Title:	How to Calibrate Radar and PTZ Camera		Document Version :	2018/11/15
Product:	Radar :DS-PR1-60	PTZ : DS-2DE7423IW-A		

Purpose of Calibration

Calibrate the linked PTZ camera to ensure high accuracy and better effect of monitoring image.

Preparation

- ✓ Language of PTZ Camera, IVMS-4200 and the radar should match;
- ✓ The recommended PTZ camera size is above 5-inch;
- ✓ Two persons are needed to complete this calibration process;
- ✓ When calibrating the camera, you'd better keep the chosen site empty.

Reference of installation height and adjusting angle of radar

radar installation height(m)	downward adjusting angle(°)	Max. detecting distance: walking away from radar(m)	Max. detecting distance: walking towards radar(m)	blind zone around radar(m)
2.2	0	59.5	59.5	5.5
2.2	5	59.23	55.6	5
2.2	10	45	26.22	4.31
3	0	58.72	59.7	8.9
3	5	59.7	52	7.2
3	10	50.9	27.9	6.2
3.5	5	59.2	49.8	8.4
3.5	10	55.8	39	7.6

*data is for reference only

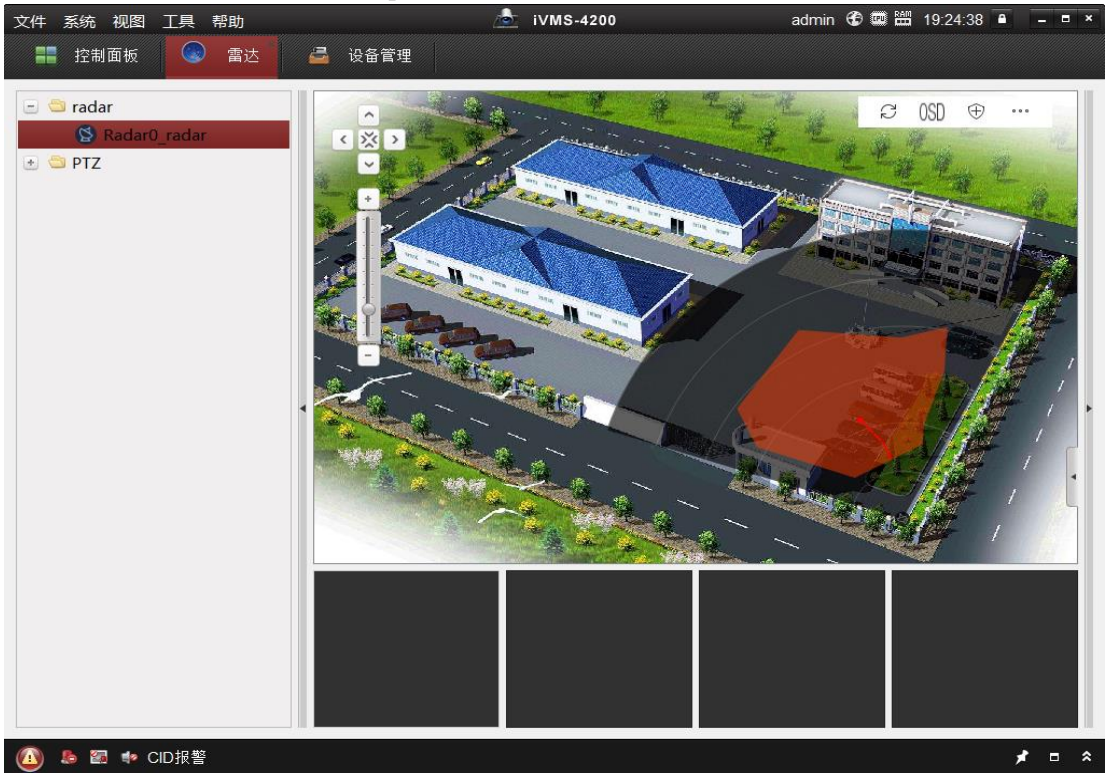
	recommended

According to statistics above:

