

CW-4836 ASI Changeover Duo

Two independent transport stream monitor and automatic changeover units

CW-4837 ASI Changeover Quad

Four independent transport stream monitor and automatic changeover units

CW-4838 ASI Changeover & Timer Duo

Two independent transport stream monitor and automatic changeover units with programmable timer

CW-4839 ASI Changeover & Timer Quad

Four independent transport stream monitor and automatic changeover units with programmable timer

Digital television systems need automatic signal monitor and changeover devices similarly as analogue systems do. The ASI Changeover unit monitors the quality of the transport stream at its main input, and on sensing error it automatically switches the signal of the reserve input to the output. The CW-4836 model comprises two such automatic changeover modules, and the CW-4837 four of them. The conditions to release a changeover can be programmed; the switch can be set also manually from the PC.

Program providers are permitted to send out the programs of adult channels in limited hours of the day only. This requires devices providing possibility of changing the outgoing programs regularly, once or several times a day. Regular reprogramming of the transport stream remultiplexer for this purpose is not the proper solution; the right solution is to compile the program packets parallel and switch over them with a timed switch. The CW-4838 and the CW-4839 ASI Changeover & Timer are versions of the changeover series, which are equipped with a timed switch, too. In 'auto' mode these versions work in the same way as the changeover units without timer do, and when set to 'manual' mode, the device will switch over without monitoring the signal, according to the programming of the timer switch only.

Switching is made in all four versions with relay, assuring that the signal of the main input will be transmitted to the output even at power failure. The software for configuring the ASI Changeover and the ASI Changeover & Timer is the SW-4836 Changeover Controller, which is available for free download at www.cableworld.eu.



- Automatic ASI changeover controlled with transport stream monitor (CW-4836, CW-4837)
- Automatic ASI changeover with additional programmable timer switch (CW-4838, CW-4839)
- Duo and quad versions in identical construction
- The transport streams connected to the main input can be analysed and reproduced through the CW-Net system
- Use of relay switches assures the output signal even at power failure

CW-4836 and CW-4837 ASI Changeover

The ASI Changeover continuously monitors the signal at its main input (ASI A), and on finding it defective turns on the front panel 'ERROR' LED. Additionally, if the device is set to 'auto' mode, the device switches the signal of the reserve input (ASI B) to the output. In 'manual' mode the user decides the signal to be transmitted to the output. In case of switching an erratic signal manually to the output the 'ERROR' LED signals with blinking.

The transport stream monitor of the changeover module first examines the existence of the sync byte, then the packet format, where it accepts the 188 and 204 byte/packet format only.

In the second step the device tests the existence of non-correctable errors using the Transport Error Indicator bit, which well indicates the reception threshold at terrestrial and satellite transmissions.

In the third step the PAT table Continuity Counter and the repetition time of the PAT tables will be examined.

The second and third step of the signal test can be switched on and off by programming.

In case of erratic signal the automatic changeover circuitry switches the signal of the reserve input (ASI B) to the output. After the error terminates a delayed automatic switchback occurs. The delay time can be set to 10 or 30 seconds.

The actual operating mode, the result of the transport stream monitoring and the actual switched input are displayed with front panel LEDs.

The CW-4836 comprises two individually programmable ASI Changeover modules; the CW-4837 comprises four such modules. The switch is built with relay assuring that in case of power failure the signal of the main input will be switched to the output. The signal of the main input can be analysed and reproduced with the software of the CW-Net system (e.g. SW-4811B TS Analyzer software).

CW-4838 and CW-4839 ASI Changeover & Timer

The switching module of the ASI Changeover & Timer, additionally to that of the ASI Changeover, can be controlled beyond from the transport stream monitor circuitry also from an integrated timer. This timer permits the user to switch to the output any of the prepared two transport streams in the required time periods. Thus the device can advantageously be used e.g. for switching the adult programs in the night or switching to regional programs, local studios, spots etc. in the same time of the day.

All four models are suitable for continuous service; PC is only needed for configuring the device. The software for configuring the devices is the SW-4836 ASI Changeover Controller, which is available for free download at www.cableworld.eu.

CableWorld Ltd. provides its partners high-level technical support in solving possible technical problems.

Technical data

ASI input / output

ASI performance	according to EN 50083-9 (DVB-TM 1449 Rec. 1)
Input voltage	300 ... 880 mV _(p-p)
Insertion loss	
Main input to output	max. 4 dB
Reserve input to output	max. 1 dB
Return loss	
Main input	min. 10 dB
Reserve input	min. 15 dB
Impedance	75 Ω
Number of inputs	2 × 2 (CW-4836, CW-4838) 4 × 2 (CW-4837, CW-4839)
Number of outputs	2 × 1 (CW-4836, CW-4838) 4 × 1 (CW-4837, CW-4839)
Type of connectors	BNC socket
Switching element	relay

Automatic changeover

Monitored parameters:	
Sync byte	h47
Error threshold	lack of 3 consecutive sync bytes
Packet format	188 or 204 byte
Data Error test	on/off switchable
Transport Error Indicator bit	error, if its value = 1
Error threshold	> 3 errors out of 256 samples
PAT test	on/off switchable
Continuity Counter	0 ... 15 continuously increasing
Error threshold	continuity error
Repetition Time	max. 500 ms
Error threshold	no PAT in a 500 ms period
Switchback delay	10 sec, 30 sec selectable

Integrated timer

Accuracy	better than 1 sec/day
Switching cycle	1-week repetition
Number of switch-over cycles	max. 4/day

LAN

System	CW-Net
Physical layer	100Base-T
Data rate	100 Mbit/s (IEEE802)
Mode	Full Duplex
Type of connector	RJ-45 socket

General data

Front panel LED displays	LINK, ACT AUTO, ASI A, ASI B, ERROR
Service period	continuous
Power requirements	90 ~ 264 V / 47 ~ 440 Hz
Power consumption	max. 30 VA
Mass	approx. 3.5 kg
Physical dimensions:	19" × 1 HU
Width × Height × Depth	483.0 × 43.6 × 473.0 mm
Operating temperature range	+5...+40°C
Relative humidity	max. 80 %
Storage temperature range	-25 ... +45°C
Relative humidity	max. 95 %, non-condensing

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