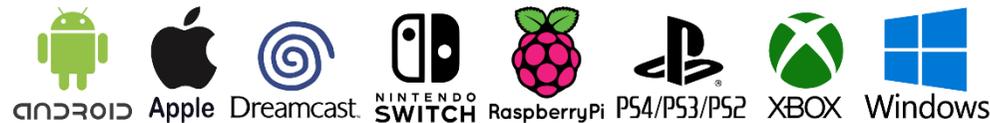


GAME CONTROL MIXER GCM 100 mar.2021

Accessible game control mixing for PC, PS3, PS4, Xbox One, Nintendo Switch and more. By onswitch.org.uk and celticmagic.org

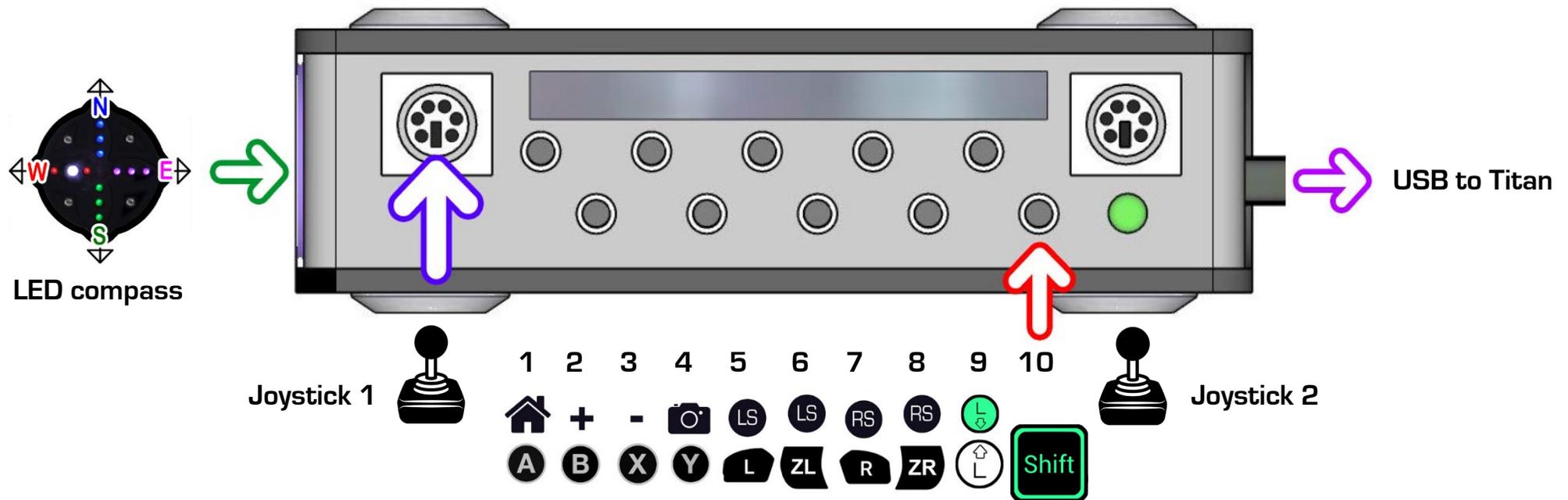


- OUTPUT** - use short USB cable to connect to your games machine. Green “O” LED = good connection. See HELP section.
- PROG** - link to a Windows PC for **KMG** Capture. Use to mix in speech and other controls. Green “P” LED = good connection.
- ↑ ↓** - Titan buttons change slot display. 1= Mouse , 2= Xbox 360, 3= AUTO/Xbox One, 4=PS4, 5=Switch. 6-9 Custom.
- A / B** – co-pilot gamepad to Titan “A”, GCM100 to Titan “B”. Green LEDs = good connection.
- LED compass** – visual indicator of joystick modes. Mount where you can see it easily. Plugs into left of GCM100.
- SHIFT** – Connect a switch to SHIFT socket 10. Use this with 1-4 joysticks to reach all controls and mix in many ways.

GCM100 connection help

SWITCHES: Plug **accessibility switches** into the GCM100 at any-time. If you can manage two switches, connect to socket **1 (X)** and most importantly, socket **10 (SHIFT)**. Tap SHIFT 1-6 times, or hold with switches, or joysticks for extra powers.

LED compass: Indicates 1-4 joystick modes. Use alongside the Joystick Modes help sheet until memorised.



