TCFL4 with all attenuators set to minimum

5dB DIV

CENTRE 529.5MHz   SPAN 111MHz
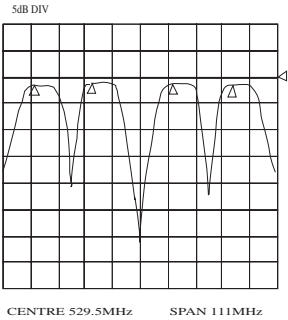
TCFL4 with one attenuator –10dB

CENTRE 529.5MHz   SPAN 111MHz
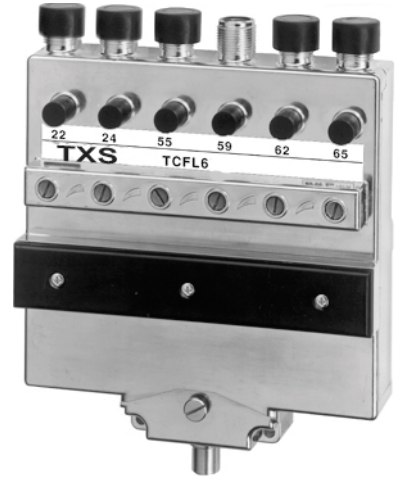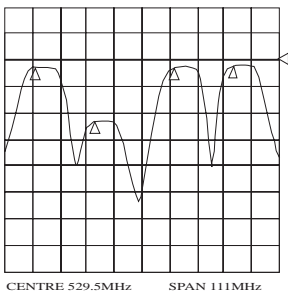
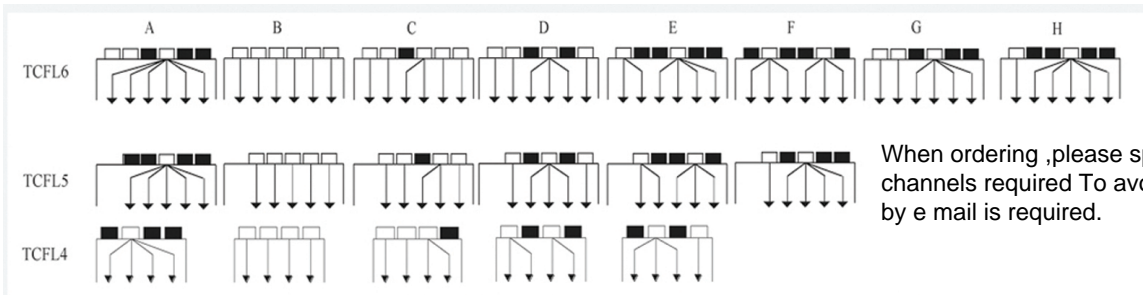| Type	Number of Channels	Inputs 75Ω	Outputs 75Ω	Price
TCFL4	4	See Input Options	1	£89.00
TCFL5	5	See Input Options	1	£99.00
TCFL6	6	See Input Options	1	£109.00

Input Options
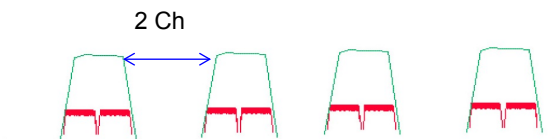
TCFL6 A B C D E F G H

TCFL5

TCFL4

When ordering ,please specify input option and channels required To avoid errors confirmation by e mail is required.

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

2 Ch

A TCFL6 will be suitable for most UK DVB-T sites, due to adjacent channels often being used,most main sites have 8 multiplexes plus local TV.
Contact our technical support who can e 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 .

FJ-CP

F to Male Belling Lee type adaptor see connectors

Typical insertion loss -4dB with 16MHz or greater spacing between channels Ensure input impedance is 75 Ohms

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.

