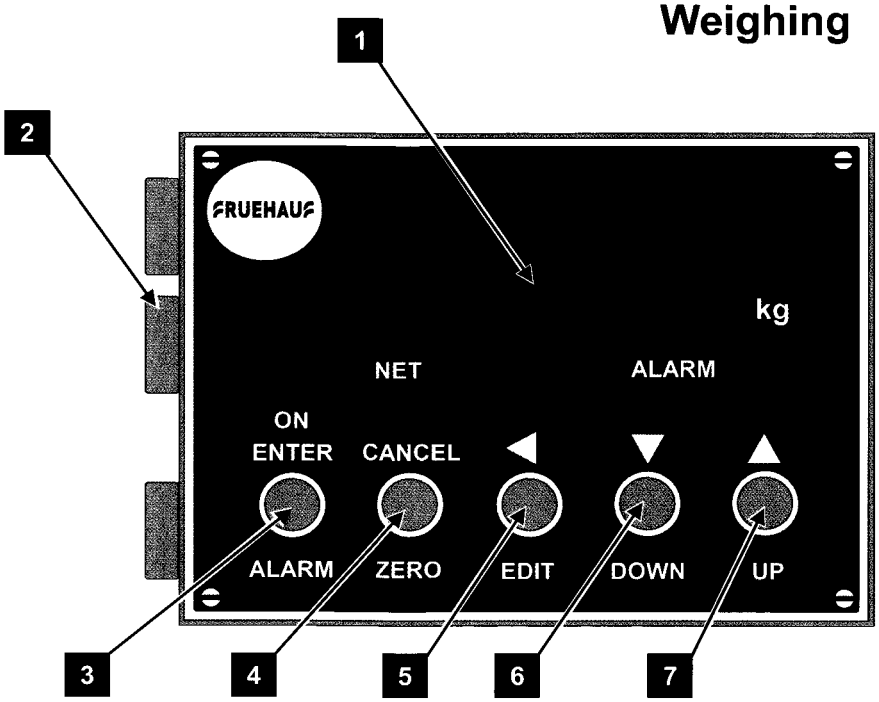
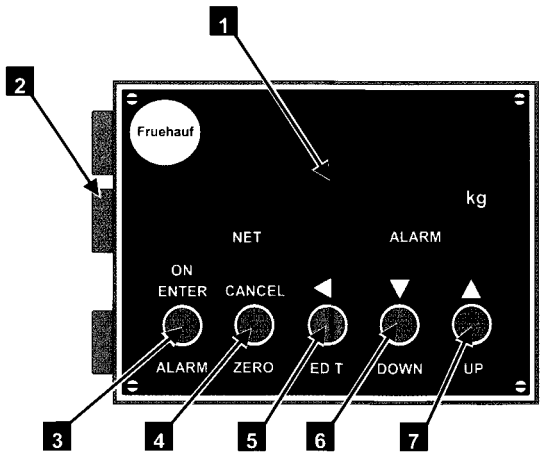


1	LED Display Panel
2	Electrical Connections
3	Push Button "ON", "ENTER" & "ALARM"
4	Push Button "CANCEL" & "ZERO"
5	Push Button "EDIT"
6	Push Button "DOWN"
7	Push Button "UP"

CAUTION

It should not be necessary to recalibrate either Zero or Span, and excessive recalibration should be avoided unless and until a definite trend towards consistent Heavy or Light weighing is identified.
Excessive recalibration can result in poor repeatability.



ALARM

The alarm can be selected to sound when the Maximum payload is exceeded.

Short press button [3] "ENTER" , this toggles the alarm on or off and is indicated in the Display [1] above the word Alarm.

CHANGING THE ALARM SETPOINT

Press button [6] "DOWN" to display for example A 25000 (the current alarm setting).

Press button [5] "EDIT", and use the arrow buttons [5,6,7] to enter a value for the Set point. This will be shown in the display.

Press button [3] "ENTER" to store the new value. (Press button [4] "CANCEL" to restore the original value.

Press button [6] "DOWN" to return to NET weighing.

In Alarm setting mode the display will automatically revert to NET weight if no buttons are pressed for 30 Secs. If you do not press ENTER after the sequence the previous alarm value will be restored.

