

Ikegami

17-Series Color Monitors

TM20-17RA/RPA

TM14-17RZ/RPZ

TM10-17RA/RPA

NTSC/PAL
MODE SELECTION



DTV has a real blue sky with Ikegami.



TM20-17RA/RPA TM14-17RZ/RPZ



TM10-17RA/RPA

Ikegami 17 Series are High performance, Low cost color Monitors, providing NTSC-PAL automatic selection. The units are specifically designed for production or broadcast applications and provide high-fidelity video reproduction with easy operation, utilizing In-Line Gun CRT technology, BFS circuits, and Comb filter (NTSC only). The 17 Series Color Monitors can accept 2 composite video, Y/C and RGB or Component inputs in both NTSC and PAL formats. Furthermore, Digital Inputs (D1 or D2/D3 formats) are available with optional modules.

17 Series Color Monitors

Features

Cathode Ray Tube

In-line Self Converging Electron Gun assures convergence stability.

Black Matrix surrounding CRT face assures high contrast under bright ambient lighting.

Circuitry

NTSC-PAL mode selection

Screen aspect ratio of 4:3 or 16:9, with front panel switchable.

BFS (Beam Feed-Back System) provides long-term Black Level stability.

Pre-set Controls: Hue (NTSC Only), Chroma, Y/Pb/Pr Chroma, Brightness, Contrast

Comb Filter provides wide band luminance, switchable to notch filter at front panel (NTSC only).

(TM10-17RA/RPA : Comb Filter only).

Sweep failure protection circuit prevents phosphor burns.

System Conveniences

4 Video Inputs (A/B/YC/RGB or Y, Pb, Pr), with front panel switchable.

Digital Inputs (D1 or D2/D3 formats) are available with optional modules.

Horizontal Time Constant can be selected in either 0.5msec. or 2msec.

Rack mount units available.

Test Facilities

Underscan switch to permit observation of picture corners.

Pulsecross switch for sync signal verification.

Specifications

GENERAL

Input Voltage
 JPN, USA: 100V ~ 120VAC $\pm 10\%$, 50/60Hz, Single Phase
 Europe: 200V ~ 240VAC $\pm 10\%$, 50/60Hz, Single Phase
 (Set up at the factory according to the destination)
DC Input: +12VDC (Option: TM10-17RA/RPA)
Power Consumption
 TM10-17RA/RPA: Approx. 50W
 TM14-17RZ/RPZ, TM20-17RA/RP: Approx. 60W
Ambient Temperature
 0 ~ 40 (32 ~ 104 F), 90% or less relative humidity (non-condensing)
Dimensions (WHD)
 TM10-17RA/RPA: 222 x 213 x 352mm
 (8.74 x 8.39 x 13.86 inches)
 TM14-17RZ/RPZ: 450 x 265 x 515mm
 (17.72 x 10.43 x 20.28 inches)
 TM20-17RA/RPA: 450 x 399 x 515mm
 (17.72 x 15.71 x 20.28 inches)
Weight
 TM10-17RA/RPA: Approx. 10kg (22.05lbs)
 TM14-17RZ/RPZ: Approx. 19kg (41.89lbs)
 TM20-17RA/RPA: Approx. 28kg (61.73lbs)

RATING

Input Signal
 Video: 2inputs
 Y/C: 1 input
 RGB/Y, Pb, Pr: 1 input
 *Switchable at Rear Panel
Digital Video: TM10-17RA/RPA: 1 input (Option)
 TM14-17RZ/RPZ, TM20-17RA/RPA: 2 inputs (Option)
Sync: 1 input

