Old Stuff – Broadcasting

Category: Old Stuff
January 30, 2019

All About FM

This week we have a couple of documents from the early 1940's explaining FM. At this time FM was very, very new. It had the benefit of reducing the noise one would hear on AM. A lot of work went into convincing the world that FM was the way of the future.
1941-All about FM (3 MB)
1941-GE FM Primer (4 MB)

AM Broadcast Transmitters

Some classic (and one BIG) broadcast transmitters.
Raytheon RA-250 Popular with 250 watt small town, low budget stations (1.2 MB)
Bauer 707 Popular with the 1KW day / 250 night stations. Offered as a kit! (2 MB)
Continental 105C A 1,000 KW transmitter! (8 MB)

The Story of Stereo 1960

From 1960 the story of stereo from having two ears to stereo LP's and FM!
The Story of Stereo 1960 (8 MB)

Old Stuff – Catalogs

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Allied Radio Catalogs

PDF of the 1969 Allied Radio Catalog (50 MB)

Radio Shack Catalogs

So what exactly is a Meissner Signal Shifter? What did it cost? How about a 2 and one half meter transceiver? And where could you buy one in 1946? Guess what? Radio Shack. THEY SOLD RADIOS! And they had a radio shack.
Radio Shack Catalog 1939 (6 MB)
Radio Shack Catalog 1946 (11 MB)
1986 Radio Shack (20 MB)

Lafayette

1968 Lafayette Radio Electronics (16 MB)

Heathkit

1976 Heathkit (71 MB)

WiRES-X Automation

Category: Automation,Projects,WiRES-X
January 30, 2019

Yaesu does not provide a mechanism that allows the WiRES-X software to be controlled by another program, i.e., having another program switch to a certain Room when a net starts.

Windows does, however, permit another program to send events to a program. Each window, menu item, and dialog in a Windows program has a unique identifier. It is possible to use these identifiers to send “message” to the WiRES-X software.

The WiRES-X Automation Project’s purpose is to bring together people who are interested in developing this technology and sharing their results.

To get things going, here are two mechanisms for automating WiRES-X:

1. AutoIT: http://www.autoitscript.com
2. Python – an excellent programming language found at python.org

Dave, N9TOW, provided the following information:

Packages I have installed on my WiresX system.
C:\Users\WiresX>pip list
comtypes (1.1.3)
pip (9.0.1)
pypiwin32 (220)
pywinauto (0.6.3)
setuptools (28.8.0)
six (1.10.0)
https://github.com/pywinauto/pywinauto

To install

pip install -U pywinauto

Script that executes changing channels on WiresX app

```
import time
from pywinauto import Application
  app  =  Application().connect(path="C:\Program  Files (x86)\YAESUMUSEN\WIRES-X\wires-X.exe")
app.WiresX.menu_select("Connect(C)->Connect To(T)")
time.sleep(1.5)
app.InputID.Edit.set_edit_text("21493")
time.sleep(.5)
app.InputID.OK.click()
time.sleep(4)
dialogs = app.windows()
##app.Dialog.CloseButton.click()
```

Python Program

Bill, W9LBR, developed a Python program that runs on the WiRES-X computer. The software has been updated as of 12-Feb-2024. See more here.

This is from his description:

WXscheduler.pyw is a Python 3 program that automates certain aspects of
Wires-X Room/Node connections according to a userrdefined schedule.
To that end WXscheduler.pyw must be run on the same Windows PC that hosts the Wires-X application controlling either an HRI-200 or
a USB connected radio that supports PDN operation.

Schedulable operations:
– Connect

– Disconnect
– SetUnlimitedTOT
– SetTimeoutTOT
– Restart Wires-X App

Manual operation: Button that causes a Force Disconnect

Bonus operation: Displays Last Heard information that the Wires-X app
updates once a minute. Converting Lat/Lon into Grid Square if available.

A zip file containing instructions and the Python program is available at WXScheduler.

Update History

2 June 2023 v1.3 updates: – Last Heard now displays FT5-D, FTM-200, and FTM-500 correctly – Desktop\Wires-X_Last_Heard.html now generated to be viewed with PC browser

12 Feb 2022 updates: – Corrected grid square rendering of GPS coordinates as displayed in the Last Heard frame – version (v1.2) now displayed in main window title

5 Feb 2022 minor updates: – Fixed Last Heard display of recently manufactured FT70-D radios – WXscheduler.txt is now in DOS format, making it easier to read with Notepad 2022 version of WXscheduler.pyw – A scheduled event now performs multiple actions – Added File->Settings->Call settings actions – Fixed issue when Wires-X App is minimized – Fixed issue when Wires-X Settings window left open

DV4mini Fusion Monitor Program

Category: Hotspots,Projects
January 30, 2019
This program uses a DV4mini to monitor over-the-air Fusion signals and display the meta data (does not display voice, pictures, messages, etc.)

