

The following description walks you through the installation and the basic set-up process for your special application of an **AT** or **DT** or **HT** or **XT** Rubidium module:

Video and Time Code Format Converter

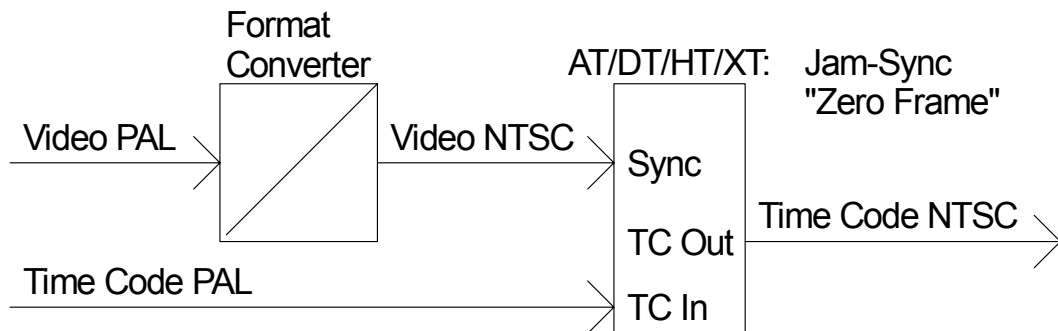
In a format conversion process, the AT/DT/HT/XT modules can be used as a time code format converter.

Select the module according to the video standard you are using:

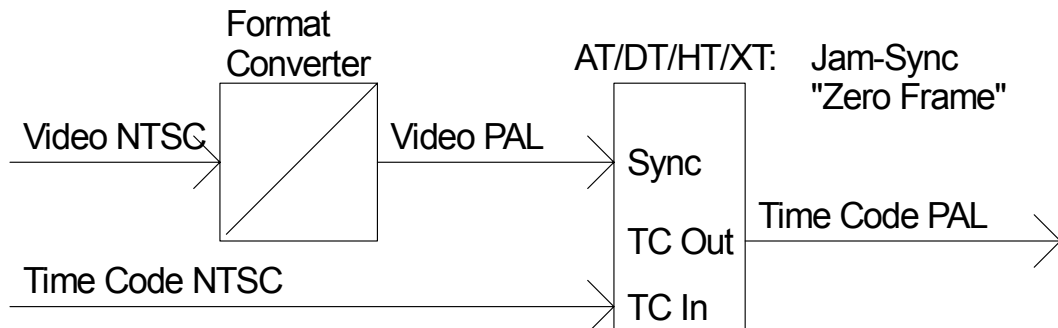
- AT: Analogue video (CVBS).
- DT: SD digital video.
- HT: HD or SD digital video.
- XT: 3G or HD or SD digital video.

Input the LTC time code of the original format and – for synchronization purposes - the video of the converted format. With the set-up described below, AT/DT/HT/XT then outputs a time code according to the converted video format:

PAL → NTSC



NTSC → PAL



The external LTC can be received at the XLR3 female connector (if assembled) **or** at the DSUB9 female GPI/LTC IN – please refer to manual for pin assignment.

Step 1:

Load Factory Settings: Preset a Basic Configuration

Activate the **Profile** page and select: Profile: **Factory Settings**
 Click on the **OK** button.



Step 2:

Activate/Deactivate Functions

Activate the **Functions** page and **activate/deactivate** as shown:

RUB AT			RUB DT, RUB HT, RUB XT		
	Edit	Use		Edit	Use
System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Keys	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Keys	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Read	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LTC Read	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LTC Read	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VITC Read	<input type="checkbox"/>	<input type="checkbox"/>	D-VITC Read	<input type="checkbox"/>	<input type="checkbox"/>
Jam	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ANC Read	<input type="checkbox"/>	<input type="checkbox"/>
Generate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Jam	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LTC Generate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Generate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VITC Generate	<input type="checkbox"/>	<input type="checkbox"/>	LTC Generate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Link	<input type="checkbox"/>	<input type="checkbox"/>	D-VITC Generate	<input type="checkbox"/>	<input type="checkbox"/>
Video	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ANC Generate	<input type="checkbox"/>	<input type="checkbox"/>
Insert	<input type="checkbox"/>	<input type="checkbox"/>	Link	<input type="checkbox"/>	<input type="checkbox"/>
Serial	<input type="checkbox"/>	<input type="checkbox"/>	Video	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			Insert	<input type="checkbox"/>	<input type="checkbox"/>
			Serial	<input type="checkbox"/>	<input type="checkbox"/>

