

# AXTELL HANDS-FREE VENT SYSTEM

– instructions v3 (Dec 31, 2019)

For Tech Support visit

<http://www.axtell.com/remotesupport.html>

## OPERATING NOTES

### POWER ON INSTRUCTIONS:

- 1- Plug in the A/C power adapter and power on the Magic2 box, and make sure the correct auto alive file is selected (see instructions below).
- 2- Plug the puppet into it's A/C power adapter or internal battery, and turn on (always power the Magic2 box on first, then the puppet).

### POWER OFF INSTRUCTIONS:

- 1- Turn off the puppet.
- 2- Turn off the Magic2 box (always power the Magic2 box off last).

**SERVO CARE** – By resting turning off your puppet and resting your servos for 15 minutes after an hour of operation, you will extend the life of your servos.

**BATTERY CARE** - Make sure you cycle the battery every 3-4 weeks to make sure it stays in operating condition. If the battery is not regularly used and sits for long periods of time, it can lose its ability to hold a charge.

## OVERVIEW OF THE VENT SYSTEM

With this amazing Axtell Hands-Free VENT System you have several modes you can use. Here is an overview of the modes and we will demonstrate them in more detail later.

**Vent Mode** – In Vent Mode, the FOB will control the mouth and head of the character. Auto-Alive will always be active during Vent Mode. During Vent Mode you can also play MagicTrax and use the FOB (in vent mode) to control the character's mouth when a track is paused. This is very handy if you want to do both MagicTrax and Live control or vent during a show.

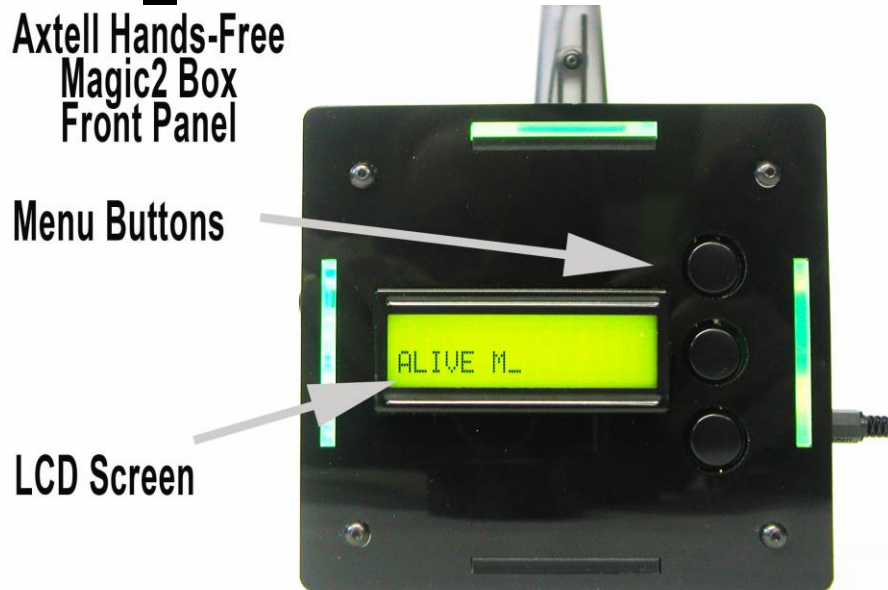
**Motor-Mouth**– You can speak into a microphone and the character will move it's mouth – Auto-Alive is active during Motor-Mouth. This works in Magic Mode, by plugging a microphone into the jack on the box. It will also work from an audio track which can be plugged into the Motor-Mouth jack. This is the fastest form of animatronic control in that you could simply record the character's voice talking, and plug it into the box jack to control the character's mouth, for almost instant performance. If you want music and sound effects too, just record a stereo file with voice only on the left, and all other audio including voice on the right you can split the signal and send the voice only side to the jack in the box, and the other to your PA!

There are additional features that your box is capable of, should you want to upgrade to the Magic2 System equipment.

