

# **MOBILE PHOTOGRAPHY & VIDEOGRAPHY**

**CHECKLIST FOR HIGH QUALITY PHOTOGRAPHY  
WITH A SMARTPHONE**



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# BASICS

Before you dive into the topic of smartphone photography and videography, you should get an overview of the topic of film and photography on the Knorr-Bremse brand portal.

Here, you will find sample videos and important elements of the Knorr-Bremse corporate design such as logos, logo animations, colors and fonts. Once you are familiar with these basics, you are ready to go.



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With today's smartphones, you can take increasingly better photos and videos. In order to make the best use of the technology and to ensure that the shooting goes as smoothly as possible, you should pay attention to the following during preparation and during implementation.

## **Legal**

### **Declaration Of Consent (Gdpr)**

Data protection has to be strictly observed, especially in the field of video and photo. Therefore, have all persons who are recognizable in the picture sign a consent form. By doing so, the photographed persons agree that video and photo recordings are made and that these can be used later, e.g. for advertising purposes. You can find a template for the declaration of consent on the Knorr-Bremse brand portal.

## **Technical**

### **Ensure Sufficient Memory**

To make sure you don't suddenly run out of memory on your smartphone during the shoot and then have to frantically delete other files, make sure you have enough memory beforehand.

### **Enable Grid**

For image composition (more on this later), it is recommended to activate a grid. This makes it easier for you to see when an object is centered and to get a better orientation. You can activate the grid here:

iOS:	Settings – Camera – Grid
Android:	Camera – More – Settings – Grid type – 3x3 grid/Golden ratio (more on this later)

### **Exposure**

Smartphones automatically expose and focus the image. This means that you will see an image that is not overexposed or underexposed and mostly in focus without any special settings. For this to function optimally, you should consider a few things: For example, do not place the object in front of bright sunlight or a window. The smartphone will otherwise try to dim the glaring background, which will cause all other objects to become much darker as well.

### **Focus**

When photographing and filming, make sure that the object in question is properly focused. An incorrect focus point sometimes is not clearly visible on a small display and only really becomes apparent when the photo or video is viewed on a larger screen. Therefore, click on the object in question to tell the smartphone that you want to focus on this object.

**Ae&Af Lock**

When you move or pan with the smartphone, the smartphone may want to adapt to the situation and therefore constantly readjust the exposure and focus. To avoid this, you can activate the AE&AF lock. This way, the smartphone exposes the image correctly and does not readjust when you pan to brighter areas. It also lets you determine the distance it should focus at.

You can activate the AE&AF lock by clicking on the desired object for several seconds until the message "AE&AF lock" appears.

**Digital Zoom & Clean Lenses**

While you can zoom in and out with a proper lens on classic cameras without any loss of quality, this usually is not possible on smartphones because the zoom effect is only created digitally. However, if your smartphone has different lenses, it is possible that the smartphone simply switches lenses and thus, there is no loss of quality.

For smartphones with only one lens, instead of changing the image section on the screen by zooming in, it is better to move a step towards the subject and thus maintain the quality. You can then always adjust the cropping in editing later. Also, make sure that the lenses are clean.

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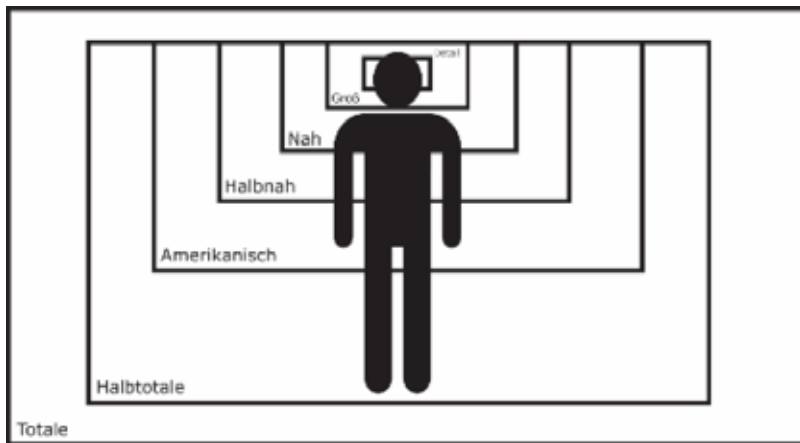
# IMAGE COMPOSITION

