

NB: Known issue - freeze at autostart of cartridge. Investigation pending, sorry for inconvenience

UBoot64 v2



Boot menu for C64 Ultimate enabled devices — v2 (Oscar64 rebuild)

Contents

[Version history and download](#)

[Instructions](#)

- [Prerequisites](#)
- [Installation](#)
- [Upgrading from v1](#)
- [First run](#)
- [Add start options via the Filebrowser](#)
- [F1: Filebrowse menu](#)
- [F2: Information](#)
- [F3: Edit / re-order / delete](#)
- [F5: Configuration](#)
- [F7: Quit to BASIC](#)

[Credits](#)

UBoot64



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UBoot64: Boot Menu for Ultimate devices
Starting... v2.0.0-20260428-1846

Detecting and reading...
Ultimate Command Interface detected.
DOS version: ultimate-ii dos v1.2



REU detected, size: 16384 KB
Reading slot data to 24480.
Recognised Ultimate devices:
Drive A: ID 8 Pow On, 1541
Drive B: ID 9 Pow On, 1581
IDs needing manual power switching: Yes
Active IEC IDs: 08 09 11

Updating UII+ time from NTP Server.
Ultimate datetime: 2026/04/29 10:14:59
Connecting to: pool.ntp.org
Sending NTP request

```
UBoot64: Boot Menu for Ultimate devices
Welcome to your C64. 2026/04/29 10:15:01
```

```
0 CBM Commander
1 Next Level (Demo)
2 GDos64
3 BluREU
4 BluREU 3D
5 Game of Thrones (Music)
6 C64OS
7 Cyberchip
```

```
F1 Filebrowser      F2 Information
F3 Edit/Order/Del  F5 Configuration
F7 Quit to BASIC
Make your choice.
```

Version history and download

[\(Back to contents\)](#)

Version 2.0.1 - 202604230

- Fix for freeze at startup (error in cartridge init code)

Version 2.0.0 - 20260429:

- Complete rebuild using the [Oscar64](#) cross-compiler (replaces cc65)
- Directory listings stored in REU memory, enabling:
 - much larger directory support
 - long filename support: maximum filename size now 50
 - long pathname support: maximum pathsize now 255. NB: The maximum is for the complete path, not for every directoryname in the path separately.
- Configurable colour scheme (F5 → F6 in configuration menu)
- Verbose or silent startup option (F5 → F2 in configuration menu)
- Splash screen in Information menu
- Configuration upgrade tool (`uboot_upd12.prg`) included for users upgrading from v1
- Various stability and bug fixes

Version 0.91 - 20230922:

- First public alpha (v1, cc65 build)

Instructions

Prerequisites

[\(Back to contents\)](#)

- Ultimattell+ (U2+) cartridge installed on a real C64, or an Ultimate 64 / Commodore 64 Ultimate
- For Gideon's Logic products: Firmware at version 3.4 or higher (to have access to the UCI DRVINFO command — [firmware page](#))
- For Commodore Ultimate products: Supported starting from initial firmware
- RAM Expansion Unit (REU), minimum 128 KB, needs to be enabled
- Ultimate Command Interface needs to be enabled

Installation

[\(Back to contents\)](#)

- Download the ZIP file with the latest build
- In the ZIP file you will find these instructions, a `.crt` file (the cartridge image) and a `uboot_upd12.prg` file (configuration upgrade tool for v1 users). Unzip contents to a temporary location.
- Transfer the `.crt` file to the `/Flash/carts` directory on your Ultimate device. Either transfer via FTP, or place it on the USB storage, browse to it in the UI filebrowser, press **C= + C** to copy, navigate to `/Flash/carts` and paste with **C= + V**.



*** Ultimate 64-II (V1.49) 3.14d ***

carts	DIR
html	DIR
roms	DIR

/Flash/

-F3=HELP-

*** Ultimate 64-II (V1.49) 3.14d ***

ar5ntsc.crt	CRT	32K
ar5pal.crt	CRT	32K
epyx.crt	CRT	8K
final3.basic.crt	CRT	64K
final3.desktop.crt	CRT	64K
kcs.crt	CRT	16K
kcs_1985_v2.crt	CRT	16K
rr38ntsc.crt	CRT	64K
rr38pal.crt	CRT	64K
rr38q_cnet.crt	CRT	64K
ss5ntsc.crt	CRT	64K
ss5pal.crt	CRT	64K
tar_ntsc.crt	CRT	64K
tar_pal.crt	CRT	64K
uboot64.crt	CRT	64K

/Flash/carts/

-F3=HELP-

- Select the `.crt` file as the cartridge to start automatically: in the Ultimate UI press **F2**, navigate to **Cartridge and ROM Settings**, press **RETURN** twice to edit the **Cartridge** option, and select **uboot64.crt** from the drop-down.

