
RECOVIB

RECOVIB Feel

3-Axis Shock & Vibration Smart Probe

User Manual

RECOVIB Feel Android Application



CONTENTS

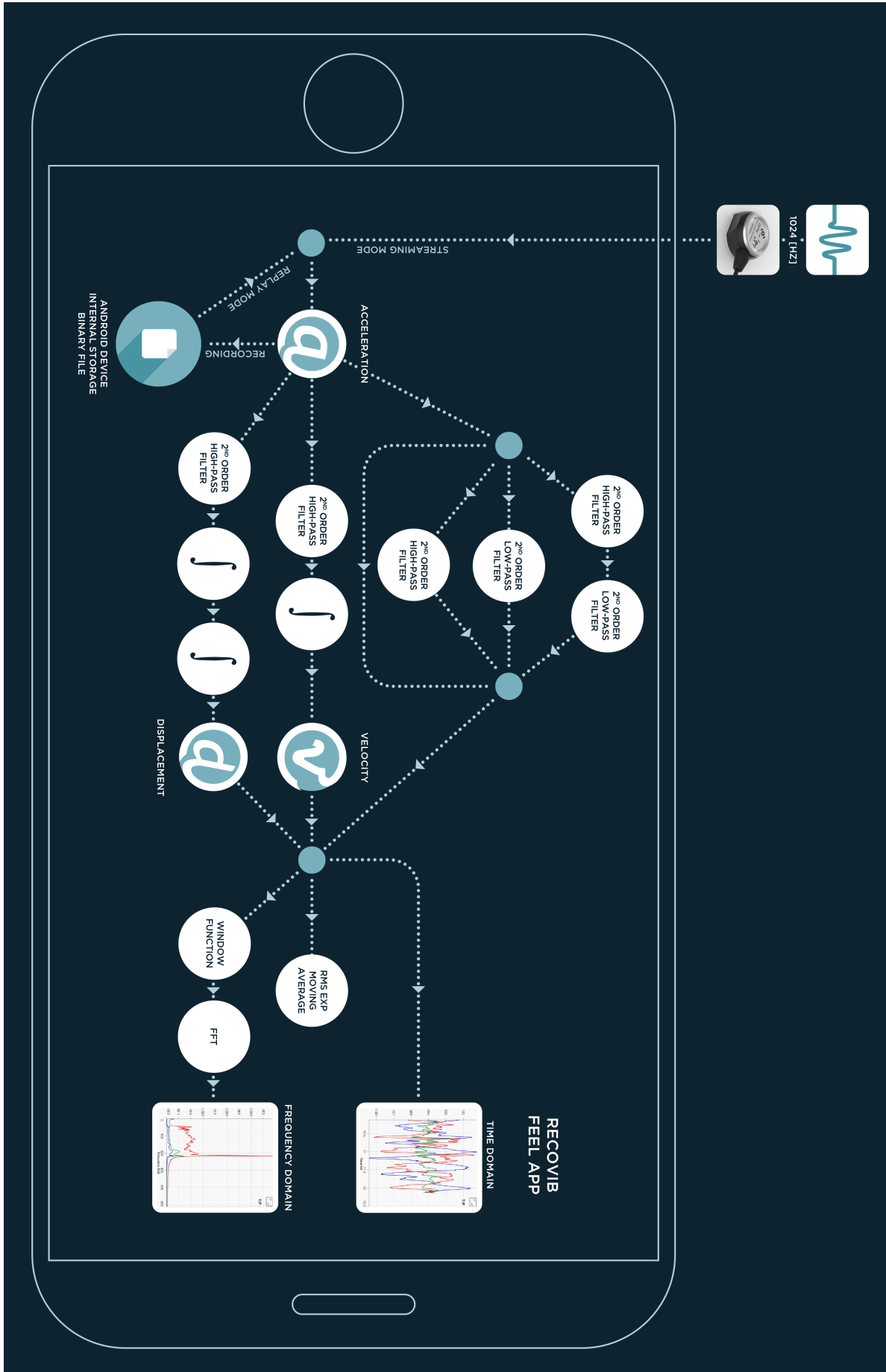
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1 CASE CONTENT



1. RECOVIB Feel sensor
2. Magnet
3. USB key containing software installer
4. Screwdriver
5. USB OTG adapters (USB type-C and Micro-B)

2 FUNCTIONAL CHART



3 INSTALLATION AND CONFIGURATION

3.1 Software Download

To be able to download the RECOVIB FEEL App from the Google Play Store, you need a USB OTG compatible Android device. Refer to your device specifications to make sure it is USB OTG compatible. Although some devices are USB OTG compatible, they may have very poor performances and may not be reliable to use with the RECOVIB FEEL. Refer to Appendix A and B for a list of devices reported to be working or not working¹. From the Google Play Store, search "recovib". Select the RECOVIB FEEL App and install it (Figure 1). If RECOVIB FEEL is not listed when searching "recovib", it might mean that your Android device does not support USB Host/USB OTG.

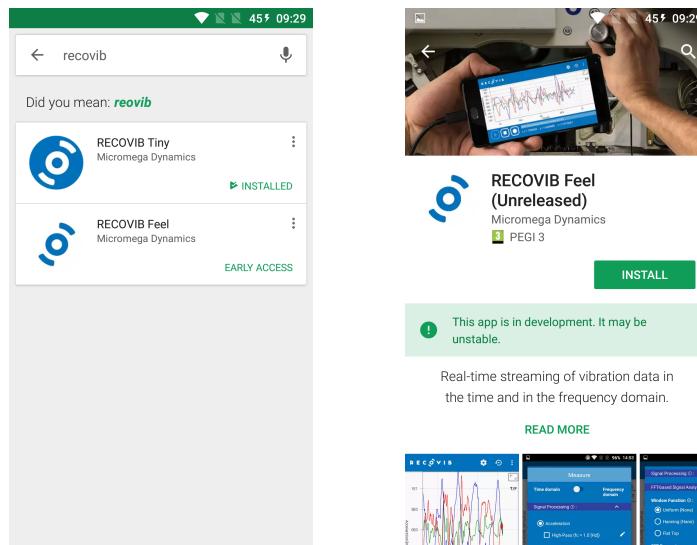


Figure 1: Google Play Store - RECOVIB FEEL

3.2 First Usage Configuration

Once the app installed, open it and allow it to access photos, media, and files on your device (this step is only needed at first launch). You are now asked to connect the RECOVIB FEEL to your Android device through the supplied USB OTG adapter. After a few seconds, you will need to allow the app to access the USB device. Check the box to use it by default and press "OK".

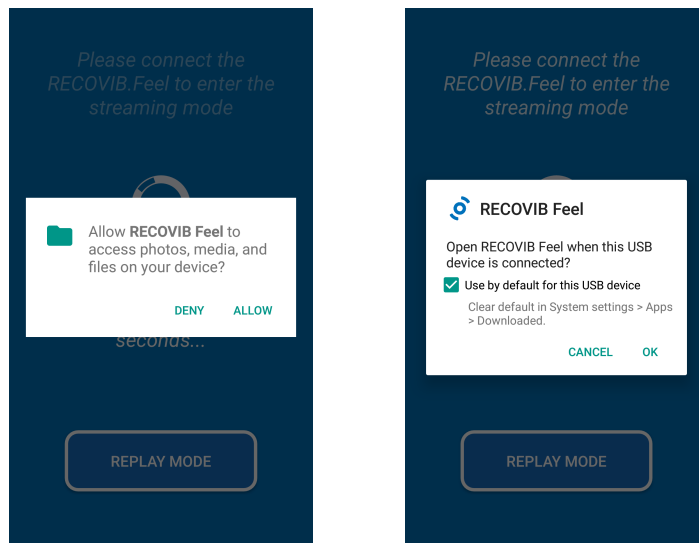


Figure 2: Storage and USB access permissions

¹These lists are for indicative purposes only

At first launch, the settings dialog opens (Figure 3). Scroll down and click "OK" for a default configuration.

