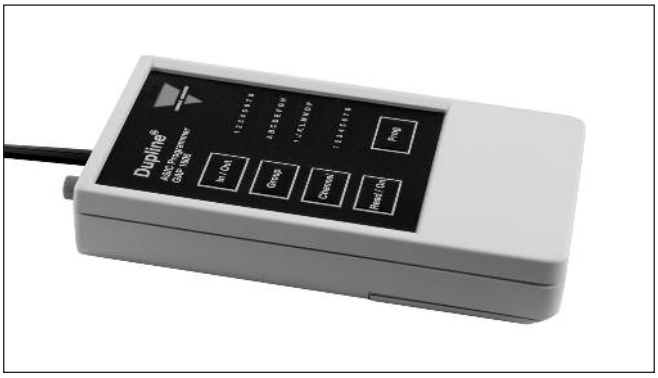
Programming Unit
Type GAP 1605



- **Portable programming unit**
- **Individual coding of every input or output**
- **Group coding of an entire module**
- **Reading of codes**
- **Editing of channel codes**
- **On/off-line coding of Dupline® modules type G ....**
- **LED display 4 x 8 LEDs**
- **5-key tactile keyboard**
- **Battery powered**
- **Easy-to-handle plug-type connection**
- **Switch for turning power on/off**

Product Description

Programming unit for Dupline® modules G..(..) .... Provides means of reading and programming of channel codes. Coding of I/O's as either 2, 4 and 8 successive channels or individually for each I/O. Unused inputs/outputs can be defined as non-coded.

Ordering Key

GAP 1605

Type:
Dupline® Programmer
Type no.

Type Selection

Supply	Ordering no.
Internal battery	**GAP 1605**

Supply Specifications

Power supply	9 V Alkaline 400 mAH
Battery type	IEC 6F22
Rated operational power	
Stand-by	< 25 µA
Operating	< 22 mA
Battery lifetime	Typ. 1 year

Product Specifications

Output	
Connection	6/6 modular socket
Display	4 x 8 dots
Type	LED
Size	1.8 mm
Keyboard	Tactile keys
No. of keys	5
Cable	GAP 1605 to Dupline® system
Connectors	2 x 6/6 modular plugs
Length	75 cm

General Specifications

Environment	
Degree of protection	IP 40
Pollution degree	3 (IEC 60664)
Operating temperature	0° to +50°C (+32° to +122°F)
Storage temperature	-20° to +60°C (-4° to +140°F)
Humidity (non-condensing)	20 to 80% RH
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Material	ABS, grey
Weight	225 g

Mode of Operation

The GAP 1605 is a portable programming unit used for reading or programming channel code(s) in the series of Dupline® products.

The external switch turns the power on/off.
When the battery is installed and the power is on, the GAP 1605 is ready for use. Connect the cable between the programming unit and a Dupline® module type G..

5 keys provide the means of operating the GAP 1605: two keys are used for reading and programming, two keys for changing Groups and Channels and one key for selecting the desired Input/Output.

The current coding is displayed by 4 x 8 LEDs. The top row of LEDs displays the selected input or output. The two middle rows display the current channel group, while the bottom row displays the current channel code.

« In/Out » - Key

This key is used to scroll through the I/O's of a module. If a new module is connected or if consecutive channel codes are allocated to the I/O's, pressing the « **In/Out** » key has no effect since all Dupline® modules are preprogrammed to their physical number of inputs/outputs. This key is also used to switch between consecutive and individual coding of the I/O's. To change the mode, keep **« In/Out »** pressed for more than 2 seconds.

« Group » - Key

Used to select the Group address within the range A to P. The Group LED will shift one position right for each key activation.

« Channel » - Key

Used to select the channel(s) within the group. The Channel LED will shift right one, two or four positions, depending on the number of inputs/outputs. If consecutive channels are selected, then pressing the **« Channel »** key will have no effect.

