CG Antenna

SB-1000 Link-All-3.0

USB Radio interface

Operating Manual

Take care: the 9-pin sub D connector is NOT a serial interface!
READ this manual!

Achtung! die 9-polige Buchse ist KEINE serielle Schnittstelle!
Bitte lesen Sie diese Anleitung.

Distributed by:

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FEATURES

- **Connect your computer with USB port. No need for a serial or parallel port.**
  Most of Radio programs are built based on COM serial port of PC computer. But most latest PC computers don't have a serial port.

- **USB to UART bridge by CP2102 single chip. USB 2.0 compliant. Full speed.**
  To be compatible with the legacy radio program, we still have to keep using serial port. That's why we choose to use USB to UART bridge which converts the USB to serial port. CP2102 is a very reliable industry single-chip USB to UART bridge.

- **CAT, CI/V controller and audio transformer are combined together. Switch DTR/RTS, PTT/CW on the front panel to avoid conflict.**
  No sophisticate software setting. Very clearly operate from reachable setting on the control panel.

- **Complete isolation between computer and radio station.**
  1. Optical isolation used for digital signal.
  2. Audio signal isolated 1:1 transformer. It has internal static isolation. Excellent EMC(Electromagnetic compatibility)

- **Operated by computer USB power. No need extra power supply.**
  When you are in your expedition or mobile, you will not have extra power headache with SB-1000. It uses the power from your computer's USB port.

- **Very compact size, easy to carry.**
  Weight less than 500 grams. Pocket size only.

- **Supply with full accessories.**
  It comes with USB, CAT or CI/V, Data and audio cables. No need extra investment.

FUNCTIONS

SB-1000 links your radio transceiver with the computer.

- **Control radio operation via CAT, CI/V.**
  You can control your radio if it supports CAT or CI/V protocol from your computer.

- **Operate RTTY, PSK31, SSTV, FAX, etc. digital mode.**
  From your computer you can easily operate digital mode with proper software.

- **Transmit and receive CW.**
  If you want to be relax operate CW, you can choose to use software to send or receive CW. Use your computer keyboard instead of paddle or straight key. Read all received Morse code from your computer screen.

