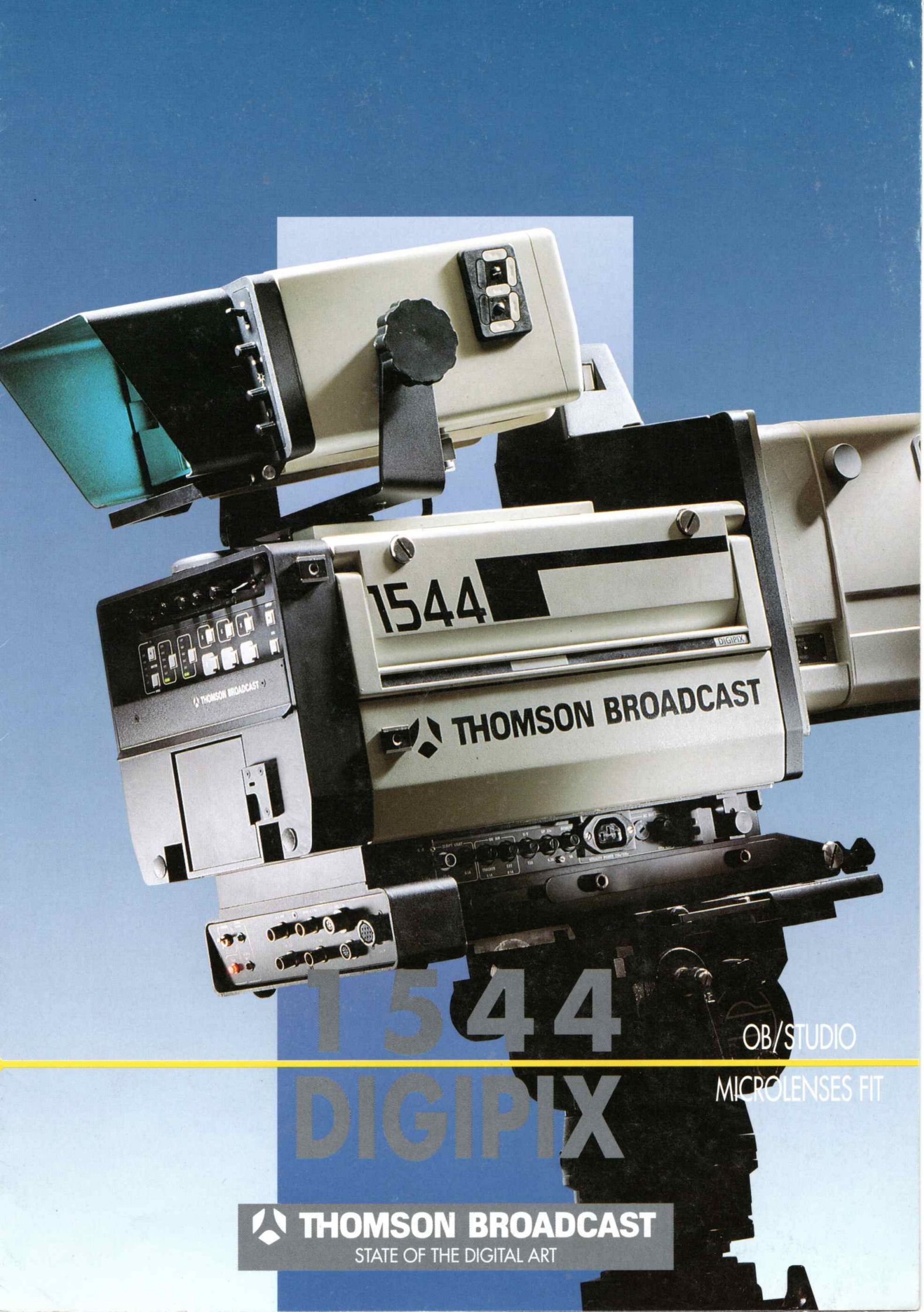


T544 DIGIPIX

OB/STUDIO

MICROLENSES FIT

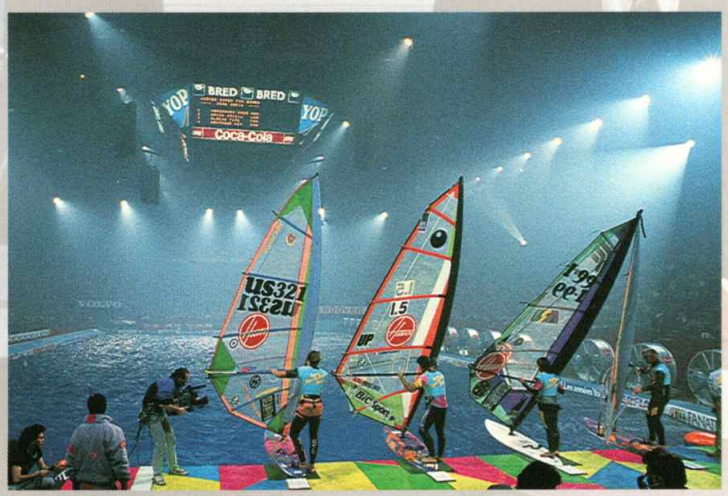
THOMSON BROADCAST

STATE OF THE DIGITAL ART

