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Base/Repeater 580

Shortform Operating Instruction

Dutch Police II

General

This manual describes the operating of the **580 Series** Base/Repeater (REP-580, REF-580,BRF-580 and BSC-580). It is assumed, the **580 Series** Base/Repeater is correct programmed, installed and a secure key set is loaded. If no communication key is loaded, the **580 Series** Base/Repeater will work ONLY as a repeater. Base station function is NOT possible. If one of the above assumption is not given, please contact your technical staff.
In normal mode the base station will work as a repeater. If a valid communication key is loaded monitoring is possible. The priority is always given to the base station.

Operating and Display Elements

All operating elements are located at the Control unit. Independent of the use of the unit (Repeater only or Base and Repeater) the function of each press-button is the same. This is also true for the display flags and indications.
Depending of the use of a handset or a microphone, the location of the PTT-Switch is different.
If a handset is used, the PTT-Switch is located at the inner part of the handset.
If a microphone is used, the PTT-Switch is placed at the microphone itself.
If a remote control unit is used, the PTT-Switch is placed at the remote control unit (red button).

Control unit Buttons

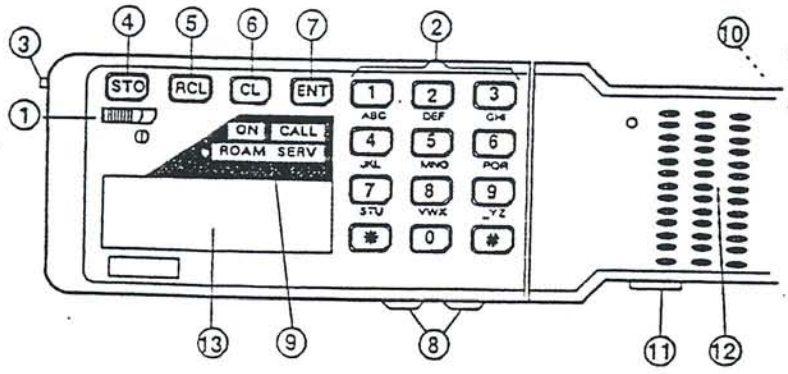


Fig. 1

#	Description	Function
1	ON / OFF Switch	Switches the **580 Series** Base/Repeater on / off
2	Alpha numerical keyboard	Input of numerical characters and special functions
3	Shift key	1. Switches alternative functions on 2. Switches the RF-Power in transportable mode to high RF output
4	STO Storage key	Changes operating mode
5	RCL Recall key	Recall of predefined functions
6	CL Clear key	Clears : 1. Input correction(each time one character) 2. Input display (clear display)
7	ENT	Confirmation of inputs
8	- Key + Key	- Volume + Volume
9	Display flags	See Tab. 2
10	PTT-Switch	**580 Series** Base/Repeater in transmit mode
11	Loudspeaker switch	not used in this application
12	Handset loudspeaker	not used in this application

Table 1

Display Symbol

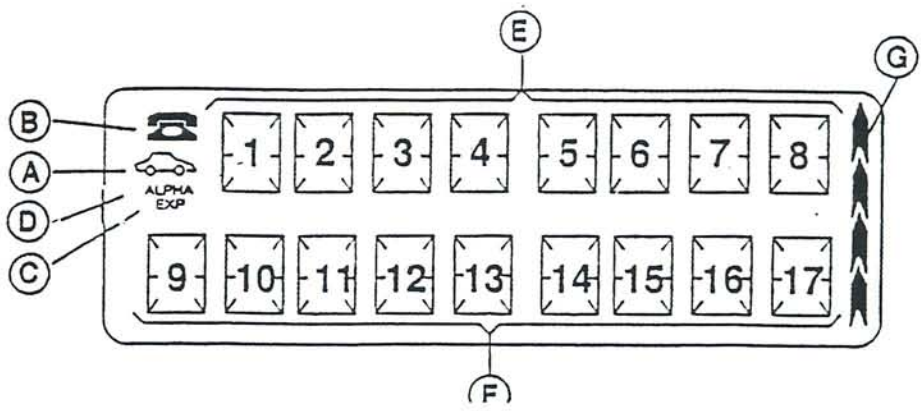


Fig. 2

	Indicator Description	ON	OFF
9	ON	If **580 Series** Base/Repeater is switched on	If **580 Series** Base / Repeater is switched off
9	SERV	When the transmitter is keyed	
9	CALL	Sel-Call is transmitting	
9	ROAM	not used	
A		Mobile power range	Transportable power range
B		Synch. OK in ciphered mode	Synch. not OK
C	EXP	Shift key (3) pressed	
D	ALPHA	not used	
E	*CH_ XXX Y*	Status and info display: CH ⇒ Channel XXX ⇒ Channel Number Y ⇒ Mode Indication	
F	*CH_ XXX Y* *YYY ZZZ*	Input display: Input from the keyboard and received messages are displayed	
G	Field strength indication	Tree bars Very good ch Two bars good ch one bar usable ch no bars poor ch	

Table 2

Operating

ON / OFF

Move the ON / OFF Switch (1) to the On position. The **580 Series** Base/Repeater and the ON LED (9) and (A) will be switched on.
A self test checks the functionality of the **580 Series** Base/Repeater and will be ready for reception at the last selected channel.
(If an error occurs see error messages)
The default display will show up.

