

# SETUP GUIDELINES

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The initial setup and configuration of the studio and recording devices (green screen and lighting) will be completed by the Rapidmooc team. You should therefore not need to change anything.

Nevertheless, this guide will be useful while awaiting delivery of your Rapidmooc studio or if you have to move it.

## COMPONENTS

The Rapidmooc kit contains:

### Rapidmooc studio

- 1 mobile unit (on wheels) with support tablet
- 1 Full-HD PTZ camera + remote control
- 1 LED TV + remote control
- 1 HD Inwicast box
- 1 green screen keyer
- 1 audio mixing console
- 1 wireless microphone receiver+ 2 lapel microphones
- 1 Rapidmooc remote control
- 1 remote control for presentation device
- 1 wireless keyboard and mouse
- 1 HDMI cable for presentation unit
- 1 jack-jack cable for presentation device audio

Studio dimensions for TOTEM model (HxWxD): 170x100x50 cm

Studio dimensions CLASSIC model(HxWxD): 180x90x60 cm

## Green screen

Foldable, pop-up green screen fabric + tripod

Mount system for screen/magnetic support

Screen dimensions (WxH): 240X200 cm

## Lighting

4 LED lights with tripods

## STUDIO

### Dimensions

The green screen fabric included in the Rapidmooc kit, combined with good lighting conditions, allows for high quality compositing in a confined area of 3 m<sup>2</sup>.

### However:

- The subject must be a sufficient distance from the screen to not cast any shadows or cause green feedback (green reflected onto the back and hair)
- The frame size increase as you move the camera further away. This will give the subject more freedom to move during their presentation, within the confines of the green screen...

Therefore, if possible, set up the studio in a room which is at least 4 metres deep. This allows the subject to be far enough away from the screen and correctly proportioned in relation to their presentation content.

Any deeper than 4 metres and the screen will have to be made bigger in order to increase the subject shot (e.g. moving from medium shot to thigh shot — see § DISTANCE/SHOT). One effective solution is to paint the wall green (see § SCREEN for colour suggestions).

## Lighting/Blacking out

With chroma keying, it is essential that you:

- Use sufficiently diffused lighting that lights the green screen evenly and provides a “solid” green
- Avoid too large a contrast between the subject and screen

You can therefore obtain acceptable chroma key results with daylight, which is actually a very good light source. Even more so if you can limit any light variations coming through windows (tinted windows, curtains, dim-out blinds, etc.). If not, a cloudy sky provides consistent and even lighting.

You can thus choose a room with windows that let in daylight. The lights provided with the Rapidmooc studio grant additional lighting to ensure a “solid” green (without a gradient or hot spots from the lights) and help add volume to the subject’s face.

However:

Lighting conditions and room luminosity are the main issues to be taken into account when adjusting the settings for chroma keying. The more stable the conditions and the more control you have over them, the less chance there is that you will need to adjust the settings.

Therefore, to make it easier, we recommend you install the Rapidmooc studio in a room set aside for this purpose. You should also partially black out the windows if they are too susceptible to light variations or if sunlight falls directly

onto part of the green screen. The setup will thus only need to be done once. Nevertheless, the training session on how to use the system will allow your users to be completely independent, including in this regard.

Chrome keying needs lighting to work effectively. In a windowless room (or with totally blacked out windows), it is therefore essential that you have enough diffused light, which can be obtained using additional lights (e.g. spotlights) or ceiling light panels.

The lights included in the Rapidmooc kit will supplement such lighting conditions (see § LIGHTING)

## Miscellaneous

The studio works with a single power cable plugged into a mains socket. Ensure there is at least one socket in the room. It is recommended that you plug the lights into a separate socket.

In addition, ensure the room is not too noisy or too close to a popular passageway. Especially during recording.

## SCREEN

### Colour

Chroma keying allows you to composite a subject over any video background. Green and blue are those furthest away from the colour of human skin, and should therefore give the best quality composite.

## Materials

### FABRIC

The easiest and most practical fabric is: taut, quick to set up, almost free of wrinkles, convenient for a variety of situations and an optimal colour for compositing. Crease-free, elastic and foldable: all qualities found in the Rapidmooc kit screen.

## PAINTING

Painting a wall in green is a long-lasting and permanent solution. If you choose this option, we recommend you use matte paint made for this purpose and intended for interior concrete, plaster, wallpaper, chipboard, wood and hardboard. The surface should be sanded in advance to ensure it is as smooth as possible.

