



Portable MSR Reader with Rechargeable Battery User's Manual

Contents

Information	3
Technical And Operational Description	6
Connections	10
Card Data Format	13
Demo Software	14
Specifications	20
Communication Protocol	21

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Information

Mini400 Series Magnetic Swipe Reader

ΜΑСΗΙΝΕ ΤΥΡΕ	FUNCTION				
	MC 123 Muti-Charge F - MEM 512 KB				
	RS-232 REC QUEUE LED STATUS REC QUEUE REC STATUS				
Mini400 Track 1 & 2 & 3	AUTO OFF WER 1.2 FFM ₩ → ₩				

Read the instructions on your device before installing batteries

- 1. Insert batteries into your device properly, with the (+) and (-) terminals aligned correctly.
- 2. Always fully charge your batteries before use.
- 3. When you charge the batteries for the first time, or if the batteries have been stored for a long time, it normally takes about 3 charge and discharge cycles for the batteries to regain full capacity.
- 4. It is normal for batteries to become hot during charging and they will gradually cool down to room temperature after fully charged.
- 5. Store the batteries in a cool and dry place.
- 6. Remove batteries from the electrical device if the device is not going to be used for a long time.
- 7. Keep battery contact surfaces and battery compartment contacts clean by rubbing them with a clean pencil eraser or a rough cloth each time you replace batteries.
- 8. If the performance of the batteries decrease substantially, it is time to replace the batteries.
- 9. Keep batteries away from children. If swallowed, contact a physician at once.

Lithium Ion Polymer Battery Handling Guideline

Danger !

It may cause the battery swelling, leaking, explosion or ignition, if you do not reading following:

- 1. Do not store battery in a manner that allows terminals to short.
- 2. The cell batteries are requested to be stored within a proper temperature range specified in this specifications.
- 3. Use only approved charger (Mini400). Improperly charging a cell or battery may cause the cell or battery to flame or damage.
- Prohibit reversing cell polarity within a battery assembly. The battery must be connected correctly.
- 5. Do not heat or dispose the battery into fire, water or other liquids.
- 6. Do not short-circuit a battery. Extended short-circuiting creates high temperature in the cell and at the terminals. Physical contact to high temperature can cause skin burns. In addition, extended short-circuit may cause the cell or battery to flame.
- 7. Do not bend, fold or fall the battery or part of the battery. It may cause the battery be damaged and result in the battery swelling, leaking, explosion or ignition.
- 8. Do not open or manipulate the folded cell edge.
- 9. Do not bend or fold the sealing edge. And do not tear off the sealing film.
- 10. Do not drop or cause unnecessary shocks to the battery.
- 11. No sharp edge components shall be inside the battery housing. The sharp edge may destroy the cell packaging.
- 12. Do not carry loose batteries in a pocket or purse with metal objects like coins, paper clips and hair pins, etc. This will short circuit the battery, generating high heat.
- 13. Do not directly heat cell body. It may cause the battery be damaged by heat above 90° C.
- 14. Never disassemble a battery.
- 15. Never solder a battery.

Warning !

It may cause the battery swelling, leaking, explosion or ignition, if you do not reading following:

- 1. Do not put the battery into microware, washing machine or drying machine.
- 2. Do not put the battery onto oven.
- 3. Do not mixed batteries and types. Avoid to use old and new cells or cells of different sizes, different chemistry or types in the same battery assembly.
- Do not use a damaged battery.

- Do not use a damaged battery.
 Keep away batteries from children.
 In case of contacting the materials from a damaged or ruptured cell or battery: Eye contact: Washing immediately with plenty of water and soap or for at least 15 minutes. Get medical attention. Skin contact: Washing immediately with water and soap. Inhalation of Vented Gas: Remove to fresh air. Get medical attention.

 - Ingestion : Get medical attention immediately.

Caution !

- 1. Do not place batteries near heating sources, nor exposed to direct sunlight for long periods. Elevated temperature can result in reduced battery service life.
- 2. The battery shall be operated (stored, charged and discharged) in the temperature specified in this specifications. **Operating Temperature:**

3. Do not overcharge or overdischarge batteries. It will decrease the batteries' service life.

* Manufactory has no liability for problems that occur when the above specifications are not followed.