DISPLAY

CH_ XXX C

To switch off the unit, move the ON / OFF Switch (1) to the OFF position.

Note:
If the unit is used as a transportable unit, automatically the RF-Power output will be reduced. By switching on the **580 Series** Base/Repeater and pressing the shift key (3) simultaneously, The unit will transmit in the high power mode.

Volume Control

The volume is pre-set to a default value.
It can be increased by pressing the + key (8) and decreased by pressing the - key (8) The display will show the relevant level.

DISPLAY

VOLUME ---- ∪∪∪∪

∪ ⇒ Volume level 4
(max. Volume level = 8)
(min. Volume level = 1)

Loudspeaker Control

The external loudspeaker can be switched on or off. A toggle function controls this mode. The default setting is: ext. loudspeaker off. To change the loudspeaker mode press shift (3) then 0 (2). The display indicates if the ext. loudspeaker is switched on

DISPLAY

CH_ XXX C LSP ON

or if the ext. Loudspeaker is switched off.

DISPLAY

CH_ XXX C LSP OFF

After using this mode the **580 Series** Base/Repeater default display will be shown.

Cipher/plain Mode

The **580 Series** Base/Repeater offers the possibility to operate the equipment in three communication modes:
- Plain
- Default key and
- Ciphered

If no Communication key is loaded ONLY repeater mode is possible
To select one of the three modes press:
STO 1 for plain operation.
STO 2 for ciphered operation.
STO 3 for default key operation.
The user will be informed in plain mode at the begin of a transmission and during plain reception (plain override) about the transmission mode .

DISPLAY

CH_XXX C

C ⇒ Ciphered Mode
D ⇒ Default Mode
P ⇒ Plain

Note:
More about the key management is described in the key entry device **KED 3400** manual

Channel Selection

The cold start channel is always the last selected channel.
To select an other pre-programmed channel, press the relevant number (2),

DISPLAY

CH_ XXX C CH_ YY

YY ⇒ new channel number (max. 2 digits)

press ENT (7). The relevant channel will be displayed.

DISPLAY

CH _YYY C

YY ⇒ new channel number

A new channel will always show up with its pre-programmed channel assignment parameters. (plain, crypto etc.)

An incorrect input can be corrected by pressing CL (6). Each time CL (6) is pressed, one character will be erased.

A selection of an invalid channel will not be accepted and no action will be carried out by the **580 Series** Base/Repeater.

DISPLAY

CH_ XXX C CH_MISS

Receive Mode

The **580 Series** Base/Repeater can receive a group call, selective call or an open call in plain, default or ciphered mode. If the unit is in a other receive mode then the remote transmitter, an alert tone and a display message will indicate the wrong status.

DISPLAY

CH_ XXX Y GO TO C

Y ⇒ see Cipher/Plain mode
if R ⇒ Repeater mode
C ⇒ go to cipher mode
D ⇒ go to default key

The caller ID will be displayed in selective call reception

DISPLAY

CH_ XXX C FROM _ ZZZ

ZZZ ⇒ Transmitter ID

Receive Messages

9 predefined messages can be received.
At the same time a alert tone will inform the user about the reception of the message.

DISPLAY

CH XXX C M E S S A G E

Message see attached list

Transmit Mode

By pressing the PTT button, the **580 Series** Base/Repeater is in transmit mode. The SERV LED will be on.

Send Selective Call

Enter the desired ID number (3 digits) of the called subscriber and a 0.
DISPLAY

CH_ XXX C SC_ ZZZ_Y	ZZZ ⇒ Called ID number Y ⇒ O (MSG Dummy)

Note: After entering the 3. digit the indication CH_ will change to SC_
Press ENT (7)
DISPLAY

CH_ XXX C TO_ ZZZ	ZZZ ⇒ Called ID number CALL and SERV will be on.

Send a Message

9 predefined messages are pre-programmed. The message can be combined with a Sel call number.
Enter the desired ID number (3 digits) of the called subscriber
DISPLAY

CH_ XXX C CH_ ZZZ	ZZZ ⇒ Called ID number

Enter the desired message number (1..9)
DISPLAY

CH_ XX C SC_ ZZZ Y	ZZZ ⇒ Called ID number Y ⇒ message number

Note: After entering the 4. digit the indication CH_ will change to SC_
Press ENT (7)
DISPLAY

CH_ XXX C MSG_TX Y	Y ⇒ message number CALL and SERV will be on.

