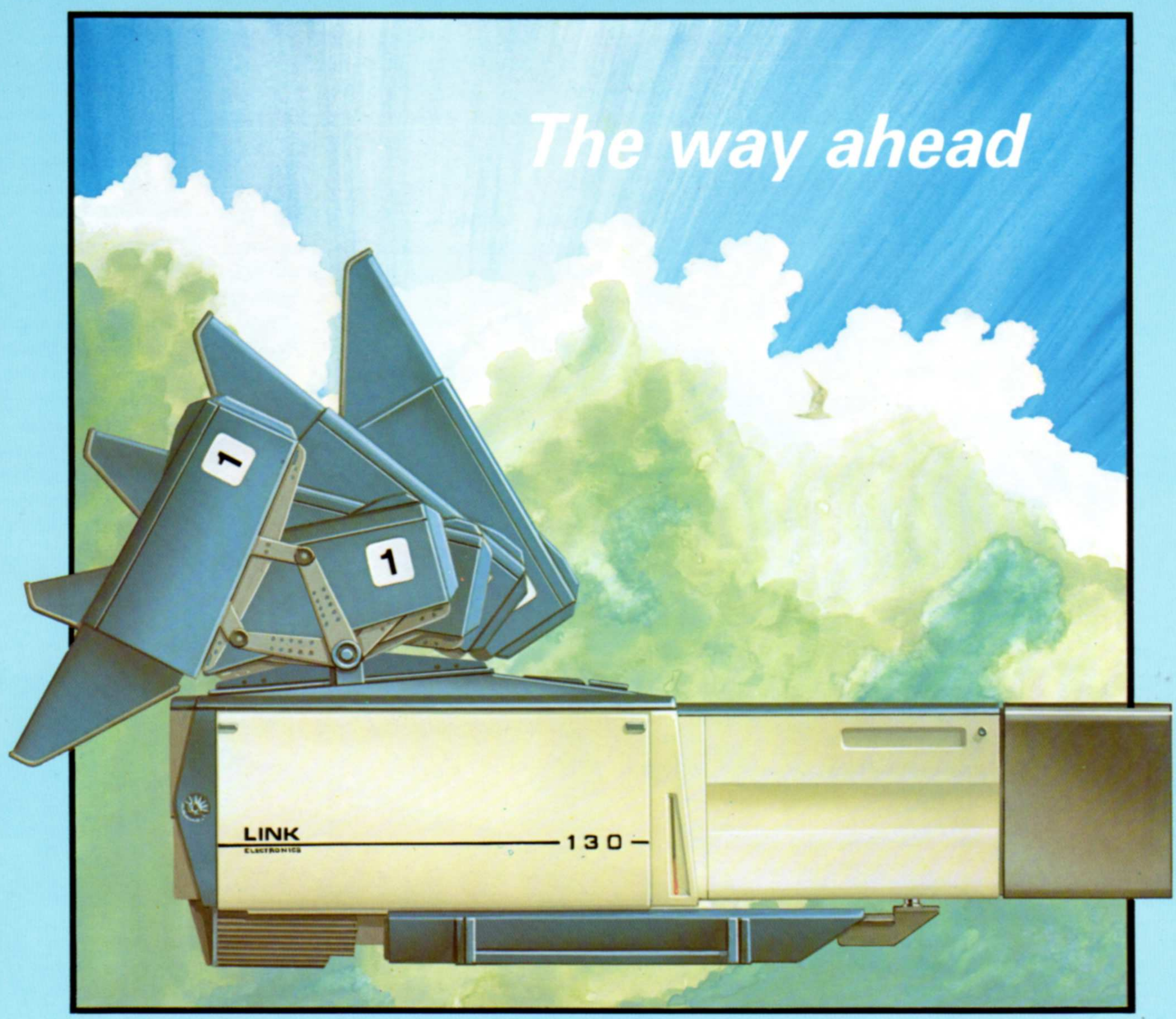


130 Camera Performance and Specification

Main Parameters

System: PAL/NTSC.

Registration: Better than 0.05% over entire picture area.

Dynamic Centring: Eliminates registration drift during operation.

Geometry: Better than ±0.1% over entire picture area.

Diagnostics: Comprehensive plain language diagnostics displayed on monitoring output and viewfinder when required.

Signal/Noise Ratio: Better than 54dB (PAL) 56dB (NTSC).

