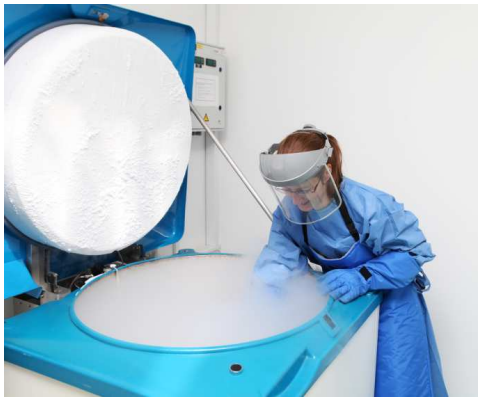
ALARM
MONITORING
DATA LOGGING

AS300 COMMUNICATOR MANUAL



Asper Systems Ltd
Laboratory Alarm & Monitoring Systems

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IMPORTANT : Section1 must be read before operating the alarm and monitoring system.

AS300 COMMUNICATOR DETAILS	
MASTER PIN	
USER PIN	
SIM TEL NUMBER	
SIM NETWORK	
SERIAL No	

Section 1 ► THIS SECTION MUST BE READ BEFORE OPERATING THE ALARM SYSTEM

IMPORTANT

To maintain a high level of confidence in the integrity of the complete alarm system it must be tested on a regular basis.

The responsibility rests with the user as to how often the alarm system is fully tested. This will probably depend on the value of the samples which are being stored in their equipment. The alarm system must be used only as one aid in the customers overall procedure for protecting their product

All alarm systems are there to assist in the overall protection of your product. Good maintenance of the monitored equipment is the first line of defence in maintaining the correct operating temperature or environment for your product. All alarm systems have to be checked on a regular basis. Regular checking will find any faults that have occurred thus improving the overall integrity.

Only O2 and Vodafone PAYG SIMS allow credit response ,which will enable the low credit warnings. All other networks do not have this facility, so the low credit warnings will not be activated. Please ensure there is sufficient credit on the SIM card at all times. This will ensure the alarm system will be able to call telephone contacts in the event of an alarm.

The alarm system must never be used as the primary alarm to protect humans.

Section 2 ► AS300 Communicator Overview

The AS300 Communicator is a new generation of monitoring and alarm systems using the Global System for Mobile Communications (GSM) and wireless technology. The monitoring and data logging system allows laboratory and hospital equipment to be protected. The system ensures the safety and continued effectiveness of medicine produce, blood products and samples at specific refrigeration and freezer temperatures. Due to the high value of many of these goods, Quality Assurance programs increasingly require that storage temperatures are to be verified several times per day and that records be maintained. The AS300 Communicator will meet the alarm, monitoring and logging requirements.

Make an informed decision on what action to take based on instant readings from the equipment monitored. This can be sent at any time to your mobile telephone. This is particularly useful if an alarm occurs when the person is on call or out of the workplace. With no need for a dedicated telephone line or line rental the AS300 Communicator is exceptionally easy to install. The programming of relevant information can be done from any location by a mobile telephone using the relevant password.

Multiple units at different sites can be connected anywhere in the country or countries as the system uses the GSM network of your choice.

Section 3 ► AS300 COMMUNICATOR

3.0 Features

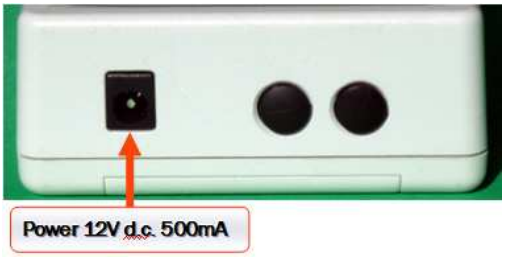
- Compact size. 170H x 85W x 35W (mm)
- Simple to use.
- 100 Transmitter channels, one transmitter per channel.
- Three menus available giving information on the system.
- Last 10 alarms stored.
- All alarms are time and date stamped.
- Acknowledged by mobile phone.
- Up to five telephone numbers.
- Add and remove transmitters by a simple password protected text.
- Audible alarm.
- Power failure alarm.
- Rechargeable battery backup.
- Built in communications to mobiles, land lines and web.
- Internet access to logged alarm information. (Option)

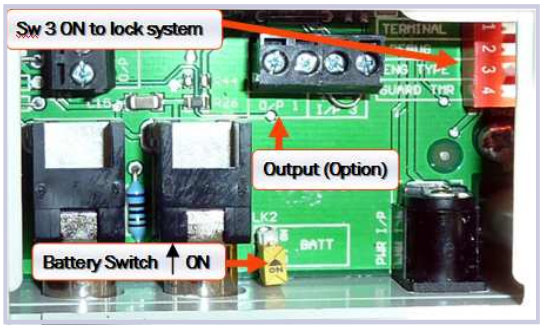
3.1 Front Panel Descriptions.

