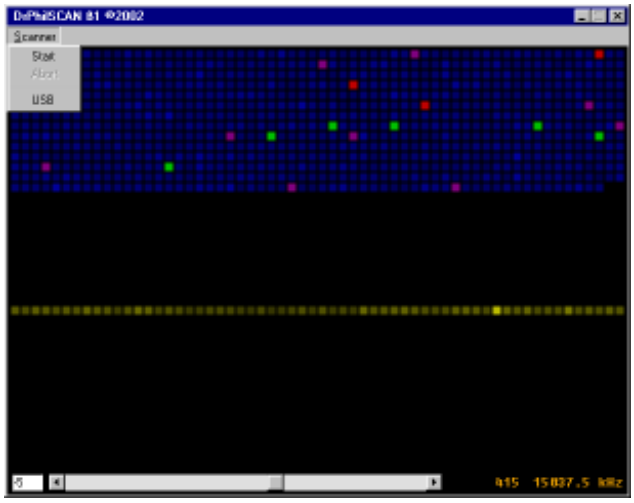
See comments at end. This software had no general released.

PhilSCAN Beta 1 FAQ



Disclaimer:

This software is provided "as is" without any warranty of any kind. In no event shall the programmer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of the software. Please report software bugs.

Section I: Introduction

PhilSCAN is a world band scanner covering the entire AM broadcast spectrum from 120 meters to 11 meters. Want to know what is on without checking schedules? After a simple 2.5 minute scan PhilSCAN will inform you. Think of PhilSCAN as your own personal assistant who “listens” to every frequency for activity. It can do in minutes what would take you over 3.5 hours. PhilSCAN can be used for dxing, it can detect very weak signals.

For those technically curious: PhilSCAN is ~50k stand-alone executeable using Win32 system calls. The program utilizes x86 assembly to do real-time DSP spectral analysis using fourier theory (calculus). Ham, air, and ship will be incorporated later.

Section II: Setup

To use PhilSCAN you will need:

- A Windows OS computer.
- An RS232C cable (Radio Shack #26-117B or equivalent).
- An audio patch cable (connect ‘REC’ out to your soundcard input).

Note: The proper input device MUST be selected under ‘Master Volume Control’ using Options -> Properties -> Recording. Turn the “level” down and mute the volume.
Note: Access this via double clicking on the speaker icon (lower right corner, under time).

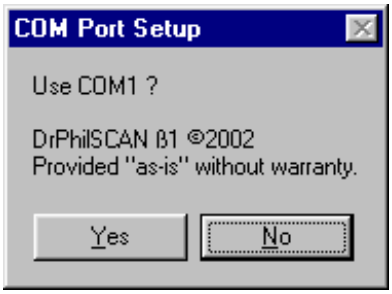
R75 ‘SET’ mode values:

- Set 'CIV Adr' to '5A'.
- Set 'CIV BAUd' to 'HI’.
- Set 'CIV TRn' to 'on'.
- Set 'CIV 731' to 'oF'.

Start the program using one of the following methods:

- Right click on the desktop and use New -> Shortcut -> Browse to locate "PHILSCN1.EXE".
- Press Start -> Run -> Browse and locate "PHILSCN1.EXE".
- Type PHILSCN1 and hit "ENTER" at the DOS prompt.

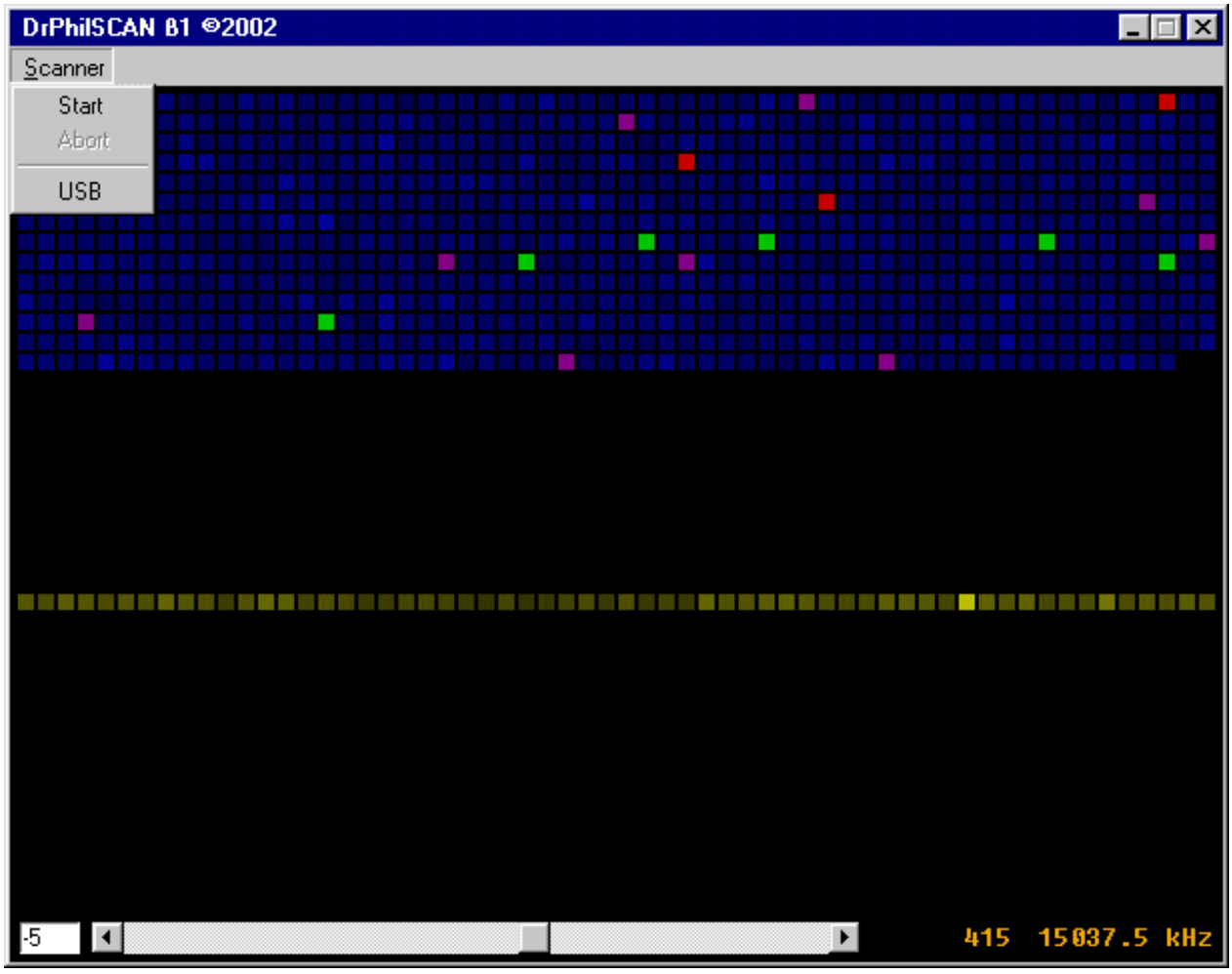
Note: A series of screens will allow selection of a COM port for RS232 communication.



