PRINCO DDR3-1600 user guide and testing for MSI P55A Fuxion Motherboard
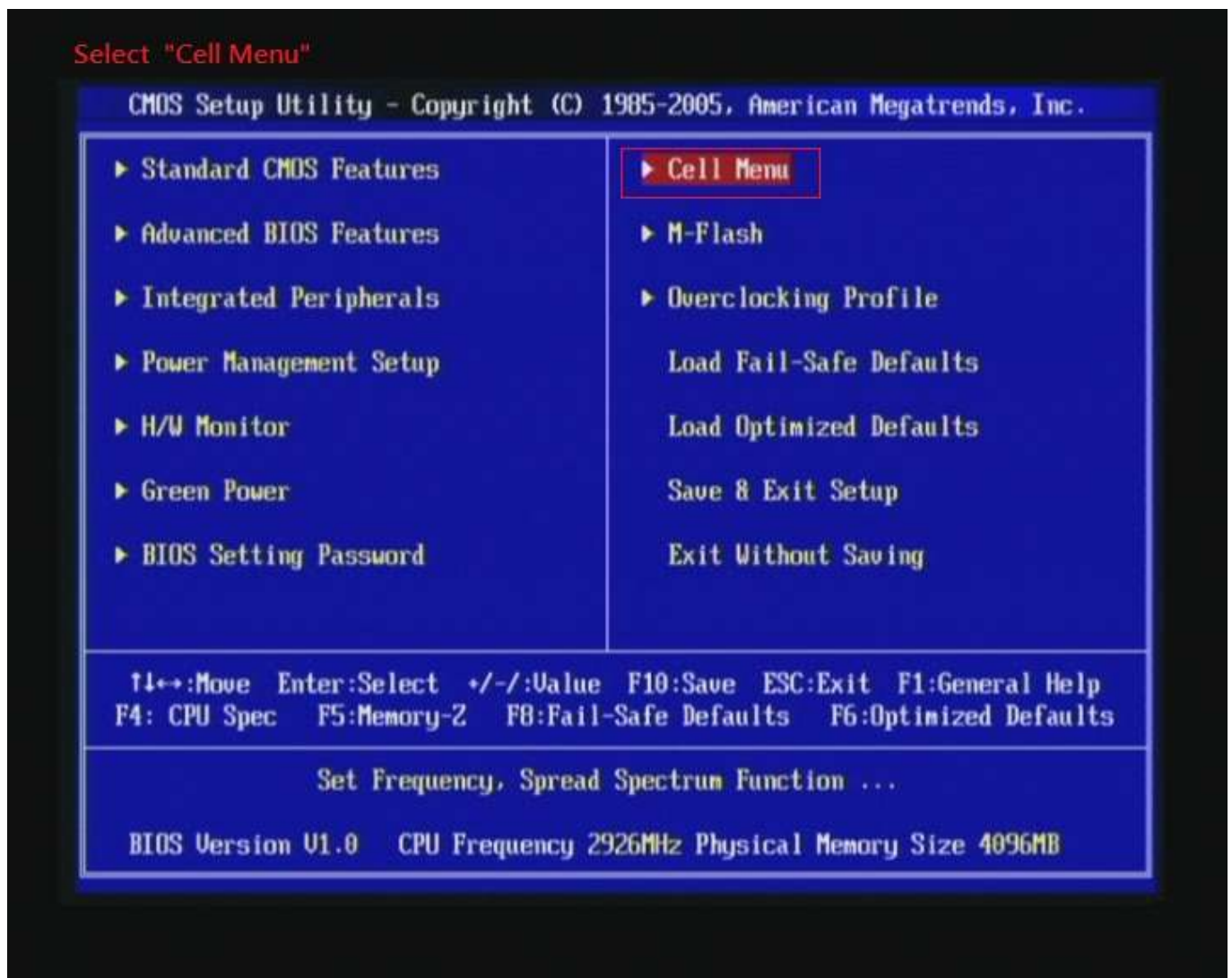