*** Ultimate 64-II (V1.49) 3.14d ***

```
-- Audio / Video --
Video Configuration
Audio Mixer
Speaker Mixer
LED Lighting

-- System Setup --
Memory Configuration
Cartridge and ROM Settings
Turbo Settings
Machine Tweaks

-- User Interface --
User Interface Settings

-- SID Related --
SID Sockets Configuration
SID Addressing
UltiSID Configuration
SID Socket 1: ARMSID
```

/Flash/carts/

-F3=HELP-

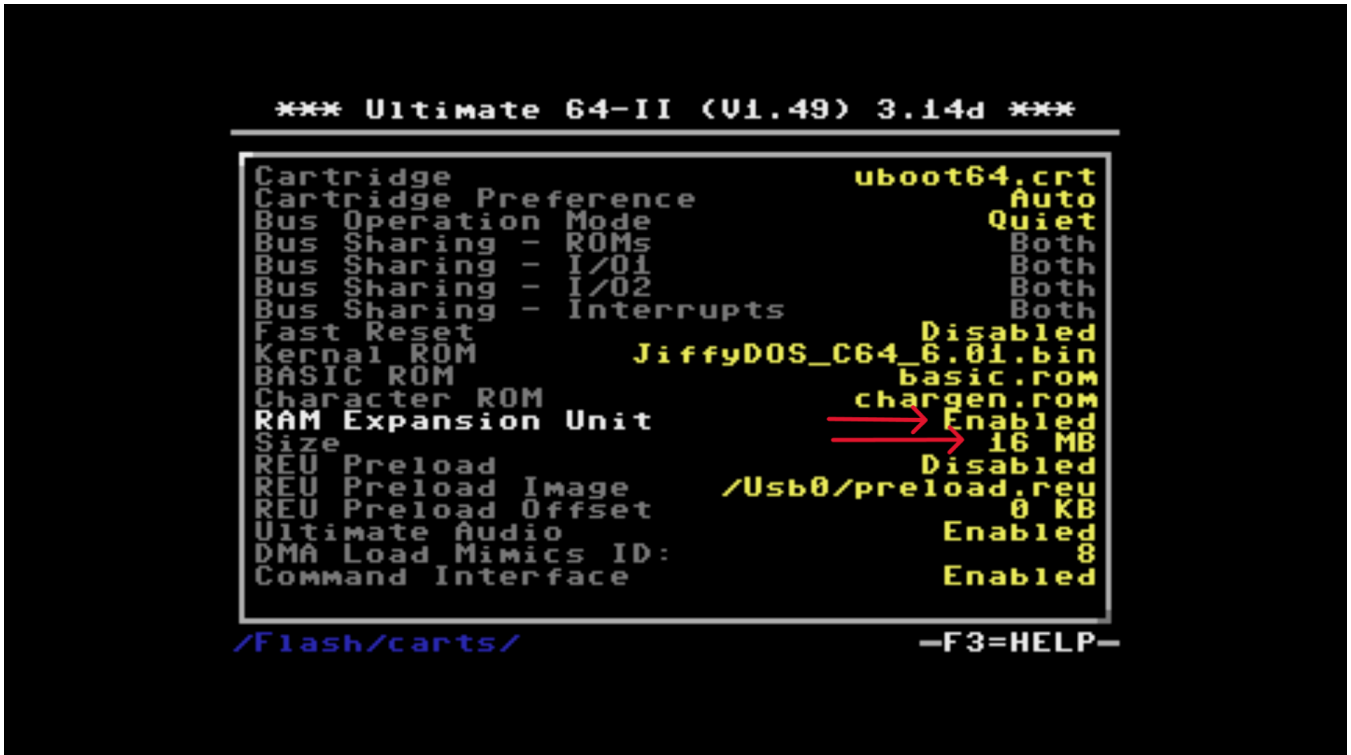
*** Ultimate 64-II (V1.49) 3.14d ***

```
Cartridge → uboot64.crt
Cartridge Preference Auto
Bus Operation Mode Quiet
Bus Sharing - ROMs Both
Bus Sharing - I/O1 Both
Bus Sharing - I/O2 Both
Bus Sharing - Interrupts Both
Fast Reset Disabled
Kernal ROM JiffyDOS_C64_6.01.bin
BASIC ROM basic.rom
Character ROM chargen.rom
RAM Expansion Unit Enabled
Size 16 MB
REU Preload Disabled
REU Preload Image /Usb0/preload.reu
REU Preload Offset 0 KB
Ultimate Audio Enabled
DMA Load Mimics ID: 8
Command Interface Enabled
```