Charging : 0°C ~45°C Discharge : -20°C ~60°C Storage : -20°C ~45°C



Technical And Operational Description

Front Panel Display and Operations



Card Reader

Swipe the card through the entire length of the slot to read.

• Operation Status Indicator

When encountering erroneous input, defective card, misread, bad memory or incorrectly encoded data and so on, the device will turn on the ERROR indicator.

Battery Status Indicator

Indicating the battery is ready ,charging progress , charge done, charge suspend in charge mode or low battery in operational mode.

Connector

For connection to host computer and external Power for charge Battery .

Battery Box

Put the battery in box and hold battery .

• Power Button

Turn the Mini400 on/off power. Note : Hold the power button for 3 sec for power off.

Display Information

Operational Indicator

Status	Green LED	Red LED	Buzzer *1	Read Card
Power On	Take tu 2 tii	rns blink mes	Веер. Веер.	х
Auto Power Off	Take tu 2 tii	rns blink mes	Веер. Веер.	х
Ready	On	Off	x	О
Read OK	Blink 1 times	Off	Beep.	х
Read Error	Off	Blink 1 times	Веер. Веер. Веер.	х
Inactive Battery	Off	Blink 3 times	Веер. Веер. Веер.	х
RTC No Setting	Take turns blink		x	х
Memory will be Full	Slow Blink	Off	x	ο
Memory Full	Fast Blink	Off	x	х
Memory bad	Off	Blink	х	х
Firmware Management mode	Off	On	Х	х

*1 Mini400 is available for Built-in Buzzer.

Battery Indicator

Status	Green LED	Red LED			
Power On	Take turns blink 2 times				
Standby	Off	Off			
Precharge in progress	Off	Slow Blink			
Fast charge in progress	Off	On			
Charge done	On	Off			
Charge suspend (temperature ,Timer Fault)	Off	Fast Blink			
Low Battery	Blink	Off			
Inactive Battery	Take turns blink 2 times				

Operational Description

1. Powered by Battery

For normal use, the unit is powered by battery. Push the Power Switch Button for about 1.5 seconds to turn on the unit. Also push the Power Switch Button for about 1.5 seconds to turn off the unit. After the unit is turned on, the power would be turned off automatically if there is no swiping a card on the unit in 15 seconds. This means the unit would be turned off if no swiping a card again in every 15 seconds after every card swiping. It would have Low Battery Detect/Warning indication when the unit is powered by battery.

2. Powered by Cable

When the unit is connected with the PC through the communication Cable (WAS-T0017) and the PC is running Mini400 software and open the COM PORT for the unit, then the unit will be turned on in about 0.5 second by the PC through the RS-232 COM PORT. Then you can do the unit Setting, Configuration or data downloading. When the software closes the COM PORT or exits, the power turn off from the PC immediately. When powered by cable from PC, the Power Switch would have no function and the unit would have no Low Battery Detect/Warning function.

3. Real Time Clock Setting

Before start using the unit, you must set the Real Time Clock (RTC) inside the unit to your local time. If there is no battery for quite a while or it is powered by cable for quite a while this would cause Real Time clock (RTC) malfunctioned due to no power supply. When put on the battery to turn on the unit and the Red/Green LED take turns blinking, this means the RTC is malfunctioning and you must do the RTC time setting before you use the unit.

4. Low Battery Detect

When powered by battery, it would have Low Battery Detect function. When the battery goes low, the LED would flash green once every 2 second and you must charge battery immediately, otherwise, the unit would shut down any time without pre-warning.

5. Charge Mode

There are three different charge modes for Mini400: low battery mode ; real time mode and manual charge mode. Low battery charge mode is used when the battery hits low voltage, it starts to be charged automatically. Real time charge mode is whenever the Mini400 cable is connected to USB or Power adapter, it would be charged immediately. Manual charge mode is the charge is controlled by Demo software . User can use the software to start or stop charging. The default set mode is on low battery charge mode.

6. Charge Status Indication

When Mini400 is in charge, Battery Status Indicator light show slow blink red that means the battery is in the pre-charge. When Battery Status Indicator light turns to red, it means the battery is in charge status. When Battery Status Indicator light turns to green, it means the charge is finished. If the charge process has unusual situation, Battery Status Indicator light will show red fast blink. If Mini400 cable is connected, and battery is not in charge, Battery Status Indicator light will turn off.