- Unit Enabled : - Green LED when the unit is enabled. Red LED when unit is disabled.
- Status :- LED indicating the status of the unit.
- System OK: - "ON" for 4 seconds and "OFF" for 1 second.
- Mains Power Fail : - Status Light "OFF" for 4 seconds and "ON" for 1 second.
- In Alarm Condition : - Status Light "ON" for 1 seconds and "OFF" for 1 second.
- GSM Signal : - Indicates signal strength. LED will be solid and flash every 1 minute. Four flashes indicate a excellent signal strength. This LED will be extinguished if a weak signal is detected.
- Credit Required : - "ON" when SIM value drops below £4.00.
- Alarm Activated : - "ON" when alarm is activate.
- Power Failed :- "ON" when power fail is activate after delay time.
- Alerts In Progress :- "ON" when alarm alerts and acknowledgments are being sent.
- Display :- The display scrolls through information on system e.g GSM Signal strength and credit on sim (See Section 6)
- Scroll and Menu Switches :- Allows access to Alarm, System, Probe and TX Info menus (See section 7)

3.2 AS300 Communicator Power –Battery Switch

Use only the supplied power supply for the receiver and connect the 12V d.c. 2.1mm socket to the power input located at the base of the AS300 Communicator To locate the battery switch remove the rear compartment flap. The battery On / Off switch is located at the bottom left hand side of the receiver. If mains power has been removed from the receiver the system will activate an alarm after the programmed delay time.





3.3 Positioning Communicator

The choice of receiver site affects the ultimate system performance; this can be important if transmitters are positioned at the limit of their range or in buildings were significant metal is used in their construction (such as reinforced concrete containing metal rods), or utilising metal internal partitioning.

For maximum range coverage and reliability the receiver should be located in a central position with respect to the transmitters. In general, the higher the receiver, the better the range achieved. To avoid screening effects, the receiver should be mounted well away from large metal masses such as metal filing cabinets. The communicator should be mounted at least 1.5 metres above ground level and positioned at least 1 metre away from mains electrical panels, electricity cables and sources of high speed switching, such as computers, otherwise radiated electrical noise may reduce the receiver sensitivity.
If these instructions are not carried out the Communicator will have reduced sensitivity and possible future problems can occur such as lost transmission of transmitter units.

Common mistakes when positioning a communicator

1. Communicator is positioned in receptions or gate houses where there is considerable communications equipment.

2. Communicator is positioned close to electricity cables beneath the wall surface. Check position of electricity sockets and light switches. Cables from these items will be run vertically or horizontally. Do not locate the receiver within 0.5 metre of these cables.

3. Communicator is positioned in a basement.

3.4 Fit the SIM Card

If a sim card had not been ordered with the receiver, please fit a sim card. A Pay As You Go or contract sim card can be used in the communicator. The communicator is set up for a "Pay As You Go" sim card by default. If a contract sim card is used the low credit warnings must be disabled in the GSM Unit as many contract sims display a £0.00 balance when interrogated by the unit. To change SIM settings please see Section 17.0.

The sim number and credit will be displayed on the main scrolling display.

3.5 Low Credit Warnings for Pay as you go Sim Card

If the credit on the SIM Card falls below £4.00 the Credit Required LED will be illuminated and the buzzer will bleep every 60 minutes. If the credit on the SIM Card falls below £2.00, Credit Required LED will flash and a text message will be sent to receiver telephone number 1. The message is "GSM Alarm credit low", this will be repeated every 7days until the SIM has been topped up.

NOTE :- NOT ALL MOBILE NETWORKS PROVIDE INFORMATION ON THE CREDIT LEVEL OF THE SIM WHICH MAKES THIS FEATURE UNUSABLE . ONLY O2 & VODAFONE PAYG SIMS HAVE A CREDIT RESPONSE.

