

- **TENDER** (Ref. 4443)
- **TRAVEL** (Ref. 4442)

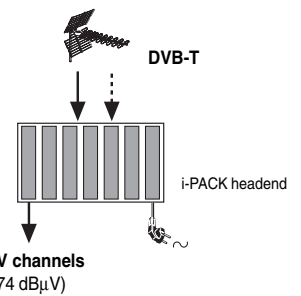
TENDER and *TRAVEL* headends are high performance, economical, space-efficient FTA Digital Terrestrial TV Multireceivers that deliver 6 TV programmes on conventional, analogue VHF or UHF (*) channels. They differ only in the spectrum of the referred channels : double side band in *TENDER* and vestigial side band in *TRAVEL*. The headends are made up of 6 receivers and 1 power supply arranged on a metal, wall-fixing baseplate. They come completely pre-linked and ready for use. All that needs to be done is to program the units using the SPI-300 programming tool !

(*) The output frequency band —"VHF" or "UHF"— must be indicated in the order.

	IN	OUT
	COFDM Signal	TV Channels
TENDER	FTA	DSB
TRAVEL	FTA	VSB

FTA : Free-To-Air
DSB : Double Side Band
VSB : Vestigial Side Band

- The two headends can perform BISS de-encryption.



TECHNICAL SPECIFICATIONS

INPUT

Signal type : **Free-To-Air** or **BISS**
Modulation : **COFDM**
Frequency band : **174-230 MHz / 470-862 MHz**
Level : **35...100 dBµV**
Bandwidth : **7 / 8 MHz**
Operation Mode : **2K / 8K**
Constellation : **QPSK / 16QAM / 64QAM**
Impedance : **75 ohms**

VIDEO DECODING

MPEG-2 - MP@ML
Image Format : **16/9 - 4/3 Pan&Scan - 4/3 Letter-box**
Teletext and Subtitles Insertion : **Yes**

AUDIO DECODING

MPEG-2 - Layer 2
Modes : **Mono - Stereo - Dual**

OUTPUT

Signal : **6 VHF Channels or 6 UHF Channels**
(*TRAVEL* headend may use adjacent channels)
Frequency band : **45-450 MHz or 470-862 MHz**
TV Standard : **B - G - D - K - I - L**
Colour System : **PAL - SECAM**
Spectrum : **VSB (*TRAVEL*)**
DSB (*TENDER*)
Sound : **Mono ***
Carrier level ratio : **12 / 16 dB**
RF Level : **74 dBµV (adj. -10dB)**
Broadband noise (ΔB=5MHz) : **-68 dBc**
Impedance : **75 ohms**

* When selecting a stereo audio service, the sound carrier is modulated with the "L+R" sum. If the audio service is dual, the carrier may be modulated with any of the "audio1", "audio2" or "audio1+audio2" signals.

PORTS AND LEDS

Input : **6x F type** - loop-through configured
Output : **1x F type**
Programming : **6x RS 232 / DB-9 type**
Indicator LEDS : **SYNC - STATUS**

GENERAL & POWER

Mains voltage : **110-240 V - 50 Hz**
Preamplifiers line powering : **+24V / 60mA**
Consumption : **45 W (*TENDER*)**
55 W (*TRAVEL*)
Operating temperature : **0...+40 °C**
Outside dimensions (w x h x d) : **300 x 260 x 215 mm**
Packed weight : **9.5 kg**

SIMPLE TO SET UP

Input connection : The headends have six loop-through pre-configured F input ports —one per receiver. The headend is fully assembled and pre-wired when you receive it, and can be easily connected to a single down lead from the antenna. The headend can be easily reconfigured if the standard requirement needs to be changed.

Output connection : The 6 channel combined output is delivered at the output port.

Powering : The headend is powered as a whole when connecting it to the mains.

Preamplifiers line powering : By using the supplied jumpers, a +24V voltage can be easily injected to power up a masthead amplifier if required.

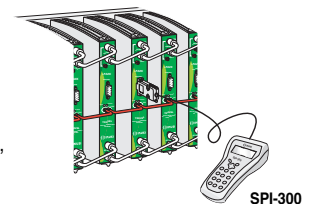
Programming : The six receivers that make up the i-PACK headend are individually programmable. The SPI-300 Programmer (see below) is connected to the front panel DB-9 sockets.

PROGRAMMING

Programming of each receiver module involves the following selections and settings:

- Central Input Frequency (125 kHz steps)
- Bandwidth (7 or 8 MHz)
- Hierarchy Level (high or low priority)
- TV Programme and Audio Service
- Parameters of the output TV channel (video carrier frequency, TV standard, colour system, video modulation depth, audio modulation index, carrier level ratio, output level).
- Image Format (16:9 to 4:3 Pan&Scan and 16:9 to 4:3 Letter-Box conversions)

The parameter values are controlled in each receiver by a built-in, powerful microprocessor and remain unalterable unless they be modified through the SPI-300.



Programmer

Model	SPI-300
Reference	4070

- 20x4 character alphanumeric display. User friendly software.
- 500 preset memory allocations for repetitive headends.
- Firmware update function (programmer and modules).
- No battery required. Dimensions: 160x75x40 mm.

