

# Demorad Software User Guide

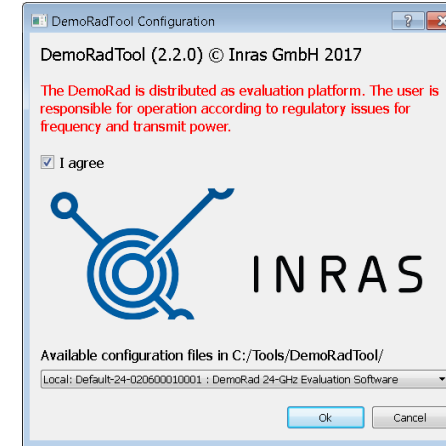
## Revision

- ▶ Rev 0: 24/1/17
- ▶ Rev 1: 2/2/17 – Added command line prompts
- ▶ Rev 1.1: 14/4/17 – Amended command line prompts
- ▶ Rev 1.2: 19/04/17 – Updated Storelf instructions

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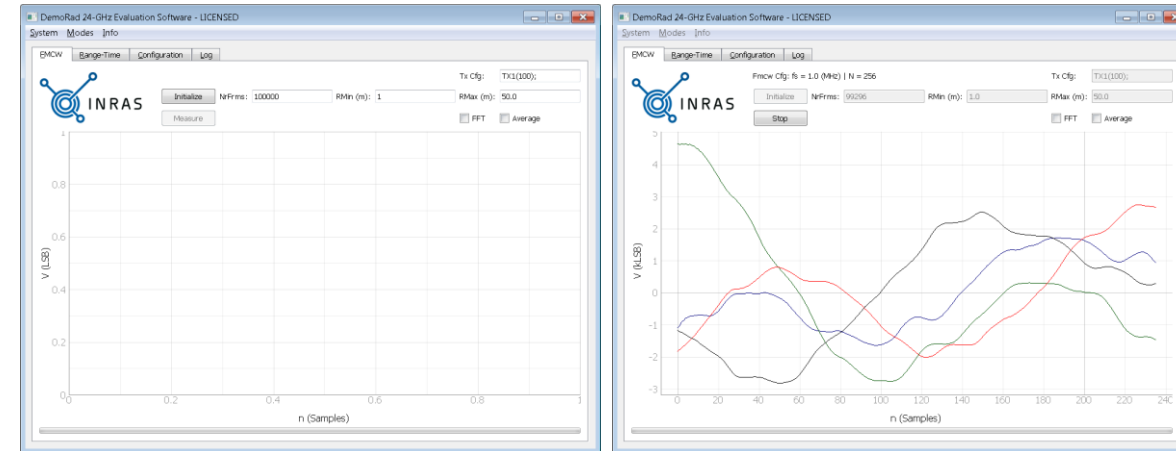
## ► Run DemoRadTool-x32.exe

- You must have the correct license and agree to the terms of use



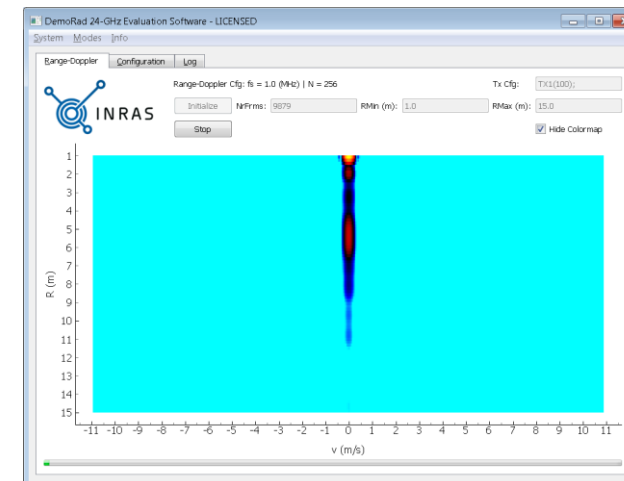
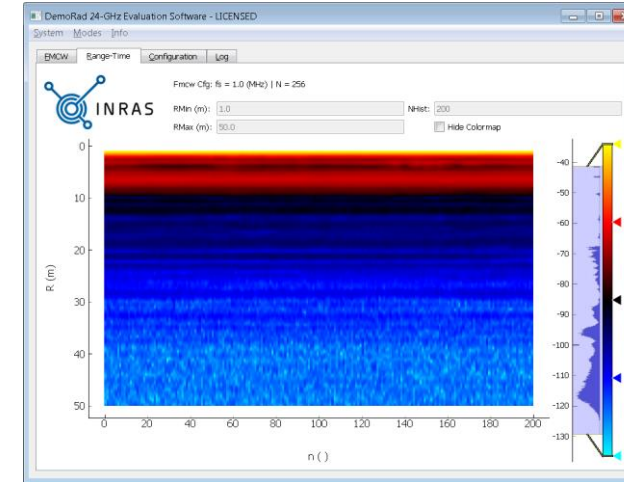
## ► Run FMCW mode

- This is the default mode when the application is open.
- Click 'Initialize' and then 'Measure' to start measuring.