3.6 GSM Signal

The AS300 Communicator unit must have a GSM signal to operate. The signal strength is shown in two ways on the unit.

1. The scrolling display will show signal strength and credit on sim.
2. The GSM Signal LED will be lit solid and will flash every one minute. Four flashes indicates a good signal.
3. If no signal or a poor signal is present the unit will sound its audible alarm. This can be muted but will keep resounding every 10 minutes to remind the user that their alarm is not operational. Action should be taken to rectify this problem by moving the unit or changing the network provider.
4. If no Sim card is present in the unit the GSM Signal LED will turn red.

3.7 Antennas

The communicators GSM and radio antennas must be screwed into position for the AS300 Communicator to operate. The GSM antenna is located at the top right hand side and the wireless antenna is located at the top towards the left hand side. The Antenna's both use SMA connections.

If reception is weak for either the wireless or GSM signal, larger antenna's are available.

3.8 Alarm Sequence at the AS300 Communicator when a AS200TX transmitter alarm is activated.

When an alarm is activated the following sequence is started :-

1. Status led flashes.
2. Alarm Activated LED is illuminated.
3. Audible alarm sounds.
4. Audible alarm can be muted by pressing the mute button or an acknowledgement text from a mobile telephone.
5. Telephone sequence starts.
6. Alerts sent, LED is illuminated.
7. Once acknowledged Alarm Activated and Alerts Sent LED are extinguished (once all alerts are sent).

3.9 Alarm Telephone Sequence for AS300 Communicator.

Five telephone numbers can be allocated when an alarm is activated from a transmitter telephone number 1 will be sent then 3 minutes later telephone number 2 will be sent and so on till telephone number 5. If these calls are not acknowledged all telephone numbers will be telephoned at 1 hour intervals until acknowledged by a text message.

3.10 Alarm Sequence for the AS300 Communicator Power Fail Alarm.

When a receiver power fail alarm is activated the following sequence is started :-

1. Alarm Activated LED and Power Failed LED is lit.
2. Audible alarm sounds.
3. Audible alarm can be muted by pressing the mute button or an acknowledgement from a mobile telephone.
4. Telephone sequence starts. The receiver can have up to 5 telephone numbers allocated for a power fail alarm condition. The receiver will telephone 1 to telephone 5 with a 3 minute delay between each call. If no acknowledgement is received Tel 1 to Tel 5 will be phoned again 30 minutes later. After this no more phone calls will be issued until power is resumed.
6. Once power is restored power fail led flashes. To extinguish this LED press the Mute /Clear button until the buzzer bleeps.

3.11 Test Message

The AS300 Communicator will send a test message to the receiver telephone number 1 every 28 days. This feature helps to ensure the communications of the unit is working and if a PAYG sim is fitted, keeps the network active for the sim. The time of the test message is derived from when the unit is powered up.

Section 4 ► AS300 COMMUNICATOR Display

4.0 Display

1. The Version number of the firmware is displayed, followed by Radio Receiver then Config AS.

2. Please wait, is displayed.

3. Sim check is now done if a sim is fitted SIM OK will be displayed. If no sim is fitted "No Sim" will be displayed followed by best network available. The unit will stop at this point until a sim is fitted.

4. The network of the sim will be displayed.

5. The strength of the GSM signal will be displayed.

6. The AS300RX is now started and ready to use.

7. The display will now start scrolling, starting with the sim card telephone number fitted. If O2 or Vodafone sims are not used the display will read SIM No, UNAVAILABLE.

8. The GSM signal strength and credit available on the sim installed. *Only O2 and Vodafone will give credit information*.

9. The total number of AS200TX transmitters registered on the system, after the registration period.

10. The base number and transmitter unit range of the AS300 Communicator receiver.

11. The time and date will be displayed. If this requires to be set up please see Section 20.1.

12. Load Indent will be displayed if the sim used is not an O2 or Vodafone. An indent can be registered on the display see Section 18.0.

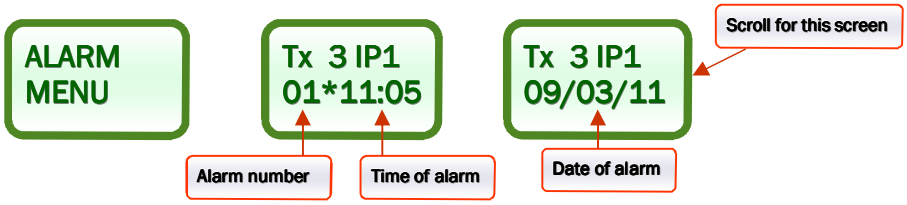
Section 5 ► AS300 Communicator Menus

5.0 Menus

The menu button will allow the user to access three menus, alarm menu, system menu and tx info menu. Once the desired menu has been selected, use the scroll button to scroll through this menu.

