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**TECHNICAL MANUAL**

**MKR100 REV.5**

**MKR200 REV.6**

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# **DIGITAL KEYSER / MIXER**

## **MKR100 & MKR200**

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## I. INTRODUCTION.

The MKR-100/200 is a 10 bit linear digital keyer/mixer (12 bit internal).

The MKR-100/200 is useful each time that it is necessary to key a text, a drawing or a logo and to remain in the broadcast digital domain.

## II. DESCRIPTION.

The MKR-100/200 is housed in a rack 1U / 19 inches.

### In front panel.

Seven keys give access to basic functions.

- The "INPUT" key selects an input between two inputs.
- The "CUT" key acts display of the foreground in "on/off" mode.
- The "MIX" key activate a dissolve mode. The key "AUTO " starts the automatic operation.
- The key "HW" activate an horizontal wipe mode. The key "AUTO " starts the automatic operation.
- The key "VW" activate an horizontal wipe mode. The key "AUTO " starts the automatic operation.
- The key "FTB" activate a fade to black.

Others functions are accessible behind the tilting front panel.

### Behind the front panel.

- Adjustments of duration of the "MIX", "WIPE", or "FTB" in automatic operation.
- Functions "MASK" and "CROP" and associated adjustments.
- Adjustments of the "SOFT" for wipes and mask.
- System functions such as remote control mode or input locking.

### On backplane.

From left to right :

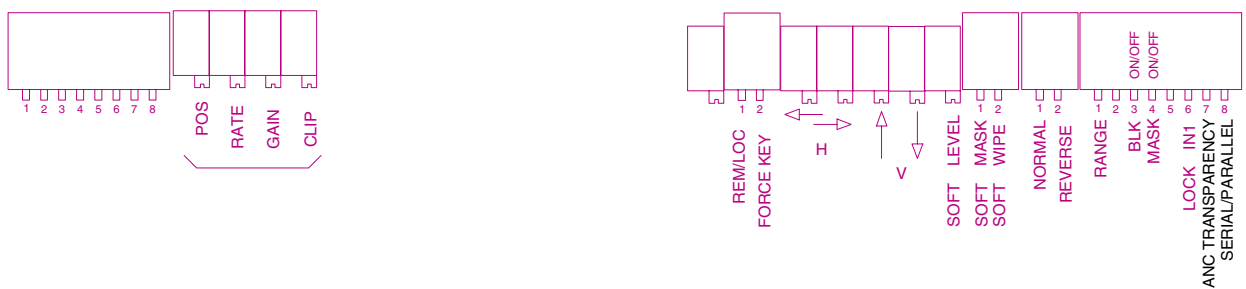
- The network input "M BUS" with loop through for a remote control (RCK2 control desk).
- Foreground digital inputs FG1 - FG2 that correspond to the fill of the key.
- Control digital output for these inputs.
- Remote control subD25 socket (GPI).
- Serial remote control subD9 - RS 232/ RS 422/ RS 485.
- 4 digital outputs.
- Background digital input (BG) and active loop through output.
- Digital reference input and active loop through (MKR200 only).
- Key digital inputs 1 - 2.
- Control digital output for these inputs.
- Power supply input socket.

### III. OPERATION.

*Important.*

The keyer must receive a signal on its BG inputs to operate properly.

Without signal on the BG input keys and indicators don't work.



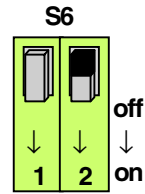
(Fig.1)

The MKR-100/200 can operate in two modes, keyer or mixer.

