Underhill®

Decoder and 8-Station Sender Portable Programmer / Tester Instructions
p/n **DEC-PROG-R**

Introduction

Underhill's new Portable Programmer can program <u>or</u> test Underhill's 2Wire Decoders or 8-Station Senders on the fly as needed.

Power consumption has been optimized by 2 (qty) AA batteries, typically allowing for a season of use.

Setup

Install the included batteries in the compartment on the back of the unit. Be careful to observe correct polarity.

⚠️ **The Programmer will tolerate battery miss-insertion, as the mechanical arrangement prevents the batteries from actually connecting.**
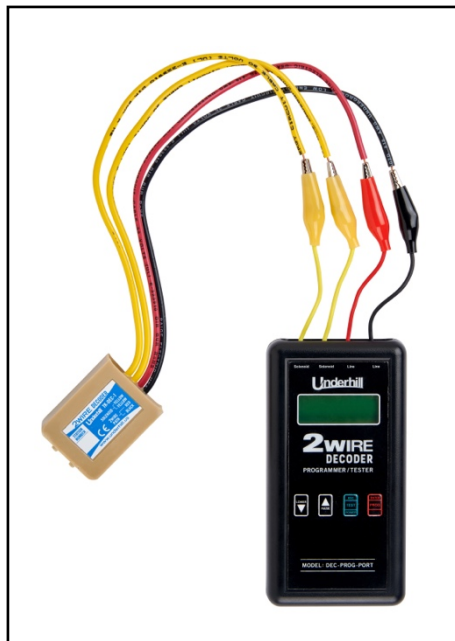
The unit will power-up and say, "Press Enter" and the software version number will display briefly. The display then reverts to the 'normal programming screen' which allows the user to test and program 2Wire Decoders or 8-Station Senders. The unit will power-off automatically after approximately 20 secs of inactivity.

Programming / Testing a Decoder

Programming or testing can easily be accomplished by attaching the Portable Programmer's color-coded leads as follows:
- The red, black and 2 (qty) yellow leads for Underhill 2Wire Decoder or,
- The red and black wire leads for any 8-Station Sender.

See Figure 2-1.

Portable Programmer Connected to a Decoder
Figure 2-1

Incorrect color-coded wiring will not harm the unit but will give errors that will be displayed on the screen. For multiple output decoders, be sure to attach the solenoid/valve wires associated with the channel that you wish to program. A Decoder's station number can be reprogrammed as often as needed. The factory default station number is Station 01.

⚠ **CAUTION: Never connect the Portable Programmer to a 2Wire Decoder or 8-Station Sender while it's connected to the 2Wire path.**

The "Raise and Lower" buttons allow the user to change the Decoder station number or the Sender address.

The PROG (Enter) button writes the displayed address to the decoder or sender attached. Once programmed the device is tested at the programmed address. Any errors are reported on-screen, see "Errors" on the following page.

The TEST (Escape) button tests the attached decoder or sender. The address showing on-screen is tested first, before the whole range of possible addresses is scanned. A successful test will be indicated on-screen together with the address that actually responded. The scan of addresses can be interrupted by pressing any key.

⚠ **Note: The TEST (ESC) key is also used to turn the unit ON after it has automatically powered OFF.**

Programming / Testing an 8-Station Sender

To program or test an 8-Station Sender, connect the red and black Portable Programmer clips to the Sender's black and red wire leads.

Press the "Lower and Raise" buttons to select Senders 1-8 depending on whether the Sender is used with a Universal Decoder Adapter or a Novo 2Wire Converter. If used with an Underhill Novo, the first Sender number should be #5. Press the "Enter / PROG" button and the Programmer will start with Sender #1 until the selected number is displayed. An 8-Station Sender's number can be changed if entered incorrectly or as often as needed.

Normal Operation

POWER "On"
The unit powers-off after approximately 20 secs of no-activity. A simple press of the TEST (ESC) key will reactivate power-on the unit. When the unit is OFF it consumes a very small amount of power.

⚠ **Note: If the unit is to be left for 3 months or more, it is recommended that the batteries be removed.**

PROG Button
Once a station number or Sender address is selected, press the PROG (Enter) to confirm your selection. If no 2Wire decoder is detected, an attempt is made to program an 8-Station Sender. If the address displayed is greater that that allowed for a 8-Station Sender, a message "Sender Add Too High" is displayed. Otherwise a program command is sent, followed by a 8-Station Sender test action. If no 8-Statiomn Sender response is seen, then FAIL is displayed.

Errors are displayed on screen.

'SHORT'   There is a short circuit between 2 or more of the alligator clips. Confirm there the alligator clips are not touching one another.
'FAIL'   No response (no decoder or sender). The 2Wire Decoder or 8-Station Sender has failed and may require replacement.

⚠️ **Note: 2Wire Decoders and 8-Station Senders can be reprogrammed multiple times with different addresses. If one fails attempt to program it with a different number. If the new number passes, then attempt to re-program it to the previously desired station number or address.**

TEST Button
Pressing TEST (ESC) button while in the 'normal programming screen' will test the attached decoder or sender. The sequence first identifies if a decoder is attached, and if so, which channel.

If a decoder was detected, it is then tested at the displayed address. If this fails, then the range of all possible addresses are tested. Pressing any key during this sequence will abort the scan. If a decoder isn't detected, then senders are searched for in the same way. If no response is seen, then a FAIL message is displayed.