5.1 Alarm Menu

The alarm menu will show the last 10 alarms showing the most recent alarm first. The alarms are time and date stamped and the first alarm will show the number 1 up to 10 for the tenth alarm. An asterisk will follow the alarm number if it has not been viewed before. Once viewed the asterisk will be removed, by scrolling to the next display it will show the date of the alarm.



5.2 System Menu

The system menu will show the serial number of the AS300 Communicator and the current time and date set in the AS300 Communicator.

5.3 Transmitter Information Menu

The Tx Info menu will show the base number and the number of transmitters registered on to the AS300 Communicator.

Section 6 ► Pin Numbers

6.0 Pin Numbers

The AS300 Communicator uses two pin numbers, the master pin allows settings to be changed e.g. alarms, telephone numbers etc and the users pin allows alarms to be acknowledged and certain parameters to be queried for information. For convenience no pin number is required for certain texted commands and queried information.
For added protection, once the relevant procedures including telephone numbers, messages etc have been set up, internal switch 3 (ENG TYPE) can be switched into the ON position. This will not allow any setting to be changed with a master pin number until this switch is returned to the OFF position (See Fig 4) Section 23.0. The unit can be queried for information with the switch in the ON position. If the master pin is used for a text command whilst switch 3 is in the ON position, the message **Access Denied** will be sent from the communicator.

MASTER PIN	
USER PIN	
SIM TEL NUMBER	
SERIAL No	

NOTE : This manual uses the master pin 2222 for demonstrational purposes.

Section 7 ► AS300 COMMUNICATOR INITIAL SETUP

7.0 AS300 Communicator System Initial Setup Summary

Before the AS300 Communicator can be used the following requires to be setup by text message :-

- Base Number of the AS300 Communicator to match the AS200RX or AS300RX receivers. (Ref Section 9.2)
- Register the AS200TX transmitters on to the AS300 Communicator. (*Ref Section 9.3*)
- Contact Telephone Numbers. (*Ref Section 10*)
- Out Going Message, OGM. (*Ref Section 11*)

7.1 Set the Base Number on the AS300 Communicator

Up to 15 different bases can be set for the AS300 Communicator numbered from 1 to 15. This allows AS300 Communicator to be located near to each other without interfering with one another. The AS300 Communicator has to be configured to the same base number as the AS200RX or AS300RX to allow the AS200TX transmitters to be registered on to the AS300 Communicator unit. The AS300 Communicator will be factory set for Base No 01.

Setup information :-

- To setup any values the master pin has to be used.
- base 1= base number 1 to be set.

Send the following text message to the AS300 Communicator,

2222spacebase1

7.2 Register the AS200TX transmitter on to the AS300 Communicator

To register the AS200TX transmitters on to the AS300 Communicator a text message regtx has to be sent to the AS300 Communicator. This will allow the communicator to look for transmitters for 90 minutes. Once the 90 minutes has expired no new transmitters will be accepted on to the communicator. To add or remove AS200TX transmitters from the AS300 Communicator the same procedure should be carried out. Transmitters which require to be removed from the system must have their power removed and battery switched off before this procedure is carried out.

Setup information :-

- To setup any values the master pin has to be used.
- regstr= register AS200TX transmitters on to the AS300 Communicator.
- regend = ends registration period before 90 minutes has elapsed.

Send the following text message to the AS300 Communicator.

2222spaceregstr

Section 8 ► Set Telephone Numbers

8.0 Telephone Numbers Summary

The AS300 Communicator will accept up to 5 telephone numbers. The telephone numbers can be a mixture of mobile and land lines. Only mobile phones will be able to acknowledge an alarm message.

When an alarm is activated after the delay time set, it will telephone number 1 then 2, 3, 4 and 5 respectively. A delay of 3 minutes is allowed between each call for the recipient of the call to acknowledge the alarm. When the call has been acknowledged no more calls are made and all recipients of the alarm call will receive a further call to alert them that the alarm has been acknowledged. This acknowledged call will contain the telephone number of the acknowledger.