- **Support ECHOLINK to control remote station.**

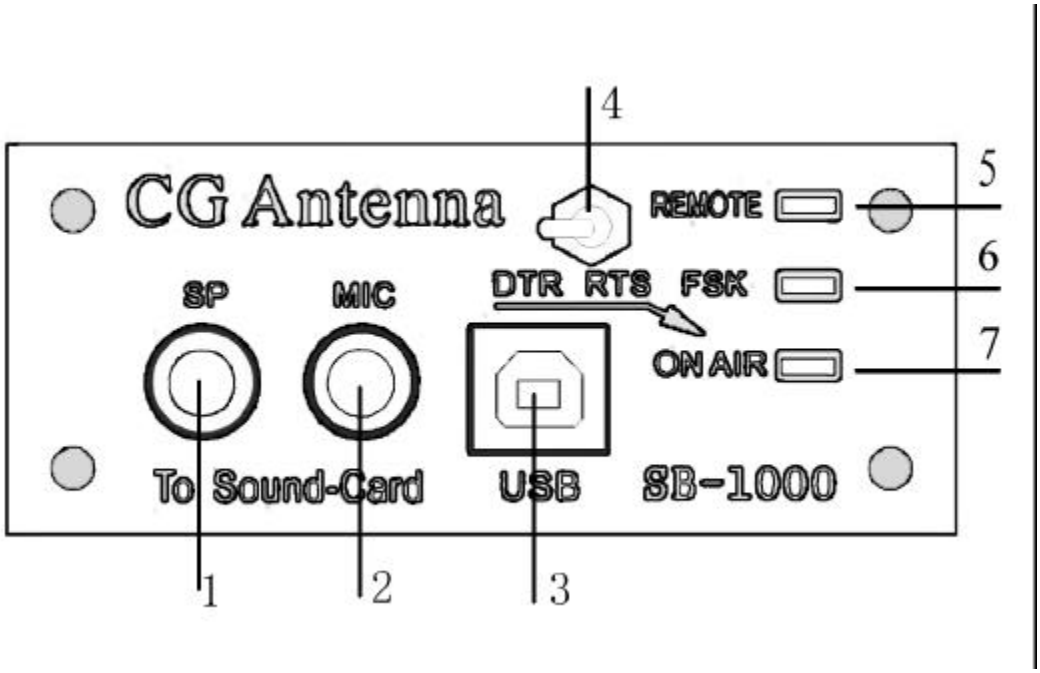
- **Record your SSB voice session.**

- **Easy switching DTR/RTS on the front panel.**

- **Support FSK operation.**

FRONT PANEL & CONTROL

Front panel has all the jacks and switch that link with the computer.
Diagram 1.



1. **SP** jack
   RCA type jack connects to line-out or speaker jack of computer sound card.

2. **MIC** jack
   RCA type jack connects to line-in or microphone jack of computer sound card.

3. **USB** jack
   The 4-pin USB B jack connects to the computer USB port.

4. **DTR/RTS** switch
   This switch defines the data signal coming from DTR or RTS of computer. You must set this switch according to software configuration. The FSK signal comes from RTS by default. But you can change a jumper to use DTR or TxD inside the box.

5. **REMOTE** indicator
   This indicator lights on when you are operating CI/V or CAT radio control.

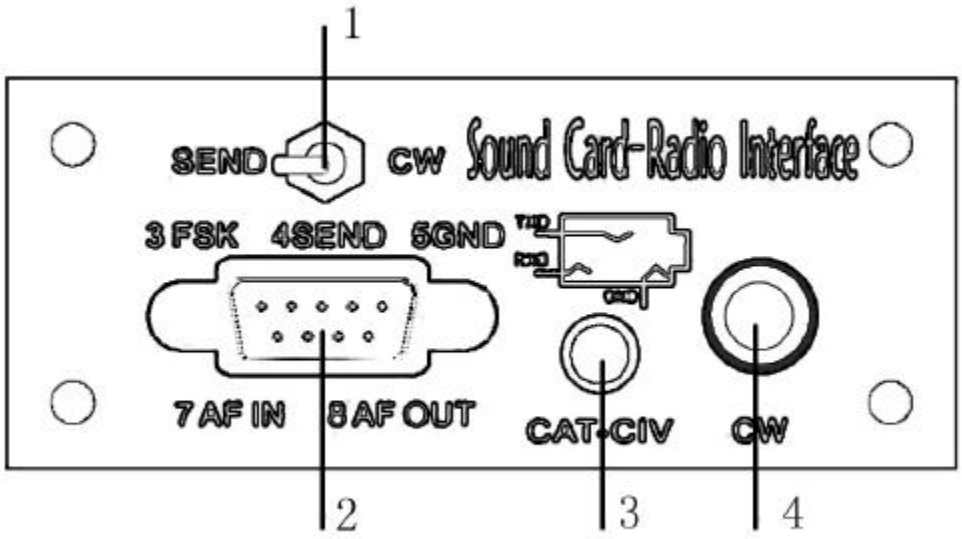
6. **FSK** indicator
   This indicator lights on when you are transmitting FSK signal.

7. **ON AIR** indicator
   It indicates when you are transmitting CW or PTT is engaged.

REAR PANEL & CONTROL

Rear panel has all the jacks and switch that link with transceiver.

Diagram 2.



1. **SEND/CW** switch
   This switch defines the control signal sending to transceiver. Switch to SEND for data mode. Switch to CW for CW mode.

2. 9-pin serial port
   This 9-pin male DE-9 jack connects to data port of transceiver.
   Port definition: *(starts from left above)*
   Pin 3: FSK
   Pin 4: PTT control signal
   Pin 5: Ground
   Pin 7: Audio in
   Pin 8: Audio out

3. **CAT/CIV** jack
   This jack connects to computer control port of transceiver. So called CAT or CI/V port according to different brand transceiver.
   e.g. YAESU uses CAT. ICOM uses CI/V

4. **CW** jack
   This jack connects to CW key jack of transceiver.

