

# Nikon Auto-Levels

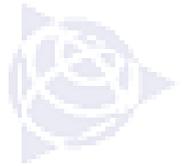


BuildingPoint  
SouthEast



# Objectives

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- ◆ **Nikon has a substantial established sales of auto-levels**
- ◆ **We need to take that existing market share, add the efforts so far on the SPO line, and grow the combined sales in the segment**
- ◆ **We want to value-add to our distribution by giving a broad portfolio and consistent quality**
- ◆ **There are many different standards of auto-level on the market. The Nikon and SPO auto-levels are in keeping with the quality and reputation of our portfolio**



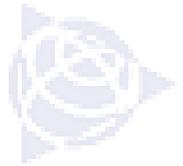
# Brand Strategy

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- ◆ **We want to complete our portfolio with a product that extends our brand image to as wide a population as possible**
- ◆ **Today's auto-level user is tomorrow's laser user**
- ◆ **We need to migrate dealers towards the SPO brand over time, so that we keep the brand recognition with our lasers**

# AX-2S/AC-2S/AP-8



- ◆ 20x, 24x, 28x Magnification
- ◆ Magnetic damped

**Target Trades:**  
**General Contractors**  
**Concrete Contractors**



# AS-7/7C, AE-2/2C



- ◆ 30x and 34x magnification
- ◆ Optional Circle
- ◆ Air damped

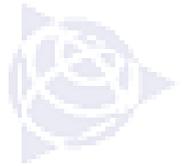
**Target Trades:  
Engineers  
Surveyors**



# Target AX-2S/AC-2S/AP-8

## Applications

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- ◆ **Elevation control across the site**
- ◆ **Leveling forms and footers**
- ◆ **Measuring cut and fill**

# Elevation Control Across the Site



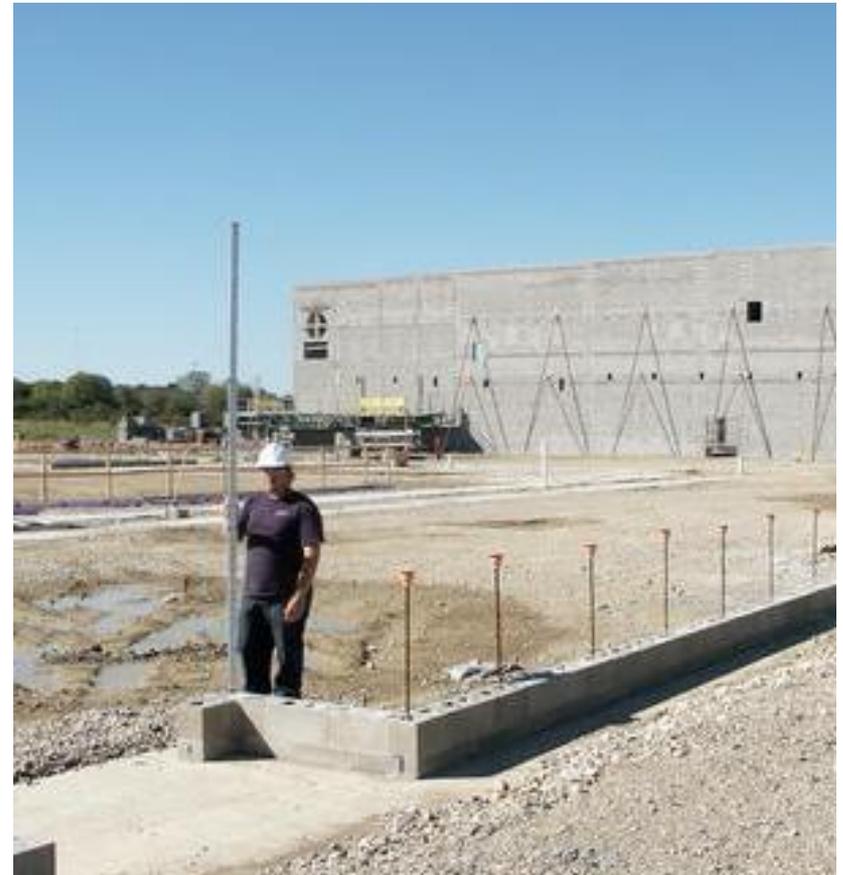
- ◆ The AX-2S/AC-2S/AP-8 are capable of accurate elevation measurements over the entire site



