

BTS

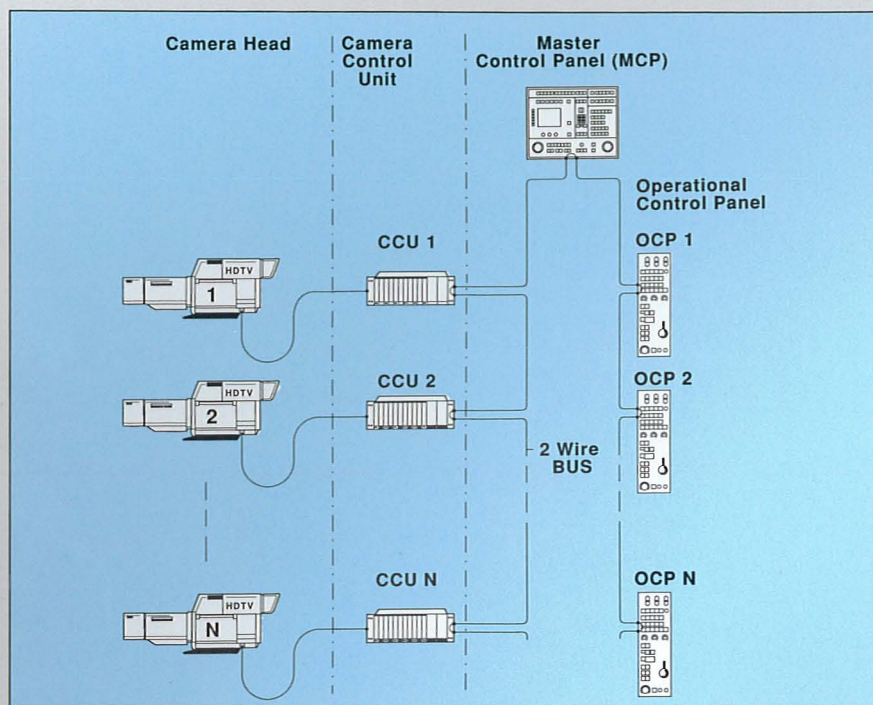
Broadcast Television Systems GmbH

A joint company of Bosch and Philips

KCH 1000 Multi-Standard HDTV Camera



KCH 1000 Multi-Standard HDTV Camera ...



The BTS KCH 1000 - the only multi-standard HDTV camera with a choice of Plumbicons or Saticons.

The BTS High Definition Television camera, KCH 1000, is designed for studio or outside broadcast applications. It provides HDTV state of the art picture quality under any shooting conditions and is adaptable to all proposed HDTV scanning systems.

With high performance processing circuits and a wide range of features, the KCH 1000 offers highest resolution, sensitivity and signal to noise ratio, combined with precision registration and outstanding colour fidelity.

The KCH 1000 has a distributed logic system to control automatic adjustments and operating functions, both in the Camera Head and the Camera Control Unit, CCU.

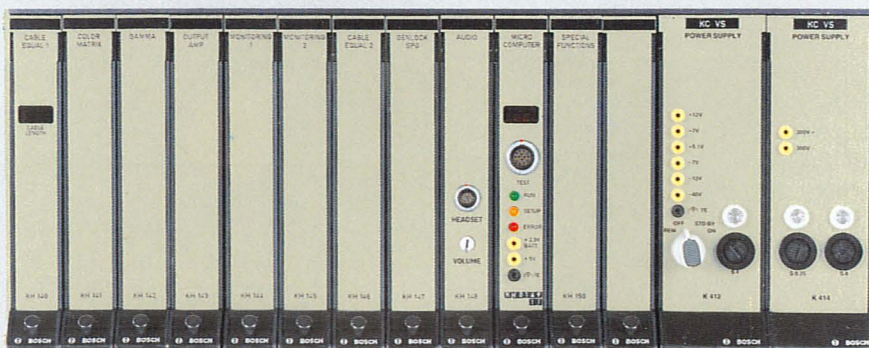
With over 60 years of broadcasting experience, more than any other manufacturer, BTS has brought to the broadcaster a top performance high definition camera capable of working in multi-camera systems and with full production facilities including extensive intercom and audio systems.

KCH 1000 Features and Benefits.

- High resolution 30 mm Plumbicon or 25 mm Saticon tubes
- All proposed HDTV scanning standards
- F 1.5 optical system
- Automatic cable length equalisation up to 300 meters, 895 feet
- RGB and Y, C_R, C_B, outputs
- Dynamic lens error, including pincushion, correction
- Automatic high order correction of registration, geometry and shading with diascope in lens
- Dynamic knee processor and automatic beam control, -ABC
- Sophisticated Master Control Panel, MCP, with EL display and incremental controls
- Compact Operational Control Panel, OCP, with professional joystick and painting controls
- Multi 4 wire intercom system
- Two high quality microphone channels
- Teleprompter facility

Video Processing

- Gain selection - 6 dB, - 3 dB, 0 dB, + 3 dB, + 6 dB, + 9 dB
- Knee processor, static or dynamic up to 400 %
- Automatic Beam Control (ABC) up to 1000 %
- Independent Black and White balance control
- Colour Bar, Sawtooth, Staircase, grid test signals and external test signal input
- Horizontal analogue aperture processor

