

German Field Line Communication equipment of WW 2



Funksammler Publications

Kleiner Klappenschrank zu 10 Leitungen 10 line switchboard

Development and Description

As can be learned from the previous section, the construction and operation of the “*Feldklappenschrank OB 17 zu 10 Leitungen*” was relatively complex. The redesign of equipment in 1933 had the aim to simplify and the new 10 line field switchboard would be as simple as possible, omitting buzzers, alarm bells, built-in telephone and provisions to connect to public networks. These functions would have to be taken up by external accessories where necessary. At the same time the unit was redesigned for “single interconnection cord” operation, negating the need for separate interconnection cable indicator flaps. Instead of eight cables, the unit now has 10 interconnection cables, one for each line. The basic design with a falling indicator flap, interconnection button and interconnection cable socket for each of the ten lines remained unchanged.

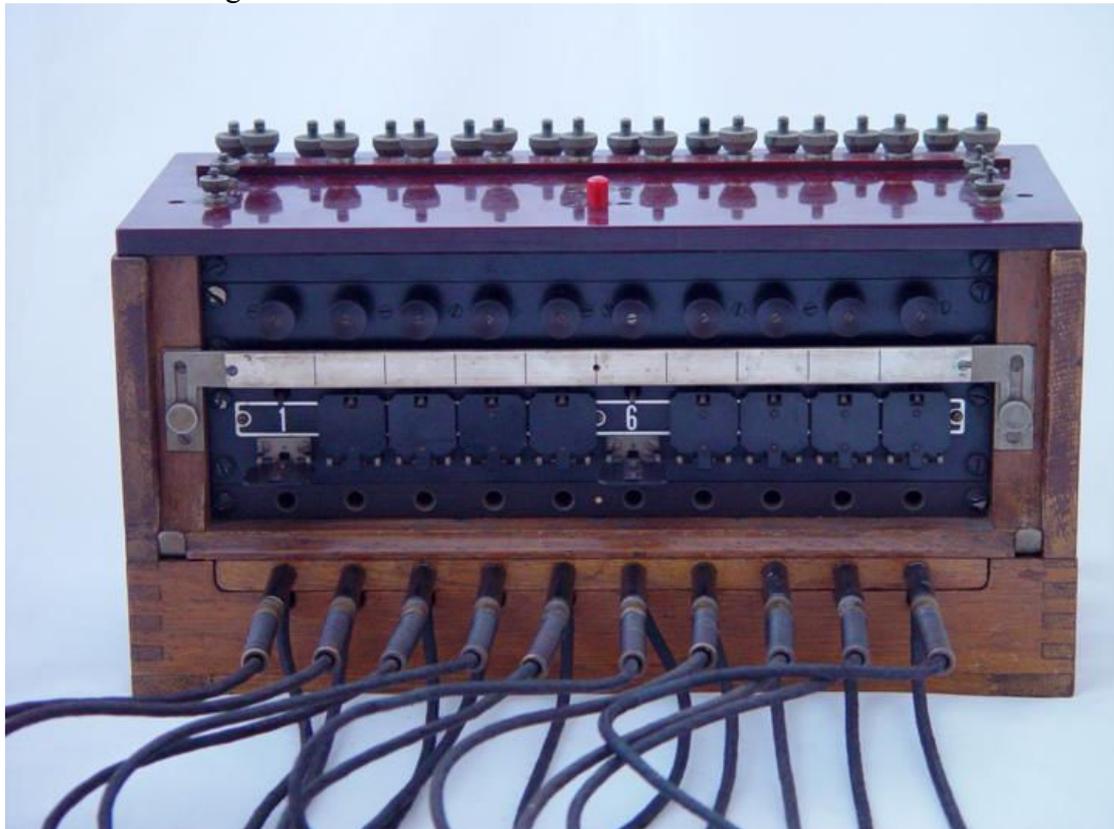


Figure 125: 10 line exchange overview

To operate the new “*Kleiner Klappenschrank zu 10 Leitungen*”, an external *FF 33* field telephone would have to be connected. If connections to public networks were required, an “*Amtszusatz*” or public network connection unit would be required.

The redesign resulted in a unit roughly half the size and weight of the old *OB 17* model. The unit did not require any presetting of jumpers or interconnections, making it far simpler to operate. A metal lid protecting the top and the use of the standard *FF 33* carrying strap allowed the switchboard to be carried in the field and protects it from the weather.