If the alarm call is not acknowledged the telephone numbers will be repeated with the alarm call every 60 minutes.

8.1 Setup Telephone Number 1

Useful information :-

- To setup any values the master password has to be used in front of the text .
- tel = Telephone number

Send the following text message to the AS300 Communicator.

2222spacetel1space07742663872

8.2 Setup Telephone Number 2

Useful information :-

- To setup any values the master password has to be used in front of the text .
- tel = Telephone number

Send the following text message to the AS300 Communicator.

2222spacetel2space07742663873

Master Pin Required

8.3 Setup Telephone Number 3

Useful information :-

- To setup any values the master password has to be used in front of the text .
- tel = Telephone number

Send the following text message to the AS300 Communicator.

2222spacetel3space07742663874

Master Pin Required

8.4 Setup Telephone Number 4

Useful information :-

- To setup any values the master password has to be used in front of the text .
- tel = Telephone number

Send the following text message to the AS300 Communicator.

2222spacetel4space07742663875

Master Pin Required

8.5 Setup Telephone Number 5

Useful information :-

- To setup any values the master password has to be used in front of the text .
- tel = Telephone number

Send the following text message to the AS300 Communicator.

2222spacetel5space07742663876

Master Pin Required

8.6 Query Telephone Numbers set in AS300 Communicator

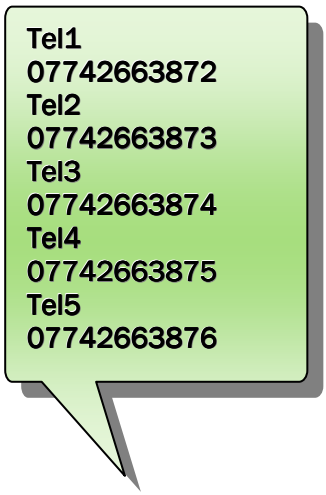
Useful information :-

- tel = Telephone
- ? = Query

Send the following text message to the AS300 Communicator,

tel?

A message will be returned to the senders mobile with all the telephone numbers programmed into unit.



Section 9 ► Set Out Going Message (OGM)

9.0 Out Going Message Summary

When an alarm is activated, a message will be sent to the recipients on the telephone list. If the message is sent to a mobile telephone it will be in the form of a text message. If it is sent to a land line it will be processed as a synthesised voice message.

The OGM can be up to 90 characters long, messages longer than this will be rejected by the AS300 Communicator. The transmitter number, temperature value and alarm input are attached at the end of the OGM.

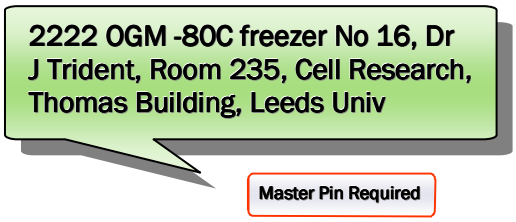
9.1 Setup Out Going Message

Useful information :-

- To setup any values the master pin has to be used.
- OGM = Out Going Message (NOTE : OGM has to be in upper case)

Send the following text message to the AS300 Communicator,

2222spaceOGMspace-80C freezer No 16, Dr J Trident, Room 235, Cell Research, Thomas Building, Leeds Univ



9.2 Query Out Going Message set in AS300 Communicator

When a outgoing message is set or changed in the receiver a text message will be sent to the mobile which changed the message. This should be checked to make sure the message has been entered correctly.

Useful information :-

- To query any values the master pin has to be used.
- OGM = Out Going Message
- ? = Query

Send the following text message to the AS300 Communicator,

2222spaceOGM?

OR

OGM?

Section 10 ► Lost AS200TX Transmitters

10.0 Lost of transmission from a AS200TX Transmitter

If the AS300 Communicator does not receive a transmission from a AS200TX transmitter registered on the system from 90 to 180 minutes, a lost transmitter alarm will be generated. The As300 Communicator will alarm and the alarm will be logged in the alarm menu. The AS300 Communicator is factory set to send an alarm message to telephone number 1 if an AS2000TX transmitter become lost. This lost alarm text can be disabled if required.

To turn OFF lost AS200TX transmitter message.

Useful information :-

- To setup any values the master pin has to be used.
- Txlost off = turns text message off for lost AS200TX transmitters.

