



电视电声研究所校准实验室
Calibration Laboratory of Research Institute of TV and Electro-Acoustics

中国认可
国际互认
校准
CALIBRATION
CNAS L2052

校准证书

CALIBRATION CERTIFICATE

证书编号: J2022022004
(Certificate No.)

| | |
|----------------------------|---|
| 客户名称 (Client) | Intertek Japan K.K. |
| 客户地址 (Address) | Yasuda Shibaura No.2,Bldg.,3-2-12 Kaigan,Minato-ku,Tokyo 108-0022 Japan |
| 器具名称 (Instrument Name) | Three Vertical Bar Signal Test Device |
| 型号 (Model) | RDL |
| 编号 (Serial No.) | 100001 |
| 生产厂家 (Manufacturer) | TIRT |
| 接收日期 (Received Date) | 2022年2月28日 |
| 校准日期 (Calibration Date) | 2022年2月28日 |
| 发布日期 (Issued Date) | 2022年2月28日 |

校准:
(Calibrated by)

签发:
(Issued by)

核验:
(Checked by)

校准单位:
(Certified by)



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电视电声研究所校准实验室

The Calibration Laboratory of Research Institute of TV and Electro-Acoustics

1. 本实验室校准所用的标准都可溯源到国家标准和国际单位制 (SI)。
2. 本实验室质量体系符合 ISO/IEC 17025:2017 的要求。
3. 校准结果的不确定度评定和表述均符合 JJF1059 系列标准的要求。

校准所依据的技术文件 (Reference Documents for Calibration)

JJF 1235-2010 电视视频信号发生器校准规范

JJF 1742-2019 高清视频信号发生器校准规范

校准地点及其环境条件:

温度 (Temperature): 20 °C 地点 (Place): 电视电声研究所校准实验室 (803)

湿度 (Humidity): 30 %RH 其他 (Other): \

校准使用的计量标准或主要标准器

| 名称 | 编号 | 证书编号 | 证书有效期至 |
|--------|---------------|--------------|------------|
| 视频测量系统 | F207E3 ED3C11 | JT2021042000 | 2022-04-24 |

注:

1. 本实验室仅对加盖“电视电声研究所校准专用章”的完整证书负责。
2. 本证书提供的校准结果仅对本次被校样品有效, 不得用于其它被校样品。
3. 本证书的测量不确定度均为包含因子 $k=2$ 的扩展不确定度。
4. 如果委托单位对本次校准有异议, 应于收到被校件之日起十五日内向本实验室提出。

校准结果

(Result of calibration)

1. Appearance and normal working inspection: normal.

2. PAL Composite H-Timing

Main Parameters

| Project | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------------------|------|---------------|----------------|-------|-------------|
| Line Sync Amplitude | mV | 300.0 | 300.1 | -0.1 | 3.4 |
| Line Sync Width | us | 4.70 | 4.74 | -0.04 | 0.02 |
| Burst Amplitude | mV | 300.0 | 295.9 | 4.1 | 5.1 |
| Burst Width | us | 2.25 | 2.24 | 0.01 | 0.04 |
| Burst Frequency | MHz | 4.434 | 4.434 | 0.000 | 0.002 |

Other Parameters

| Project | Unit | Measured Value | Uncertainty |
|---------------------|------|----------------|-------------|
| Line Sync Rise Time | ns | 241 | 6 |
| Line Sync Fall Time | ns | 241 | 6 |
| DC Level | mV | 385 | 6 |

3. PAL Composite Colorbar (100/0/75/0)

Luminance Level

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| White | mV | 700.0 | 697.4 | 2.6 | 6.6 |
| Yellow | mV | 465.2 | 461.6 | 3.6 | 4.7 |
| Cyan | mV | 368.0 | 365.2 | 2.8 | 3.9 |
| Green | mV | 308.2 | 305.7 | 2.5 | 3.5 |
| Magenta | mV | 216.8 | 214.9 | 1.9 | 2.7 |
| Red | mV | 157.0 | 155.5 | 1.5 | 2.3 |
| Blue | mV | 59.9 | 59.0 | 0.9 | 1.5 |
| Black | mV | 0.0 | -0.0 | 0.0 | 1.0 |

