

# The Education University of Hong Kong

## 2021-2022 Quality Education Fund Thematic Network - Tertiary Institutes

### STEM Project Team

SCHOOL: S. K. H. ST. JAMES' PRIMARY SCHOOL (P4)

TOPIC: MOBILE APPS FOR SOUND AND LIGHT  
MEASUREMENT

# Mobile App for Sound Measurement(db)

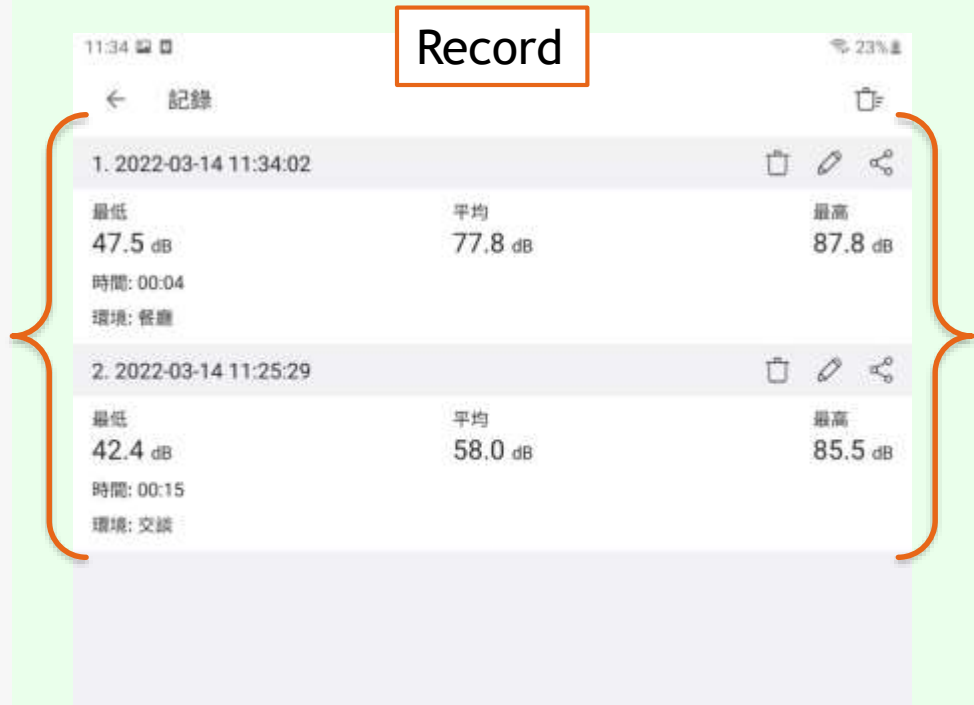
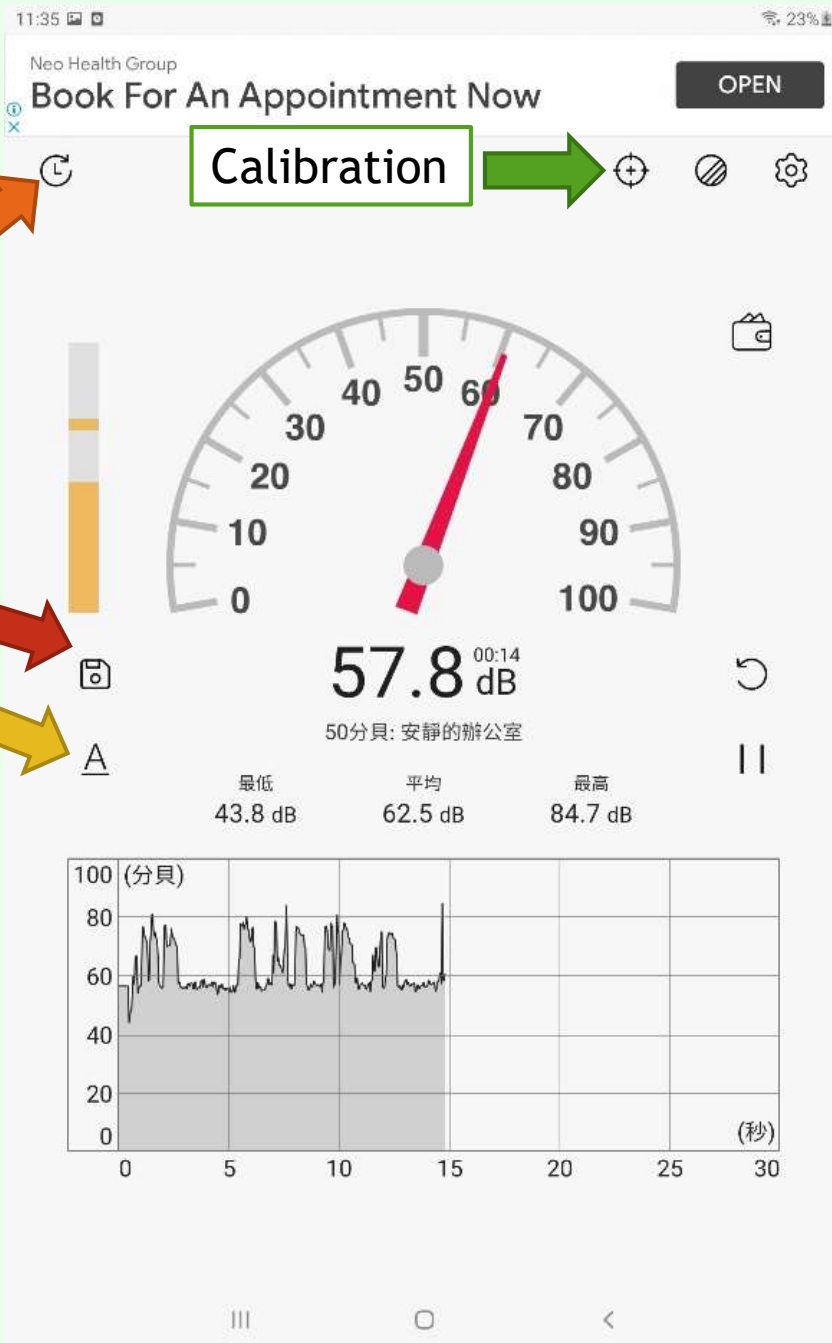