Sensitivity: 800 lux at f2.

Resolution: More than 600 lines.

Cable Length: Up to 1.5 kilometre 11mm Tri-axi.

Power Consumption: 95w at 12v d.c. or 110/240v a.c. excluding lens and utility power.

Temperature Range: -20°C to +45°C ambient.

Gain Control: -3, 0, +3, +6, +12dB, switchable.

Black Stretch: Variable.

Contour Correction: In band and out of band, separately controlled, applied to all three channels. Built in comb filter.

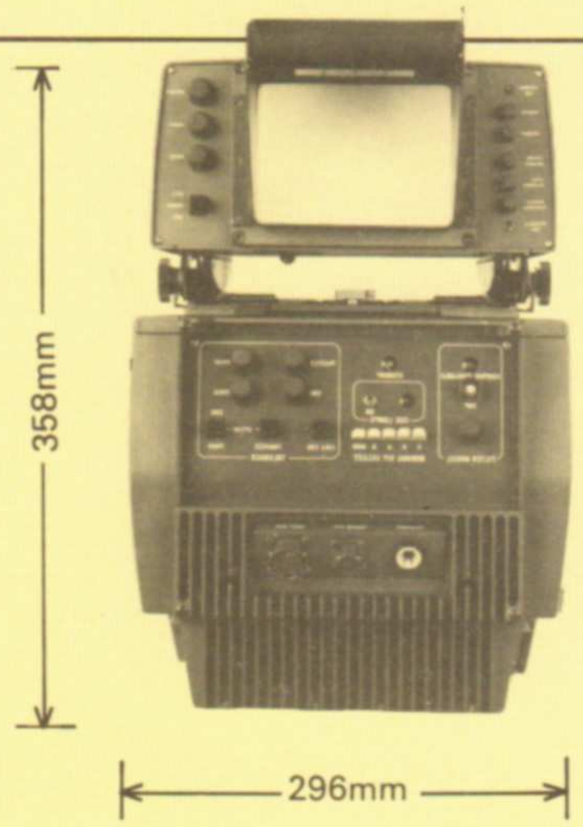
Viewfinder: 7" (17cm) high brightness full ±60° tilt. 360° rotation.

Weight: Camera Head 20 kg.

Modes of Operation

1. Triaxial Mode.
2. Stand alone via external power source.
3. Radio link operation.
4. Remote control via PTT lines.

For details of measuring conditions see detailed specification overleaf



Temperature Specification

Camera head −20°C to +45°C ambient.

Base station and control panels: 0°C to +40°C ambient.

Mechanical Information

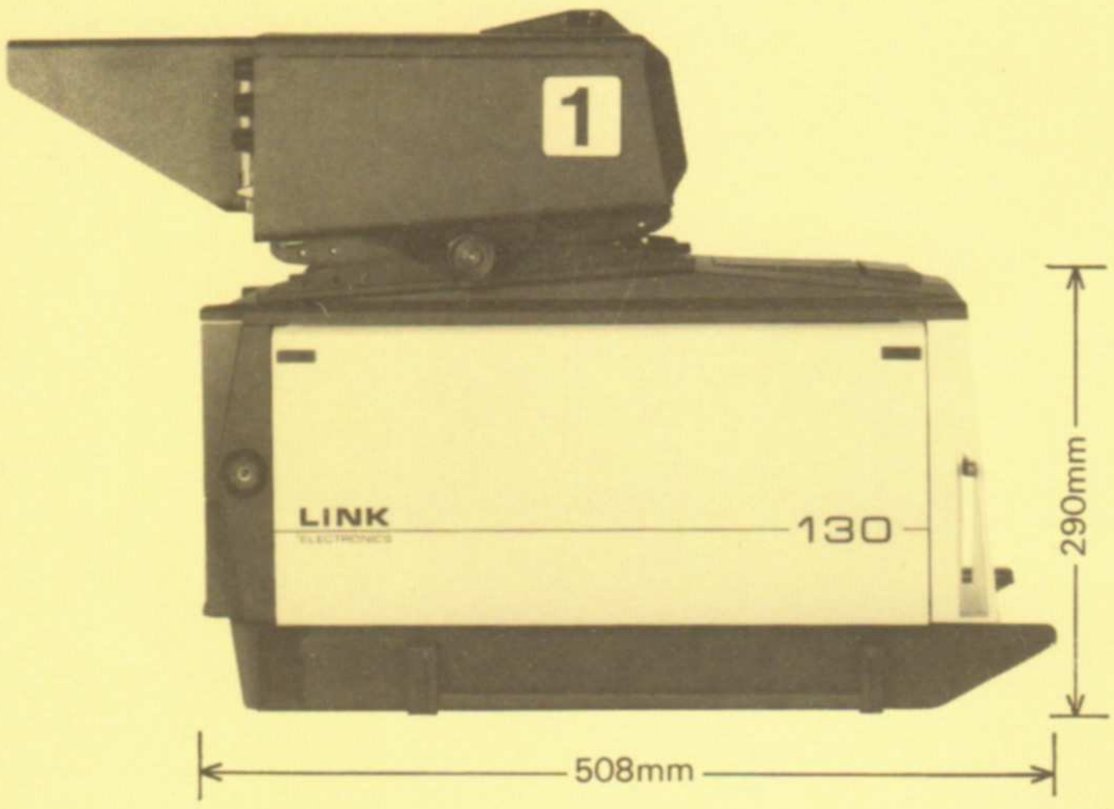
Camera weight	20 kg approx.
Viewfinder	6 kg approx.
Base Station	9.5 kg approx.
Master Setup Panel	6 kg approx.
Combined Operational Control and Colour Balance Panel	1.8 kg approx.
Camera head mounting:	Standard Vinten camera wedge.
Lens mounting:	Interchangeable bayonet mount, full lens support cradle built into camera.