CPU i7-875 2.93G
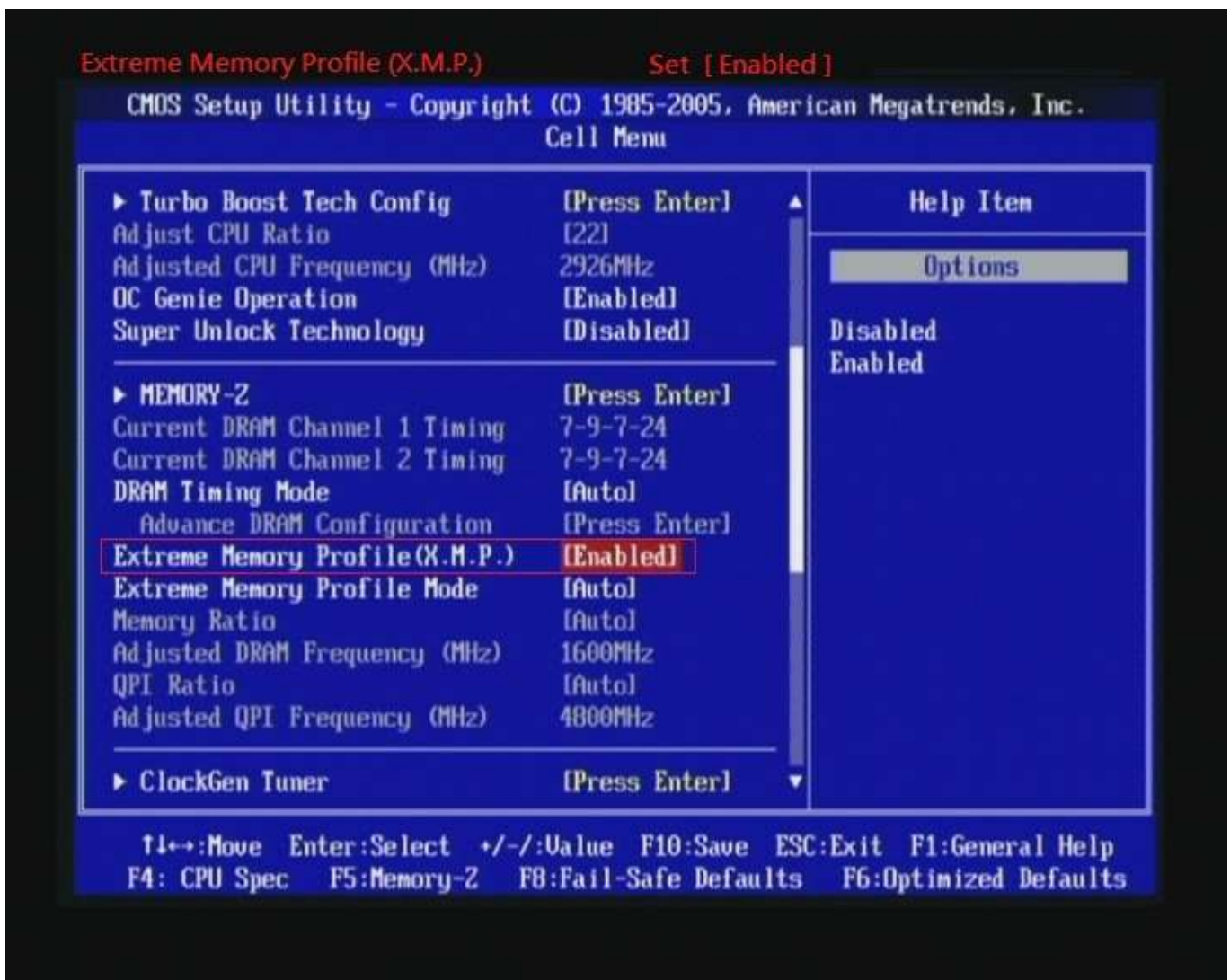
Part I：Standard test