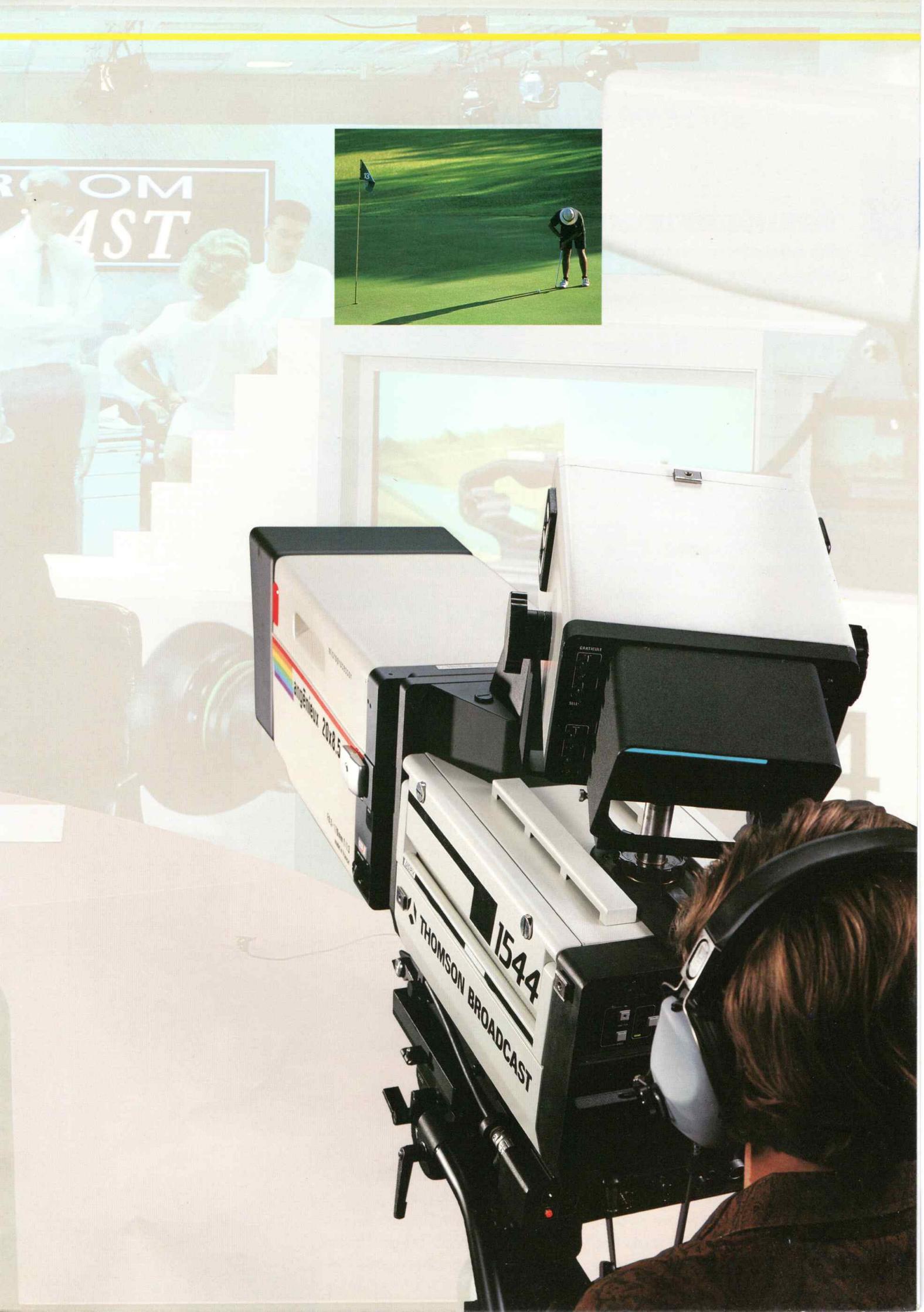
The new TTV 1544 DIGIPIX is the top-of-the-range production camera. It is the culmination of our experience in designing and manufacturing CCD cameras.

