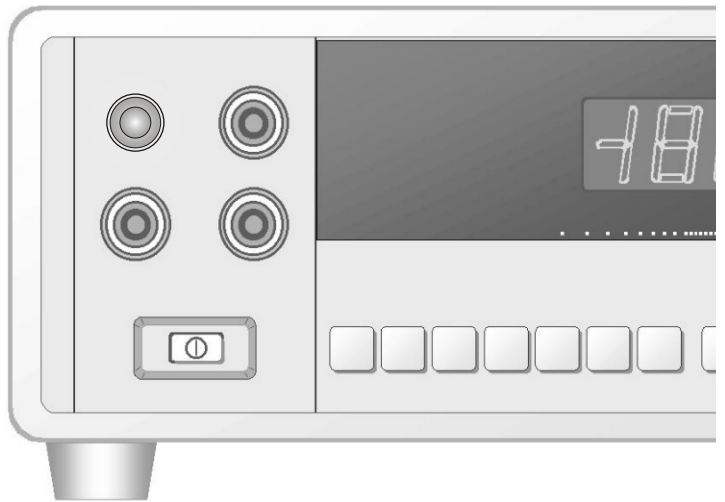




# Bench-top Instrument

**FC-3000/ 7150/ 7015/  
7150U/ 7015U**

주파수 카운터  
사용설명서

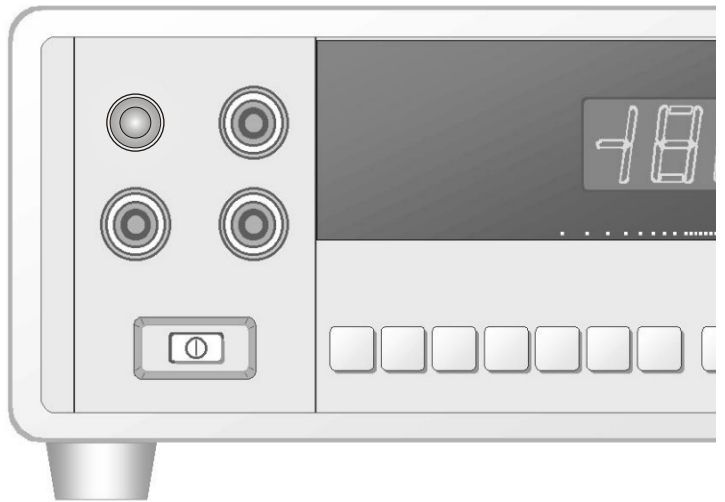




# Bench-top Instrument

**FC-3000/ 7150/ 7015/  
7150U/ 7015U**

주파수 카운터  
사용설명서



 이지디지털주식회사



, .10mA 가 , 가  
 DC 60V AC 30V (RMS) 가

1.

2.

3.3

AC

3

4.가

5.

LINE

6.

가

가



---

**1**

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3.     \_\_\_\_\_
- 4.     \_\_\_\_\_

**2**

- 1.             \_\_\_\_\_
- 2. \_\_\_\_\_
- 3.     \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**3**

- 1.             \_\_\_\_\_
- 2.             \_\_\_\_\_

**4**

- 1.             \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4.     \_\_\_\_\_
- 5.     \_\_\_\_\_
- 6.     (A/B) \_\_\_\_\_

**5**

- 1.BNC     \_\_\_\_\_
- 2.             \_\_\_\_\_
- 3.             \_\_\_\_\_

---

1

1.