7. Memory Low Warning

Log database memory is almost full (>90%). Adding new records is still possible but you are advised to free up the log database memory by uploading the data to the PC as soon as possible.

8. Memory Full Warning

Log database memory is full. You not be able to add any new records. Free the log database memory by uploading the data to the PC.

9. Firmware Management mode (FMM)

FMM allows you to quickly upgrade your Mini400's internal firmware via com port and also check validity of currently loaded firmware. Contact your dealer for most recent firmware upgrade files.

Replace Battery

Note:

Read the instructions on your device before replace new battery. see <u>Lithium Ion Polymer Battery Handling Guideline</u> for details



1. Power turn off



2. Take the cover away



3. Take the battery away



4. Take new battery



5. Put new battery in



6. Fix the battery cover

Connections

1.1.1

WAS-T0017A



DSUB 9P POWER JACK	DSUB 9P FEMALE PIN	FUNCTION	MINI USB 4P
+		VCC	1
	2	TXD	2
	3	RXD	3
-	5	GND	4



No use

Connect to PC



Note:

- 1. When Mini400 is connected/disconnected to external power adapter, it would be turned On/Off automatically.
- 2. Normally the charging time is about 1.5 ~ 2.5 hours (Default setting is low battery charge mode, it is detected when the battery is low, it would be charge until Full automatically). The working hours would be more than 48 hours (Stand alone and Always On). If Mini400 is connected with external power adapter, it would use external power instead.
- 3. The battery life is more than 300 times. If user uses improperly charge mode, it may affect the battery life.

WAS-1536A



MINI DIN 6P MALE

DC PLUG

MINI DIN 6P MALE PIN	MINI DIN 6P FEMALE PIN	DC PLUG	FUNCTION
1	1		DATA
3	3	V-	GND
4	4		CLOCK
5	5	V+	+5V

Connect to PC



External power for charge

Note:

- 1. When Mini400 is connected/disconnected to external power adapter, it would be turned On/Off automatically.
- 2. Normally the charging time is about 1.5 ~ 2.5 hours (Default setting is low battery charge mode, it is detected when the battery is low, it would be charge until Full automatically). The working hours would be more than 48 hours (Stand alone and Always On). If Mini400 is connected with external power adapter, it would use external power instead.
- 3. The battery life is more than 300 times. If user uses improperly charge mode, it may affect the battery life.

WAS-1571A



USB 4P FEMALE PIN	FUNCTION
1	VCC
3	D -
2	D +
4	GND

MINI USB 4P	FUNCTION
1	VCC
2	RXD
3	TXD
4	GND

Connect to PC



Note:

- 1. When Mini400 is connected/disconnected to USB port, it would be turned On/Off automatically.
- Normally the charging time is about 1.5 ~ 2.5 hours (Default setting is low battery charge mode, it is detected when the battery is low, it would be charge until Full automatically). The working hours would be more than 48 hours (Stand alone and Always On). When Mini400 is connected with USB, it would use power from PC instead.
 The battery life is more than 200 times of the pattery life.
- 3. The battery life is more than 300 times. If user uses improperly charge mode, it may affect the battery life.

Card Data Format

CARD DATA STRING

TRACK 1		TRACK 2			TRACK 3			DATE & TIME						
ss	TRACK1 DATA	ES	SS	TRACK2 DATA	ES	SS	TRACK3 DATA	ES	SP	DATE	SP	TIME	SP	WEEK
%	TRACK1 DATA	?	;	TRACK2 DATA	?	+	TRACK3 DATA	?		DATE		TIME		WEEK

TRACK 1

%	CARD ID	?		Track 1 IATA		
			Bits Per Inch		210	
1. SS i	s the start sentinel (%).			Bits Per Character		

