

Why should you adjust the cameras?

The goal of the T3 immersive room is to establish the perception of a seamless “same room” feel for the participants in the room.

For Point-to-Point meetings the three PrecisionHD 1080p cameras do this by providing a similar “same room” feel for the far end T3 participants. To achieve this all three PrecisionHD 1080p cameras need to act as if they are one camera establishing a panoramic view of each of the T3 immersive rooms.

For Multisite meetings, with up to four sites in total, the cameras are set to maximize the perceived eye contact.

You will need to set:

- **Pan**, i.e. the camera view angle in the horizontal plane.
- **Tilt**, i.e. the camera view angle in the vertical plane.
- **Zoom**, i.e. the perceived distance from the camera lens to object being viewed.
- **Focus**, i.e. the image clarity.
- **Gamma**, i.e. a transfer function characteristic of a camera’s image sensor.
- **White balance**, i.e. proper camera color temperature of a light source.
- **Brightness**, i.e. how much ambient light is allowed to strike the camera’s image sensor.

You will need two sets of settings

The system will need two settings, one for the **Point-to-Point** meetings and another for the **Multisite** meetings.

The T3 system will automatically use the correct setting depending on the type of meeting.

Logging on to the system

1. Log on to the system as Administrator.

Press and hold for 3 seconds here to enter the Administrator interface

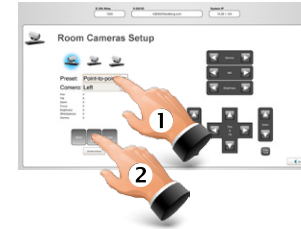


2. Tap the **Room Cameras** field to enter **Room Cameras Setup**.



Point-to-Point (PtP) calibration

1. Select **Point-to-Point (1)** and then tap **Load factory default (2)**.

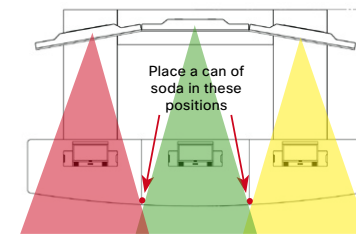


2. Select each camera in turn (Left, Center, Right) and adjust the parameters to within the intervals of the below table.

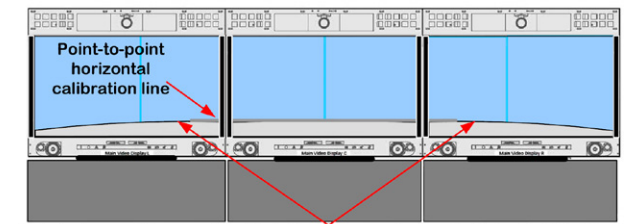
Typical Point-to-point Physical camera setting values:

| Camera | Pan | Tilt | Focus | Zoom |
|--------|---------|---------|-----------|-----------|
| Left | 348-354 | 192-198 | 4552-4558 | 1282-1324 |
| Center | 403-409 | 187-191 | 4540-4549 | 1381-1443 |
| Right | 457-462 | 192-198 | 4552-4558 | 1282-1324 |

3. Place two cans of soda, as shown. In camera calibration mode the cans should be barely visible. Adjust Zoom and Pan, if needed.



4. Finally use the horizontal calibration line to adjust camera tilt, if needed:



Self view image of the rear edge of the table when properly aligned with the “Point-to-Point” horizontal calibration line.

5. Tap **Save** when all has been properly set.

PtP Gamma, WB and Brightness settings

While still in the Point-to-Point layout adjust the three remaining parameters, viz. the Gamma, Whitebalance and Brightness for each camera. This will adjust the quality of the displayed image, as picked up by the corresponding camera.

Gamma. Although the Gamma range can be toggled from 0 - 7, basically there are just two settings which alternate as you move up or down, at this time. Depending on how the room lighting is affected by room size and ceiling height Gamma is either set one way or the other.