ZEro This is for initial zero calibration only. It should not be repeated unless there is clear evidence of a permanent zero (empty body) weight shift, or parts of the system have been replaced.

SPAn This is for initial span (full weight) calibration and should not be repeated unless there is clear evidence of a repeatable weighing error or weigher parts have been replaced. Load the trailer with a known weight, or fill and use a weighbridge to determine net weight. (ideally near max gross weight). Ensure the body is raised to the weighing position. Press button [5] "EDIT" and edit in the payload shown using buttons. [5,6 & 7]
Press button [3] "ENTER" to start SPAN acquisition. Press button [4] "CANCEL" to abort.

CAL This is displayed with a flashing "0" "Good" is displayed on successful completion. (An error code is displayed if it fails) The display returns to SPAn . Make a note of the new calibration factor as displayed in CALFACt described below.

ZEroFCt Pressing button [5] "EDIT" displays the zero (empty) calibration factor used internally.

CALFACt Pressing button [5] "EDIT" displays the span (Full load) calibration factor used internally.

bLUEUEH This parameter is used to display the unique Bluetooth ™ address of the currently connected remote display device (if option supplied) The address is 7 digits which may be alpha numeric.
It is set to 0000000 if the Bluetooth ™ option is unused (default) If it is edited to 000000 1, a new remote device will be searched for on return to normal weighing. See Bluetooth Remote device.

CELL oP This is used to display the load cell input in Millivolts per volt (mV/V). It is useful for troubleshooting. Press button [3] to display (the flashing bars in the left digit indicate mV/V mode). An empty standard Bathtub body gives a cell output of 0.04 & 0.08 mV/V. A 30t load gives around 0.65 mV/V.

BLUETOOTH ™ RADIO REMOTE CAB DISPLAY OPTION

Introduction

This option allows remote display of weight on a battery powered portable module (the 'Remote'). It is a simple duplicate display of the NET weight shown on the normal chassis indicator, and has no control buttons.

Operation

The remote is switched on by pressing the power button on the left hand side panel. This button requires a press of at least half a second to switch the unit on.

This is to prevent accidental powering on with consequent battery drain. (If the button is held depressed, it enters a diagnostic mode (see 'Troubleshooting', below).

The display will initially show the message S IGNAL?, indicating no radio link established with the base. If the link remains down, the S IGNAL? message is replaced with two flashing decimal points (DPs) to conserve battery power, whilst still indicating the remote is powered up.

If the base (on the Trailer) is now switched on (press a button or flash trailer side lights), the Bluetooth radio link will be established after a few seconds and the net weight will be displayed on the remote.

Switching off is by pressing the power button on the remote a second time.

The remote will automatically switch itself off after 5 minutes without a signal from the base. It will also switch off if its internal battery voltage drops below a safe limit 'LO bAt will be displayed.

It is a good idea to switch on the remote around the same time as the base is powered on (sidelights flashed). If the base is turned on more than 30 seconds before the remote, it will attempt to search for a 'new' remote (as described below), and this may result in a longer wait for initial connection.

Swapping Remotes

Only one remote may 'talk' with one base at any one time. When the base powers up, it will try to link with the remote it was previously talking to. If that remote is in range and switched on, a link is made in seconds, and weight data is transmitted and displayed.

If the previous remote is not found within 30 seconds, a search ('discover') for any Fruehauf remote is initiated. The first one found is used to form a new link.
Around 40 seconds after switch-on, a brief display of d ISC n is made, where 'N' is the number of Bluetooth devices discovered (this will include any Bluetooth – even a mobile phone).
The search then continues to find only a Fruehauf remote device. If a new remote cannot be detected after a further 30 seconds, the cycle is stopped and connection with the original remote is attempted continuously.

Note that once a successful link has been made, the search cycle is not re-started. If the link is temporarily lost, the base will only try to re-connect with the current remote. To initiate a search, the base must be turned off and on again.

Linking with a new remote

Power up the base with the 'new' remote nearby, and switched on. A search is started, as described above, as soon as the 'old' remote isn't detected. This will take around a minute, with no indication of progress until the remote starts to show net weight.
Note that the remote may power itself down after five minutes from first switching it on if a link isn't established. If the 'new' remote is not discovered within around 1 minute, switch the base off then on to re-initiate a search. Alternatively, enter SEtUP > bLUEUtH and set the address to 000000 1, to initiate a continuous search for the new remote.