TITAN: Connect a gamepad (if needed) to the Titan **A** socket, with the GCM100 in **B**. The Titan should display a steady number (**1-9**) with green LEDs lit for **A** (if in use), **B** (GCM100) and **O** (output).

JOYSTICKS: Connect GCM100 joysticks before connecting the Titan to your games machine. When first starting, the LED compass will go through a joystick calibration phase (indicated by rainbow colour cycling effect, followed by one or two white flashes). Avoid touching your joysticks until the LED compass display has settled. Then, joysticks can be SHIFTED into one of 24 different modes.



1. Titan SLOTS and SHIFT

SHIFT SLOT = TITAN ↑↓ or use SHIFT x6 or see joystick mode N6.



SLOT 1 = MOUSE *Experimental. May require PC restart.* SHIFT TO SLOT 2 = tap SHIFT x 6

STICK 1 = Mouse pointer (W1-W3 = MOUSE/DRAG/SCROLL) (E1-E3 = SAME BUT SLOWER) (S1=S3 = ALTERNATIVE)



⊗ = LEFT-CLICK ⊙ = RIGHT-CLICK ⊕ = DRAG ⊕ = AXIS lock X/Y/OFF

N1 = (LEFT) Left-click (RIGHT) = Right-click (UP) = Double-click

N2 = arrow keys

SLOT 2 = Xbox 360 controller

SLOT 3 = AUTO (same as slot 2 but for use with PS4, Xbox One, Nintendo Switch, etc. - see HELP Connecting section)

SLOT 4 = PS4 - recommended for PC and PS4 use.

SLOT 5 = Nintendo Switch



24 Joystick Modes (see next page) + Secondary SWITCH functions (see green options on case)

TAP SHIFT **B** (x2) **L** (x3) **R** (x4) **L** **R** (x5)

HOLD SHIFT and push switch 1-10 for secondary feature (e.g. SHIFT + 1 = HOME).



SLOTS 6-8 = CUSTOM (6 = PC, 7=AUTO, 8=PS, but with LATCHED SHIFT)

2. GCM Joystick Modes

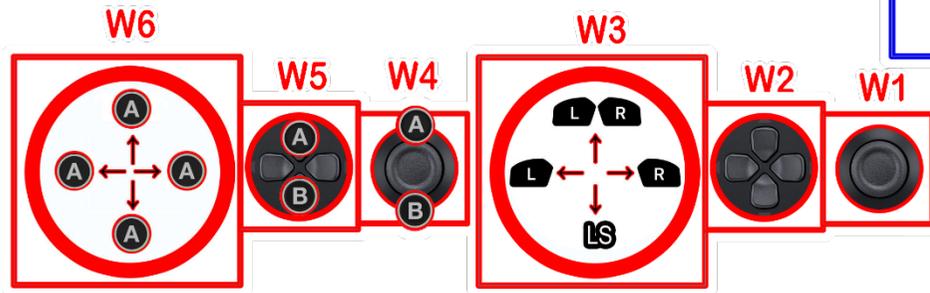
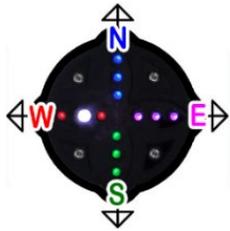
TITAN SLOT 5 NINTENDO SWITCH

SHIFT + move a stick ↑, →, ↓, or ← 1-6 times.

Modes 1-3 = static LED.

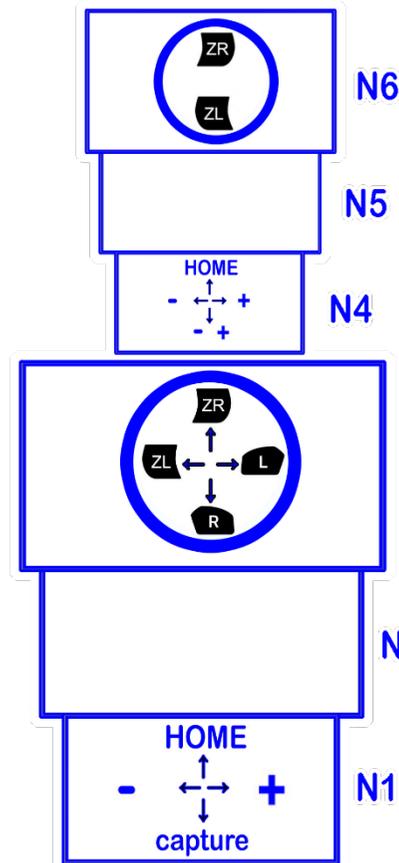
Modes 4-6 = blinking LED.