THOMSON BROADCAST offers you the finest technology, sharing your concerns for quality and long working life.

The camera is fitted with high-performance FIT microlens sensors; it incorporates a digital pixel correction system, enabling it to render perfectly both the full richness of areas in shadow and the dynamic range of very high contrast pictures. This correction system uses all-digital technology and allows the useful life of CCD sensors to be extended.



The TTV 1544 DIGIPIX incorporates every operational feature required for maximum user convenience.


THOMSON BROADCAST
1544

SUPERIOR PERFORMANCE

DIGITAL PIXEL CORRECTION

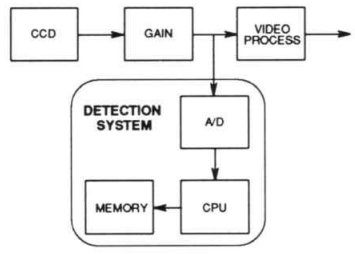
This exclusive feature, used for the first time in a camera, guarantees complete uniformity of the black levels, whatever the shooting conditions.

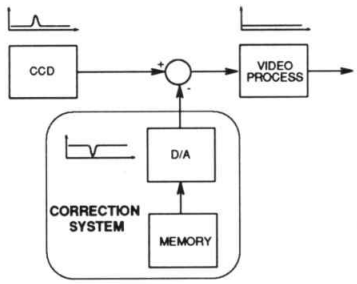
By injecting a correction signal, compensation can be applied for the leakage of black-level current from one pixel to another.

An automatic set-up function is built into the camera, which stores the location of pixels to be corrected and the compensation to be applied.

Easy to use, this process:

- *Increases the useful life of the CCD sensors.*
- *Prevents emergence of pixel errors.*

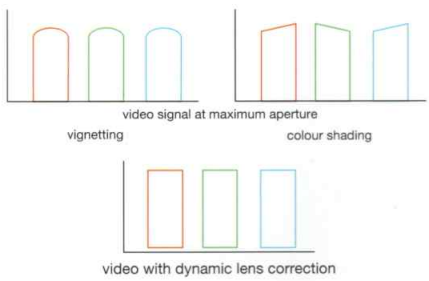




DYNAMIC LENS CORRECTION

To take full advantage of features offered by lenses while ensuring excellent picture quality, THOMSON BROADCAST has developed Dynamic Lens Correction (DLC).

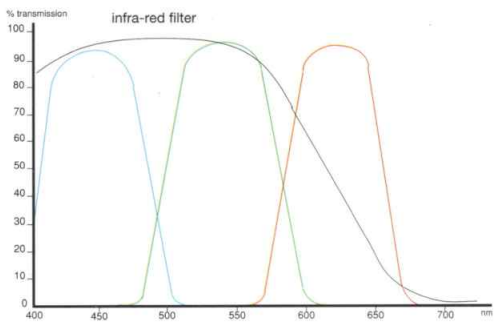
- *Automatic identification of lens types*
- *Correction for vignetting and colour aberrations due to the focal length and aperture of the optics*
- *Colour correction for lenses*
- *Remote flare correction.*



COLOUR CORRECTION

The use of a splitter and infrared filter to match the spectral response of the CCDs, together with variable colour correction, ensures excellent colour accuracy.

To improve sensitivity when shooting out of doors, the TTV 1544 uses electronic colour temperature correction instead of correction filters.



VARIABLE OPTICAL AXIS

A new adjustable optical splitter block provides perfect alignment between the optical axis of the lens and the CCD sensors themselves, even with very wide ratio zoom lenses.

16/9 LETTERBOX FORMAT

The choice is given to produce in 16/9 film like or in normal 4/3 aspect ratio. The 16/9 letterbox format is obtained by changing the number of active horizontal lines.

RESOLUTION

Combining the finest optical and electronic technologies results in exceptional image quality and eliminates aliasing.

- *High-resolution FIT microlens CCD sensors (440,000 pixels)*
- *Resolution 700 TV lines*
- *Sophisticated optical low-pass filtering*
- *Spatial offset of CCDs*
- *Contour designed for CCD sensors.*

CCD

The TTV 1544 uses the latest high-sensitivity FIT sensors (754 pixels per line). The special mounting system for the sensors prevents any variation in registration with temperature.

