor brands 2x links here

<https://www.badcaps.net/forum/showthread.php?t=388>

<https://www.badcaps.net/forum/showthread.php?t=414>

Example of rating of capacitor at a sale site.

MANUFACTURER

[*Panasonic*](#)

PRODUCT CATEGORY

[*Capacitor Aluminum*](#)

DESCRIPTION

Cap Aluminum Lytic 3300uF 6.3V 20% (10 X 20mm) Radial 5mm **2180mA 10,000h**

105°C Bulk

Disclaimer, I have always been bad at math but this is what I think my math means:

The NEWEST original xbox is 14 years old. 14 years times 12 months times 30 days times 24 hours, if on the entire time it's theoretically possible an ogxbox could have been ran 120,960 hours give or take.. On a capacitor that is rated for 10,000 hours.... If used only 2 hours a day it would be at 10,080 hours. Anyway, replace those capacitors folks! (if you can and care about your device lasting another 14 years)

Copied/backed up from NEMISIS post on xbmc4xbox forum.

<https://www.xbmc4xbox.org.uk/forum/viewtopic.php?f=13&t=5262&p=34801&hilit=Mobo+Caps#p34801>

layout

Number of Caps x volts Farad rating (physical size)

Versions 1.0 to 1.1

Mobo Caps:

13x 25v 22uf Nippon SME (5x11mm)

6x 25v 100uf Nichicon VR (6x11mm)

3x 16v 1500uf Nichicon PW (12x20mm)

2x 10v 3300uf Nichicon PW (12.5x25mm)

1x 10v 680uf Nichicon PW (8x15mm)

5x 6.3v 1500uf Nippon KZE (10x20mm)

1x 1F 2.5v SuperStor (N/A)

SMD Caps:

1x 16v 47uf Nichicon WX (6.3x5.4mm)

6x 16v 10uf Nichicon WX (3x5.4mm)

240v PSU **Caps:** (Delta DPSN-96AP-1)

1x 50v 10uf LTEC ST (5x11mm)

1x 25v 47uf LTEC LZG (5x11mm)

2x 25v 100uf Nippon KY (6x11mm)

2x 200v 330uf Taicon VZ (18x35mm)

3x 10v 2200uf Nippon KY (10x30mm)

1x 16v 1000uf Nippon KY (10x20mm)

*Fuse 1x 250v 3.15A Bel (8.35x7.7mm)

240v PSU Caps: (FoxLink FTPS-0002 Rev. B)

1x 400v 180uf TEAPO? (25x30mm)

2x 25v 100uf TEAPO? (6x11mm)

1x 1000uf 16v TEAPO? (10x20mm)

*Fuse 1x 250v 2.5A ? (8.35x7.7mm)

Could not identify the following caps:

C23, C19, C17, C21, C15, & unknown C??

RAM:

Samsung

K4D263238M-QC50

Versions 1.2 to 1.5

Mobo Caps:

13x 25v 22uf Nichicon VR (5x11mm)

7x 25v 100uf Nichicon VR (6x11mm)

3x 6.3v 3300uf Nichicon HM (10x25mm)

2x 10v 3300uf Nichicon PW (12.5x25mm)

1x 16v 680uf Nichicon HM (8x15mm)

3x 6.3v 1500uf Nichicon HD (10x20mm)

1x 1F 2.5v SuperStor

SMD Caps:

1x 16v 47uf Nichicon WX (6.3x5.4mm)

5x 16v 10uf Nichicon WX (3x5.4mm)

240v PSU Caps: (Delta DPSN-96BP-1)

1x 400v 150uf Rubycon USR (22x35mm)

3x 50v 0.22uf Taicon VX (4x7mm)

2x 25v 100uf Taicon PW & VX (6x11mm)

1x 25v 47uf Taicon VX (5x11mm)

3x 10v 2200uf Ltec LZG (10x30mm)

1x 16v 1000uf Ltec LZG (10x20mm)

*Fuse 1x 250v 3.15A ? (8.35x7.7mm)

RAM:

Samsung

K4D263238D-QC50 (v1.2-1.3)

K4D263238F-QC50 (v1.4-1.5)

Versions 1.6 to 1.6b

Mobo Caps:

11x 25v 22uf Nichicon VR (5x11mm)

3x 25v 100uf Nichicon VR (6x11mm)

3x 6.3v 1500uf Rubycon ZL (10x20mm)

5x 6.3v 3300uf Rubycon MBZ (10x23mm)

1x 1F 2.5v Nichicon UC (N/A)

SMD Caps:

1x 16v 47uf Nichicon WX (6.3x5.4mm)

3x 16v 10uf Nichicon WX (3x5.4mm)

240v PSU Caps: (Samsung 8794V-0 Rev. 1.0)

3x 50v 1uf CapXon GS (5x11mm)

1x 50v 0.47uf CapXon GS (5x11mm)

1x 50v 10uf CapXon GS (5x11mm)

1x 50v 22uf CapXon GS (5x11mm)

1x 10v 2200uf CapXon KM (10x20mm)

1x 25v 470uf CapXon GL (10x20mm)

1x 10v 3300uf CapXon GL (10x30mm)

2x 200v 330uf CapXon GS (18x35mm)

*Fuse 1x 250v 3.15A ? (8.35x7.7mm)

Re: Repairing Original Consoles

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Post

by **NeMesiS** » Sat Sep 12, 2015 10:51 pm

I made some better observations...