(FC-3000/FC-7150/FC-7015 /FC-7150U/FC-7015U)

LSI                    7

10MHz

T.C.O.(TEMPERATURE CONTROLLED OSCILLATOR)

	FC-3000	FC-7150	FC-7015	FC-7150U	FC-7015U
	0.1Hz~3GHz	0.1Hz~1.5GHz	0.1Hz~100MHz	0.1Hz~1.5GHz	0.1Hz~100MHz
	10nS~10S	10nS~10S	10nS~10S	10nS~10S	10nS~10S
	DC~30MHz	DC~30MHz	DC~30MHz	DC~30MHz	DC~30MHz
	-	-	-	100nS~10S	100nS~10S
	-	-	-	5Hz~10MHz	5Hz~10MHz
RPM	6~600x10 <sup>7</sup>	6~600x10 <sup>7</sup>	6~600x10 <sup>7</sup>	-	-
RS-232C					

가

\*10/1

\* (100kHz, -3dB)

\*

\* /

\*

\*TCXO( )

가

가

LED

10

4가 ( )

가

가

가

2.

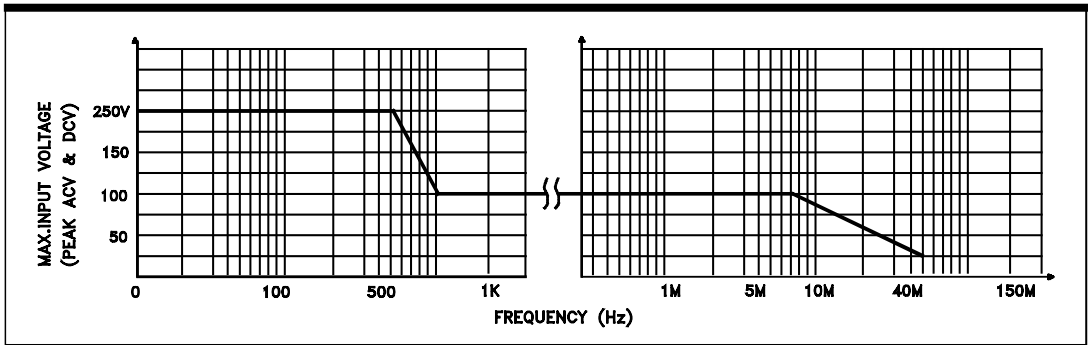
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**A (FC-3000/FC-7150/FC-7015 /FC-7150U/FC-7015U)**

- :0.1Hz 100MHz(DC )/30Hz 100MHz(AC )
- :0.1Hz 100MHz:30mV
- :AC/DC 가
- :1MΩ ,40pF
- :x1 x10 가
- :100kHz,-3dB, 가
- :+350mV~-350mV (RESET OV) (FC-7150U/FC-7015U )
- :+ - 가 (FC-7150U/FC-7015U )

Time Base Selector	INT	EXT	INT	EXT	INT	EXT	INT	EXT
Gate Time	0.01S		0.1S		1S		10S	
Number Of Displayed Digit	5	6	6	7	7	8	8	9
Frequency (Input A, B)	RESOLUTION							
0.1 Hz-0.99 Hz	10 uHz	1 uHz	1 uHz	0.1 uHz	0.1 uHz	10nHz	10nHz	1nHz
1 Hz-9.9 Hz	0.1 mHz	10 uHz	10 uHz	1 uHz	1 uHz	0.1 uHz	0.1 uHz	10nHz
10 Hz-99 Hz	1 mHz	0.1 mHz	0.1 mHz	10 uHz	10 uHz	1 uHz	1 uHz	0.1 uHz
100 Hz-999 Hz	10 mHz	1 mHz	1 mHz	0.1 mHz	0.1 mHz	10 uHz	10 uHz	1 uHz
1 KHz-9.9 KHz	0.1 Hz	10 mHz	10 mHz	1 mHz	1 mHz	0.1 mHz	0.1 mHz	10 uHz
10 KHz-99 KHz	1 Hz	0.1 Hz	0.1 Hz	10 mHz	10 mHz	1 mHz	1 mHz	0.1 mHz
100 KHz-999 KHz	10 Hz	1 Hz	1 Hz	0.1 Hz	0.1 Hz	10 mHz	10 mHz	1 mHz
1 MHz-9.9 MHz	100 Hz	10 Hz	10 Hz	1 Hz	Hz	0.1 Hz	0.1 Hz	10 mHz
10 MHz-99 MHz	1 KHz	100 Hz	100 Hz	10 Hz	10 Hz	1 Hz	1 Hz	0.1 Hz
100 MHz	10 KHz	1 KHz	1 KHz	100 Hz	100 Hz	10 Hz	10 Hz	1 Hz

