Bond Worksheet on BAII Plus Calculator

The bond worksheet on a BAII Plus calculator can compute the bond price, the yield to maturity or call, and accrued interest.

To access the bond worksheet, press [2nd] [BOND]. Use the [↓] or [↑] keys to access bond variables.

To reset the Bond worksheet to default values, press [2nd] [CLR WORK].

Bond data is entered into the worksheet in the following order:

	Variable	Term	Definition	Display	Variable Type
1.	SDT	Settlement date	The date on which a bond is exchanged for funds	SDT= *dd.mmyy*	Enter only
2.	CPN	Coupon rate	The annual interest rate printed on the bond	CPN =	Enter only
3.	RDT	Redemption date	The date on which the issuing agency retires the bonds (can be maturity date or call date).	RDT = *dd.mmyy*	Enter only
4.	RV	Redemption value (% of par value)	The amount paid to the owner of the bond when retired. The default is 100% or at par value.	RV =	Enter only
5.	ACT/360		ACT = actual/actual-day count method 360 = 30/360 day count method	ACT is default To change setting, press [2nd] [SET]	Setting
6.	2/Y or 1/Y	Coupons per year	2/Y = two coupons per year; interest payments are semi-annual 1/Y = one coupon per year, interest payments are annual	2/Y is default To change setting, press [2nd] [SET]	Setting
7.	YLD	Yield to redemption or Yield to maturity	The rate of return earned from payments of principal and interest, with interest compounded *semi-annually* at the stated yield rate.	YLD =	Enter or compute
8.	PRI	Dollar price	Price of the bond (Important note: price is	PRI =	Enter or compute

			expressed in terms of dollars per $100 of par value)		
9.	AI	Accrued interest	Amount of interest accrued (Important note: price is expressed in terms of dollars per $100 of par value)	AI =	Auto-compute

Example 1:

A $2500 bond pays interest at 8% semi-annually and is redeemable at par at the end of 5 years. Determine the purchase price to yield a holder, if the bond pays 10% compounded semi-annually.

Term	Value to be entered	
SDT =	1.0310	Enter. Press [↓].
CPN =	8	Enter. [↓].
RDT =	1.0315	Enter. [↓].
RV =	100	Enter. [↓].
ACT/360 =	ACT	[2nd] [SET] if display shows 360
2/Y or 1/Y	2/Y	[2nd] [SET] if display shows 1/Y
YLD =	10	Enter. [↓].
PRI =		Press [CPT]. Display shows PRI = 92.27826507

Remember that the 92.27826507 value is per $100 at par.

Therefore, for a $2500 bond, the purchase price = 92.27826507 x (2500/100) = 2306.96

The purchase price of the bond is $2306.96.

Example 2:

A $5000 bond maturing at 105 on September 1, 2031, has semi-annual coupons at 7%. Determine the purchase price on March 1, 2010 to guarantee a yield of j_2=6.8%.

Press [2nd] [BOND]. Press [2nd] [CLR WORK].

Term	Value to be entered	
SDT =	1.0310	Enter. Press [↓].
CPN =	7	Enter. [↓].
RDT =	1.0931	Enter. [↓].
RV =	105	Enter. [↓].

ACT/360 =	ACT	[2nd] [SET] if display shows 360
2/Y or 1/Y	2/Y	[2nd] [SET] if display shows 1/Y
YLD =	6.8	Enter. [↓].
PRI =	To be computed	Press [CPT]. Display shows PRI = 103.4300944

Remember that the 103.4300944 value is per $100 at par.

Therefore, for a $5000 bond, the purchase price = 103.4300944 x (5000/100) = 5171.50

The purchase price of the bond is $5171.50.

Practice Problems:

1. A $5000 bond with a coupon rate of 6.5%, payable semi-annually, matures in 10 years. What should be the purchase price of the bond for a yield of 5.8% compounded semi-annually?

2. A local municipal government issues $1 million bonds with a ten-year maturity date. Interest on the bonds is 3% payable annually. What is the issue price of the bonds if the bonds are sold with a 4% yield compounded semi-annually?

3. A $10,000 bond is redeemable at par and bears interest at 10% compounded semi-annually. What is the purchase price of the bond ten years before maturity if the market rate is 8% compounded semi-annually?

4. A $50,000, 3.2% bond with annual interest coupons redeemable at par in ten years is purchased to yield 4% compounded semi-annually. What is the purchase price?

Answers:

1. $5262.78
2. $918,891.04
3. $11,359.03
4. $46,755.64