Input Level

Video Signal:
 Composite: 1.0Vp-p
 Non Composite: 0.7Vp-p
Y/C Signal:
 Y signal: 1.0Vp-p
 C signal: 0.286Vp-p (burst level)
RGB or Y, Pb, Pr:
 -RGB Signal->
 G signal: 1.0Vp-p (Sync on Green) or 0.7Vp-p
 R/B signal: 0.7Vp-p
 -Y, Pb, Pr Signal->
 N10 SMPTE Format
 Y White: 0.7Vp-p
 Setup: 0%
 Sync: 0.3Vp-p
 Pb, Pr: 0.525Vp-p
Digital Video (D1 or D2/D3):
 Serial: 0.8Vp-p $\pm 10\%$
 Sync Signal: 0.3Vp-p ~ 6Vp-p
 Audio: 0.315Vrms (10dBV)
 (TM10-17RA/RPA only)

Connection

Video/RGB or Y, Pb, Pr:
 Bridging BNC connectors, high impedance with 75 termination plug (TM14-17RZ/RPZ, TM20-17RA/RPA), 75 terminated (TM10-17RA/RPA)
Y/C:
 4pin plastic connector, single end, 75 terminated.
 (TM14-17RZ/RPZ, TM20-17RA/RPA, 7pin metal connectors are OPTION)
Audio: RCA Connector (TM10-17RA/RPA)

Remote Controls

Parallel Remote:
 Video input select (A/B/YC/RGB or Y, Pb, Pr/Digital)
 COLOR/MONO select
 Tally (ON/OFF)
 4:3/16:9
SYNC INTEXT (TM10-17RA/RPA only)
 *Unusable except for Tally in case of Serial Remote operation
 (TM14-17RZ/RPZ, TM20-17RA/RPA)
Serial Remote (Option):
 Video input select (A/B/YC/RGB or Y, Pb, Pr/Digital)
 COLOR/MONO select
 SYNC INTEXT
 Blue only ON/OFF
 Comb Trap
 Apt ON/OFF
 4:3/16:9
 Not Under scan
 Delay (PCR) ON/OFF
 Degauss ON/OFF

PERFORMANCE

CRT

In-line gun, Dot-shadow mask, high resolution CRT
 EBU phosphor
 Dot Trio Pitch
 TM10-17RA/RPA: 0.28mm
 TM14-17RZ/RPZ: 0.28mm
 TM20-17RA/RPA: 0.43mm
 Resolutional center
 TM10-17RA/RPA: 450 TV lines or more
 TM14-17RZ/RPZ: 650 TV lines or more
 TM20-17RA/RPA: 600 TV lines or more

VIDEO SIGNAL SYSTEM

Frequency Response
 Measured with Aperture Gain 0, (notch filter OFF)
 50Hz ~ 7MHz, flat with in +1/-5dB
 (TM14-17RZ/RPZ, TM20-17RA/RPA)
 50Hz ~ 5MHz, flat with in -1/-3dB
 (TM10-17RA/RPA)

Pulse Response

At each RGB amplifier output with 0.05 μ sec. rise time square wave video input
 Overshoot: 10% or less (at 250kHz)
 Sag (10% 5% or less (at 50Hz))
 Chrominance Rejection Ratio
 Less than -26dB (TM10-17RA/RPA)
 Less than -24dB (TM14-17RZ/RPZ, TM20-17RA/RPA)
 (with aperture correction 0, notch filter ON)

Aperture Correction

Waveform of Overshoot of 2T pulse appear symmetrically with notch filter ON

Noise

Coherent noise: Less than -40dB
 Other noise: Less than -50dB

COLOR SIGNAL SYSTEM

Demodulation Axis

R, Y, B system
Frequency Response
 NTSC: 3.58MHz ± 0.5 MHz +1/-3dB
 PAL: 4.43MHz ± 0.5 MHz +1/-3dB
 (measured at chroma output test point)

Demodulation Axis Phase Error

90° $\pm 2^\circ$

SYNC SYSTEM

Sync Stability
 Stability of synchronization will be met for the following conditions:
Internal Sync
 Video input level within ± 6 dB against the rated value of 1.0Vp-p
External Sync
 Sync Signal Input level of 0.3 ~ 6.0Vp-p (TM10-17RA/RPA)
 0.3 ~ 8.0Vp-p (TM14-17RZ/RPZ, TM20-17RA/RPA)
AFC Time Constants
 SLOW: Approx. 2.0msec.
 FAST: Approx. 0.5msec.