2. ES is the end sentinel (?).

3. Card Id up to 76 alphanumeric data characters.

Track 1 IATA	
Bits Per Inch	210
Bits Per Character	7
Alphanumeric Characters	79

I

TRACK 2

;	CARD ID	?	
			Bits

1. SS is the start sentinel (;). 2. ES is the end sentinel (?).

3. Card Id up to 37 numeric data characters.

Track 2 ABA	
Bits Per Inch	75
Bits Per Character	5
Numeric Characters	40

TRACK 3

+ CARD ID	,	
-----------	---	--

1. SS is the start sentinel (+). 2. ES is the end sentinel (?).

3. Card Id up to 104 numeric data characters.

Track 3 Thrift	
Bits Per Inch	210
Bits Per Character	5
Numeric Characters	107

DATE&TIME&WEEK

SP	DATE	SP	TIME	SP	WEEK
			-		
	YYYY/MM/DD	SP	HH:MM:SS	SP	W

1. SP is the SPACE characters (20h).

2. TIME is 24hr .

WEE	К
SUN	1
MON	2
TUE	3
WED	4
THU	5
FRI	6
SAT	7

Demo Software

STEP 1 : Run Mini400



STEP 2 : Choose COM PORT (Do not choose TCP/IP)

🐴 Mini400 - User Name		_ D ×
Help Exit		
No T:		Track#2
* BAUDRATE : 1920		
CHOOSE	Login X	
COM PORT	Enter Login ID : ****	
	Login ID have to be 4 digital numbers	F
	The default setting is 0000	o
Comm Port IP 0, 0, 0, 0	OK Cancel	0 / 0 Write Card
Upload Sav	e Erase Date/Time Version	Settings Change Login ID
COM 3		Logino

- STEP 3 : Click Date/Time to set PC current time to Mini400 (When need)
- NOTE: Make sure your PC current time is correct befor you set PC time to Mini400.



STEP 4 : Click Version

(To show Mini400 Firmware Version when needed)

▲ Mini400 - Us Help Exit	er Name						
No Track#1	_	Mini400		Mini400	Firmwar	e Versior	ck#2
<		٩	Card Reade	r Firmware: V1.	0R06		
Comm Port	IP 0, 0,	0, 0 Trad	k Filter All	Tracks	click Versio	n	Write Card
Сом з 💌	Upload	Save	Erase	Date/Time	Version	Settings	Change Login ID

STEP 5 : Click Settings setting User Name/Power Mode/Charge Mode/Sound Mode/Track Active Mode (Timer set min 3 second /max 30 minute)

lp <u>E</u> xit Track#1	Settings		Chose Sotting Mode	
	User Name User Name test Power Mode C Real Control C Switch Control C Auto Power Off 00 : 30	Track Active Mode Track 1 Enable Track 2 Enable Track 3 Enable	Setting Mode	
omm Port I		Caylight Saving Time Start 2nd Sunday, March 02:00 End 1st Sunday, November 02:00		Enter Settings
₩ 3 ▼	Operate sound enabled OK	Cancel	Settings Change Login ID	

STEP 6 : Click Change Login ID to Change Login ID (Login ID default setting is "0000".)

<mark>∐ Mini400 - U</mark> s <u>H</u> elp <u>E</u> xit	er Name						<u>- 0 ×</u>
No Track#1		🐭 Change Lo	ogin ID	×		Enter new Login ID	ack#2
		Enter Login I	D: ****	·		Login ib	
		_	e to be 4 digita				
		Re-Enter Log	gin ID : ****				
				1			
•				Cancel			Þ
Comm Port	IP 0, 0,	0, 0 Tra	ack Filter All	Tracks 💌	Click Cl Logii	-	Write Card
Сом з 💌	Upload	Save	Erase	Date/Time	Version	Settings	Change Login ID

STEP 7 : Click Upload to upload data

No Track#1 Track#2 Track#3 Date 19 *AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	Help	<u>E</u> xit		5				D	ate
20 ************************************	No	Track#1		Track#2		Track#3		Date	
21 ************************************	19	*****	AAAAAA	;22222222222222222	222222	+3333333333333	3333333333	2005/05/	6 15:07:256
Upload data AAAA ;222222222222222222222222222222222	20	****	AAAAAA	;22222222222222222	222222	+333333333333	3333333333	2005/05/0	6 15:07:266
Upload data ;22222222222222222222222222222222222	21	*****	AAAAAA	;2222222222222222	222222	+333333333333	333333333	2005/05/0	6 15:07:276
data AAAA ;22222222222222222222222222222222	-		LAAAA	;22222222222222222	222222	+333333333333	3333333333	2005/05/0	06 15:07:286
LAAAA ;222222222222222222222222222222222	-	•	AAAA	;22222222222222222	222222	+333333333333	3333333333	2005/05/0	6 15:07:306
	uata		AAAA	;22222222222222222	222222	+333333333333	3333333333	2005/05/0	06 15:07:316
Beauty 1/25	1	1	5	Upload			Beserde : 1	1.7.25	▶ Write Card

