Setting-up Notes on the Telefunken E863 KW/2

Answering questions in e-mails this information might prove useful when setting up an E863 without any rear connectors attached such as for testing:

1. Fine Tune:

This is +/-200Hz, but pushing it in should disable the function (removes the +12VDC from one end of the 10k potmeter). The potmeter's center is connected through a 39k resistor to the calibration board.

2. Rear Connector Bu29:

When the receiver is used without ancillaries "solo", then a number of connections need to be made in a plug inserted into the rear connector Bu 29. A specially wired plug was supplied with a new receiver.

Now obviously if you haven't got one, you need to make one. A “Siemens” plug with 26p in two rows (DIN41618) is needed.

The system manual for the TRANSRADIO 21 gives the following information (which can also be found on the circuit diagram “Empfänger”.

The required interconnections for the "solo" operation are:

- AGC:	9a - 10b and 9b - 10a (screen) (a to b, not a to a!)
- Audio:	11a - 12b and 11b - 12a (screen)
- Not-Mute:	1a - 8b (removes +12VDC power from the RF-unit)
- No ext fine freq control:	2b - 5a
- GND to plug cover:	1b

Further notes on Bu29:

The link Bu 29/ 1a - 8b (or Bu 23/ 6 - 5) may be opened with a relay to silence the receiver while transmitting. For actual operation I found it useful to also disable AGC with the same relay by opening 9a - 10b on Bu 29 preventing AGC build-up due to transmitter feed-through. If there is still too much audio feedthrough while transmitting, the link Bu 29/ 11a - 12b can be broken as well. Did all three things when I was using the radio as my station receiver, also had to include a small filter on the mute function to prevent the tune lock (green light) going out due to transients on +12V (see diagram “Mute on Transmit” on this web page).

3. Rear Connector Bu23:

The external line output is on Bu 23, the round DIN connector (circular pin count, 6 in centre)

1+2:	audio 600 ohm out (balanced)
3:	screen for above
4:	GND
5:	same as Bu 29/ 8b
6:	same as Bu 29/ 1a

4. AGC Time Constants:

I found the release time constant of 2s for -20dB (my rx was originally mainly used for TTY traffic) much too slow for ham radio SSB. On the "Regelverstärker" I replaced C592 with 15uF (was 22uF) and C593 with 56uF (was 250uF). This brings it to about 1s for -20dB (see detail picture under “AGC Faster Release Time” on this web page).