# Android - 聲級計



No Ads





- 140分貝: 槍響
- 130分貝: 救護車
- 120分貝: 閃電
- 110分貝: 演唱會
- 100分貝: 地鐵
- 90分貝: 摩托車
- 80分貝: 繁忙交通
- 70分貝: 餐廳
- 60分貝: 交談
- 50分貝: 安靜的辦公室
- 40分貝: 安靜的圖書館
- 30分貝: 悄悄話
- 20分貝: 手錶滴答聲
- 10分貝: 呼吸

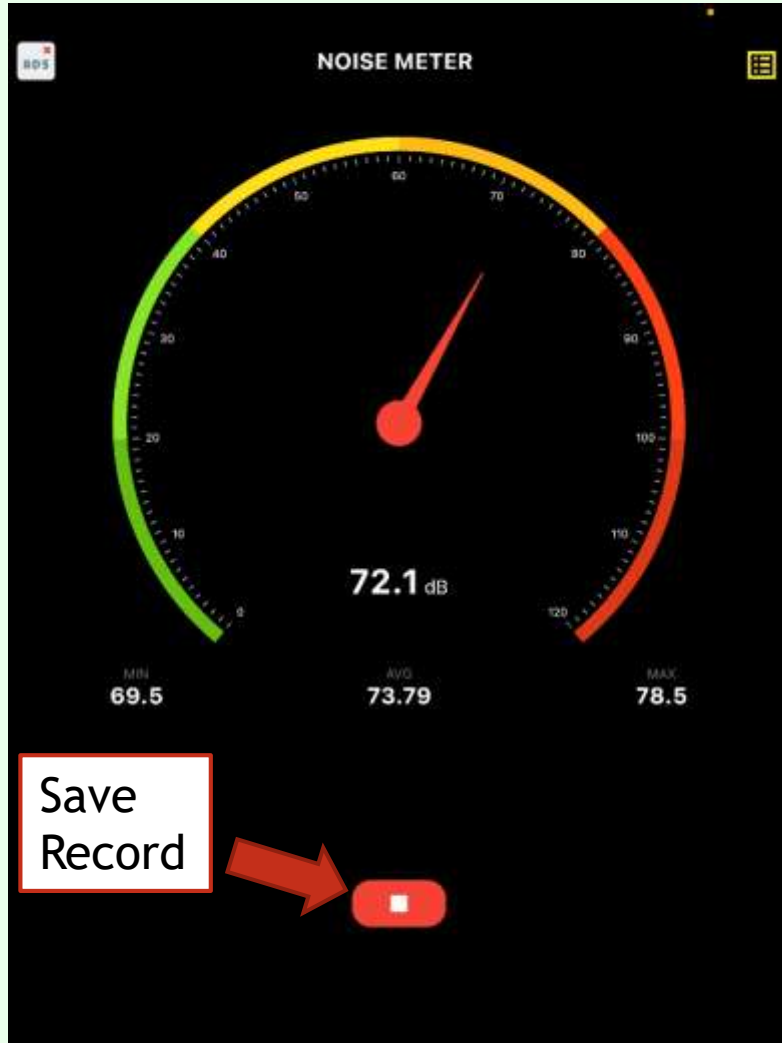
With Ads

# IOS - Sound Meter 分貝計



# IOS - Sound Meter

Record

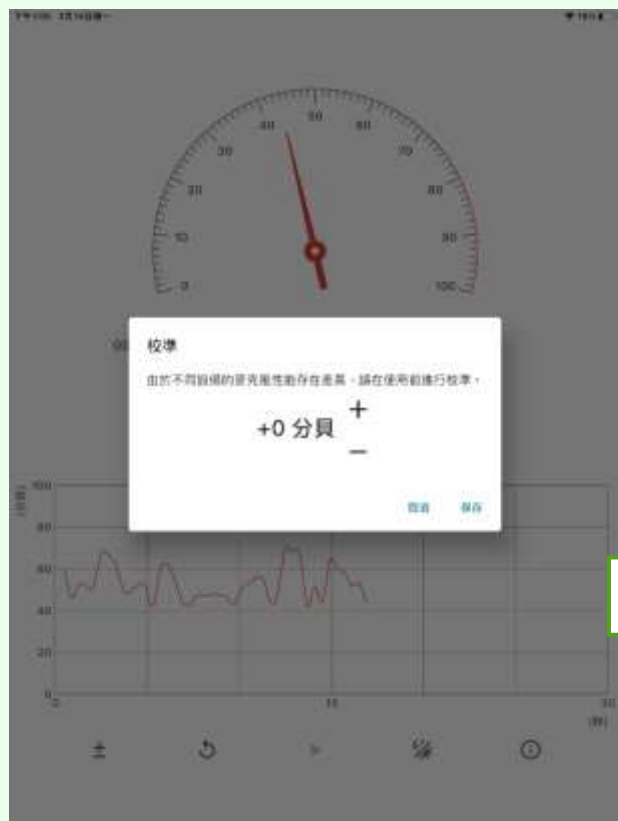


HISTORY

14/3/2022

MIN	AVG	MAX	TIME
54.9	63.12	78.4	13:16
55.5	66.97	75.4	13:25

# IOS - 分貝計



Calibration

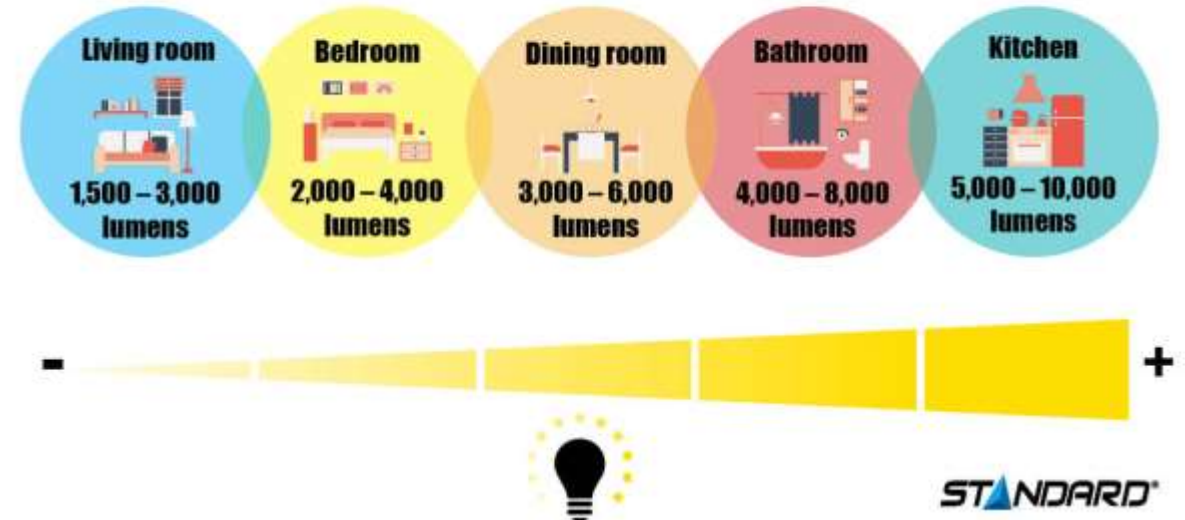


# Mobile App for Light Measurement(lux)

## LUX RATING CHART

	Condition	Light Level (LUX)	Foot Candles (FC)
Day Time	Sunlight	107,527	10,000
	Daylight	10,752.70	1,000
	Overcast Day	1,075.30	100
	Very Dark Day	107.53	10
	Twilight	10.75	1
Night Time	Deep Twilight	1.08	0.1
	Full Moon	0.108	0.01
	Quarter Moon	0.0108	0.001
	Starlight	0.0011	0.0001
	Overcast Night	0.0001	0.00001

