# Measurement methods for RDS receiver products

This presentation introduces you to the IEC 62634:2014

# Development history



- 1996:First RDS measurement specification IEC 60315-9
- 2007:RDS Forum members question the relevance of the current IEC 60315-9
- 2007:RDS Forum informs the IEC of the need to update or to replace the current outdated IEC 60315-9
- 2008:Experts from the RDS Forum draft a replacement specification
- RDS Forum 2008 reviewed and approved replacement proposal
- In 2011 this became the new standard IEC 62634
- In 2014 ed2 with a number of small corrections will be issued

# What changed since 1996



- **ARI is no longer used**
- **Now fully integrated FM/RDS receiver chips are used**
  - These are made in very large quantities
  - Over one billion RDS chips sold in 2012
  - There was a clear need for a well agreed description of RDS measuring methods and a minimum set of basic requirements

**Distinguish three receiver product categories:**
**- Small portable devices (hi-ohmic)**
**- Car radios (50 or 75 Ohm)**
**- Home receivers (75 Ohm)**

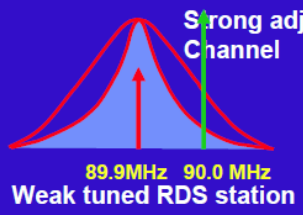
# The objectives to be achieved



- **All-in-one document**
- **State of the art measuring method based on today's RDS products**
- **Realistic targets agreed by RDS Forum members**
- **Complementary to**
  - RDS standard IEC 62106 Ed.3 : 2014
  - RDS Forum guidelines for implementation were adapted

## RDS reception at Challenging conditions


Weak Signal — RDS sensitivity

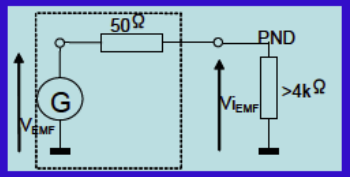



Adjacent channel — RDS Selectivity

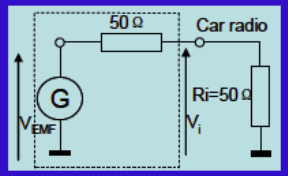

Strong Signal conditions

# Measuring issue:

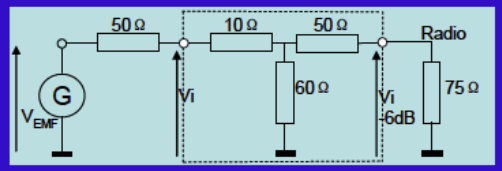
## Connection method




High Ohmic




Car radio




Home tuners

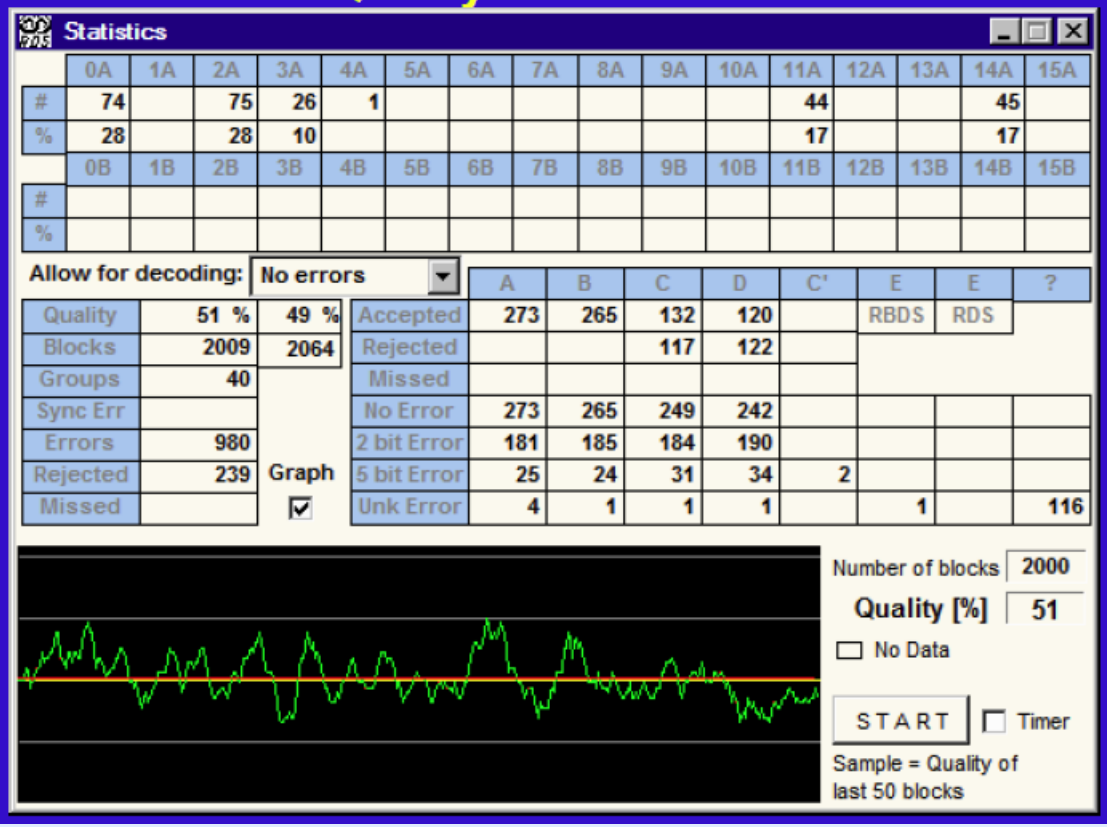
## RDS Sensitivity

Categories:

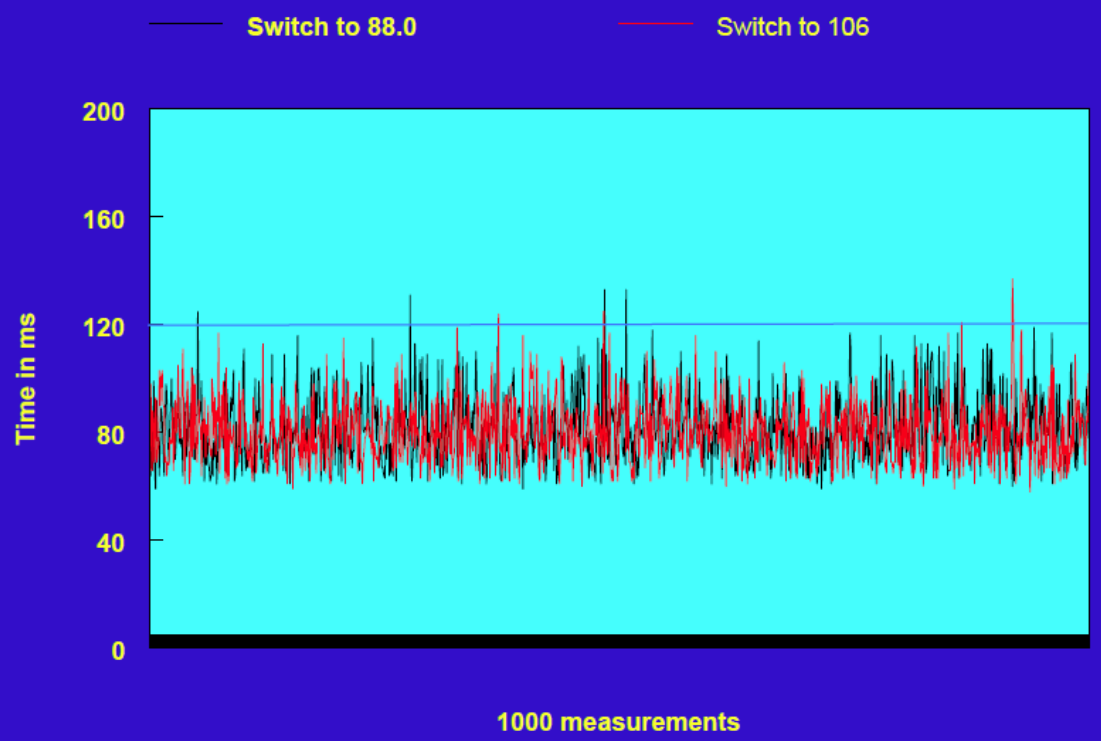
- 50% good blocks
- Time to find synchronization
- Time to find PI code

# RDS Sensitivity: 50% good blocks

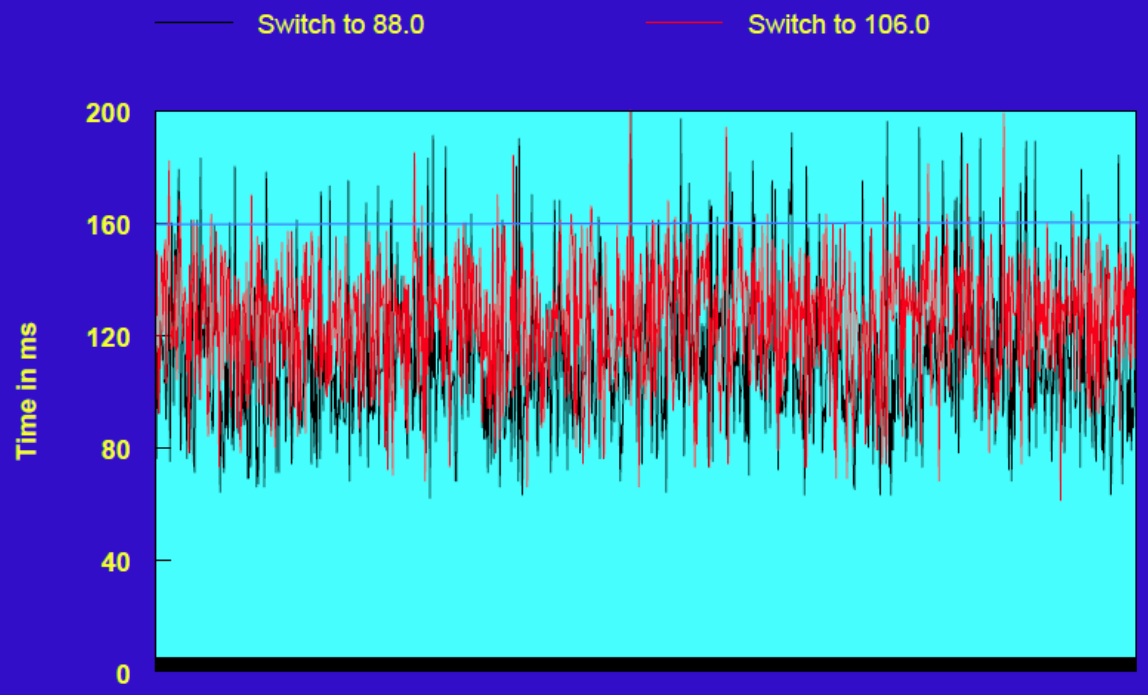
## Quality over 2000 blocks



# RDS Sensitivity: Time to find synchronization



# RDS Sensitivity: Time to find PI code



# RDS Sensitivity: Test setup / Method

1. Adjust RF level for 50 % good blocks

2. Let the PC make 1000 tuning switches and record times

## A corrected version was formally submitted in 2012 to IEC TC 100 and accepted in 2013

- **Is now published as**

R12/017_1 on the RDS Forum web site

The RDS Forum invites the RDS receiver industry to provide feedback