When choosing paint, use primary green (blue + yellow). Here are two suggestions:

- ROSCO GREEN CHROMAKEY. [+ info here](#)
- ACRYLIC GREEN CHROMAKEY. [+ info here](#)

*N.B: If the screen shows visible irregularities when compositing, one solution is to reduce the room's overall luminosity. This opens up the camera aperture and reduces the depth of field, thus making the irregularities less noticeable.*

## Size/Frame

A larger screen means a larger subject frame, giving them room to move during the presentation.

## LIGHTING

For the best results, we recommend using separate lighting for the subject and the screen. The Rapidmooc kit provides for that with 4 lights to supplement the sufficient ambient lighting (see previous chapters § Lighting/blacking out of recording room).

### Screen

The screen must be evenly lit. The green must be “solid” without any hot spots.

Start by placing two lights on either side of the screen in line with the subject (figure 4.1 and 4.2 – lights #1 and #2).

Fix the white plates on the 4 panels.

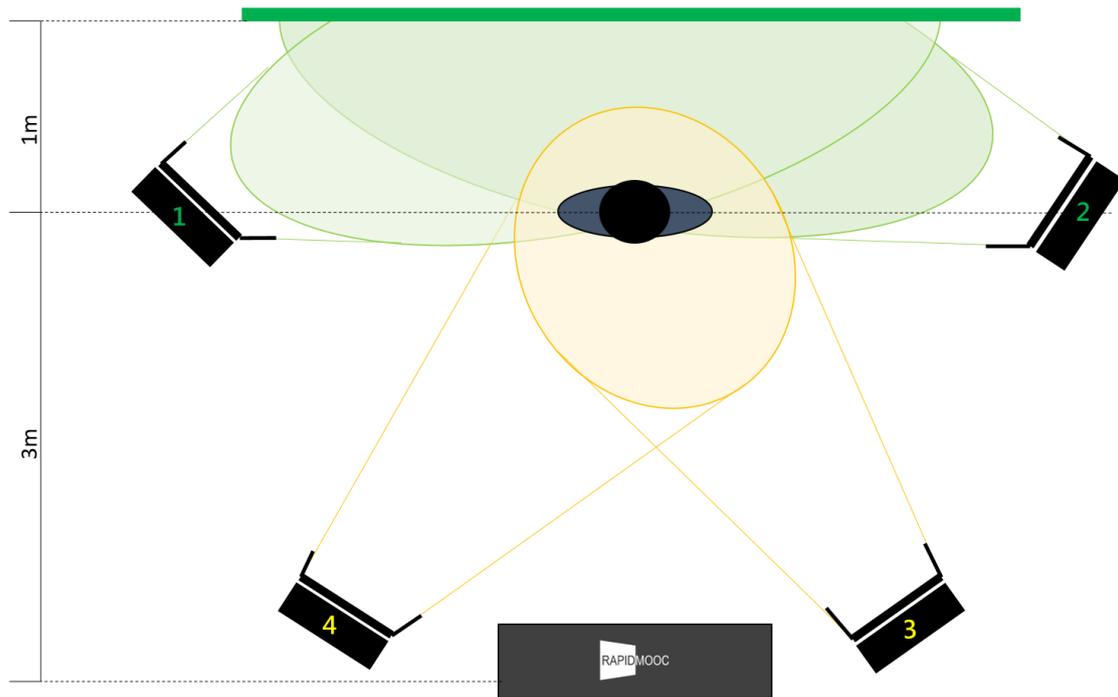
Adjust the height of the screen’s LED panels to approximately 150 cm (chest height).

Adjust the shutters so that the lights slightly illuminate the subject without overexposing them (too much light on subject’s arms and shoulders). You can remedy this by turning the LEDs and the shutters.

