

CW-407A ... M **SELECTIVE COMBINER-8**

The demand for continuous increase of the number of channels to be transmitted in the UHF band requires more sophisticated selective pre-combiner circuitries with increased channel selectivity. Therefore, CableWorld Ltd. developed a new selective pre-combiner series for use with the new CW-4076 ACTIVE COMBINER.

The CW-407x SELECTIVE COMBINER-8 is equipped with channel filters, which provide proper bandwidth and proper cut-off to cope with the requirements of the increased channel load in the UHF band. Since for smaller bandwidth higher stability is needed, the new filters are built of higher quality components. The new filter concept does not permit building filters for the low channels of the VHF band, therefore the CW-407x system starts from 118 MHz.

In the CW-407x SELECTIVE COMBINER-8 the directional couplers are upgraded types, too.



They feature much better frequency response, separation and return loss in the UHF band than their predecessor type did.

Beyond the requirements of the reliability and stability, also the demand for increased separation requests excellent connection contacts, which was implemented with using gold plated connectors.

The channel assignment has also been optimised: in the UHF band, all third TV channels are combined in the same selective combiner, thus two each adjacent channels can only return to the input after passing one more directional coupler type combiner in the ACTIVE COMBINER, which results in a considerable increase of the separation between channels. According to the same considerations under 470 MHz all second channels are combined in the same selective combiner.

Main features:

- Combining with excellent signal to noise ratio by using high rejection slope filters
- Excellent channel separation and return loss by using high quality directional couplers and optimised channel assignment
- Gold plated „F”-type connectors
- High stability and reliability

Technical data

Transmission characteristics

Frequency band 118 - 862 MHz
(s. table)

Input data

Number of combiner inputs 8
 Input impedance 75 Ω
 Input return loss >15 dB
 Separation between the inputs >40 dB
 Combining attenuation 20 ±1 dB
 Bandwidth B standard min. 7 MHz
 G, D, K standard min. 8 MHz
 Amplitude response within the channel <1 dB

Output data

Output impedance 75 Ω
 Output return loss between 118 and 862 MHz >15 dB

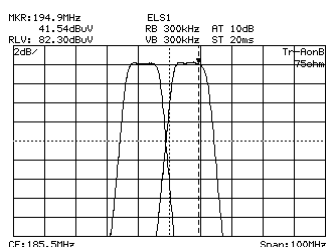
General data

Type of the connectors F sockets (gold plated)
 Physical dimensions
 - Width 214 mm
 - Height 32 mm
 - Depth 67 mm
 Mass approx. 0.35 kg
 Operational temperature range
 - to fulfil the specifications +10 ... +35 °C
 - to maintain operation 0 ... +40 °C

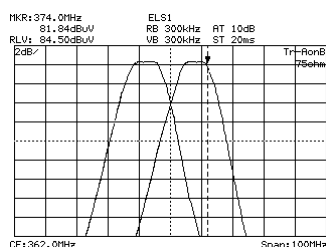
Type numbers and channel table of the CW-407x SELECTIVE COMBINER-8
 Channel allocation according to B/G standard

Type	1	2	3	4	5	6	7	8
CW-407A	S3 119.25	S5 133.25	S7 147.25	S9 161.25	E5 175.25	E7 189.25	E9 203.25	E11 217.25
CW-407B	S4 126.25	S6 140.25	S8 154.25	S10 168.25	E6 182.25	E8 196.25	E10 210.25	E12 224.25
CW-407C	S11 231.25	S13 245.25	S15 259.25	S17 273.25	S19 287.25	S21 303.25	S23 319.25	S25 335.25
CW-407D	S12 238.25	S14 252.25	S16 266.25	S18 280.25	S20 294.25	S22 311.25	S24 327.25	S26 343.25
CW-407E	S27 351.25	S29 367.25	S31 383.25	S33 399.25	S35 415.25	S37 431.25	S39 447.25	optional
CW-407F	S28 359.25	S30 375.25	S32 391.25	S34 407.25	S36 423.25	S38 439.25	optional	optional
CW-407G	21 471.25	24 495.25	27 519.25	30 543.25	33 567.25	36 591.25	39 615.25	42 639.25
CW-407H	22 479.25	25 503.25	28 527.25	31 551.25	34 575.25	37 599.25	40 623.25	43 647.25
CW-407J	23 487.25	26 511.25	29 535.25	32 559.25	35 583.25	38 607.25	41 631.25	44 655.25
CW-407K	45 663.25	48 687.25	51 711.25	54 735.25	57 759.25	60 783.25	63 807.25	66 831.25
CW-407L	46 671.25	49 695.25	52 719.25	55 743.25	58 767.25	61 791.25	64 815.25	67 839.25
CW-407M	47 679.25	50 703.25	53 727.25	56 751.25	59 775.25	62 799.25	65 823.25	68 847.25

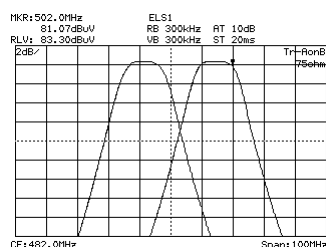
Responses of the adjacent inputs of the CW-407x SELECTIVE COMBINER-8



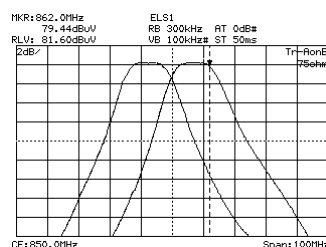
VHF III. band



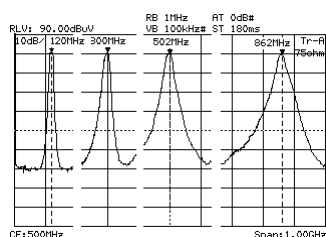
Hyper band



Low UHF band



High UHF band



Filter stopband responses in different frequency ranges

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