## Setting Sizes

The size of the object in relation to the entire image field is referred to as the setting size: For example, whether the object only is small in the picture (wide shot) or very large (close-up). There are various setting sizes that have become established over time. They allow the viewer to be addressed with different perspectives and still maintain a certain structure in the image. An overview of some of the most common setting sizes can be found here:



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## Rule of thirds

Photographs look particularly harmonious when they have been created according to the rule of thirds. This ratio simply fits our viewing habits best. But what exactly is the rule of thirds? This rule states that you should orient objects or landscapes to imaginary lines that divide the shooting window into three parts, both horizontally and vertically. If you are photographing landscapes, for example, you can place the sky in the upper third of the image. But if you want the focus to be on the sky, you can reserve the top two-thirds for the sky. On the horizontal plane this means that, for example, a person's eyes should be on the line from the transition from the second to the third third.



## Symmetries

If you are already feeling pretty confident with your image composition and want to get a little more out of it, try capturing symmetries. For example, if you see a beautiful hallway that looks symmetrically appealing, you can also use it for the creation of the image. Some examples of symmetrical shots can be found here:



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# SMARTPHONE PHOTOGRAPHY

Depending on whether you want to shoot videos or photos with your smartphone, there are various things to consider.

An overview of what to consider when photographing with a smartphone can be found here:

## **Ratio**

While you should pay attention to standardized ratios like 1920x1080 (16x9) or 1080x1920 (9x16) for story formats when creating videos, you are usually freer when it comes to photos. Depending on the area of application or design requirements, photos can be taken or cropped in different ways.



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## **File Format**

With newer smartphones, photos can be taken both in compressed form in JPEG format or uncompressed in RAW format. Shooting in RAW format allows many settings to be edited even more easily afterwards. However, since RAW format files require much more storage space, smartphones are usually set to take photos in JPEG format. The JPEG format should also be sufficient for most purposes. Therefore, make sure that your photos are taken as JPEG in the menu.

If you feel confident taking photos with your smartphone and want more freedom in post-processing, you can take photos in RAW format and edit them with professional software (more on this later).

## **Image Editing**

Thanks to apps like Instagram etc., people are used to giving photos a different look with the help of filters. These filters can usually be activated right on the smartphone. However, in order to grant a consistent image style, it is recommended to refrain from using extreme filters. For a consistent look of the Knorr-Bremse images, please follow the visual language of the sample images in the brand portal.

## **Image Editing Software**

While simple image editing is possible on most smartphones, it is recommended to use special image editing software for a more professional approach. The world's most famous software for image editing probably is Adobe Photoshop. The downside with Adobe Photoshop, however, is that it costs money and is quite complicated to learn.

A more rudimentary variant of Adobe Photoshop is Adobe Lightroom. Lightroom is specifically designed for quick and easy editing of photos and is also offered as a free smartphone app in the respective app stores. To learn how to best use Lightroom, see the Adobe Help section.

## **Export**

Exporting photos from your smartphone is very simple. Simply attach the photo of choice to an email and send it to yourself. Alternatively, you can send the photo to a colleague through a messenger service. However, make sure that the smartphone does not reduce the quality before sending.

To avoid a loss of quality or if you want to copy or send large amounts of photos, connecting the smartphone to a Mac or PC is recommended. To do so, please proceed as follows:

To export files from an iOS device, you should have iTunes installed on your PC (on Mac, Apple's Photos app will do) and then connect your iOS device to the PC or Mac with a cable.

Unlock the iOS device and select "Import" within iTunes on the PC or within the Photos app on the Mac. The files are then saved to the desired location on the PC or Mac.

Android devices can be connected to a PC or Mac as well; then, select (MTP) File Transfer in the Android menu. You can find File Transfer by clicking the popup that appears on the Android device when you connect it to a PC or Mac.