: ± ± ( 1)



1. ( A, B)

- : 10n 10  
: , n, u, m, S
- : DC~30MHz  
: 0~ 999999999  
: " OF "
- RPM : 6RPM~600x10<sup>7</sup> RPM, : "OF"  
(FC-3000/FC-7150/FC-7015 )

**B (FC-7150U/FC-7015U)**

- : 0.1Hz 100MHz(DC )/30Hz 100MHz(AC )
- : 0.1Hz 100MHz:30mV
- : AC/DC 가
- : 1MΩ ,40pF
- : x1 x10 가
- : 100kHz, -3dB, 가
- : + - 가

**(A B)(FC-7150U/FC-7015U)**

- : 0.1 uS~ 10 S(0.1Hz~ 10MHz)
- LSD : 100nS
- : ±LSD±
- : ±LSD± ± xT.I
- : 1,10,100,1000( : 10 ,1 ,0.1 ,0.01 )

**(A/B)(FC-7150U/FC-7015U)**

- :0.1Hz 10MHz( A)
- 0.1Hz 10MHz( B)
- : ±LSD±( x A)/N
- : ±1 COUNT of A ± B TRIG. ERROR x FREQ. A.

**C**

**◆ FC-7150U,FC-7150**

- :80MHz 1.5GHz
- :80MHz 1.1GHz:35mV,1.1GHzHz 1.5GHz:70mV
- :AC
- :50 ±5%
- :3Vrms
- : ± ± ( 2)

**◆ FC-3000**

- :80MHz 3.3GHz
- :80MHz 2.0GHz:10mV,2.0GHz 3.0GHz:20mV,3.0GHz 3.3GHz:35mV
- :AC
- :50 ±5%
- :3Vrms
- : ± ± ( 2)

◆ ( 2)

Time Base Selector	INT	EXT	INT	EXT	INT	EXT	INT	EXT
Gate Time	0.01S		0.1S		1S		10S	
Number Of Displayed Digit	5	6	6	7	7	8	8	9
Frequency (Input C)	RESOLUTION							
80 MHz-99 MHz	1 KHz	100 Hz	100 Hz	10 Hz	10 Hz	1 Hz	1 Hz	0.1 Hz
100 MHz-999 MHz	10 KHz	1 KHz	1 KHz	100 Hz	100 Hz	10 Hz	10 Hz	1 Hz
1 GHz-3.3 GHz	100 KHz	10 KHz	10 KHz	1 KHz	1 KHz	100 Hz	100 Hz	10 Hz



- : TCO( )
- : 10.000000MHz
- :  $\pm 1\text{PPM} (\pm 1)$  )
- :  $\pm 10\%$  1PPM
- : 0 50  $\pm 5\text{PPM}$
- :  $\pm 5\text{PPM}$
- : 10MHz( )
- : 1.0Vp-p
- : 600
- : 10MHz( )
- : 1.5Vrms 5Vrms
- : 600

- : 0.56"7 LED,M/h, K/u, m, Hz, S, HOLD,G.T  
"OF": 가|999999999

- (HOLD) : , , , T.I,  
HOLD , .

### 3.

1)

		( )
103 ~ 126V AC (50/60Hz)	F 0.5A 250V	FC-7150U,FC-7015U: 15W
206 ~ 252V AC (50/60Hz)	F 0.25A 250V	FC-3000,FC-7150,FC-7015: 10W

2)

: 0 ~+40 ( 23  $\pm 5$  )  
: 85%

3)

: -20 ~+70  
: 85%

4)

: 255( ) $\times$ 90( ) $\times$ 255( )(mm)

5)

: 2.0Kg

---

4.

