Rhino Software History Revisions

Product: CB24
Last Version: CB24V119(3973).HEX
Date: September 10, 2007

Version   Date   Comments
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0.86   1-1-04:

            Initial release.

0.87   5-1-04:

            X when T1 is down in channel slots no ring during T1 down, or
            Blue alarm on all channels. Added switch sequence to front panel
            so that you do not need to take off the cover for software
            upgrading.

0.88   6-1-04:

            Added compatibility for new version of SLIC.

0.89   9-19-04:

            1) Changed ring back tone to be pure sine. Only need if you are
            need.
            2) Fix for the SLIC to handle CID properly for *some* TELCO
            CID modes. Please note that this version may cause the unit to run
            a slight bit hotter than previous versions, only when the channels
            are ringing.
            3) Added special trap for A=1,B=1 in LOOP mode only.
            4) Increased LOOP B bit ring "watch" time to 7 second expiration
            from 5 seconds.

0.90   12-10-04:

            1) T1 configuration menu did not allow for different signaling
            protocols.
BETA!   2) Signaling protocol identifier in main screen only showed first.
slot selection
            *** PLEASE NOTE THAT 0.90 IS IN BETA ***
            **** PLEASE REPORT ANY ISSUES PROMPTLY ****

            NEW MODULAR CODE UPDATES - Please note that this code
            will also work on ALL Rhino CB24 models!

0.91   12-10-04:

First modular system release - FXS and/or FXO code release
Note: this will work on any older Rhino channel bank of the CB24
model series (post Sept-2003)

0.92   12-30-04:

Update to modular system release - FXS and/or FXO code release
1) handled "no T1 signal" better.
2) Added an auto FXO mode (transparent to user) to keep
signaling bits correct.
3) After AutoT1 we now leave signaling bits in the default IDLE
mode.
4) Added a toggling third line to show both FXS and FXO, and
signaling mode for each channel.
5) Allowed "DIGITAL" to be selected for slots with no boards
installed. (bug!)
Note: this will work on any older Rhino channelbank of the CB24
model series. (post Sept-2003)

0.93   Not a public release.

0.94   01-17-05:

1) AB bit tracking to CD was not correct, CD now tracks AB in all
modes.
2) FXO CID and ADSI bug fixed.

0.95   01-18-05:

Added Ground start modes to the FXS analog ports. Loop,
Ground-Tip and Ground-Ring are all supported, in a per channel
basis. FXO settings are not affected.

0.96   01-20-06:

Added more of a span for FXO Tx and Rx gain, was -5db to +5db,
now is -9db to +9db. FXS gain settings are not affected.

0.97   01-21-05:

1) Better sensing of the POTs lines connect and disconnect. (this is
the main reason for the update! There were reports of FXO ports
not releasing)
2) Volume mutes of the analog channel during non-FXO line
activity.
3) FXS ringing is stopped immediately when the T1 is sensed as
being DOWN, due to Asterisk server rebooting takes down the T1.
4) FXO Tx and Rx gain settings (analog volume) setting was not
correct to the display value. (Also bad!)

0.98   01-21-05:

1) Fixed FXS ground start mode did not wait long enough after hang up to reset to the ground start mode.
2) Added FXO Tx gain to +1db as AutoT1 default, users reported that FXO sounded a bit soft, gave it a kick.

0.99   02-04-05:

1) Fixed problem with CID on FXO.
2) Distinctive ring now works on FXO.
3) FXS changes made to support CID and distinctive ring as well; however this made it better than before.

NOTE: starting with version 99, we will add a (xxxx) to the .hex filename, where "xxxx" defines the number of lines that will be downloaded to the Rhino, and will be displayed as each line is accepted by the Rhino during download.

1.00   03-16-05:

1) Fixed LOOP FXO signaling to allow for KEWL type disconnects. (Asterisk fxs_ks works with Rhino FXO LOOP)
2) Removed slight ticking sound on FXS channels when they are first picked up.

1.01   03-23-05:

1) Changed FXO mode to FULL, reports of low volume on FXO-FXO calls due to -3.6db down settings into 600 ohms.

1.02   04-12-05:

1) Trap potential FXO hang-ups on loud audio excursions.
2) Reverse battery polarity does not cause FXO line hang-ups now.
3) REVP FXO signaling mode, identical to WINK but senses FXO analog polarity and takes AB high when that occurs.
4) REVP FXS signaling mode, identical to WINK but reverses battery when T1 AB go high.
5) Fixed Channel menu to provide ALL_FXO as second option rather than last option.

1.03   04-25-05:

1) Added more control to the FXO channel for gain settings.
2) Added FXO digital filter seed control, 15 values.
3) Expanded FXO Tx and Rx gain to allow -15db to +12db.
4) Unplugged FXO channels will now show "L" in the Tx line of the LCD display.
5) REVP signaling protocol for FXO and FXS both work in tandem, allow for billing supervision on both ends.

1.04   05-12-05:

1) fixed message waiting lamp on/off capability while on hook.
2) Fine tuned the digital filters for better echo cancellation for Asterisk users.

1.05   06-10-05:

SPI data rate clock change, internal maintenance only.

1.06   08-08-05:

Removed the "check for line collapse" routine on FXO, FXO channels now only looks for battery interruption that is greater than 8ms in duration.

1.07   08-16-05:

1) Fixed idle FXO conditions to transmit the proper idle codes if a POTs line is not connected.
2) Revised the "REVP" protocol to be based on LOOP mode with a 'b' in the display for FXO polarity reversal sense.
3) Console now sends out ASCII line by line status that is a mirror of the main LCD display.

1.08   08-22-05:

FXO LOOP only, fixed "potential" race condition (1 user reported) that caused getting stuck in "i" on the Tx line on Rhino display.

1.09   09-13-05:

Added lock feature to GUI interface, plus safety to upgrade, must have "keys unlocked" to perform upgrade.

1.10   09-13-05:

Better test for FXO channels availability.

1.11   10-07-05:

Decreased ring sensitivity on FXO channels.

1.12   10-11-05

Added support for 72 countries on the FXO side.

1.13   We are superstitious! This version was bypassed.

1.14   10-30-05:

Added support for jumperless modular base boards.

1.15   11-05-05:

1) Added FXO supervision field to allow for setting of the time in milliseconds for far end hang-up.

2) Decreased ring sensitivity for FXO to eliminate false rings on close proximity CO installations.

1.16   11-22-05

Added specific support for Spain reverse polarity FXO terminations.

1.17   02-28-06

1) Changed FXO Loop start to be Tx = "1" when idle. (used to be "B")
2) Added FXO support for Spain special ring conditions. (fix for 1.16)
3) Added FXO country "Comdial" to accomodate lower volatage ring-in teerminations.
4) Added FXS DID mode for supplying battery and reverse battery during DID inbound DTMF periods.
5) Qualified FXO inbound ringing to eliminate false ring-in conditions.

1.18   04-24-07   1) Added PASV and VOX to FXO mode
2) FXO idle condition in LOOP mode is B over B
3) Removed FXO Ground start mode

1.19   09-10-07   1) Fixed a nasty bug when saving Channel data
2) REVP for FXO bug fixed

*** PLEASE REPORT ANY ISSUES PROMPTLY ****