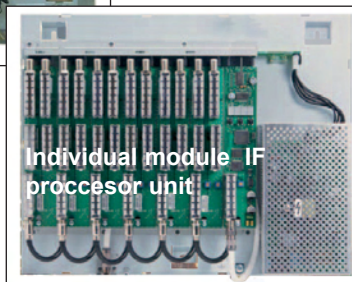
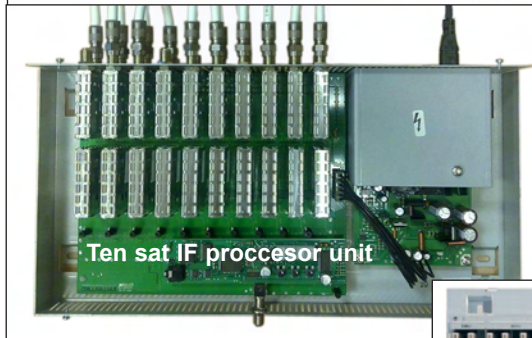
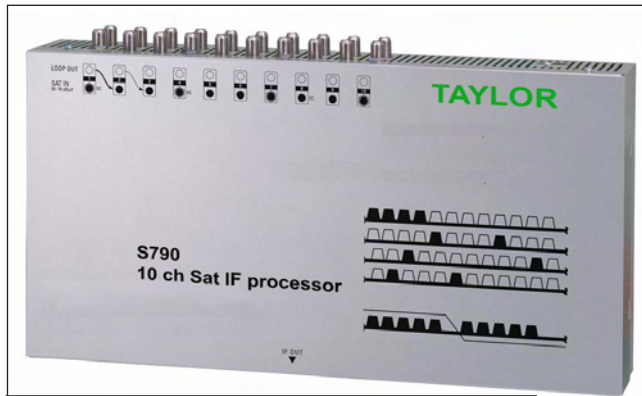
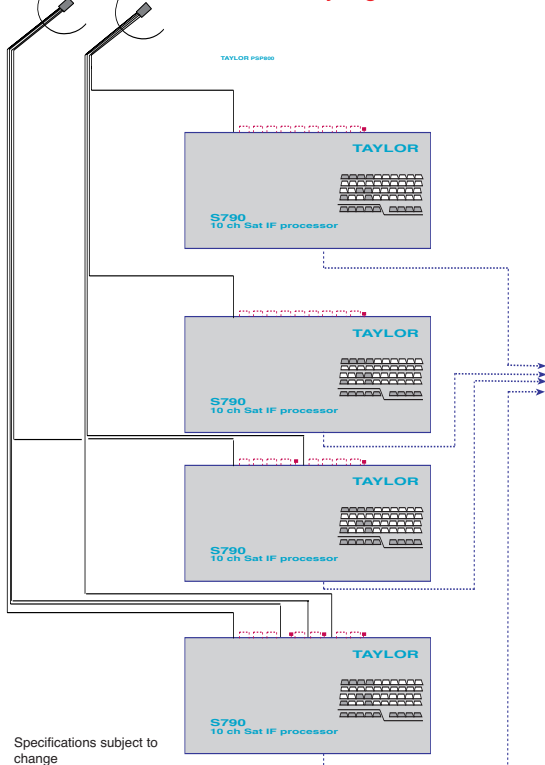


S790,S791 SATELLITE PROCESSORS

S790 Ten module unit
S791 Individual single or twin modules with capacity for 12 single or twin converters



Other Analogue or digital
 Astra 28.2 Sky Digital



Technical Description

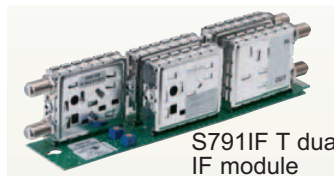
The S790/91 satellite processor converts an individual satellite channel using state of the art phase lock loop oscillators controlled by a microprocessor. To improve the threshold performance of the front end there is a tracking frequency agile bandpass filter in the first stage of each converter.