Send the following text message to the AS300 Communicator

2222spacetxlostspaceoff

To turn ON lost AS200TX transmitter message.

Useful information :-

- To setup any values the master pin has to be used.
- Txlost on= turns text message on for lost AS200TX transmitters.

Send the following text message to the AS300 Communicator

2222spacetxlostspaceon

Section 11 ► Acknowledge Alarms

11.0 Acknowledge Alarms Summary

When an alarm is activated, it has to be acknowledged before it will stop sending out alarm messages. Once acknowledged, recipient's who have received the alarm message will be sent a message giving telephone details of the acknowledger. Acknowledging of alarms can be carried out by the master password, acknowledgers password or simple ack text. At the end of the alarm text message a prompt will tell the user the correct acknowledgement text to use. The AS300SA alarm sounder requires to be muted by depressing the mute switch. The alarm menu on the AS300SA must be scrolled through before the alarm activated led on the front panel of the AS300SA will be extinguished.

11.1 Acknowledge Alarm

An alarm can be acknowledged with any of the following texts to the alarming unit.

Useful information :-

- ack = acknowledge alarm

Send the following text message to the AS300SA.

2222spaceack
OR
Ack

A message will be sent back to the mobile telephone will contain the following details

The telephone number which acknowledged the alarm.

NOTE

On power fail front panel led's are extinguished to conserve battery life. When the power has been restored and alarm acknowledged, press the Mute Button to restore the led's.

Section 12 ► Query Unit Commands

12.0 Query Unit Commands

or the AS300When information is required from a AS200TX transmitter or AS300 Communicator, the AS300 Communicator can be queried. A list of the most commonly used queries are listed in this section. The user can select a master pin number in front of the message which in some queries gives more information.

12.1 Query Base Value in the AS300 Communicator

This will send back to the users mobile telephone the Base number set in the AS300RX receiver.

Setup information :-

- base= base setting in the AS300 Communicator.
- ? = query

Send a text a message to the AS300 Communicator,

base?

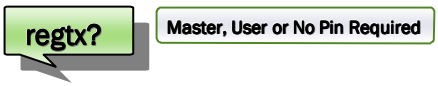
12.2 Query Registered AS200TX Transmitters

This will send back to the users mobile telephone, the transmitters registered on the AS300 Communicator Setup information :-

- regtx= registered AS200TX transmitters on the AS300 Communicator.
- ? = query

Send a text a message to the AS300 Communicator,

regtx?



12.3 Query Alarm Log in the Communicator

This will send back to the users mobile telephone, the last five alarms logged.

- alarms= the last five logged alarms in the AS300 Communicator.
- ? = query

Send a text a message to the AS300 Communicator,

alarms?

12.4 Query AS200TX Transmitter Values

This will send back to the users mobile telephone the current values in the transmitter.

- tx7= current values in transmitter unit number 7, including current temperature.
- ? = query

Send a text a message to the AS300 Communicator,

tx7? Note : Master pin returns more information

12.6 Query AS300 Communicator Telephone Numbers

This will send back to the users mobile, the telephone numbers stored in the AS300 Communicator.

- tel= the telephone numbers stored in the AS300RX for power fail and test in the receiver.
- ? = query

Send a text a message to the AS300 Communicator,

rxtel?

12.7 Query AS300 Communicators OGM Outgoing Message

This will send back to the users mobile telephone the Out Going Message. (*OGM is case sensitive)*

- OGM= the outgoing message set in the receiver, this message will be sent in the event of an alarm.
- ? = query

Send a text a message to the AS300 Communicator,

OGM?

12.8 Query Hit Count

This will send back to the users mobile, the current number of transmission hits from the AS200TX transmitter to the AS300 Communicator. This is mainly used for commissioning the system and diagnosing faults.

- hits= current number of transmission hits from the transmitter to the receiver..
- ? = query

Send a text a message to the AS300 Communicator,

hits? Note : 40 hits excellent, 6 hits lowest acceptable.

12.9 Query Time and Date Stored in the AS300 Communicator

This will send back to the users mobile, the time and date set in the receiver.

- time= the current time and date set in the receiver.
- ? = query

Send a text a message to the AS300 Communicator,

time?

