Ritron Model(s):	LM-600Analog and RIB-600Analog
Current Firmware Revision:	9s1N4603.s19
Revision Update:	January 23, 2020

LM-600Analog and RIB-600Analog updated to firmware revision 9S1N4603

LM-600Analog and RIB-600Analog firmware revision history:

1. 9S1N4601 released: 04/29/2019

a. Release firmware 9s1N4601 with initial production

2. 9S1N4602 released: 07/09/2019

a. Correct field programming code A263 to enable both WX alert and WX alert relay.

b. Correct field programming code A632 to enable Record-and-Play.

c. Add capability to record and save .snd files using the PC Programmer.

d. Update field programming code A21 “Reset to Factory Defaults” as follows:
UHF Frequency Code 26 QC Tone Code 12 Record-and-Play Enabled

e. Add “power-up” indication of “0” on the display for 1 second.

f. Add “received signal” indication on the display. Top left segment indicates signal present, top right segment indicates correct subtone decoded.

g. Extend Field Programming reset time from 10 seconds to 20 seconds.

h. Add 3.125 kHz channel programming capability. If frequency programming MSB is set the radio is programmed for a 3.125 kHz channel step and calculated as follows:

VHF = (Frequency/3.125kHz) - 30,000
UHF = (Frequency/3.125kHz) - 125,000

3. 9S1N4603 released: 01/23/2020

a. Check for RX carrier continuously instead of every ¼ second. This is to improve synchronization of multiple LM-600Analog and RIB-600Analog when in Record-and-Play mode.

b. Start recording or live playback at a fixed 300mS after carrier squelch detection while screening for QC or DQC. This is to improve synchronization of multiple LM-600Analog and RIB-600Analog when in Record-and-Play mode.

c. Clear DTMF buffer index when code is decoded. This solves a problem where short DTMF codes were only being decoded every other time.

d. Fix Sensor Input messages so that the message is played whenever an event (open or closed) is detected. This corrects a problem where, if Sensor Input opens while Sensor Closed message is playing, the Sensor Open message is not played.

e. Change RDA register 34 from 2988 (UHF NB) and 2986 (VHF WB/NB, UHF WB) to 2928. This is to eliminate RX interference (static) in the presence of a high RF input signal. This reduces the RX Digital gain after ADC sample down by 3dB.

f. Change RDA registers 84, 85 and 86 to eliminate Squelch blocking in the presence of a high RF input signal.

- 84 from 000C to 000A. This reduces ADC gain by 12dB.
- 85 from 000C to 0002. This reduces ADC gain by 12dB and filter gain by 6dB.
- 86 from 0014 to 0004 for VHF and UHF NB. This reduces filter gain by 6dB.
- 86 from 001C to 0004 for VHF and UHF WB. This reduces filter gain by 18dB.

g. Add special processing to handle following case: No record-and-Play, no delay, no pre-announce tone, at least 1 repeat. This requires playing live from the beginning but also recording for repeats. In this condition the first ¼ second of recording was corrupted.

h. Frequency Tables are updated as follows:

- UHF Table Frequency 121 is invalid and no longer available
- VHF Table Frequency 35 is added at 154.5475 MHz
- VHF Table Frequency 36 is added at 152.9000 MHz