STEP 8 : Click Save to save data

▲ 另存新檔				?×				_0	×
<u>H</u> (儲存於①: (🔁 Mini400	•	+ 🗈 💣 🎟 -						
Nc 🔁	20040528						Date		•
1 我最近的文件	Current				3333:	3333333333	2005/05/06	15:07:256	
	Filename				3333:	3333333333	2005/05/06	15:07:266	
	Пенапс				33333	3333333333	2005/05/06	15:07:276	
2 🎾					33333	3333333333	2005/05/06	15:07:286	
2 我的文件					3333:	3333333333	2005/05/06	15:07:306	
2 我的電腦					33333	3333333333	2005/05/06	15:07:316	-
							L.	F	
網路上的芳鄉 机	Click Save	e	v	儲存(S) 取消	×	Records : 1	1 / 25	Write Card	
COM 3 💌	Upload	Save	Erase	Date/T	ime	Version	Settings	Change Login ID	
	L								

STEP 9 : Click Write Card

ol	Track#1	Track#2	Track#3	Date	-
19	****	;22222222222222222222222222222222222222	+3333333333333333333333333	2005/05/06 15:07:256	
20	*****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:266	
21	*****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:276	
22	*****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:286	5
23	*****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:306	
24	*****	;22222222222222222222222222222222222222	+3333333333333333333333333	2005/05/06 15:07:316	
•					ſ
Cor	nm Port IP 0,	0, 0, 0 Track Filter	Il Tracks 💽 Records :	1 / 25 Write Card	1

Write Card - Step 1: Select the data Click [Prev Record] and [Next Record] to select the data from upload data. All three tracks data can be edited by user if necessary.

🐂 Write	Card Data			×	
Track 1	11111	nodif. 1.	lata at hana		
Track 2	22222	IUUITY THE	lala al here		
Track 3	33333		TIAL A		
MSR206	6 Information	Read Card		Write Card	
Port	COM1			Wilke Cald	
Model	MSR206-3HL	Erase Card	Auto Next after Write	Exit	
Version	1.02		High Coercivity		
	Auto Scan	<< Prev Record	20/20	Next Record >>	
Found MSR206					

Write Card - Step 2: Select High/Low coercivity Write Hi-Co card - Check the Hi-Co box; Write Lo-Co card - Uncheck the Hi-Co box.

🗃. Write (Card Data			×		
Track 1	11111					
Track 2	22222					
Track 3	33333					
MSR208	Information	Read Card	1	Write Card		
Port	COM1			write card		
Model	MSR206-3HL	Erase Card	Auto Next after Write	Exit		
Version	1.02		High Coercivity			
	Auto Scan	<< Prev Record	20/20	Next Record >>		
Found MS	Found MSR206					

Write Card - Step 3: Select Auto Next after Write

The default setting of the [Auto Next after Write] check box is checked. User can click [Prev Record] or [Next Record] to select data that you need. Also, it allows user to uncheck [Auto Next] after write then select your own data.

🐂, Write (Card Data			×	
Track 1	11111				
Track 2	22222				
Track 3	33333				
MSR206	Information	Read Card		Write Card	
Port	COM1			write Calu	
Model	MSR206-3HL	Erase Card	Auto Next after Write	Exit	
Version	1.02		High Coercivity		
	Auto Scan	<< Prev Record	20/20	Next Record >>	
Found MSR206					

Write Card - Step 4: Click [Write Card]

Click [Write Card] button to write card. Click [Cancel] to stop write card function.