When creating movies and videos with a smartphone, pay attention to the following:





# SMARTPHONE VIDEOGRAPHY

## **Airplane Mode & Silent**

To avoid possible noise and interruptions from incoming calls or messages during recording, the smartphone should be switched to airplane mode. Smartphones of other participants should also at least be muted so that the recordings are not disturbed by incoming calls.



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## Resolution & Frame Rate

From the factory, smartphones are usually set to not record in the highest resolution to save storage space. Therefore, it is important to check the smartphone camera settings before a shoot.

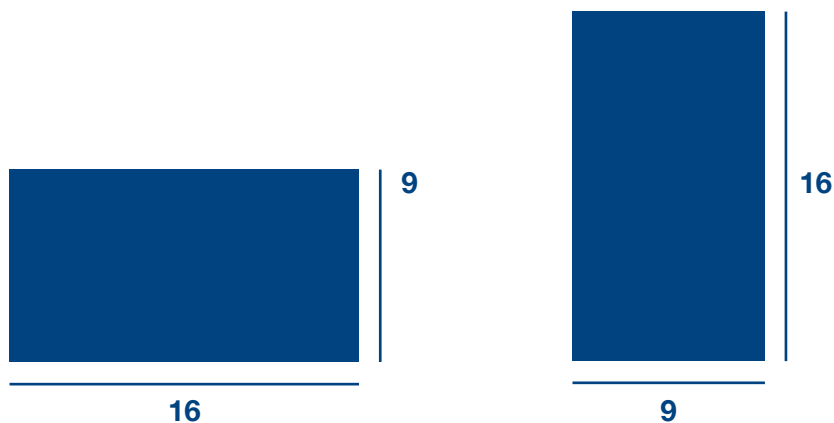
The higher the resolution, the better the quality. Full HD (1080p) should be used as the minimum resolution. The frame rate or fps (frames per second) indicates whether a shot is captured as slow motion or not. Slow motion is not required for most of our purposes, so frame rate settings should generally be 30 fps. You adjust these settings here:

iOS:                Setting – Camera – Record video

Android:          Camera – More – Settings – Video resolution of the rear/front camera –  
Select maximum video resolution\*

## Portrait Or Landscape Format

The human eye is used to looking more in width than in height. Therefore, people usually find it more pleasant to consume visual media in landscape format. Apart from few exceptions, such as the story format (9:16), you should therefore make sure to film in landscape format. If the shot will be shown in social media as a story, it should of course be taken in portrait format.



## Stabilization & Camera Movements

A very jerky camera image is usually perceived as annoying and should therefore be avoided. To create a jerk-free image, you can use a gimbal. Gimbals are devices that use built-in motors to dampen movement, allowing for smoother camera movements. To create smooth camera movements even without a gimbal, keep the following things in mind:

Hold the smartphone with both hands (landscape mode is best) and rest your arms against your upper body. The smartphone will be at about chest height. If you want to do camera pans now, just move your complete upper body while the arms are still resting against your body.



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### **Tripod**

If you want to film a statement or create other static shots, you should mount the smartphone on a tripod or place it on a solid surface. This avoids a jerky camera image and allows the viewer to better engage with the shot.

When buying a tripod, make sure that you can also mount a smartphone holder (for portrait and landscape format).

### **Background Noise**

Smartphones have very limited sound recording capabilities and therefore, the sound quality usually is not very good. Before shooting, make sure that the background noise is not too loud. Avoid e.g. street noise, talking, church bells, etc.

### **Clothing & Moiré Effect**

There are certain (textile) patterns that are misinterpreted by cameras and thus lead to reproduction errors. Usually, this moiré effect occurs with fine and symmetrical patterns on clothing. Therefore, make sure to avoid clothing with such structures. Very light and very dark clothes are not recommended either, as they usually lead to less details or appear particularly bright.

### **Edit on the smartphone**

There are several apps that allow you to edit a video right on your smartphone. One advantage of this is that it saves the inconvenient export to a PC and possible later import to the smartphone. The disadvantage is that you are working on a small display, have fewer editing options, and cannot easily include a logo animation at the end, for example. Apps for editing on the smartphone are e.g. iMovie (iOS only) or InShot (iOS and Android).