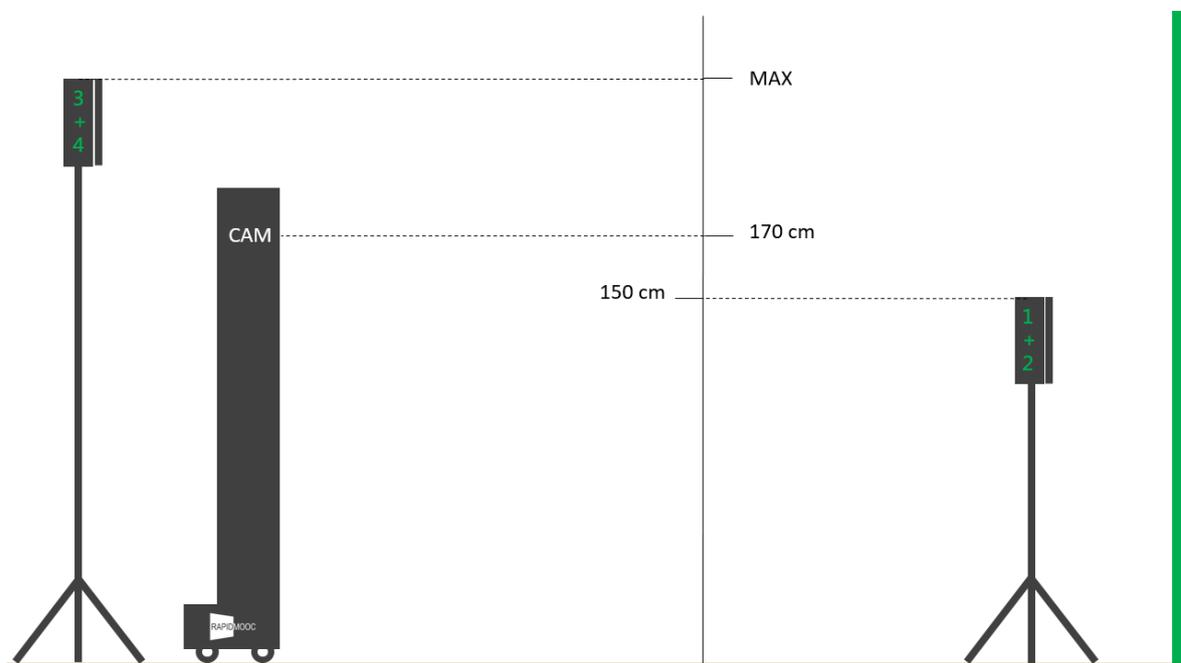
### Subject

Next, place the third and fourth LEDs facing the subject (figure 4.1 et 4.2 – lights #3 and #4), and move them away to give volume to the face (shadows). Position the lighting as high as the tripod and room allows. Orient them towards the face, hair and shoulders to better outline these parts of the body.

Ensure that the subject is far away enough from the screen to not cast a shadow on the green screen. Furthermore, try to maintain the same light intensity as the green screen lighting to minimise contrast.



4.1 - Standard lighting - distances



4.2 - Standard lighting - heights

## Variations

Depending on the room layout, it is sometimes best to orientate spotlights #3 and #4 towards the ceiling or walls if they are white. This way, the subject is not directly illuminated, and instead benefits from the room's diffused light. You can try this setup if you are not happy with how well the subject is outlined.

Also, since we want a "solid" and even green across the whole screen, ensure the lighting is not too intense (spotlights #1 and #2).

