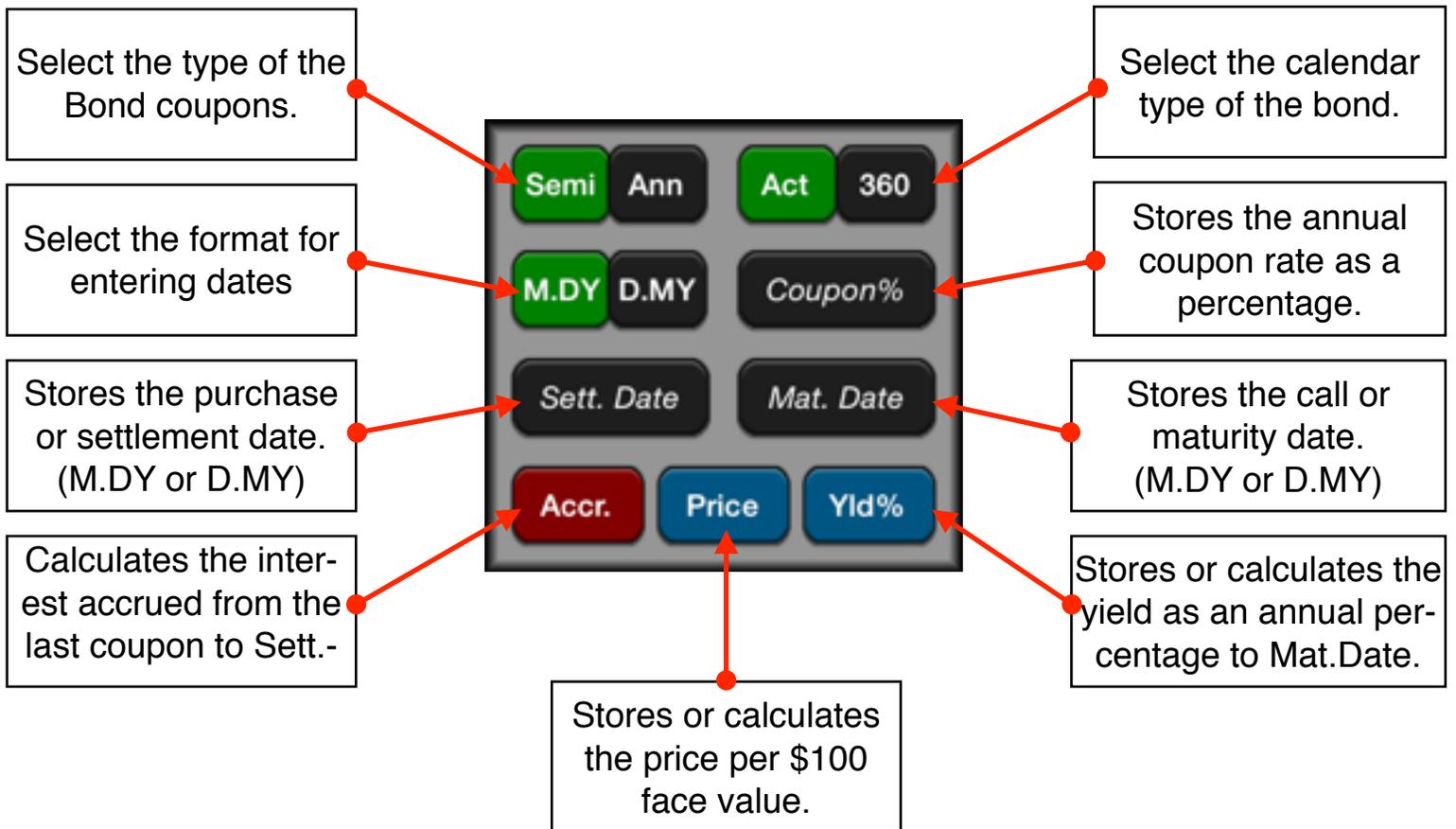


Bond Calculation Tool

This tool is an expansion of the calculation capability included in the original HP-11C calculator. It allows you to calculate annual or semi-annual bonds with 30 day months and 360 day years or by using actual calendar days. To show it, touch the **[OPT]** and select the “Bonds Price & Yield” option.



The **[Price]** or **[Yld%]** buttons calculates the value if the immediate previous key pressed was one of the keys in this tool. See the examples below to have a better understanding about this.

Example: Price & Yield of a Bond

What price should you pay on August 10, 2003 for a $6\frac{3}{4}\%$ U.S. Treasury bond that matures on May 1, 2018 if you wish a yield of $8\frac{3}{8}\%$? The calendar basis is actual and the coupon payments are made semi-annually.

Solution: (assuming M.DY date format).

First, show the Bond tool touching the **OPT** and select the “Bonds Price & Yield” option. Then, follow this sequence:

| Keystrokes | Description |
|--|---|
| [Act 360] [Semi Ann] [M.DY D.MY] | Sets the calendar to actual . Sets the bond payment period to semi-annual . Set the Month-Day-Year date format (mm.ddyyyy). |
| Type “8.102003” [Sett. Date] | Type the settlement date and press settlement . (if D.MY is set, type 10.082003). |
| Type “5.012018” [Mat. Date] | Type the maturity date and press maturity . (if D.MY is set, type 1.052018). |
| Type “6.75” [Coupon%] | Type the annual coupon rate and touch CPN% . |
| Type “8.375” [Yld%] | Type the desired yield and press Yield(%) . |
| [Price] | Calculates the bond price. Result = 86.38 |
| [Accr.] | Calculates the interest accrued since last coupon to the settlement date. Result = 1.85 . |
| [+] | Adds the bond price and the accrued interest to calculate the net price. Result = 88.23 |

Suppose that the market quote for the bond is $88\frac{1}{4}$. What yield does it represent?

| Keystrokes | Description |
|-------------------------|--|
| Type “88.25” [Price] | Type the market quote and press bond price to enter it. |
| [Yld%] | Calculates the bond yield to maturity. Result = 8.13 |

Example: A Zero-Coupon Bond

Calculate the price of a zero-coupon, semi-annual bond using a 30/360 calendar basis. The bond was purchased on May 19, 2003 and will mature on June 30, 2017, and has a yield to maturity of 10%.

Solution: (The example assumes M.DY date format).

| Keystrokes | Description |
|--|--|
| [Act 360] [Semi Ann] | Sets the bond calendar to 30/360 . Sets the bond type to semi-annual . |
| Type "5.192003" [Sett. Date] | Type the settlement date and press settlement . (if D.MY is set, type 19.052003). |
| Type "6.302017" [Mat. Date] | Type the maturity date and press maturity . (if D.MY is set, type 30.062017). |
| Type "0" [Coupon%] | Type zero coupon rate and touch CPN% . |
| Type "10" [Yld%] | Type the desired yield and press Yield(%) . |
| [Price] | Calculates the bond price Result = 25.23 |