## House lighting

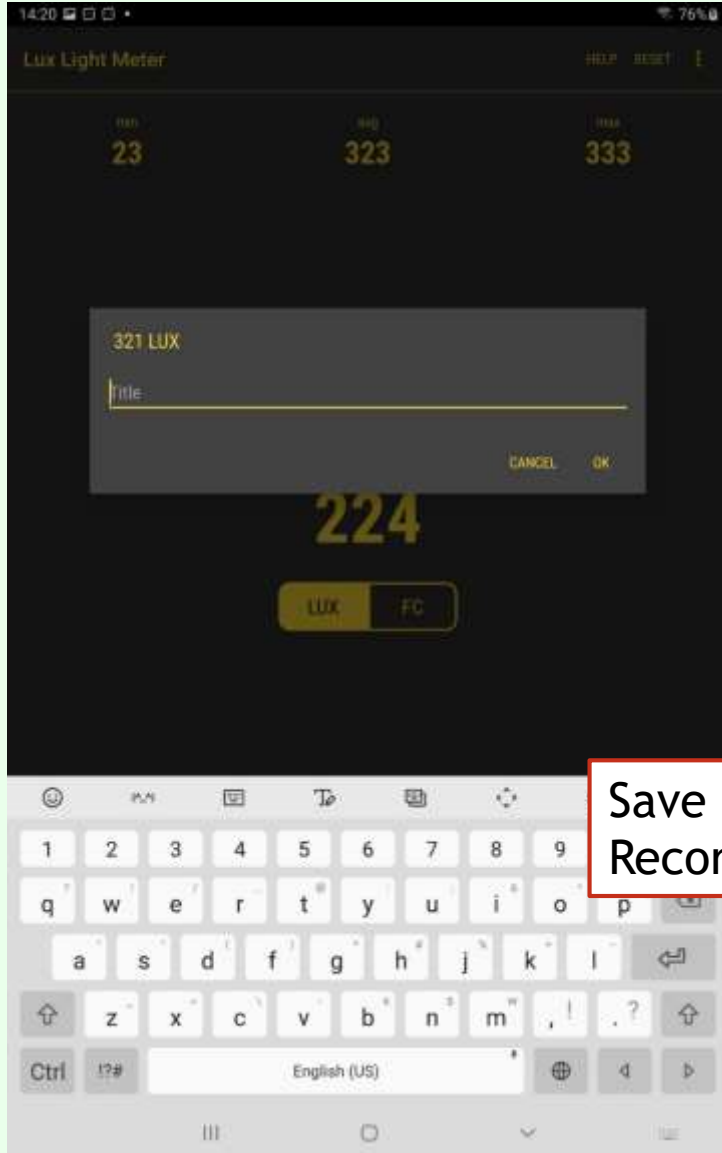




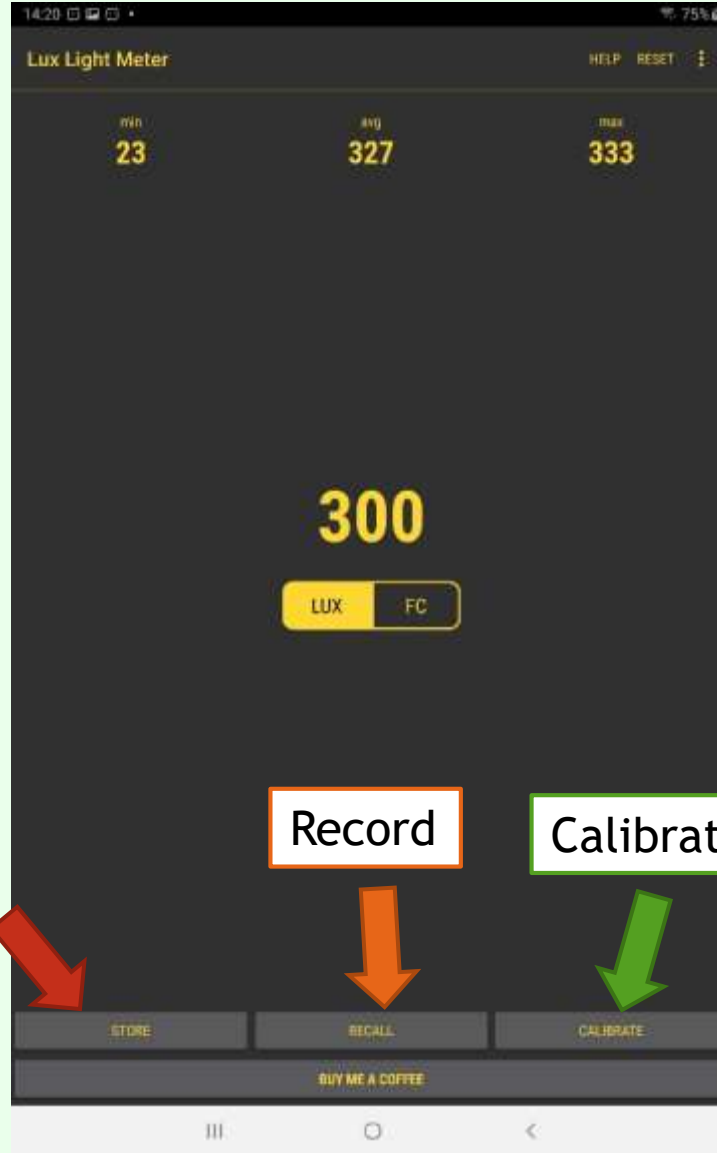
# Android - Lux Light Meter Pro

No Ads





Save Record