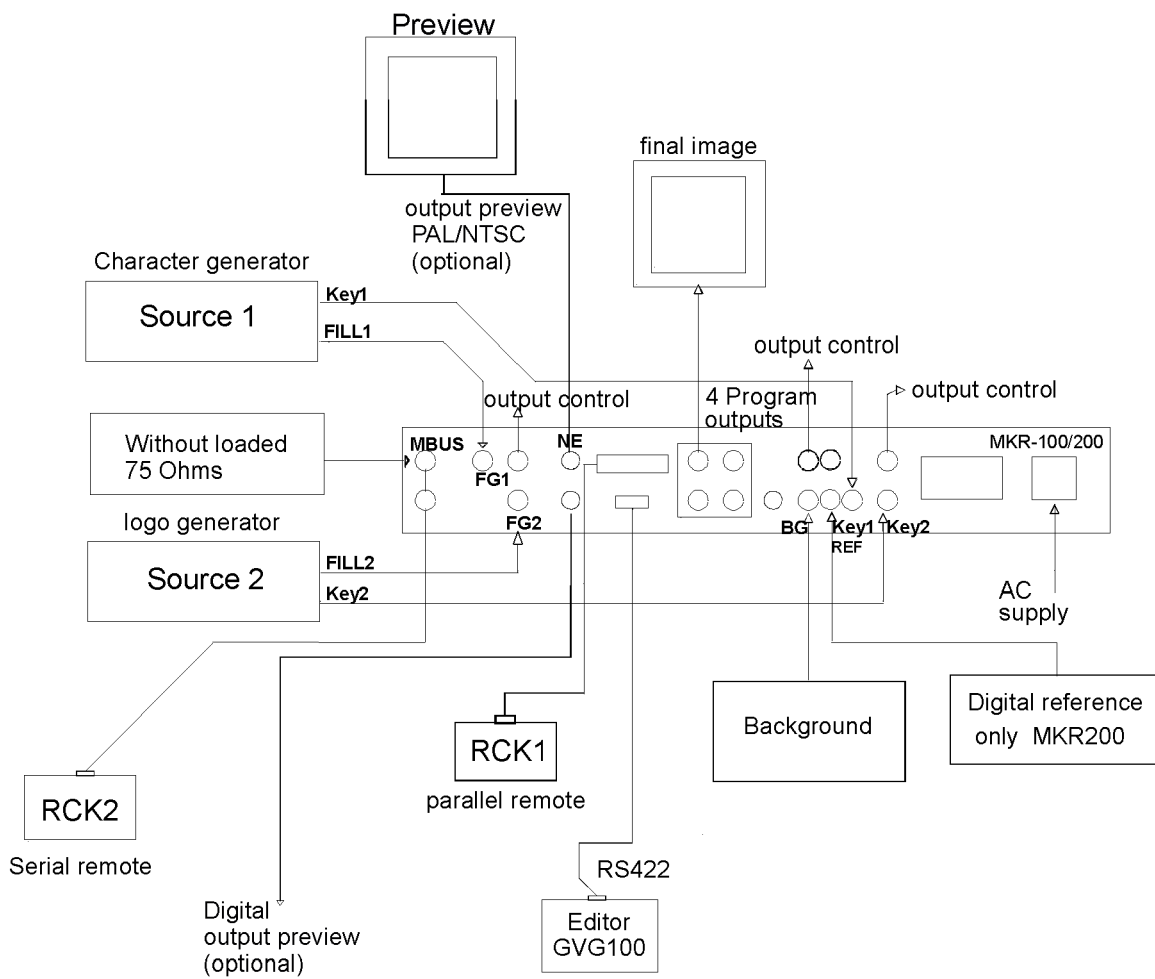
## 1) Keyer mode.

Keyer mode is the normal mode. Keyer mode is the delivery default mode.

The keyer mode is active when the commutator 2 of S6 is up in position "Off".



The figure 2 shows a possible keyer wiring in this mode.



