Functional Checks

If the transceiver does not operate correctly, check the following:

- Is frequency with the two selector knobs correctly set?
- Is battery capacity sufficient? Carry out a battery test without any charger connected!
- Weak signals? Switch OFF the squelch!
- Is the transceiver's helical antenna vertically held or is it screened by the operator's body?
- Operate radio without any accessory. Same malfunction?
- Are helical antenna or antenna plug/ cable damaged?
- Is voice level too low or distance to microphone too far?
- Does multipath effect occur? Change location.
- At radio interference change location. Suppress interference of your car/airplane.

In case of doubt, compare operation of the transceiver with another transceiver on the same location or call another station. Should the unit require service, please contact your nearest authorized dealer or certified repair station.

Siting

The radio operates in the VHF frequency band, this is a Line-Of-Sight (LOS) frequency; therefore, siting of the radio greatly affects its operating range. The longest range is normally obtained when a direct LOS is maintained between the radios. Use of hilltop or tower locations will increase the LOS range. Location in valleys with intervening hills, behind buildings or in dense woods may reduce or prevent communications. If possible, avoid locations near electrical interference sources, such as power and telephone lines, computers, radar's, welders and electrical generators.

Safety Information

Every radio, when transmitting, radiates energy into the atmosphere that may, under certain conditions, cause the generation of sparks. All users of our radios should be aware of the following warning:

Do not operate radio near flammable liquids or nearby explosive devices.

During normal use, the radio will subject you to radio energy substantially below the level where any kind of harm is reported.

To ensure personal safety, please observe the following simple rules:

- **DO NOT** transmit when the antenna is very close to, or touching, exposed parts of the body, especially the face and eyes.
- **DO NOT** transmit inside vehicles or aircraft with the helical antenna, always operate the radio with a suitable external antenna. Assure appropriate lightning protection where elevated outdoor antennas are used.
- **DO NOT** hold the transmit (PTT) key in when not actually desiring to transmit.
- **DO NOT** allow children to play with any radio equipment containing a transmitter.
- **DO NOT** operate the radio whilst driving. It should also be noticed that the use of a hand held microphone while driving could constitute an offence under the Road Traffic Regulations.

Ni-MH

This radio contains a Ni-MH battery!
DO NOT dispose worn out Ni-MH batteries with domestic waste. Consumers are obliged by law to return Ni-MH batteries at the end of their service lives to the public collecting points set up for this purpose or point of sale.

Subject to technical change Printed in Germany 08.03.10

FSG 5

VHF / AM 760 Channel HANDHELD TRANSCEIVER FOR AIRCRAFT RADIO COMMUNICATIONS

Approvals and Conformity:

CE

BFS-No.: B-7827/82 and L-5202/84
FTZ-No.: LO-80/82
FCC ID: BVY8VEFSG5

Operating Instructions 025.HB.06E

Article-No.: D10006 Issue 01/2009

- ***Before operating the transceiver, please read this instructions thoroughly!***
- ***Keep for future use!***
- ***Please observe the Safety Information!***

Technical Data

Frequency range:	118.000 MHz … 136.975 MHz
Number of channels:	760 channels free selectable
Frequency accuracy:	< ± 15 ppm
RF carrier output:	typ. 1 Watt/ 50 Ω / ca 3.6 W PEP
AF output power:	0.7 Watt / 8 Ω @ 12 Vdc
Sensitivity:	< 1 µV / 50 Ω / 6 dB / m = 0.3
AGC range:	≤ 6 dB / 5 µV … 100 mV / m = 0.3
Supply voltage:	11.7 … 15.1 Vdc external
Built-in battery:	Ni-MH 12 Vdc / **1.5 Ah nominal**
Operating time: (Normal condition)	9 hrs at 80% RX / 20% TX 15 hrs at 90% RX / 10% TX 24 hrs at 95% RX / 5% TX 45 hrs at 40% RX / 60% standby
Power consumption:	Transmit 450 mA typical Receive 35 mA typical Standby 17 mA typical
Operating temperature:	-20°C … +60°C
Charging temperature:	0°C … +40°C
Dimensions:	209 × 84 × 44.5 mm w/out antenna
Weight:	ca. 900 g
Via accessory jack:	Connection of battery charger, external 12 Vdc supply, protected 12 Vdc output for special accessory, additional dyn. microphone 5 to 200 Ω, additional ear/headphone min. 30 Ω, PTT key.

Robust aluminum die-cast case, sidetone via headphone, battery indicator, illuminated frequency display.

DITTEL MESSTECHNIK GMBH AVIONICS DIVISION
ERPFTINGER STRASSE 36 ★ 86899 LANDSBERG ★ GERMANY
PHONE +49 (0)8191/ 3351-0 ★ TELEFAX +49 (0)8191/ 3351-49
E-MAIL: INFO@DITTEL.COM ★ INTERNET: WWW.DITTEL.COM

General Information

This Operating Instruction refers to a handheld Transceiver **FSG 5**, Article-No. F10200. The **FSG 5** is a radio that is working within the airband frequency range of 118.000 MHz to 136.975 MHz in 25 kHz increments (760 channels). The operation mode is Simplex, which is transmitting or receiving only in turns.