Record

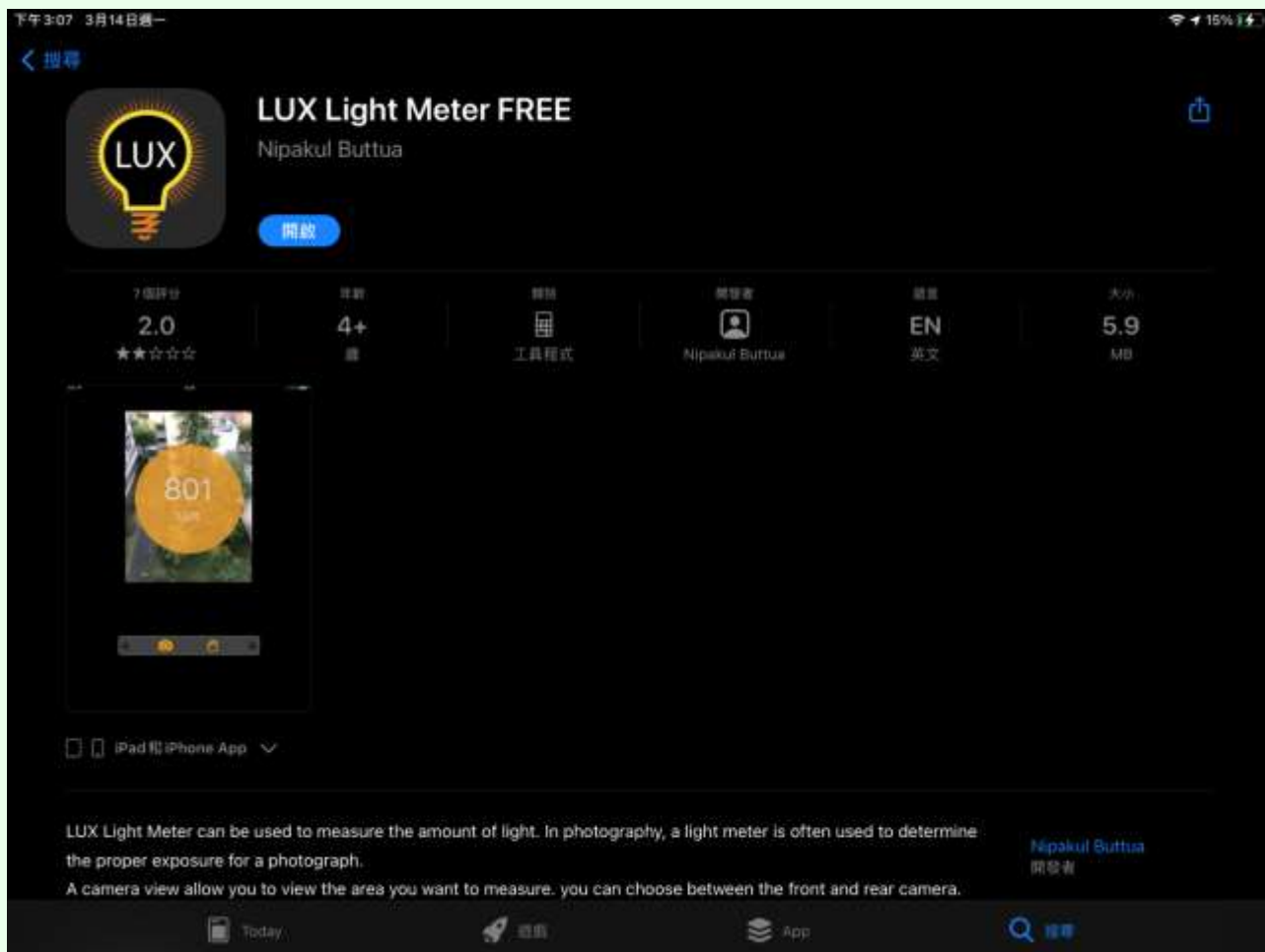
Calibration

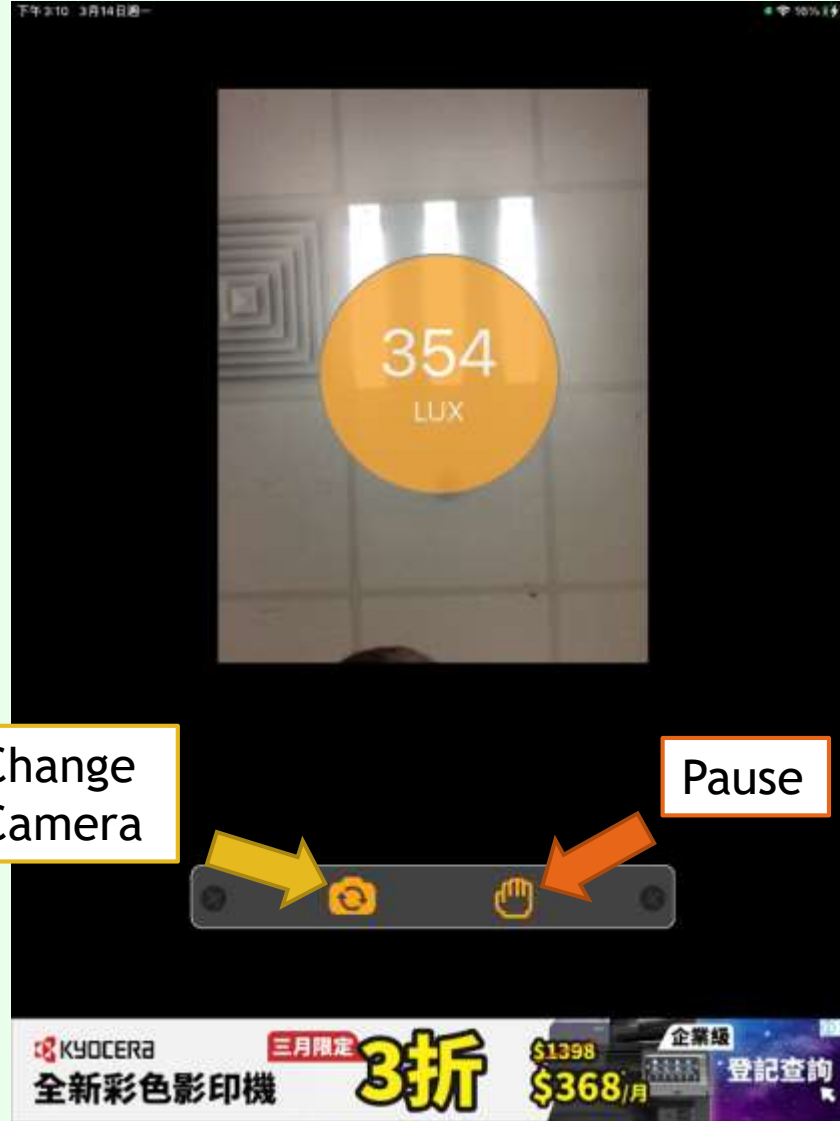


Record

# IOS - LUX Light Meter FREE

With Ads