This version of the program will output a record when a station keys up and then another record when the station unkeys. I've done this so that the user doesn't get overwhelmed with all of the meta data that is produced.

You'll need to review the Yaesu Digital Communication Standards document to understand what the different fields mean.

Computer Requirements: Windows 7 or later

Program Installation

1. Download the program from this link: DV4mini YSFMonitor.
2. Create a directory on your Windows PC and unzip this folder into that directory.
3. Download and install the Microsoft Visual Studio 2017 redistributable for your machine

Running the Program

1. Open a command box (type cmd) and change to the directory in which you installed the software.
2. Check the program: Type VSFRX.exe -v. It should respond with the version number.
3. User Device Manager to determine the com port of your DV4mini.
4. Enter frequency and com port as follows: YSFRX.exe com7 444525000

Note that the frequency must be entered as 9 digits.
5. A log file will be created in the same directory as the program.

Output Example from the 30-Apr-2018 Net

```
M: 2018-05-01 01:01:30.338 DV4mini version: V01.77
M: 2018-05-01 01:01:30.338 YSFRX-20180430 K9EQ starting
M: 2018-05-01 01:01:33.646
M: 2018-05-01 01:01:33.646 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 6 SQ: 0 SC: 0
M: 2018-05-01 01:01:33.646 Terminator, CSD1
M: 2018-05-01 01:01:33.646 0000: 2A 2A 2A 2A 2A 48 35 35 37 56
57 38 4F 4A 2D 20 20 20 20 20 ******H557VW8OJ- *
M: 2018-05-01 01:01:33.646 Terminator, CSD2
M: 2018-05-01 01:01:33.646 0000: 4B 39 45 51 20 20 20 20 20 20
57 38 4F 4A 20 20 20 20 20 20 *K9EQ W8OJ *
M: 2018-05-01 01:01:36.748
M: 2018-05-01 01:01:36.748 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:01:36.748 Header, CSD1
M: 2018-05-01 01:01:36.748 0000: 2A 2A 2A 2A 2A 46 30 58 49 4B
4B 44 38 47 52 4E 20 20 20 20 ******F0XIKKD8GRN *
M: 2018-05-01 01:01:36.748 Header, CSD2
M: 2018-05-01 01:01:36.748 0000: 4B 39 45 51 20 20 20 20 20 20
4B 44 38 46 4A 48 20 20 20 20 *K9EQ KD8FJH *
M: 2018-05-01 01:01:43.742
M: 2018-05-01 01:01:43.742 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:01:43.743 Terminator, CSD1
M: 2018-05-01 01:01:43.744 0000: 2A 2A 2A 2A 2A 46 30 58 49 4B
4B 44 38 47 52 4E 20 20 20 20 ******F0XIKKD8GRN *
M: 2018-05-01 01:01:43.745 Terminator, CSD2
M: 2018-05-01 01:01:43.745 0000: 4B 39 45 51 20 20 20 20 20 20
4B 44 38 46 4A 48 20 20 20 20 *K9EQ KD8FJH *
M: 2018-05-01 01:01:48.921
M: 2018-05-01 01:01:48.921 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:01:48.921 Header, CSD1
M: 2018-05-01 01:01:48.921 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A
```