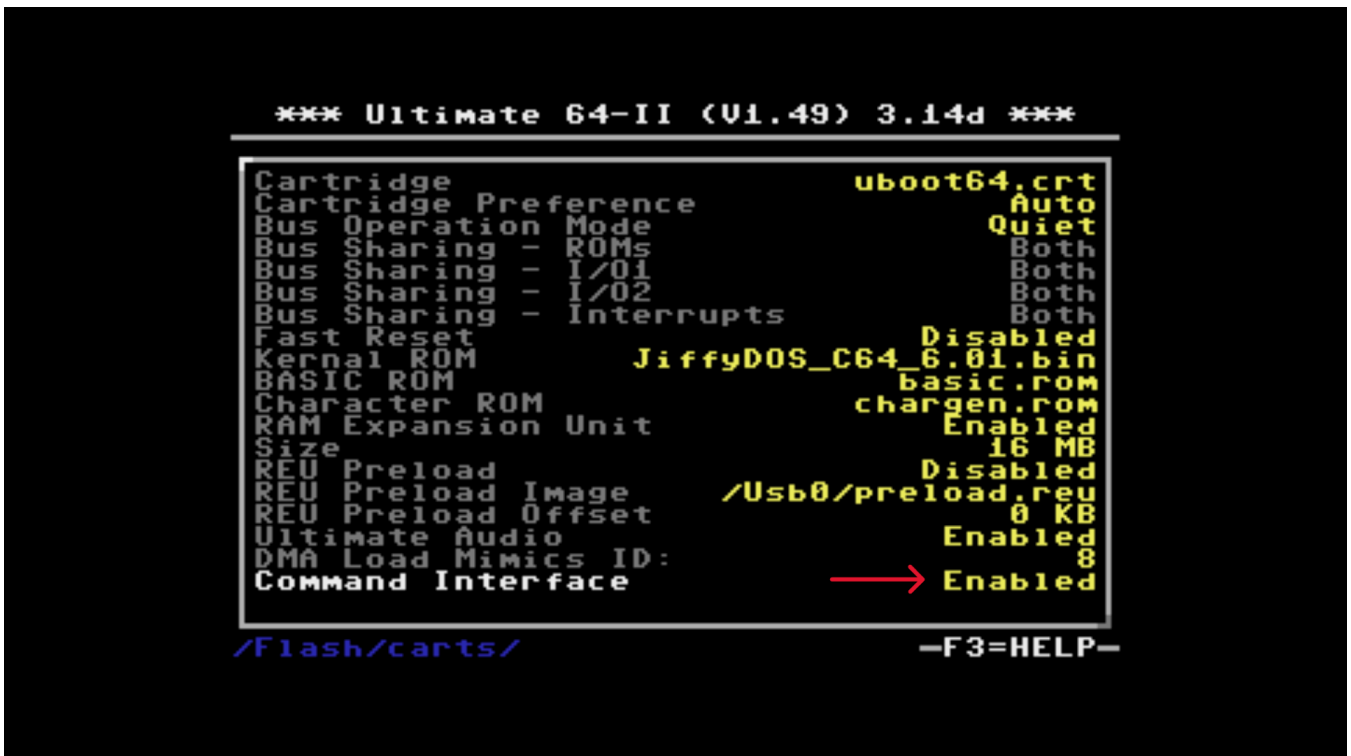
/Flash/carts/

-F3=HELP-

- In the same **Cartridge and ROM Settings** menu, ensure that RAM Expansion Memory (REU) is enabled. Size does not matter as even the smallest possible size of 128KB will be sufficient.



- In the same **Cartridge and ROM Settings** menu, ensure that the Ultimate Command Interface is enabled.



- Press **STOP** to leave the configuration menu and **RETURN** to confirm saving to flash.
- Power cycle your device. UBoot64 should now start automatically.
- Stop autostarting by deselecting the cartridge via the same procedure and choosing **None** or another image.

Upgrading from v1

[\(Back to contents\)](#)

If you have an existing v1 configuration (slot and config files), you must run the upgrade tool before using v2 for the first time. The slot file format changed between v1 and v2.

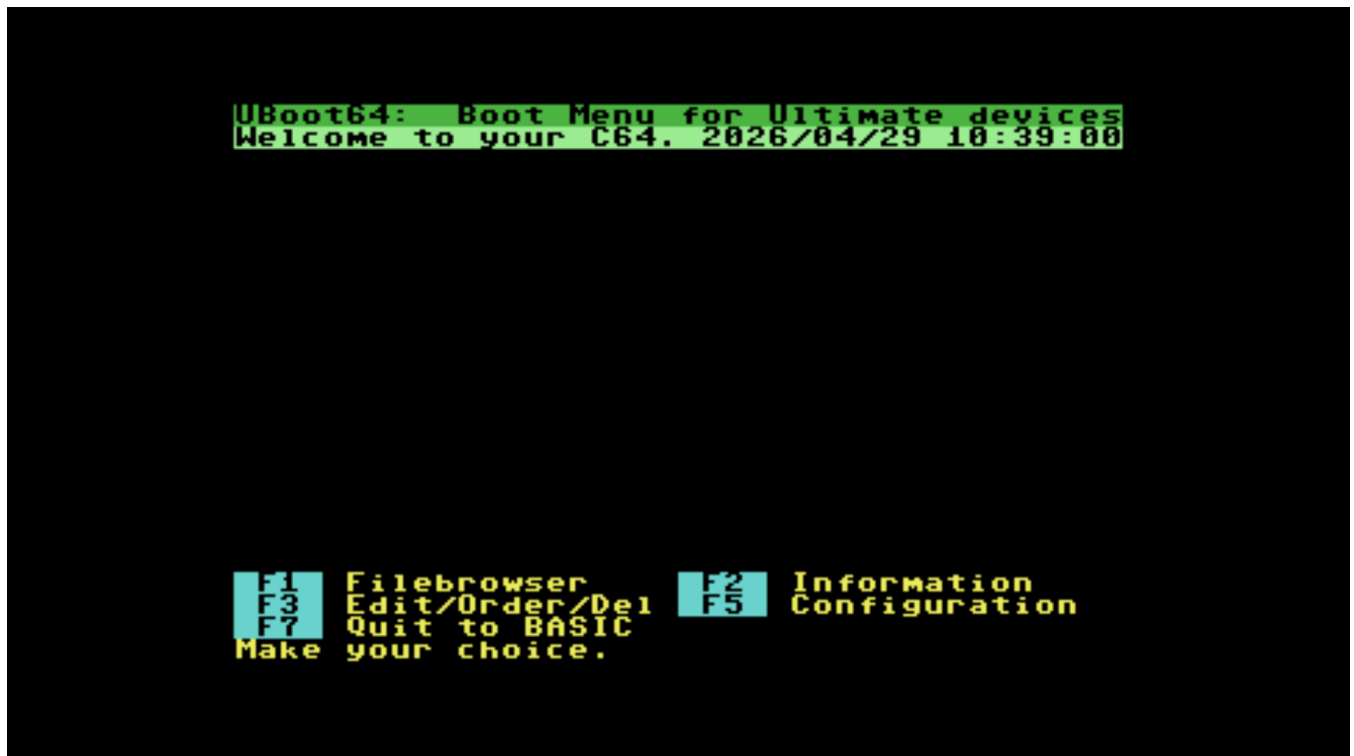
- Transfer `uboot_upd12.prg` to your USB storage.
- Run `uboot_upd12.prg` from the Ultimate UI or a BASIC prompt before starting UBoot64 v2.
- The tool reads your existing v1 configuration files and rewrites them in the v2 format.
- After the upgrade tool completes successfully, start UBoot64 v2 normally.