SENSITIVITY

The very careful video processing and excellent sensitivity of the microlens CCDs allows shooting under very low lighting conditions.

- *Sensitivity 1000 Lux at f/5.6*
- *Minimum 7.5 Lux at f/1.4 (+18 dB gain)*
- *Electronic colour temperature correction*
- *Sensors with very low inherent noise.*

LENSES

The camera is fitted with a standard mount and will accept a very wide range of 2/3" lenses. To ensure the finest picture quality, we recommend lenses designed for use with CCDs.

- *Adaptor for ENG/EFP lenses*
- *Dual connector for studio or EFP lenses.*

FLEXIBLE OPERATION

DYNAMIC RESOLUTION

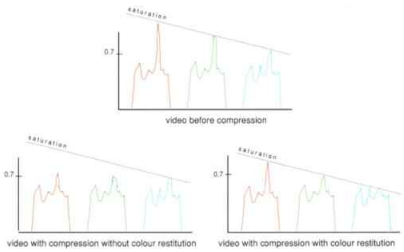
The electronic shutter enables clear pictures to be obtained, even with rapidly moving subjects.

- *6 shutter speeds: 1/60s to 1/2000s.*

CONTRAST COMPRESSOR

The "WHITE COMPRESS" contrast compressor enables the full dynamic range of the CCDs to be used and makes shooting easier under difficult exposure conditions.

- *Extended dynamic range contrast compressor*
- *Retention of colour and detail in over-exposed areas.*



INTERCOM

A complete intercom system provides full communications facilities for operation and maintenance.

- *Dual intercom: camera/director and camera/engineering*
- *Intercom between camera and engineering maintained when the camera is unpowered*
- *Program sound*
- *Duplicate connection for assistant.*

AUXILIARY

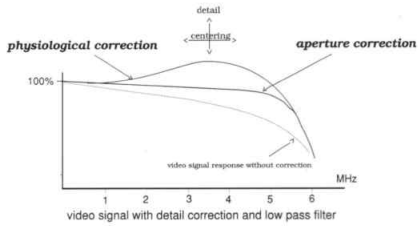
The camera provides all the inputs and outputs necessary for complete integration into a broadcast environment.

- *Video outputs: coded, viewfinder, return*
- *"Pan Bar" (viewfinder and communication selection)*
- *"Tracker" (intercom/PGM/on-air tally)*
- *Script light supply (and script holder).*

CONTOUR CORRECTION

A new contour correction circuit, using the three R, G and B signals, allows high quality pictures to be obtained even in highly coloured surrounding:

- *Double correction: aperture and physiological*
- *Adjustable noise coring*
- *Remote control of contour correction.*



video signal with detail correction and low pass filter

DUAL AUDIO CONNECTION

The camera accepts inputs from all types of microphones (electrostatic or dynamic) and provides a high-quality signal via the CCU. Two microphone inputs are available, with the following features:

- *Phantom power supply, 12 V or 48 V DC*
- *Sensitivity remotely adjustable from the sound control room*
- *Line or microphone input*
- *Output level adjustable from -6 to +12 dB.*

STAND ALONE

The TTV 1544 may be used on its own, connected to a video recorder or connected to an HF transmitter.

- *26-pin VTR connector*
- *Operates from mains supply (220/240 V or 110/130 V AC), or battery (12 to 35 V DC).*

VIEWFINDER

The camera's viewfinder has been designed to provide the maximum convenience for the cameraman. Its design enables it to keep the camera well balanced, whatever its position.

- *17 cm (7") high-resolution viewfinder*
- *Very high brightness: 600 nits*
- *Graticule with 7 preset positions*
- *Orientation: ± 90° rotation, ± 50° tilt*
- *Video selector for Y, R, G, B, R-G, B-G, return and Mix.*
- *Optional colour viewfinder.*

FILTER WHEELS

There are two six-position filter wheels, one with removable filters to allow a wide range of artistic effects.