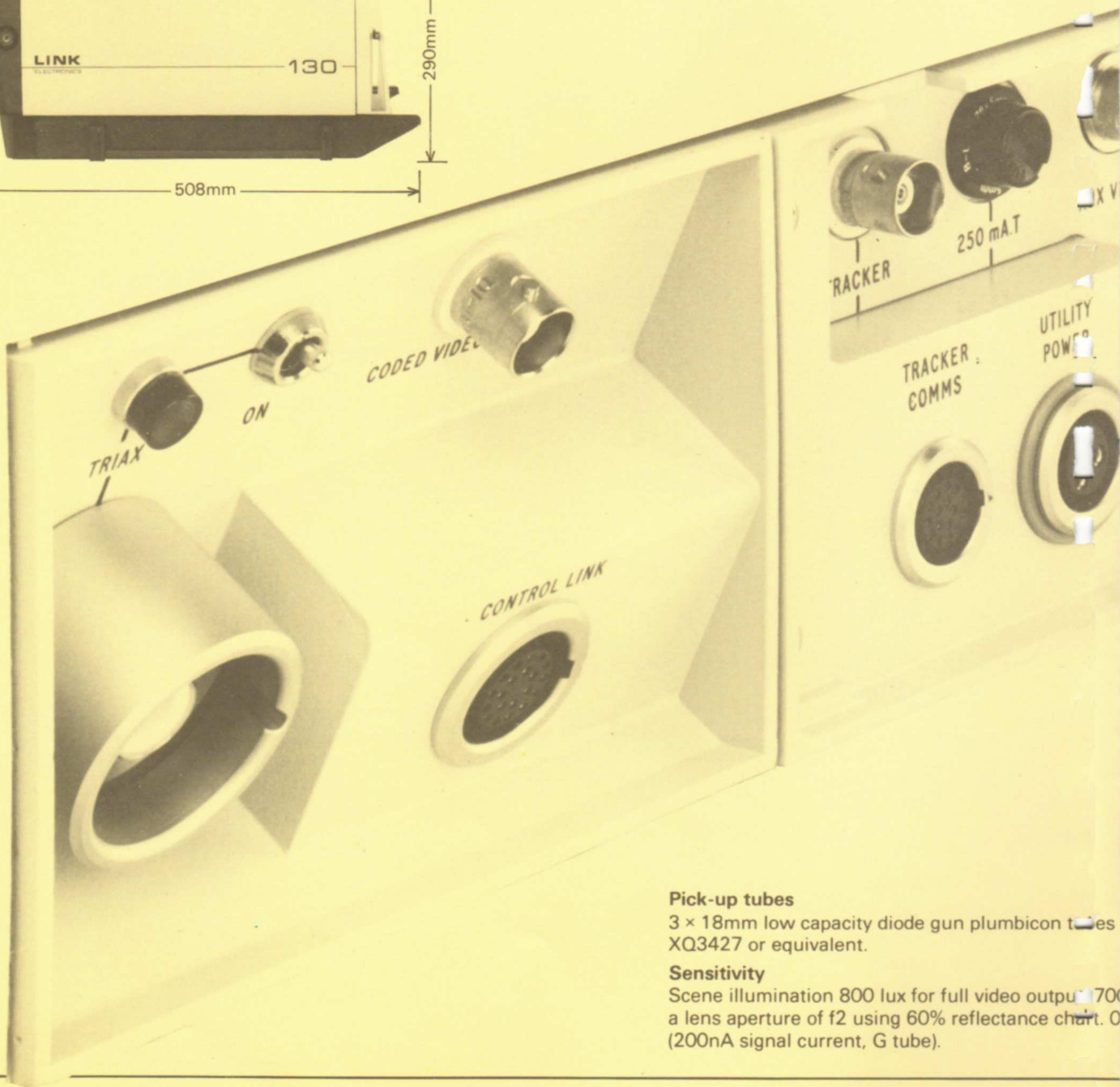
System Outputs

2 × 1 volt encoded video 75 o
1 set, R, G, B 0.7v non-c np
bandwidth, full system b nki
1 set, Y, U, V, signals non-co
bandwidth, U & V signals 2.5
2 × 1v composite 75 ohr for
1 × Parade Staircase −5 / +
may serve several cameras).

Camera Outputs

1v video feed for tracker
1v video feed for prompting d
1v composite encoded video.
Utility Power Output 13 - 2
Shot Box and Lens Cont ls.
Range Extender.
Pan Bar Controls.
Tracker Communication