DEFLECTION SYSTEM

Scanning Frequency

Horizontal
 Nominal 15.734kHz (NTSC); 15.625kHz (PAL)
Vertical
 Nominal 59.94Hz (NTSC); 50Hz (PAL)

Scanning Amplitude

NORMAL SCAN (adjustable)
 Overscan is 1% of CRT effective area with an aspect ratio of 4:3
UNDER SCAN (adjustable)
 Four corners are visible within boundary of effective area with an aspect ratio of 4:3 or 16:9

Geometry and Linearity

Less than 2% of picture height

Convergence Error

Center
 Inside a circle with diameter of 80% of picture height : Less than 0.5mm
Corner
 Outside area of picture center, Less than 1.2mm (TM10-17RA/RPA), 0.8mm (TM14-17RZ/RPZ, 0.9mm (TM20-17RA/RPA).

HIGH VOLTAGE

Tolerance

TM10-17RA/RPA: 18kV $\pm 0.2kV$
 TM14-17RZ/RPZ, TM20-17RA/RPA: 24kV $\pm 1kV$

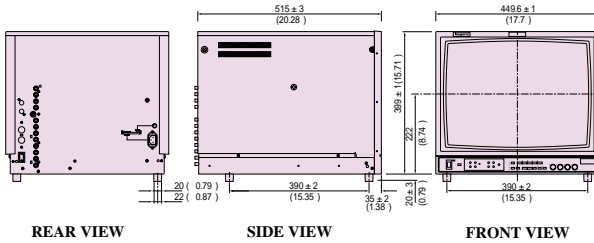
Regulation

$\pm 5\%$ over the range of
 0 ~ 300 μ A (TM10-17RA/RPA),
 0 ~ 450 μ A (TM14-17RZ/RPZ, TM20-17RA/RPA) referred to 150 μ A.

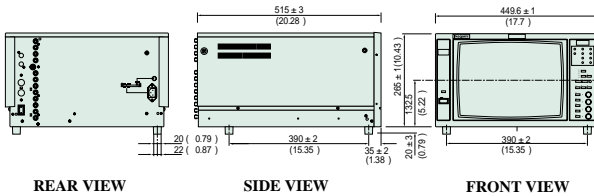
OPTION

TM10-17RA/RPA
 DC-1072 DC Power Module (DC12V)
 DK-1072D1 SDI Kit, DK-1073A (with Embedded Audio)
 DK-1074N D2/D3 NTSC SDI Kit, DK-1074NA (with Embedded Audio)
 SF-1071 Serial Remote Interface Module
 SRC-301 Serial Remote Controller (BNC connector Control)
 Rack Mount Adaptor
 TM14-17RZ/RPZ, TM20-17RA/RPA
 DK-173 D1 SDI Kit
 DK-174N D2/D3 NTSC SDI Kit
 SF-171 Serial Remote Interface and Y/C Input (7pin connector)
 SRC-301 Serial Remote Controller (BNC connector control)
 Rack Mount Adaptor

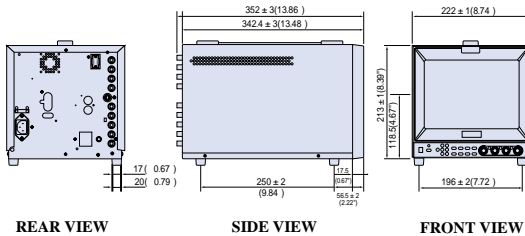
TM20-17RA/RPA



TM14-17RZ/RPZ



TM10-17RP/RPA



Unit:mm(inches)

Design and specifications are subject to change without notice.

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