It's the easiest way to enjoy overclock benefit by using PRINCO DDR3-1600 DIMM board
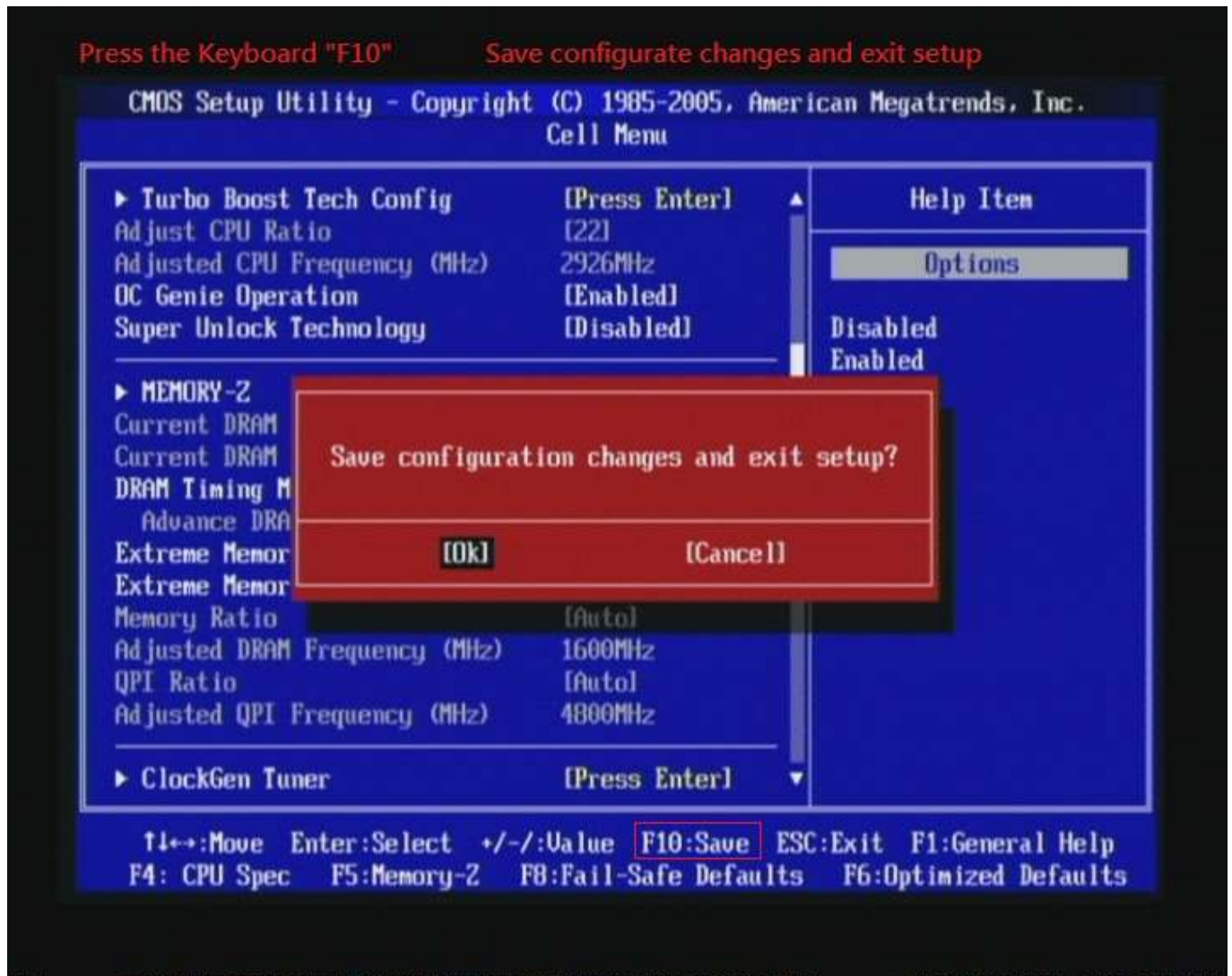
How to use?