Mixed Talkback Headset
Cameraman's Headset.
Remote Comms/Viewfi er





Pick-up tubes

3 × 18mm low capacity diode gun plumbicon t es XQ3427 or equivalent.

Sensitivity

Scene illumination 800 lux for full video outpu 70 a lens aperture of f2 using 60% reflectance chart. 0 (200nA signal current, G tube).

ms.
sit 75 ohms (2.5MHz
g)
posite (Y signal 5.5MHz
MHz bandwidth).
m itoring.
5v 5 kilohms (one output

vice or other.

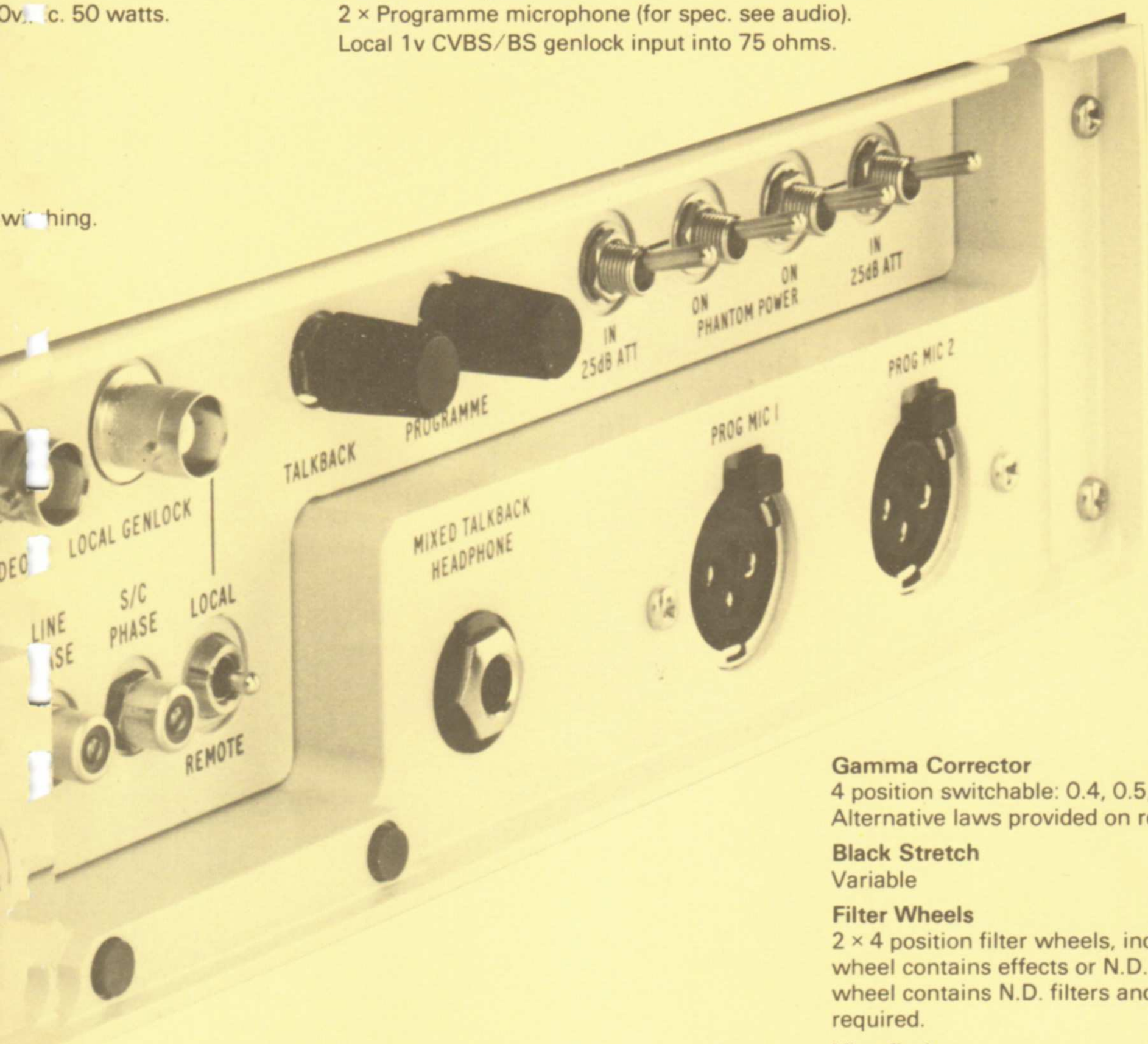
0v c. 50 watts.