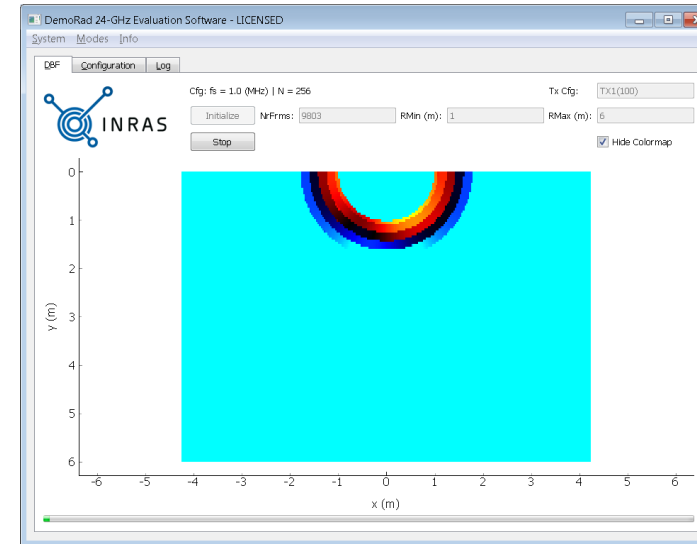
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- ▶ The FMCW mode has a Range-Time tab.
- ▶ To change Mode
  - Stop the FMCW measurement.
  - Click 'Modes' in the file menu and select another mode
- ▶ Range Doppler Mode
  - Initialise and Measure in the Range-Doppler tab.



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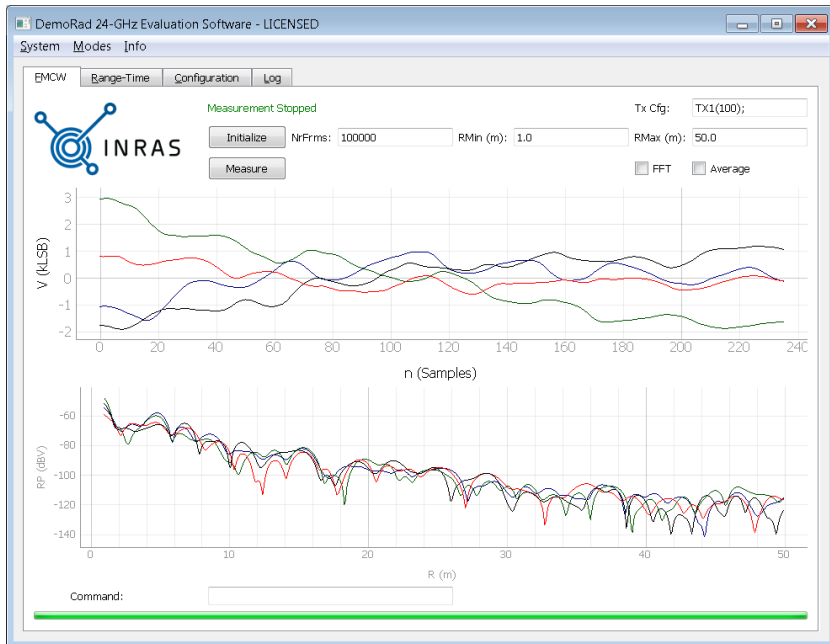
- Digital Beam Forming Function
  - In the 'Modes' file menu called 'DBF'



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## Commands

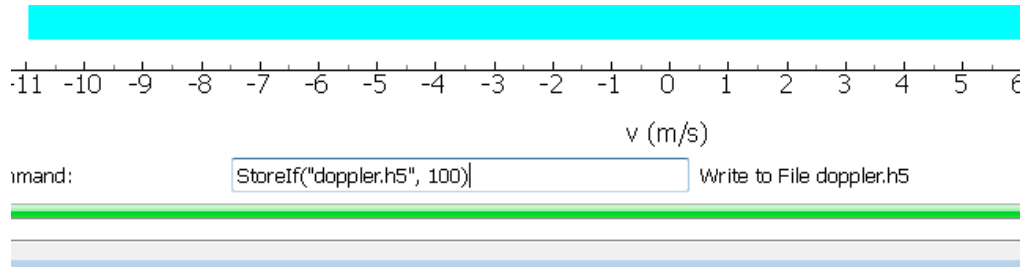
- ▶ In the FMCW tab press “Alt + F2”
  - This will bring up a Command line under the plot.
- ▶ Commands
  - AddPlt(1): Enable a second plot
  - AddPlt(0): Disable a second plot



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## Commands

- **StoreIf("Dummy.h5", NrFrms):** Stores the received data to a hdf5 file. The files are stored to c:/Tools/DemoRadTool/; this folder must exist before storing. This is for Range Doppler Mode.



- This .h5 file can be read in MatLAB using the 'Read\_RDdata.m' file. This file is found in the Software folder.
- You will need to have the .h5 file in the same folder and edit the .m file to read in your .h5 file name.

```
Editor - Read_RdData.m
Read_RdData.m x +
% (c) Inras GmbH
%
% Description: Read hdf5 file from DemoRadTool range-Doppler map
%             StoreIf("xxx.h5",NrFrms)
% Extract the data from the file and store If signals to If array
% In the for loop the signals form the four channels are extracted

stFile      = 'version1.h5';

% Number of samples
N            = hdf5read(stFile,'/BrdCfg/N');
% Number of frames for RD map
Np          = hdf5read(stFile,'/BrdCfg/Np');
```

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## Commands

- AddPosn(1): Enables a position estimation page
- EstPosn(RMin,RMax,NrFrms): Estimates the position between RMin and RMax and for NrFrms adjacent values
  - “EstPosn(0,10,150)” command will live plot a position estimate plot in the Posn tab

