The RS ID easy with Multipsk (4.16)   F6CTE (Patrick Lindecker) the 26th of Nov. 2009

Introduction and main use

This document explains how to use the RS ID.

The "RS" ("RS" for "Reed-Solomon") identifier permits to automatically, locate, any digital transmission done in one of the RX/TX modes handled by Multipsk, except QRSS.

It is detected :

- in one hand, the used mode and,
- in the other hand, the central frequency of the identifier (which is also the central frequency of the transmission), with a precision of +/- 2.7 Hz.

As soon as this identifier is received, Multipsk switches on the received mode and frequency and decodes immediatly the QSO in progress or the call (CQ). This identifier is transmitted in 1.4 sec and has a bandwidth of 172 Hz. Its detection is done down to a Signal to Noise ratio of -18 dB (without missing at about -16 dB), so with a sensitivity equal or better than the one of the majority of the digital modes (RTTY, PSK31...).
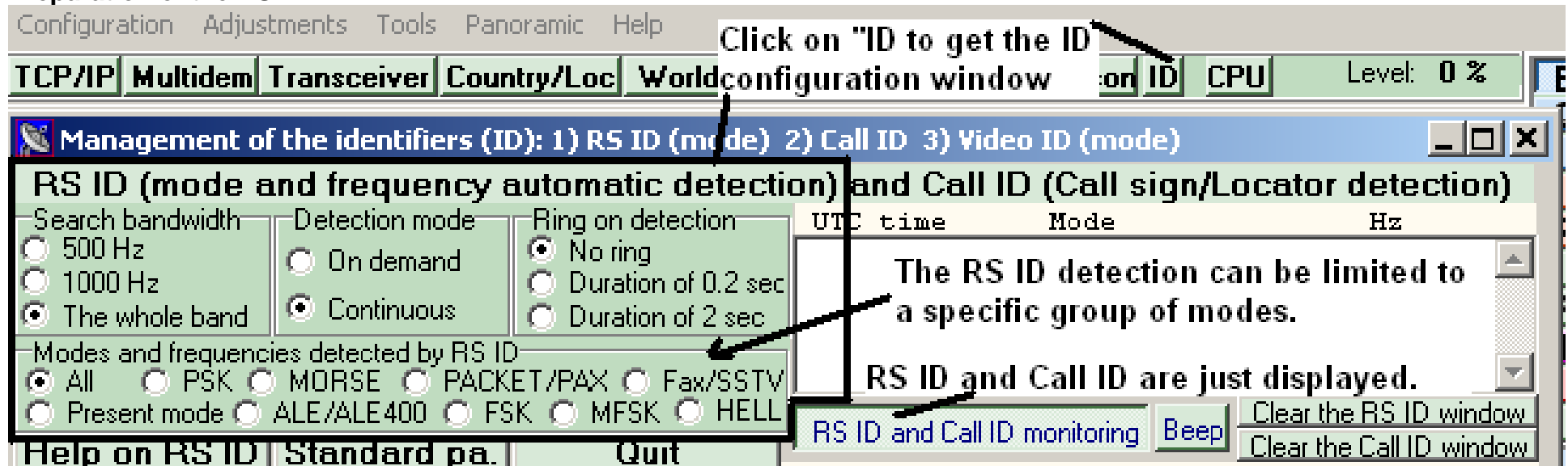
This identifier can be transmitted before each general call or prior to each answer in a QSO, by clicking on the "RS ID" button. It can be, also, transmitted with the <RS ID> macro.
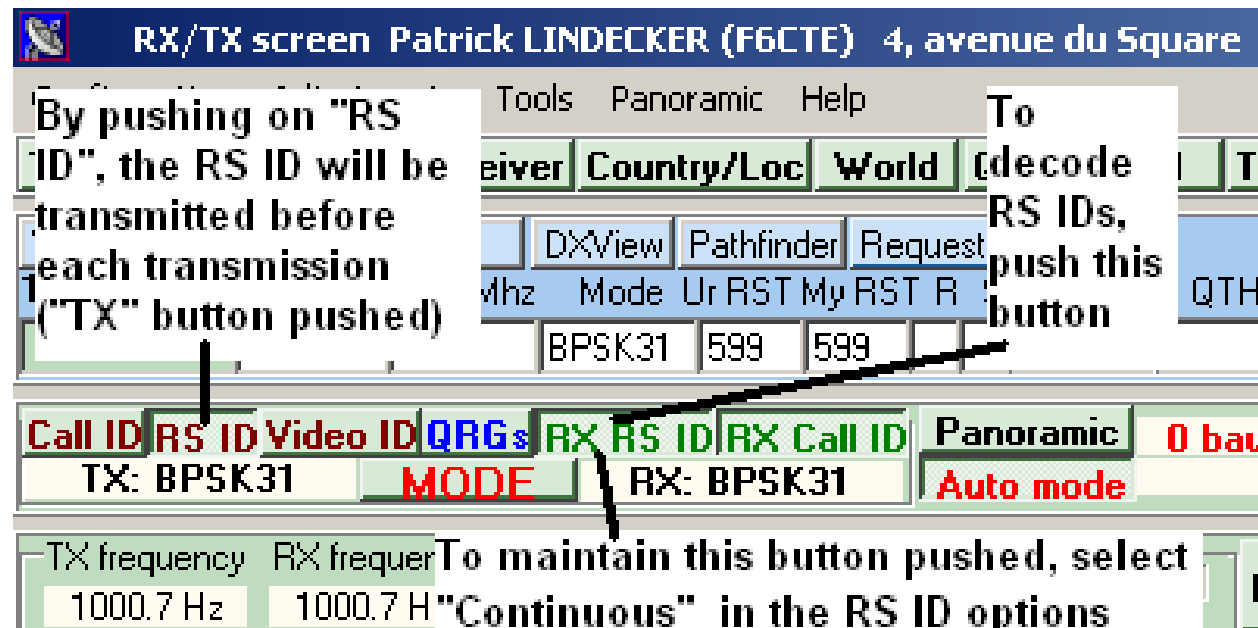
Notes about the help in Multipsk:

- To bring up the text help (contextual one), click on the right button of the mouse, with the focus over a button, "RX RS ID", for example.
- Also use the button hints (wait a fraction of second over a button).

Further are several snapshots which explain how to use the RS ID (main functions).

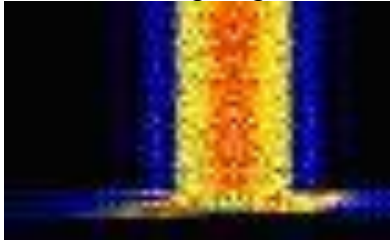Refer to the help for more advanced options.

Preparation of the RS ID

Configuration   Adjustments   Tools   Panoramic   Help

| TCP/IP | Multidem | Transceiver | Country/Loc | World | configuration window | :on | ID | CPU | Level: 0 %

Click on "ID to get the ID"

Management of the identifiers (ID): 1) RS ID (mode) 2) Call ID 3) Video ID (mode)   _ □ X

RS ID (mode and frequency automatic detection) and Call ID (Call sign/Locator detection)

Search bandwidth
- ○ 500 Hz
- ○ 1000 Hz
- ⦿ The whole band

Detection mode
- ○ On demand
- ⦿ Continuous

Ring on detection
- ⦿ No ring
- ○ Duration of 0.2 sec
- ○ Duration of 2 sec

UTC time   Mode   Hz

The RS ID detection can be limited to a specific group of modes.

RS ID and Call ID are just displayed.

Modes and frequencies detected by RS ID
- ⦿ All   ○ PSK ○ MORSE ○ PACKET/PAX ○ Fax/SSTV
- ○ Present mode ○ ALE/ALE400 ○ FSK ○ MFSK ○ HELL

RS ID and Call ID monitoring   Beep   Clear the RS ID window   Clear the Call ID window

| Help on RS ID | Standard pa. | Quit |

Buttons to push to start automatic decoding or to transmit a RS ID

RX/TX screen Patrick LINDECKER (F6CTE)   4, avenue du Square

Tools   Panoramic   Help

By pushing on "RS ID", the RS ID will be transmitted before each transmission ("TX" button pushed)

To decode RS IDs, push this button

| eiver | Country/Loc | World |

DXView | Pathfinder | Request

Mhz   Mode Ur RST My RST R   QTH

BPSK31   599   599

Call ID RS ID Video ID QRGs RX RS ID RX Call ID Panoramic   0 bau

TX: BPSK31   MODE   RX: BPSK31   Auto mode

TX frequency   RX frequer To maintain this button pushed, select
1000.7 Hz   1000.7 H"Continuous" in the RS ID options

Reception of a RS ID on the RX/TX screen (waterfall)
For example, here is the PSK63 RS ID (root) received just before the PSK63 transmission itself (trunk).
The mode is going to switch to PSK63, tuned to the central frequency of the identifier.

Log book of the RS IDs

RS ID and SdR reception

From the Multipsk SdR window ("Direct via the sound card" button), it is proposed to detect any RS ID, Call ID (or Prop ID) on a 44 KHz bandwidth (between the yellow vertical dashes) and to display the RS ID or the Call ID in the SdR spectrum.

For example, with a SdR receiver tuned to a central frequency of 14.091 MHz, it will be possible to detect any RS ID on all the 14 MHz digital band, i.e. from 14.070 to 14.112 MHz.