The individual channel, after amplification, is converted to an intermediate frequency, passed through a SAW filter giving excellent selectivity, before being converted to the output frequency. Each channel has 15dB of AGC, essential to compensate for levels varying due to rain attenuation. The output level of each channel can be adjusted over a range of 10 dB, this will maximize the performance of the head end amplifier as tilt can easily be applied and minor frequency response errors in the head end configuration can be corrected. In addition, the whole system performance is improved if all the channels distributed are processed, as the distribution amplifiers are not having to cope with the full bandwidth of the noise power from the LNB and unwanted channels.

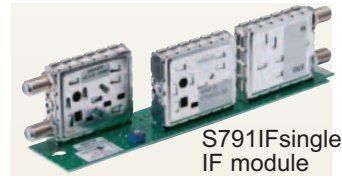
Sky digital channels, can only be distributed **if the multiplex frequencies are not changed, due to the Sky digibox software**, so if a single wire system is used for sky there could be some limitations on what programs can be distributed.

The processors are particularly useful on very large five wire switch systems distributing sky, it gives level control on each digital carrier, and also enables other satellite carriers to be fitted into frequencies not being used by sky or into frequencies occupied by sky programmes that are not required by the customer. Also fibre systems to maximize reach will benefit from individual level control of each sat multiplex.

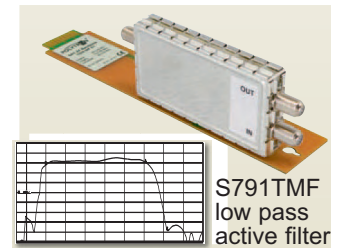
Individual Single, Twin or Ten module
Input Frequency range 950-2150 MHz
Frequency steps 1 MHz
AGC range 55-70 dBuV
Input level AGC range
IF frequency bandwidth 36 MHz
Output frequency range 1015-2150 MHz
Flatness ± 3 dB
Frequency steps 1 MHz
Attenuator adjustment per channel -10 dB
Connectors F
Operating Ambient temperature 0-30 °C
Recommended Ambient temperature 17 °C
Power 190-260V AC 50-60 Hz ≤60W