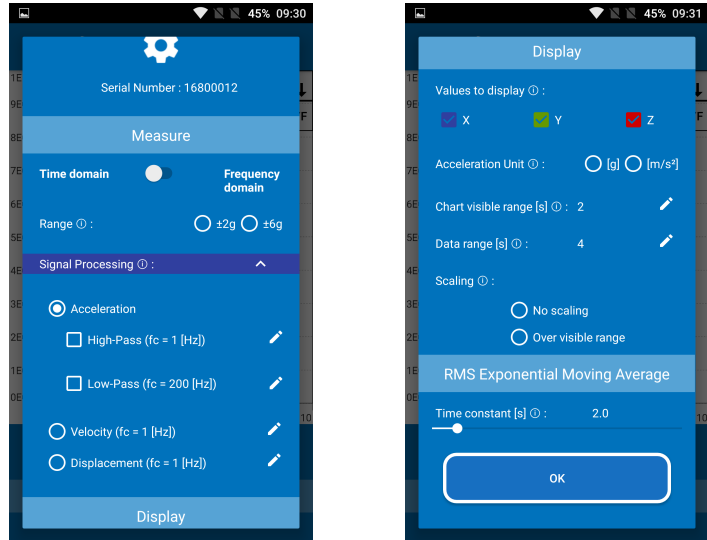


Figure 3: Settings Dialog

You now get to the main window (Figure 4). The first usage configuration succeeded.

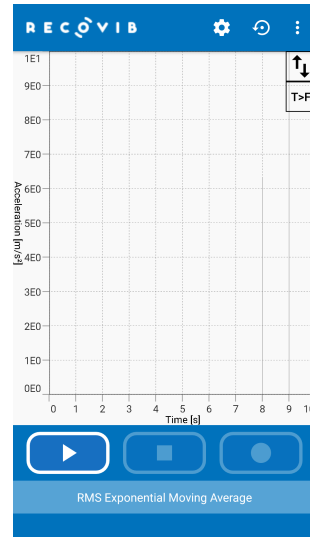


Figure 4: Main Window

If you do not get to this point, it might mean that :

- The USB OTG is not properly enabled on your device. Some operations might be needed to enable OTG on your Android Device. Device specific information can be found on the internet.
- The USB OTG does not work properly on your device (see Appendix A and B).

4 OPERATION

4.1 Launching the RECOVIB FEEL App

If the first usage configuration was done properly (section 3.2), you should be able to get to the main window in two ways :

- Quit the potentially running RECOVIB FEEL App and plug the RECOVIB FEEL in your Android device through the USB OTG adapter. After a few seconds, the application opens automatically and is ready for streaming.
- Quit the potentially running RECOVIB FEEL App and launch the application manually by pressing on the application icon. The app opens and asks you to plug the RECOVIB FEEL. After a few seconds, the application opens and is ready for streaming.

4.2 Start/Stop Data Streaming

To start streaming data from the main window, simply press on the **PLAY** icon. To stop streaming data, simply press on the **STOP** icon.

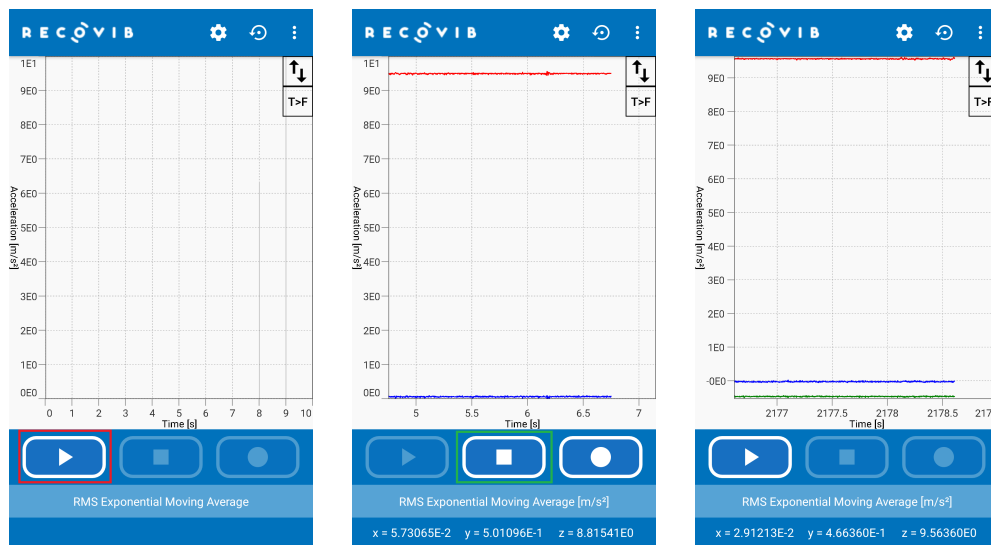


Figure 5: Start/Stop Data Streaming

4.3 Record Streamed Data

While streaming data, you can record acceleration data by pressing the **RECORD** icon. The icon will toggle till the recording is stopped. The recording stops either after the **RECORD** icon is pressed again or automatically after a user-defined number of minutes (see section 4.3.1).

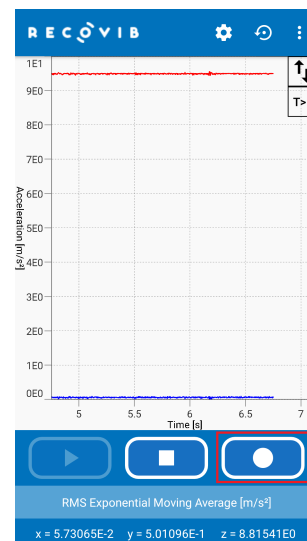


Figure 6: Record Streamed Data

4.3.1 Set the Recording Time Limit

To define the recording time limit, press the **RECORDING SETTINGS** icon when no recording is ongoing. The recording settings dialog opens. Move the slider to the right/left to set the desired number of minutes. This parameters aims at avoiding memory overflow. One minute of recording corresponds to 675 840 Bytes of data.

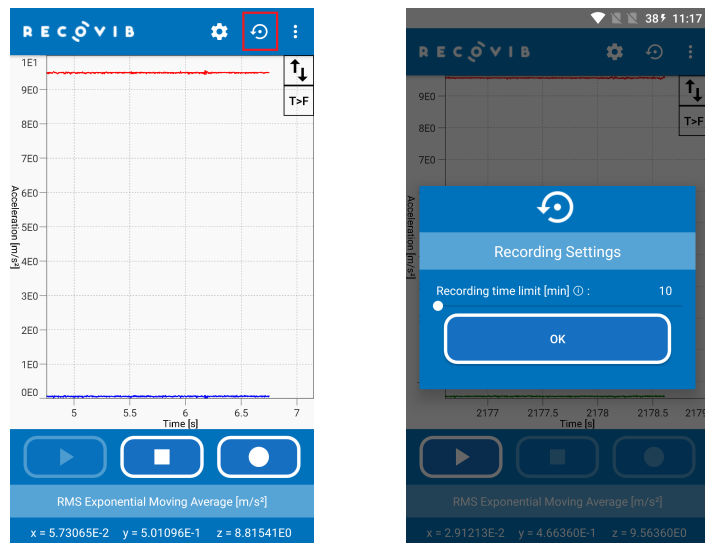


Figure 7: Set the Recording Time Limit

4.4 Replay Recorded Data

To replay a set of data, launch the app (see 4.1) and press the **REPLAY MODE**. Press the **PLAY** icon to select the set of data to replay. A file browser opens. You will find your recordings in the Android device's Internal Storage² under :

/Documents/RecoVIB_Feel_App/{SERIAL_NUMBER}/{RECORDING_DATE_TIME}

Select the *{RECORDING_DATE_TIME}.recovib* file to replay this recording.