NOTICE:

Before using the radio the first time charge the battery for at least 10 hours with 250 mA!

Battery Test

Press button "LAMP/ BATT. TEST" ③ for a few seconds (without any charger connected

The LED indicators ⑨ will light sequentially

5 LEDs ON ⇒ battery fully or nearly fully charged

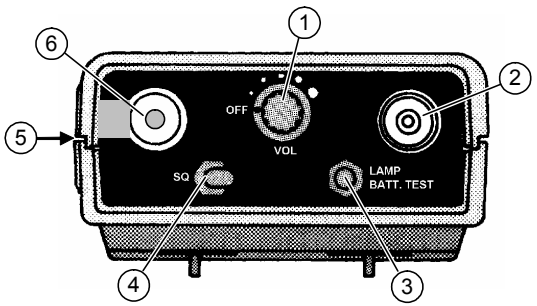
2 … 4 LEDs ON ⇒ battery partially discharged, reduced operating time.

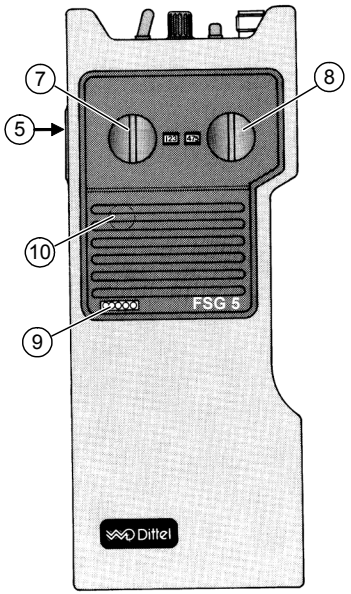
1 LED ON ⇒ battery discharged, charge the battery immediately.

NOTE: Do not discharge battery completely during radio operation (no indicator ON). Self-discharge of battery when not in use (radio switched OFF) permitted.

Receive Operation

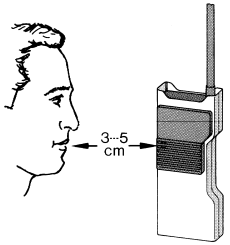
1. Connect antenna to the antenna socket ②.
2. Rotate the VOL control ① clockwise to turn the radio ON.
3. With the MHz- ⑦ and kHz- ⑧ selector switches set the desired operating frequency.
   WARNING! MHz-switch stops at each band-edge (118 / 136)! Risk of destruction!
4. To check receiver switch OFF squelch circuit (toggle switch ④ towards OFF position that is opposite "**SQ**"). On a free channel basic receiver noise with steady volume should be audible.
5. **Standard Receive Operation**
   Switch the Squelch-circuit ON (SQ-toggle switch ④ towards position "**SQ**"). Receiver noise, weak signals and interference pulses are blocked. Adjust the volume control ① to a desired level.
6. To obtain full receiving radio range switch OFF the squelch ④. Now the radio is noisy during standby operation but no weak signals are suppressed.
7. In noisy environment hold speaker close to your ear or use noise canceling headphone for this purpose.





Transmit Operation

When using the helical antenna hold transceiver vertically, preferably with the left hand.



Care for an all-round obstacle free location; the called station should be within line-of-sight distance.

Do not hold the radio such as the antenna gets very close to, or touching, exposed parts of the body, especially the face, shoulder or the eyes.

Please keep radio discipline. The channel must be clear before transmitting.

Rotate the volume control ① clockwise to turn ON the radio.

With the MHz- ⑦ and kHz- ⑧ switches set the desired operating frequency.

Press and hold the push-to-talk button ⑤. Speak loud, slow and clear!

When the built-in microphone is used, speak into the microphone ⑩ from a distance of 3 to 5 cm. After your message release the PTT button ⑤ to clear the channel and hear the reply.

Charging the Battery

Plug DL-5A charger into accessory jack ⑥. Connect charger to mains.

Observe charging temperature of 0°C … +40°C.

Normal charge: ca. 10 hours with up to 250 mA.

Transceiver not in use should be left connected to the charger. This keeps the battery fully charged and allows maximum operating time.

Continuous charging via ⑥ of **FSG 5** in operation or switched OFF is permitted.

Use only DITTEL chargers.

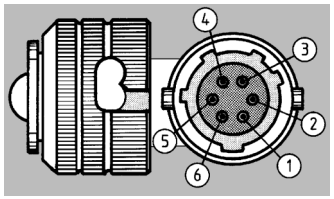
Always recap accessory jack ⑥ after charging.

Frequency Display Illumination

The frequency display may be illuminated by pressing the "LAMP/ BATT. TEST" button ③, independent whether the radio is switched ON or OFF.