wi hing.

System Inputs
Vision 1 × Composite Video or Black & Burst for genlock.
1 Ext viewfinder feed 1v 75 ohms.
1 Ext video feed for prompting device etc. 1v 75 ohms.
Audio Communications and Signalling.

Audio
2 × Programme Mic inputs:
Impedance 1 kilohm.
Sensitivity −10 to −60dB.
Signal/Noise ratio better than 56dB.
Input attenuator: 25dB individually switched.
Phantom power: 50v individually switched.

Camera Inputs
Tri-axial cable input/output.
Data link input.
Local 12v d.c. power.
2 × Programme microphone (for spec. see audio).
Local 1v CVBS/BS genlock input into 75 ohms.



Gamma Corrector
4 position switchable: 0.4, 0.5, 0.6, unity.
Alternative laws provided on request.

Black Stretch
Variable

Filter Wheels
2 × 4 position filter wheels, individually controlled. Front wheel contains effects or N.D. filter and cap position. Rear wheel contains N.D. filters and diascope position as required.

Viewfinder
High brightness 7"(17cm) diagonal monochrome tube.
2000 lm/m² minimum output.
±60° tilt angle. Full 360° rotation.
Resolution greater than 700 lines per picture height.
Electronic zoom angle indicator.
Electronic adjustable horizontal and vertical cursor lines for framing and line up.
V/F feed selectable as luminance, red, green or blue or monitoring. Normal/external/mix.

Intercommunications (Talkback)
Full facilities 4 wire system.

Power Supply:

a. 217 – 256v a.c.	50Hz/60Hz	200VA approx.
b. 104 – 126v a.c.	50Hz/60Hz	200VA approx.
c. 10 – 17v d.c.		95 watts approx.

Note a. and b. via base station.
c. locally at camera head for stand alone or radio link operation.

typ

0m at
dB gain

Geometry
Any part of the picture will be within ±0.1% of true position.
Excludes lens aberrations.

Registration
Maximum deviation of red and blue signals with respect to green will be ±0.05% over the entire picture area.

Frequency Response
d.c. −5.5MHz ±0.5dB.
Resolution better than 600 lines (G channel).
Modulation depth 100% ±20% at 5MHz (400 lines) aperture corrector ON

Signal/Noise Ratio
Better than 54dB (PAL) unweighted, Y channel, aperture corrector off, linear matrix, 0dB gain, gamma off, measured 7.5kHz −5MHz subcarrier notch out.