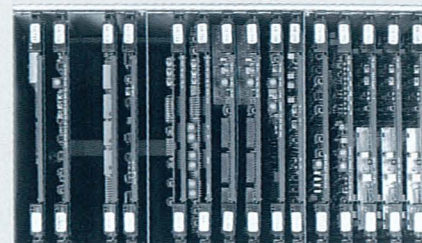


... for all HDTV Systems



Master Control Panel (MCP)

- Menu controlled operation
- Electro-luminescent, EL, display
- Rotary encoders for all analogue adjustments
- Scene file facility
- Two wire bus connection to Camera Control Unit
- Multi-camera operation including automatic set-up



Operational Control Panel (OCP)

- Professional joystick control of Iris and Master Black
- Lens Focus control
- White painting and black painting of flare controls
- Filter, master gain, automatics monitoring, knee and gamma selection
- Scene File selection
- Detail control



CPH 1000 HDTV Digital Image Enhancer

Digital HDTV Image Enhancer for two dimensional signal enhancement of high definition television pictures.

Features

- Multi-standard
- Remote control of settings
- Balance of positive and negative detail
- Adjustable coring level from 1.6% to 4.5%
- Tri-level sync locking to external reference
- Tri-level sync can be inserted into RGB video signal
- Non-linear gain correction. Linear gain adjustment
- Detail signal extraction out of red, green or Y signals

Technical Data

KCH 1000 Camera Channel

Video

Scanning standard alternatives:

1250 lines, 50 fields, 2:1
1125 lines, 60 fields, 2:1
1050 lines, 59.94 fields, 2:1
625 lines, 50 frames, 1:1
525 lines, 59.94 frames, 1:1

Aspect ratio 16:9

Other standards on request

Sensitivity¹

Plumbicon 30 mm tubes
800 Lux, 74 ft. cd., F 4.0 gain 0 dB
70 Lux, 65 ft. cd., F 2.0 gain +9 dB

Santicon 25 mm tubes
1000 Lux, 93 ft. cd., F 2.8 gain 0 dB
100 Lux, 9.3 ft. cd., F 1.5 gain +9 dB

16:9, 89.9% reflectance, 3200°K, in the green channel.

Resolution²

50% at 600 TV lines, 16:9
1200 TV Lines limiting resolution

(CTF in picture center, aperture and contour off, RCA P200 test pattern, measured in the green channel)

Registration 0.02% (Zone 1)

Video Output Signals

1 × RGB video, 0.7 Vp-p, 75 Ohm
1 × RGB + Sync, 1 Vp-p, 75 Ohm
1 × YC_RC_B video (Y + Sync)
0.7/1 Vp-p, 75 Ohm
1 × Y video + Sync, 1 Vp-p, 75 Ohm

¹ depending on tube

² depending on tube and lens

Input-Signals (loop through)

1 × Sync reference (tri-level)
1 × Return video
1 × Teleprompter

Power Supply

230 V, 50/60 Hz, ± 20%
115 V, 60 Hz, ± 20%
Total power consumption
approximately 350 W

Dimensions (mm)

Camera Head (excluding lens)
Height 440, Width 310, Length 565

Camera Control Unit

Height 195, Width 518, Length 500

Weights (approximate)

Camera Head (excluding lens) 33 kg
Camera Control Unit 30 kg

Intercom

Headset

All inputs – 10 dBm
All outputs + 6 dBm
Inputs and outputs to and from
Production Control are + 6 dBm.
Input and output at remote
control unit – 10 dBm.

Frequency Response (without headset)

300 Hz to 3 kHz, – 3 dB
Harmonic distortion factor total < or = 3%
Signal to Noise Ratio = or > 40 dB

Microphone channels

2 Inputs for dynamic or condenser
microphone (12 or 48 volt feed)

Sensitivity selectable from:

– 75 dBm to – 5 dBm

Switchable Dynamic Compressor

Frequency response:

20 Hz to 15 kHz – 3 dB

Total harmonic Distortion

< or = to 1%

Unweighted Signal to Noise ratio

= or > 50 dB

Outputs to production

+ 6 dBm

CPH 1000 Digital Image Enhancer (optional)

Standards

1250 lines, 50 fields, 2:1
1125 lines, 60 fields, 2:1
1050 lines, 59.94 fields, 2:1
625 lines, 50 frames, 1:1
525 lines, 60 frames, 1:1

Input Signals

1 × RGB, 0.7 Vp-p, 75 Ohm
1 × tri-level sync, 0.6 Vp-p, 75 Ohm
Remote control signals

Output Signals

1 × RGB, 0.7 Vp-p, 75 Ohm
(sync can be inserted into RGB signals)

Bandwidth

20 MHz ± 0.5 dB

Power Supply

230 V, 50/60 Hz, ± 20%
115 V, 50/60 Hz, ± 20%
Power consumption approx. 350 W

Dimensions (mm)

Width 520, Height 435, Depth 506

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