

Ikegami

80/90 Series Color Monitors

TM20-90RH/RP
TM20-80RH/RP
TM14-80RZ/RP



TM20-90RH/RP
TM20-80RH/RP Rear Panel
(Configuration of Module)



TM20-90RH/RP
TM20-80RH/RP Front Panel



TM14-80RZ/RP
Front Panel

The 80/90 series color monitors are designed to be high-end Grade-I master monitors to succeed Ikegami's monitors which have been established as state-of-the art technology of conventional broadcasting. With the superior technology and confidence kept, further improvement for performance are achieved in this new series monitor to satisfy more flexible applications.

- **In-line Self Converging Electron Gun assures convergence stability.**
900TV Lines (TM14-80RZ), 700TV lines (TM20-80RH/RP, TM14-80RP), 900TV lines (TM20-90RH/RP) or more horizontal resolution.
- **SDTV Analog Component (Y,P_B,P_R/RGB), Composite are standard.**
- **The 80/90 series provides PLUG-IN modular construction for optional modules. Optional modules can be inserted from rear side of monitor. This construction ensures easy installation, easy system expansion and easy maintenance. Some optional modules are commonly used for Ikegami HDTV/SDTV Multi-Format Color Monitors.**
- **Auto Setup Probe can adjust to factory initial color temperature automatically. (ASP-80:Option)**

Specifications

Input Voltage:	100~120, 200~240VAC±10% 50/60Hz
Input Power:	160W approx.
Standard Accessories:	Remote Connector, Power Cable, Operation Manual, Service Manual
Input Facilities:	
● Input Signals	*Encoded Video NTSC or PAL-B TM20-80RH/14-80RZ, TM20-90RH....NTSC Decoder standard TM20/14-80RP, TM20-90RPPAL Decoder standard Other decoders are options. *RGB or Y,R-Y,B-Y (SMPT or BETA switchable internally) 1 CHANNEL *D1(4:2:2), D ₂ (D ₃) (Option) SERIAL input 2 CHANNELS SERIAL output 1 CHANNEL (MONITOR OUT)
● Input Level	*Encoded Video Composite 1Vp-p Non Composite 0.7Vp-p *RGB 0.7Vp-p Non Composite Sync on Green No Sync on Red + Blue or Sync Red Green Blue or External Sync *Analog Composite (Y,R-Y,B-Y) SMPT E Y Signal White Level 700mVp-p (N10) Setup Level 0mVp-p Sync Level 300mVp-p R-Y Signal p-p Level 525mVp-p B-Y Signal p-p Level 525mVp-p (100/0/75/0 Color Bar) Beta Y Signal White Level 714mVp-p Setup Level 53.6mVp-p Sync Level 286mVp-p R-Y Signal p-p Level 700mVp-p B-Y Signal p-p Level 700mVp-p (100/7.5/75/7.5 Color Bar) *Y/C Y Signal 1Vp-p C Signal 0.286Vp-p (burst level)
● Connection	Bridging BNC Connectors, high impedance, isolated from chassis ground
● Return Loss	Analog more than 46dB (up to 10MHz)/ Digital more than 15dB (up to 270MHz)
● Remote Control (via 15pin D-sub connector)	Input Selector (A/B/C/RGB or Y,P _s ,P _r /DIGITAL A/DIGITAL B) 4:3/16:9 COLOR/MONO R/G Tally (ON/OFF), Marker ON, Shadow ON, EXT SYNC ON
Display Device:	In-line gun, shadow mask high resolution CRT TM14-80RZ/RP 0.28mm TM20-80RH/RP 0.43mm TM20-90RH/RP 0.28mm
● Chromaticity	*ASP Standard X Y R 0.630 0.340 G 0.310 0.595 B 0.155 0.070 *EBU Standard X Y R 0.640 0.330 G 0.290 0.600 B 0.150 0.060 *Tolerance R,G: ±0.010 B: ±0.007
● Brightness/Contrast	*Preset Contrast 35Ft-L at Factory setting(100% Window Signal) *Max Brightness TM14-80RZ/RP : more than 70Ft-L with Window Signal TM20-80RH/RP: more than 50Ft-L with Window Signal TM20-90RH/RP: more than 50Ft-L with Window Signal
● Resolution(at 35Ft-L)	TM14-80RZ/RP: 900TV lines (at center) TM20-80RH/RP: 700TV lines (at center) TM20-90RH/RP: 900TV lines (at center)
Video Signal System:	
● RGB Response	50Hz~10MHz+1, -3dB
● Sag	±1%
● Back Level Varies	< 1%(APL 10%~90%)
● Color Temperature Stability	< 1% for 500HRS, +10°C~+40°C