# Sound Meter REED R8050



# Light Meter Klein Tools ET130



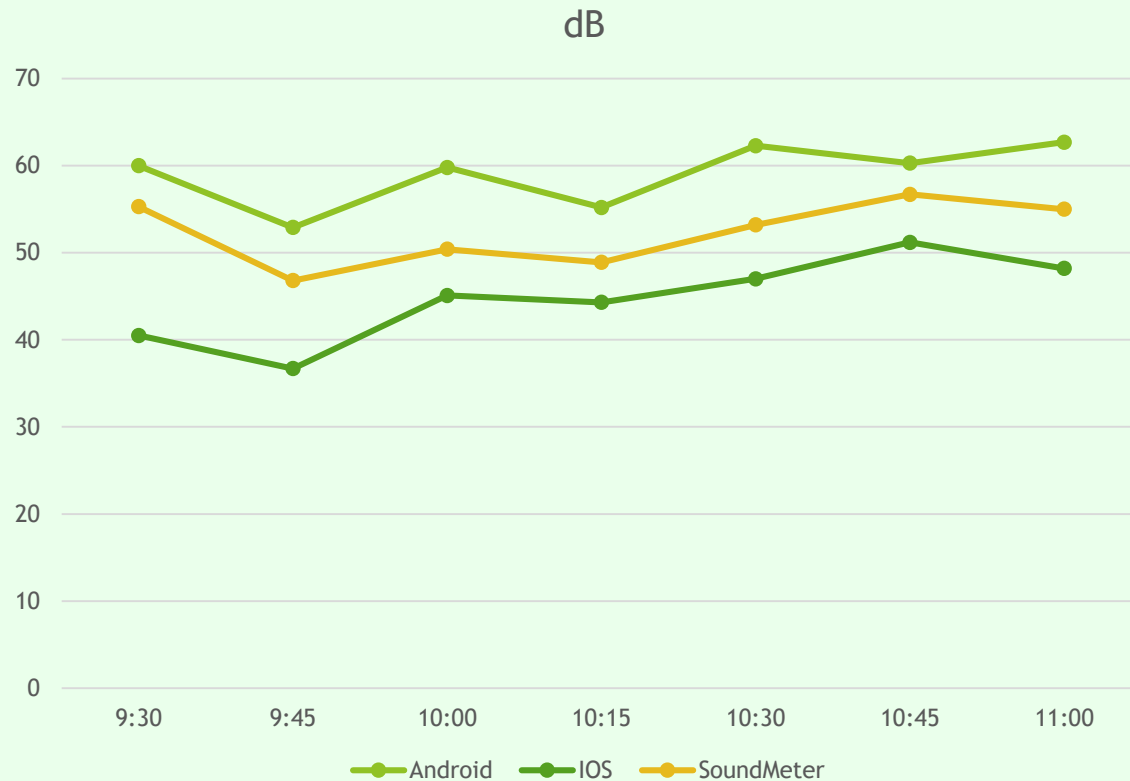
# Reference for Sound meter(dB), Versus Location