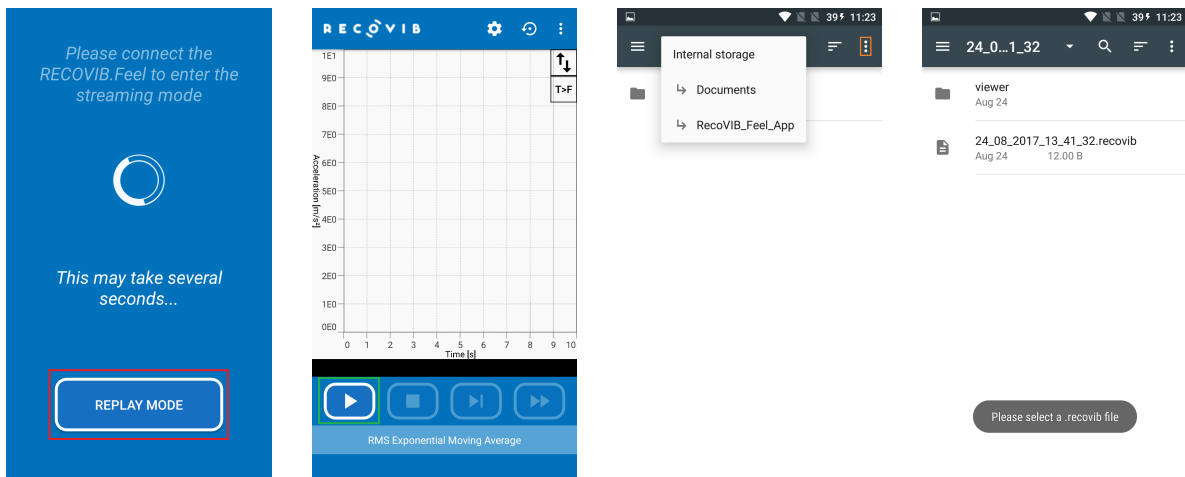


Figure 8: Replay Recorded Data - Select File

Do not modify the file locations/names. If the above path format is not respected, the RECOVIB FEEL app will crash.

²You might need to make your Internal Storage visible to find the Documents folder. The operation depends on the Android device but you will most likely find a "Show Internal Storage" under the **OPTIONS** icon

When replaying data, you have the buttons of a common remote control : **PLAY/PAUSE**, **STOP**, **SKIP** and **FAST-FORWARD**.

- **PLAY/PAUSE** : play or pause the replay
- **STOP** : stop the replay (e.g. to select another file to replay)
- **SKIP** : skip a user-defined period of time (see section 4.6.10)
- **FAST-FORWARD** : replay the data x2, x4, x8, x16 the normal speed

Once the full set of data has been replayed, it can be replayed again by pressing the **REPLAY** button.

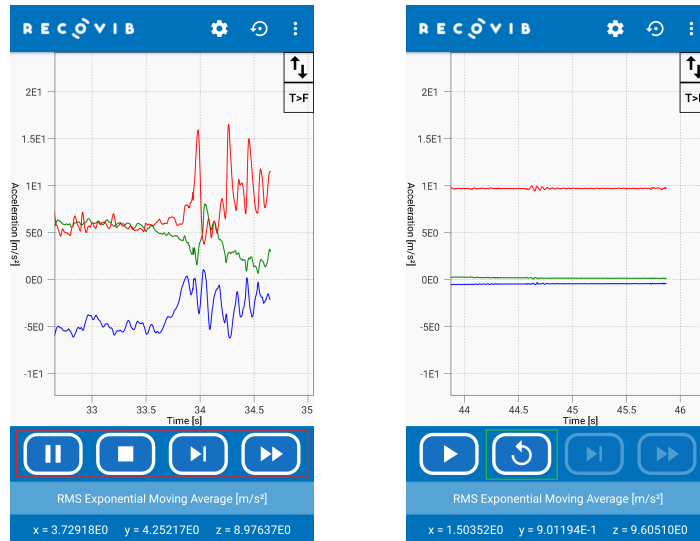


Figure 9: Replay Recorded Data - Control Buttons

4.5 Common Touch Gestures

- **Double Tap** : scale chart to the whole set of data in the X and Y directions
- **Long Press** : display a cursor that can be moved along the curves
- **Pinch/Zoom** : zoom in/out (if scaling is disabled only, see section 4.6.11)
- **Swipe up/down/right/left** : move in the chart (if scaling is disabled only, see section 4.6.11). When the streaming is ongoing (streaming mode or replay mode), the chart is automatically sliding to the right. It is then impossible to navigate to the left/right. Stop streaming (see section 4.2 or 4.4) to navigate freely

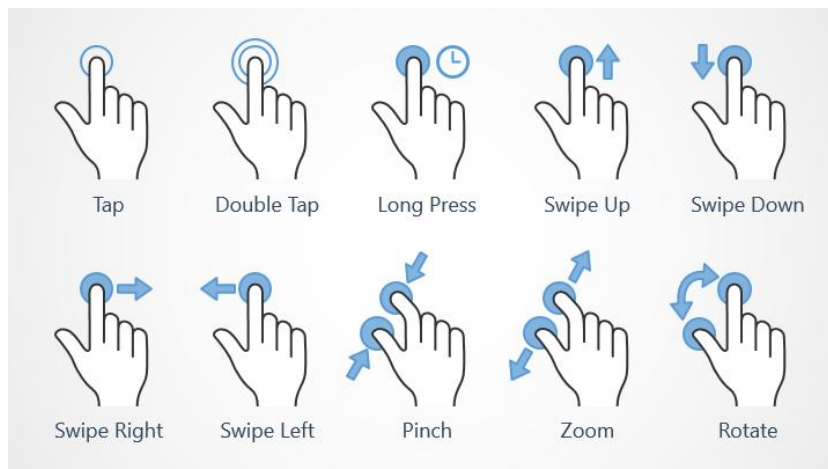


Figure 10: Common Touch Gestures

4.6 Modify Settings

From the main window, press the **SETTINGS** icon to open the settings dialog again. You can get basic information on the different parameters by pressing on the corresponding **INFORMATION** icon.

