

## ACCREDITED SOLUTION

EXPLORER™ 700 – IDG T-40 Daylight Panel



Document Name: EXPLORER™ 700 – IDG T-40 Daylight Panel

Revision: C

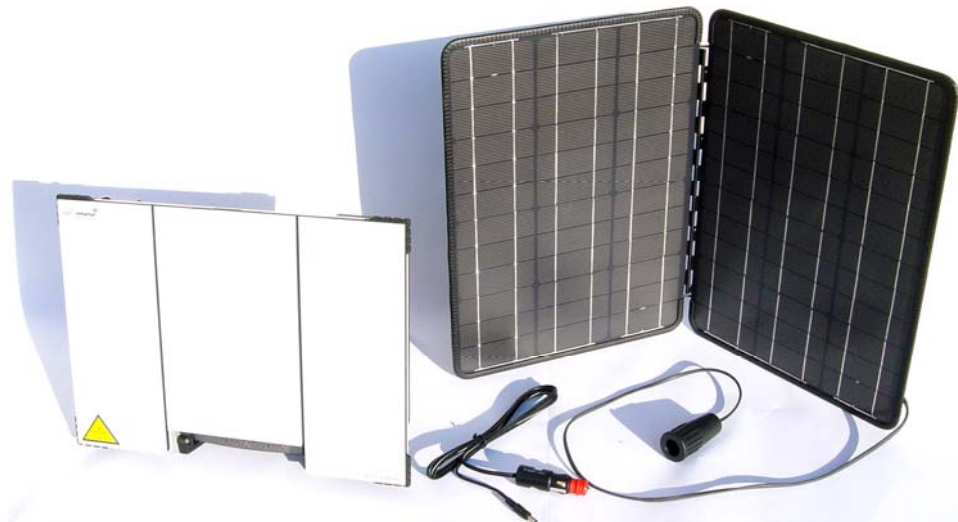
Introduction: This document describes the portable T-40 daylight panel (12 Volt version) from IDG Europe as a power source to the EXPLORER™ 700.

Typical Applications:

- ▶ Aid
- ▶ Expeditions
- ▶ Government and Military
- ▶ Emergency Response / Disaster Relief

Product Description: The foldable T-40 panel is a light-weight and easy-to-use solar panel offering a very reliable power source in remote areas or locations with limited, erratic or no power service.

The power supply in the EXPLORER™ 700 has a built-in regulator allowing a solar panel to be connected directly to the DC input. The DC input has been designed and optimized for 12 Volt solar panel specifications, which makes it extremely efficient even in cloudy conditions.



EXPLORER™ 700, Car Charger Cable and IDG T-40 Daylight Panel.

#### Features:

- ▶ Very efficient mono-crystalline cells give an unmatched power/weight ratio.
- ▶ Works even in low levels of solar irradiation.
- ▶ Extremely rugged, waterproof and tolerates salt water.
- ▶ Folds to protect the solar cells during transport.
- ▶ Low-reflectance plastic front.
- ▶ Restores power silently.
- ▶ 20 year warranty.
- ▶ Includes 4.9 ft (1.5 m) cable with standard female cigarette lighter connector.
- ▶ Connects directly to the EXPLORER™ 700 with the optional EXPLORER™ Car Charger Cable.

#### T-40 daylight panel specifications:

Nominal Power (Pmax)	: 40 Wp
Voltage at Pmax (Umax)	: 17.9 Volt
Current at Pmax (Imax)	: 2.2 Amp
Weight total	: 4.32 lbm (1960 grams)
Dimensions, unfolded	: 25.8 x 17.7 x 0.24 in (655 x 450 x 6 mm)
Dimensions, folded	: 13.0 x 17.7 x 0.51 in (330 x 450 x 13 mm)

More product info: [http://www.idgeurope.com/products/portable\\_power/solar\\_power\\_packs.shtml](http://www.idgeurope.com/products/portable_power/solar_power_packs.shtml)

IDG Europe  
contact details:

E-mail  
Phone  
Web

<mailto:contact@idgeurope.com>  
+46 8765 2670  
<http://www.idgeurope.com>

Thrane & Thrane  
contact details:

E-mail  
Phone  
Web

<mailto:solutions@thrane.com>  
+45 3955 8800  
<http://www.thrane.com>

Tested on products:

EXPLORER™ 700

Software version: 1.02

Instructions:

Follow these simple steps to set up the T-40 and connect it to the EXPLORER™ 700:

- Step 1: The EXPLORER™ 700 battery must be inserted before you connect the T-40 solar panel.

The EXPLORER™ 700 continuously measures the battery temperature and will automatically insure that charging only occurs if the temperature is within the range of 0°C to 45°C (32°F to 113°F).

The green Power LED will flash rapidly if outside above-mentioned temperature range.

- Step 2: The T-40 will generate power even in cloudy conditions as long as there is enough daylight. However, the more solar irradiation that hits the solar cells, the better power output you will get.

Point the front of the panels towards the sun by leaning them against a wall or other support (see figure 2a).