---

## HANDS-FREE ANIMATION CONTROL SYSTEM - BOX OVERVIEW

**For VENT mode you will need to see “ALIVE V\_” on the LCD Screen.**

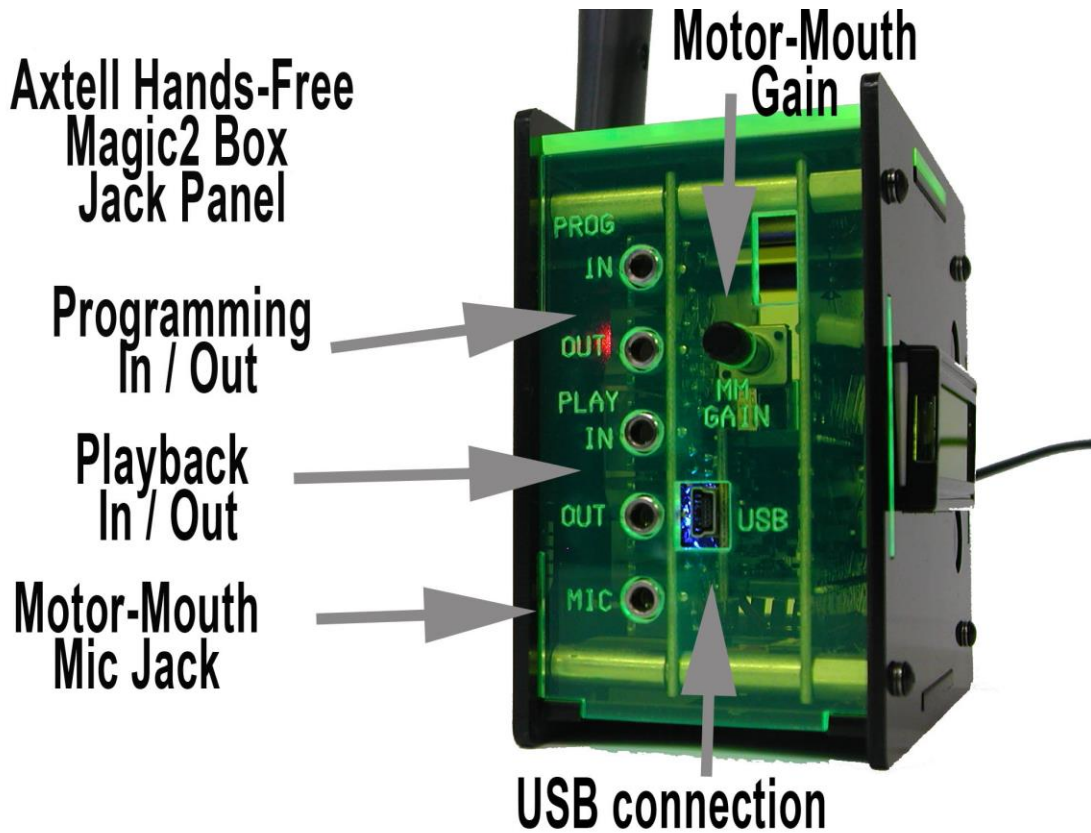


(Note the above screen shows ALIVE M\_ this is for Magic Mode. To enter Vent Mode press and hold the center button until it says VENT MODE and release. It will then display ALIVE V\_)



Use the provided A/C adapter to power your box. This should be plugged into the jack located directly underneath the on/off switch.

The following Side panel information will not be used for VENT mode but still could come in handy when you want to upgrade to the Magic2 System.