HARDWARE INSTALLATION

Cable connection
Please use the suitable cables that are provided by CG Antenna (see below). Most cables of modern transceiver are available. If you want to make your own cable, please read the port specification first.

Front panel to computer
The SP jack must be connected to speaker or line-out port of computer's sound card.

The MIC jack must be connected to microphone or line-in port of computer's sound card.

USB jack is connected computer's USB port.
*It should be connected **after** software driver is installed.

Rear panel to transceiver
9-pin sub-D connector is connected to data (audio) port of transceiver. This is NOT a serial interface connector!

CAT/CIV is connected to CAT or CI/V port of transceiver.

CW jack is connected to CW keyer port of transceiver.

SOFTWARE INSTALLATION

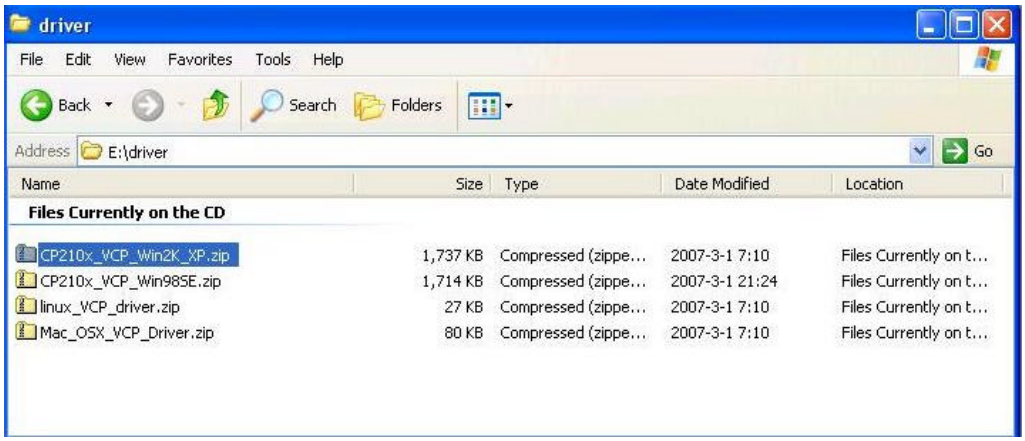
SB-1000 comes with software driver for Windows 98, 2000/XP(Vista is not supported at this moment), Mac OS X and Linux.

Computer system requirement
CPU: Intel P3 500 MHz
RAM: 256MB
CD-ROM
At least 1 USB 1.1 port and a sound card.

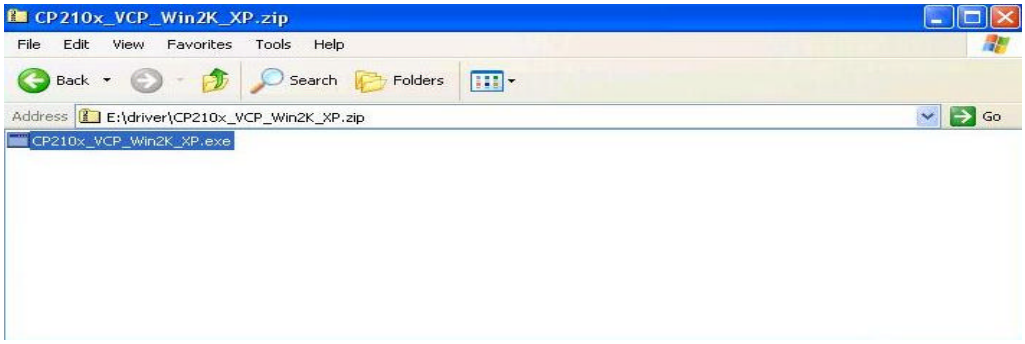
Installing software driver on Windows XP