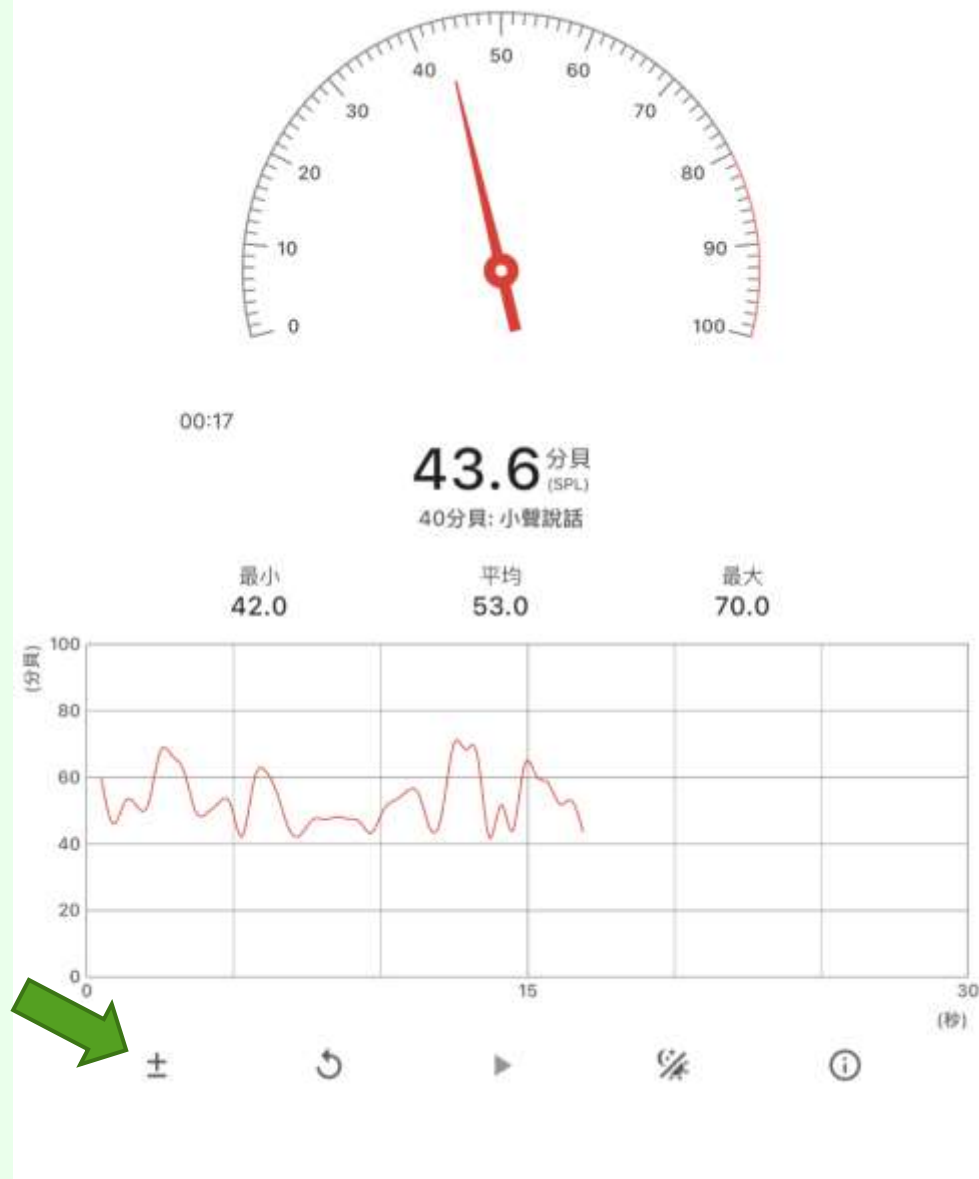
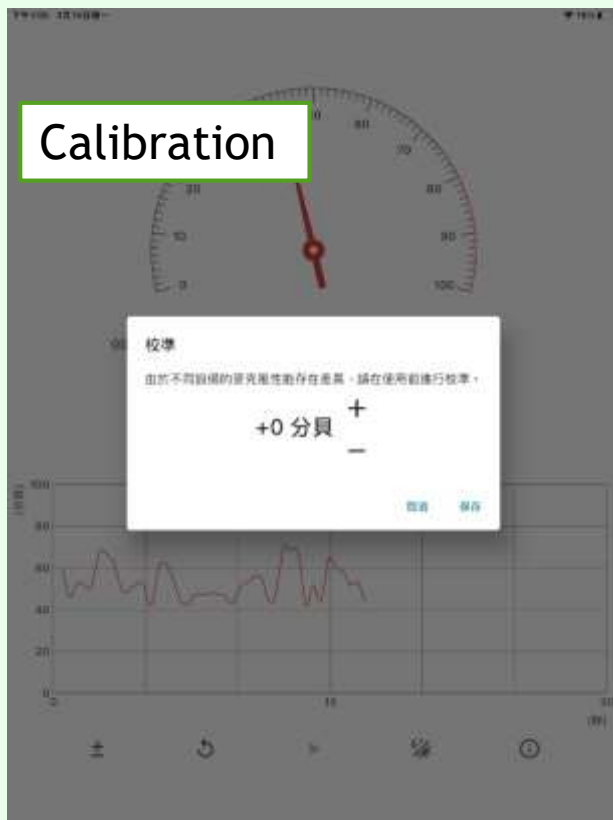
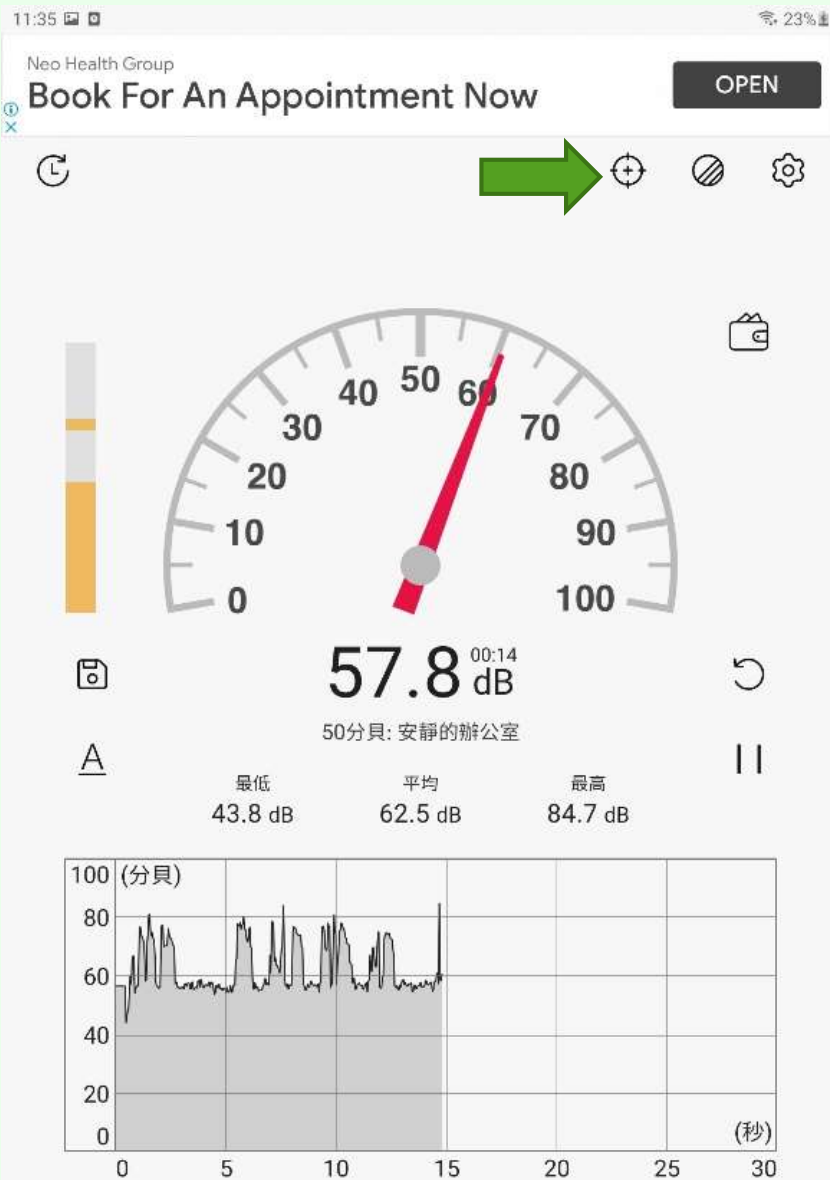
	R8050	Android	IOS
Office	40.9	50.0	34.7
Outdoor (EdUHK, raining)	53.7	60.3	50.8
Mall	57.2	64.4	54.7
Road (海怡路)	50.4	57.0	47.3
MTR Station	57.7	64.2	65.3
MTR	68.2	74.7	65.5

