Bilstein iRC Instruction

BILSTEIN iRC

OVERVIEW

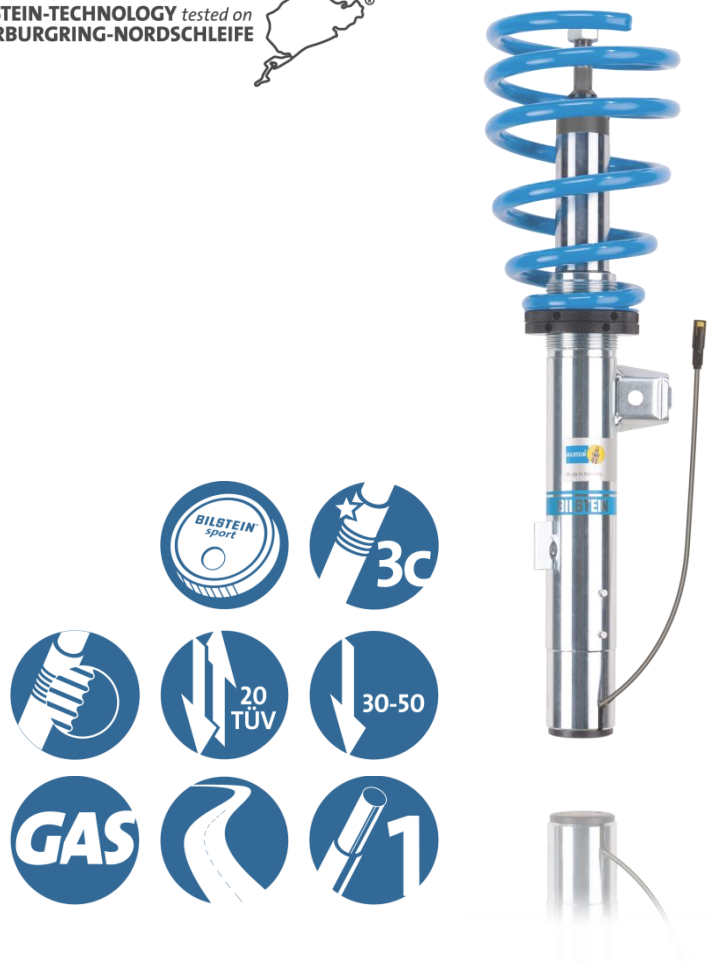
- The Bilstein iRC is a module used in addition to B16 RideControl coilovers
- The iRC module converts a standard B16 RideControl kit into an active suspension that can be custom tuned to the users individual demands
- The iRC module works with the free Bilstein iRC app to allow the user to fine tune the parameters that control the damper modes

What is the BILSTEIN B16 RideControl?

Button Controlled Damper System – Comfort/Sport

- Monotube gas pressure shocks/Upside down monotubes
- Electronically Controlled Damper modes via cabin mounted button
- Damper setting option between Comfort and Sport mode
- Height Adjustable Coilover
- Application specific tuned Dampers
- Illuminated Control Button
- TÜV-Approved

BILSTEIN-TECHNOLOGY *tested on* NÜRBURGRING-NORDSCHLEIFE



What is the BILSTEIN iRC?

BILSTEIN-iRC App for Active Dampers

- An addition to the BILSTEIN B16 RideControl suspension systems (sold seperately)
- Converts B16 RideControl kits into an active suspension system with the aid of a 3-Axis Sensor (G-Sensor)
- Controled and programmed via smartphone app
- Eliminates the requirement of the RideControl button for a seemless installation
- Provides two fixed settings: Comfort+ (Open) and Sport+ (Closed)

Continued:

- Three additional preset Auto modes (Comfort, Normal and Sport) that can be tuned by varying the acceleration threshold values, switching times and filter parameters for an individually tailored suspension setting
- Option to rename and save the three preset auto modes (Comfort, Normal and Sport)
- Provides graphical output of the longitudinal and lateral acceleration forces which display on your smartphone
- Customize illumination pattern of RideControl button (if equipped)

How does the BILSTEIN iRC work?
BILSTEIN-iRC App for Active Dampers

General Principle:

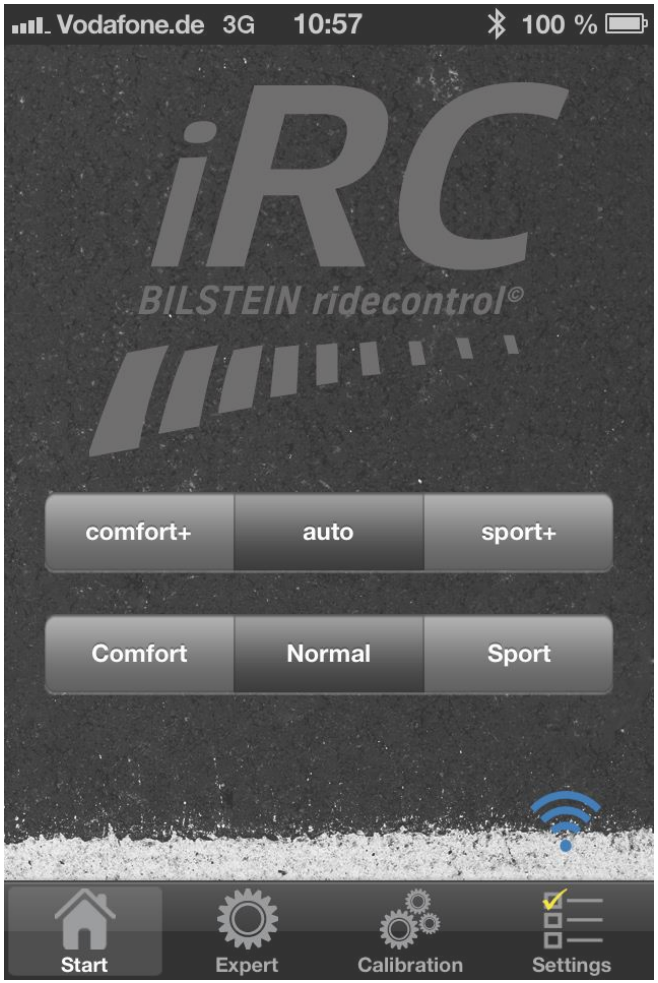
- iRC module contains 3-Axis sensor which automatically switches dampers between “comfort“ and “sport“ depending on various parameters:
    - Lateral acceleration threshold
    - Longitudinal acceleration threshold
    - Tolerance Angle
    - Sensitivity
    - Assist time

- Default position in Auto mode is soft (open), when exceeding the “assist value“, damper switches to firm setting for the determined time “assist time“ for the chosen setting

- Assist value, assist time, sensitiviy are adjustable by the user (trigger for damper switch)

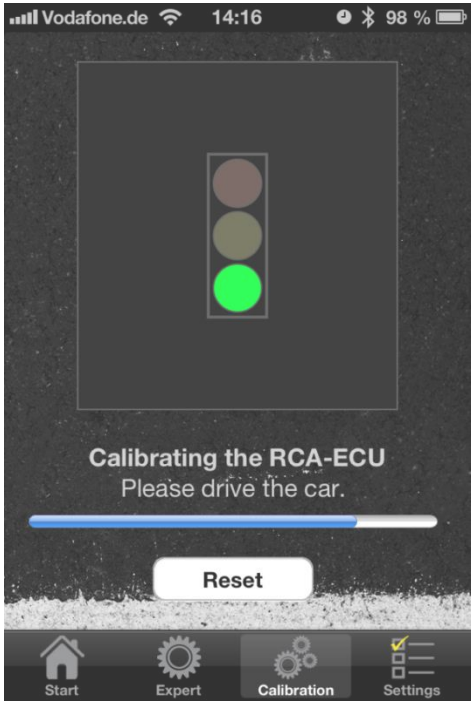
Bilstein RideContol iRC iPhone App Start Screen

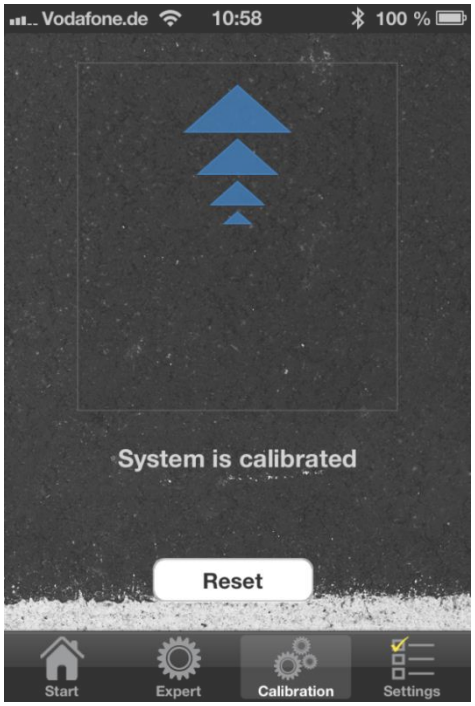
- In addition to Comfort+ and Sport+ modes, an Auto mode is available
- When switching to Auto mode, three sub settings become avail
- These modes are pre-programmed but can be modified to meet an individual users needs
- Connection of phone to iRC is displayed with WIFI symbol: Blue = Connected / Yellow = Bad Connection / Red = Not Connected