If you do not run the upgrade tool, UBoot64 v2 will detect the old format and exit with an error asking you to run the upgrade tool first.

First run

[\(Back to contents\)](#)

- At first run, no configuration file is present yet, so UBoot64 creates configuration files with an empty start menu and default settings.
- The configuration files are saved in the root directory of the first USB drive found (path `/usb*/`). The files are `DMBCFG.CFG` (configuration data) and `DMBSLT.CFG` (menu slot data).
- On startup a splash screen is shown briefly. Press any key to proceed to the main menu.
- The empty start menu looks like this:



Add start options via the Filebrowser

- Start options can be added to menu slots **0-9** and **A-Z** (18 slots total) via the Filebrowser.
- Press **F1** to open the filebrowser:

```

UBoot64: Boot Menu for Ultimate devices
Filebrowser 2026/04/29 10:40:40

[UCI file system]
/USB*/
2sid-collection DIR
3sid-collection DIR
ARMSid DIR
Blanks DIR
C128Demo DIR
C128Original DIR
c128stuff DIR
C64Demo DIR
C64OS DIR
c64osupdates DIR
chiptunes DIR
Dev DIR
Digidrum DIR
DiskMag DIR
Diskutils DIR
dlair64ld+alpha DIR
Firmware DIR
Floppybackup DIR
Geos DIR

F1 Dir refr.
F3 UCI or IEC
RET Run/Select
DEL Dir up
↑ Root dir
↑ Top
E End
P/U Page do/up
Cur Navigate
AB Add mount
M Run mount
↓ Load
0 Demo mode
F7 Quit

UCI mode
Trace OFF
↓ Load ON
Demo OFF
    
```

- The browser starts in **UCI mode** — browsing via the Ultimate Command Interface on the native filesystem of your Ultimate device.
- Press **F3** to switch to **IEC mode** for drives connected to the IEC bus. Use + / - to select the device number.

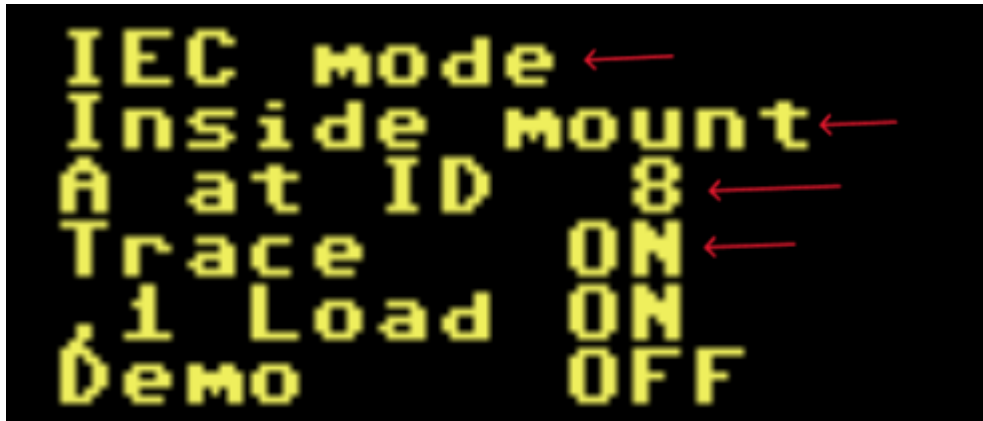
```

UBoot64: Boot Menu for Ultimate devices
Filebrowser 2026/04/29 10:40:40

[[1]] /usb0/,00 2a
No dirtrace active.
0 2sid-collection DIR
0 3sid-collection DIR
0 armsid DIR
0 blanks DIR
0 c128demo DIR
0 c128original DIR
0 c128stuff DIR
0 c64demo DIR
0 c64os DIR
0 c64osupdates DIR
0 chiptunes DIR
0 dev DIR
0 digidrum DIR
0 diskmag DIR
0 diskutils DIR
0 dlair64ld+alpha DIR
0 firmware DIR
0 floppybackup DIR
0 geos DIR

F1 Dir refr.
F3 UCI or IEC
+/- Device
RET Run/Select
DEL Dir up
↑ Root dir
↑ Top
E End
P/U Page do/up
Cur Navigate
D Dirtrace
↓ Load
0 Demo mode
F7 Quit

IEC mode
Trace OFF
↓ Load ON
Demo OFF
    
```

- Press **ENTER** on a program file to select it for a menu slot. In UCI mode the associated drive A disk image is automatically included.
- Press **A** or **B** on a disk image (`.Dxx`) to select it as the additional image to mount on drive A resp. B when starting from that slot.
- Press **M** on a program file to select it to be run from the disk image already mounted on drive A.
- To add a REU file: navigate to it and press **ENTER**, then select the target slot, choose REU size with **+ / -**, and confirm with **ENTER**.



Note: The REU file must be in the same filepath as the drive A disk image if one is present.