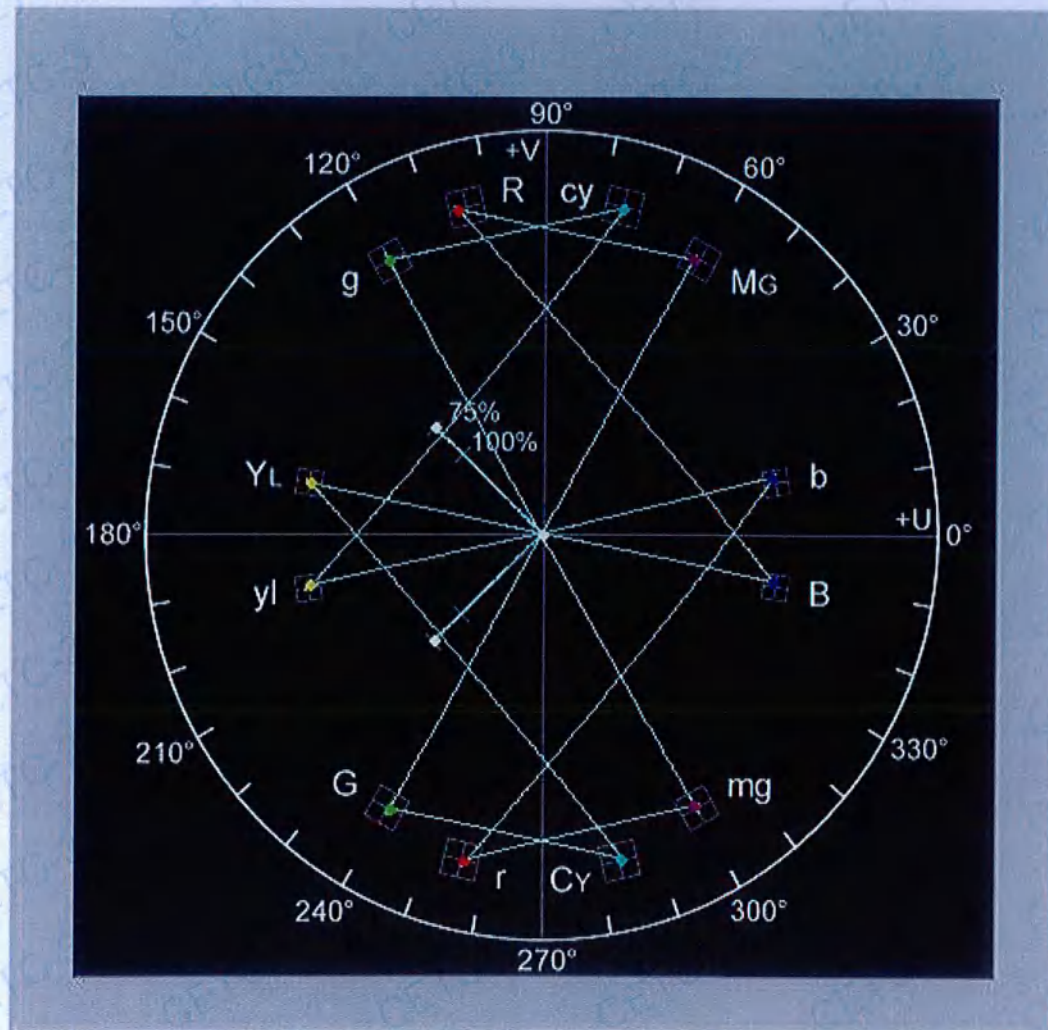
Chroma Level

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| Yellow | mV | 470.5 | 463.7 | 6.8 | 7.1 |
| Cyan | mV | 663.8 | 656.2 | 7.6 | 9.4 |
| Green | mV | 620.1 | 614.1 | 6.0 | 8.9 |
| Magenta | mV | 620.1 | 612.1 | 8.0 | 8.8 |
| Red | mV | 663.8 | 657.8 | 6.0 | 9.4 |
| Blue | mV | 470.5 | 466.3 | 4.2 | 7.1 |

Chroma Phase

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| Yellow | Deg | 167.1 | 167.6 | -0.5 | 0.8 |
| Cyan | Deg | 283.5 | 283.8 | -0.3 | 0.8 |
| Green | Deg | 240.7 | 241.1 | -0.4 | 0.8 |
| Magenta | Deg | 60.7 | 61.3 | -0.6 | 0.8 |
| Red | Deg | 103.5 | 104.0 | -0.5 | 0.8 |
| Blue | Deg | 347.1 | 347.5 | -0.4 | 0.8 |