Figure 126: 10 line exchange in transport configuration

Two locks on the side allow the unit to be opened, giving access to the interconnection cable storage compartment. Also in this compartment is a 30 pole plug socket, which can connect the switchboard to a remote line terminal unit, negating the need to connect the lines directly to the switchboard.

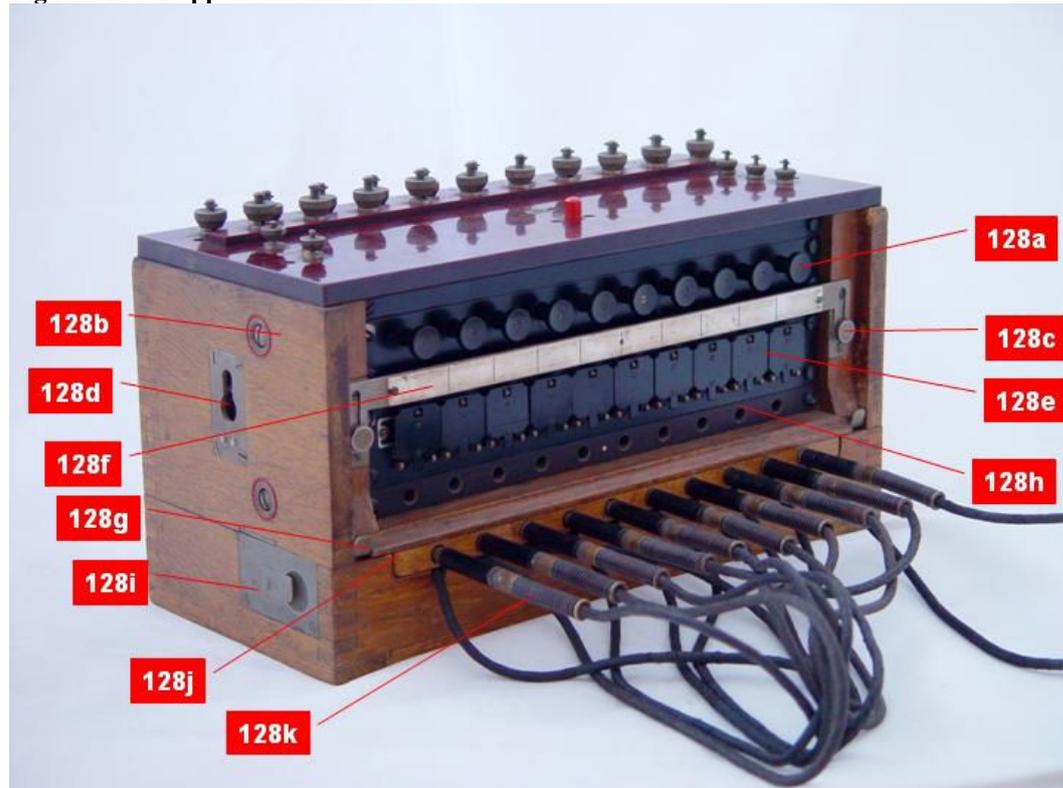


Figure 127: Remote line connection panel

Normally the incoming telephone lines are connected to the terminals on the top panel. Apart from line connections, the top panel has two terminals to connect a *FF* 33 field telephone and three terminals to connect an external alarm battery and alarm bell. These are all the connections that the operator will have to deal with.