Example of W2 (D-pad) mode illuminated.



← WEST

- W1 = Left-stick
- W2 = D-pad
- W3 = L, R, LS
- W4 = Left-stick left/right, A + B
- W5 = D-pad left/right, A + B
- W6 = A stick



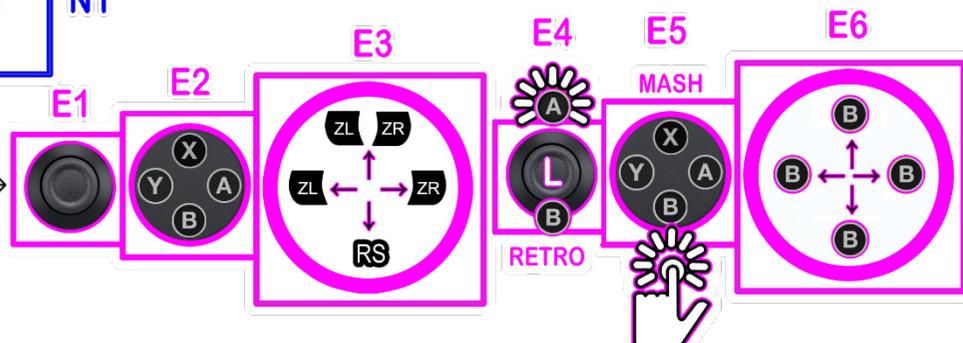
↑ NORTH

- N1 = Menu buttons
- N2
- N3 = Shoulder buttons
- N4 = (Menu buttons for RetroPie)
- N5
- N6 = ZL / ZR

CHANGE SLOT: In N6, tap SHIFT x6, rotate stick to change slot number (1-8) and press A to select.

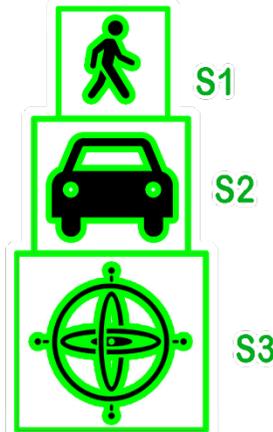
→ EAST

- E1 = Right-stick
- E2 = ABXY
- E3 = ZL, ZR, RS
- E4 = RETRO [B button auto-fire]
- E5 = MASH ABXY [hold for auto-fire]
- E6 = B stick.



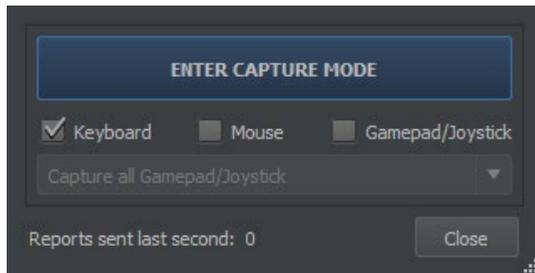
↓ SOUTH

- S1 = Explorer. Explore 3D worlds.
 - ← → = r-stick look left/right. ↑ = walk forward.
 - ↓ = back / look-up / back / look-down.
- S2 = Driver (left/right/L2 and R2).
- S3 = Motion 1
- S4 = Basic Explorer. Simpler version of S1.
- S5 = Drive Slow
- S6 = Motion 2



3. KMG Capture: Mixing in Windows 10 controls

Keyboard, Mouse and Gamepad (KMG) controls can be “captured” from a Windows PC. Then apps, such as Voice Attack, can be added to your mix for the likes of speech control.



1. Add a high-quality micro-USB cable between your TITAN **PROG** socket and PC.
2. Start the **GTuner IV utility** (free from consoletuner.com). Select a gaming slot (e.g. slot 2 for PC, RetroPie, or slot 3 for Xbox One). Press **F4** and with **Keyboard** ticked, click on “**ENTER CAPTURE MODE**”.
3. Click on the Device Monitor tab and experiment with the keys below.



LEFT-STICK = CDEF (+G = 77% +H = 56% +GH = 33%). **RIGHT-STICK** = IJKL (+M = 77% +N = 56% +MN = 33%)

ZL = R (+S = 77% +T = 56% +ST = 33%) **ZR** = O (+P = 77% +Q = 56% +PQ = 33%)

MINUS = BACKSPACE + ENTER

ACCELEROMETER = ACCEL_1_X -100% = Number Pad 1 ACCEL_1_X +100% = 2 ACCEL_1_Y -100% = 3 ACCEL_1_Y +100% = 4.