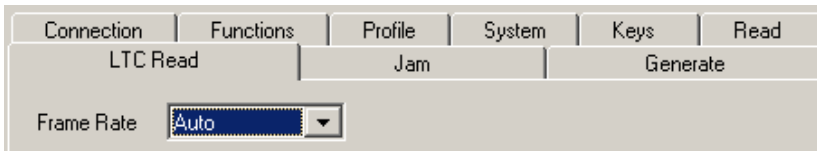
- We suggest that you deactivate the **Use** check-boxes of all functions you are presently not using.
- We suggest that you deactivate the **Edit** check-boxes of all functions after the installation process. That avoids unintentional operating and malfunctions.

Step 3:

LTC Time Code Reader Configuration

Activate the **LTC Read** page and select:

Frame Rate: If you are doing the same converter process all the time, please fix the frame rate according to the LTC input. If you are working with different processes (PAL → NTSC, NTSC → PAL), select “Auto”, in this case the frame rate of the incoming LTC will be detected automatically.



Step 4:

Time Code Reader Configuration

Activate the **Read** page and select:

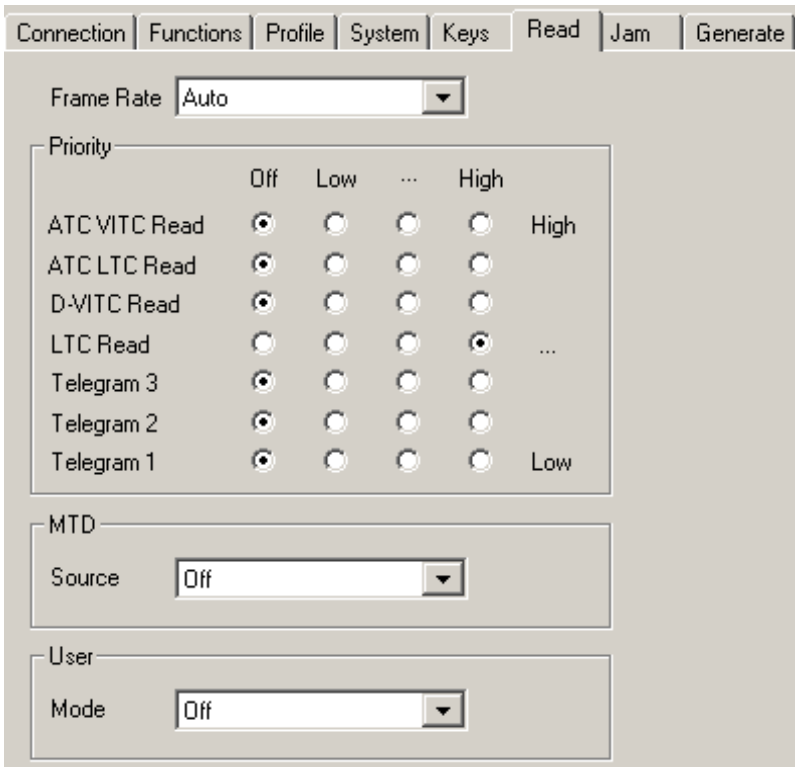
Frame Rate: If you are doing the same converter process all the time, please fix the frame rate according to the LTC input. If you are working with different processes (PAL → NTSC, NTSC → PAL), select “Auto”, in this case the frame rate of the incoming LTC will be detected automatically.

Priority: All “Off” except “LTC Read = High”.

MTD: “Source = Off”.

User: “Mode = Off”.