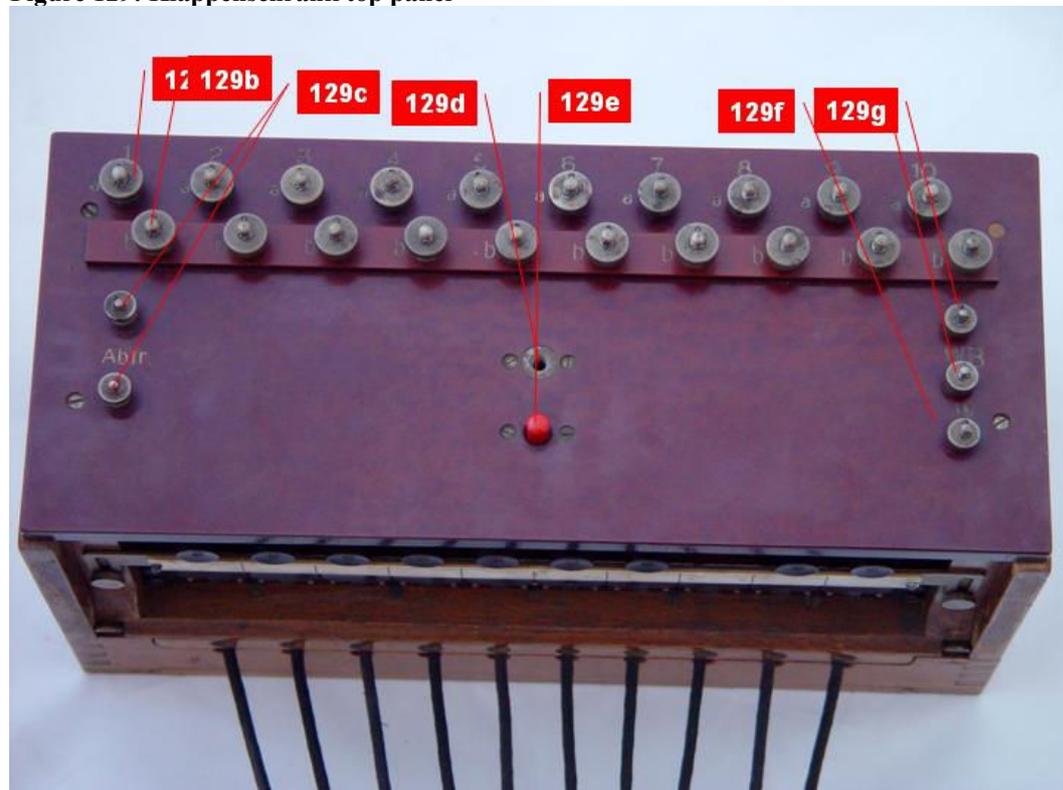
Construction

Figure 128: Klappenschrank external view



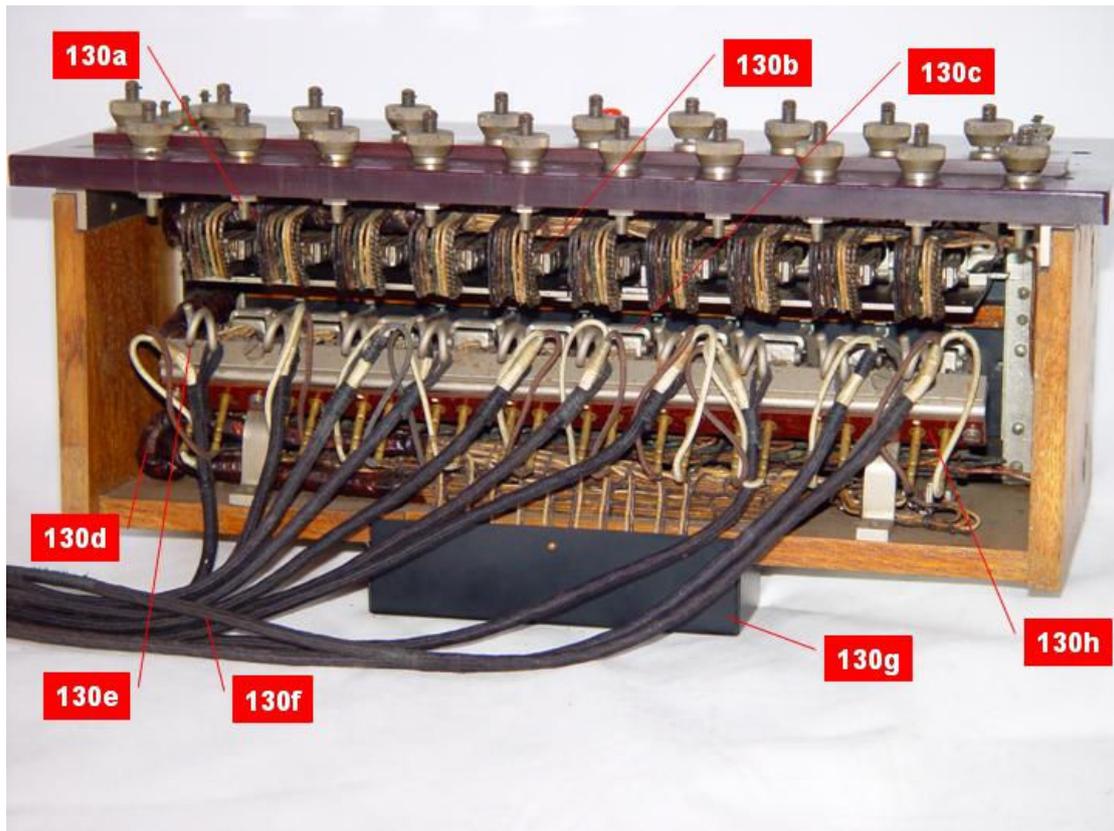
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|------------------------------------|---|------------------------------------|
| 128a Connection button | 128f Signal flap locking bar with writing tab | 128j Interconnection cable storage |
| 128b Interior fastening screw | 128g Lug for metal cover | 128k Interconnection cable jack |
| 128c Signal flap locking bar screw | 128h Interconnection cable socket | |
| 128d Carrying strap slot | 128i Storage compartment lock | |
| 128e Signal flap | | |