Send Group Call

One of the 9 predefined messages can be combined with a group call.
If one of these messages is transmitted, automatically a group call will be send out in advance.
To recall one of these messages press RCL (5) ,then 0
DISPLAY

CH_ XXX C MSG_TX

and enter one of the relevant number (2) from 1..9.
The message will be displayed and transmitted immediately.
DISPLAY

CH_ XXX C MSG_TX Y	Y ⇒ Message number SERV and CALL will be on

Repeat Send Message/Sel Call

This function repeats the last Sel call or group call transmission.
Enter RCL (5) and 0. Depending of the last transmitted function, it will be displayed and transmitted.

Emergency Clear

To store the **580 Series** Base/Repeater or in emergency cases all keys stored in the **580 Series** Base/Repeater can be erased by using the emergency clear function.

Note: If this function is used, no communication in cipher mode will be possible. A new keyset must be loaded.
Press the shift key (3), EXP (C) will be displayed, then press within 5 sec. the numerical key 9 and then CL (6)
If CL (6) or 9 is not pressed within the time out the **580 Series** Base/Repeater will go back to default mode.
DISPLAY

CH_ XXX C EMCY CLR

Output Power

580 Series Base/Repeater offers four power output values. The first two are mainly used if the **580 Series** Base/Repeater is connected to an independent battery. If the **580 Series** Base/Repeater is used in a mobile or fixed installation a max. output of 15 Watt can be achieved.

Power output:		Display
Portable low	5 Watt	no display indication
Portable high	15 Watt	 on
Fixed low	5 Watt	no display indication
Fixed high	15 Watt	 on

Note:
Portable high and the fixed low mode is on if the **580 Series** Base/Repeater is switched on and the shift key (3) is pressed simultaneously.

Error Messages

In case of an error the **580 Series** Base/Repeater will **not** transmit any information in plain, if the unit is in default key or cipher mode.
If an error occurs, the **580 Series** Base/Repeater will recognise it with the help of the BITE and will show the status on the display.

The following error messages can occur:

Message	Meaning
GO TO C	Go to Cipher mode
GO TO DK	Go to Default Key mode
CH_MISS	selected channel not programmed
(The following error codes need assistants from the security manager or a invalid mode will be used)	
NO KCPA	No key channel parameter assign.
NO KEYS	No key loaded
NO A KEY	No active key loaded
NO S KEY	No spare key loaded
CHANGE OM	Change operating mode
OM INVALID	Operating mode invalid
OMD INVAL	Operating mode default invalid
CHAN ERR	Channel error
EMCY CLR	Emergency

Note:
These Messages are related to the ciphering module HC-3400.
The following error messages can occur after switching on the unit:

Message	Meaning	What to do?
Error C	HC Problem	go to Workshop
Error M1	After EMCY	call Security of.

Note: It is possible after this error message an other message from the above list will show up.
The following error messages can occur during operation of the unit:

Message	Meaning	What to do?
Power LED blinking and alert tone	Battery low	Connect unit to charger or check connectors

Bit Error Test (BER)

In special cases it can of great importance to know the quality of the received digital signal. Therefore. the **580 Series** Base/Repeater offers the possibility to check the bit error rate of the received signal.

Press shift (3) and then enter 99
DISPLAY

CH_XXX Y BER = ZZZ

Y ⇒ Mode (see cipher/plain or receive mode)
ZZZ ⇒ BER in ‰

The BER will be displayed. A number between 0 and 255 correspond direct to the BER in ‰.
255 is a error in checking the BER-Test, e.g. the unit is switched to and receives an analogue signal or nothing.

If PTT is pressed the repeater goes to transmit mode and the display is the same as in transmit mode. After releasing the PTT, the repeater goes back to the BER mode

To terminate the BER mode press the CL (6) key.

Note:
The Coder can synchronise between 0 and 100. Voice recognition will be between 0 and 80. 255 will be a non valid value.

Battery Indication

If the battery is low an intermitted alert tone will be audible and the power LED **ON** (1) is blinking.
If this indication occurs connect the **CSE-580** to the power supply or replace the attached Battery.

Service Mode

580 Series Base/Repeater offers for advanced user a special programming mode, the service mode.
This mode allows the reprogramming of the unit in the field.
Switch the unit off. Switch the unit on and press # key (2) simultaneously until the new display appears
DISPLAY

ENTER_PW

Enter the Password. (It will not be displayed)

DISPLAY

ENTER_PW □□□□□□

Press ENT (7) and the unit is in the Service Mode.
DISPLAY

SERVICE MODE

If a wrong password is entered, unit goes back to the default mode.
For more details about the service mode and the password, see the service mode instruction manual.