S791IF T dual IF module



S791IF single IF module



S791TMF low pass active filter

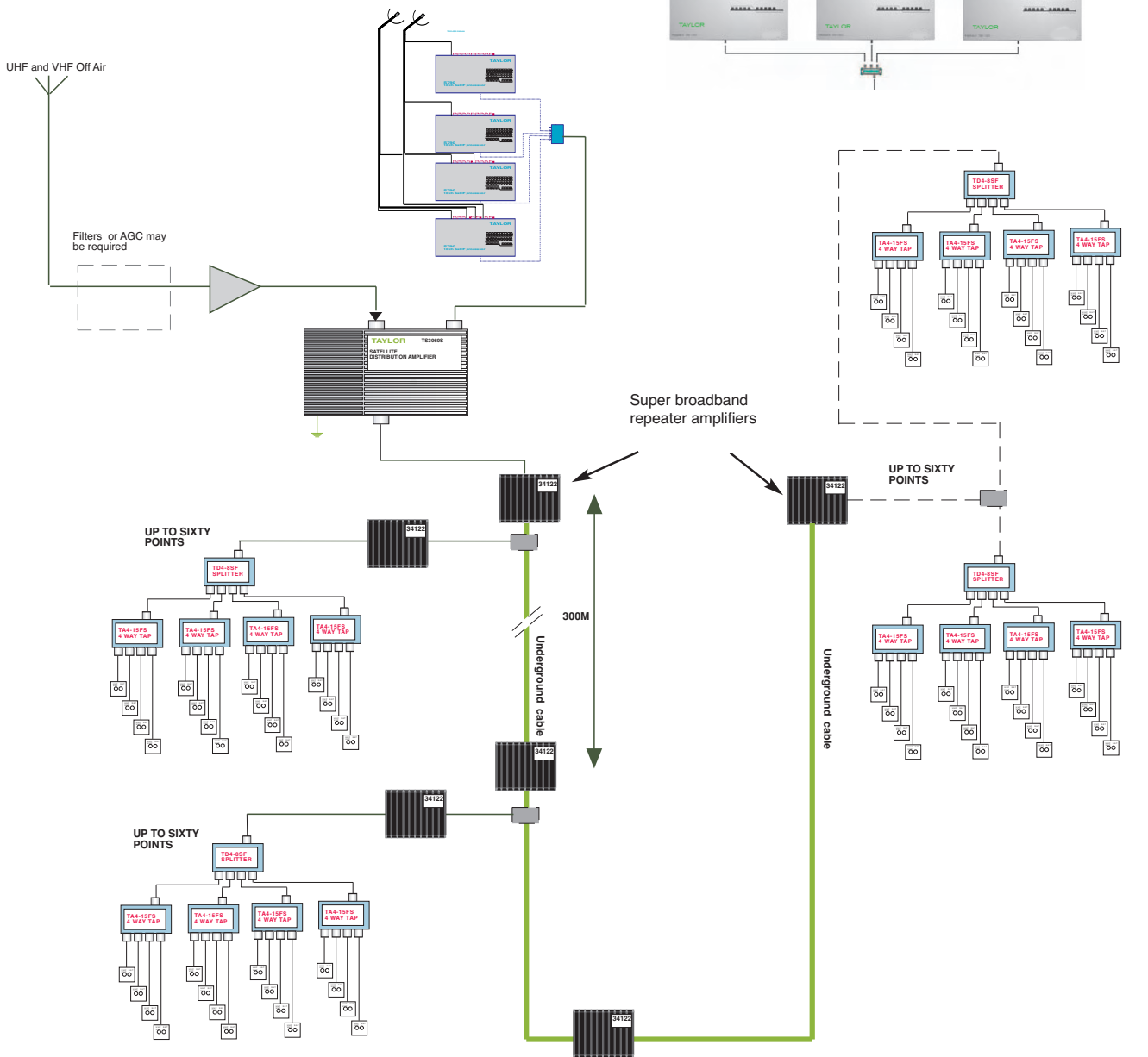
System showing selected Sky digital channels combined with another satellite, using unused or unwanted Sky frequencies.

Some Sky channels must be included due to data essential for the digibox embedded in a multiplex transport stream.

		Price
S790	Ten IF module unit complete with ten module	£784.40
S791	Base unit	£355.72
S791 IF	Single plug in module	£123.03
S791 IF T	Twin plug in module	£168.30
S791 TMF	Low pass active filter to allow pass through of unconverted freq between 1100-1690MHz	£72.70
Copy key	Removable memory card that stores settings	£26.27

No switching
 Sat IF Splitters may be needed

Typical large sat system using a single coax



Above is a typical system distributing analogue or digital satellite channels plus terrestrial VHF and UHF.

For large systems this is the only optional way of distributing satellite if the running multiple underground trunk cables is prohibitive.

Systems of over a thousand points can be constructed using coax or tens of thousands of points using a hybrid fibre/coax system. The limitations to the size of system are the same as existing cable networks except greater care has to be taken in calculating frequency response errors at higher frequencies.

The limitations of using a single cable for distribution of satellite is bandwidth, and the software in sky digiboxes being unable to locate transponders, that have been relocated in the IF spectrum. There are various partial solutions to this software problem, see our website, but at the moment no complete solution unless Sky update the receiver software in the future.

As more channels are allocated various options can be used to optimize the available bandwidth.

For example, using satellite demodulators and remodulating, programmes that are broadcast clear in the UHF or VHF band, makes more capacity available in the one to two GHz spectrum for subscription programmes.

Digital broadcast make more efficient use of bandwidth and as broadcasters move over to digital more channels can be distributed in the available bandwidth. If the most efficient current technology is used a single coax system can carry fourteen hundred and seventy channels.