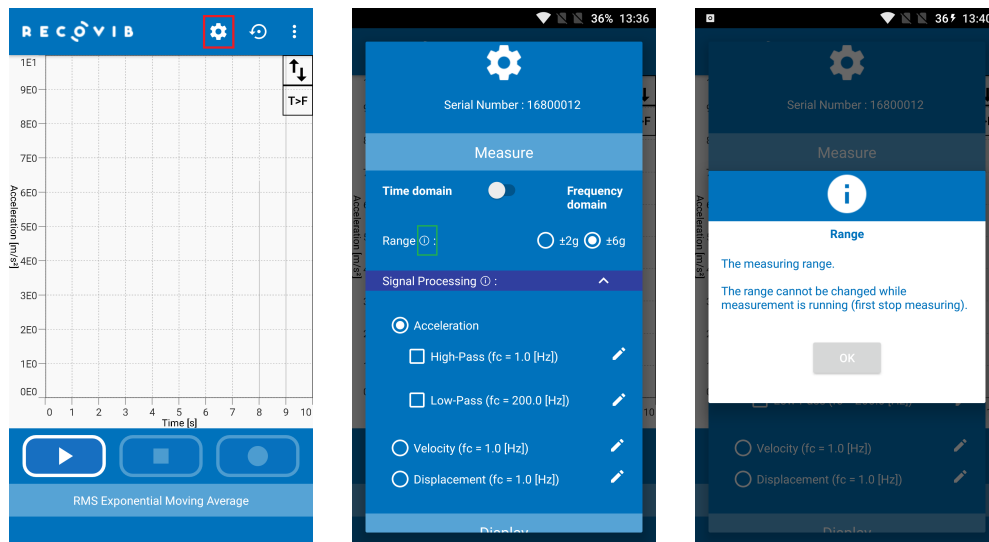


Figure 11: Parameters dialog

4.6.1 Switch From Time Domain to Frequency Domain

The RECOVIB FEEL App allows for real-time streaming of data in the time and in the frequency domain. To switch from one domain to another, you can either use the **SWITCH** in the settings dialog or use the **T>F** (**F<T**) short-cut in the main window.

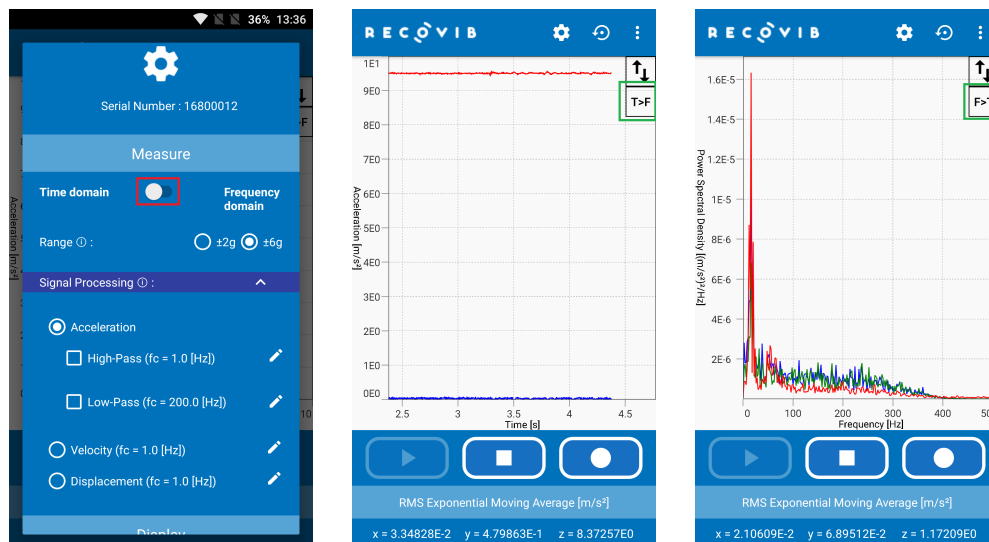


Figure 12: Switch From Time Domain to Frequency Domain

4.6.2 Set the Measuring Range

The 2g/6g RECOVIB FEEL offers the possibility to choose between two different measuring ranges : $\pm 2g$ and $\pm 6g$. To switch from one measuring range to another, stop the potentially ongoing streaming and open the settings dialog. Select the desired measuring range in the **Range** menu.

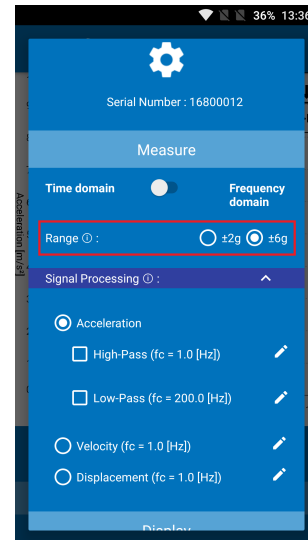


Figure 13: Set the Measuring Range

4.6.3 Set the Signal Processing

As shown in section 2, the RECOVIB FEEL App offers several signal processing options.

The RECOVIB FEEL is an acceleration sensor but the application makes it possible to derive velocity and displacement values based on the measured acceleration values. Hence, you can use the RECOVIB FEEL in three different modes :

1. Acceleration mode :
 - Raw acceleration data are displayed
 - High-pass (2nd order) filtered acceleration data are displayed. The cut-off frequency is defined by the user.
 - Low-pass (2nd order) filtered acceleration data are displayed. The cut-off frequency is defined by the user.
 - Band-pass (2nd order high-pass filter followed by a 2nd order low pass filter) filtered acceleration data are displayed. The cut-off frequencies are defined by the user.
2. Velocity mode : a 2nd order high-pass filter is applied to the acceleration values and the filtered values are integrated by a 1st order low-pass filter. Both filters have the same user-selectable cut-off frequency.
3. Displacement mode : a 2nd order high-pass filter is applied to the acceleration values and the filtered values are double integrated by a 1st order low-pass filter. Both filters have the same user-selectable cut-off frequency.

To switch from one mode to another, stop streaming (see section 4.2 or 4.4) and open the settings dialog. Press the **EXPAND MORE** icon to expand the Signal Processing tab if needed and select the radio button corresponding to the desired mode.

To set the cut-off frequencies, press the **EDIT** icon.

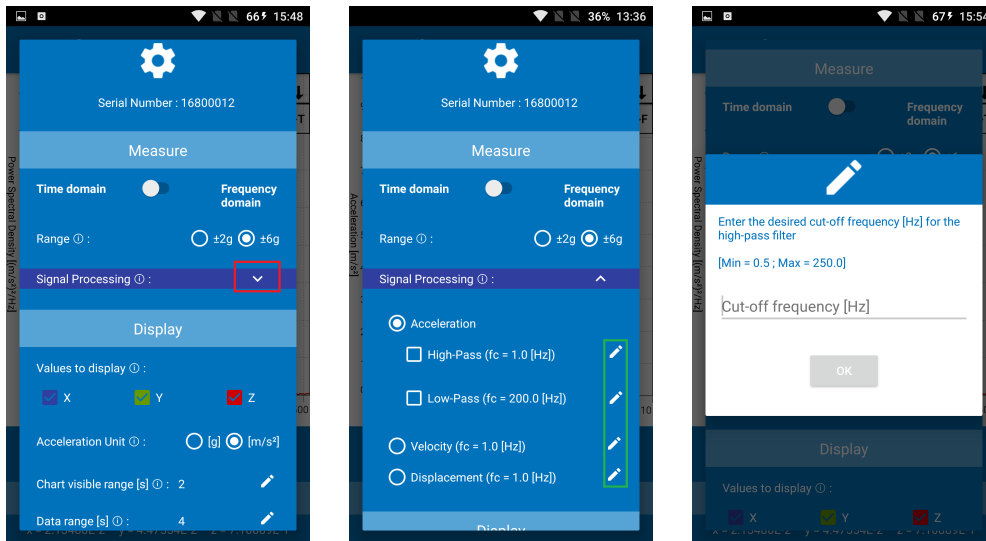


Figure 14: Set the Signal Processing

4.6.4 Set the FFT-based Signal Analysis

When the frequency domain is selected (see section 4.6.1), the FFT-based Signal Analysis tab appears in the settings dialog (press the **EXPAND MORE** icon to expand the FFT-based Signal Analysis tab if needed). Three subsections can be identified :