Make sure that no part of the front of the panel is shadowed or covered and it is important that both panels are facing in the same direction. If the panel is laid on the ground, it is recommended to allow some airflow under the panel, for cooling purposes.

The T-40 will give a better power output if it is kept cool.

In warm climates it can be a good idea to position the panel under clear water (2-3 cm under surface) if you are near a lake, pool, etc. The T-40 is totally waterproof and tolerates saltwater, just make sure that the connector is not exposed to the water.

In many circumstances the ground will reflect the sunrays (snow, water, etc). Positioning the panel standing will increase the input of solar irradiation on the cells for higher efficiency (figure 2b).

- Step 3: Plug in the EXPLORER™ TT-3720A, Opt. 009 car charger cable in the solar panel's female cigarette-lighter connector.



Figure 1.

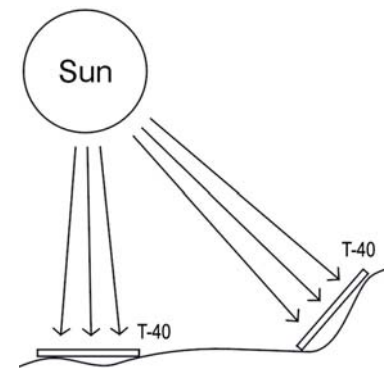


Figure 2a.

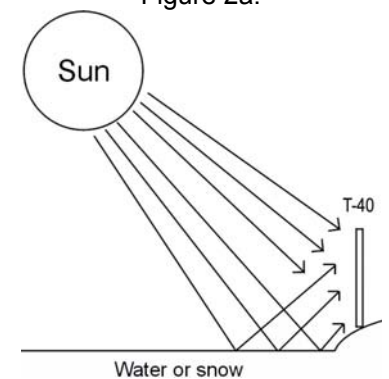


Figure 2b.



Figure 3.

Step 4: Connect the other end of the car charger cable to the DC in connector on the EXPLORER™ 700.

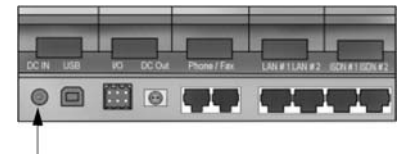


Figure 4.

Step 5: The green LED left to the display is constantly lit as long as the battery is charging (figure 5). When the battery is fully recharged, the green LED is turned off.  
If the EXPLORER™ 700 is switched on, the green LED will be flashing shortly every 2 seconds when fully charged.



Figure 5.

It is recommended to change the Power Up Mode setting in the EXPLORER™ 700 to Manual, so it does not power up automatically each time the solar panel is connected. Please follow below steps.

Step 1:  
Press the ▼ button.



Step 2:  
Press the ▼ button until SETTINGS appear.  
Press OK.



Step 3:  
Press the ▼ button until POWER UP MODE appears. Press the OK button.



Step 4:  
Press the ▼ button once and select MANUAL by pressing OK.



#### Maintenance:

- ▶ Make sure that there is no dirt or moisture inside the connector.
- ▶ When disconnecting a device from the panel, do not pull on the cable; always hold onto the connector.
- ▶ Keep the front of the panel clean. Do not expose to sharp objects. The panel can be cleaned with a wet cloth and a mild soap solution when necessary.

You can preserve power by following below guidelines:

- ▶ Point the EXPLORER™ antenna carefully to obtain best possible signal strength.
- ▶ Upgrade the EXPLORER™ 700 software version to 1.02 or latest software release (Advanced Power Management).
- ▶ Switch OFF the EXPLORER™ 700 when not used for more than 30 min.
- ▶ Turn OFF the interfaces you have no plans of using (please refer to EXPLORER™ 700 User Manual, Chapter 4).
- ▶ Set Backlight to Timed (is set to 10 seconds by default).

Need more power?

- ▶ T-60 daylight panel [http://www.idgeurope.com/products/portable\\_power/solar\\_power\\_packs.shtml](http://www.idgeurope.com/products/portable_power/solar_power_packs.shtml)
- ▶ T-Flex for adding more panels [http://www.idgeurope.com/products/portable\\_power/t-flex.shtml](http://www.idgeurope.com/products/portable_power/t-flex.shtml)
- ▶ Spare EXPLORER™ 700 battery (part no. TT-3686P).

**Note:** Remember to order the optional EXPLORER™ Car Charger Cable (part no. TT-3720A, Opt. 009).

**Tested:** All tests performed @ 20°C (68°F) ambient temperature:

- #1 In direct sunlight the charge time is approx. 2 hours when the EXPLORER™ 700 is registered on the network (ready to receive an incoming call) and the EXPLORER™ Bluetooth Handset is switched ON and being charged from the EXPLORER™ terminal.
- #2 Even in daylight (cloudy conditions) the T-40 will generate enough power to recharge the EXPLORER™ 700 battery and EXPLORER™ Bluetooth Handset.



Information in this document is subject to change without notice and does not represent a commitment on the part of Thrane & Thrane A/S. © 2006 Thrane & Thrane A/S. All rights reserved. Printed in Denmark.