

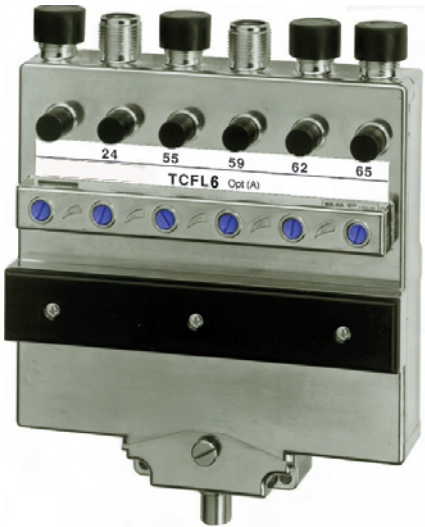
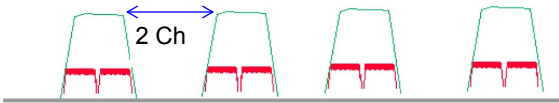
CHANNEL FILTER LEVELLERS  
& COMBINERS

Type	Number of Inputs 75Ω		Outputs 75Ω	Price	
TCFL5	5	See Input Options	1	£145.00	
TCFL6	6	See Input Options	1	£157.10	

If adjacent channels need to be combined they have to be clustered in one filter cavity if they are not the same level and adjustment is needed, processors such as the TSMP ,range TSMP-TV-TVDTQ have to be used as shown in the following pages.

These use SAW filters to provide the very sharp filtering that may be needed if one of the two multiplexes that are adjacent channel needs levels adjusting.

2 CH=16 MHz  
1 CH=8MHz  
Adjustment range is less with 1 CH spacing



Connectors are female Belling Lee type (IEC M14 75 Ω) on input Male on output see connectors on page 72

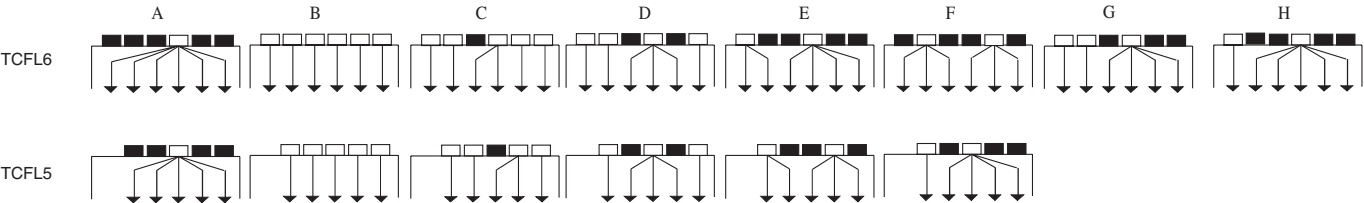


When ordering ,please specify input option and channels required

To avoid errors confirmation by email is required.

Typical insertion loss -3.5dB with 16MHz or greater spacing between channels

Input Options



A TCFL6 will be suitable for most sites, due to adjacent channels often being used,most main sites have 8 multiplexes plus local TV.  
Contact our technical support who e can mail you a link so you may identify the channels used in your area.  
If you are having to replace a existing filter ,we will re align for a price of £50.00 + £3.50 shipping back+ VAT .

### Using passive or active filter leveler's ?

Below indicates one of a common problem with digital TV broadcasts and the configuration and levelling of multiplexes .

The two pairs of multiplexes can be passed through a passive filter leveller , so 6 pairs of multiplexes would use a 6 ch filter leveller such as a TCFL6, 6 cavity filter .

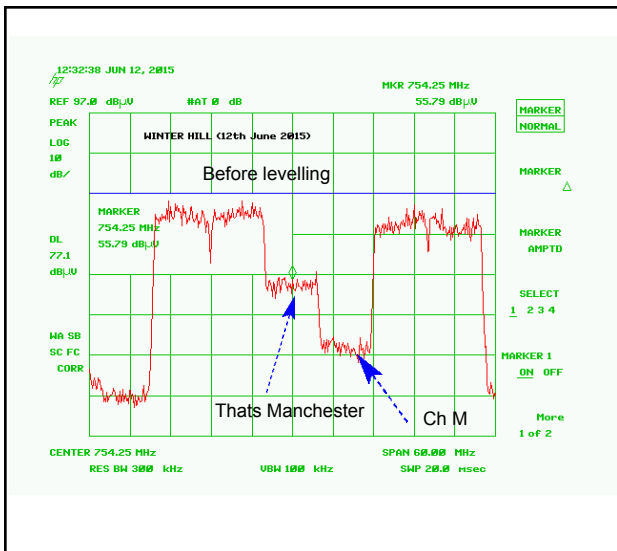
However you can see in this example two local TV stations adjacent ch to the main multiplexes ,one is -12dB and the other is -28dB, in this example they are local TV stations.

If the local stations are needed for distribution they may need levelling, a passive filter cannot adjust the adjacent individual multiplexes as in this example.

If the modulation type is QPSK for a local TV station instead of 64 or 256QAM a slightly lower signal level could be tolerated.