- After selecting what to place in a slot, you are shown this screen to pick the slot position:



- If the slot is already filled, confirmation is requested. Choose **Y** to proceed or **N** to cancel.
- Press **0-9** or **A-Z** to choose the slot, enter a name and press **ENTER**.
- Repeat until all desired slots are filled.
- Important notes:
 - For technical reasons, loose .PRG files in UCI mode can not be added to the start menu. Either add them via the SoftIEC in IEC mode, or use the Ultimate native UI for launching these applications. Reason is that launching a PRG from an UCI path is not supported via the Ultimate Command Interface (yet)
 - If you want to add a program, disk images and a REU image to the same slot, this needs to be done in separate steps for each file or image to add. Just choose the same slot again each time.

F1: Filebrowse menu

[\(Back to contents\)](#)

The filebrowser is based on and inspired by the DraBrowse program from <https://github.com/doj/dracopy>.

```

UBoot64: Boot Menu for Ultimate devices
Filebrowser 2026/04/29 10:40:40

[UCI file system]
/USB*/
2sid-collection DIR
3sid-collection DIR
ARMSid DIR
Blanks DIR
C128Demo DIR
C128Original DIR
c128stuff DIR
C64Demo DIR
C64OS DIR
c64osupdates DIR
chiptunes DIR
Dev DIR
Digidrum DIR
DiskMag DIR
Diskutils DIR
dlair64ld←alpha DIR
Firmware DIR
Floppybackup DIR
Geos DIR

F1 Dir refr.
F3 UCI or IEC
RET Run/Select
DEL Dir up
↑ Root dir
↑ Top
E End
P/U Page do/up
Cur Navigate
AB Add mount
M Run mount
↓ Load
0 Demo mode
F7 Quit

UCI mode
Trace OFF
↓ Load ON
Demo OFF
  
```

Key reference

Key	Function
F1	Read / refresh directory
F3	Toggle between UCI and IEC modes
+	Increase device number (IEC mode only)
-	Decrease device number (IEC mode only)
RETURN	Enter directory / run selected program (IEC mode) / select for slot

Key	Function
CURSOR RIGHT	Enter directory
DEL	Go to parent directory
CURSOR LEFT	Go to parent directory
↑	Go to root directory
T	Go to the first item in the directory
E	Go to the last item in the directory
P	Page down in the directory
U	Page up in the directory
Cursor keys	Navigate in the directory
D	Toggle Dirtrace (IEC mode only): traces directory movements from root
A	Select highlighted image (<code>.Dxx</code>) to be mounted on drive A
B	Select highlighted image (<code>.Dxx</code>) to be mounted on drive B
M	Select highlighted program to run from the disk image on drive A
1	Toggle ,1 load
O	Toggle demo mode
Q or F7	Quit to main menu

UCI mode and IEC mode

The file browser opens in **UCI mode** by default. Press **F3** to toggle between modes. The current mode is shown in the lower right of the sidebar.

UCI mode browses the native filesystem of the Ultimate device (USB storage) directly via the Ultimate Command Interface. It supports long filenames, full directory paths, and can enter disk images (`.D64` , `.G64` , `.D71` , `.G71` , `.DNP`) as if they were directories.

IEC mode reads directories from a physical or emulated IEC bus device (disk drives on the serial bus). Press **+** or **-** to cycle through available active device numbers. In IEC mode, filenames follow CBM conventions and directory listings are read via the KERNAL. File type labels (`PRG` , `SEQ` , `DEL` , `REL` , `CBM` , `DIR`) are shown next to each entry.

Directory navigation

Use **CURSOR UP** / **CURSOR DOWN** to move the highlight one entry at a time. Use **P** (page down) and **U** (page up) to jump a full screen at a time. **T** jumps to the first entry in the directory and **E** jumps to the last.

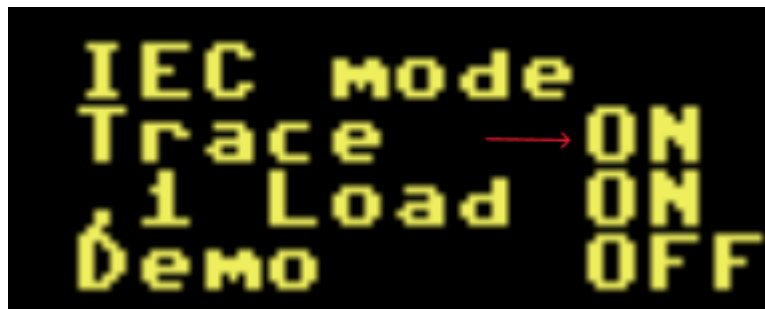
To enter a subdirectory or disk image, press **RETURN** or **CURSOR RIGHT** on it. To go back up to the parent directory, press **DEL** or **CURSOR LEFT**. Press ↑ (the up-arrow key, not cursor up) to jump directly to the root of the current file system.

Press **F1** at any time to re-read and refresh the current directory listing.

Directory trace (IEC mode)

Because IEC drives do not report their full path, pressing **D** activates **directory trace** mode: UBoot64 records each directory you navigate into, building the full path from root. The TRACE indicator in the sidebar switches to **ON**. Navigate from the root directory with trace active before selecting a program, so the complete path can be stored in the menu slot.

Without trace active in IEC mode, only the filename is stored; the path will be empty and the program can only be found if it is in the root directory of the drive.



Press **D** again to turn trace off and reset the recorded path depth.

Toggles: ,1 Load and Demo mode

The sidebar shows two additional toggles that affect how a program is launched when selected for a slot.