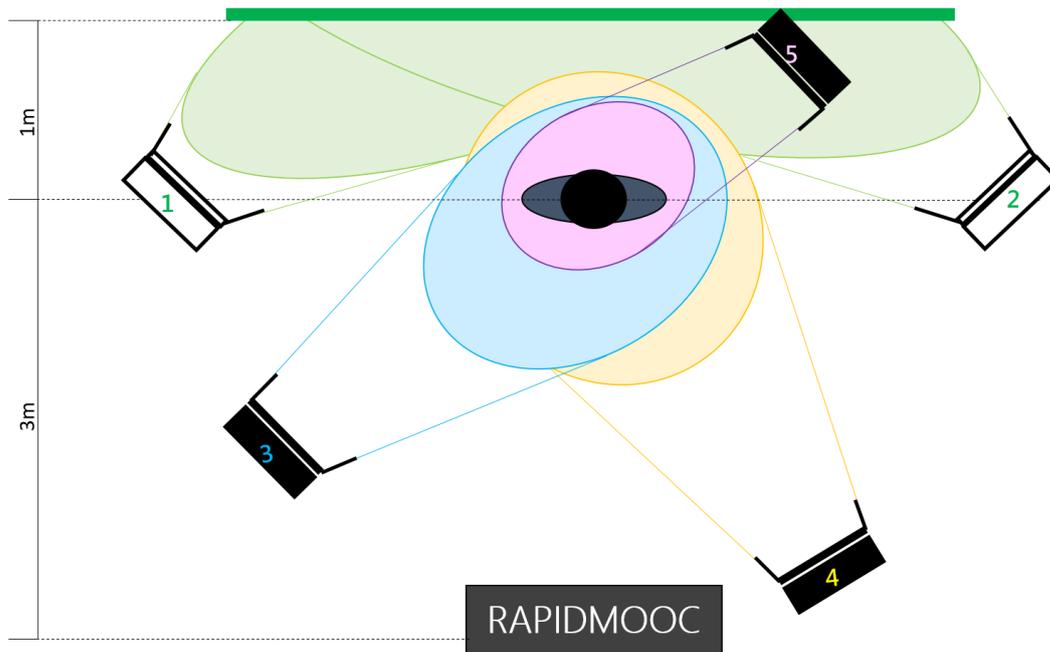
## Optimisation

If you want to optimise your studio's lighting conditions, you can add extra lighting.

This could be, for example, ceiling light panels or extra LED spotlights. Remember that the brighter the room (diffused light), the better the chroma key's quality will be.

We have tested and approved an excellent solution that is widely used for precisely this: the [Mini Switch from DMG Lumières](#). Contact us for more information.

If you are a perfectionist, you can add a third light behind the subject to better outline them. Light #5 can be fixed to the ceiling to ensure it stays out of the camera shot.



4.3 – Optimised lighting

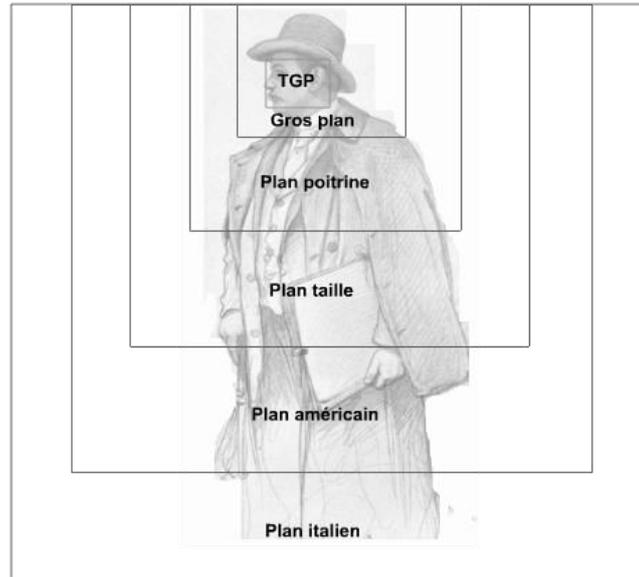
## DISTANCE/SHOT

The subject' s framing will depend on:

- Their size and the green screen' s dimensions
- The distance between subject-camera and camera-screen
- The camera' s zoom level

For example, weather reports are usually shot at a mid-thigh level (also called  $\frac{3}{4}$  shot or medium shot).

What' s important is that the subject' s hands and arms can be seen.



TGP = ECU

Gros plan = Close-up

Plan poitrine = Medium close-up

Plan taille = Mid shot

Plan américain =  $\frac{3}{4}$  shot

Plan italien = Full shot

In theory, the distance between the camera and subject must be at least 3 times longer than the distance between the subject and the screen\*. If you are 1 m away from the screen, the camera should therefore be at least 3 m away from you. In theory.

There must be enough distance between the subject and the screen to avoid shadows. The subject should position themselves in front of or in line with the screen's lights.

On the ground, use masking or gaffer tape to mark out the area where the subject can stand.

\* unless using a backlit screen or equipment such as Chromatte or Reflecmedia.

## CAMERA

To check or change the camera's settings, click on the green MENU button then use the arrows to navigate.



The camera should be configured as follows:

- VIDEO/MIRROR: ON
- EXPOSURE/MODE: FULL AUTO
- WHITE BALANCE/MODE: OUTDOOR
- PAN TILT ZOOM/POWER UP ACT: PRESET1\*
- SYSTEM/FORMAT: 1080P50
- FOCUS: MANUEL

\*if you have chosen preset1 beforehand (see GUIDE RAPIDMOOC\_PREMIERS\_PAS and §Camera settings), the framing will be set automatically when you turn on the system.

N.B.: You can operate the camera, save presets and change the focus directly from the studio's interface, without needing to touch the remote control.

## SETUP AND CHROMA KEY TESTS

Position and plug in the Rapidmooc kit's components (studio, green screen, lights) as explained in this document.

Follow the quick start steps of the Rapidmooc studio that can be found in the RAPIDMOOC\_PREMIERS\_PAS guide.