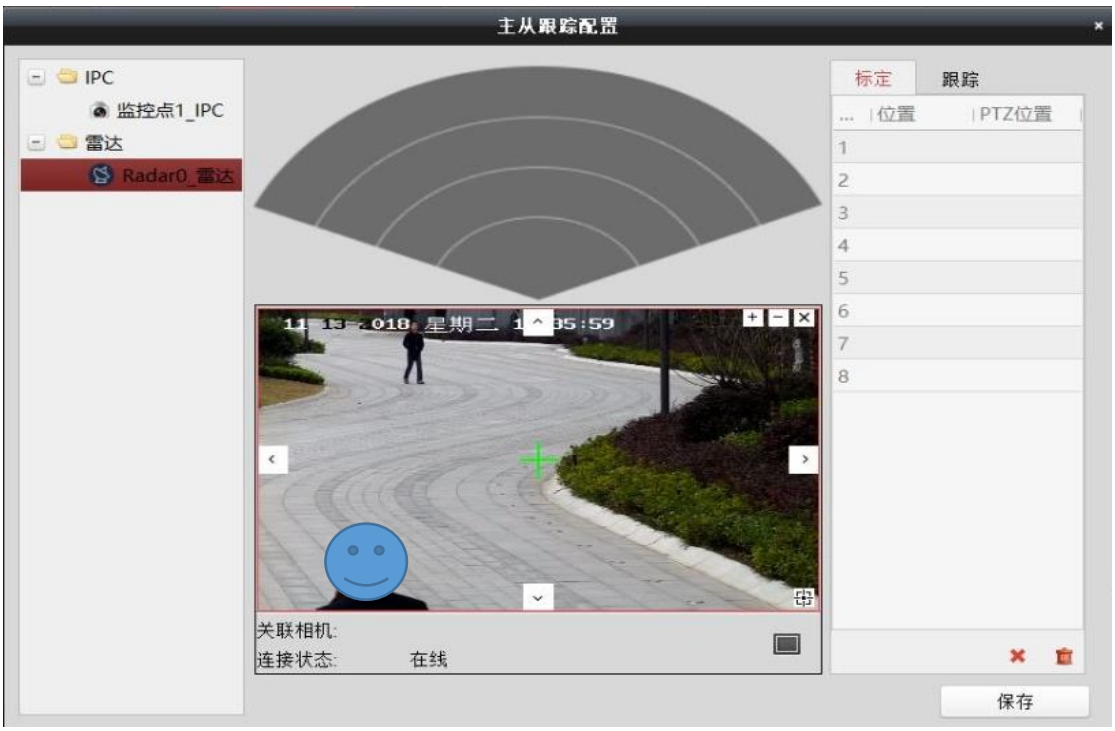
1. Radar installation height of 2.2m is highly recommended to ensure best quality of trajectory surveillance.
2. If the installation height is between 2.2 and 2.5m, there is no need to adjust the radar angle.
3. For installation height from 3m to 3.5m, we recommend 1° to 5° in order to reduce blind zone.

Setup and calibration

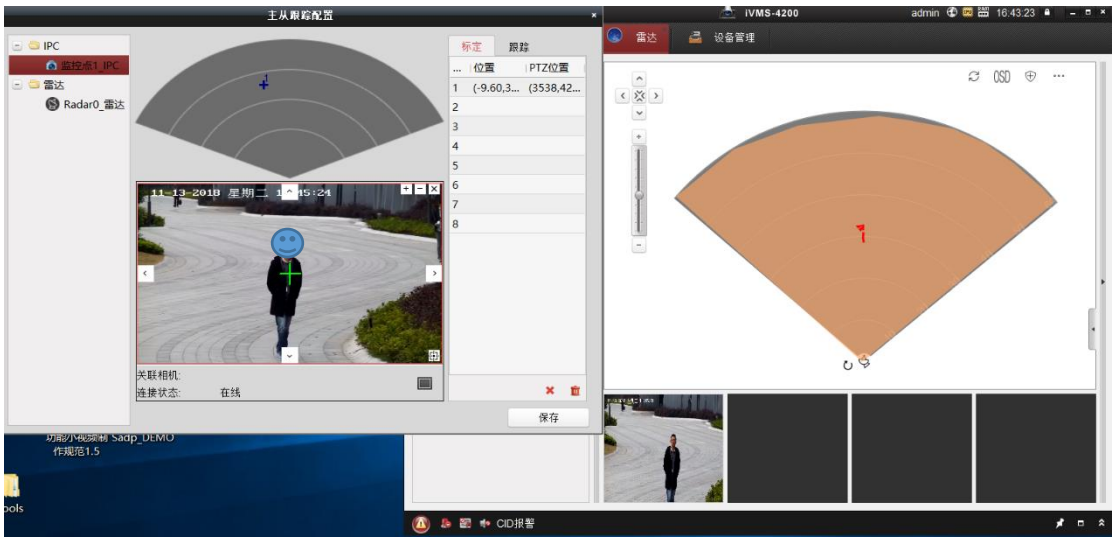
1. Disarm the radar before the operation. (Click ⊕ to disarm the radar)



2. Click ••• to enter Master-Slave Tracking Settings.
3. Double click the radar and linked camera in the device list on the left. The real-time scene of the camera will be displayed under the radar field diagram.



4. Then, we start the calibrate process.
    1) The calibration is a dynamic process. One person must move step by step into the detection area. When Person A is walking in the detection area, his trajectory will be presented in the real-time scene of the Radar.
    2) Then, person A could stop once there appears a relatively long trajectory. After that, you have only 10 seconds to calibrate the camera. After 10 seconds, if there is someone else walking into the detection area, the camera will turn to another person and calibration fails.
    3) Adjust the PTZ of the speed dome. Person A should better take up vertically **2/3** of the linked camera's real-time scene. In addition, in the horizontal direction, you'd better put the figure of person A in the middle of the image.
    4) Align the central sign + with the target in the scene. Focus the aim point on the center of the target person.
    5) Click the real-time scene of the linked camera and select a coordinate in the Calibration Position list on the right.
    6) Click "save".



*Notice

1. It is required to set four calibration positions (equally distributed) if the speed dome is not installed together with the radar. But for speed dome installed together with the radar, only one calibration position is needed.
2. Under these situations, the calibration will fail:
    - ✓ No trajectory shows in the real-time scene of the radar;
    - ✓ Once person A stops and 10 seconds passed, meanwhile other persons are walking into the detection area, the process fails;
    - ✓ Disturbance from many other moving targets.