,1 Load (toggle with **1**): controls the BASIC LOAD command used at boot time.

- **OFF**: `LOAD"FILENAME",8` — loads the program to the address in the file header (normal for most games and programs).
- **ON**: `LOAD"FILENAME",8,1` — loads to the absolute address stored in the file. Needed for some utilities and programs that require loading at a fixed memory address.

Demo mode (toggle with **O**): when ON, all Ultimate emulated drives except the one on IEC ID 8 are powered off before the program starts. Many demos and some games require only one drive to be active. Enable this toggle when adding demos to ensure reliable playback on systems with multiple emulated drives.



Both toggle states are stored in the menu slot when you confirm the selection.

Selecting items for menu slots

After navigating to the desired file or image, use the appropriate key for the type of item:

Selecting a program to run (RETURN or M):

- In IEC mode, pressing **RETURN** on a `.PRG` file without trace active runs it immediately (direct launch, no

slot storage).

- In IEC mode with trace active, pressing **RETURN** on a `.PRG` stores it in a slot — the recorded path and filename are saved.
- In UCI mode, pressing **RETURN** on a `.PRG` file does nothing unless first a disk image was entered. If a disk image was entered before (since mount), the program stores it in a selected slot and also automatically stores that disk image as the drive A image.
- Pressing **M** instead of **RETURN** stores the program to run from the disk image already mounted on drive A (IEC inside-mount mode). Use this when the program must be started from within the mounted disk.

Entering and using a disk image (RETURN on .Dxx file in UCI mode):

Pressing **RETURN** on a disk image file in UCI mode mounts it on drive A and switches to IEC mode, showing "Inside mount" in the sidebar. You can then browse the disk contents and press **RETURN** on a program to store both the program and the disk image in a slot.

Adding an additional drive B image (B):

In UCI mode, pressing **B** on a disk image (`.Dxx`) stores it as the drive B image for the next slot you choose. This is useful when a program needs two drives simultaneously.

Adding a drive A image without entering it (A):

Pressing **A** on a disk image in UCI mode stores it as the drive A image for the next slot, without mounting or entering the image. Use this when you want to add an image to a slot separately from the program selection step.

Selecting a REU image (RETURN on .REU file):

Navigate to a `.REU` file and press **RETURN**. You are then prompted to choose the REU size with **+ / -** before confirming. The REU image is preloaded into REU memory before the program in the slot starts.

After any selection, you are taken to the slot picker screen to choose which of the 18 menu slots (0–9, A–H) the item should be stored in.

Limitations in UCI mode

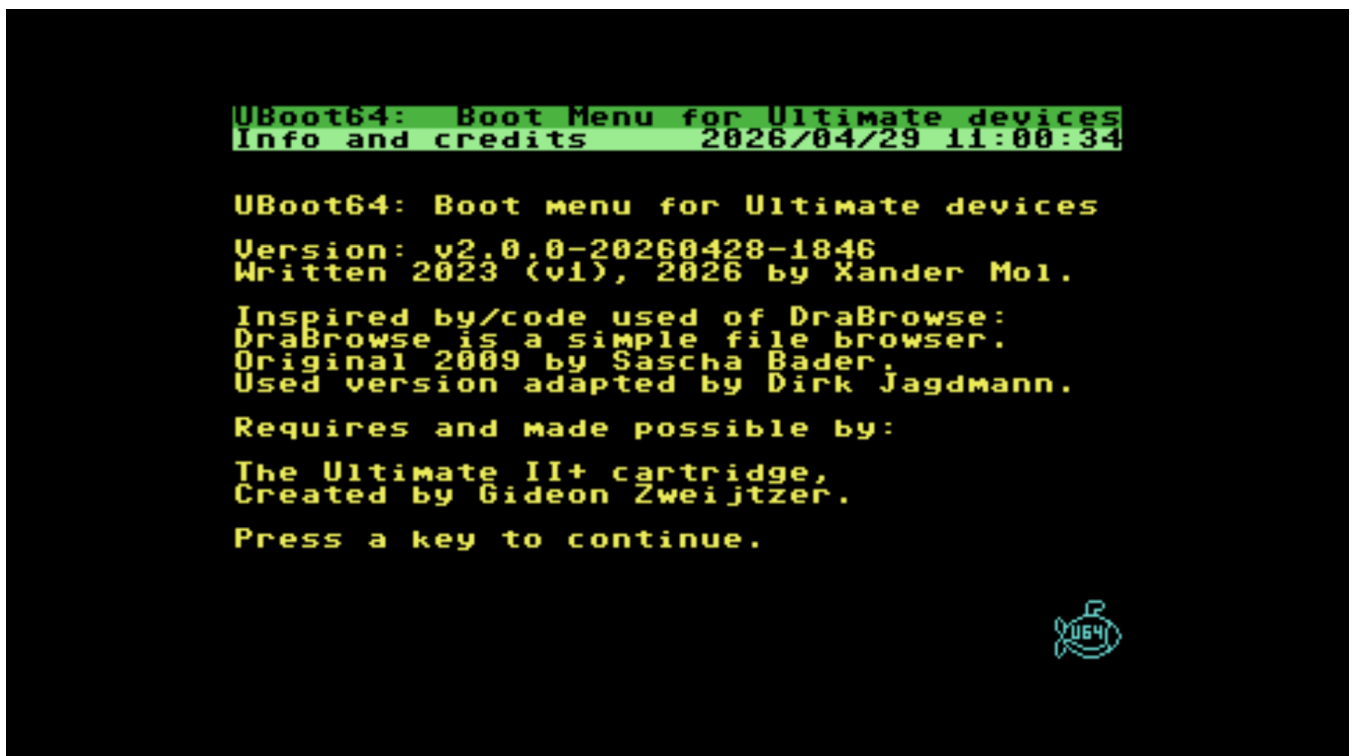
Loose `.PRG` files on the native UCI file system cannot be added to a menu slot for direct launch. The Ultimate Command Interface does not (yet) support launching a program directly from a USB path. Options:

- Use IEC mode via SoftIEC to access the file through a CBM device number.
- Enter a disk image in UCI mode first, then select the program from within the mounted image.
- Use the Ultimate's own UI for running programs directly from USB.

