

OFFICIAL APP MANUAL

Video tutorials and manuals for BeSteady and ACR Systems products are available on acr-sys.com and vimeo.com/acrsys.

If you have any questions about are products or you have a problem with it don't hesitate to send us an email at support@acr-sys.com.



OFFICIAL APP MANUAL

After months of hard work we are proud to present you ACR Manager – the official manager for ACR Systems products.

ACR Manager is a brand new Android dedicated application for configuration and maintenance of BeSteady ONE, BeSteady ONE Plus and ACR The Plus.



Before you start

1. You will need to have email account connected with Google.
2. Go to Google Store search ACR Manager.
3. Install it on your Android device.

How to start

1. Turn on the gimbal.
2. Android devices with android version older than 4.2 needs to be paired with the gimbal – when pairing number shows, just click ok.
3. Open ACR Manager.
4. Select your gimbal from search menu.

BeSteady ONE, BeSteady ONE Plus and ACR The Plus users who have rare pan axis issue and needed to rotate pan engine plug on main board in the past, now need to check FOLLOW PAN FIX option in EXPERT menu. If the gimbal rotates on pan axis while in follow mode, you should set FOLLOW PAN FIX to opposite position (from on to off, or from off to on).



1. Main menu - Navigate the various sections of the ACR Manager via the main menu.

2. Active profile and Bluetooth connection - This icon shows which profile is currently active. Also there is an icon showing if Bluetooth connection was established.

3. Read - Loads previously saved settings. Useful when you want to discard any unsaved adjustments.

4. Write - Saves current settings to the board. Settings must be written to board to take effect.

5. Voltage meter - Shows battery icon and voltage value or USB icon, depending on what is powering the gimbal.



PROFILES

☒ PROFILE 1

☐ PROFILE 2

☐ PROFILE 3

☐ PROFILE 4

☐ PROFILE 5

≡ DUPLICATING

☐ COPY PROFILE TO

☐ COPY PROFILE TO ALL OTHER PROFILES

Profiles – You can switch your active profile here. BeSteady ONE Plus and ACR The Plus supports 5 different profile and BeSteady ONE supports 3. Also you can copy active profile to any other or duplicate it to all of them.

SOUND

☒ COMMANDS

☒ ERRORS

Sound – Toggle on/off sounds of the gimbal (Commands and Errors). We recommend to leave all sounds on.

Tilt strength – Set tilt motor strength.

Tilt power boost – Give additional power to tilt axis (use only with uncommon set).

Roll strength – Set roll motor strength.

Roll power boost – Give additional power to tilt axis (use only with uncommon set).

Pan strength – Set pan motor strength.

Pan power boost – Give additional power to tilt axis (use only with uncommon set).

Filter strength – You can eliminate micro vibrations with this option. We recommend to use value 1, but you can also try 0 and 2.

Mobility – Lower values gives you more precision, but weaker stabilisation with fast acceleration (0-50% for shooting from hand), high values gives you better stabilisation with fast acceleration, but less precision (50-100% for shooting from drones, cars, motorboats).

Calibrate gyro – Gyro calibration, necessary at the beginning of every shooting day, when you change place of shooting and after writing factory defaults. It is essential to perform a gyro calibration on a completely stable gimbal. Perfect horizon level is not necessary.


Skip calibration on startup – Enable skip gyro calibration on startup. With this option on, the unit remembers last gyro calibration and starts immediately.

Motors on/off – Toggle all motors on/off.

Inverted Mode – Toggle real inverted mode on/off.


PERFORMANCE

TILT STRENGTH41%

-  +


☐ TILT POWER BOOST

ROLL STRENGTH24%

-  +


☐ ROLL POWER BOOST

PAN STRENGTH25%

-  +


☐ PAN POWER BOOST

FILTER STRENGTH1

-  +

☒ CALIBRATE GYRO

MOBILITY20%

-  +

☒ SKIP CALIBRATION ON STARTUP

☐ MOTORS ON/OFF

☐ INVERTED MODE

FOLLOW

≈ FOLLOW MODE

- ☒ FOLLOW TILT
- ☐ FOLLOW ROLL
- ☐ FOLLOW PAN
- ☐ XTENDED STABILISATION

TILT SPEED 42%

-  +

ROLL SPEED 42%

-  +

PAN SPEED 42%

-  +

TILT OFFSET 0

-  +

ROLL OFFSET 0

-  +

PAN OFFSET 0

-  +

☒ CALIBRATE FOLLOW OFFSET

FOLLOW DEADBAND 15%

-  +

FOLLOW EXPO RATE 30%

-  +

Follow Mode - Toggle each axis Follow Mode on/off. You can set the Follow Mode to operate 1, 2 or all 3 axis simultaneously.

Follow Tilt - Set follow on tilt axis.