Lift & Gain Controls
Master gain control switchable, −3, 0, +3, +6, +12dB.
Individual red/green/blue gains ±10dB.
Master lift +10% to −30% before gamma correction.

Provisional specification details are subject to modification.

Camera Specification

The Link 130 is an outstanding new generation automatic camera ideal for both outside broadcast and studio productions.

MAIN SYSTEM PARAMETERS

Pick-up tubes
3 x 18mm low capacity diode gun plumbicon tubes, type XQ3427 or equivalent

Sensitivity
Scene illumination 800 lux for full video output (700mV) at a lens aperture of f2 using 60% reflectance chart 0dB gain (200nA signal current, G tube)

Geometry
Any part of the picture will be within ±0.25% of true position.
Excludes lens aberrations

Registration
Maximum deviation of red and blue signals with respect to green will be
zone 1 ±0.05% (zone 1 = 90% picture
zone 2 ±0.1% area-EBU zone)

Frequency Response
1dB to 5.5MHz
Resolution better than 600 lines (G channel)
Modulation depth 100% ±20% at 5MHz (400 lines) aperture corrector ON

Signal/Noise Ratio
Better than 54dB (PAL) unweighted, Y channel, aperture corrector off, linear matrix, 0dB gain, gamma off, measured 7.5kHz-5MHz subcarrier notch out

Lift & Gain Controls
Master gain control switchable, −3, 0, +3, +6, +9, +12dB
Individual red/green/blue gains ±10dB.
Master lift +10% to −30% before gamma correction

Gamma Corrector
4 position switchable: 0.4, 0.5, 0.6, unity.
Alternative laws provided on request

Black Stretch
Variable

Filter Wheels
2 x 4 position filter wheels, individually controlled. Front wheel contains effects or N.D. filter and cap position. Rear wheel contains N.D. filters and diascope position as required. Wheels may be controlled from camera head, Master Setup Panel or OCP as required

VIDEO INPUTS/OUTPUTS

CAMERA HEAD (130-00)	BASE STATION (130-20)
System O/Ps PAL 1 x 1 volt encoded into 75 ohms	2 x 1 volt encoded into 75 ohms
YUV —	1 set YUV signals non-composite into 75 ohms
RGB —	1 set RGB signals non-composite into 75 ohms
Picture and WFM O/Ps —	2 x 1 volt composite output into 75 ohms
Auxiliary Video 1 x 1 volt composite output (full bandwidth) into 75 ohms	1 x 1 volt composite input into 75 ohms
External Viewfinder	1 x 1 volt composite input into 75 ohms
Genlock I/P 1 x 1 volt composite Video or Black and Burst (camera head or base station)	1 x 1 volt composite Video or Black and Burst
Tracker O/P 1 x 1 volt composite Video (repeat of viewfinder signal)	—

CONTROL INPUTS/OUTPUTS

CAMERA HEAD (130-00)

Control Link Input
Multiway Connector (LEMO) for radio link or local control panel

Pan Bar Control
Access to pan bar remote "Press to Talk" and remote "Ext/Mix" V/F switch contacts. Also outputs 4 x 0-5 volt remote controlled user d.c. functions

Shot Box
Separate shot box or normal zoom lens servo controls

Range Extender
Used with lenses having remote range extender selection

Utility Power Output
130-200v d.c. utility power at 50 watts

BASE STATION (130-20)

Auxiliary Control Input
4 x 0-5v d.c user specified control input

Phasing Control Input
10K ohms line phase/20K ohms subcarrier potentiometers (external) connector for remote phasing

Parade Step Output
−6/0/+6 volts at 5K ohms (one output may serve several cameras)

Audio signalling
15 way Canon D skt for control of tallies and signalling

Prog mic gains
Remote d.c. control of 2 x camera head programme mic gain circuits via 2 x 10K ohms potentiometers

MSP1/MSP2
2 x 9 way Canon D skt for connection to 1 or 2 master setup panel (**130-30**)

OCP
9 way Canon D skt for connection to one of a range of (**130-40 series**) Lift/Iris/Colour Balance Panel

AUDIO INPUTS/OUTPUTS

CAMERA HEAD (130-00)	BASE STATION (130-20)
Prog Mic 1 and 2 2 x Canon XLR prog mic inputs switchable 48v phantom power	2 x Canon XLR prog mic outputs
Tuchel Headset skt	25 way Canon Talkback connector

