

20" High Resolution Color Monitor

TM20-30RH/RP



The TM20-30RH/RP is a high performance color monitor which can accept encoded or component signals in analogue or digital form. For encoded signals the monitor can be equipped with two decoders, allowing it to display signals from two of the following systems, NTSC, PAL-B, SECAM, PAL-M. The super fine dot pitch shadow mask tube provides 900TVL resolution.

There is an optional Auto-Setup probe, and a menu display can be switched to the monitor screen to provide instructions for its use.

TM20-30RH/RP

20" High Resolution
Color Monitor

Specifications

Input Voltage 100~120, 200~240VAC+/-10%(Auto Select) 50/60Hz
Input Power 160W Approx.

Input Facilities

Input Signals:

- Encoded Video (NTSC or PAL-B or PAL/SECAM or PAL-M*) 3 ch
TM20-30RH: NTSC Decoder standard
TM20-30RP: PAL Decoder standard
Others are option
(*Two of them can be installed simultaneously-two slots construction)
- RGB or Y,R-Y,B-Y (MII or BETA switchable internally) 1ch
- DI(4:2:2), D2(D3) – Option
- PARALLEL INPUT 1ch
- SERIAL INPUT 2ch
- SERIAL OUTPUT 1ch (Monitor OUT)
- Y/C – Option 1ch

Connection Bridging BNC Connectors, high impedance, isolated From chassis ground.

Return Loss Less than 46dB (up to 10MHz)

Display Device In-line gun, shadow mask high resolution CRT, Dot Pitch 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

Brightness/Contrast

- Preset 35Ft-L at factory setting (100% Window Signal)
- Max Brightness More than 50Ft-L with Window Signal

Resolution(at 35Ft-L) 900TV lines (at center)

Output Facilities (Option)

Y 0.7Vp-p
R-Y 0.525Vp-p
B-Y 0.525Vp-p
(100/0/75/0 Color Bar)

Video Signal System

R/G/B Response 50Hz ~ 10MHz +1, -3dB

Luminance

- Frequency Response
- Without Notch +/-1dB at 50Hz to 7MHz
- With Notch -30dB at 3.58MHz
- With Comb +/-1dB at 50Hz ~ 7MHz (w/o Notch) (w/Notch) (w/Comb)
- 2T pulse to base line <+/-1% <+/-2% <+/-1%
- 2T pulse to bar <+/-1% <+/-2% <+/-1%
- T step <1% <1% <1%
- Distortion <1% <1% <1%
- Square wave response <1% <1% <1%

Linearity Differential Gain less than 2%

Black level varies Less than 1% (APL 10% ~ 90%)

Color temperature stability Less than 1% for 500 hours, +10°C ~ +40°C

Aperture correction

- Correction Characteristics: Waveform of overshoot of 2T pulse appears symmetrically with TRAP ON.
- Frequency Response: 60Hz to 100kHz; less than +/-1dB 1MHz; more than +2dB, 2.5MHz; more than +6dB, 3.58MHz(NTSC); less than -15dB, 4.43MHz(PAL); less than -15dB

Noise(at each RGB in active scan period)

Coherent Noise	Less than -46dB
Hum Noise	Less than -55dB
Other	Less than -55dB

Color Signal System

	w/COMB	w/TRAP
Chrominance Suppression in	>24dB	>30dB
Luminance	at 4.43 or 3.58MHz	at 4.43 or 3.58MHz
Luminance Suppression in	>20dB	
Chrominance	at 4.43 or 3.58MHz	
Chroma/Luma Delay	<20nsec.	<20nsec.
Chroma Signal Response	NTSC 2.3MHz to 4.9MHz: (reference 3.58MHz) +1, -3dB PAL-B 3.1MHz to 5.7MHz: (reference 4.43MHz): +1, -3dB	

Oscillator Performance

Subcarrier Lock in: +/-200Hz (NTSC/PAL-M), +/-300Hz (Pal-B)

Pulse Error Less than 2 degree 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+/-1IRE

Raster + Deflection

Scan

- Normal scan aspect ratio 4:3 w/ blanked raster 1%
- Underscan aspect ratio 4:3, approx -7.5% (adjustable 90% of Normal scan)
- Overscan 105% of Normal scan.
- 16:9 Scan (Option)

Stability of Raster size 1% of picture height 0 ~ 100% ARL at 35Ft-L reference

Linearity H + V line 0.5% of picture height

Geometry Entire Screen 0.5% of picture center

AFC Time Constant	Normal	2msec
Fast		0.5msec
Slow		7msec

Retrace Time	Horizontal	0.9usec
Vertical		0.8msec

High Voltage ●Tolerance 25kV, ●Regulation within +/-1% at 0 to 450uA.

Convergence Center: <0.3mm(within circle of 80% of picture height)

Corners: <0.5mm(outside area of picture center)

Functions

Adaptive comb decoder(option): under license from Faroudja Laboratories

Safe title generator (100, 95, 90, 85, 80%, 100+90+80%, 5 cross hatch, 10 cross hatch selectable) reference & variable horizontal position

Auto Setup (with an optional probe)

Infrared Remote Control (with an optional remote box)

Test Signal	●Cross hatch	●10step stair signal w/plugs
	●Flat field(50%)	●Character
	●Window (100%)	

Video A/B Split (reference & variable vertical position)

Color/Mono Split (reference & variable vertical position)

Beam Feedback System

Menu Assist Contrast, Brightness, Chroma, Hue,,, G.Gain, B.Gain
R.BLG, G.BLG, B.BLG, Aperture level, Height
Width, V.CENT, H.CENT, Rotation, F.Focus, H.Phase

●Safe Title Setup

●Split Setup

●System Setup

Decoder Select (NTSC/PAL-B/PAL-M/SECAM)

Test Signal ON/OFF

●Mode Setup

User Display ON/OFF Level Display ON/OFF

Aux RGB/Y,R-Y,B-Y Control Lock Setup

CH C/ Y/C

Dimensions

450(W) x 399(H) x 515(D) mm
17.72(W) x 15.71(H) x 20.28(D) inches

Weights

38kg (83.8 lbs) approx.

Design and specifications are subject to change without notice.