🐂, Write	Card Data			×
Track 1	11111			
Track 2	22222			
Track 3	33333			
MSR206	Information	- Read Card		Write Card
Port	COM1	Head Cald		write card
Model	MSR206-3HL	Erase Card	Auto Next after Write	Cancel
Version	1.02		High Coercivity	
	Auto Scan	<< Prev Record	20/20	Next Record >>
Please sw	ipe card for Write			

Write Card - Step 5: Finish Write Card Swipe card, If the message is "Write OK", the card has been written successfully. If the message is "Write Error", Please make sure that you have selected right card type Hi-Co or Lo-Co.

🐂, Write (Card Data			×	
Track 1	11111				
Track 2	22222				
Track 3	33333				
MSR206	Information	Read Card		Write Card	
Port	COM1			wike Cald	
Model	MSR206-3HL	Erase Card	Auto Next after Write	Exit	
Version	1.02		High Coercivity		
	Auto Scan	<< Prev Record	20/20	Next Record >>	
Write OK					
mile OK					

STEP 10 : Click Erase to erase the memory records of Mini400 (Note : Always [Save] the data before [Erase])

	Exit		-	
No	Track#1	Track#2	Track#3	Date
19	****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:256
20	****	;22222222222222222222222222222222222222	+33333333333333333333333	2005/05/06 15:07:266
21	*****	;22222222222222222222222222222222222222	+33333333333333333333333	2005/05/06 15:07:276
22	****	;22222222222222222222222222222222222222	+3333333333333333333333333	2005/05/06 15:07:286
23	*****	;22222222222222222222222222222222222222	+333333333333333333333333	2005/05/06 15:07:306
24	*****	;22222222222222222222222222222222222222	+3333333333333333333333333	2005/05/06 15:07:316
4				F
Cor	nm Port IP 0,	0, 0, 0 Track Filter A	Il Tracks 💽 Records :	1 / 25 Write Card
9	M 3 V Upload	Save Erase	Date/Time Version	Settings Change Login ID

STEP 11 : Click Exit Mini400 Software

👍 Mini400 - User Name						
Help Exit	H.					
No Track#	Track#2	Т	rack#3	1	Date	Click
Click						EXIT
EXIT						
Comm Port IP	0, 0, 0 Tr	ack Filter	Tracks 💌	Records: 0	/0	Write Card
	0, 0, 0	5				
	0	C	Det IT're	V	0	Change
COM 3 🔽 Upload	Save	Erase	Date/Time	Version	Settings	Login ID

Specifications



Magnetic Stripe Card :

TRACK 1 / IATA / 210 bpi / 79 Alphanumeric Characters TRACK 2 / ABA / 75 bpi / 40 Numeric Characters TRACK 3 / Thrift / 210 bpi / 107 Numeric Characters



RS232 Interface : RS232, Half-Duplex, 8N1, 9600 bps



Communication Protocol :

Version 1.2 (GNET V1.2)

ſ	MRTC
l	Ley RIC

CLOCK :

Real Time Clock (RTC) module and back-up capacitor



Memory Size for Storing Data :

CMOS Serial Flash Memory 512K bytes Up to 2048 records (256 Bytes / Record)



Battery Power :

Rechargeable Lithium-ion Polymer Battery Nominal Capacity: 250 mAH (Typical) Nominal Voltage: 3.7 V Cycle Life: 300 cycles (at least) Low Battery Detect and Built-in Quick Charge Circuit



Power Supply for Charge :

DC 5V, 200mA (for RS-232) or USB Powered Charging duration time : 1.5 ~ 2.5 hr Working duration time after charge : 48 hr (always power on)



Dimensions :

L 82 x W 20 x H 28 mm



Environment :

Operating Temp : $-0^{\circ}C \sim +60^{\circ}C$ (Discharge) $-0^{\circ}C \sim +45^{\circ}C$ (Charging) Storage Temp : $-10 \sim +65^{\circ}C$ Humidity : $10 \sim 90$ % relative



Mounting :

Portable or Any surface

Communication Protocol

GNET FEATURES



- 1. POLLING
- 2. LOGIN / LOGOUT
- 3. DATABASE
- 4. INFORMATION

Also can be expandable.

Simple format

Use ASCII value for each field and use Separator "," between two Fields.