● Noise (at each RGB in Active Scanperiod)

Synchronous Noise	≦ -46dB
Hum Noise	≦ -55dB
Other	≦ -55dB

● Chroma Signal Response

NTSC	3.58MHz±1MHz: +1,-3dB
PAL-B	4.43MHz±1MHz: +1,-3dB

● Demodulator Axis

R-Y VS B-Y 90°±1°

● Oscillator Performance Subcarrier Lock-in

±200Hz (NTSC/PAL-M)
±300Hz (PAL-B)

● Phase Error

Less than 2° for each of following individual conditions:

- a) Burst frequency ±10Hz
- b) Burst level change +6dB, -12dB
- c) Ambient temperature change by +10°C
- d) Sync-blanking within FCC requirement

● Color Killer

Automatic operation when burst level is less than 5±1 IRE

● Adjustments

*Chroma amplitude: ±6dB
*Subcarrier phase: ±15°

Raster + Deflection

● Scan

*Normal Scan (4:3)
Aspect ratio 4:3 with blanked raster 1%
*Under Scan (4:3)
Aspect ratio 4:3 approx. -7.5% (Adjustable 90% of Normal Scan)
*Normal Scan (16:9)
(Width is the same as 4:3 Normal Scan and the aspect ratio is 16:9)
*Under Scan (16:9)
(Width is the same as 4:3 Under Scan and the aspect ratio is 16:9)

● Stability of Raster Size

1% of picture height 0-100% APL at 35Ft-L reference

● Linearity H + V line

0.5% of picture height

● Geometry Entire Screen

0.5% of height center

● Retrace Time

Horizontal 9μsec.
Vertical 0.8msec.

● High Voltage

*Tolerance 25kV±1kV
*Regulation with ±1% at 0 to 450μ

● Convergence

Center: < 0.2mm (within circle of 80% of picture height)
Corners: < 0.5mm (0.45mm:90RH)(outside area of picture center)

Functions:

- **Adaptive Comb Decoder (option)**
- **Safe Title Generator**
- **Auto Setup (with an optional probe)**
- **Infrared Remote Control (with an optional remote box)**
- **Serial Remote Control (with an optional remote controller SRC-301/A)**
- **Test Signals** *Cross Hatch
*Flat Field (50%) *10 step stair signal with plugs as standard
*Window (100%) *Character

● Color/Mono Split (vertical position)

● Beam Feedback System

Dimensions: TM14-80RZ/RP : 450 (W) × 265 (H) × 515 (D) mm
17. 72 (W) × 10.43 (H) × 20.28 (D) inches
TM20-80RH/RP: 450(W) × 399 (H) × 515 (D) mm
17.72 (W) × 15.71 (H) × 20.28 (D) inches
TM20-90RH/RP: 450 (W) × 399 (H) × 515 (D) mm
17.72 (W) × 15.71 (H) × 20.28 (D) inches

Weight:

TM14-80RZ/RP : 28kg (61.73 lbs) approx.
TM20-80RH/RP: 38kg (83.77 lbs) approx.
TM20-90RH/RP: 38kg (83.77 lbs) approx.

Options

- * **DK-801** SDDSI D1 Input Module
- * **DK-802N** SDDSI D2/D3 (NTSC) Input Module
- * **DK-8012** SDDSI D1,D2/D3 (NTSC) 2 Format Input Module
- * **DE-802** PAL Comb Decoder Module
- * **SRC-301/A** Serial Remote Controller
- * **ASP-15** Auto Setup Probe
- * **ASP-80** Auto Setup Probe
- * **RCT-20A** IR Remote Controller
- * **DC-801** Dual Component Module
- * **EX-801** Test Extender Board

* Commonly used for HDTV/SDTV Multi-Format Color Monitors

Design and specifications are subject to change without notice.

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U42B033-SI-F1 Printed in Japan

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