F2: Information

[\(Back to contents\)](#)

Shows first the splash screen, and after pressing any key, the information and credits screen. Press any key to return to the main menu.



F3: Edit / re-order / delete

[\(Back to contents\)](#)

Rename, re-order, edit commands for, or delete menu slots.

```

UBoot64: Boot Menu for Ultimate devices
Edit/Re-order/Delete 2026/04/29 11:01:37

0  CBM Commander
1  Next Level (Demo)
2  GDos64
3  BluREU
4  BluREU 3D
5  Game of Thrones (Music)
6  C640S
7  Cyberchip
8  <EMPTY>
9  <EMPTY>
A  <EMPTY>
B  <EMPTY>
C  <EMPTY>
D  <EMPTY>
E  <EMPTY>
F  <EMPTY>
G  <EMPTY>
H  <EMPTY>
F1 Edit name      F2 Edit command
F3 Re-order slots F5 Delete slot
F4 Quit

```

- F1 — Rename a slot. Choose slot (0-9 / A-Z), enter new name, press ENTER.

```

UBoot64: Boot Menu for Ultimate devices
Rename menu slots 2026/04/29 11:02:11

0  CBM Commander
1  Next Level (Demo)
2  GDos64
3  BluREU
4  BluREU 3D
5  Game of Thrones (Music)
6  C640S
7  Cyberchip
8  <EMPTY>
9  <EMPTY>
A  <EMPTY>
B  <EMPTY>
C  <EMPTY>
D  <EMPTY>
E  <EMPTY>
F  <EMPTY>
G  <EMPTY>
H  <EMPTY>
Choose menu slot to be renamed. 0
Are you sure? Y/N y
Choose name for slot:
CBM Commander█

```

- F2 — Add or edit a user-defined BASIC command to execute before the program starts.

```

UBoot64: Boot Menu for Ultimate devices
Edit command 2026/04/29 11:03:14

Chosen slot:
 1 Next Level (Demo)

Enter command (empty=None):

```

- **F3** — Re-order slots. Choose slot to move (**0-9 / A-Z**), highlighted in white. Press **UP / DOWN** to move. Confirm with **ENTER**, cancel with **F7**.

```

UBoot64: Boot Menu for Ultimate devices
Re-order menu slots 2026/04/29 11:03:52

 0 CBM Commander
 1 Next Level (Demo)
-2 GDos64
 3 BluREU
 4 BluREU 3D
 5 Game of Thrones (Music)
 6 C640S
 7 Cyberchip
 8 <EMPTY>
 9 <EMPTY>
 A <EMPTY>
 B <EMPTY>
 C <EMPTY>
 D <EMPTY>
 E <EMPTY>
 F <EMPTY>
 G <EMPTY>
 H <EMPTY>

Move slot up or down by cursor keys.
ENTER to confirm position,
F7 to cancel.

```

- **F5** — Delete a slot. Choose slot (**0-9 / A-Z**), confirm with **Y** or cancel with **N**.

```
UBoot64: Boot Menu for Ultimate devices
Delete menu slots 2026/04/29 11:05:15
```

```
0 CBM Commander
1 Next Level (Demo)
2 GDos64
3 BluREU
4 BluREU 3D
5 Game of Thrones (Music)
6 C640S
7 Cyberchip
8 <EMPTY>
9 <EMPTY>
A <EMPTY>
B <EMPTY>
C <EMPTY>
D <EMPTY>
E <EMPTY>
F <EMPTY>
G <EMPTY>
H <EMPTY>
```

```
Choose menu slot to be deleted. 5
Are you sure? Y/N
```

- **F7** — Return to main menu. Changes are saved at this point.

F5: Configuration

[\(Back to contents\)](#)

Configure NTP time synchronisation, startup verbosity, and the UI colour scheme.

After pressing **F5**:

```
UBoot64: Boot Menu for Ultimate devices
Configuration tool. 2026/04/29 11:07:39
```

```
Current configuration settings:
```

```
NTP time update settings:
- Update on boot toggle: On
- Offset to UTC in seconds: 7200
- NTP server hostname:
pool.ntp.org
```