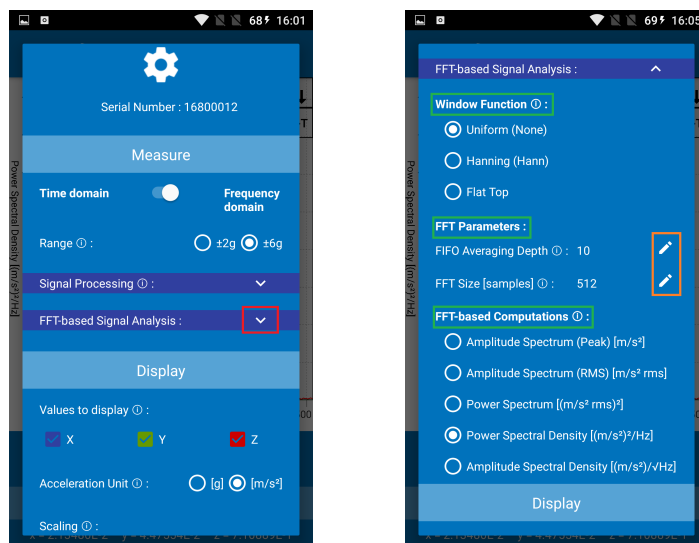


Figure 15: Set the FFT-based Signal Analysis

Window Function Windowing is used to minimize the effects of performing an FFT over a non integral number of cycles (Spectral Leakage). Three options are implemented :

- Uniform window should be used for broadband random signal (white noise) and closely spaced sine waves
- Hanning window should be used for sine waves or combination of sine waves, for narrowband random signal (vibration data) and for unknown content
- Flat top window should be used for sine wave (when amplitude accuracy is important)

Select the desired one by pressing on the corresponding radio button.

FFT parameters To modify the FFT parameters, press the corresponding **EDIT** icon.

- FIFO Averaging Depth : if this parameter is set to x, the last x FFT frames are averaged with equal weighting and the result is displayed.
- FFT size : The length of the FFT input data frame in samples. The higher the value of this parameter, the longer the time "window" in which we observe the signal. The higher the value of this parameter, the longer the time between subsequent updates of the FFT spectrum and the larger the amount of numeric data that must be processed.

FFT-based Computations The RECOVIB FEEL App offers five FFT-based computations.

- Amplitude Spectrum (Peak)
- Amplitude Spectrum (RMS)
- Power Spectrum
- Power Spectral Density
- Amplitude Spectral Density

Select the desired one by pressing on the corresponding radio button.

4.6.5 Set the RMS Exponential Moving Average

The RMS Exponential Moving Average is an approximation of the RMS Linear Moving Average. It is computed as follows :

$$\mu_k = \sqrt{(a(k)^2 - \mu(k-1)^2) * m + \mu(k-1)^2}$$

with

$$m = 1 - \exp\left(-\frac{\Delta t}{\tau}\right)$$

where Δt is the sampling time [s] and τ is the time constant [s].

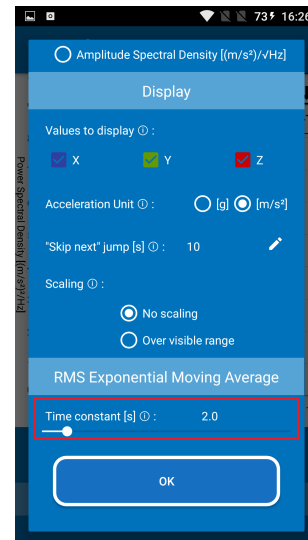


Figure 16: Set the RMS Exponential Moving Average

4.6.6 Select the Values to Display

You can select the values to display on the chart by checking the **boxes** associated with the desired axes. The axes definition is in accordance with the reference axes of measures printed on the RECOVIB FEEL.

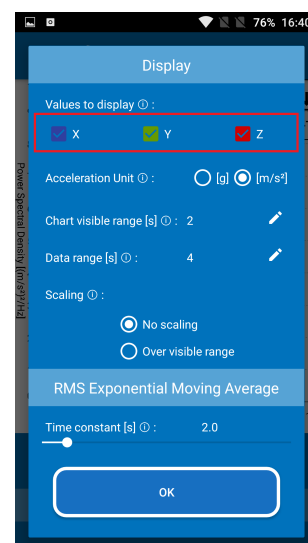


Figure 17: Select the Values to Display

4.6.7 Select the Acceleration Units

You can select the desired acceleration units (g or m/s^2) by pressing the corresponding **radio button**. The conversion between g and m/s^2 is done using the following value of g : $9.80665 [m/s^2]$.

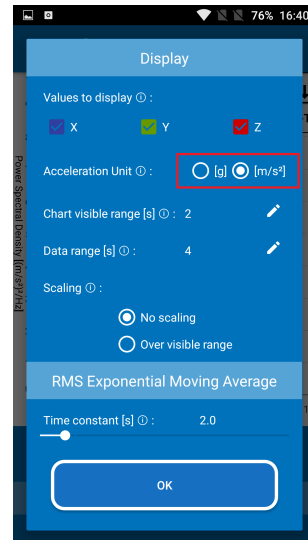


Figure 18: Select the Acceleration Units

4.6.8 Set the Chart Visible Range

The chart visible range is the range of data in seconds that the chart viewport is focussing on. Setting this parameter to x results in a moving viewport ranging from $(t - x)$ to t , where t is the current time.

To modify the chart visible range, simply press the **EDIT** icon.

Note : Setting a chart visible range smaller than the chart data range is a common sense rule (see section 4.6.9).

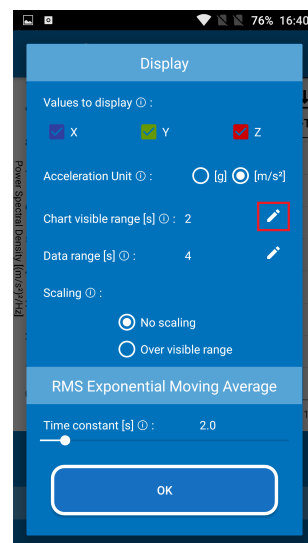


Figure 19: Set the Chart Visible Range

4.6.9 Set the Chart Data Range

The chart data range is the range of data in seconds that is kept in the chart. Setting this parameter to x results in a chart data ranging from $(t - x)$ to t , where t is the current time.

To modify the chart data range, simply press the **EDIT** icon.

Note : Setting a chart data range greater than the chart visible range is a common sense rule (see section 4.6.8).

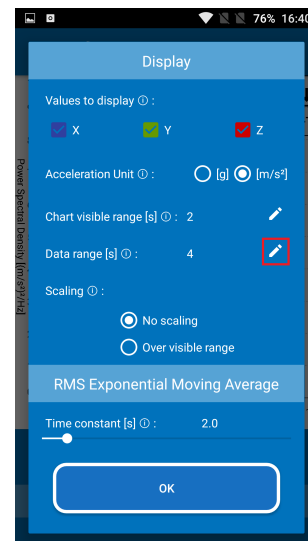


Figure 20: Set the Chart Data Range

The difference between the chart visible range and the chart data range is illustrated in Figure 21. For this example, the chart visible range and the chart data range are set to 10 and 20 seconds, respectively.