Vector



4. 1920×1080i 50Hz YsUV H-Timing

| Project | Unit | Measured Value | Uncertainty |
|--|------|----------------|-------------|
| Negative Pulse Amplitude | mV | 298.2 | 3.4 |
| Positive Pulse Amplitude | mV | 297.7 | 3.4 |
| Positive and Negative Pulse Amplitude Difference | mV | 1.1 | 1.0 |
| Sum of Positive and Negative Pulse Amplitudes | mV | 595.9 | 5.8 |
| Negative pulse Width | ns | 591 | 3 |
| Positive Pulse Width | ns | 594 | 3 |
| Negative Pulse Fall Time | ns | 17 | 4 |
| Positive Pulse Fall Time | ns | 17 | 4 |
| Rise Time | ns | 40 | 4 |
| DC Level --Y | mV | 368 | 6 |
| DC Level --U/Pb | mV | 672 | 9 |
| DC Level --V/Pr | mV | 671 | 9 |

5. 1920×1080i 50Hz YsUV Colorbar (100/0/100/0)

Y

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| White | mV | 700.0 | 697.9 | 2.1 | 6.6 |
| Yellow | mV | 649.5 | 648.3 | 1.2 | 6.2 |
| Cyan | mV | 551.2 | 550.0 | 1.2 | 5.4 |
| Green | mV | 500.6 | 499.8 | 0.8 | 5.0 |
| Magenta | mV | 199.4 | 198.3 | 1.1 | 2.6 |
| Red | mV | 148.8 | 148.0 | 0.8 | 2.2 |
| Blue | mV | 50.5 | 50.1 | 0.4 | 1.4 |
| Black | mV | 0.0 | -0.5 | 0.5 | 1.0 |

U/Pb

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| White | mV | 0.0 | -0.0 | 0.0 | 1.0 |
| Yellow | mV | -350.0 | -347.8 | -2.2 | 3.8 |
| Cyan | mV | 80.2 | 79.0 | 1.2 | 1.6 |
| Green | mV | -269.8 | -267.9 | -1.9 | 3.2 |
| Magenta | mV | 269.8 | 267.5 | 2.3 | 3.2 |
| Red | mV | -80.2 | -79.7 | -0.5 | 1.6 |
| Blue | mV | 350.0 | 347.6 | 2.4 | 3.8 |
| Black | mV | 0.0 | 0.4 | -0.4 | 1.0 |

V/Pr

| Color | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|---------|------|---------------|----------------|-------|-------------|
| White | mV | 0.0 | -0.0 | 0.0 | 1.0 |
| Yellow | mV | 32.1 | 31.5 | 0.6 | 1.3 |
| Cyan | mV | -350.0 | -347.3 | -2.7 | 3.8 |
| Green | mV | -317.9 | -316.0 | -1.9 | 3.5 |
| Magenta | mV | 317.9 | 314.4 | 3.5 | 3.5 |
| Red | mV | 350.0 | 347.1 | 2.9 | 3.8 |
| Blue | mV | -32.1 | -31.4 | -0.7 | 1.3 |
| Black | mV | 0.0 | -0.1 | 0.1 | 1.0 |

6. 1920×1080i 50Hz YsUV Three Vertical Bar
Vertical Bar Width (% of Total Width)

| Vertical Bar | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|--------------|------|---------------|----------------|-------|-------------|
| Black Bar 1 | % | 8.33 | 8.31 | 0.02 | 0.05 |
| White Bar 1 | % | 16.67 | 16.67 | 0.00 | 0.05 |
| Black Bar 2 | % | 16.67 | 16.67 | 0.00 | 0.05 |
| White Bar 2 | % | 16.67 | 16.66 | 0.01 | 0.05 |
| Black Bar 3 | % | 16.67 | 16.67 | 0.00 | 0.05 |
| White Bar 3 | % | 16.67 | 16.66 | 0.01 | 0.05 |
| Black Bar 4 | % | 8.33 | 8.36 | -0.03 | 0.05 |

Vertical Bar Level

| Vertical Bar | Unit | Nominal Value | Measured Value | Error | Uncertainty |
|--------------|------|---------------|----------------|-------|-------------|
| APL | % | 50.0 | 49.7 | 0.3 | 1.0 |
| Black Bar 1 | mV | 0.0 | 0.0 | 0.0 | 1.0 |
| White Bar 1 | mV | 700.0 | 694.2 | 5.8 | 6.6 |
| Black Bar 2 | mV | 0.0 | 0.1 | -0.1 | 1.0 |
| White Bar 2 | mV | 700.0 | 693.8 | 6.2 | 6.6 |
| Black Bar 3 | mV | 0.0 | -0.3 | 0.3 | 1.0 |
| White Bar 3 | mV | 700.0 | 693.9 | 6.1 | 6.6 |
| Black Bar 4 | mV | 0.0 | 0.8 | -0.8 | 1.0 |

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