# Versus Time

Sunny Day



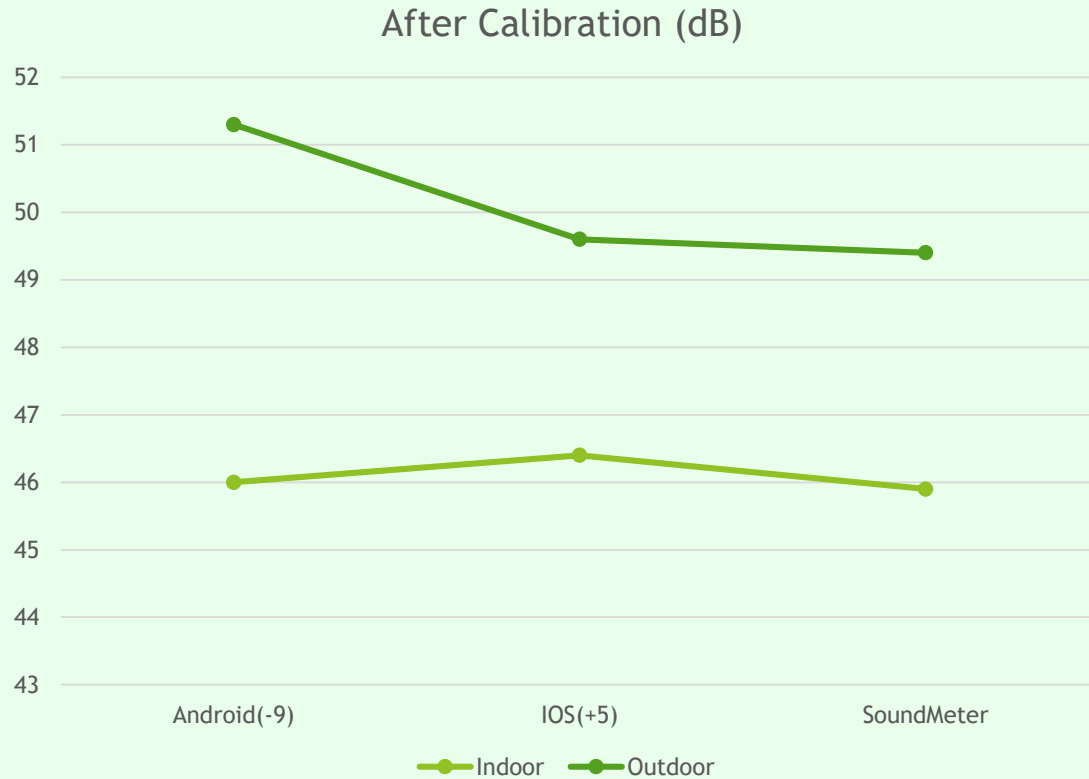
Time	Android	IOS	SoundMeter
9:30	60	40.5	55.3
9:45	52.9	36.7	46.8
10:00	59.8	45.1	50.4
10:15	55.2	44.3	48.9
10:30	62.3	47	53.2
10:45	60.3	51.2	56.7
11:00	62.7	48.2	55