0. Clear BIOS to mainboard initial setting

1. Enter BIOS setup and [Cell Menu] menu

2. Enter [Extreme Memory Profile(X.M.P.)] item and choose
   X.M.P option，*BIOS will load X.M.P parameter in SPD on
   DIMM board，which are performance optimized for PRINCO
   DDR3-1600 DIMM board*

3. Enter [Extreme Memory Profile(X.M.P.)] item and select
   Enabled

4. Save BIOS changes [F10] and exit

Test result?

In order to demonstrate the performance and stability of

PRINCO DDR3-1600 DIMM board, We use the strictest

stress testing, that is, multi-core MemTest in window 7.

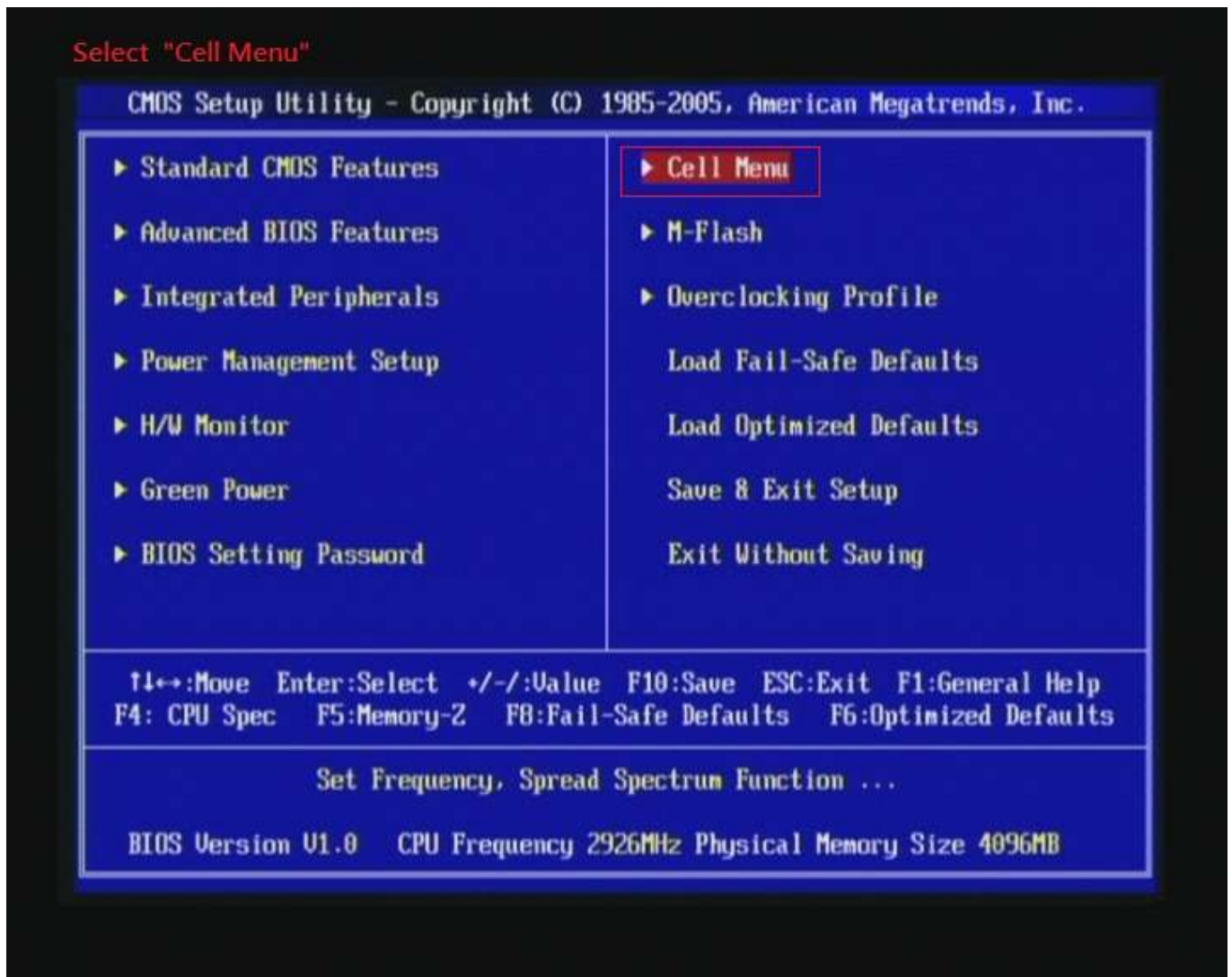(Data rate：802.0*2=1604,　timing：7, 9, 7, 24,　multi-core test => pass!)