1.	.....	1
2. BNC	.....	1
3.	.....	1
4.	.....	1

\*\*

---

## 2

### 1.

- 1) 가 .
- 2)
- 3) / /
- 4) ( / / / ) 가

### 2.

AC

: AC 115V/230V( $\pm 10\%$ )  
: 50Hz/60Hz  
: FC-7150U/FC-7015U; 15W  
FC-3000/FC-7150/FC-7015; 10W

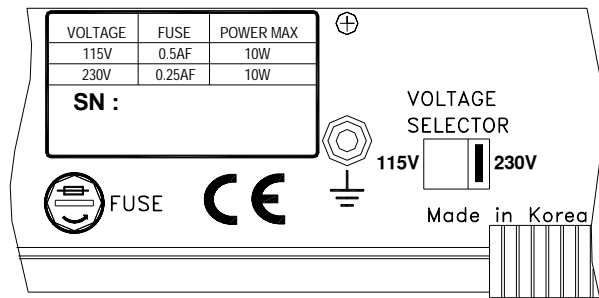
3.

1) 【 2】

2)

3)

115V 230V



【 2】

: FC-3000 230V AC

, 115V

4.

: 0-40

가

25 ±5

: 85%  
가

가  
( )가

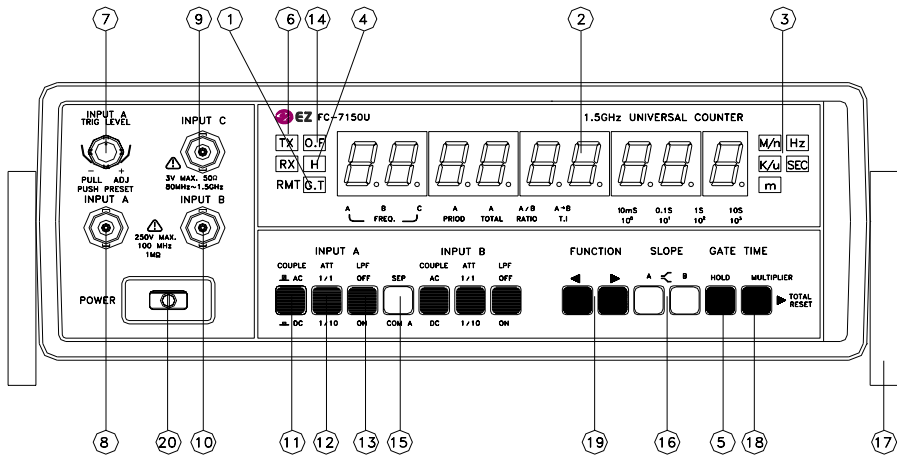
5.

