

TP-Broadcaster Flyaway Antenna System

- **1.2m / 1.5m antenna system**
- **DVB-S encoder / modulator and IRD**
- **Dual band LNB**
- **Audio / video monitoring**
- **180W / 400W HPA**
- **Compact and robust**
- **Full auto-pointing options**

The **TP-Broadcaster** antenna system from Holkirk is renowned for its compact size, lightweight and powerful performance which has been designed to excel in today's increasingly demanding DSN market place.

The TP-Broadcaster range is a complete uplink solution that incorporates antenna, HPA, encoder/modulator and audio/visual monitoring. The components of the system are housed in IATA airline checkable transport cases.

There are no tools required to assemble and operate the system making the TP-Broadcaster fast and reliable for quick deploy applications.

Easy of use

The user friendly modular design of the TP-Broadcaster antenna allows for simple, fast and accurate location and acquisition of the satellite, either as a manually controlled mount or as a fully auto-pointing and motorised system.

The TP-Broadcaster can be either configured as a manual point, 3 axis jog control or full auto-pointing with inclined orbit tracking. The control interface is housed within the TX flight case.



TP-Broadcaster-400 with HPA, Tx / Rx Cases and handheld spectrum analyser



TP120 Broadcast system deployed and ready for action

Encoder/Modulator/IRD

The E5714 is an extremely powerful, high-end encoder and modulator in a 1RU chassis, fitting easily into small trucks and space-constrained rack environments. It delivers world-class MPEG-2 encoding at extremely low bit-rates

The receiver can be further licensed to decode one service and output analog SD video and audio allowing the RX8315 to simultaneously address both digital and legacy analog tiers and DVB Common Interface CA decryption.

HPA – 180W or 400W

StellarCool™ and StellarMini are high power satellite uplink amplifiers designed to operate in extreme environmental conditions from direct rain to direct sunlight, with proven reliability in temperatures ranging from -40 to +55 °C.

Audio Video Monitoring

The Bel BM-AV2 is a 4 channel high quality 2U video/audio monitor with alarm facilities. It accepts 3 composite video inputs with automatic selection between PAL and NTSC sources. The resulting image is displayed on a high quality 4" TFT video display.

Audio inputs provided are analogue (4) and AES (2 pairs). Input levels are displayed on 4 high-resolution, tricolour bargraph meters with user-adjustable colour transition points and peak hold facility. Six standard scales and ballistics are user-selectable.

Analogue input and output levels can be independently adjusted. The audio source selected for monitoring is available as a line output and at a headphone front panel socket.

High quality magnetically screened speakers are used to provide high-SPL audio reproduction. A limiter circuit is included to prevent speaker damage.

Specification

	TP150	TP120
Side Lobe Performance	29-25 Log e dBi	
Polarisation Performance	XPD >35 dB	
Receive		
Polarisation :	linear	
Frequency band :	10,7 ~ 12,75 GHz	
Gain @ 12,5 GHz :	44.0 dBi	42.0dBi
Transmit		
Polarisation :	linear orthogonal	
Frequency band :	13,75 to 14,5 GHz	
Appendix 30B	12.75 to 13.25GHz	
Gain @ 14,25 GHz :	45.5 dBi	43.5dBi
Mechanical Data		
Antenna Diameter :	150 cm	120cm
Geometry :	Single offset	
Reflector Material :	Carbon fibre	
Speed: Elevation	Fast 2°/Sec	
	Slow 0.5°/Sec	
Azimuth	Fast 5°/Sec	
	Slow 1°/Sec	
Controller :	ACU100 – Holkirk 3 axis jog controller	

TWT Performance

	400W	180W
Frequency range	13.75 to 14.5 GHz	
TWT output flange	400 W	175W
HPA rated output	350 W	150W
Gain:		
at rated power	70 dB	61 dB
SSG Prated -10 dB	75 dB	66 dB
Attenuation range	25 dB min	
Gain variation:		
full band	.25 dB max	
Intermodulation (two equal carriers)		
with total output = Prated -4 dB:	-18 dBc max	
with total output = Prated -7 dB:	-23 dBc max	
Harmonic output	-60 dBc max	

Audio Visual Monitoring

Video input	Composite
Audio Input	4 balanced
Audio Output	2X XLR3M
Level	+15dB
Meters	Bar
Scales	NORDIC, DIN PPM, BBC PPM, VU, VU Ext, AES/EBU

Prime power

Input Voltage	230VAC
---------------	--------

Inputs – Video

Analog composite video (PAL/NTSC) 10-bit sampling
SDI serial digital video 625 and 525 line standard
supported with EDH error detection and health monitoring
HSYNC support for 625 and 525 line

Inputs - Audio

Two stereo pairs input via analog, AES-EBU or SDI
Analog audio balanced 600K/20 k
Input levels: 12, 15, 18, 21, 22 and 24 dB
Up to 4 stereo pairs can be de-embedded from SDI

Outputs

EN 300 421 (DVB-S) and EN 301 210 (DVB-DSNG)
EN 302-307 (DVB-S2)

Frequency: 950 MHz to 1750 MHz (1 kHz steps)

Output power: -20 to +5 dBm (0.1 dB steps)

Monitor output: -30 dB relative to main output

Switchable 10 MHz reference

Modulation: QPSK, optional 8PSK, 16QAM,

DVB-S2 QPSK, 8PSK, 16APSK, 32APSK

Symbol rate: 1 Msym/s to 48 Msym/s variable in
1 Sym/s increments

Video Encoder

Vertical Resolutions 576, 288 (PAL), 480, 24 (NTSC)

Horizontal Resolutions: 720, 704, 640, 544, 528, 480, 352

MPEG-2 MP@ML

1.5 Mbps to 15 Mbps (without performance upgrade)

0.256 Mbps to 15 Mbps (with performance upgrade)

Performance Upgrade option enables long GOP and adaptive

GOP features

MPEG-2 422P@ML (option)

1.5 Mbps to 50 Mbps

"Pixel Perfect" fully exhaustive motion estimation

Audio Encoder

2x stereo audio channel processing

MPEG Layer II Audio Encoding Standard

Encoding rates from 32 kbps to 384 kbps

Dolby® Digital (AC-3)

Encoding rates from 56 kbps to 640 kbps

Pass-through Dolby Digital (AC-3) 1- 5.1 channel,

Dolby®E, linear PCM and DTS

System Weight (TP120 Broadcaster 400)

	LXWXD (CM)	(kg)
Case 1 -	795X518X310	22.15 (Reflector)
Case 2 -	795X518X310	21.75 (Tri-pod)
Case 3 -	795X518X310	20.15 (Feed)
Case 4 -	795X518X394	26.10 (Elevation)
Case 5 -	640X310X310	28.05 (TWT)
Case 6 -	630X600X300	21.70 (Monitor case)
Case 7 -	630X600X400	23.70 (TX case)

