

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Application of RBC Signals, LLC for	)	Call Sign: E220055
modification of an Earth Station License	)	
to Operate with a Non-Geostationary	)	File No: To Be Assigned
Orbit Spacecraft		

**APPLICATION FOR MODIFICATION TO FIXED EARTH STATION LICENSE
(RBC Signals | Winston Salem, NC)**

RBC Signals, LLC (“RBC Signals”), pursuant to Section 25.115 of the Commission’s rules, 47 C.F.R. § 25.115, respectfully seeks modify the license to operate a fixed 400 MHz Yagi earth station in Windham, New York to:

- remove and add points of contact as detailed here in
- relocate the station to Winston Salem, NC from Windham NY
- update emissions, reduce power and change bandwidth

The station will be used to conduct telemetry, tracking, and command (“TT&C”) operations for space-to-Earth with a center frequency 401.5 MHz and for the Earth-to-space band a center frequency of 399.96/400.035 MHz to support the non-geostationary orbit (“NGSO”) spacecraft Baby Bird, operated by Blackwing Space, Inc.¹As demonstrated in this application, grant of the requested authority will serve the public interest because it will allow RBC Signals to support the experimental mission Baby Bird and further facilitate U.S. leadership in the advancement of novel satellite technologies. RBC Signals would also like to add receive only points of communication for GHOS t 1-6 (callsign S3139)².

The Baby Bird is scheduled to be deployed from a Space Exploration Technologies Corporation (“SpaceX”) Launcher around October 1st, 2025. RBC Signals respectfully requests that the Commission consider and authorize the proposed operations (as appropriately conditioned) as soon as practicable. After discussion with OET, RBC Signals was informed that all TTC and LEOP support provided and not directly involved in the validation of the experiment associated with the authorization of the subject system through the OET office should be filed through the FCC Part 25 office given the commercial nature of the arrangement between Blackwing and RBC Signals.

¹ See Blackwing Space., File No. 0864-EX-ST-2026 (Granted 7/28/2026). To the extent applicable, RBC Signals incorporates by reference relevant satellite technical and operational information provided in said application associate with callsign WB9XWX via the OET.

²See Orbital Sidekick INC., File No. SAT-LOA-20220325-00035. The Ghost constellation is currently authorized, grant received on 12/07/2022. To the extent applicable, RBC Signals incorporates by reference relevant satellite technical and operational information provided in said application associate with callsign S3139.

I. BACKGROUND

RBC Signals is a Seattle, Washington-based company that provides earth station services around the world. With this application, RBC Signals seeks earth station license authority to operate in Winston Salem NC to support the Baby Bird mission.

Baby Bird will be placed in sun synchronous orbit (“SSO”) at an altitude at 510 km (± 25 km⁴) at an inclination of 98 degrees. Baby Bird will conduct research on space situational awareness applications using an optical beacon. as described in the *Blackwing Baby Bird Application*. During the mission, RBC Signals’ TT&C operations will be conducted on an unprotected and non-interference basis intermittently when the spacecraft passes over the earth station.

RBC will conduct all operations in accordance with the Commission’s rules and requirements governing fixed earth station operations in the subject bands.

³ RBC requests leave to update the technical or operational data associated with this license request should the Commission seek any clarifying or supplemental information in considering this request.

II. DISCUSSION

RBC Signals seeks to remove the existing earth to space point of communication Sherpa AC-1 and add Baby Bird for earth to space transmissions as well as the GHOS network for receive only operations. The purpose of the transmit request is to provide TT&C support to for both Baby Bird. RBC Signals will work to ensure that these operations will not cause harmful interference to current or future co-frequency operations and that the interests of the United States are accommodated.⁴

A. Baby Bird Satellite Overview

RBC Signals incorporates by reference the mission information and payload specifications provided in the *Baby Bird and Ghost Applications*. TT&C support for these important space operations is plainly in the public interest. RBC Signals has received feedback that due to the non-experimental and commercial nature of the support RBC Signals is providing that a Part 25 application should be filed to permit this TTC support of the experimental mission, rather than a Part 5 experimental license.