Bilstein RideContol iRC iPhone App Calibration

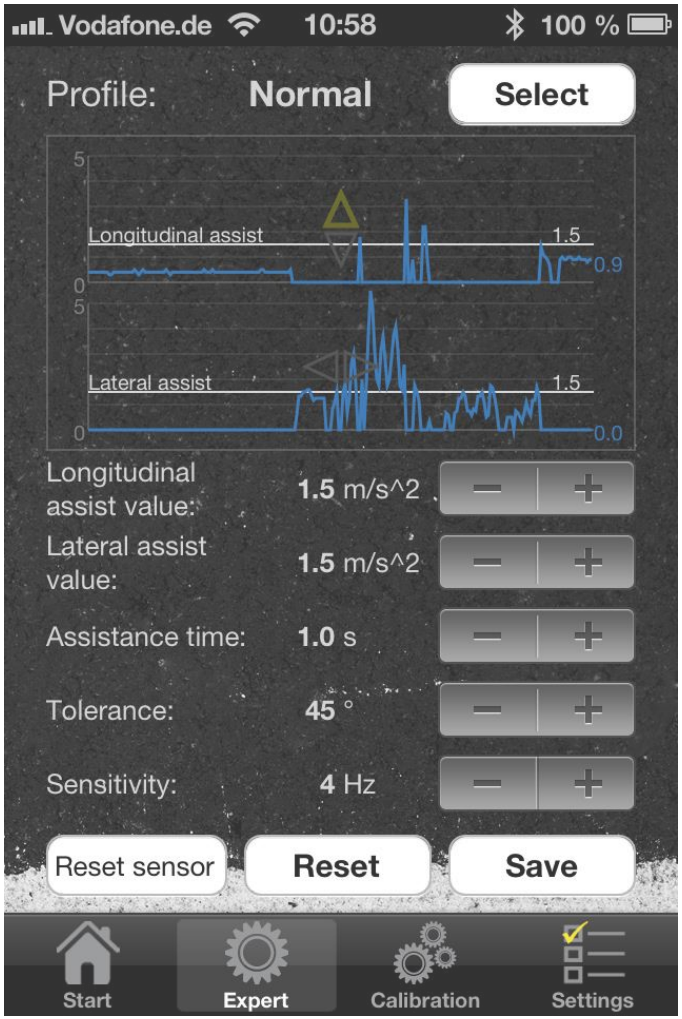
- Sensor must be calibrated to vehicle and smartphone
- This is done by driving the vehicle
- During calibaration phone must remain stationary in either a horizontal or vertical positon
- Sensor only needs to be calibrated to vehicle once





Bilstein RideContol iRC iPhone App Expert Screen

- Shows Profile Selected (Comfort, Normal and Sport)
- Indicator arrows display the switching of the damper modes (ON/OFF) by either the Longitudinal or Lateral assist
- Live view of the measured forces in meters per second
- Independent adjustment of longitudinal and lateral acceleration (force) thresholds, Assitance Time, Tolerance Angle and Sensitivity
- Save created settings
- Reset parameters and Sensor



Tuning with the iRC APP: Controlling the switching time (ON/OFF)

Longitudinal Assist Value:

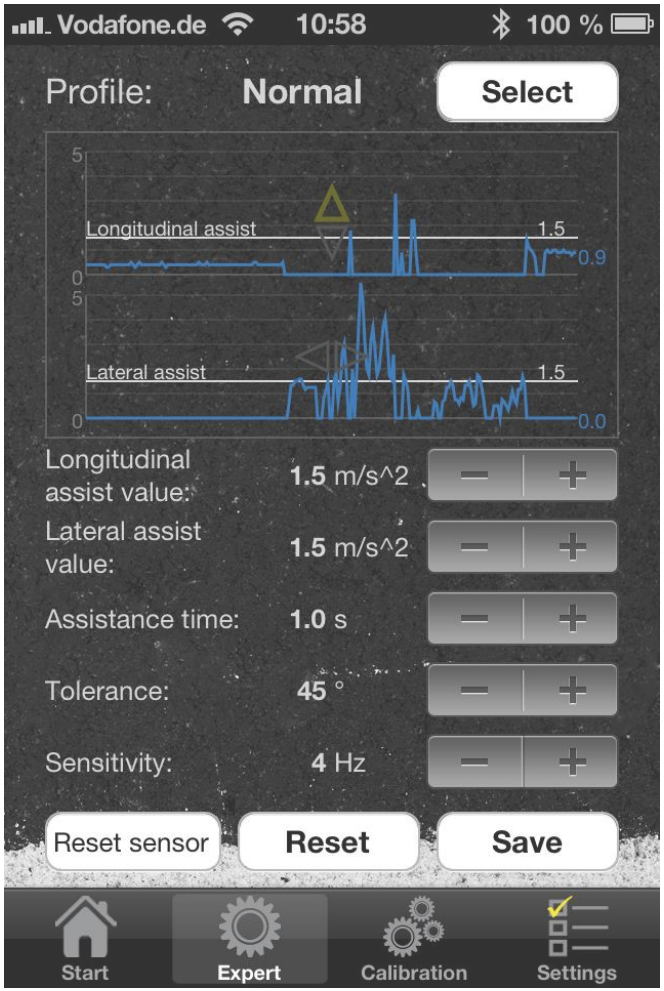
- Measured in meters per second (m/s)
- Adjustment Range: 0.0 to 5.0, the lower the value = the more sensitive
- Defines Longitudinal trigger point

Lateral Assist Value:

- Measured in meters per second (m/s)
- Adjustment Range: 0.0 to 5.0, the lower the value = the more sensitive
- Defines Lateral trigger point

Assistance Time:

- Measured in seconds
- Adjustment Range: 0.0 to 5.0
- Assist time (time ON) after trigger point is adjuster here
- The lower the value = the more sensitive



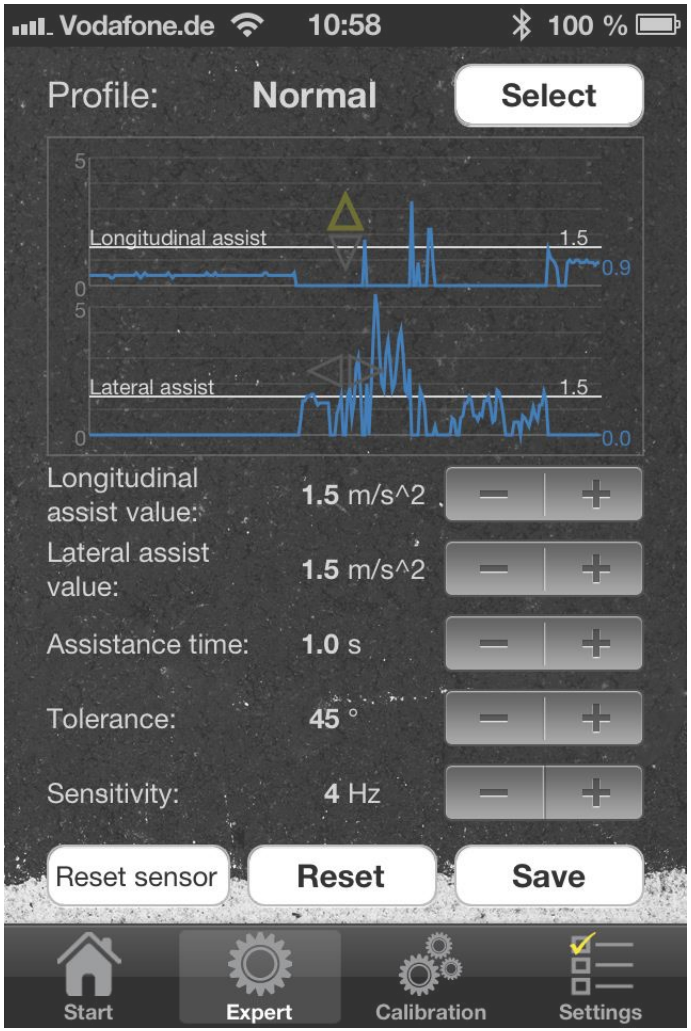
Tuning with the iRC APP: Filtering Faults cause by bumpy roads (small inputs)

Tolerance Angle:

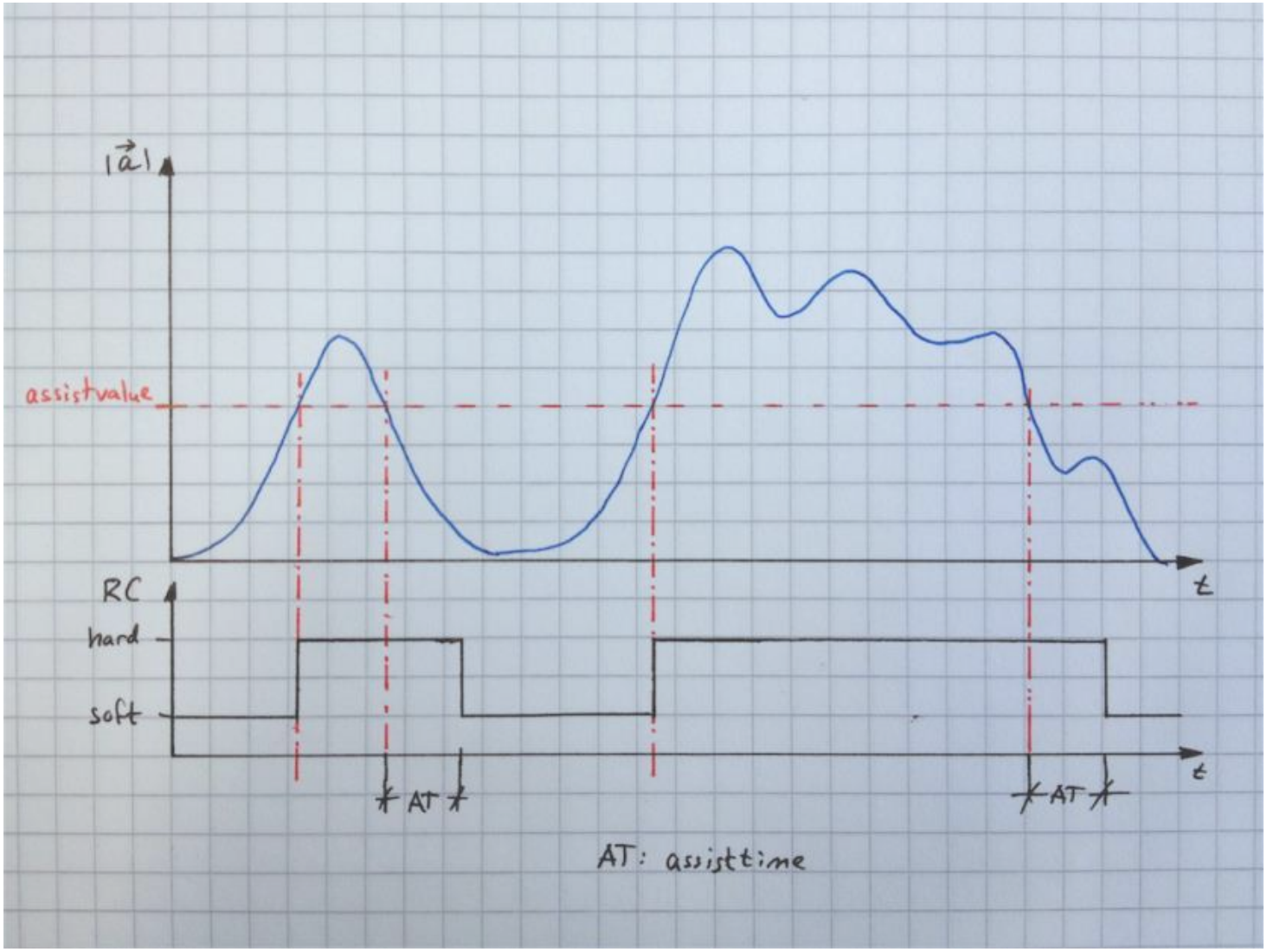
- Measured in degrees
- Adjustment Range: 0 to 90
- Recommended setting is 45 deg
- Angle Range in which trigger will be ignored relative to the position of the sensor
- The higher the value of the angle is, the more faults are removed

Sensitivity:

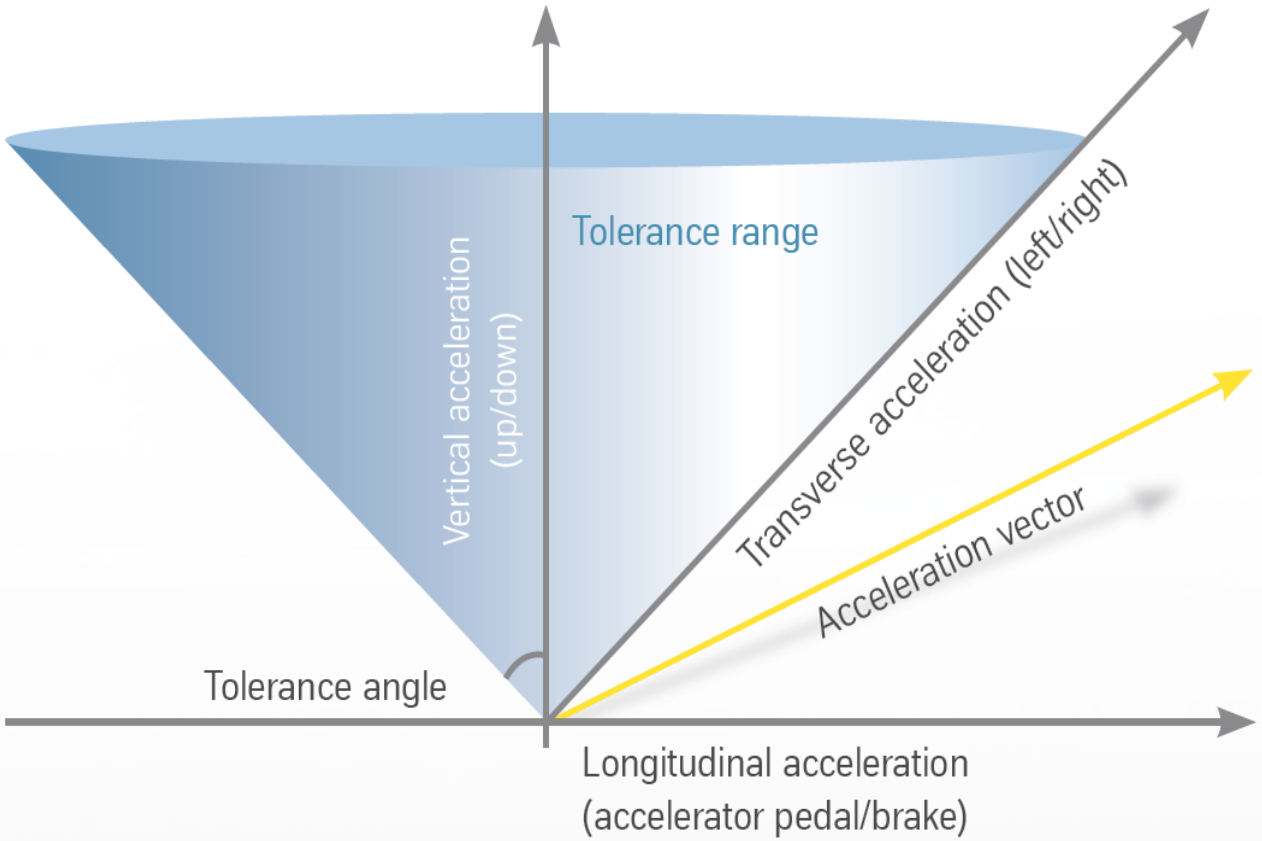
- Measured in Hertz
- Adjustment Range: 1 to 5 Hz
- Recommended setting is 4 Hz
- The smaller the frequency is the less susceptible to faults the system will be
- The lower the frequency = more comfortable ride



Bilstein RideContol iRC Software, Operation



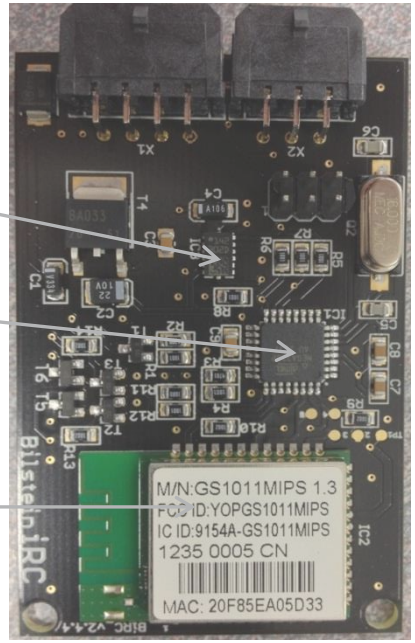
CUSTOMIZING IN AUTO MODE



Bilstein RideContol iRC Hardware

Part # 14-230615:

- Module works with all RideControl kits
- Includes all necessary hardware
- Connects to smartphone via WIFI



Active Damper System
B16 RideControl + iRC Components