Advanced Overclocking and Testing

Part II：Heavy test

If you want to know the potential of PRINCO DDR3-1600? Following are step-by-step howto.

How to use?

0. Clear BIOS to mainboard initial setting

1. Enter BIOS setup and [Cell Menu] menu

2. Enter [DRAM Timing Mode] item and select Manual

3. Enter [Advance DRAM Configuration] item

4. set [CH1 1T/2T Memory Timing] item to [1]

set [CH1 CAS Latency (CL)] item to [7]

set [CH1 tRCD] item to [9]

set [CH1 tRP] item to [7]

set [CH1 tRAS] item to [24]

Channel 1:	CH1 1T/2T Memory Timing	Set [1]
	CH1 CAS Latency(CL)	Set [7]
	CH1 tRCD	Set [9]
	CH1 tRP	Set [7]
	CH1 tRAS	Set [24]

CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
Advance DRAM Configuration

```
============ Channel 1 ============                    Help Item
CH1 1T/2T Memory Timing        [1]
CH1 CAS Latency(CL)            [ 7]          tRAS is "Timing of Row
CH1 tRCD                       [ 9]          Address Strobe"; the
CH1 tRP                        [ 7]          timing of active to
CH1 tRAS                       [24]          precharge delay
CH1 tRFC                       [ 74]         between the precharge
CH1 tWR                        [10]          and activation of row
CH1 tWTR                       [ 5]          data access. If you
CH1 tRRD                       [ 4]          set this item smaller,
CH1 tRTP                       [ 4]          system will run faster
CH1 tFAW                       [20]          but might be more
CH1 B2B-CAS Delay              [ 0]          unstable. Please set
                                             it depends on memory
Current CH1 tdrRdTRd            6            module.
Current CH1 tddRdTRd            7
Current CH1 tsrRdTWr            8
Current CH1 tdrRdTWr            8
Current CH1 tddRdTWr            8
```