(Fig.2) KEYER MODE

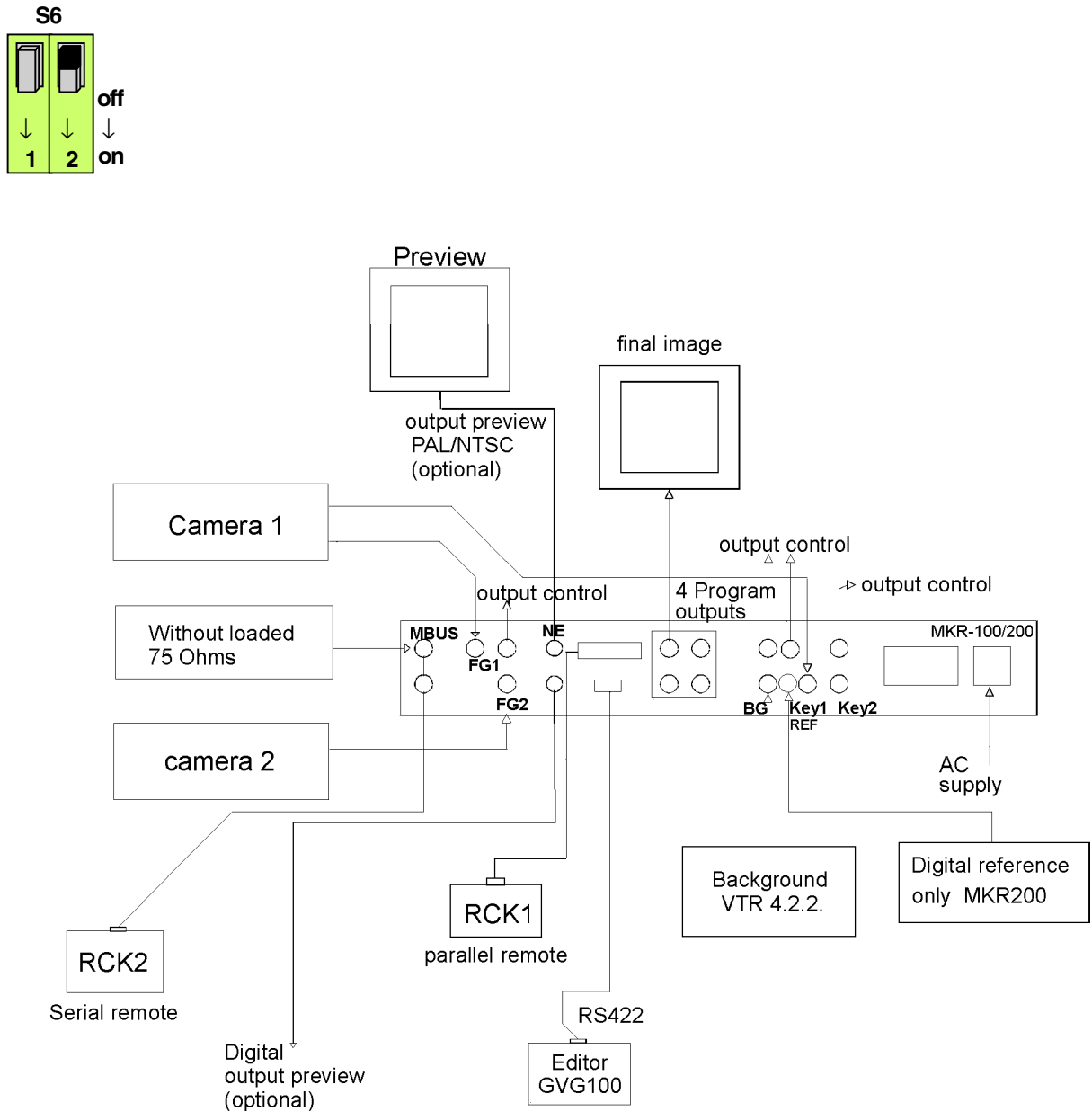
## 2) Mixer Mode.

In this mode the MKR-100/200 mixes to the two choice sources with the wallpaper "BG".

The mixer mode is active when the commutator 2 of S6 is low in position "On".

The fig.3 shows a possible wiring the MKR-100/200 in mixer mode.

In this mode it is recommended to apply a digital signal on inputs Key 1 and Key 2 to reduce the high frequency radiation.



(Fig.3) MIXER MODE

### 3) Signals phase.

The MKR-100 includes on each input a 1 line auto-phasing.

Thanks to this feature source linking of MKR100 don't need phase adjustment.

The MKR-100 will put sources "Key" and "FG" in phase following the "BG" signal as reference.

The MKR200 will put all sources in phase following the digital reference signal.

### 4) Synchronisation.

The MKR-100 does not generate synchronisation signals. The synchronisation signal in output will be the one applied on the BG input. The MKR200 insert a new digital sync.

In the absence of signal on this input there is no synchronisation signal in output.

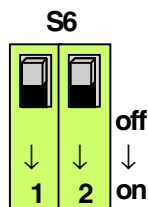
Thanks to this technique one guarantees a complete transparency of the MKR-100 for all auxiliary data as the audio, the E.D.H. or the VITC.

With MKR200 we can blank the ANC (Switch 7 of S5).

### 5) Remote control.

The MKR-100/200 can operate with local or remote control. In local mode the adjustments are located behind the front panel.

The local mode is active when the commutator 1 of S6 is up in position "Off".



Four adjustments are available in local mode.

"Position" Equivalent to the T-Bar on the remote control desk, adjust wipes position or dissolve.

"Rate" Adjust automatic transition duration or fade to black duration.

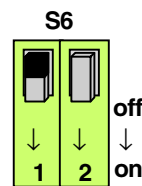
"Gain" Adjust key signal gain.

"Clip" Adjust key signal threshold.

**NB : Always attempt to work with the minimum of "gain and to compose with the clip".**

In remote control mode(RCK1) POS, RATE, GAIN, CLIP function are on the control desk.

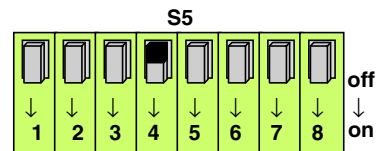
The remote mode is active when the commutator 1 of S6 is low in position "On".



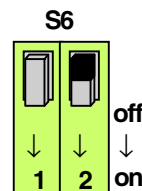
### 6) MASK function.

The MKR-100 "MASK" generator allows to define a delimited area for keying.