BLUETOOTH ™ RADIO REMOTE CAB DISPLAY OPTION contd.

Battery Charging

The remote's internal rechargeable battery is 'trickle-charged' from the vehicle's lighter socket, using the supplied charging lead.

The battery cannot be harmed by overcharging.

The LED indicator next to the remote's charging socket will illuminate whenever charging is taking place. The remote is designed to be left connected to the charging socket at all times when it is not in use.

The current draw from the vehicle battery will not flatten it if left connected overnight, or longer.

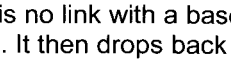
The lighter socket can be 12 or 24v supply. If the remote's battery becomes completely discharged, it may take several hours of charging before it can be used. If it turns off prematurely, suspect a flat battery. After use, or when first plugged in, the first hour is at a boosted charge rate, indicated by the LED flashing on/off, slowly.

Range

The Fruehauf system uses powerful Class 1 Bluetooth modules with a specified range up to 100m. This maximum is greatly affected by terrain and obstructions such as other vehicles and buildings; the signals are not able to penetrate most solid materials. The signals are, however, easily reflected and this is one way they achieve good penetration into the cab; they pass through the windows after reflection around the trailer chassis and even off the ground.
The range should be close to maximum in 'line-of-sight' from the offside of the vehicle, but will obviously reduce, and even disappear altogether if a large object comes between base and remote.

When establishing a link after switch on, a maximum distance of around 10 metres between base and remote should be observed.

Troubleshooting

When there is no link with a base, the display will show  for two seconds. It then drops back to a power saving mode of two decimal points on the display 'toggling' on and off.

If the remote remains in this mode for more than two minutes with an operational base nearby, it is likely that the base is either already connected to another remote, has Bluetooth mode disabled, is not Bluetooth equipped, is out of range, or there is something interfering with the radio signal between base and remote.

Ensure the base is known to be Bluetooth equipped and move the remote close by and power both off and on again*.
If this still fails to initiate a link after a couple of minutes, enter SEtUP > bLUEtH on the base, and check for a valid Bluetooth address (a 7-digit number above 0000004 that may include some letters).

If the address is set to '0000000', Bluetooth has been disabled. Set '0000001' to initiate a search when the base is returned to normal weighing.

If there is a Bluetooth address in the base (indicated by 7 numbers and/ or letters), see if it corresponds with that in the remote.

Press and hold the remote's power button to force the diagnostic mode – it will show the current software release, then perform a display segment test, then display a 7-digit address which should be the same as the one displayed in the Base's bLUEtH parameter.

(If the remote shows a blank address, keep the power button pressed until In It IAL is displayed – then try the diagnostic step again.)

If all of the above checks out, it may be a radio signal propagation problem. Perhaps the base and remote are too far apart, a large object is blocking the signal path, or strong external radio interference is present. This may happen if parked near a radio transmitting antenna or source of strong electrical interference, such as welding or large electric motors/ control gear.

It is possible, but fairly unlikely, that a mobile phone, CB or 'walkie-talkie' could be sufficient to temporarily upset the Bluetooth link.

*If the site is one where the driver is not permitted to leave the cab, try holding the remote out of the window, in 'view' of the base on the chassis until a successful link is achieved. It should then be possible to bring the remote back inside and still maintain the link.

BLUETOOTH ™ RADIO REMOTE CAB DISPLAY OPTION contd.

Remote Diagnostic Function

The remote has a diagnostic function in which, if the power button is held pressed when switching on, the display will step through a series of self tests.

These are:

a. Display firmware (internal software programme) version number – e.g. dF6-309 .
b. Perform a sequence of segment tests.
c. Display Bluetooth address lower 7 digits (as used by the base in the bLUEtH parameter).
d. Display Bluetooth address upper 5 digits (giving a full 12-digit address).
e. Force a re-initialisation of the Bluetooth module – In It IAL.

Note that if the module was not previously initialised, steps c. and d. above will show blanks. After step "e", the address should show properly when the sequence is repeated. A reported Bluetooth address is a good indication the Bluetooth module is working correctly.