

Technical Description

IRIG-B Timecode Board
7230



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1 IRIG-B Timecode Board 7230

After selecting the IRIG-B function the following picture appears on display.

SELECT IRIG-B CLOCK 1 - 8 > <
COMP: U = UTC L = LOCAL I = INTERN E = EXTERN

By selecting the board number (1-8) one out of a maximum number of eight IRIG-B decoder boards can be addressed.

In the second line of the display appears a list of the available orders to control the IRIG-B board. If you want to address the first IRIG-B board in the system you must press key "1".

The display now shows the actual setting of the IRIG-B board 7230 including the time.

number of selected board		selected time local / UTC	selected time base internal / external	
↑ ↓		↑ ↓	↑ ↓	
1. IRIG - B	TIME CODE	LOC	INTERN	Command
12.34.56	DAY 256	C1: 00	C: 00	C3: 00 > <
↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓
time	day of the year	control words		entry

By pressing "U" and "ENT" the IRIG-B output changes to UTC.

Pressing "L" and "ENT" changes the IRIG-B board to local time output.

When pressing "E" and "ENT" the reread time on the IRIG-B board is displayed. **EXTERN** appears on display without stating **LOC** or **UTC**.

2 IRIG-B Information

2.1 System Structure

The IRIG-B board contains 2 independent μ P-systems.

- System 1 serves to code the IRIG-B time information
- System 2 serves to decode the IRIG-B data string (optional)

2.1.1 System 1 - code

The base system distributes the DCF77 synchronized time information plus some additional status values to the internal bus one second in advance. System 1 takes this information and transposes it into the IRIG-B code also one second in advance. Exactly on the next second change this data string is transmitted at millisecond intervals to a 1 kHz carrier frequency.

The carrier amplitude is reduced according to the IRIG-B code. The modulated carrier is put out via a BNC-connector on the board while the TTL-data string is available at the clamp. By means of a potentiometer the whole carrier amplitude can be adjusted from $0,5 V_{SS}$ to $3 V_{SS}$. The output impedance is 50 Ohm.

2.1.2 System 2 - decode

(This system is not implemented at present. It can be requested by requirement.)

System 2 runs independent from system 1. Via another BNC-Connector a modulated IRIG-B carrier can be sent to the system. It is decoded and displayed in the IRIG-B position.

It is therefore possible to put out the actual IRIG-B time and display a different IRIG-B time (e.g. audio tape) simultaneously.

The input amplitude may range from $0,25 V_{SS}$ to $3 V_{SS}$. The input impedance is 50 Ohm.

Are several IRIG-B boards present in the system, a display of the individual times is not possible.

3 System Test

The **hopf** IRIG-B board can be used to carry out a system test. For this test the inputs and outputs (IN a. OUT) must be connected with a BNC cable.

Also the time base in the IRIG-B menu must be set to EXTERN.

This test checks if the put out time information is interpreted correctly.

4 Technical Data

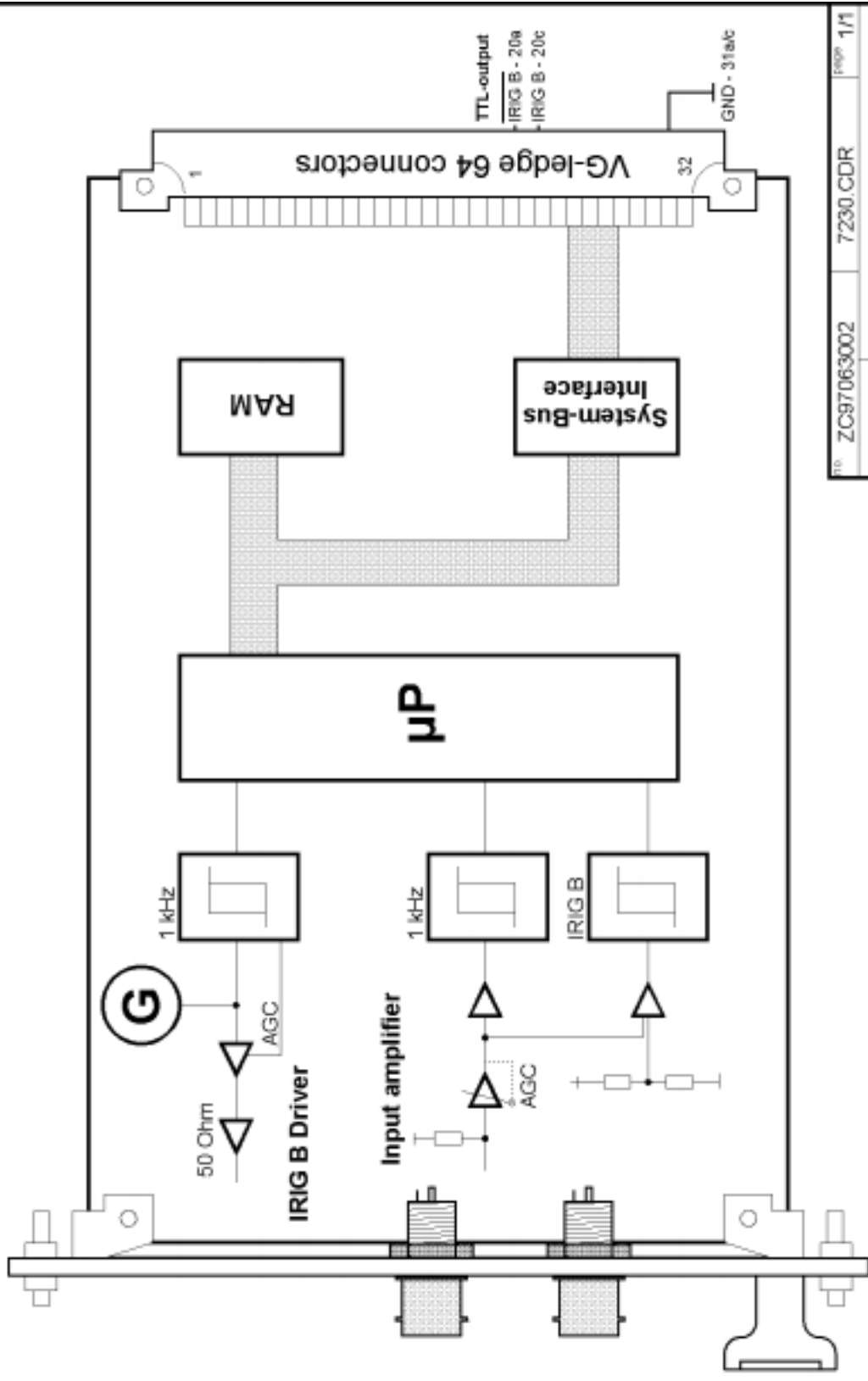
max. permissible ambient temperature :	0 ... +55°C
IRIG-B output impedance :	50 Ohm ¹
IRIG-B output amplitude :	0,5 - 3 V _{ss}
IRIG-B input impedance :	50 Ohm ¹
IRIG-B input amplitude :	0,25 - 3 V _{ss}
IRIG-B TTL output :	24 mA
max. cable length:	30m RG58/RG59

Other specifications: soft- and hardware alterations according to customer's specifications are possible



Please note : The **hopf** Company withhold the right to alternations in specifications of soft- and hardware without notice.

¹ only with ideal conditions (no interference's by HF cables, power cables etc.)



TO	ZC97063002	7230_CDR	SEPP 1/1
7230 block diagram			
DATE	30.06.97	SYSTEM	
NAME	Vollmer		
SIZE	A4		
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