Note: This program is free, copyrighted, and provided "as is" without any warranty.

Main screen:

After the COM setup the main screen (similar to below but blackened) will appear and PhilSCAN will apply power to the R75. Please refer to the picture below for all subsequent explainations.



Section III: Preparing to Scan

Recommended Settings:

The RF gain, ATT, and P.AMP settings will heavily effect results, so experiment. A good starting point is ATT 'off', P.AMP 'off', and RF gain at about 11 o'clock.

- PBT's at 12 o'clock (straight up).
- NB off.
- NR (experiment).

Note: During scanning the radio will control the mode, AGC, and ANF.

Section IV: Scanning and Aborting

Scanning is started by pressing Scanner -> Start. The volume will be muted until completed. The blue blocks allow progress to be viewed. **DO NOT USE THE CPU**: Avoid changing controls or using the computer for anything during the scan. A 300 MHz CPU or greater is recommended. To abort a scan press Scanner -> Abort.

Note: Press Scanner -> USB to leave the radio in USB mode following a scan, SAM is the default setting.

Section V: Mouse Controls

Single Left Mouse Click causes the radio to change station to that of the touched block. The frequency will be displayed in the lower right corner of the screen along with the relative signal strength.

Double Left Mouse Click causes a single line to be scanned in yellow. The radio returns to its prior station following the scan. Multiple single scans can be used for dxing a region, looking for signals as they pop up.

Note: Touching the scroll bar and other events may return the screen color to blue.
Note: If the screen disappears (rare), simply minimize and then maximize the screen.

Single Right Mouse Click causes PhilSCAN to show the first 10 highest signal strenghts. Subsequent presses show the next 10 and so on.

Note: Purple squares indicate signals stronger than current set (aka previously shown).
Note: Green squares indicate centered signals.
Note: Red squares indicate non-centered signals.

Double Right Mouse Click returns the screen to blue (resets).

Section VI: Other Controls

The small square in the lower left corner is for entering an offset. This offset, in hertz, is for SSB usage (display inaccuracies) and can be either positive or negative.

The scroll bar at the bottom of the screen controls the lighting. This is VERY useful for visually seeing which signals are the strongest. After a scan this should be the first thing you adjust. **DO NOT TOUCH THIS DURING SCANNING**: It will tie up the CPU.

AUTHOR'S NOTE:

I would like to thank everyone who beta tested this program. I hope that PhilSCAN will increase the usefulness of your R75 and help you find not only what is on "right now" but also that elusive dx. The R75 community is our greatest asset. If you have a question or comment write me at just_rtfm<NO SPAM>@yahoo.com. dr phil :)

'Your powers are weak old man.'

[EOF]

I am extremely pleased with Tecsun's ETM or Easy Tuning Mode.
In 2002 I designed something similar in a program called PhilSCAN.
This software used an RS232 cable and CIV to control the ICOM IC-R75.
The R75's audio was then fed into the computer's soundcard for FFT processing.
Fast Fourier Transforms allowed the program to mathematically see carriers.
Basically the software searched for and measured the amplitude of carriers.
The executable and the above PDF were given to several beta testers.
A general release was dropped due to concerns over debugging.
PhilSCAN and the PL-390 need ~2.5 minutes to scan SW.

just_rtfm@<NOSPAM>yahoo.com
http://home.comcast.net/~phils_radio_designs