↑↓←→:Move Enter:Select +/-/:Value F10:Save ESC:Exit F1:General Help
F4: CPU Spec   F5:Memory-2   F8:Fail-Safe Defaults   F6:Optimized Defaults
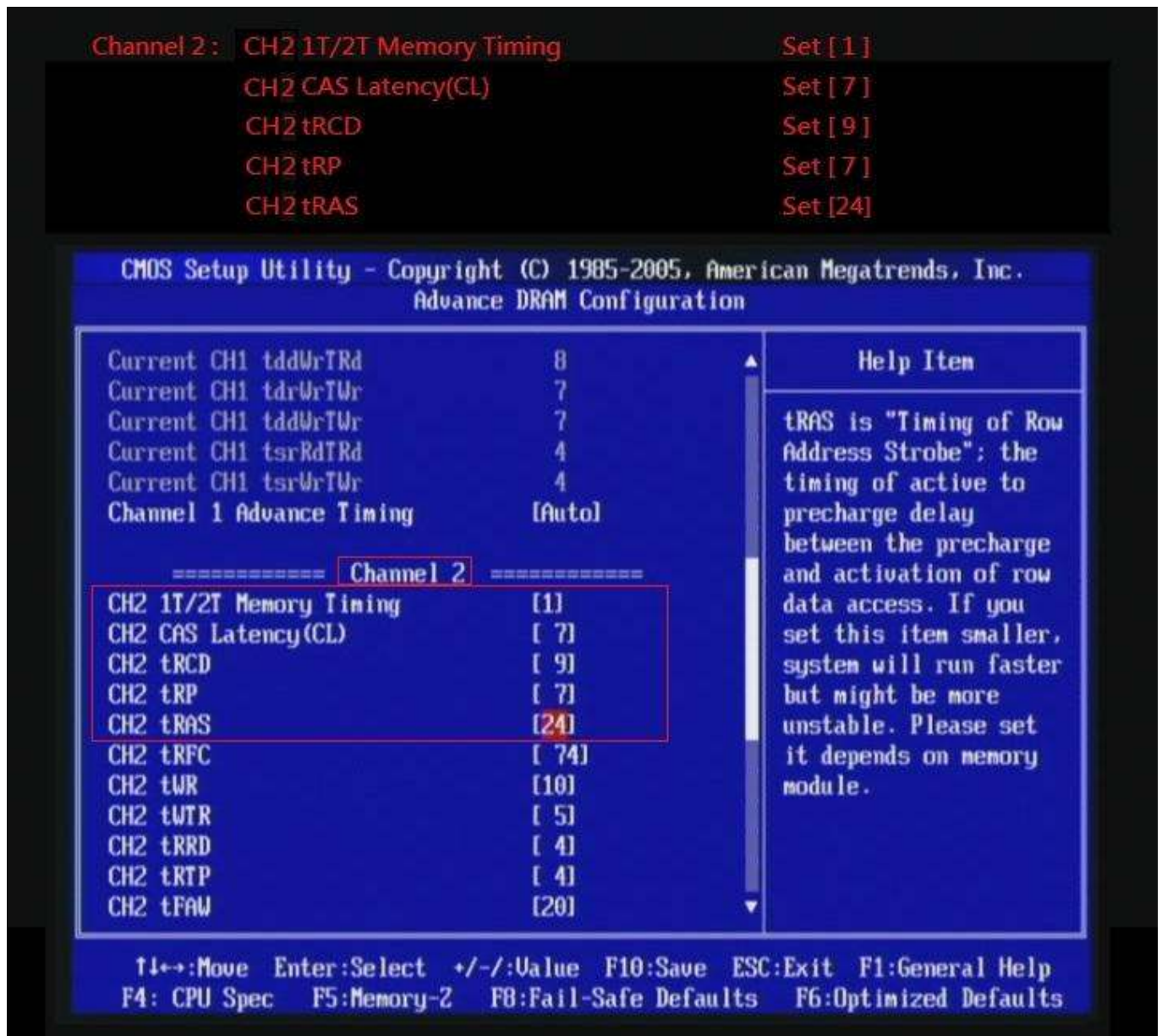
5. set [CH2 1T/2T Memory Timing] item to [1]

set [CH2 CAS Latency (CL)] item to [7]