Accessories

The accessory jack ⑥ allows connection of accessories for various applications and operating conditions. When an external dynamic microphone of < 200 Ω DC impedance is connected, the built-in microphone is automatically switched OFF. In noisy environment a second loudspeaker or a noise canceling headphone with at least 30 Ω is recommended.



Accessory jack ⑥
Top view

Pin assignment:

① Earphone/headphone/loudspeaker, at least 30 Ω

② Dynamic or special Electret microphone, 5 … 200 Ω

③ +11.7 … 15.1 V DC
input to charge the battery
output (switched) to supply VOX 90 and/or special Electret microphone
supply from 12 V DC car or aircraft battery.

④ Microphone Ground

⑤ Ground (minus power; GND for PTT, AF)

⑥ PTT button; common return by ⑤ (GND)

Anlage 1 zur EG-Baumusterbescheinigung
Nr. B129596H vom 21.10.1996
Seite 1 (1)

Annex 1 to EC Type-Examination Certificate
No. B129596H Date: 21.10.1996
Page 1 of 1

Angewandte Normen: Störaussendung: FTZ 17 TR 2013: Ausgabe Juni 1989
Used Norms: (Emission)

Störfestigkeit: ETS 300 339 (März 1994)
(Immunity)

Als wesentliche Teile der technischen Dokumentation gelten:

Prüfbericht Nr.: 1350o/067/96 vom 13.08.1996
1350o/068/96 vom 13.08.1996
1350o/069/96 vom 13.08.1996

BUNDESAMT FÜR ZULASSUNGEN IN DER TELEKOMMUNIKATION

ZULASSUNGSURKUNDE

Zulassungsnummer : LO-80/82

Objektbezeichnung: FSG 5

Zulassungsinhaber: Walter Dittel GmbH
Erpftinger Straße 36
D-86899 Landsberg/Lech

Zulassungsart : Allgemeinzulassung

Befristung : unbefristet

Objektart -: Funkanlage des beweglichen Flugfunks als

a) tragbare Sprechfunkanlage in Bodenfunkstellen

b) Luftfunkstelle in nichtzulassungspflichtigen Luftfahrzeugen

c) Notfunkgerät in zulassungspflichtigen Luftfahrzeugen

Das Zulassungsobjekt erfüllt die technischen Vorschriften der Richtlinie FTZ 17 TR 2013, Ausgabe Juni 1989

Die Zulassungsurkunde mit Ausstellungsdatum 11.09.1984 wird hiermit ungültig.

Saarbrücken, den 13.10.93

Im Auftrag

Wiegand

Wiegand

1 Anlage

Bundesamt für Zulassungen in der Telekommunikation, Talstraße 34-42, D-66119 Saarbrücken, Tel.: (06 81) 5 98-0, Fax: (06 81) 5 98-16 00

Anlage 1 zur Zulassungsurkunde
Nr. LO-80/82 vom 13.10.93
Vorgangs-Nr.: 36086 1
Seite 1 (2)

SYSTEMBESCHREIBUNG

Objektbestandteile: tragbare Sprechfunkanlage "FSG 5"

Objektmerkmale:

Frequenzbereich	:	118,000 MHz ... 136,975 MHz
Kanalzahl	:	760
Kanalabstand	:	25 kHz
RF-Ausgangsleistung:		1 W
Sendeart	:	A 3 E
Betriebsarten	:	Simplex-Betrieb zur Übertragung von Sprache auf einer Frequenz

BUNDESAMT FÜR POST UND TELEKOMMUNIKATION

Federal Office For Posts And Telecommunications

EG-BAUMUSTERBESCHEINIGUNG

EC TYPE-EXAMINATION CERTIFICATE

Registrier-Nr.: B129596H — Anlage(n): 1
Registration no.: — Annex(es):

Benannte Stelle: Bundesamt für Zulassungen in der Telekommunikation
Notified body:

Bescheinigungsinhaber: Walter Dittel GmbH
Certificate Holder: Erpftinger Straße 36
D-86899 Landsberg/Lech

Produktbezeichnung: FSG 4, FSG 5, FSG 5W
Designation of product:

Produktbeschreibung: VHF/AM-Handfunkgeräte
Product description:

Diese Bescheinigung ist erstellt in Übereinstimmung mit der Richtlinie des Rates 89/336/EWG (Amtsblatt der Europäischen Gemeinschaften Nr. L 139 v. 23. Mai 1989) und gilt nur in Verbindung mit der/den beigefügten Anlage/n.
This certificate is issued according to the directive of the council 89/336/EEC (Official Journal of the European Communities L 139 from 23. May 1989) and can only be used in conjunction with the above mentioned annex(es)

Ort, Datum: Saarbrücken, 21.10.1996
Place, Date:

Im Auftrag:
On Behalf of
the Directory:

Stefan Bach

Bundesamt für Post und Telekommunikation

Bundesamt für Post und Telekommunikation, Talstraße 34-42, D-66119 Saarbrücken, Tel.: +49 6 81 5 98-0, Fax: +49 6 81 5 98-16 00