GYRO = GYRO_1_X -100% = Number Pad 5 GYRO_1_X +100% = 6 GYRO_1_Y -100% = 7 GYRO_1_Y +100% = 8

Voice Attack speech commands

Start **Voice Attack**: Use the “**GCM Speech (Nintendo Switch)**” profile available from OneSwitch. Say “LISTEN TO ME” or “STOP LISTENING”. Start GTuner IV. Click “Device Monitor”. Press F4. Tick “Keyboard”. Start KMG Capture mode.



Description	Spoken Command
R	[Are ; Romeo]
RS	[Are Ess ; Right Stick Press]
ZR	[Zed Are ; Zulu Romeo]
D-PAD DOWN	[Dee Down ; D-Pad Down]
D-PAD LEFT	[Dee Left ; D-Pad Left]
D-PAD RIGHT	[Dee Right ; D-Pad Right]
D-PAD UP	[Dee Up ; D-Pad Up]
L	[Eli ; Lima]
LS	[Eli Ess ; Left Stick Press]
ZL	[Zed Eli ; Zulu Lima]
PLUS	[Plus]
NINTENDO	[Nintendo ; Home]
MINUS	[Minus]
B	[Bravo ; Bee]
A	[Alpha ; Ay]
X	[Ex Ray ; Ex]
Y	[Young ; Yankee ; Why]
L-STICK UP 33%	CRAWL
L-STICK UP 77%	JOG
L-STICK UP 100%	RUN
L-STICK UP 100% + RIGHT TRIGGER	SPRINT
L-STICK DOWN 77%	BACK UP
L-STICK UP 56%	WALK
SHIFT ON/OFF	SHIFT
STOP ALL COMMANDS	STOP IT
START VOICE ATTACK	[VOICE ATTACK ON; LISTEN TO ME]
STOP VOICE ATTACK	[VOICE ATTACK OFF; STOP LISTENING]

All Nintendo Switch commands are available.

Say “**SHIFT**” to latch SHIFT ON/OFF (see GCM Joystick modes)

Gaming Example: For 3D exploration games that use the left-stick to move and right-stick to look, try setting your stick to E1 right-stick mode, and use:

- “CRAWL” (33% left-stick up)
- “WALK” (56%)
- “JOG” (77%)
- “RUN” (100%)
- “SPRINT” (100% + RT)
- “BACK-UP” to walk backwards
- “STOP IT” to stop

This reduces the need to keep sustained pressure on a stick.

Get Voice Attack from voiceattack.com. Their help guides, and forum can support you build your own custom profiles for each game you need.

4. HELP

Customisation options upon request include using the USB-A gamepad for joystick shifting, joystick sensitivity boosting, menu button blocking (for people likely to get lost in game menus), SHIFT latching (for those unable to SHIFT and move a stick at the same time), simplified joystick mode selection, and more.

HELP connecting to your games machine

PC: SLOT 2 for Xbox 360 controls, SLOT 3 (with Xbox One controller attached) for Xbox One controls, or SLOT 4 for PS4 controls. Gamepad optional.

PS4: SLOT 4. PS4 gamepad essential. In PS4 menu, set **Setting > Devices > Controllers > Communication Method > "Use USB Cable option"**.

PS3: SLOT 3: Gamepad optional. Hold PLAYSTATION to set as controller 1 (joystick mode N1 and push UP).

Raspberry Pi: SLOT 2. Gamepad optional. In RetroPie use joystick mode N4 to quit most games.

Switch: **SLOT 5. Use joycons to set System Settings > Controllers and Sensors > Pro Controller Wired Communication ON.**

Xbox 360: SLOT 2: Xbox 360 hard-wired gamepad essential.

Xbox One: SLOT 3: wired XAC or Xbox One gamepad essential. See trouble shooting if having problems connecting.

Android: SLOT 1 for touch/mouse games. SLOT 2 or 4 for gamepad games. Requires an On-The-Go USB adapter. Limited.

Apple iOS: SLOT 1 for touch games (use touch assist mode in accessibility options). SLOT 4 for gamepad games (PS4 gamepad required). Requires an Apple USB 3.0 camera adapter with connected power supply (Apple iPad or quality 2A alternative). Limited.

Dreamcast: SLOT4. Gamepad optional. Brook PS4 to Dreamcast adapter with Raspberry Pi power supply attached to its "PC" socket. Connect Titan to Brook to Dreamcast. Brook adapter must be in green LED mode (hold for 5 seconds to set). VMU access limited to swapping to a standard controller.