Follow Roll - Set follow on roll axis. Tilt axis follow will be also activated.

Follow Pan - Set follow on pan axis.

Xtended Stabilisation - Set full stabilisation mode without follow.

Tilt speed - Set maximum follow speed for tilt axis.

Roll speed - Set maximum follow speed for roll axis.

Pan speed - Set maximum follow speed for pan axis.

Tilt offset - Set starting offset for tilt axis.

Roll offset - Set starting offset for roll axis.

Pan offset - Set starting offset for pan axis.

Calibrate follow offset - Adjusting Follow Offset setting automatically base on the difference between the current Follow Mode camera position and the calibrated position stored in the memory. Gimbal must be placed on the stand and it's motor must be turned on.

Follow deadband - Set safezone in which Follow Mode does not engage. It can help eliminate human error during walking.

Follow expo rate - Above 0% enables smooth acceleration and deacceleration with Follow Mode. If higher values are set, then the gimbal moves smoother and looks like more organic movement.

Control button – Set actions for control button. This option is described on page 11.

Filter – Set responsiveness of RC servos. With higher setting you will feel that RC control is much less direct and more delayed. The gimbal movement is more organic.

Deadband – Set safezone around the starting point of an RC servo.

Expo – Makes the RC input more smooth so the input control speed is not linear from start to finish.

Tilt speed – Set the maximum movement speed of tilt axis controlled by the RC input signal.

Roll speed – Set the maximum movement speed of roll axis controlled by the RC input signal.

Pan speed – Set the maximum movement speed of pan axis controlled by the RC input signal.

Set neutral point – Allow to software-side trimming for your RC device.

Default RCU – Set default RCU (Thumbstick, MZ10, MZ12).

Input mapping – Remote input as well as the source can be set here. The pins correspond to the physical pins visible in the RC port on the back of the unit. This option is described on page 13.

Command channel – Set actions for command channel signal (Low, Medium, High). This option is described on page 11.

Angle and Speed Modes – Each axis controlled by the RC input can be set to operate on one of two control modes. This option is described on page 14.

CONTROL

» CONTROL BUTTON

FILTER

5

-

+

DEADBAND

12%

-

+

EXPO

30%

-

+

TILT SPEED

66%

-

+

ROLL SPEED

65%

-

+

PAN SPEED

66%

-

+

SET NEUTRAL POINT

DEFAULT RCU

» INPUT MAPPING

» COMMAND CHANNEL

» ANGLE AND SPEED MODES

CONTROL

☞ CONTROL BUTTON

1 CLICK

Switch to Profile 1

2 CLICKS

Switch to Profile 2

3 CLICKS

Switch to Profile 3

4 CLICKS

Switch Inverted Mode ON/OFF

5 CLICKS

Switch Motors ON/OFF

LONG CLICK

Calibrate Gyro

CONTROL

☞ COMMAND CHANNEL

LOW SIGNAL

Switch to Profile 1

MID SIGNAL

Switch to Profile 2

HIGH SIGNAL

Switch to Profile 3

Control Button – Located at the back of the gimbal is fully configurable to perform various actions depending on the number of consecutive clicks.

Control Button programmable actions:

Use profile (1-5) – Switches to a given profile.

Calibrate gyro – Manually calibrates gyro, **the gimbal has to be completely stationary while it is done!**

Set tilt angle by hand – Open a few seconds window for user to set a new tilt resting position.

Toggle motor on/off – Toggle motors operation without powering off the unit.

Toggle Inverted Mode on/off – Toggles Inverted Mode.

Command channel - Is usually mapped to toggle switch on RC device. Some devices provide 2-way switches and some provide 3-way switches. 2-way switches allows to set LOW and HIGH positions. MEDIUM position setting is available for 3-way switches. They can be programmed with same options as control button.

Source – Set source for you RCU (PWM, Thumbstick).

Roll – Set channel for roll axis.

Roll monitor – Shows live RC input.

Tilt – Set channel for tilt axis.

Tilt monitor – Shows live RC input.

Pan – Set channel for pan axis.

Pan monitor – Shows live RC input.

Command – Set channel for command button.

Command monitor – Shows live RC input.

Value of 1000 mean that there is no signal on that particular channel.

CONTROL

✕

INPUT MAPPING

SOURCE:

PWM

ROLL:

CHANNEL 1

ROLL MONITOR

1000

TILT:

CHANNEL 2

TILT MONITOR

1000

PAN:

CHANNEL 3

PAN MONITOR

1000

COMMAND:

CHANNEL 4

COMMAND MONITOR

1000

CONTROL

ANGLE AND SPEED MODES

TILT SPEED MODE

TILT MINIMUM ANGLE

-

0

+

TILT MAXIMUM ANGLE

-

0

+

ROLL SPEED MODE

ROLL MINIMUM ANGLE

-

0

+

ROLL MAXIMUM ANGLE

-

0

+

PAN SPEED MODE

PAN MINIMUM ANGLE

-

0

+

PAN MAXIMUM ANGLE

-

0

+

Angle mode is used to control a direct angle of an axis depending on input servo position. It is best used with non-joystick type servos, that can be set to a permanent position (dial-type servos, switches, etc.).