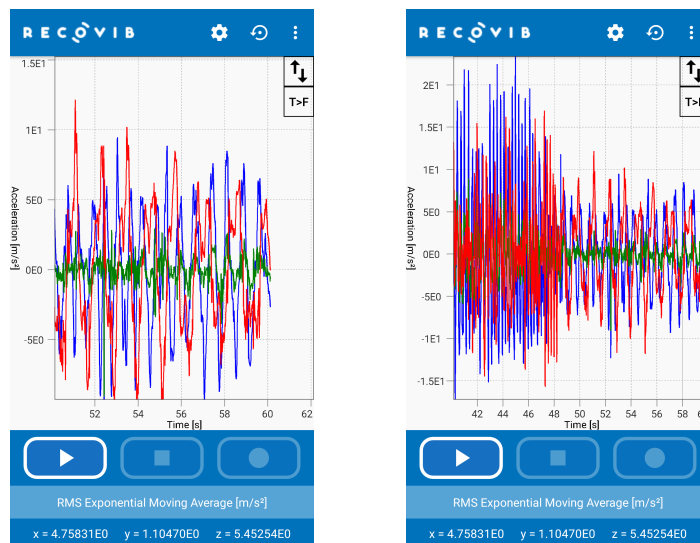


Figure 21: Difference between the chart visible range and the chart data range. **Left**: the viewport is 10 seconds wide (chart visible range). **Right**: after double-tapping to scale the chart to the entire set of data, the viewport is 20 seconds wide (chart data range).

4.6.10 Set the Skip Next Period of Time

As stated in section 4.4, a user-defined period of time can be skipped when replaying a set of data. To modify this period of time, simply press the **EDIT** icon.

Note that you will only be able to modify this value in the replay mode (see section 4.4).

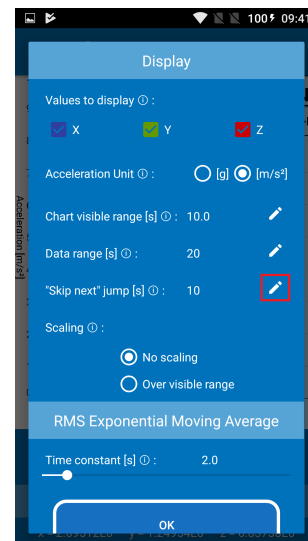


Figure 22: Set the Skip Next Period of Time

4.6.11 Set the Vertical Scaling Mode

When the vertical scaling is enabled, the chart is scaled in the Y direction to fit the chart visible range.

To enable/disable the vertical scaling, you can either press the **radio button** in the settings dialog or use the **SCALING** short-cut in the main window.

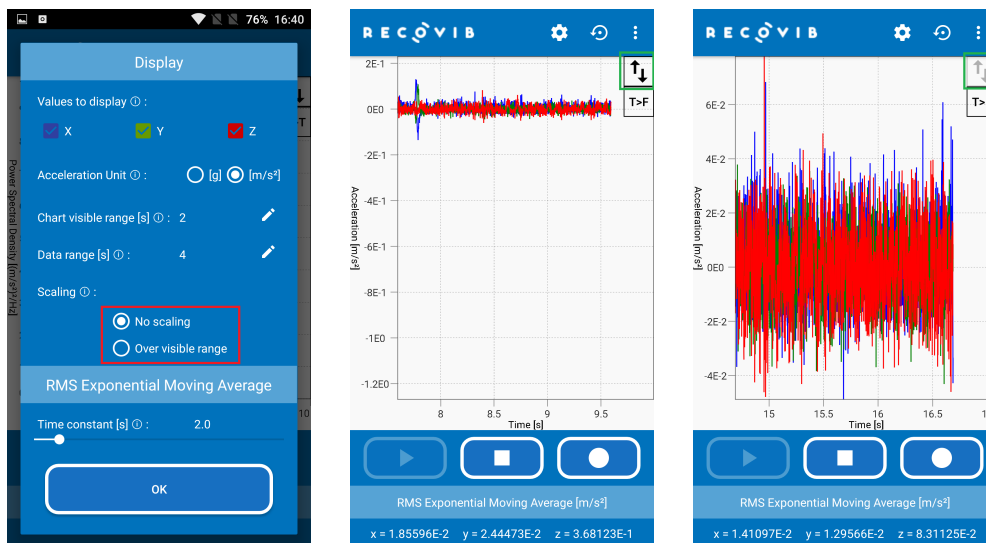


Figure 23: Set the Vertical Scaling Mode

5 MAINTAINING THE SENSOR

5.1 Calibration

- To ensure optimal measurements, the sensor needs to be regularly calibrated, at least every 2 years.
- Calibration is performed by Micromega Dynamics SA exclusively. Contact Micromega Dynamics SA customer service for further information.

5.2 Cleaning

- After use, clean the sensor with a dry cloth to keep it in good condition.
- If the device is dirty, clean the casing with a slightly damp cloth or a very mild cleaning product.
- Avoid wetting the connectors and cables.
- Never soak the device in water.

5.3 Precautions

- Never open the device. It does not contain any user changeable parts.
- Do not use the sensor in the presence of inflammable liquids or gas. It is not intended for use in potentially explosive environments.
- Keep the device away from environments with high humidity and/or temperatures.
- Do not leave the device in a vehicle, or in locations where the temperature may exceed 60°C, such as behind a windscreen, a window or a rear window, where it could be exposed to direct sunlight for extended periods. This could cause damage to the device.
- Return the device to the Micromega Dynamics SA customer service should any problems be encountered.

6 CERTIFICATIONS

6.1 EMC Compliance

STANDARD	STANDARD REFERENCE	LIMIT LEVEL
Radiated Emission	EN 55016-2-3/CISPR 16-2-3	EN/IEC 61000-6-3 30MHz-1GHz
Electrostatic discharge immunity	EN/IEC 61000-4-2	4kV by contact 2,4 & 8kV in air Criterion B
Magnetic Field Immunity	EN/IEC 61000-4-8	30 A/m 50 & 60 Hz Criterion A
Radiated, radio-frequency, electromagnetic field immunity	EN/IEC 61000-4-3	80 MHz - 1GHz 10V/m 1.4-2.0 GHz 3 V/m 2.0-2.7GHz 1V/m AM 80% 1kHz Criterion A

6.2 Dust & Water

STANDARD	STANDARD REFERENCE	LIMIT LEVEL
Degree of Protection provided by enclosures (IP code)	IEC60529	IP67

7 TECHNICAL SPECIFICATIONS

7.1 Measurement Characteristics

<i>Model</i>	$\pm 2g$ or $\pm 6g$	$\pm 15g$	$\pm 200g$
<i>Lower frequency limit</i>	0Hz (DC)		
<i>Passband frequencies (per channel)</i>	250Hz		
<i>Streaming rate (per channel)</i>	1024 samples per second		
<i>Non-linearity</i>	$\pm 0.5\%$ F.S.	$\pm 0.3\%$ F.S.	$\pm 0.5\%$ F.S.
<i>Residual noise density</i>	$30 \mu g/\sqrt{Hz}$	$300 \mu g/\sqrt{Hz}$	$2600 \mu g/\sqrt{Hz}$
<i>Residual noise (250Hz bandwidth)</i>	475 μg	4.75 mg	47 mg
<i>Transverse sensitivity</i>	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$

7.2 Environmental Characteristics

<i>Model</i>	$\pm 2g$ or $\pm 6g$	$\pm 15g$	$\pm 200g$
<i>Operating temperature range</i>	-10 .. 50 °C		
<i>Temperature coefficient of sensitivity</i>	$\pm 0.01 \%/^{\circ}C$	$\pm 0.01 \%/^{\circ}C$	$\pm 0.02 \%/^{\circ}C$
<i>Temperature drift of zero point</i>	$\pm 0.4 mg/^{\circ}C$	$\pm 1 mg/^{\circ}C$	$\pm 30 mg/^{\circ}C$
<i>Protection grade</i>	IP67		

7.3 Mechanical Data

<i>Model</i>	$\pm 2g$ or $\pm 6g$	$\pm 15g$	$\pm 200g$
<i>Dimensions</i>	46.8 x 30 x 23 mm		
<i>Weight</i>	45.3 g		
<i>Case material</i>	Aluminium		

7.4 Autonomy

<i>Model</i>	$\pm 2g$ or $\pm 6g$	$\pm 15g$	$\pm 200g$
<i>Average Power Consumption (idle)</i>	39.15 mW		
<i>Average Power Consumption (streaming)</i>	57.35 mW		

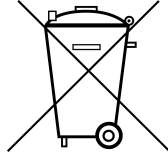
7.5 Software

<i>Model</i>	$\pm 2g$ or $\pm 6g$	$\pm 15g$	$\pm 200g$
<i>Output format</i>	Binary		

8 RECYCLING

Standards applicable to waste electrical and electronic devices state that they must be recycled.