Versions 1.0 to 1.1

Mobo Caps:

13x 25v 22uf Nichicon VR

6x 25v 100uf Nichicon VR

3x 16v 1500uf Nichicon PW

2x 10v 3300uf Nichicon PW

1x 10v 680uf Nichicon PW

5x 6.3v 1500uf Nichicon HD (Solid/Wet)

1x 1F 2.5v SuperStor!

SMD Caps:

1x 16v 47uf

6x 16v 10uf

PSU Caps:

1x 50v 10uf Ltec (Gold)
1x 25v 47uf Ltec (Blue/Green)
2x 25v 100uf Nippon KY
2x 200v 330uf Taicon?
3x 10v 2200uf Nippon KY
1x 16v 1000uf Nippon KY

RAM:

Samsung 211
K4D263238M-QC50

Versions 1.2 to 1.5

Mobo Caps:

13x 25v 22uf Nichicon VR
7x 25v 100uf Nichicon VR
3x 6.3v 3300uf Nichicon HM
2x 10v 3300uf Nichicon PW
1x 16v 680uf Nichicon PW
3x 6.3v 1500uf Nichicon HD (Solid)
1x 1F 2.5v SuperStor!

SMD Caps:

1x 16v 47uf

5x 16v 10uf

PSU Caps:

1x 400v 150uf Rubycon USR

3x 50v 0.22uf Taicon?

2x 25v 100uf Taicon?

1x 25v 47uf Taicon?

3x 10v 2200uf Ltec (Blue/Green)

1x 16v 1000uf Ltec (Blue/Green)

RAM:

Samsung 404

K4D263238F-QC50

Version 1.6

Mobo Caps:

11x 25v 22uf Nichicon VR

3x 25v 100uf Nichicon VR

3x 6.3v 1500uf Rubycon ZL (Wet)

5x 6.3v 3300uf Rubycon MBZ

SMD Caps:

1x 16v 47uf

3x 16v 10uf

PSU Caps:

3x 50v 1uf CapXon?

1x 50v 0.47uf CapXon?

1x 50v 10uf CapXon?

1x 50v 22uf CapXon?

1x 10v 2200uf CapXon?

1x 25v 470uf CapXon?

1x 10v 3300uf CapXon?

2x 200v 330uf CapXon?

RAM: N/A

Notes and Findings:

* Brands may vary slightly but I've noticed mostly good caps are used on all versions.

* RAM versions may also vary slightly.

* Versions 1.0 to 1.5 have the bad PowerStor clock capacitor which tends leak acid

However on the 1.6 mobo a Nichicon supercap has been used. I'm assuming to address the leak.

* 1500uf 6.3v - Versions 1.1 to 1.5 use a Solid Capacitor, where 1.0 & 1.6 use a Wet Capacitor.

* Out of 2 Version 1.1 consoles, one had been given 22uf 50v caps instead of 22uf 25v.

- * 22uf 25v caps are mostly used within all xbox versions
- * Brands of the SMD caps could not be identified.
- * Version 1.1 has a missing 3300uf 10v cap but its still allocated on the board.

Questions:

* Could a higher voltage cap be used alternatively whilst maintaining the same capacitance? eg. 10v instead of 6.3v, 50/25v or 16/10v YES and SHOULD

* Would there be any advantage in doing so, extended life expectancy or better performance? Less chance of exploding, yes

* When selecting replacement capacitors, is it better to have a higher ripple current and lower leakage current?

(I found a Nichicon distributor, It wouldnt cost much extra to upgrade the capacitors from PW to HD or HE Series caps)

* RAM: Looking at two consoles, Version 1.0 has "Samsung 211 / K4D263238M-QC50"

And the Version 1.5 has "Samsung 404 / K4D263238F-QC50" I get the model number 1.0 has M and 1.5 F

* But what do the 211 and 404 mean, are they significant in any way?

* When buying RAM chips do I need to match the M/F variants or the unknown number?

* With the 1500uf 6.3v caps, Does it matter if Solid or Wet caps are used?

* Could I fill the missing cap on the version 1.1 **mobo**, mentioned earlier?

Part Sources:

* Mentioned earlier that I found a Nichicon Distributor which has all the **caps** I could want.

* Found a source for RAM chips, about \$9USD / \$14AUD for 5 pieces including postage.

* Also come across a source for replacement lasers for Samsung, Philips and Thomson drives.

Last edited by [NeMesiS](#) on Sat Sep 12, 2015 10:56 pm, edited 1 time in total.