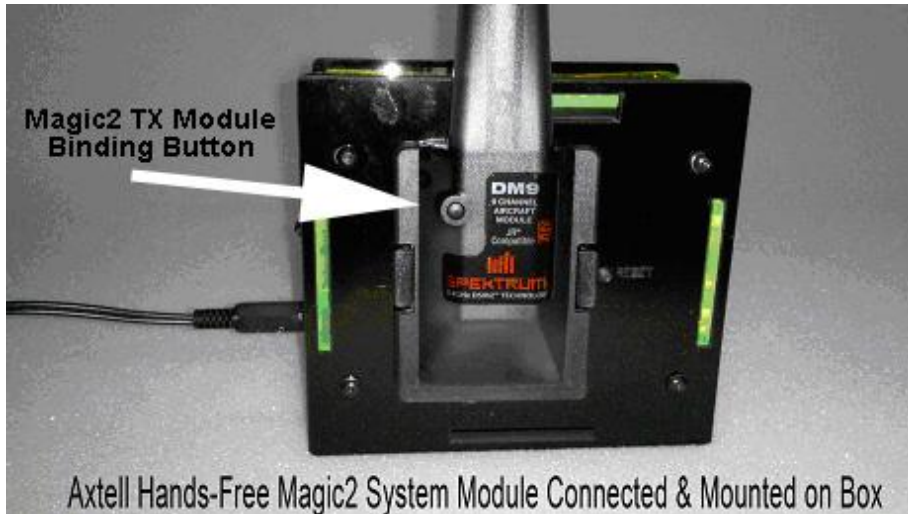
In VENT systems you would not use the jacks in and out as those are for the Magic2 Programming and MagicTrax playback features. However you could still use the MotorMouth feature if you wanted to, we will cover that later.

## BINDING INSTRUCTIONS



*(Note, your Vent Character is already bound to the Magic2 box..use the instructions below if you need to “re-bind” at any point).*

Binding Button Instructions: After your Axtell Hands-Free character has been plugged into either the battery or A/C adapter, you will push the binding button located next to the power switch. While pressing the binding button switch the power on, once power has been turned on you can release the binding button. Next take your Magic2 box and hold the bind button down... located in the back middle of the module.



While holding down the button switch the Magic2 box on, continue holding the button until you see the character come to life. If done correctly the character should go into Auto-Alive.

(If no auto-alive begins moving, the SD Card may not be securely seated in the slot. Re-seat the card and try again).

## PAIRING YOUR FOB

Sometime your FOB may not be working and you will need to re-pair your FOB to the ANIMATION CONTROL SYSTEM MAGIC2 BOX. Do the following:

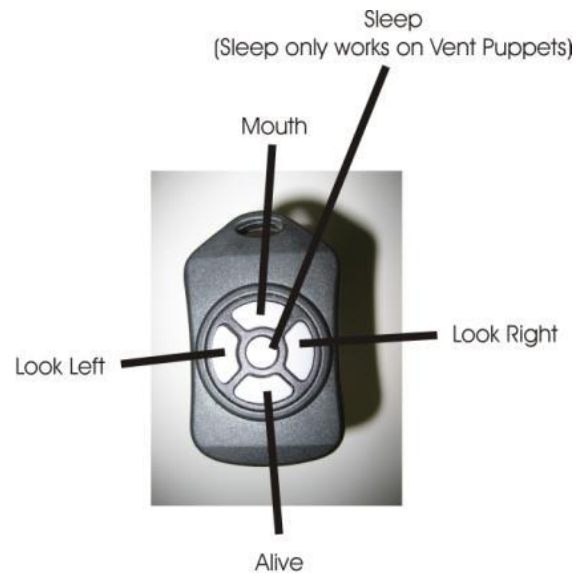
1. Press the top button on the Magic2 Box until you see FOB MENU
2. Press the center button to select it.
3. It will say PAIR FOB – hit the middle button again
4. Press the top and bottom button of FOB to pair
5. Once the FOB is paired to the box it will exit all menus



# “VENT” OPERATION

With your MAGIC2 Puppet system you can also go into the VENT MODE. You leave the Control System turned on and set to Vent Mode in the menu by pressing and holding the center menu button until it says VENT Mode.

In the VENT mode you will be using the FOB to control the puppet's head left and right, and mouth. You will be able to turn Auto-Alive™ on for the body movement, or turn the body movement off. The idea with VENT mode, is that you can be on stage talking with your Hands-Free puppet as a ventriloquist (providing the live voice of the puppet using “ventriloquism” without moving your mouth....a skill you can learn on our website). You would hide the fob in your hand so the audience does not notice that you are controlling the mouth of the puppet, or it's head turn. You can now turn the head to the extreme left and right or anywhere in between! Press and release and the head of the puppet will stop. Auto-Alive™ will operate all the other functions including the head turn randomly unless you press the head left / right buttons on the fob.