Example for DT/HT/XT modules:



Step 5:

Set Sync Mode and Frame Rate of the Time Code Generator

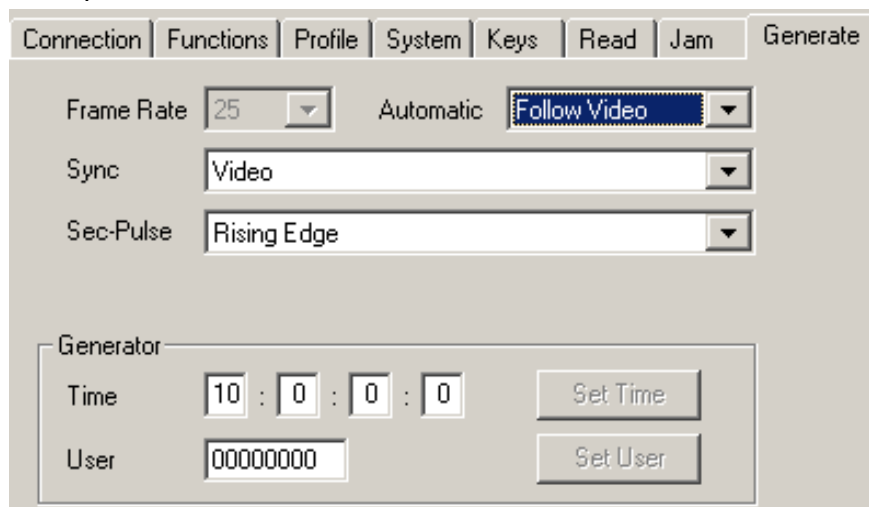
Activate the **Generate** page and select:

Frame Rate: If you are doing the same converter process all the time, please fix the frame rate according to the LTC output (should be equal to the picture rate of the converted video signal).

DT/HT/XT modules only: If you are working with different processes (PAL → NTSC, NTSC → PAL), select “Follow Video”; in this case the frame rate of the time code output will follow the picture rate of the video input.

Sync: “Video”.

Example for DT/HT/XT modules:



Step 6:

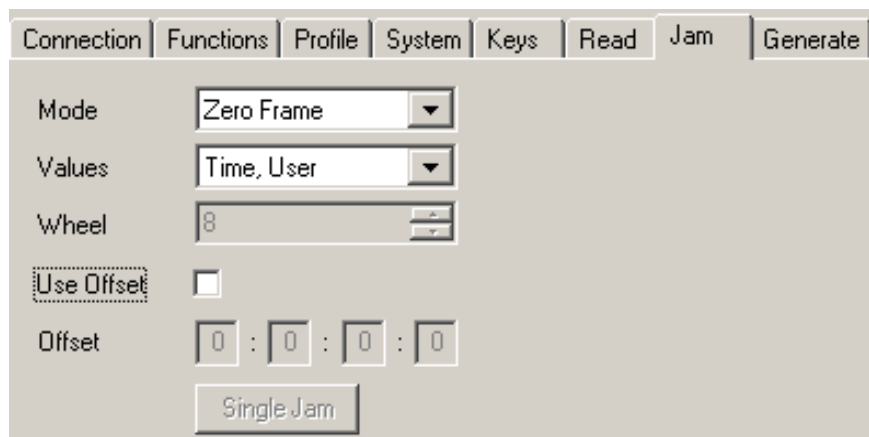
Activate the Jam-Sync Mode

Activate the **Jam** page and select:

Mode: “Zero Frame”.

Values: “Time, User”.

Use Offset: Not activated – unless you explicitly have to do an offset correction.



Step 7:

Optionally: Output VITC or ATC Time Codes

There is actually one time code generator, but different time code output formats are available. The configuration up to now has the LTC time code output enabled.

For the AT module, it is possible to generate VITC as well. Activate the **VITC Generate** page for configuration.

For DT/HT/XT modules it is possible to generate D-VITC, ATC_LTC and ATC_VITC as well. Activate the **D-VITC Generate** page for configuration of the D-VITC generator. Activate the **ANC Generate** page for configuration of the ATC_LTC and ATC_VITC generator.

→ You may refer to steps 7 and 8 of the “LTC to VITC Converter” application guide for reference.

Step 8:

Optionally: Select LED Functions to Watch Status Information

Activate the **Keys** page and select:

LED SIGNAL: “Gen Sync Status” indicates the status of the video synchronization:
 LED lights up during video lock.
 LED flashes slowly during the fine trim procedure.
 LED flashes fast if video synchronization is lost.

LED SET: “Jam” indicates the status of the Jam-Sync mode:
 LED lights up = Generator accepts reader input time code.
 LED flashes = Generator does not accept or receive the reader time code.

