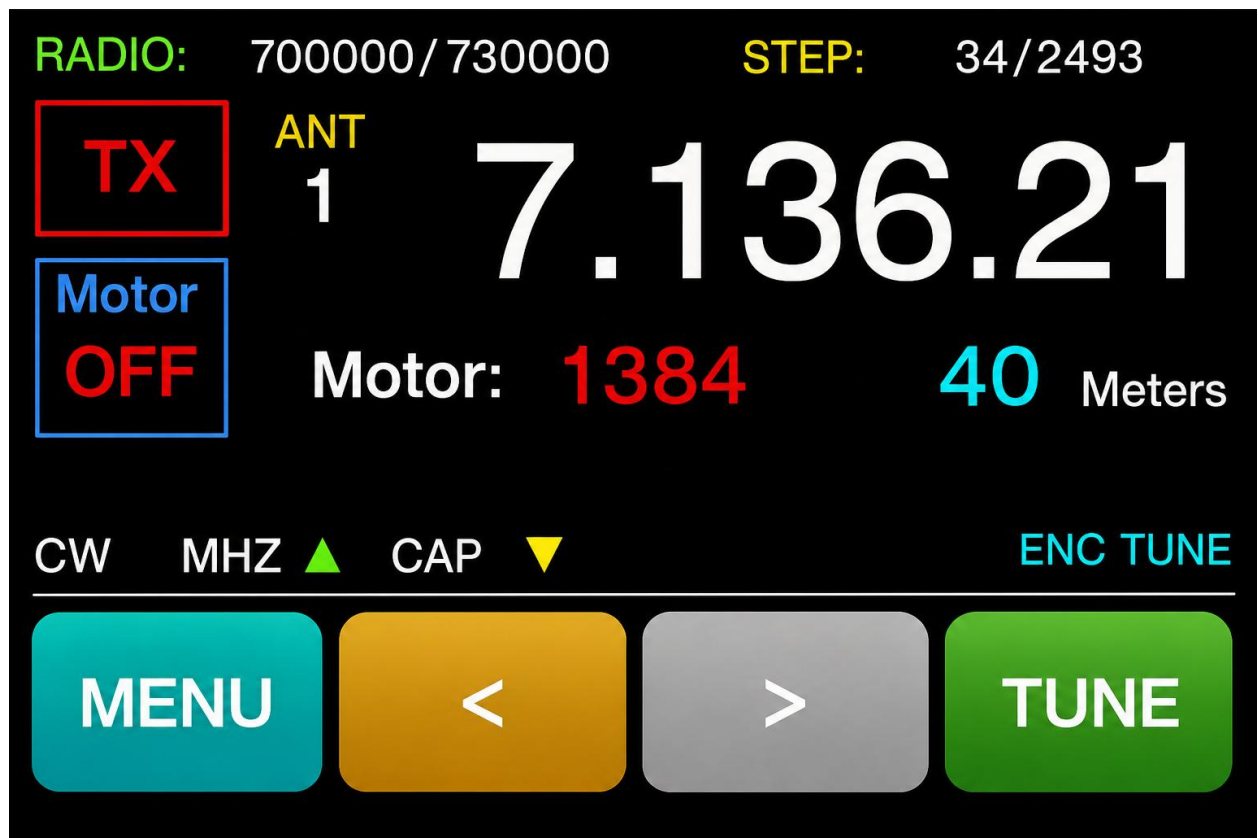


coverdrive™

Front Panel Operational Overview

This document provides an operational overview of the front panel interface used by the coverdrive Intelligent Magnetic Loop Antenna Controller.



Top Status Bar

The top status bar provides operational frequency and movement range information.

RADIO: 7000000 / 7300000

Displays the active amateur band frequency range. For example, 7.000 MHz to 7.300 MHz for the 40 meter amateur band.

STEP: 34 / 2493

Displays current and maximum stepper movement range information for the active band capacitor tuning system.

TX Status

Indicates transmit activity or RF carrier detection status. This becomes important during SWR-assisted tuning and refine operations.

Motor Status

Displays the current stepper motor driver state such as Motor ON or Motor OFF. "RED" indicates the stepper status (OFF)

ANT 1 / ANT 2

Displays the currently selected magnetic loop antenna system.

Main Frequency Display

The large center frequency display provides clear real-time operating frequency visibility during normal radio operation.

Motor Position Display

Displays the real-time capacitor stepper motor position used for resonance tuning.

Band Display

Displays the currently active amateur radio band such as 40 Meters or 20 Meters.

CW / MHZ / CAP Direction Status

This lower status line provides real-time capacitor movement direction feedback to the operator.

CW indicates counter-clockwise motor movement.

MHZ ▲ or ▼ indicates radio frequency direction movement.

CAP ▲ or ▼ indicates capacitor capacitance direction movement.

This allows the operator to understand the live relationship between frequency movement, capacitor movement, and tuning behavior.

ENC TUNE

Indicates encoder is used to fine tune radio frequencies.
“TUNE” touch button is used to switch modes.

VFO TUNE

Indicates encoder is tuning the radio, not the radio VFO.
“TUNE” touch button is used to switch modes.

MENU Button

Provides access to system functions, settings, calibration tools, and learned resonance features.

Navigation Buttons

The < and > buttons provide system navigation and operational control interaction.

TUNE Button

Provides access to tuning and refine tuning operations used during resonance adjustment.

Operational Philosophy

The coverdrive front panel was designed to provide clear real-time operational feedback while maintaining a clean and uncluttered user interface. The display continuously informs the operator about frequency movement, capacitor direction, tuning activity, antenna selection, and resonance behavior during live amateur radio operation.

Sub-Menu Operational Overview



SUB-MENU ITEMS – DESCRIPTION

ENDSTOP	Configure or set the motor endstop positions for safe travel limits.	CALLSIGN	Set or edit the operator callsign stored in the system.
RESET	Reset the system settings to default values.	ADD BAND	Add a new amateur band to the system configuration.
SAVE POS.	Save the current capacitor position to memory.	DEL BAND	Delete a selected band from the system.
ANT1	Select and activate Antenna 1 (loop) as the active antenna.	CLEAR POS.	Clear all saved capacitor positions from memory.
OK	Confirm the selection or changes made in this menu.	EXIT	Exit the menu without saving changes and return to the main screen.
		RESTART	Restart the controller software/system.



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Purpose: *Front Panel Interface and Operational Feedback Description*