The "MASK" function is active when the commutator 4 of S5 is low in position "On".



To visualise the MASK push low the commutator 2 of S6.



In this case the image is black in regions where the MASK is active.

4 potentiometer RV5 to RV8 set the mask.







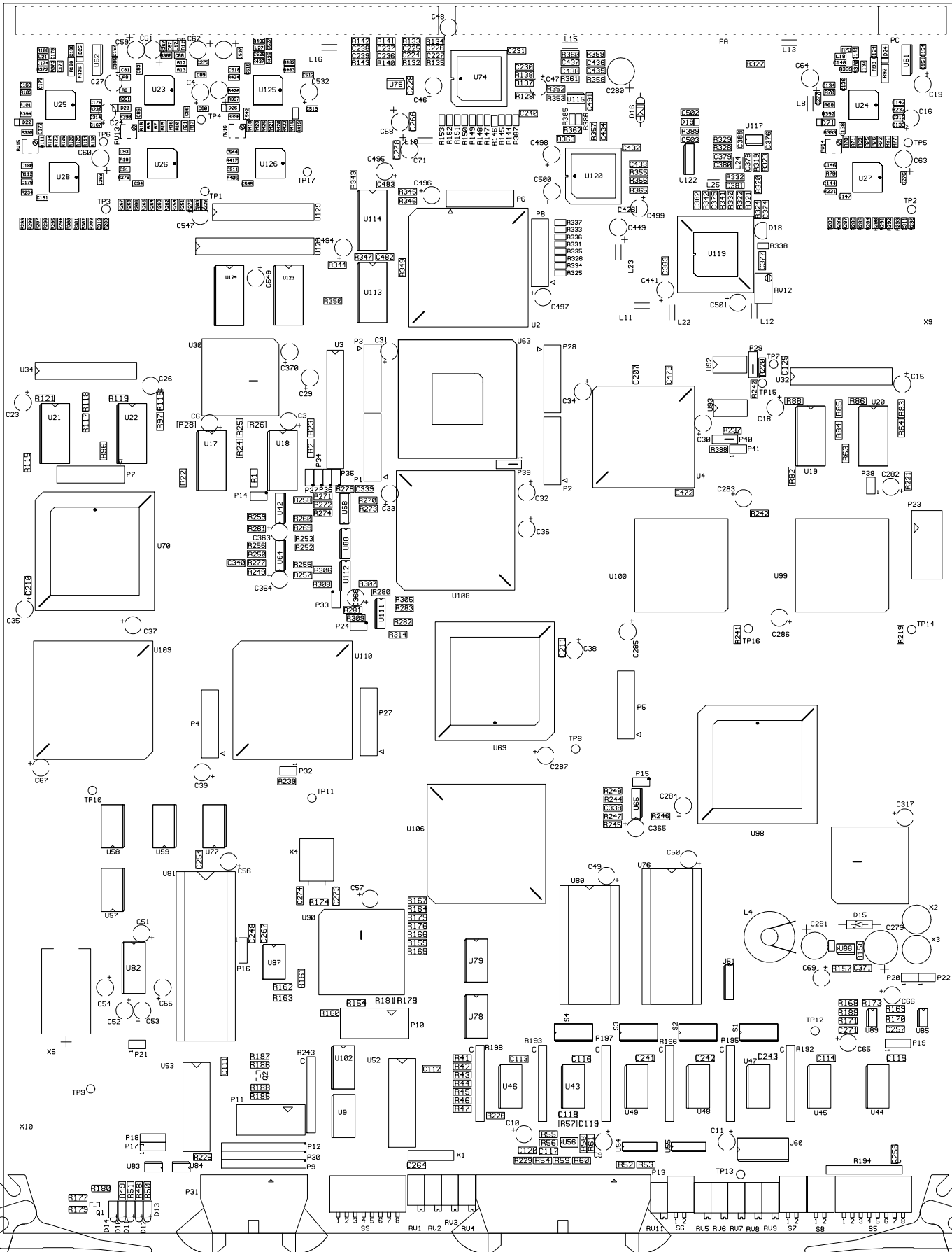






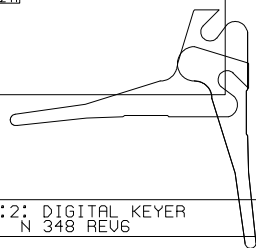
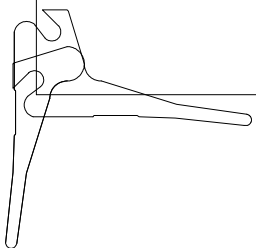






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SAU	PARIS	ING: STARKIER BELLU	DES: ROLLAND INCRSRT REV6
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