IEEE P802.11
Wireless LANs

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| PDT Uplink Carrier Frequency |
| Date: 2025-09-10 |
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Abstract

This document contains Proposed Draft Text (PDT) for the uplink carrier frequency of the TGbp (AMP, Ambient Power) amendment to the 802.11 standard.

# Revision information

The following is a summary of the important changes that occurred within each revision of this document:

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| **Revision** | **Major changes** |
| 0 | Initial revision |
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# Introduction

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbp Draft. The abstract, revision information, introduction, explanation of the proposed changes, and references sections are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbp Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

## Explanation of the proposed changes:

The proposed changes to the 802.11 TGbp draft within this document are based on the following motions adopted by the TGbp task group.

### Relevant passing motions:

[Motion #27, [1]]

* 11bp defines one mode of backscattering without carrier center frequency shift.

[Motion #83, [1]]

* 11bp defines at least one mode of bistatic backscatter that can use frequency shifting within a 40 MHz channel in 2.4 GHz band.
* Existing 40 MHz medium protection mechanisms will be leveraged

# Text to be adopted begins here:

***TGbp editor: Please add the following new subclauses for AMP UL carrier center frequency to the 802.11bp draft D0.1:***

# 40. Ambient Power (AMP) PHY specification

## 40.3 AMP PHY (2.4GHz)

### 40.3.10 Transmit specification

## 40.3.10.3 Transmit center frequency shift

For AMP backscattering without carrier center frequency shift, an AMP non-AP STA backscatters AMP UL PPDU on an Excitation subfield of the AMP DL PPDU. The center frequency of the backscatterd AMP UL PPDU is the same as the Excitation subfield of the AMP DL PPDU that the UL PPDU is modulated on.

For AMP bi-static backscattering with carrier center frequency shift, an AMP non-AP STA backscatters AMP UL PPDU on an Excitation subfield of the AMP DL PPDU, and the center frequency of the backscatterd AMP UL PPDU is shifted by TBD MHz within a 40MHz channel from the center frequency of the Excitation subfield of the AMP DL PPDU that the UL PPDU is modulated on.

# Text to be adopted ends here.

**References:**

1. [11-24-1322r9](https://mentor.ieee.org/802.11/dcn/24/11-24-1322-09-00bp-tgbp-motion-dock.pptx): TGbp Motion Dock, Bo Sun (Sanechips)