Gamecube: SLOT 4. Gamepad optional. Raspberry Pi PSU/PC power to Titan PC PROG required. Also requires a Brook PS3/PS4 to PS2 adapter in XID mode, fully updated, into a PS2 to Gamecube adapter. Power up your Gamecube. Connect PC PROG to power, then connect what remains, leaving connection to the Gamecube (and optional gamepad) until last.

PS2: SLOT4. Gamepad optional. Requires a PS3/PS4 to PS2 Brook adapter (with up to date firmware).

Wii and Wii-U: SLOT 2. Maxgear Cross Fighter adapter with attached Wii-remote required. Start Wii/Wii-U (sync Wii-remote if needed). Press Wii-remote "A". Connect Maxgear adapter to back-of your Wii via USB to USB cable. Count to 10. Connect Titan Two to front of Maxgear adapter. A good connection is indicated by the Wiimote LED being on, and the T2 having a green LEDs for "O" and "B". Reconnect the T2 if not. Repeat if this fails.

TROUBLE SHOOTING

- 1. Connection issues?** Follow HELP Connecting section for your machine. Only use the supplied short USB cable between the Titan OUTPUT socket and your games machine. Make sure cables are firmly connected. A tiny round red LED light suggests an error with that connection. **A U** means Authentication error. Check your controller is powered up. Check you are in the right SLOT for your games machine (try 3 if in doubt). Disconnect GCM100 then reconnect. Power down Xbox One controller or power off PS4 controller (press tiny button on back with paperclip). Try again from scratch.
- 2. LED display issues?** The LED compass should always display four colours (blue = north, pink = east, green = south, red = west). You must be in the correct slot for this to work. Slot 0 will not work.
- 3. Co-Pilot issues?** The GCM 100 system is set-up for the gamepad in Titan socket A to act in a co-pilot helper style. Get in touch for alternative uses of the gamepad.
- 4. Titan firmware upgrade?** If upgrading Titan firmware (not recommended for GCM 100 use normally), remember to update the SD card by pressing the "Configure" button in GTuner IV.
- 5. What games can I play?** See the GCM 100 page at OneSwitch.org.uk for a booklet of fantastic games possible to play with one stick and two buttons. If you can manage more controls, then many more games are possible.
- 6. Sip-Puff upgrade? More console compatibility? Customisation upgrades?** Get in touch.

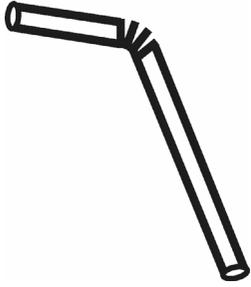
N.B. Do not use extra power. Only use the supplied short USB Output cable.

For more help with your Game Control Mixer contact barrie.ellis@oneswitch.org.uk. The Game Control Mixer is a joint project with Celtic Magic. We are indebted to Jefferson Koppe (ConsoleTuner.com) and Scachi for their invaluable help. Thanks also to Francis Binnie of SpecialEffect for support with VoiceAttack profiles standards.



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Sip-Puff Essentials (GCM100P version)



Celtic Magic supplied headsets or tube assemblies are supplied with a 60ml syringe with a female “Luer Lock” connection. To clean the internal pipes this can be attached to just the headset itself or the whole pipe assembly.

To clean the internal pipework, use a warm strong soapy water solution. Use a full syringe to flush this cleaning solution through the pipework. Refill the syringe with clean water and flush out the soap solution twice. Use the syringe again to blow air through until no water splutters from the pipe. It may take several strong pumps of air to clear all the water droplets.

Never attempt to flush clean the PTFE filter at the GCM end. This part is not serviceable.

Daily: Flush all tubes as above and hang to dry overnight in a clean area. Wipe clean the external headset using warm soapy water and dry.

Weekly or after a period of no use: Flush ALL removable pipework as above and leave to dry overnight

Every Month: Inspect the head set, connecting pipework and fittings looking for signs of wear and tear.

Every 12 Months: Fit a new PTFE filter. If there has been heavy use, may also need to renew headset and connecting pipework.

If a GCM device with breath is used by multiple users, perhaps in a medical environment, it is important that each user not only has their own headset / mouth piece but also their own connection pipe and PTFE filter as all these parts form a biologically common element. The PTFE filter is 0.2um and considered a biological barrier.

Customisation: Sip/Puff can be added at an additional cost to GCM100 units without this feature. Sip-Puff functions can also be changed upon request. **Note:** KMG Capture strength modifiers will not work if sip-puff is active, due to memory limitations.