: -20 +70

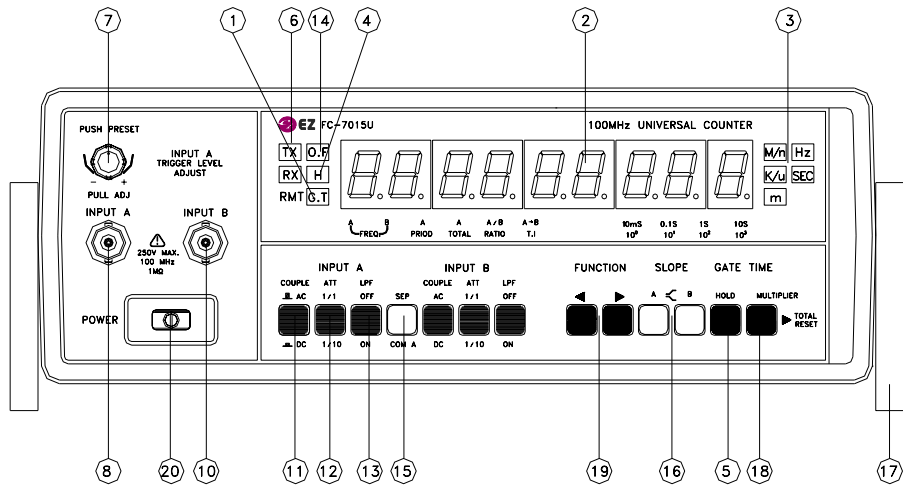
: 85%

# 3

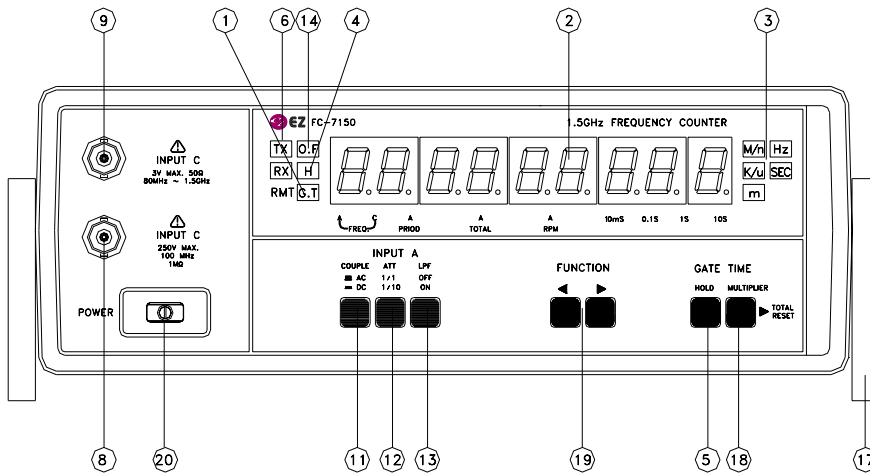
1.