- *Interchangeable special effects filters: star 4 and star 8, centre focus, fog*
- *neutral density filters: 1/2, 1/4, 1/8, 1/16.*

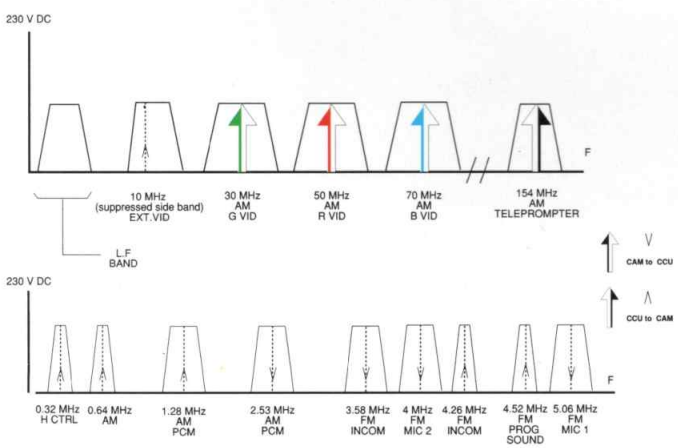
ASSISTED MAINTENANCE

The Control Diagnostic Panel (CDP), which is built into the camera head, provides access to various adjustment parameters for monitoring and maintenance. The system uses the viewfinder to display menus and parameters, providing comprehensive diagnostic facilities.
The CDP provides remote control of the VTR in stand alone mode.

TRIAX

A triax connection allows the full picture quality to be transmitted. For safety, power is only applied after a head/CCU recognition protocol.

- *3 wide-band channels (6MHz) for R,G,B*
- *Automatic sync compensation for cable length*
- *Remote power-on after identification of camera type*
- *High quality video return, teleprompter, talk-back and audio signals*
- *Remote operation: up to 2,100 m with C-type cable.*



TELEPROMPTEUR

The camera provides full facilities for a teleprompter.

- *Auxiliary power supply: 12 V DC 70 W and 220/240 V - 110/130 V AC 100W*
- *Teleprompter output up to 300 m*
- *On-air tally repeater.*

SPECIFICATIONS

CAMERA HEAD

Standard
PAL, SECAM, NTSC
Sensors
3 microlens FIT 2/3" CCD, 754 pixels/line
Optical system
f/1.4 RGB prism splitter, with infra-red and low-pass filters
Filter wheels
Neutral density: clear, 1/2, 1/4, 1/8, 1/16, cap
Special effects: clear, daylight, 4 and 8 point star-burst, centre focus, fog
Sensitivity
1000 Lux at f/5.6 (90% reflectance)
Minimum illumination
7.5 Lux, lens at f/1.4 and gain +18 dB
Signal/noise ratio
PAL/SECAM: 59 dB, NTSC: 61 dB
Resolution
700 TV lines
Weight
Approx. 26 kg
Operating temperature
-20°C to +45°C
Consumption
70 W in "stand alone" mode
Inputs
Genlock
2 microphone inputs
Power supply: AC: 220/240 V 50 Hz, 110/130 V 60 Hz
DC: +12 to +35 V
Outputs
Coded video, external, viewfinder, teleprompter
Miscellaneous
Utility power: DC: 12 V 70 W;
AC: 220/240 V, 110/130 V 100 W
Tracker (intercom/PGM/on-air tally)
On-air tally remote
Pan Bar (viewfinder selected: Cam, Ext, Mix + Micro, intercom on/off)
Lens: 12-pin connection for EFP lenses
24-pin connection for studio lenses
VTR output: 26-pin connector

CCU

Power supply
AC: 220/240 V 50 Hz, 110/130 V 60 Hz
Consumption
Max. 150 W
Operating temperature
-20°C to +45°C
Weight
Approx. 14 kg
Inputs
Genlock, with loop-through
Video return, with loop-through
Teleprompter, with loop-through
Video mix
Program sound
Outputs
3 coded video
1 RGB, 1 RGB or Y(R-Y)(B-Y)
1 RGB or Y(R-Y)(B-Y) for Chromakey
2 monitor (RGB, Y(R-Y)(B-Y), coded
2 waveform monitor R, G, B, Y, parade, coded
2 staircase
2 microphone
Miscellaneous
Dual intercom (RTS/2 wire/4 wire)
On-air 1 & 2, RCP/MCP

VIEWFINDER

17 cm (7") monochrome (colour optional), high resolution, high brightness.
Rotation ± 90°, tilt ± 50°.

LENSES

SMPTE standard 2/3" lenses, without diascope
Angénieux: 15x6.5 ; 20x8.5 ; 40x9.5 ; Super 1000.
Canon: 16x8 ; 20x7.5 ; 50x9.5 ; 55x9 ; 55x13.5.
Fujinon: 20x8 ; 20x7 ; 34x10 ; 34x20.5 ; 44x9.5 ; 55x9.5.

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