## Vent Mode

Of course more advanced users can re-map the buttons

The FOB is used in VENT and MAGIC operation. In VENT mode it is used to control the head and mouth of the puppet. In MAGIC mode the same FOB can be used to control the Magic2 “Track Manager” software (which controls the puppet with servo data pre-programmed).

### INFORMATION TO USER FOB# AXRGFv.310

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

**Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

## HANDS-FREE CONTROL SYSTEM Menu

### Alive Controller Menu System

The Alive Controller employs a simple three button interface used to select menu items and review / make changes to various settings. . *Remember, once you change the menu settings and store them, turn off the controller and then back on before continuing.*

The top and bottom buttons navigate forward and backward through the menu items which can be composed of menu names (appearing in all CAPITAL LETTERS), commands (appearing with first letter capitalized), and variables (appearing with at least first letter in lowercase – but sometimes will have mixed case to make multi-world variable abbreviations more clear, e.g., mouthOp).

By default, the status display appears. (described later)

**Press any button and the main menu is invoked, and “SETTINGS” is displayed on the LCD. Use the top and bottom buttons to navigate to the desired item. Then, press the middle button to confirm a selection.**

The main menu is composed of the names of other menus, with the exception of Exit and AlvTrak, used to choose current alive track. As you press either the top or bottom buttons you will cycle through the following options:

## Control Menus

### Menus

This section details each of the controller menus. Appearing on the left side of the page is the name of the MENU, Command or parameter as displayed on the LCD. Appearing on the right of the page is the description for each.

See: Alive Controller Menu System section for details on menu operation.

## Main Menu

The Main Menu contains a list of sub-menus and one command, therefore it serves as a more like a table of contents linking to different functional groups of commands and parameters.

SETTINGS MENU                      General device settings

VENT SETTINGS MENU    Vent related settings

FOB MENU	Commands to pair/unpair fob to controller and & fob button to controller command assignments
DIAGNOSTICS	Used for Tech Support only
Reset Defaults	Reset all parameters to default values. If SD card is installed, the character and aliveTrack parameters remain untouched. If SD card is not present, character and aliveTrack parameters are cleared.
Exit MAIN MENU	Exit the Main Menu and return to normal operating mode.

## Settings Menu

The Settings menu is used for General Settings.

character	Defines the name of the character (folder on SD card) which contains the alive and VentMotion files used by the character. The character folder must be located in the ACX folder which must be located in the root folder on the SD card. The character folder name must be 8 or less characters in length.
aliveTrack	Defines the Alive Track, which will be played and looped when the character is idle. Alive tracks are 8 characters long MAX and have extension .alv
dominant	Defines the dominant direction for the alive track as far as the direction the character will be looking. “right/Center” is the default direction Alive Tracks are recorded. Changing the selection to “Left=Mirror”, mirrors the head turn position and the body lean allowing you to change the character to “Left dominant”.
magicMouthGain	8..32 [16] Magic Trax mouth track gain used to increase / decrease Magic Trax mouth movement (this parameter was formerly called mouthScale)
motorMouthSpeed	Mouth Speed 1..9 [5] rate at which mouth closes when audio signal level falls.
Exit Settings Menu	Exit the Settings Menu and return controller to normal ` operating mode.



# Vent Settings Menu

Note : Default parameter values are shown in [brackets] and parameter ranges are showed as n1..n2, e.g. 1..50 means parameter can be in range from 1 to 50.