### **Export from a smartphone**

Exporting video files can be a bit tedious at times. If you simply forward the video file using tools like WhatsApp, its quality is usually reduced in the process. To ensure the highest possible quality, you can proceed as follows:

When exporting files from an iOS device, you should have iTunes installed on your PC (on Mac, Apple's Photos app will do) and then connect your iOS device to the PC or Mac with a cable. Unlock the iOS device and select "Import" within iTunes on the PC or within the Photos app on the Mac. The files are then saved to the desired location on the PC or Mac.

Android devices can be connected to a PC or Mac as well; then, select (MTP) File Transfer in the Android menu. You can find File Transfer by clicking the popup that appears on the Android device when you connect it to a PC or Mac.

### Logo animation

In our [brand portal](#), you will find examples and specifications of what our movies and photos should look like. As a rule, all Knorr-Bremse movies have to include a logo animation at the end. You can download the corresponding logo animation in the brand portal under Downloads – [Movie](#).





# FOR EXPERTS

There are several tools for you to take your smartphone photography or videography to the next level. You will find a small selection here.

## Smartphone Lenses

The quality of smartphone cameras these days is very impressive. But to get even more out of it, you can add special lenses to your smartphone. A popular company for smartphones lenses is the company Moment.



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**Filmic Pro**

One of the most sought-after smartphone video app is FiLMiC Pro. This app allows you to change additional camera settings that normally are locked. This allows you to adjust exposure time, aperture, or ISO to create even more cinematic shots.

**Gimbals**

Gimbals are – as briefly described before – devices that use built-in motors to dampen movement, allowing for smoother camera movements. Gimbals have greatly improved in recent years and now allow you to create very smooth camera movements on the fly. They are especially recommended for landscapes or architecture.

**Smartphone-Rig**

A smartphone rig is a kind of cage that allows you to connect various functions to a smartphone and also offers a better grip. Using a smartphone rig, an extra light, an extra microphone or things like different lenses can be effortlessly mounted on the smartphone.

**Microphone**

If you have a smartphone rig, you can also use it to connect a better microphone. The Rode Videomic Go is a popular choice for smartphone videography.

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# CHECKLIST

Do you have a small shoot or photo shoot coming up that you would like to independently do in your department? This checklist should help you to achieve the best results and to consider the most important things.

## **GDPR notice**

Have all persons who are recognizable in the picture sign a consent form. By doing so, the photographed persons agree that video and photo recordings are made and that these can be used later, e.g. for advertising purposes. You can find a template for this declaration of consent on the Knorr-Bremse brand portal.

## **1. The basics (battery and memory)**

Check whether the battery is sufficiently charged and whether there is enough memory.

## **2. Airplane mode**

Switch the smartphone to airplane mode when recording video to avoid distracting calls or interruptions to video recording.

## **3. Avoid interfering noise**

When recording video, make sure that, if possible, there is no background noise (such as construction work, traffic, etc.).



#### **4. Choose a subject**

Choose a suitable subject and make sure that there are as few disturbing elements (such as untidy workstations, etc.) in the picture as possible.

#### **5. Landscape or portrait format?**

Je nachdem ob Sie Fotos oder Videos machen, können Sie sich für ein Querformat oder Hochformat entscheiden. Für Videos empfiehlt sich meistens (außer für Aufnahmen für das Story-Format) die Aufnahme im Querformat.

#### **6. Stabilize the camera**

To create the most pleasant video recordings, it is recommended to stabilize the smartphone. Use a tripod or hold the smartphone with both hands and rest your arms against your body for stabilization.

#### **7. Position the object**

Attractively position the object (e.g. the protagonist) in the image.

#### **8. Test shot**

Take a quick test shot and take a look at the photo or video. Does it look harmonious? Is the sound quality good? Is everyone satisfied? Adjust the image or settings if necessary.

#### **9. Let's go**

When recording video, ask everyone to be quiet (and activate airplane mode if necessary) and start recording.

#### **Have fun!**