** Please do not connect SB-1000's USB cable to the computer at this moment*

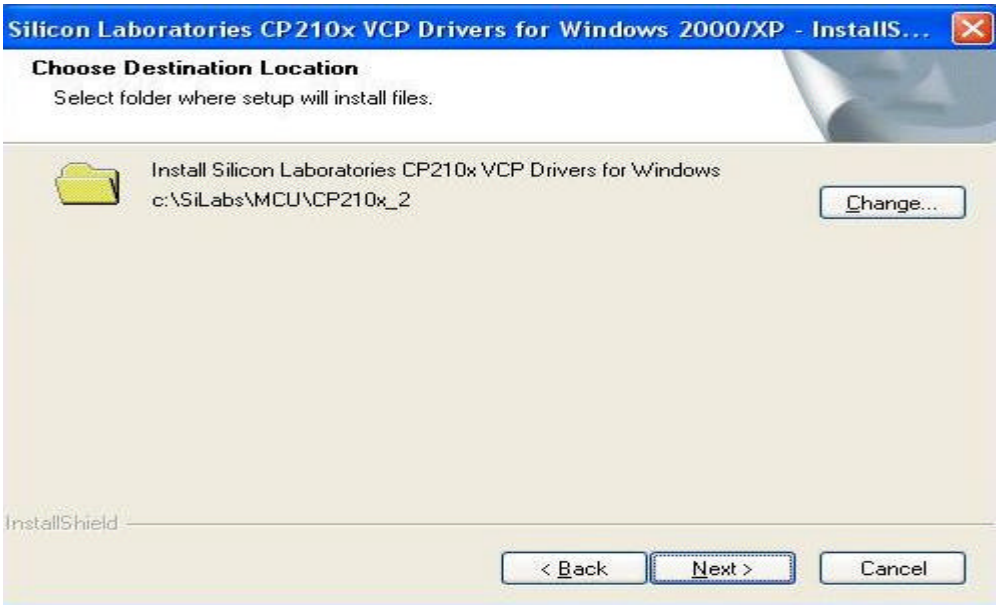
- Insert installation CD into CD-ROM
- Click 'My Computer' , Click the icon your CD driver. E.g.: E:\
- Double click e:\driver\CP210x_VCP_Win2K_XP.zip



- Double click CP210x_VCP_Win2K_XP.exe



Default: the installation program will install the driver files into c:\SiLabs\MCU\CP210x_2, you can choose different directory.

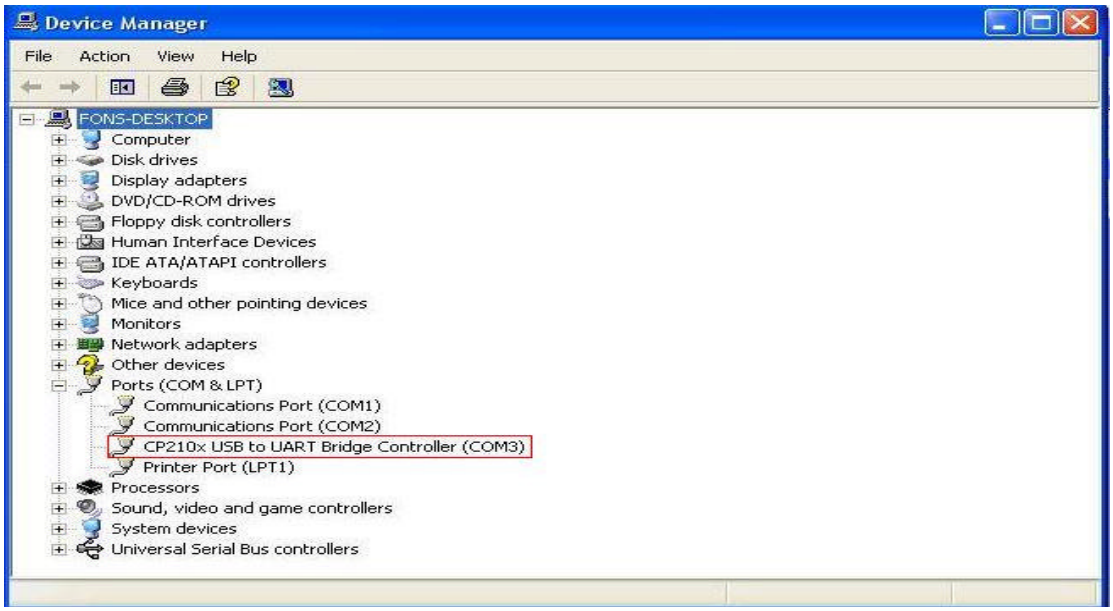


- Click c:\SiLabs\MCU\CP210x\Win2K_XP\PreInstaller.exe and click 'Install' button.