Figure 129: Klappenschrank top panel



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|--------------------------------------|---|-------------------------------------|
| 129a "a" line terminal | 129d Screw hole for metal cover | 129g External alarm bell connection |
| 129b "b" line terminal | 129e Connection button reset | |
| 129c Connections for field telephone | 129f External alarm bell battery connection | |
| | 129g External alarm bell connection | |

Figure 130: Klappenschrank interior view



130a Line terminal connection
130b Interconnection button contacts
130c Signal relay

130d Wiring loom
130e Interconnection cable hook
130f Interconnection cables

130g Socket for remote cable connector
130h Connection strip for interconnection cables

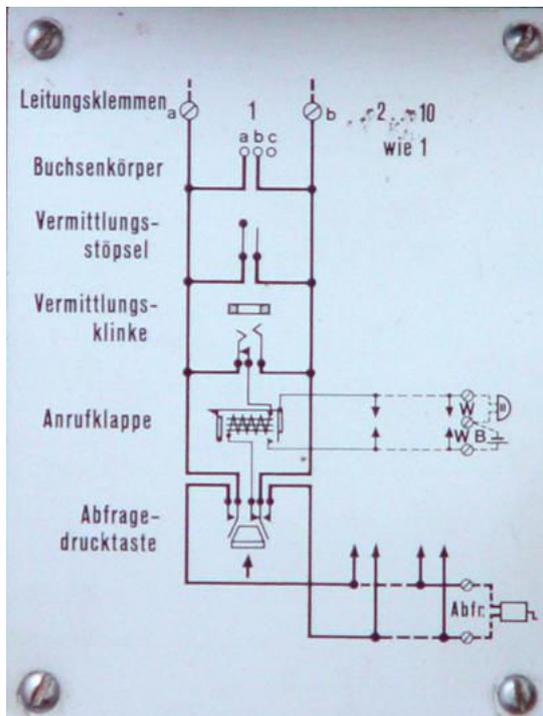


Figure 131: Klappenschrank schematic of a single field

Operation



To set up an switchboard using a “*Kleiner Klappenschrank zu 10 Leitungen*” requires the switchboard unit and a *FF 33* field telephone. If connection to a public telephone network is required, the “*Amtszusatz fuer den kleinen Klappenschrank zu 10 Leitungen (33)*” is required.

Figure 132: Klappenschrank cable storage compartment

- To set up the switchboard, place the “*Kleiner Klappenschrank zu 10 Leitungen*” on a suitable surface.
- Remove the metal lid.
- Place a *FF 33* field telephone next to the unit and connect the two “*Abfr.*” Terminals to the “*La*” and “*Lb/E*” terminals of the *FF 33*.
- Connect the incoming lines to the “*a*” and “*b*” terminals.
- The codes or names for the incoming lines can be written on the writing tab on the signal flap locking bar.
- Unlock the locking bar by sliding it upwards and locking it in place with the two locking screws.
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Figure 133: Klappenschrank ready for operation

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hat may have fallen during this operation. The switchboard is now ready for operation.

When an incoming call is received the signal flap of the relevant line will drop, revealing the number of the line behind the flap. Press the connection button for the relevant line and speak to the caller via the handset of the *FF 33* field telephone (remembering to depress the microphone switch in the handset while talking). When the caller has indicated which line he wants to speak to, press the connection button for that line and turn the generator handle of the field telephone. When the call is answered, place the interconnection cord of the caller into the interconnection plug socket of the outgoing line. Return the signal flap of the caller in the up position and press the red connection release button on top. The call is now connected.



Figure 134: Klappenschrank incoming call on line 4, connected to line 8

At the end of the call, one of the callers will turn the generator rank, resulting in the signal flap of the incoming line to drop. The operator can now remove the interconnection cord of that line and replace it in its storage socket. Close the signal flap to reset the switchboard for the next call.

Conference calls can be made by repeating the connection process: the interconnection cable of caller 1 is plugged into the interconnection plug socket of caller 2; the interconnection cable of caller 2 is plugged into the socket of caller 3 etc. In theory, all ten lines can be connected to a single conference.