MASTER SET-UP PANEL
(130-30)

CONTROLS

Switched gain
−3/0/+3/+6/+9/+12dB

Flare
Master ON/OFF Individual RGB flare control or automatic setup

Aperture Correction
Master ON/OFF Individual in band and out of band manual control

Gamma Law
Selection of 3 laws + linear

Black Stretch
Master ON/OFF + variable manual control

Standby
Switches camera to standby

Beams OFF
Switches off RGB beams

Coder Common
Shorts together coder inputs for monochrome pictures

Colour Bars
Caps Camera automatically, switches off beams and selects colour bars

Test W/F
Switches on camera head test ramp/pulse waveform

Pictures
Returns camera at any time to standard picture making condition

Full Line Up
Selects full maintenance type auto line-up

Routine Line Up
Selects restricted operational or 'daily' line-up

Auto Iris
Selects Auto Iris function

Diag
Runs Diagnostic routine (other functions available at camera head)

Black/White/Flare
Runs Auto Black/White/Flare routine

Black/White
Runs Auto Black/White balance routine

White
Runs white balance only routine

Red/Blue height
Red/Blue width
Red/Blue Vert Centring
Red/Blue Horiz Centring
Red/Green/Blue Lift
Red/Green/Blue Gains
Red/Green/Blue Flares
] Selects these functions to rotary encoders for manual adjustment

Front Filter Wheel controls
Selection of Clear/minus Blue/Effects 1/ Effects 2 filters

Rear Filter Wheel controls
Selection of Clear/ND1/ND2/CAP filters

Field Scan
Selection of Normal or Reverse Scan

Line Scan
Selection of Normal or Reverse Scan

OCP Control
Allows control at MSP or OCP

Camera Selector
Selects 1 from 8 cameras or multiple combinations to MSP control. Status of all cameras continuously displayed on LED panel above selector. This selection also provides an output to remote control engineering video matrix

Line/Field/R-G/B-G CLUE
Provides display of alternate 10 lines R/G or B/G for accurate operational colour balance

R-G/B-G
Displays Red/minus Green, Blue/minus Green for checking registration

R/G/B
Selects individual channels for monitoring

Parade
Provides switching outputs via base station for sequential RGB display on waveform monitor

Luminance/Encoded
Selects Luminance or Encoded for monitoring

Text ON/OFF
Allows test (diagnostics and status messages) to be removed from monitoring channel

Keyswitch
Allows all control system to be inhibited or limited control only, via OCPs or full system control as required

Indicators

1-8 alphanumeric display indicates camera under control

On-Air 1 (red)
Main cue light

On-Air 2 (yellow)
Used when camera output is routed to auxiliary device such as slo-mo VTR or digital effects machine

Status Panel
Continuously shows status of up to 8 cameras – On-Air
– Remote Control – from OCP
– Standby
– Auto Line Up

Inputs/Outputs
1 x IEC 220v a.c. mains input
8 x 9 way Canon D input skts (connected to base stations)
1 x 9 way Canon D output skt video matrix controller

Height	3U 5¼ inches (178mm)
Depth	115mm (allow 155 with connectors)
Width	19 inch rack mounting (482mm)
Weight	6 Kg

VIEWFINDER (130-10/14)
High brightness 7″ (17cm) diagonal monochrome tube
2000 1m/m² minimum output
±60° tilt angle. Full 360° rotation
Resolution greater than 700 lines per picture height
Electronic zoom angle indicator
Electronic adjustable horizontal and vertical cursor lines for framing and line up
V/F feed selectable as luminance, red, green or blue or monitoring.
Normal/external/mix

INTERCOMMUNICATIONS (TALKBACK)
Full facilities 4 wire system

POWER SUPPLY

a. 217 – 256v a.c.	50Hz/60Hz	295 watts total
b. 104 – 126v a.c.		135 watts base st.
c. 10 – 17v d.c.		250 watts

Note a. and b. via base station
c. locally at camera head for stand alone or radio link operation via 12v – 200v d.c.-d.c. converter available separately

