



# ***Radiometer Physics GmbH***

RPG Radiometer-Physics GmbH - Birkenmaarstr. 10 - 53340 Meckenheim

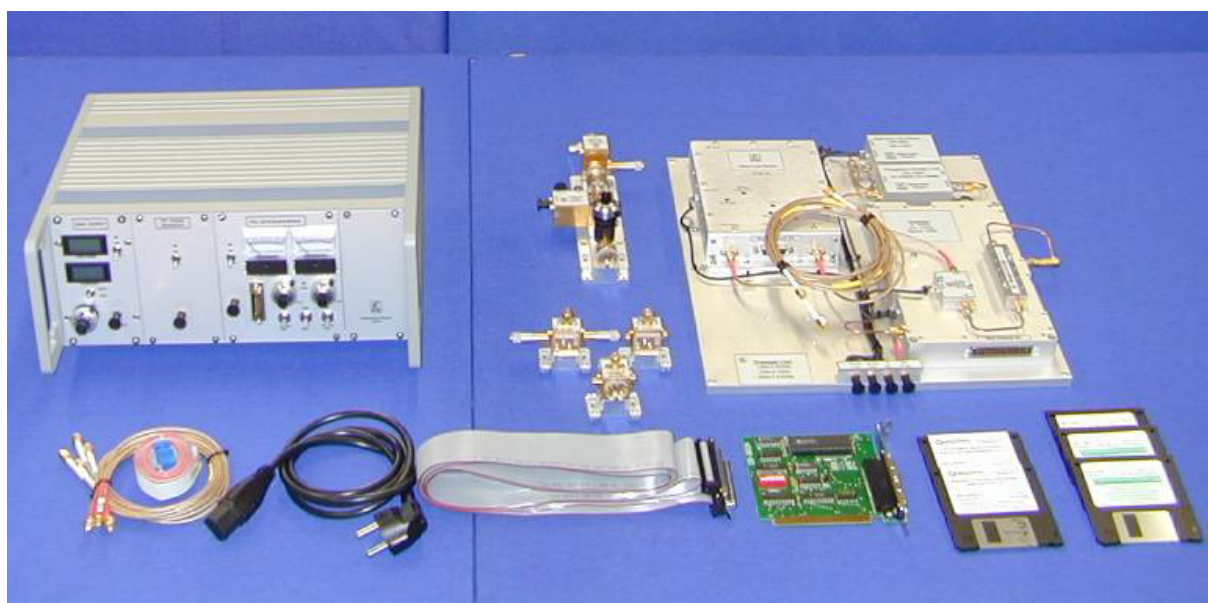
Telefon: 02225/999810 Telefax: 02225/9998199

E-mail: radiometer.physics@t-online.de

## ***Transmit System***

***$140 \pm 2.5$  GHz,  $280 \pm 5$  GHz***

***$420 \pm 7.5$  GHz***



***Projekt: 2000/111***

***Datum: 7.6.2001***

# **Synthesizer setup**

## **1. Preparation of the I/O-Boards CIO-DIO24**

See installation guide CIO-DIO24 from ComputerBoards, Inc.  
(take the 32-Bit version).

Base address : any free address in your PC (for example 300H)  
(set dipswitches as described in the installation guide)

Interrupt level : None (set jumper to X)

wait state : disable (set jumper to off)

After card installation, turn on the PC.

## **2. Installation of the software „Instacal“ (3 Disc´s) (under Windows 95 / Windows NT)**

Follow the installation procedure, as given in the software.  
Generate an icon on your Desktop.  
Call up the Software.

- a) Hit the button „Add board“
- b) Choose under the rubric „ISA“ the board „CIO-DIO24“
- c) Hit the Add-Button  
→ The board will be installed as „board #0“

Close the program.

## **3. Installation of the software „Exe. Q0420 Control“ (1 Disc) (under Windows 95 / Windows NT)**

Follow the installation procedure, as given in the software.  
Generate an icon on your Desktop.  
(for example: Q0420 Control(1))

A.) Call up the control software (Q0420 Control(1)).

- a) The window „Five RadioButtons.vi“ appears with the question:

„Will this PC be controlling two Qualcomm Evaluation Boards simultaneously ?“

→ choose „No“

b) Now choose the programming mode

→ choose the „Eight bit Bus mode“ (the button will be highlighted white)

→ Hit the execute-Button

c) The window „Eight bit Bus mode“ will appear with the questions:

„Do you want to review the jumper configurations ?“

→ choose „No“

„Do you want to operate in Q3036 Mode?“

→ choose „No“

„Connect JP7 pin1 and pin2“

→ hit the Ok-Button

Set the following values in the programm.

a) Set the reference Frequency to 10 MHz.

b) Set the phase detector to 0,25 MHz.

c) Set the output frequency (see oscillator data list)

You are now able to control the synthesizers with your PC.

## **Connecting the System**

1) Connect the cables in the following succession:

- a) 15-pol. Ribbon cable  
PLL DC & Control Modul P1 ↔ Power / Control P1
- b) 37-pol. Ribbon cable  
Plug-In-Card DIO24 ↔ PLL Control P2
- c) SMA-cable  
Bias-Supply ↔ Bias H-Mix
- d) SMA-cable  
+15V PLL DC & Control Module ↔ PLL;Ref +15V
- d) SMA-cable  
+15V DC-Supply ↔ Syn; Ref +15V
- e) SMA-cable  
IF-Mon ↔ Spectrum Analyzer

2) Turn-on the system

- a) Turn-on the power supplies  
„+15V PLL DC & Control Module“  
„+15V DC-Supply“
- b) Adjust the voltage of the Bias Supply (H-Mix) to  $\geq +1\text{V(DC)}$   
Turn on the Bias Supply.
- c) Turn on the synthesizer (see Synthesizer setup).

Now your are able to use the system !!!