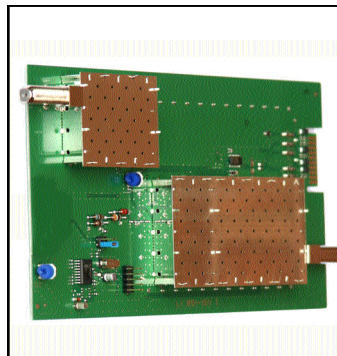
However in the Manchester example the radiation patterns of the broadcast antennas are different so coverage can severely com-promised if the difference in levels cannot be accommodated in a CATV system. In this instant both local signal levels get worse at +/- 35 deg as the radiation pattern can be very narrow ,such as in the example of Ch M

The solution is to use a active filters for head ends if the level is too low to distribute, this processes the multiplexes ,converts them down to IF and passes them through a very sharp SAW filter and converts them back up again to the desired frequency . This then provides individual level control on each multiplex.



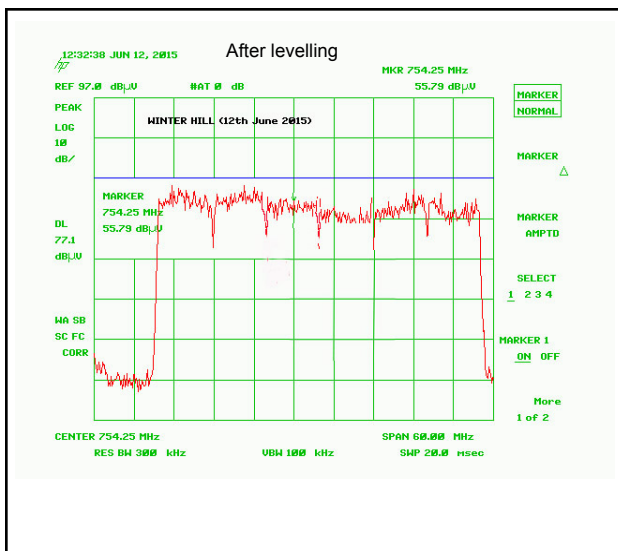
This may not be needed on small systems as using a larger amplifier could accommodate the different levels without overloading ,but on medium to large systems or fibre networks ,levelling is very important .

Below is the equipment that can be used to level the DVB-T/T2 multiplexes that are adjacent channel



Twin processor convertor .

See pages 37/38



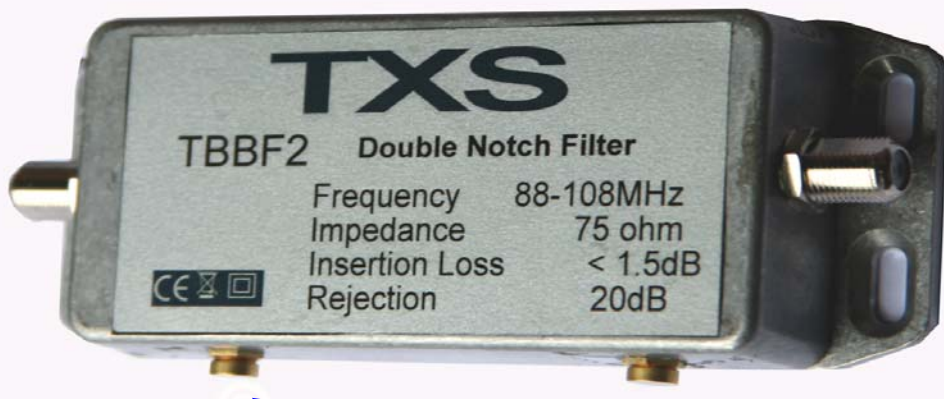
Twin processor convertor .

See page 39/41



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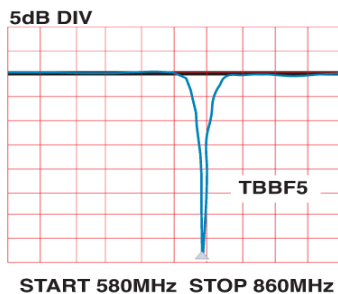
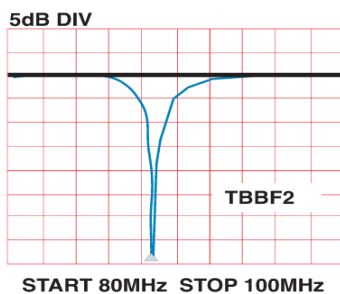


Adjust notch frequency

**Rejection of notch typically > 40dB if both notches are tuned to same frequency**

## Double Notch Filters

Type	Frequency MHz	Bandwidth at 20dB	Bandwidth at 10dB	Typical Notch per trap	Price	Price Pre Tuned
TBBF2	87-108	.06MHz	.02MHz	≥20dB	£60.00	£65.00
TBBF3	174-230	1.4MHz	.06MHz	≥20dB	£60.00	£65.00
TBBF4	470-650	3.5MHz	1.5MHz	≥20dB	£60.00	£65.00
TBBF5	630-860	4.5MHz	1.8MHz	≥20dB	£60.00	£65.00



Specifications subject to change