« Read / On » - Key

Used to turn on the GAP 1605 and to read the channel codes of the connected module. When the reading is completed, the display will show the channel code of the module: either 1, 2, 4 or 8 inputs/outputs.

2, 4 or 8 In/Out LED's being ON indicates that consecutive channel codes are allocated to the I/O's, e.g. input 1 coded to P1, input 2 to P2 ... input 8 to P8.

If only one In/Out LED is ON, then the I/O's are coded individually, e.g. input 1 to C5, input 2 to D4 etc. The code for each I/O is indicated by a group LED and a channel LED.

If the GAP 1605 is not connected to a Dupline® system, it will turn off within two seconds.

« Prog » - Key
When the displayed I/O-coding corresponds to the desired channel configuration, the codes will be downloaded to the Dupline® module when pressing the **« Prog »** key.

After programming is executed, a verification takes place. If this verification fails, all activated LEDs in the display will flash two times, and the programming unit will switch off.

If such behaviour occurs repeatedly on the same module, the module may be faulty. If several modules fail to download, the GAP 1605 may be faulty.

Individual In/Out channel programming

The GAP 1605 features an additional mode of single-channel editing. Pressing **« In/Out »** for more than 2 seconds will change the operating mode to single-point programming. The **« In/Out »** key is now used to select one of the eight possible inputs/output, thus making individual channel coding possible. The In/Out-LEDs assign the display channel code to the corresponding physical input/output of the module.

In singlemode the **« Channel »** key also has the ability to disable an In/Out-position. **« Channel »** must simply be pressed past channel 8, whereby both the Channel LED and the Group LED will turn off. To reenable, just press **« Channel »** again.

It is possible to change all eight Inputs/Outputs, even though some Dupline modules are built for only 1, 2 or 4 Inputs/Outputs.

To exit single channel programming, just keep the **« In/Out »** key pressed for 2 seconds.

Output status setting

On receivers it is possible to configure the status of the outputs during Dupline® failure. Normally, any output of a receiver will go off during Dupline failure. In some cases the inverted function is desirable (e.g. light applications - turn on light if the Dupline® is down).

To change output status, the GAP 1605 must be put into configuration mode. This is done as follows:
- Remove any connected Dupline® system.
- Keep both **« In/Out »** and **« Group »** pressed, while pressing **« Read/On ».**

The first In/Out LED now turns on. Connect the Dupline® system, and press **« Read/On »**. If output status is set, then channel LED 1 will illuminate. Pressing **« Channel »** will toggle the output status On/Off.
Press **« Prog »** to store.
If **« Read/On »** is pressed when no Dupline® system is connected, the LEDs will flash to indicated a false condition. Only a successful reading will reset this condition.

Specifications are subject to change without notice (04.03.2009)
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Mode of Operation (cont.)

Other features

To code a Dupline® module off-line, neither Dupline nor power to supply the module is required. Simply connect the module to the programmer and start coding.

If On-line coding (module connected to an operating Dupline® system) is performed, the module automatically disconnects ifself from the Dupline® and returns to normal operation after the programmer cable is disconnected.

The GAP 1605 automatically turns off when no key has been pressed within the last 30 seconds.

If the connection cable is removed from the Dupline® module, the GAP 1605 will switch off within 2 seconds.

Low battery indication

When battery is low, the In/Out row of LEDs will roll centerwards in an eye-catching manner.

Warning

When using the GAP 1605 you must connect the cable to the GAP 1605 before connecting the cable to any Dupline® module that is to be coded. Even so, the cable must first be removed from the Dupline® module before disconnecting it from the GAP 1605.
Without observing these precautions you may destroy the ASIC inside the Dupline® module through static discharges.

Caution

To ensure long battery life, always remember to turn the “switch off” on the GAP 1605.

Additional information

Scope of supply:

1 x programming unit
GAP 1605
1 x cable
GAP CAB
1 x user manual
MAN GAP ENG

Not supplied:
1 x 9 V battery type 6LR61