If you are no longer using this material or if it cannot be repaired, do not throw it away in the usual household rubbish. Recycle these products in accordance with your country's legal provisions.



9 CONFORMITY

This product has been subjected to tests in conformity with European directives.

Outside the EU, consult the competent local authorities before using the device.



10 SUPPORT

If you encounter any problems when installing or operating the equipment, you can obtain support :

- By contacting your local distributor
- By visiting the <https://micromega-dynamics.com/>
- By sending an email to info@micromega-dynamics.com

A USB OTG : WORKING ANDROID DEVICES

Manufacturer	Model	Notes
Acer	Iconia Tab A200	Has a full-sized USB port next to a micro USB port
	Iconia Tab A210	
	Iconia Tab A500	Has a full-sized USB port next to a micro USB port
	Iconia A1-810	
	Iconia A3	
	One 7 B1-760HD	
Ainol	Novo 7 Fire	
Alcatel	One Touch POP C7 (7041D)	
Amazon	Fire 2015	Note that the Play Store is not standard installed on this device
Archos	59 Xenon	
	80 G9	
	101g9 turbo	
Assistant	As-5431	
Asus	Memo 7"	
	MemoPad 7 176CX	
	MemoPad 8 ME180	
	MemoPad ME172V / 176	
	MemoPad 10.1	
	MemoPad FHD 10	
	Padfone	
	Slider SL101	
	TF101	
	TF201	
	TF300	Using an Asus USB adaptor directly on the tablet
	TF700	
	TF700KL	
	TF701T	
	Transformer Prime	
	Zenfone 2	
	Zenfone 3	

Manufacturer	Model	Notes
	Zenfone 3 Max	
	Zenfone 5	
	Zenfone 6	
Atheros	8"	
BlackBerry	Priv	Needs latest BB Priv update and may not work with all DACs. OPPO HA-2 is reported not to work with it
Bliss	S5	
Cat	S60	
Dell	Venue 7	
Elephone	G6	
	P9000	
Explay	Tab Mini	
Fairphone	2	
Google	Nexus 5	
	Nexus 5X	
	Nexus 6	
	Nexus 6p	
	Nexus 7	May require a reboot with the device connected AND the language set to English-US (no kidding !). Google is said to solve this issue
	Nexus 7 (2013)	May require a reboot with the device connected AND the language set to English-US (no kidding !). Google is said to solve this issue
	Nexus 9	
	Nexus 10	May require a reboot with the device connected AND the language set to English-US (no kidding !). Google is said to solve this issue
	Pixel C	One report needing a USB hub
HiMedia	TV Box Q16II	
	Q5 Pro	
Hisense	Sero 7 pro	USB debugging must be enabled
HTC	10	
	Desire 500	Probably needs root to fix USB host configuration
	Desire 600	
	Desire X	Warning : we also have a negative report for this one !

Manufacturer	Model	Notes
	One	Seems to work on Android 4.2.2 and higher
	One A9	
	One E9+	
	One Max	
	One M8	
	One M9	
	One M9+ Supreme Camera Edition	
	One X	
	U11	
Huawei		WARNING: Huawei devices are one of the most troublesome devices, some not working at all
	Ascend G6-L11	
	Ascend G7	
	Ascend P6	
	Honor 6	
	Honor 6 Plus	
	Honor 8	
	Mate 9	
	Mate MT1-U06	
	MediaPad X1 7.0	Warning : we also have a negative report for this one !
	MediaPad X2	
	P7-L10	
	P8max	
	P9	
iconBit	Nettab NT-0801C	
iFive	Mini 3	
	X2	
iNew	6000	
iRulu	eXpro X1s 10.1	
iView	Suprapad i700	
Jiayu	G4 Advanced	

Manufacturer	Model	Notes
	G4S	Needs root to unlock USB host mode by the app "USB Host Diagnostics"
	G5S	
	S3 Advanced	
Jide	Remix UltraTablet	Requires Remix OS2.0
Kaiser Baas	Smart Media Player	
KDDI	Sharp Aquos SHL21	
Kogan	Agora HD	
LeEco	Le Pro 3	
Lenovo	B6000 / Yoga Tablet 8	
	B8000 / Yoga 10	Needs KitKat update
	IdeaTab A1000-F	
	IdeaTab A3500-H	
	IdeaTab S6000-F	Only when rooting and adding host permissions file?
	K3 Note	
	K5 Plus	
	P770	
	P90	
	S8-50	Tablet
	s860	Root required to fix USB host file
	Tab2 A10-70F	Also known as A7600-H, can produce glitches with USB 1.1 devices
	ThinkPad Tablet 1	
LeTV	x600	
Lifetab	E10320	
	S831X	Lenovo/Medion
	S1034X	Lenovo/Medion
LG	G2	
	G3	
	G4	
	G Pad 7.0	
	G Pad 8.3	NOTE: the 8.0 version does NOT work!

Manufacturer	Model	Notes
	G Pad II 8.0	
	Optimus G	Only with custom kernel supporting USB host!
	Optimus G Pro	
	G Pro 2	
	V10	
Mediacom	SmartPad 10.1 HD S4 3G	
Meizu	MX Quad	
Micromax	A116i	
Minix	Neo X8 Plus	Needs root and you need to run USB Host Diagnostics to fix a USB host config file
Motorola	Droid Ultra XT1080	
	Moto E (2nd gen)	
	Moto G	
	Moto G3 (2015)	Supplies little power to the USB bus, so a powered device or powered USB hub is usually needed. Seems to work with DragonFly Red though
	Moto G5 Plus	
	Moto X	
	Photon Q	
	Razr HD Maxx	
	Razr M XT905/XT907	Note that this is not the same as the Droid Razr M which does not work!
	Razr HD XT925	
	Xoom	
MpMan	Mid43c	
MSI	Primo 76	
Nextbook	NX700QC16G	
Nvidia	Shield	
Onda	V975i	
OnePlus	One	
	Two	
	3	OTG needs to be enabled in the Android settings
	3T	