# Leveling Forms and Footers



- ◆ An auto-level can be used to easily check levels on footers, forms and foundations



# Measuring Cut and Fill



- ◆ The clear bright optics make the AX-2S/AC-2S/AP-8 ideal for longer range cut/fill measurements



# AE-7/7C, AS-2/2C Applications

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- ◆ **Monitoring - high accuracy elevation control**
- ◆ **Long range level runs - transferring elevations over a large area**



# Nikon Auto-Level PFBs

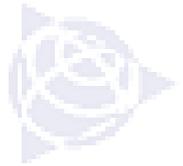
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# All-Weather Metal Housing



- ◆ 70% stronger than polycarbonate plastic, so there could be less repair costs if the unit is dropped
- ◆ All weather Design, Will keep working, whatever the weather, which means that you can measure when you need to
- ◆ AE-7/AS-2 are nitrogen filled

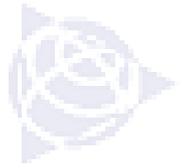
# Bubble Mirror



- ◆ Allows easy viewing of the level bubble when on a tall tripod, which means more flexibility in set up location



# Rubber / Plastic Controls



- ◆ Large rubber focus knob
- ◆ Plastic eyepiece and slow motion screws
- ◆ Easier to use in cold or wet weather

# Built-In Sight Lines

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- ◆ Allow easy alignment to the staff direction, which means faster measurements



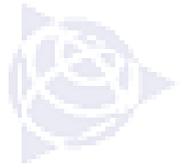
# Magnetic Damped Compensator



- ◆ The AX-2S/AC-2S/AP-8 feature a rugged yet accurate magnetic damped compensator
- ◆ More stable in areas with vibration, which means accurate measurements around construction machinery

# Air Damped Compensator

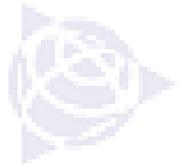
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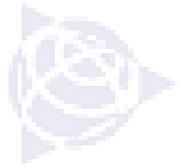
- ◆ The AE-7/7C, AS-2/2C feature a very high accuracy air damped compensator, which means less magnetic field interference and more accurate measurements



# Specifications



	<b>AX-2S</b>	<b>AC-2S</b>	<b>AP-8</b>	<b>AE-7</b>	<b>AS-2</b>
<b>Magnification</b>	<b>20x</b>	<b>24x</b>	<b>28x</b>	<b>30x</b>	<b>34x</b>
<b>Compensator Type</b>	<b>Magnetic</b>	<b>Magnetic</b>	<b>Magnetic</b>	<b>Air</b>	<b>Air</b>
<b>Aperture</b>	<b>30mm</b>	<b>30mm</b>	<b>30mm</b>	<b>40mm</b>	<b>45mm</b>
<b>Shortest Focus</b>	<b>0.75m</b>	<b>0.75m</b>	<b>0.75m</b>	<b>0.3m</b>	<b>1.0m</b>
<b>Accuracy</b> (Standard deviation according to DIN 18723 on 1 Km of double leveling)	<b>±2.5mm</b>	<b>±2.0mm</b>	<b>±1.5mm</b>	<b>±1.0mm</b>	<b>±0.8mm</b>



# Hands On

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# Auto-Level Hands On

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- ◆ Take level from the box and place on a tripod
- ◆ Adjust the height of the tripod and level the unit using the 3 screws (same as an LL500)
- ◆ Have a partner hold the rod
- ◆ Turn the level and point at the rod
- ◆ Focus the level
- ◆ Read the value on the rod

# Auto-Level Hands On

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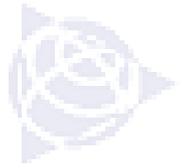


## Measuring height difference

- ◆ Position the rod on the first point and read the value
- ◆ Position the rod on the second point and read the value
- ◆  $\text{First} - \text{Second} = \text{height difference}$