mouthOpen	0..100 [98] mouth MAX open position when using motor mouth
mouthClosed	0..100 [45] mouth normal closed position when using motor mouth (note: open position value does not have to be larger than closed position. Also, as values are adjusted mouth will move in to show setting)  mouthClosed parameter is also used to limit mouth travel when playing alive / Magic Trax
headTurnStopLeft	0..100 [0] defines the stop for left head rotation as produced by vent mode LeftSlo head turn key fob command.
headTurnStopR	0..100 [100] defines the stop right head rotation as produced by vent mode RightSlo head turn key fob command.  Note: The controller restricts the left head stop to be less than or equal to the right and the right to always be greater than or equal to the left. For Example if the right stop is set to 75 then adjusting the left stop will be restricted to 0..75.
headTurnRate	1..50 [20] LeftSlo and RightSlo command head turn rate.
ventMotion1	Track used for vent motion sequence 1 as activated by key fob when command VentMotionSeq1 is assigned to a fob button. Vent motion sequence files a 8 characters long MAX and have a file extension of .vms
ventMotion2	Track used for vent motion sequence 2 as activated by key fob when command VentMotionSeq2 is assigned to a fob button. Vent motion sequence files a 8 characters long MAX and have a file extension of .vms
Sleep Position	Stores, fob Sleep Command, character position as currently set by RC Transmitter operating in Slave Trainer Mode, with trainer cable plugged into Play In Jack (Not plugged into the PROG IN Jack).

Before executing this command, that is, pressing (select), the character should be placed in the desired sleep position controlled via RC Transmitter sticks. Upon pressing (select), “Sleep Position Stored” will be briefly displayed on LCD and a parameter save will be automatically executed.

The default sleep position, if not set by SetSleepPosition is the center of servo rotation which may not be very close to a neutral position for the character.

Also, to enable Sleep position sleepSpeed must be set to a non-zero value.

sleepSpeed

Sleep Speed 0..9 [0] parameter determines how fast character moves to sleep position.

Values 1 to 9 determine the rate that character will transition to the sleep position defined by SetSleepPosition command.

If the parameter value is zero, which is the default setting, the character will stop immediately in its current position upon receiving a sleep command, not using the position programmed by the SetSleepPosition command.

Exit Vent Settings

Exit the Vent Settings Menu and return to normal operating mode.

## Fob Menu

Pair Fob

Pair an Alive Key Fob with controller. Issuing this command will prompt, for pressing and holding top and bottom buttons on fob.

Press & Hold Fob Top&Bot. Buttons
--------------------------------------

The pairing process typically takes about 1 or 2 seconds and the message “Fob Paired” will appear briefly on the screen followed by “Changes Saved” and menu exit.

If the fob is already paired with the controller, the message “Already Paired” will be displayed.

If pairing process is not successful, controller will eventually timeout and return to normal operating mode.

After pairing the fob, the Controller should be responsive to fob button presses where fob commands will be displayed on the top line of the LCD, provided that the controller is not in Menu Mode.

Up to 3 Fobs may be paired with a given controller.

Don't try to pair multiple controllers in the same proximity of one another at the same time. If for some reason the wrong fob is paired with the wrong controller the "Clear Fob" command is provided.

Clear Fob Pair            Clear all fob to controller associations. After executing this command it will be necessary to Pair all fobs to be used with the controller.

fobPowerUpMode        Specifies the fob command mode that the controller will power-up in, Vent or Magic mode. That is, mode equates to the fob command set selection.

Below are fob button to command assignments. Controller mode Vent or Magic defines which set of fob button commands are active.

Fob button to command assignments. Default parameter values are shown in [brackets]. Letters (T L M R B) indicate button position on fob. See Key Fob Commands section for a description of each command.

magic button T	[Mouth]
magic button L	[LeftSlo]
magic button M	[Sleep]
magic button R	[RightSlo]
magic button B	[Alive]

vent button T	[PlayPause]
vent button L	[MP3 <<]
vent buttonM	[Panic]
vent button R	[MP3 >>]
vent button B	[PlayPause]

Exit FOB                    Exit the Fob Menu and return to normal operating mode.

**We recommend that you test a configuration after making changes to any settings to be sure your character has the behavior programmed you expect. To test it – turn off the controller box and then turn it on again to observe settings.**

We are still editing this document for better clarity. If something does not make sense, or could be explained in better words, please email [steve@axtell.com](mailto:steve@axtell.com)  
Thanks.

For tutorials and tech support visit <http://www.axtell.com/remotesupport.html>