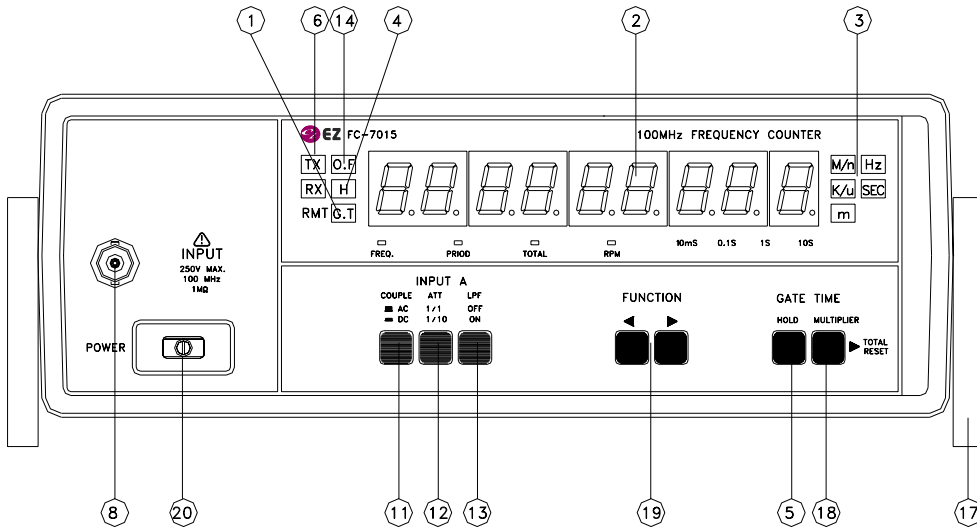
(3) FC-7150U



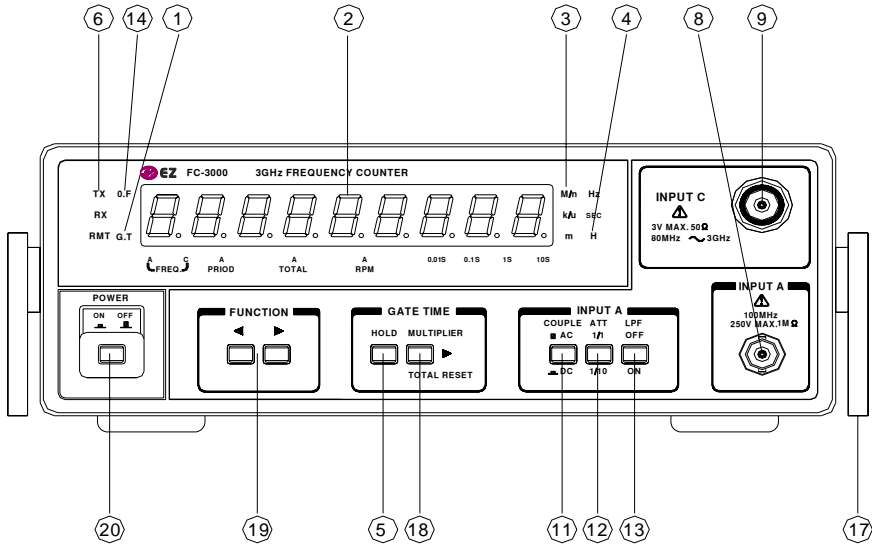
(4) FC-7015U



(5) FC-7150



(6) FC-7015

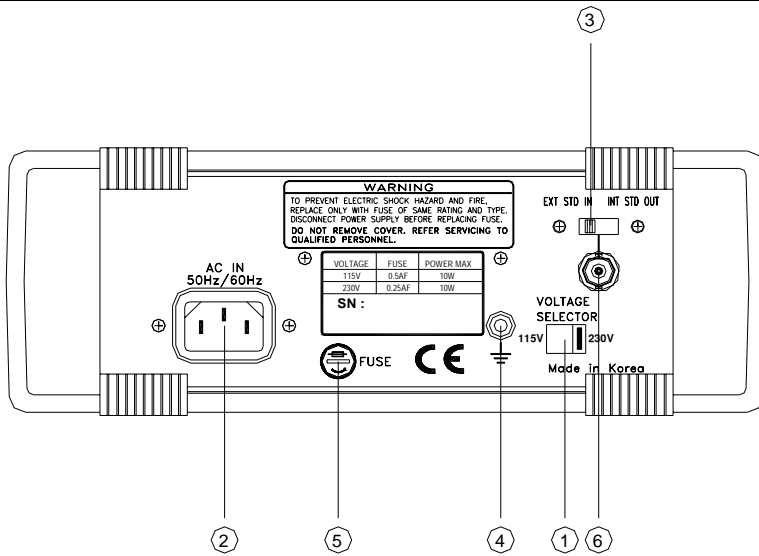


**(7) FC-3000**

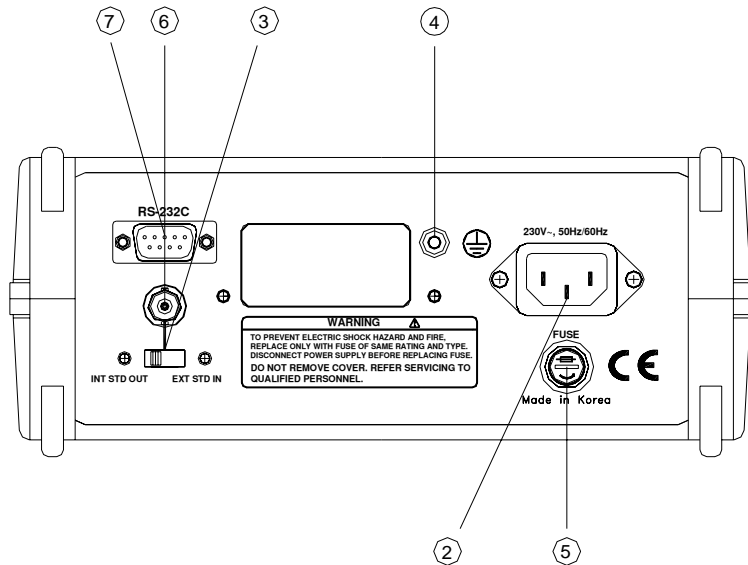
- ①. : 가 가
- ②. :9 (0.56 ) LED
- ③. : ,Hz,mHz,KHz,MHz,u,n,SEC
- ④. : 가 ,
- ⑤. : 가 가
- ⑥. TX,RX :RS-232C .( )
- ⑦. VR : A ,  
- + .(FC-7150U, FC-7015U)
- ⑧. A,BNC : A BNC ,100MHz
- ⑨. C,BNC : 80MHz 1.5GHz(3.3GHz)  
(FC-7150U, FC-7150: 1.5GHz, FC-3000: 3.3GHz)