## Setting out a height

- ◆  $\text{BM} + \text{Rod at BM} - \text{Finished Level} = \text{Rod at FL}$



# Sales Issues

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# Trimble Portfolio



## Spectra Precision Optical 100 series

- ◆ 20x, 24x
- ◆ Magnetic Compensator



## Nikon AX-2S, AC-2S, AP-8

- ◆ 20x, 24x, 28x
- ◆ Magnetic Compensator



# Trimble Portfolio



## Trimble 200 Series

- ◆ 28x, 32x
- ◆ Air damped compensator

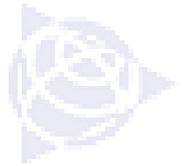


## Nikon AE-7, AS-2

- ◆ 30x, 34x
- ◆ Air damped compensator



# Nikon v CST SAL



- ◆ Comparable products although CST have plastic top housing
- ◆ CST has magnetic damped compensator
- ◆ CST does not have the high end range like the Nikon AE-7 and AS-2

20x, 24x, 28x, 32x



# Nikon v Topcon AT-G

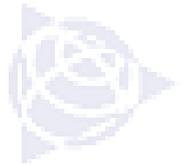


- ◆ Comparable products from a manufacture quality and reliability
- ◆ Topcon has magnetic damped compensator - v. robust
- ◆ AE-7/AS-2 series has air-damped compensator which is better for high accuracy applications
- ◆ Comparable pricing

22x, 24x, 26x, 32x



# Nikon v Leica NA700



- ◆ Comparable products from a manufacture quality and reliability
- ◆ Leica has magnetic damped compensator - robust

20x, 24x, 28x, 30x



# Nikon v Pentax

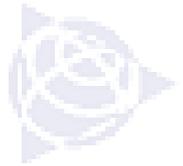


- ◆ Comparable products from a manufacture quality and reliability
- ◆ Pentax has magnetic damped compensator - robust

20x, 22x, 24x



# Low Quality Solutions



- ◆ Cheap products exist in the market place
- ◆ Non-branded
- ◆ Often they have air-damped compensator - more fragile and more difficult under high vibration
- ◆ Compensator prone to sticking - customer has to press button each time

20x, 24x



22x



24x



# Nikon Auto-Level PFBs

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# Summary of Features and Benefits

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- ◆ **Metal housing**

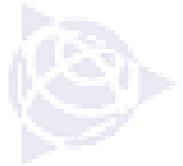
- ☺ Very rugged, so less repair costs

- ◆ **Bubble Mirror**

- ☺ Easy to level the instrument on a high tripod, which means more flexibility of set up location

# Summary of Features and Benefits

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- ◆ **Built-in Sight lines**

- ☺ Easy to align with the rod, for faster measurements

- ◆ **Rubber and plastic controls**

- ☺ Don't stick in winter, or lose your grip in the wet, so more comfortable to operate

# Summary of Features and Benefits

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- ◆ **Magnetic damped compensator (AX-2S, AC-2S, AP-8)**
  - ☺ Better under vibration, so more stable around machinery
- ◆ **Air damped compensator (AE-7 and AS-2)**
  - ☺ Less influence of magnetic fields for higher accuracy

# LL200 Laser Level



- ◆ Can be used for the same applications as the Auto-levels
- ◆ Is a one person operation saving labor costs and time
- ◆ Instant readings at the work place
- ◆ Laser, receiver, tripod and rod in one carry case





# Marketing Materials

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# AX-2S/AC-2S/AP-8



- ◆ **Data Sheet available in:**
  - ◆ English
  - ◆ French
  - ◆ German
  - ◆ Spanish
  - ◆ Italian



# AE-7/AS-2



- ◆ Four page brochure available in English



Automatic Levels

**AS-2/AS-2C**  
**AE-7/AE-7C**





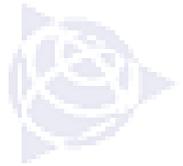
# Service and Warranty

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# Warranty

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- ◆ **Trimble will continue to offer the same warranty terms as those currently offered by Nikon (until further notice). Note that these terms vary in different countries**
- ◆ **At some point in the future, Trimble will change the terms to be consistent with Trimble's current products**



# Questions ?

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