Now connect the SB-1000 to your computer's USB port via USB cable. The system will detect it.

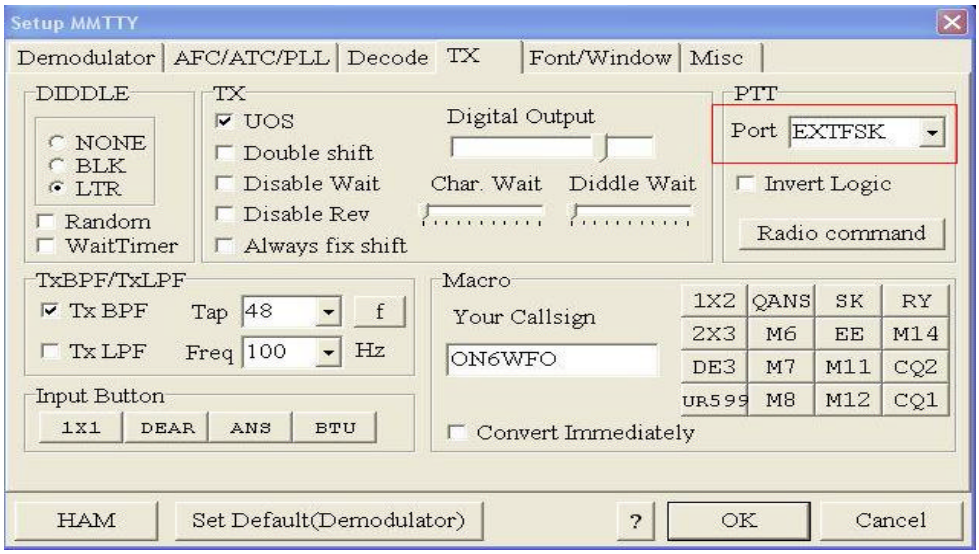
Check COM port configuration

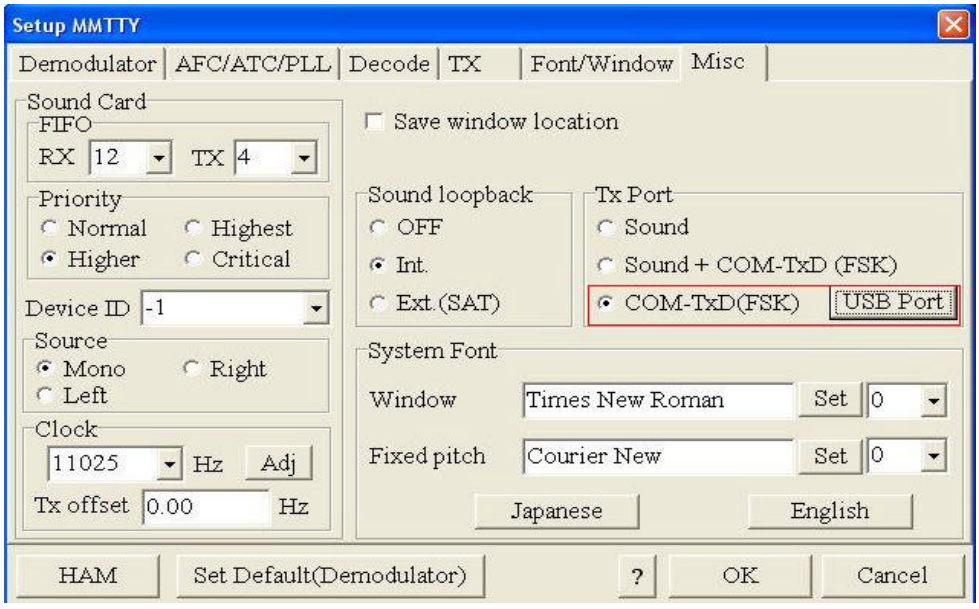
In the Control Panel -> System -> Hardware -> Device Manager
You will see a new port be added.