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.
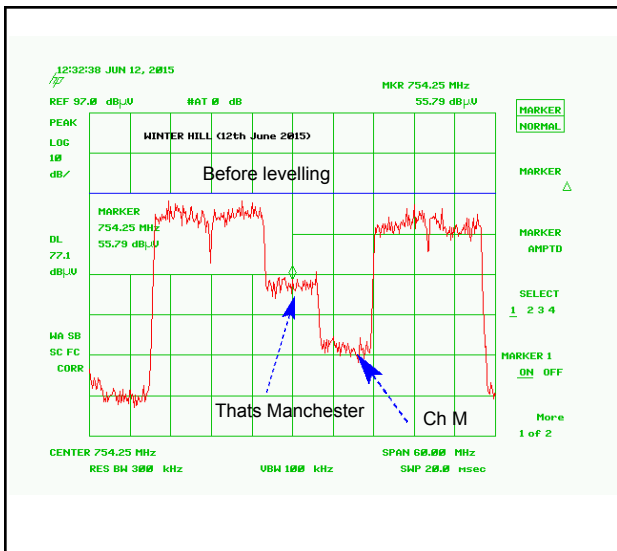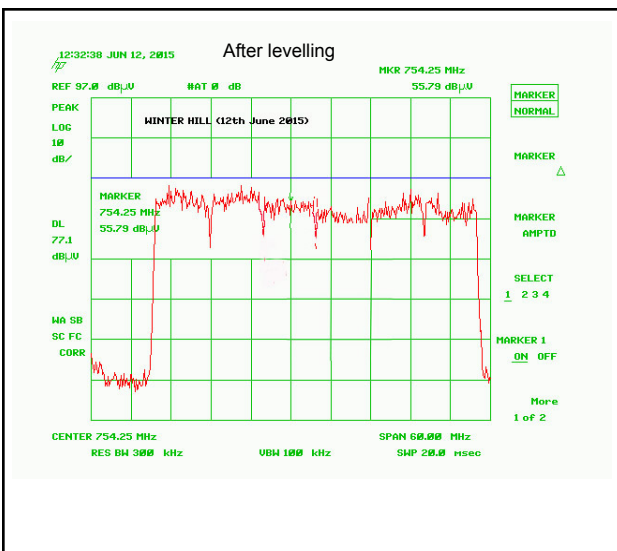

This may not be needed on small systems as using a larger amplifier could accommodate the different levels without overloading ,but on medium to large systems or fibre networks ,levelling is very important. .

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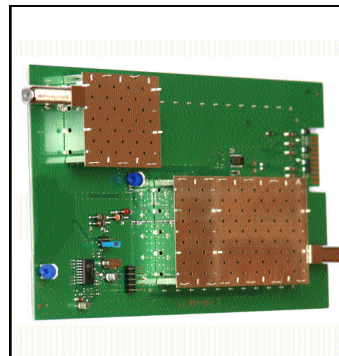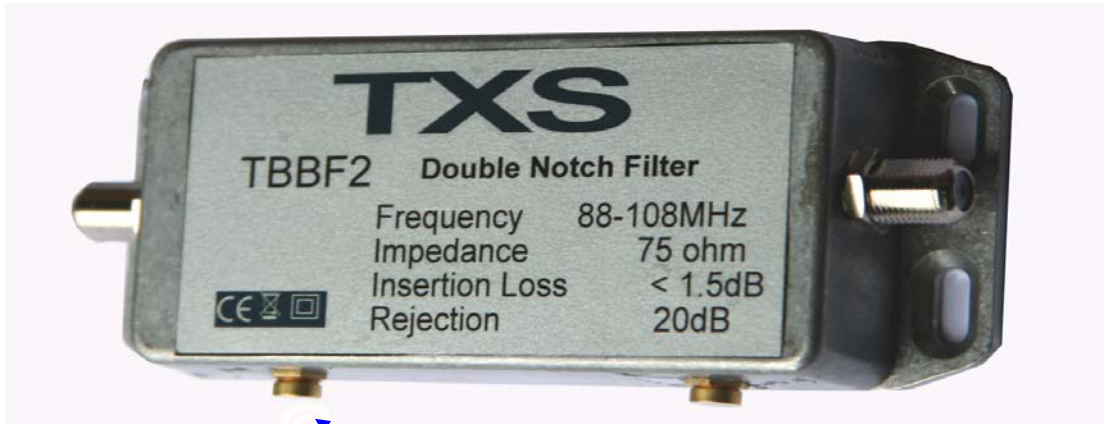

Twin processor convertor .

See pages 37/38

Twin processor convertor .

See page 39/41

TXS

Adjust notch frequency

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

Double Notch Filters						
Type	Frequency MHz	Bandwidth	Bandwidth	Typical Notch per trap	Price	Price
		at 20dB	at 10dB			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

5dB DIV

TBBF2
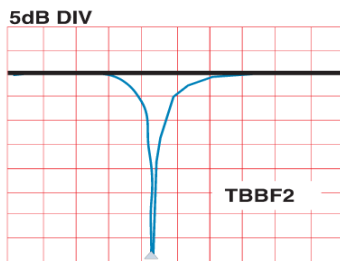
START 80MHz STOP 100MHz

5dB DIV

TBBF5
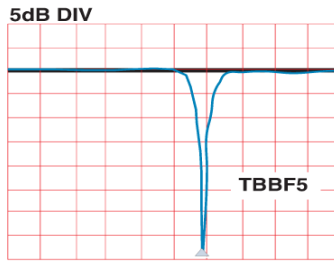
START 580MHz STOP 860MHz

Specifications subject to change

34C