Example: tilt control servo is a dial-type servo on the radio. The dial moved to -45% will position the tilt on 45 degrees.

Speed mode makes an axis move faster or slower depending on input strength. It is best set for joystick controlled axis.

Example: pan axis control is set to one of the radio joysticks. The joystick tilt of 25% from zero position will make the pan axis accelerate at 25% of maximum speed in this mode.

When **Speed mode** is switched off, then **Angle mode** is active.

Tilt Speed Mode – Toggle tilt speed mode on/off.

Tilt minimum angle – When set to “0” abolish the degrees limit.

Tilt maximum angle – When set to “0” abolish the degrees limit.

Roll Speed Mode – Toggle roll speed mode on/off.

Roll minimum angle – When set to “0” abolish the degrees limit.

Roll maximum angle – When set to “0” abolish the degrees limit.

Pan Speed Mode – Toggle pan speed mode on/off.

Pan minimum angle – When set to “0” abolish the degrees limit.

Pan maximum angle – When set to “0” abolish the degrees limit.

Page 13

Mobile app – Shows current app version.

Board – Shows current gimbal main board version.

Firmware – Shows current gimbal firmware version.

Battery monitor

Low voltage alarm – Set value for low voltage alarm. Default value for BeSteady/ACR Systems batteries is 10,3V.

Low voltage cutoff – Set value for low voltage cutoff. Gimbal will still work, but it will shut down power for motors. Default value for BeSteady/ACR Systems batteries is 9,9V.

Voltage compression – Set value for fully charged battery. Default value for BeSteady/ACR Systems batteries is 12,4V.

Calibrate voltage sensor – Each gimbal comes with precalibrated voltage sensor. You will need to use this option only when asked by ACR Support technician. To calibrate voltage sensor use fully charged battery, and check it with battery voltage meter.

App theme – Change color theme for the app.

BeSteady ONE, BeSteady ONE Plus and ACR The Plus works only with 3cell LiPo/Lilon batteries and are capable to take maximum of 13V.

DO NOT USE 4CELL BATTERIES!

DETAILS

MOBILE APP: v1.0b480

BOARD: v3.0

FIRMWARE: v2.00 b0

⌵ BATTERY MONITOR

LOW VOLTAGE ALARM

- +

LOW VOLTAGE CUTOFF

- +

VOLTAGE COMPRESSION

- +

☒ CALIBRATE VOLTAGE SENSOR

APP THEME

EXPERT

- ☐ FOLLOW TWIST COMPENSATION
- ☐ FOLLOW TILT FIX
- ☐ FOLLOW PAN FIX
- ☐ SHELF INVERTED MODE
- ☐ CALIBRATE GYRO
- ☐ CALIBRATE CAMERA IMU
- ☐ CALIBRATE FRAME IMU
- ☐ FACTORY DEFAULTS

While accessing this tab a warning window pops up requiring the User to confirm the knowledge of these settings being able to break the gimbal configuration.

Follow Tilt fix – Service button that can fix rare issues with the tilt axis.

Follow twist compensation – Service button that can fix rare issues with the roll axis.

Follow Pan fix – Service button that can fix rare issues with the pan axis.

If your gimbal rotates on PAN or ROLL axis while in Follow mode then you need to toggle corresponding option. After you switch from BeSteady Manger to ACR Manager and will already have FOLLOW PAN FIX on, and the gimbal works properly then leave it that way.

Shelf inverted mode – Enable to use shelf inverted mode (camera shelf set upside down).

Calibrate gyro – Manual gyro calibration. It is necessary to keep the gimbal completely stationary during this process.

Sensor cable pointing to – This option is only available in BeSteady One. After restoring factory defaults you will need to set exact sensor position. Also you will have to perform accelerometer calibration each time you change sensor location.

Calibrate CAMERA IMU – Step-by-step wizard with instructions to perform a good camera accelerometer calibration is launched after this button is clicked. Check product manual for further reference.

Calibrate FRAME IMU – Step-by-step wizard with instructions to perform a good frame accelerometer calibration is launched after this button is clicked. **Do not calibrate the frame sensor unless it is clearly instructed by ACR Support technician.** Check product manual for further reference.

Factory defaults – Write default, factory safe settings to the gimbal. BeSteady ONE lost all calibration data as well.

DISCLAIMER

It is essential to read the entire Manual and follow all instructions and warnings, in order to operate the BeSteady ONE, BeSteady ONE Plus and ACR The Plus correctly and avoid damage or injury.

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