B. Frequency Use

a. TT&C Downlink – 400.15 - 401 and 401 - 402 MHz (space-to-Earth)

The United States Table of Frequency Allocations (“Table of Allocations”), Section 2.106 of the Commission’s rules, 47 C.F.R. § 2.106, provides that the 400.15-401 MHz band is shared between meteorological aids (Earth-to-space), mobile satellite (space-to-Earth), space research (space-to-Earth) and space operation services (space-to-Earth). RBC Signals seeks to perform

TT&C downlink operations consistent with the co-primary space operations allocation in this band for the Ghost Systems.⁶

Additionally, RBC Signals seeks to perform TT&C downlink operations using the 400 MHz Yagi in the 401-402 MHz band (space-to-Earth; center frequency 401.5 MHz) consistent with the secondary allocation for space operations in this band. RBC Signals is not currently aware of any use of the subject frequency bands by incumbent operators near the Winston Salem facility and will coordinate as needed to ensure its TT&C operations do not cause interference with primary mobile satellite or meteorological-aid services.

Satellite	Emission Bandwidth KHz	Center Frequency MHz
Baby Bird	20	401.5
GHOS 1-6	40	400.5

b. TT&C Uplink – 401-402 MHz band (Earth-to-space)

The Table of Allocations provides that the band 399-400.05 MHz is reserved for mobile satellite (Earth-to-space)⁷ and is consistent with this use case.

Transmit Center Frequency MHz	Emissions Designator	Transmit Power at Antenna Flange Watts	Antenna Gain dBi	Polarization	EIRP dBW	Density dBw/4khz
399.96	20K0G1D	.07	16.8	RHCP	5.25	-1.7397
400.035	20K0G1D	.07	16.8	RHCP	5.25	-1.7397

⁶ See 47 C.F.R. § 2.106 (defining “space operations” as “radiocommunication service concerned exclusively with the operation of spacecraft, in particularly space tracking, space telemetry, and space telecommand.”).

⁷ 47 C.F.R. §2.106, fn. US384.

C. Waiver Request

The Commission may waive its rules for “good cause shown.”⁹ RBC Signals respectfully seeks a waiver of Section 2.106 of the Commission’s rules, 47 C.F.R. § 2.106, to the extent necessary to operate the 400 MHz Yagi and perform TT&C in the 400.15-401 and 401-402 MHz band. Good cause exists to grant a waiver in this case to permit RBC Signals to perform critical TT&C functions for the Baby Bird and Ghost missions and this waiver would not undermine the purpose of the rules. The waiver is also consistent with the Commission precedent previously granting such a waiver to operate in this band in a previous satellite authorization.¹⁰

Acknowledging the connection between the *Baby Bird Application* and this earth station application, a waiver is warranted here because it will provide RBC Signals with the ability to dependably provide critical satellite support for the mission.

⁹ See 47 C.F.R. §1.3 (“Any provision of the rules may be waived by the Commission on its own motion or petition if good cause therefor is shown.”).

¹⁰ See Astro Digital U.S., Inc., File No. SAT-LOA-20170508-00071 (grant stamp Oct. 9, 2020) (the “*Astro Digital License*”), Condition 9.

¹¹ *Supra* n. 7.

Further, a waiver will serve the public interest as RBC Signals will support novel space technologies that bridge traditional launch deployment services. Finally, given the limited nature of the proposed operations and the coordination performed in support of the *Baby Bird Application* to ensure the proposed operations will not cause harmful interference to co-frequency operations, grant of the waiver will not undermine the purposes of the rule. Thus, there is good cause to grant the requested waiver to permit the limited earth station operations proposed herein.

D. Public Interest Considerations

Grant of this earth station license modification and associated STA's will further the public interest by enabling TT&C support for the Baby Bird and Ghosts missions. It will also further position the United States as a leader in the development and encouragement of pioneering satellite technologies. Grant of this authorization will enable the continued operation and realization of the significant benefits and commercial viability of novel small satellite communications systems.

III. CONCLUSION

Based on the foregoing, RBC Signals respectfully requests that the Commission grant its license modification application to provide TT&C uplink and downlink services for Baby Bird and downlink services for the Ghost systems from Winston Salem facility.