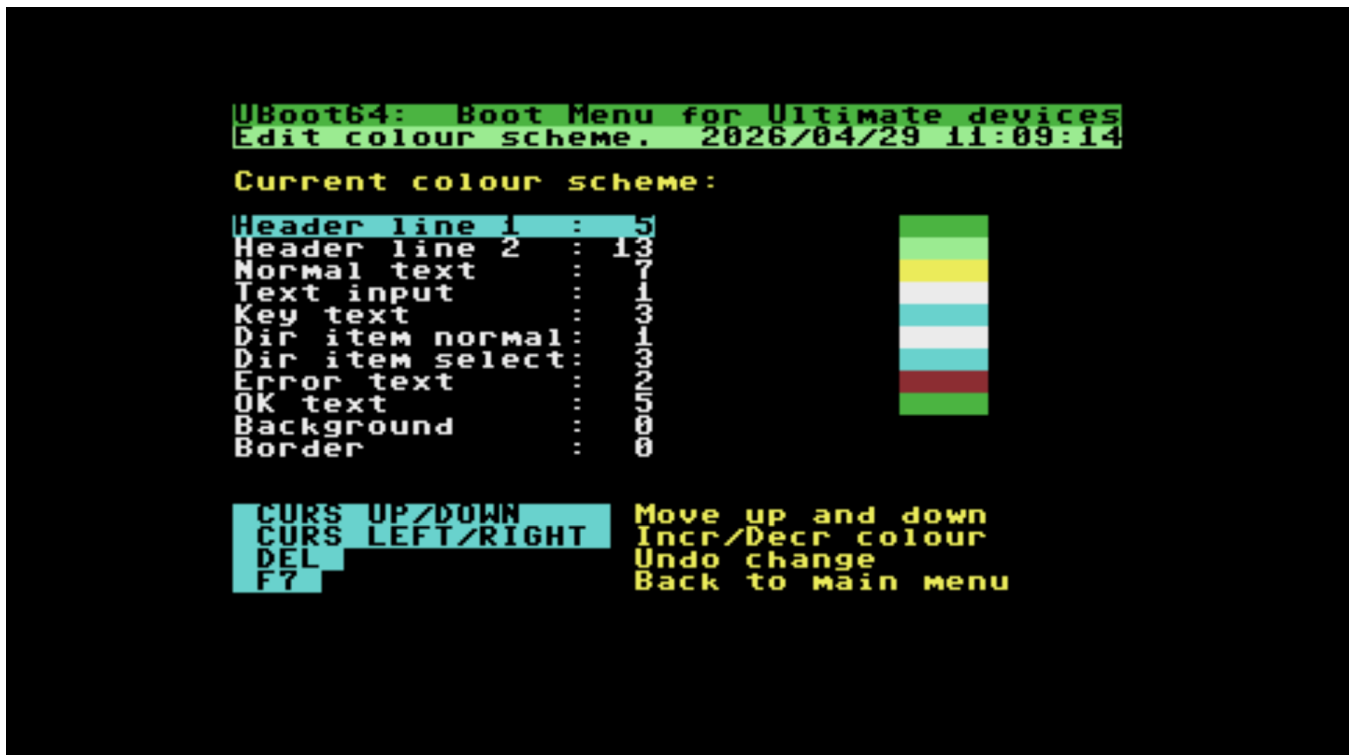
```
Verbose or silent startup: Verbose
```

```
Make your choice:
F1 Toggle time synch on/off
F2 Verbose startup on/off
F3 Edit time offset to UTC
F5 Edit NTP server host
F6 Edit colour scheme
F7 Back to main menu
```

The screen shows current settings and allows editing:

- **F1** — Toggle NTP time sync on or off. Default: enabled.

- **F2** — Toggle verbose or silent startup. Verbose shows detailed feedback during startup; silent shows only a progress indicator. Default: verbose.
- **F3** — Edit the time offset to UTC in seconds. Automated daylight saving adjustment is not provided; adjust manually when needed. Examples: CET = 3600, CEST = 7200. See <https://www.timeanddate.com/time/zones/> for all offsets (multiply hours by 3600). Default: 0 (UTC).
- **F5** — Edit the NTP server hostname. Default: `poo1.ntp.org`.
- **F6** — Edit the UI colour scheme. Use **CURS UP / DOWN** to select a colour element, **CURS LEFT / RIGHT** to change its colour value (0–15). **DEL** reverts to the saved colours. **F7** returns to the configuration menu. Changes are saved when you exit the configuration menu.



- **F7** — Return to main menu. Changes are saved.

F7: Quit to BASIC

[\(Back to contents\)](#)

Exit the boot menu to the BASIC Ready prompt. Memory is erased on exit.

Credits

UBoot64 v2

Boot menu for C64 Ultimate enabled devices

Written in 2023 (v1), 2026 (v2) by Xander Mol

<https://github.com/xahmol/UBoot64-v2>

<https://www.idreamtin8bits.com/>

Inspired by and code used from DraBrowse:
DraBrowse (db*) is a simple file browser.
Originally created 2009 by Sascha Bader.
Used version adapted by Dirk Jagdmann (doj)
<https://github.com/doj/dracopy>

Most of code and functionality ported from:
DMBoot 128:
Device Manager Boot Menu for the Commodore 128
Written in 2020-2023 by Xander Mol
<https://github.com/xahmol/DMBoot>

Built using:

- Oscar64 cross-compiler by drmortalwombat
<https://github.com/drmortalwombat/oscar64>

Additionally uses code from:

- Ultimate 64/II+ Command Library
Scott Hutter, Francesco Sblendorio
<https://github.com/xlar54/ultimateii-dos-lib>
- ntp2ultimate by MaxPlap
<https://github.com/MaxPlap/ntp2ultimate>
Time via NTP code
- EPOCH-to-time-date-converter by sidsingh78
https://github.com/sidsingh78/EPOCH-to-time-date-converter/blob/master/epoch_conv.c
- petcom version 1.00 by Craig Bruce, 18-May-1995
Convert from PETSCII to ASCII, or vice-versa.
https://codebase64.org/doku.php?id=source_conversion

Requires and made possible by the Ultimate II+ cartridge,
Created by Gideon Zweijtzer
<https://ultimate64.com/>

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