GNET V1.2

GNET Handshaking



GNET PACKET



ITEM	Dec	Hex	Control Key	Function
STX	2	02	^B	Start of Text
CMD	Ascii	Ascii	Ascii	Command Code
CONTENTS	Ascii	Ascii	Ascii	Contents Data
CHKSUM	Ascii	Ascii	Ascii	Check Sum
CR	13	Od	^M	Carriage Return
REPLY	(78) 65	(4e) 41	(N) A	(Negative) Acknowledge

Command Index Table

Торіс	Command	Contents	Description	
	L	4 Characters for Login(0000)	Login	
	0	-	Logout	
	Р	New four digit password	Set Password	
SETTING	В	-	Get Register	
SETTING	С	-	Set register	
	F	-	Get Product Version	
	S	Date, Time, Week	Set Date, Time and Week	
	Т	-	Get Date and Time	
	N	-	Get Number of Record	
DATABASE	G	Number	Read Record by Number	
	E	-	Erase All Record	

Reply Index Table

Торіс	Reply	Contents	Description	
ACK	A	Reply Information	ACK+Information	
NAK N		See Error Index Table	NAK+Information	

Error Index Table (For Reply NAK)

Торіс	Error Index	Description
ACCESS LEVEL	00	Access Denied or Password Error
	01	Command packet is too long
COMMAND CODE	02	Command packet is empty
COMMAND CODE	03	Command code is out of range
	04	Illegal Command or Data
	05	Database and Register is Empty
	06	Record number is out of range
DATABASE	07	Check Sum Error
	08	Memory Not Enough
	09	Action Failure
FILE	OA	File Not Exist

1. GET NUMBER OF RECORD :



2. READ RECORD BY NUMBER :



3. ERASE ALL RECORD :





4. SET DATE AND TIME :

5. GET DATE AND TIME:



6. GET PRODUCT VERSION :





7. LOGIN:



8. LOGOUT :





9. SET PASSWORD :



10. SET REGISTER :



REGISTER TABLE

Register	Function	Description
10h	Auto Power Off Time(Low byte)	00~FFh: 00~FFh(0~ 255)/2 Second
11h	Auto Power Off Time(High byte)	00~FFh: 00~FFh(0~ 255)/2*256 Second
12h	Power Mode	00h : Real Control 01~FEh : Auto Power OFF FFh : Switch
13~18h		
19h	Buzzer ON/OFF	00h : Buzzer OFF FFh : Buzzer ON
20~29h		
30h	TRACK 1 Active Mode	00h : Disable
31h	TRACK 2 Active Mode	01h : Required
32h	TRACK 3 Active Mode	FFh : Enable
33~39h		
40h	Daylight Saving Time Active Mode	00~02h : Enable 03~FFh : Disable
41h	Daylight Saving Time Start The Month	01~0Ch : 1~12 Month FFh : Disable
42h	Daylight Saving Time Start The Date or The Week of The Month and The Date of the week	00 <u>bbbbbb</u> *: Set The Date 01 <u>aaaccc</u> * : Set The Week Of The Month Set The Date Of The Week
43h	Daylight Saving Time Start The Time	00~16h : 0~22 O'clock
44h	Daylight Saving Time End The Month	01~0Ch : 1~12 Month FFh : Disable
45h	Daylight Saving Time End The Date or The Week of The Month and The Date of the week	00 <u>bbbbbb</u> * : Set The Date 01 <u>aaaccc</u> * : Set The Week Of The Month Set The Date Of The Week
46h	Daylight Saving Time End The Time	01~17h : 1~23 O'clock
47~FFh		

*The Date & The Week of The Month & The Date of the week Parameter table

	Parameter							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit O
Set the date	00		000001~01111					
Set the week of the month Set the date of the week	()1		000~111			000~110		

Bit 5~0 (bb bbbb)	Date
00 0000	
00 0001	1
00 0010	2
00 0011	3
:	:
01 1101	29
01 1110	30
01 1111	31

Bit 5~3 (aaa)	Order		
000			
001	First		
010	Second		
011	Third		
100	Fourth		
101	Fifth		
110	Final		
111	Final 2nd		

bit 2~0 (ccc)	Week		
000	Sunday		
001	Monday		
010	Tuesday		
011	Wednesday		
100	Thursday		
101	Friday		
110	Saturday		