Values of [0, 2, 4 & 6], give a higher contrasting image, while values of [1, 3, 5 & 7], give a lesser contrasting image.

Whitebalance. Has a range of values from 1 to 16. As you select up and down the range the color temperature changes from hot, (more Red), to warm, (neutral) to cool, (more Blue).

Brightness. Has a range of values from 1 to 30. 1 is basically a shut lens iris, (no light getting in), whereas 30 is a fully open lens iris, (allowing maximum light in). Normally, values of 1 through 10 are pretty much useless. It's not until you reach 11 and beyond that the camera begins to capture an image under normal lighting conditions.

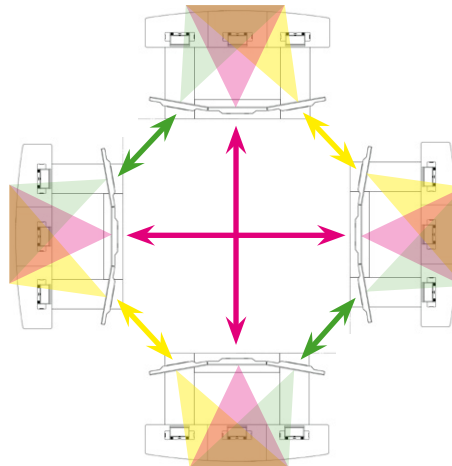
Typical Point-to-Point Visual camera setting values:

| Camera | Gamma | Whitebalance | Brightness |
|--------|--------|--------------|------------|
| Left | 2 or 4 | 12-15 | 18-26 |
| Center | 2 or 4 | 12-15 | 18-26 |
| Right | 2 or 4 | 12-15 | 18-26 |

About T3 Multisite

The Multisite layout can be used when your T3 system is in a meeting with two or three other T3 sites. The layout will show the four center chairs only. Consequently, the two outer chairs will not be shown.

Consider a four party T3 Multisite meeting. The cameras and the screens will then be connected together by the codecs as shown:



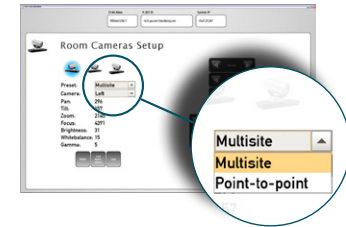
Note that all three cameras are set up to cover the four center chairs only. Also note that the color codings used show how the video signals from the cameras to the monitors are routed. The effect of this arrangement is that the perceived eye contact will be greatly enhanced.

All participants will then view the four center chairs of the three other parties as follows:



Multisite calibration

1. In the **Room Camera Setup** menu, select the **Multisite** setting and tap **Load factory default** as shown on the previous page.

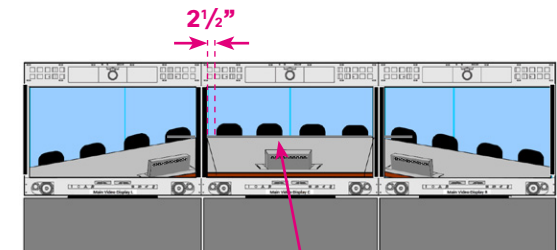


2. Select each camera in turn (Left, Center, Right) and adjust the parameters to within the intervals of the below table.

Typical Multisite Physical camera setting values:

| Camera | Pan | Tilt | Focus | Zoom |
|--------|---------|---------|-----------|---------|
| Left | 472-483 | 168-175 | 4572-4606 | 878-903 |
| Center | 402-409 | 186-194 | 4560-4609 | 540-568 |
| Right | 330-345 | 168-175 | 4572-4606 | 878-903 |

3. Fine adjust the cameras so that the tables appear in line (use the calibration line) and of the same physical size and so that a gap of approximately 2½" (6.5 cm) appears on the center screen between the outermost chairs and the screen edges as shown.



Horizontal calibration line in Multisite mode

4. Tap **Save** to exit, putting changes into effect.