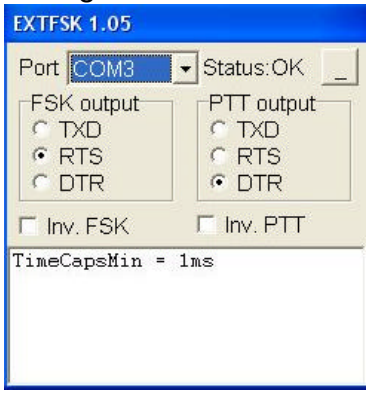
Now you can setup your radio program to use this port to operate.

** If you use MMTTY and you want to transmit in FSK mode, you have to install the COMFSK plug-in. Please refer the detail installation to MMTTY's manual.*





Configure the EXTFSK to use correct port, RTS for FSK output(by default)

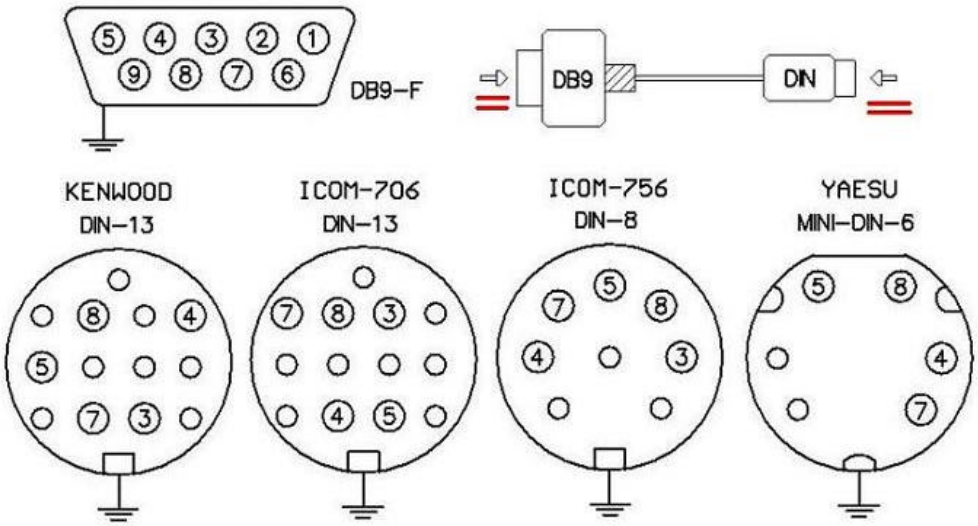


CABLE SPECIFICATION

1. SP & MIC cable
It is a RCA to 3.5 mm audio jack cable. The impedance of the jack is 600 ohms.

2. USB cable
The 4-pin B to 8 pin USB cable.

3. DB-9 to data port of transceiver cable
Different cables are available:



4. CAT/CIV cable
- For yaesu transceiver, it is a 3.5 mm audio jack to 8-pin mini-DIN jack cable.
- For ICOM transceiver, it is a 3.5 mm to 3.5 mm audio jack cable.

5. CW cable
The connector to SB-1000 side, the inner din represents 'key', the shield represents 'ground'.

WARRANTY

CG antenna warrants SB-1000 against defects in material for a period of TWO (2) year unless otherwise indicated.

The warranty does not cover damage, improper use, abuse, or conditions beyond our control (i.e. lightning).

CG Antenna assumes no liability or responsibility for damage to other devices or injuries to persons as a consequence of using our products.

If you don't accept the terms of the above warranty, please return the products in the original package to your reseller for refund (doesn't include the shipping or possible restocking charge).

SERVICE

If you have any problem of your CG product. Please contact your local sales directly. Then we can arrange the repair service.
If return for repair is needed, please wrap and pack your unit well to protect damage during transportation or handling. Include a note with your name, address, phone number, email and brief description of the problem.
**CG antenna and our distributors can not be responsible for unit lost or damage in shipping.*

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