set [CH2 tRCD] item to [9]
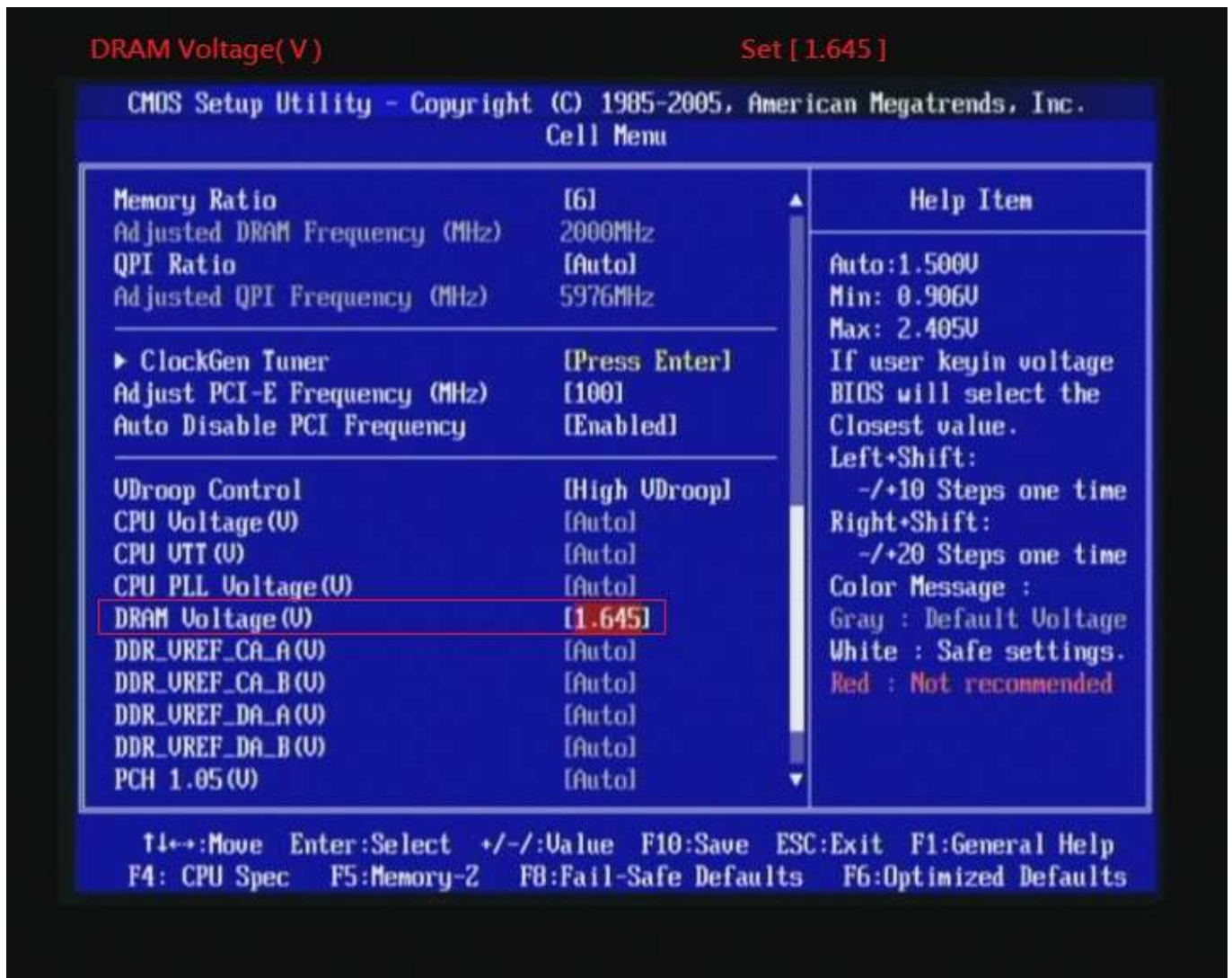
set [CH2 tRP] item to [7]

set [CH2 tRAS] item to [24]

Channel 2 :	CH2 1T/2T Memory Timing	Set [1]
	CH2 CAS Latency(CL)	Set [7]
	CH2 tRCD	Set [9]
	CH2 tRP	Set [7]
	CH2 tRAS	Set [24]

CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
Advance DRAM Configuration

		Help Item
Current CH1 tddWrTRd	8	
Current CH1 tdrWrTWr	7	
Current CH1 tddWrTWr	7	tRAS is "Timing of Row
Current CH1 tsrRdTRd	4	Address Strobe"; the
Current CH1 tsrWrTWr	4	timing of active to
Channel 1 Advance Timing	[Auto]	precharge delay
		between the precharge
============= Channel 2 =============		and activation of row
CH2 1T/2T Memory Timing	[1]	data access. If you
CH2 CAS Latency(CL)	[7]	set this item smaller,
CH2 tRCD	[9]	system will run faster
CH2 tRP	[7]	but might be more
CH2 tRAS	[24]	unstable. Please set
CH2 tRFC	[74]	it depends on memory
CH2 tWR	[10]	module.
CH2 tWTR	[5]	
CH2 tRRD	[4]	
CH2 tRTP	[4]	
CH2 tFAW	[20]	

↑↓←→:Move Enter:Select +/-/:Value F10:Save ESC:Exit F1:General Help
F4: CPU Spec F5:Memory-Z F8:Fail-Safe Defaults F6:Optimized Defaults

6. Select [Adjust CPU Base Frequency (MHz)] item，and increase to higher Base clock rate (ex:166). Then set [Memory Ratio] item to [6]. Don't forget setting [CPU Ratio Setting] item to suitable ratio [ex:17]