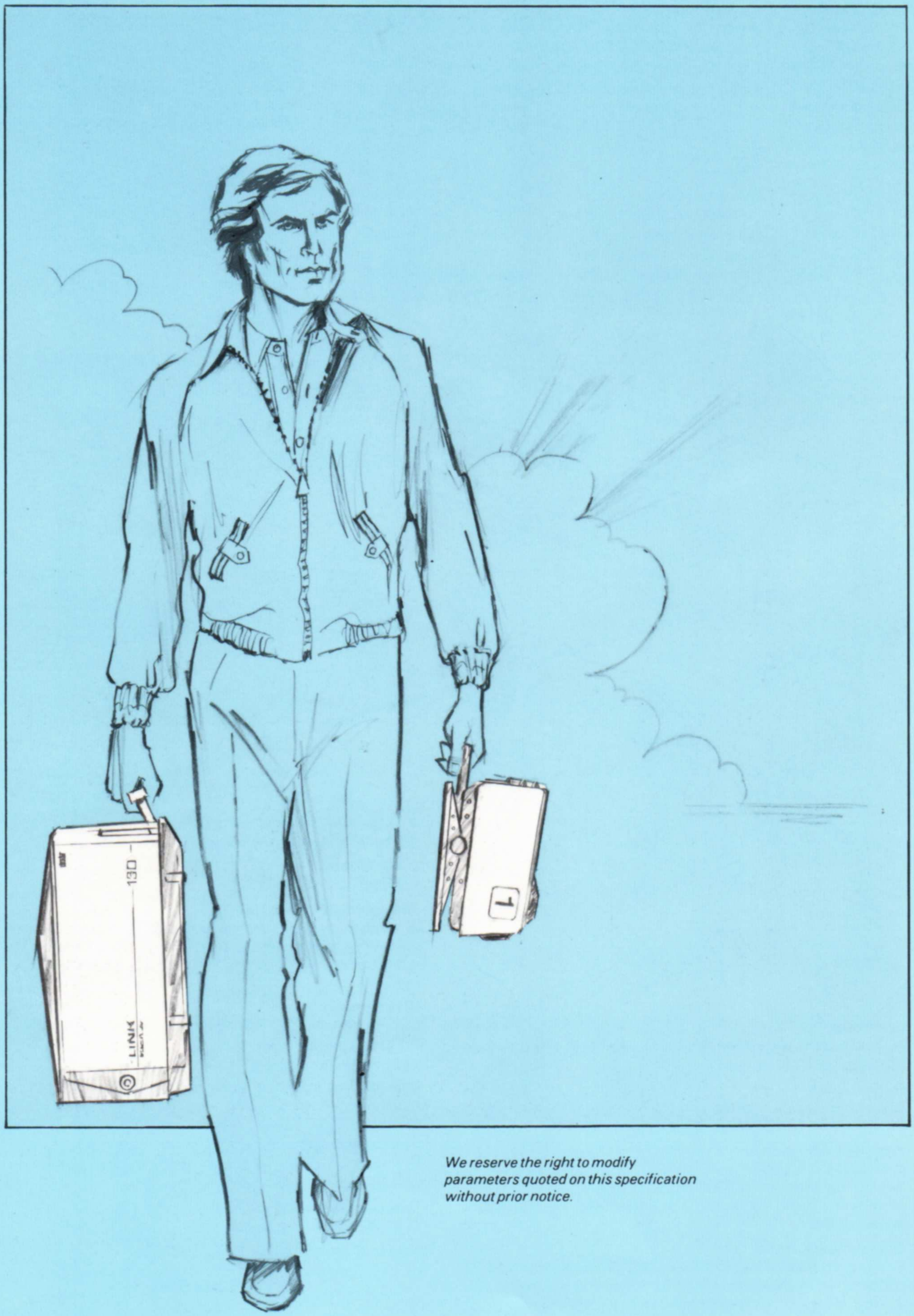
AUDIO
2 x Programme Mic inputs
Impedance 1 kilohm
Sensitivity −10 to −60dB
Signal/Noise ratio better than 56dB

Input attenuator
25dB individually switched

Phantom power
50v individually switched

TEMPERATURE SPECIFICATION
Camera head
−20°C to +45°C ambient

Base station and control panels
0°C to +40°C ambient



We reserve the right to modify parameters quoted on this specification without prior notice.

LINK
ELECTRONICS

LINK ELECTRONICS LIMITED
North Way, Andover,
Hants. SP10 5AJ, England

Telephone: (0264) 61345
Telex: 47132 LINK G
Cables: LINKELEC ANDOVERHANTS

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