

FTS GSCU-2HU - Flight Termination System Ground Station according to IRIG standard FTS319-92



TESTEM GmbH offers a flight termination system according to IRIG standard, consisting of ground station and fully programmable flight termination receiver/decoder (FTRD).

General description:

The GSCU control unit is built in non-redundant or redundant version (see options) in a 19" 2 HU rack mount housing. It contains, depending on the version one or two four tone flight termination encoders, one or two 3 W RF UHF transmitters, a micro controller unit as well as power supplies. The front panel contains a key switch for ON/OFF function, four pushbuttons for sequence selection of the flight termination system and four switches for selection of the single IRIG tones. Optional there is a rotary switch available for antenna selection and a push button for a GPS option. The sequence buttons as well as the tone switches are illuminated (light on in function). The TERMINATE button and the four tone switches are protected by a cover.

The GSCU control unit generates four different tone combinations according to IRIG standard for SAVE, ARM, TERMINATE and an additional user channel, the four single IRIG tones can be sent separately or as any mixture out of it. In case of using these single tone switches (except the so defined user channel) the sequence buttons are locked, showing this by flashing continuously.

With antenna switch option there is a rotary switch at the front panel (as shown in above picture) representing cardinal directions in eight steps (N, NE, E, SE, S, SW, W, NW) showing the set direction by a lightened LED.

Two additional LEDs show power on and the activation of the RF transmitter.

At the rear panel there are the power connector with integrated fuse, the RF output of the 3 W RF amplifier, the control connector for a high power RF amplifier and a RS 232 SUB-D connector for service. If the antenna control option is integrated there is an additional connector for the control and power cable to the FTS antenna switching system.

Features FTS GSCU and technical data:

- 19" 2 HU rackmount unit
- Weight 3 to 4 kg depending on options
- front panel control via switches and indicators
- Protected key for terminate command
- Optional antenna selection via 8 position rotary switch with direction selection for antennas (N, NE, E, SE, S, SW, W, NW) and LED indicators
- Integrated power supplies
- IRIG tone encoder
- RF preamplifier for user selectable (on order) center frequency between 390 and 450 MHz.
- All vital mode and status information displayed by LED indicators or lightened buttons
- Backpanel connections:
 - o Power with fuse
 - o RF output for antenna or HPA
 - o Control output for HPA
 - o Control output for antenna switching unit (optional)
 - o RS232 (9-pole Sub-D pin)



Technical data:

- frequency range: 390 to 460 MHz, programmable via USB
- RF output: N-type socket, no damage if antenna missing or short circuit
- RF-power: 1 W to 6 W, programmable
- Spectrum: suppression of harmonic and other lines better – 70 dBc
- Environment: reference oscillator for range of -10 °C to +70 °C, temperature compensated
 frequency stability better $2,5 \times 10^{-6}$
 Random 0,07g²/Hz (20Hz to 2 kHz)
 Sinus 10g (20Hz to 2 kHz)
 Shock half sinus 50g peak for 11 ms
- Nominal hub 20 kHz to 28 kHz, set to a modulation voltage of 2,2 V_{SS}
- Modulation frequency according to RCC standard tone combinations. Missile type A to E may be factory programmed on order (standard delivery for single missions type A).
- Power consumption: 110 to 240 VAC / 190 – 250 W depending on options

Options:



FTS High power amplifier



FTS antenna switching system

For further information please contact TESTEM GmbH mail@testem.de.