57 36 5A 44 52 20 20 20 20 20 **********W6ZDR *
M: 2018-05-01 01:01:48.921 Header, CSD2
M: 2018-05-01 01:01:48.921 0000: 4B 39 45 51 20 20 20 20 20 20
44 55 31 5A 44 52 20 20 20 20 *K9EQ DU1ZDR *
M: 2018-05-01 01:01:59.513
M: 2018-05-01 01:01:59.513 FICH: FI: HC, DT: VD1, BN: 0, BT: 1,
FN: 2, FT: 6 SQ: 0 SC: 0
M: 2018-05-01 01:02:00.317
M: 2018-05-01 01:02:00.317 FICH: FI: TC, DT: VD2, BN: 3, BT: 1,
FN: 3, FT: 3 SQ: 0 SC: 27
M: 2018-05-01 01:02:01.717
M: 2018-05-01 01:02:01.717 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:01.717 Terminator, CSD1
M: 2018-05-01 01:02:01.717 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A
57 36 5A 44 52 20 20 20 20 20 **********W6ZDR *
M: 2018-05-01 01:02:01.717 Terminator, CSD2
M: 2018-05-01 01:02:01.717 0000: 4B 39 45 51 20 20 20 20 20 20
44 55 31 5A 44 52 20 20 20 20 *K9EQ DU1ZDR *
M: 2018-05-01 01:02:02.483
M: 2018-05-01 01:02:02.483 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:04.203
M: 2018-05-01 01:02:04.203 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:04.203 Terminator, CSD1
M: 2018-05-01 01:02:04.203 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A
4B 44 38 41 47 4F 4A 4F 48 4E **********KD8AGOJOHN*
M: 2018-05-01 01:02:04.203 Terminator, CSD2
M: 2018-05-01 01:02:04.203 0000: 4B 39 45 51 20 20 20 20 20 20
41 44 30 4D 49 20 20 20 20 20 *K9EQ AD0MI *
M: 2018-05-01 01:02:09.834
M: 2018-05-01 01:02:09.834 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 6 SQ: 0 SC: 0
M: 2018-05-01 01:02:09.834 Header, CSD1
M: 2018-05-01 01:02:09.834 0000: 32 31 34 39 33 47 30 32 7A 42
41 42 38 52 4C 2D 54 4F 4D 20 *21493G02zBAB8RL-TOM *
M: 2018-05-01 01:02:09.834 Header, CSD2
M: 2018-05-01 01:02:09.834 0000: 4B 39 45 51 20 20 20 20 20 20

41 42 38 52 4C 20 20 20 20 20 *K9EQ AB8RL *
M: 2018-05-01 01:02:19.424
M: 2018-05-01 01:02:19.424 FICH: FI: TC, DT: VD2, BN: 0, BT: 0, FN: 0, FT: 6 SQ: 0 SC: 0
M: 2018-05-01 01:02:19.424 Terminator, CSD1
M: 2018-05-01 01:02:19.424 0000: 32 31 34 39 33 47 30 32 7A 42 41 42 38 52 4C 2D 54 4F 4D 20 *21493G02zBAB8RL-TOM *
M: 2018-05-01 01:02:19.424 Terminator, CSD2
M: 2018-05-01 01:02:19.424 0000: 4B 39 45 51 20 20 20 20 20 20 41 42 38 52 4C 20 20 20 20 20 *K9EQ AB8RL *
M: 2018-05-01 01:02:23.581
M: 2018-05-01 01:02:23.581 FICH: FI: HC, DT: VD2, BN: 0, BT: 0, FN: 0, FT: 6 SQ: 0 SC: 0
M: 2018-05-01 01:02:23.583 Header, CSD1
M: 2018-05-01 01:02:23.584 0000: 32 31 34 39 33 45 30 50 71 61 4B 46 38 50 4D 2F 41 4C 41 4E *21493E0PqaKF8PM/ALAN*
M: 2018-05-01 01:02:23.584 Header, CSD2
M: 2018-05-01 01:02:23.584 0000: 4B 39 45 51 20 20 20 20 20 20 4B 46 38 50 4D 20 20 20 20 20 *K9EQ KF8PM *
M: 2018-05-01 01:02:37.296
M: 2018-05-01 01:02:37.296 FICH: FI: TC, DT: VD2, BN: 0, BT: 0, FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:37.296 Terminator, CSD1
M: 2018-05-01 01:02:37.298 0000: 32 31 34 39 33 45 30 50 71 61 4B 46 38 50 4D 2F 41 4C 41 4E *21493E0PqaKF8PM/ALAN*
M: 2018-05-01 01:02:37.298 Terminator, CSD2
M: 2018-05-01 01:02:37.299 0000: 4B 39 45 51 20 20 20 20 20 20 4B 46 38 50 4D 20 20 20 20 20 *K9EQ KF8PM *
M: 2018-05-01 01:02:51.164
M: 2018-05-01 01:02:51.165 FICH: FI: HC, DT: VD2, BN: 0, BT: 0, FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:51.166 Header, CSD1
M: 2018-05-01 01:02:51.167 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A 57 35 4C 4E 41 2D 4B 45 56 4E **********W5LNA-KEVN*
M: 2018-05-01 01:02:51.168 Header, CSD2
M: 2018-05-01 01:02:51.169 0000: 4B 39 45 51 20 20 20 20 20 20 57 30 4D 44 54 20 20 20 20 20 *K9EQ W0MDT *
M: 2018-05-01 01:02:57.665
M: 2018-05-01 01:02:57.665 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,

FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:02:57.667 Terminator, CSD1
M: 2018-05-01 01:02:57.668 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A
57 35 4C 4E 41 2D 4B 45 56 4E **********W5LNA-KEVN*
M: 2018-05-01 01:02:57.668 Terminator, CSD2
M: 2018-05-01 01:02:57.669 0000: 4B 39 45 51 20 20 20 20 20 20
57 30 4D 44 54 20 20 20 20 20 *K9EQ W0MDT *
M: 2018-05-01 01:03:00.908
M: 2018-05-01 01:03:00.908 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:03:00.908 Header, CSD1
M: 2018-05-01 01:03:00.908 0000: 2A 2A 2A 2A 2A 45 35 67 47 79
4B 31 4B 43 2D 50 4F 52 54 32 ******E5gGyK1KC-PORT2*
M: 2018-05-01 01:03:00.908 Header, CSD2
M: 2018-05-01 01:03:00.908 0000: 4B 39 45 51 20 20 20 20 20 20
4B 31 4B 43 20 20 20 20 20 20 *K9EQ K1KC *
M: 2018-05-01 01:03:07.414
M: 2018-05-01 01:03:07.414 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:03:07.414 Terminator, CSD1
M: 2018-05-01 01:03:07.414 0000: 2A 2A 2A 2A 2A 45 35 67 47 79
4B 31 4B 43 2D 50 4F 52 54 32 ******E5gGyK1KC-PORT2*
M: 2018-05-01 01:03:07.414 Terminator, CSD2
M: 2018-05-01 01:03:07.414 0000: 4B 39 45 51 20 20 20 20 20 20
4B 31 4B 43 20 20 20 20 20 20 *K9EQ K1KC *
M: 2018-05-01 01:03:29.710
M: 2018-05-01 01:03:29.710 FICH: FI: HC, DT: VD2, BN: 0, BT: 0,
FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:03:29.710 Header, CSD1
M: 2018-05-01 01:03:29.710 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A
4B 30 4F 52 4B 2D 43 48 55 4B **********K0ORK-CHUK*
M: 2018-05-01 01:03:29.710 Header, CSD2
M: 2018-05-01 01:03:29.710 0000: 4B 39 45 51 20 20 20 20 20 20
57 30 4D 44 54 20 20 20 20 20 *K9EQ W0MDT *
M: 2018-05-01 01:03:37.764 TIMEOUT
M: 2018-05-01 01:04:24.355 TIMEOUT
M: 2018-05-01 01:04:44.738 TIMEOUT
M: 2018-05-01 01:04:53.392
M: 2018-05-01 01:04:53.392 FICH: FI: TC, DT: VD2, BN: 0, BT: 0,

FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:04:53.394 Terminator, CSD1
M: 2018-05-01 01:04:53.394 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A 4B 30 4F 52 4B 2D 43 48 55 4B **********K0ORK-CHUK*
M: 2018-05-01 01:04:53.395 Terminator, CSD2
M: 2018-05-01 01:04:53.395 0000: 4B 39 45 51 20 20 20 20 20 20 57 30 4D 44 54 20 20 20 20 20 *K9EQ W0MDT *
M: 2018-05-01 01:04:55.917
M: 2018-05-01 01:04:55.917 FICH: FI: HC, DT: VD2, BN: 0, BT: 0, FN: 0, FT: 7 SQ: 0 SC: 0
M: 2018-05-01 01:04:55.917 Header, CSD1
M: 2018-05-01 01:04:55.917 0000: 2A 2A 2A 2A 2A 2A 2A 2A 2A 2A 4B 47 34 53 42 47 2D 44 45 4E **********KG4SBG-DEN*
M: 2018-05-01 01:04:55.917 Header, CSD2
M: 2018-05-01 01:04:55.917 0000: 4B 39 45 51 20 20 20 20 20 20 57 38 4F 4A 20 20 20 20 20 20 *K9EQ W8OJ *

MNWis Available on Hotspots

Category: Fusion,Hotspots,Network
January 30, 2019
MNWis has been available via hotspots since 31 July, 2016

Yaesu Published Webinars

Category: Fusion,Presentations,Yaesu
January 30, 2019
Links to Yaesu webinars on YouTube

Mobile WiRES-X Nodes

Category: Fusion,Hotspots,WiRES-X
January 30, 2019
FT2D Can Now Be Used As Mobile Node