# After Calibration, Android -9, IOS +5

After Calibration, Android -9, IOS +5			
	Android(-9)	IOS(+5)	SoundMeter
Indoor	46	46.4	45.9
Outdoor	51.3	49.6	49.4



# Reference for light meter(lux)

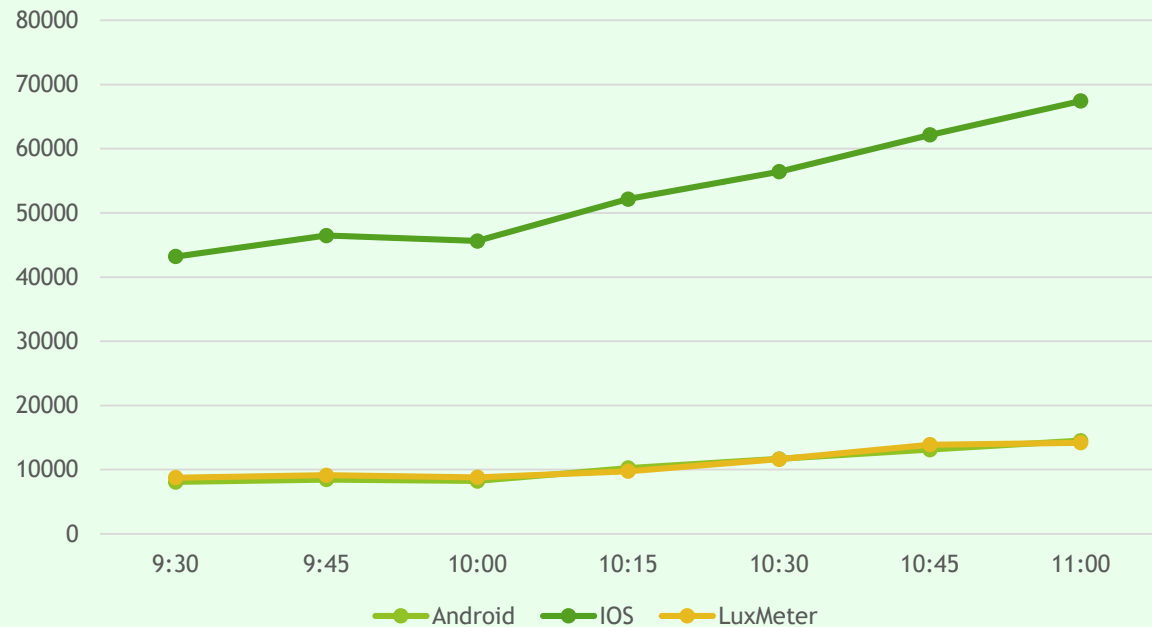


	ET130	Android	IOS
Table Lamb	611.9	614	864
Office	276.6	277	218
Pantry	324.7	328	430

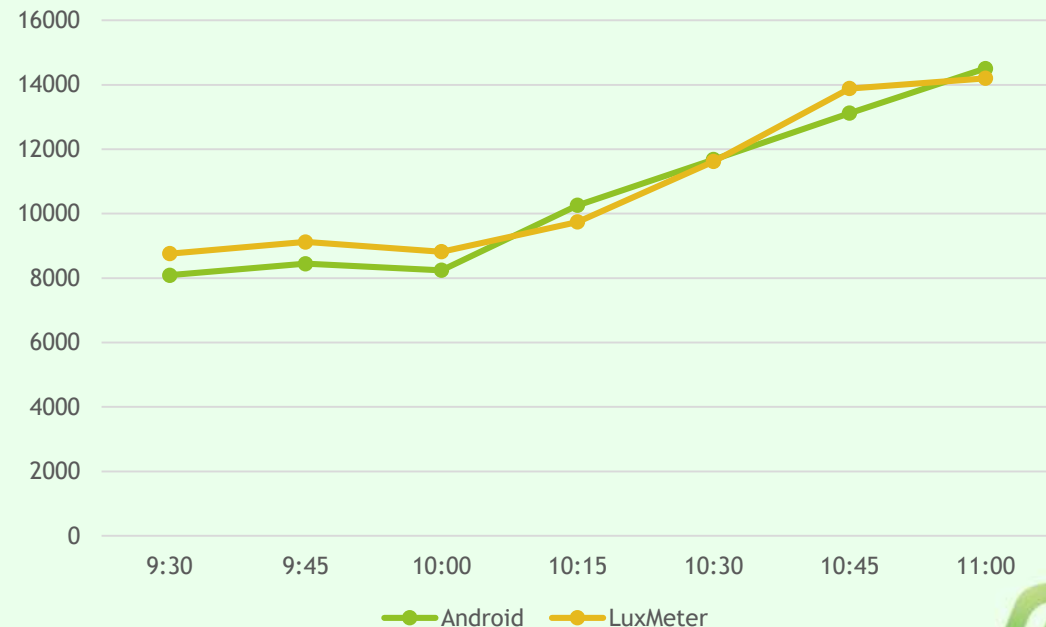
# Versus Time

Time	Android	IOS	LuxMeter
9:30	8090	43203	8760
9:45	8445	46477	9120
10:00	8240	45612	8817
10:15	10257	52160	9740
10:30	11679	56425	11620
10:45	13120	62140	13884
11:00	14504	67420	14201

Lux (Outdoor)



Lux (Outdoor)



# Android > IOS