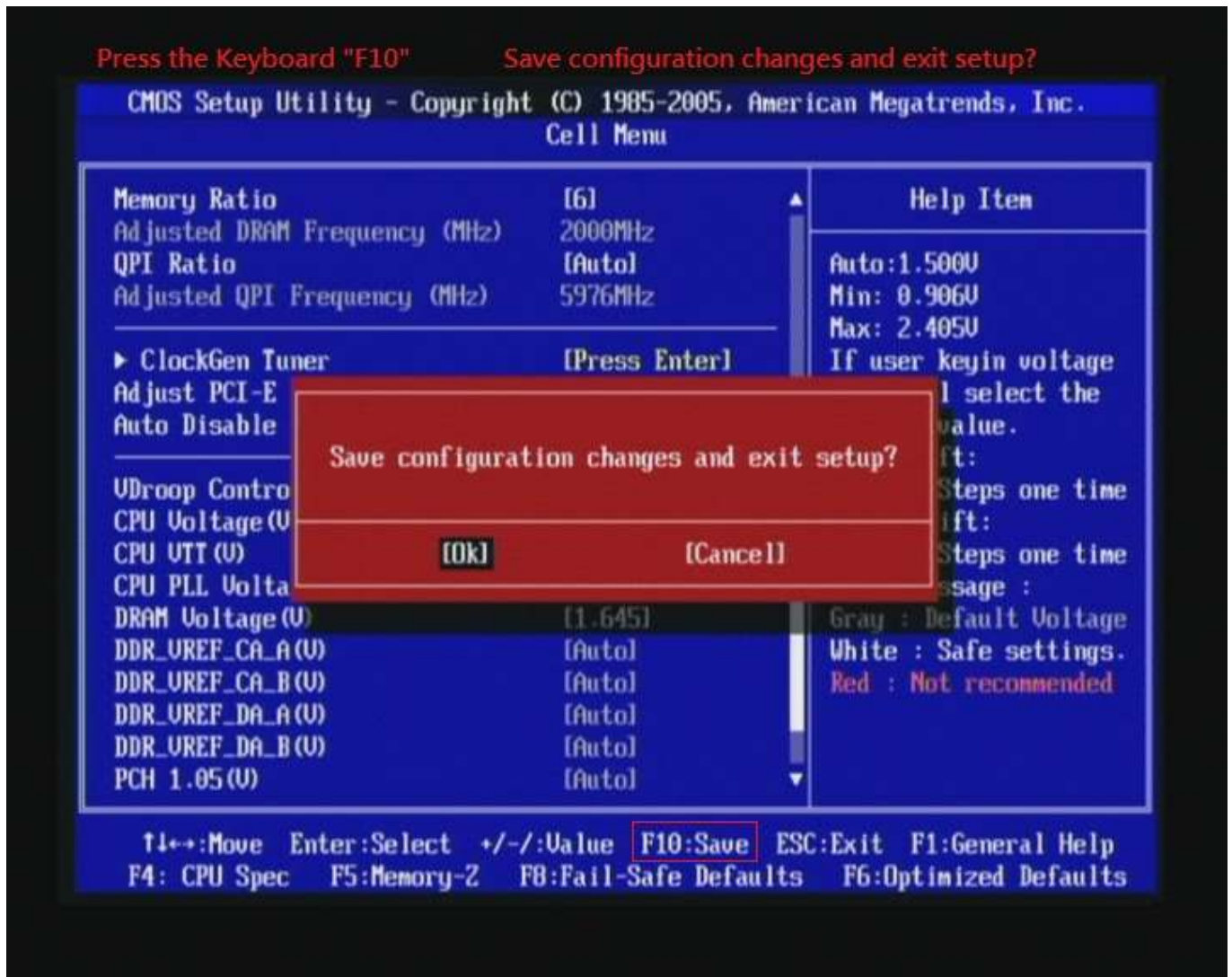*(In this case we only focus on memory over clocking, not CPU)*

7. Select[DRAM Voltage(V)] item , and set the value to
[1.645].

8. Save BIOS changes [F10] and exit

Test result?

We use the strictest stress testing， multi-core MemTest in

window 7， to show you PRINCO DDR3-1600 potential.

(Data rate：999.5*2=1999， timing：7, 9, 7, 24， multi-core test => pass!)