- 
- ⑩. B,BNC : B BNC ,100MHz  
(FC-7150U,FC-7015U)
- ⑪. : AC DC . (A,B )
- ⑫. : 10  
C . (A,B )
- ⑬. : 가 100kHz -3dB (A,B )
- ⑭. :
- ⑮ SEP/COMA : A B  
( ) (FC-7150U,FC-7015U) t
- ⑯, : AB + -  
가 , + 가 .(FC-7150U,FC-7015U) -
- ⑰. :
- ⑱. : a. FREQA. 가 A .  
b. FREQB. 가 B .  
(FC-7150U,FC-7015U)  
c. PERIODA. 가 A .  
d. TOTALA. 가 A .  
e. RPMA. 가 A RPM .  
(FC-7150,FC-7015,FC-3000)  
f. T.I(A B). 가 A B  
+ -  
(FC-7150U,FC-7015U)  
g. RATIO(AB). 가 A B  
(FC-7150U,FC-7015U)
- ⑳. :
-





(7) FC-7150U/FC-7015U/FC-7150/FC-7015



(8) FC-3000

①.

:

.



②.

:

가

③. /

:

EXT.STD.IN

,

10MHz

600

,

INT.STD.OUT

가

④

:3

가

,

⑤

:

⑥

,

:

10MHz

10MHz

⑦

RS232

: P/C

---

1.

- 1) STANDARD SIGNAL GENERATOR : 100KHz-2.0GHz
- 2) FUNCTION GENERATOR : 0.1Hz-2MHz
- 3) BNC : 50
- 4) TERMINATION : 50

가

a AC

b . FREQ. A , 1

\*" " 가 가 .  
\* 가 , .

2

1) A, B (0.1 Hz 100 MHz)

- a A BNC 가 .
- b FREQA .
- c .
- d 가 가 . 가 ,
- e 가 가 " " .

f.

g. LPF( )

가 ( 100kHz -3dB )

---

h. (10Hz ) ,DC

2). C (FC7150,FC-7150U : 80 MHz ~ 1.5GHz, FC-3000: 80MHz ~ 3.3GHz)

C 3Vrms ,x10

a. CBNC 가

b. FREQ.C

c.

d. 가 가

e. ( A)"e"

f. LPF, C

3.

a. A,BNC 가

b.

c. 가

d. , , ,

4.

30MHz

a.

b. A 가 가

999999999 "OF" 가

c. , ,

---

5. (Rotation Per Minute) (FC-3000, FC-7150, FC-7015)

---

a.	RPM	GATE TIME	
b.	A	가	가 999999999
c.	"OF"	가	가 "1. " g,h

6. (A B)(FC-7150U, FC-7015U)

	A	B
a.	A,B, BNC	
b.	T.I(A B)	
(A B)	A	B
c.	A B	
	+	
	( .+ + )	
d.		
e.		가
f.	가	가" "

7. (A/B)(FC-7150U, FC-7015U)

	A	가	B	가
	A	B		
a.	A,B,BNC			
b.	A/B			

---

d.	가
----	---

e.

가" " .

# 5

## 1. BNC

(standing wave)가

가 1/4

50

50

50

DC

DC

가 가  
3 (90cm)

50

C, BNC

50

A

C

## 2

A, B (1M $\Omega$ )

(40pF ) ATT

가 A, B

가

가

x10

C 10:1

C 50

1M $\Omega$

가

10:1

## 3.



가 . " " " ( 3- )  
" " " 가 " ,  
가 .





본 사용설명서는 사전 예고 없이 변경될 수 있습니다.