Manufacturer	Model	Notes
	5	OTG needs to be enabled in the Android settings
	X	
Oppo	Find 7	
	Find 7a	
Philips	I928	
Pipo	M6 pro	
Prestigio	Multipad 4	
	Multipad MUZE 5001	
Ritmix	RMD-1025	
Samsung	Note 2	
	Note 3	
	Note 3 Neo	
	Note 4	
	Note 4 Edge	
	Note 5	
	Galaxy Alpha	
	Galaxy Camera EK-G100	
	Galaxy J	
	Galaxy J5	
	Galaxy Mega 6.3	
	Galaxy Nexus	Causes glitching with some devices
	Galaxy Note 1 I717	Note, only this special version of the Note 1 works!
	Galaxy Note 7	Needs a USB-C OTG cable
	Galaxy Note 8	
	Galaxy Note 10.1	May need USB debugging turned on
	Galaxy Note 10.1 2013/2014 model	
	Galaxy Note Pro 12.2	
	Galaxy R	
	Galaxy S3	Seems to do unnecessary things in background which can cause glitches
	Galaxy S3 Neo	
	Galaxy S4	<p>Requires Android 4.3</p>

Manufacturer	Model	Notes
	Galaxy S4 active	
	Galaxy S4 Zoom	
	Galaxy S5	<p>May need a specific USB3 OTG cable, for example: http://www.amazon.com/dp/B00LN3AXWI/ref=cm_sw_r_udp_awd_gRWLub161MR7J
	Galaxy S5 Neo	
	Galaxy S5 Plus	
	Galaxy S5 Zoom	
	Galaxy S6	
	Galaxy S6 Edge	
	Galaxy S7	
	Galaxy S7 Edge	
	Galaxy S8	
	Galaxy S8+	
	Galaxy Tab 1 7.7	
	Galaxy Tab 1 10.1	
	Galaxy Tab 3 8"	
	Galaxy Tab 3 10.1	
	Galaxy Tab 4 7" LTE	Note that the non-LTE version does NOT work!
	Galaxy Tab 4 10.1	
	Galaxy Tab A 9.7	
	Galaxy Tab A 10.1 (2016)	SM-T580
	Galaxy Tab Pro 8.4	
	Galaxy Tab Pro 10.1	
	Galaxy Tab Pro 12.2	
	Galaxy Tab S 8.4	
	Galaxy Tab S 10.5	
	Galaxy Tab S2 8.0	
	Galaxy Tab S2 9.7	
Sharp	Aquos Zeta SH-04F	
	Aquos Zeta SH-06E	
Smartfren	Tab 7	

Manufacturer	Model	Notes
Sony	Acro S	
	NWZ-ZX1	Needs root to fix configuration problem
	Tablet S	
	Xperia Active	
	Xperia Arc S	May need LiveDock
	Xperia E3	
	Xperia Ray	Some say it works, some say it does not. Perhaps it needs a powered usb hub?
	Xperia M	
	Xperia mini ST15i	
	Xperia S	
	Xperia Sola	
	Xperia SP	
	Xperia SX	
	Xperia T	
	Xperia V	
	Xperia Z	
	Xperia Z1	
	Xperia Z1 compact	
	Xperia Z1f	
	Xperia Z2	Stopped working on Android 5. USB host was taken out of the Android configuration, may need root to fix
	Xperia Z2 tablet	
	Xperia Z3	Works for some !
	Xperia Z3 Compact	
	Xperia Z4	Under "Xperia Connectivity", press "USB Connectivity" and then "Detect USB Device" before starting the app
	Xperia Z4 tablet	
	Xperia Z5 Compact	
	Xperia Z5 Duo	
	Xperia Z5 Premium	
	Xperia Z Ultra	
Tesco	Hudle	

Manufacturer	Model	Notes
	Hudle 2	May not work well
THL	100s	Needs root to run the app "USB host diagnostics", which fixes a misconfiguration of the device
Toshiba	AT830	
	Excite 10	Needs Airplane mode turned on
	Thrive	Often problematic !
Tronsmart	Vega Elite s89	
UMI	Cross C1	
Wolfgang	AT-AS50SE	
Wiko	Cink King	
	Cink Peax 2	
	Darkside hell	
	Rainbow 3G	
Xiaomi	Hong Mi	
	Mi-2	
	Mi-2S	
	MI3	Tegra 4 version
	MI3W	Snapdragon 800 version
	MI Pad	
	Red Mi	
	Red Mi 4 Prime	
	Red Rice	
XPX	XM74 Alero	May need root to fix USB host
Zopo	ZP980+	With june 2014 firmware or higher
ZTE	Axon 7	
	V965	
	V967S	
	V987	

B USB OTG : NOT WORKING ANDROID DEVICES

Manufacturer	Model	Notes
Acer	Gallant Duo	No USB host mode
	Iconia B1	No USB host mode, this seems to be an older model, there may be more B1 models
	Iconia Tab A100	No USB host mode
Ainol	Novo 7 elf II	
	Novo 8 mini	
Alcatel	OT 995	
Archos	Familypad 2	
Asus	MemoPad 7 HD	
	Zenpad 8	Causes severe glitching
BLU	Life One X	Probably lack of isochronous mode
BQ	Edison	Probably all models
Cube	U9GT2	Probably all Rockchip-based tablets do not work
Fly	FS405	
Flytouch	9	
Freelander	PD90	Probably all Rockchip-based tablets do not work
Google	Droid 1	
	Droid 3	
HTC	Rebound	
	Sensation 4g	
Huawei	Honor 7	Heavy glitching
	Mate 7	No support for isochronous USB transfers?
	Mate SCRR-L09	USB issues, wrong playback speed
	MediaPad	
	Nova Lite PRA-LX2	
	P8	Although the P8 detects USB devices, there have been too many reports of crashes/restarts, so we consider the P8 unreliable
	P8 Lite	
	P9 Lite	
iOcean	x7	
Jxd	800b	

Manufacturer	Model	Notes
Kyocera	TORQUE SKT01	
Lenovo	P780	
LG	G Pad 8.0	
	G Stylo	
	K7	
	Ultimate 2	No USB host mode
LG/Google	Nexus 4	No USB host mode, but ziddey franco kernel patch with the AOKP rom can activate it
Median	Life Tab e10310	
Motorola	Droid Bionic	No USB host mode
	Droid Razr M	No USB host mode
Nextbook	??	Older model
Odys	Tablet PC 4	
Omega	7"	Probably all
Onda	V819	
Oppo	R5	
Pipo	U3	Rockchip based
Prestigio	Geovision 7780	
	Multipad 8.0 Pro Duo	
	Multipad 9.7 Ultra Duo	
Samsung	Captivate Glide	No USB host mode
	Galaxy A3	No USB host mode
	Galaxy A5	No USB host mode
	Galaxy Grand Prime	No USB host mode
	Galaxy J3	Reports of both working and not working or glitching ; Unreliable
	Galaxy Note 1	
	Galaxy Reverb	No USB host mode
	Galaxy S	SGS-T959
	Galaxy S1	No USB host mode
	Galaxy S2	No USB host mode
	Galaxy S3 mini	No USB host mode
	Galaxy S4 mini	No USB host mode

Manufacturer	Model	Notes
	Galaxy Tab 2	Heavy glitching (OMAP processor)
	Galaxy Tab 3 7"	No USB host mode
	Galaxy Tab 4 7"	No USB host mode
	Galaxy Tab A 7"	
	Galaxy Tab E	Only seems to work with Android 6
	Galaxy Young	
Sanei	N86	
Sharp	Aquos Crystal 306SH	
Sony	Xperia E1	
	Xperia J	No USB host mode?
	Xperia Ray	Some say it works, some don't. Perhaps it needs a powered usb hub?
Sumvision	Cyclone voyager	
Toshiba	AT200	Heavy glitching (OMAP processor)
Wayteq	xtab79qci	No isochronous mode in the kernel?
Xiaomi	Redmi Note 3	Massive USB errors
Yarvik	All?	
Zopo	C3	Only playback?