

## Tune up procedure DDR family RU

Applicant: Bird

FCC ID: EZZDDR406

### *Tune up procedure*

User has the possibility to set the following parameters in the Remote unit via web based GUI application:

- Gain Values (UL & DL)
- ALC threshold (UL & DL)
- UL Test tone

User cannot adjust/align any frequency response, linearity response or detector calibration levels.

Remote unit has a built in ALC (Automatic Level Control) with preset levels, to make sure that the linearity or spectral spreading does not exceed the regulatory limits. All Bird remote units and repeaters have the ALC feature and functionality. The ALC threshold is a settable value that defines what output power is allowed from the RU/repeater. If an inserted signal plus the set gain in the RU/repeater exceeds the set ALC threshold the RU/repeater will automatically reduce the gain so that the output signal level always matches the set ALC threshold.

The device cannot end up in saturation due to the ALC (Automatic Level Control) feature/functionality.

Saturation or over-modulation is even prevented for pulsed signal inputs with above described functionality. There are also configurable signal threshold parameters in the remaining components of the DAS system [Base station Interface (BIU), Fiber Optical Interface (FOI), that are used for proper commissioning of the system so that these types of abnormalities (overpowered input signals) are eliminated.

UL Test Tone is a help feature tool used only when commissioning the DAS network.

DL ALC threshold for all DDR family Remote units is 33 dBm +/-1dB.