Section 13 ► Enable / Disable Communicator

13.0 Enable / Disable Overview

The AS300 Communicator can be enabled or disabled from a mobile text command. When the unit is in the disabled mode no alarm reporting will take place, in the enabled mode all alarms will be reported. An illuminated green LED indicates the unit is enabled and in the disabled mode this LED is red. The unit can be sent query messages in the disabled mode.

13.1 Enable Unit

Useful information :-

- To setup any values the master pin has to be used.
- enable = enable Unit.

Send the following text message to the AS300 Communicator,

2222spaceenable

13.2 Disable Unit

Useful information for setting an alarm.

- To setup any values the master pin has to be used.
- disable = disable Unit.

Send the following text message to the AS300 Communicator,

2222spacedisable

Section 14 ► Test Alarm

14.0 Test Alarm Summary

The test alarm function will send the full OGM to all the five AS300 Communicator telephone numbers. The message will have test at the end of the OGM. The test alarm has to be acknowledged to stop the test.

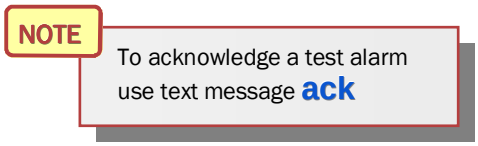
14.1 Test Alarm

Useful information :-

- To setup any values the master pin has to be used.
- test = test alarm unit.

Send the following text message to the AS300 Communicator,

2222spacetest



14.2 Test Message

When the AS300 Communicator is powered up, the time and date is recorded into memory. Every 28 days from this time a test message will be sent to receiver telephone number 1.

Section 15 ► PAYG / Contact Sim Card Setup

15.0 PAYG / Contact Sim Card Setup

The AS300 Communicator is set up for a "Pay As You Go" sim card by default. If a contract sim card is used the low credit warnings must be disabled in the GSM Unit as many contract sims display a £0.00 balance when interrogated by the unit which will set off alarms.

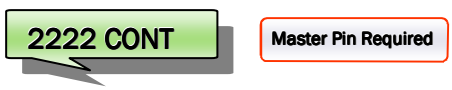
15.1 Setup Contact Sim

Useful information :-

- To setup any values the master pin has to be used.
- CONT = set AS300 Communicator for contact sim. (CONT uppercase)

Send the following text message to the AS300 Communicator,

2222spaceCONT



15.2 Setup PAYG Sim

Useful information :-

- To setup any values the master pin has to be used.
- PAYG = set AS300 Communicator for PAYG sim.

Send the following text message to the AS300 Communicator

2222spacePAYG

Section 16 ► Power Fail Delay Time in AS300 Communicator

16.0 Power Fail Delay Time

To set the delay time before a power fail alarm is activated at the AS300 Communicator.
Useful information for setting an alarm.

- To setup any values the master pin has to be used.
- PWR = power fail.
- 10 = time delay in minutes.

Send the following text message to the AS300 Communicator,

2222spacepwrspacetd10

2222 pwr td10

Master Pin Required

Section 17 ► Load Ident on Display

17.0 Load Ident on Display

The Load Ident will be shown on the display if the sim card used is not an O2 or Vodafone sim. If a O2 or Vodafone sim card is used the telephone number of the sim card will be shown instead of load Ident. To load an ident in the AS300 Communicator text a message to the AS300 Communicator unit.
Example for setting the ident to SIM 07565627811.
Send the following text message to the AS300 Communicator,

***#*#spaceIDENTspaceSIMspace0756;5627811**

IDENT SIM 0756;5627811

Section 18 ► Data Logging & Alarm Log

18.0 Data Logging and Alarm Log Overview

The AS300 Communicator can log data which can be sent to a server, this data can be down loaded to a computer and stored. This downloaded data can be analysed using the Data Analysis Software. The data interval stored from the transmitters are every 15 minutes. The alarm log gives details of all alarms, listing alarm input, time, date, call direction, telephone number, acknowledgers number and whether the call was successful or failed.

To activate this service please contact your supplier or visit **www.asper.co.uk/Webserver.htm** (Register for Logging)

18.1 Set Time and Date in the Real Time Clock

The real time clock is required to be set up to give accurate readings of time and date, two methods are available
Method 1
Example for setting 19th January 2010, 1:45pm (13:45) and 30 seconds.
Send the following text message to the AS300 Communicator,

2222spacetimespace19/01/11,13:45:30

2222 time 19/01/11,13:45:30

Master Pin Required

The time sent should be approx 1 minute ahead of the current time. The time sent will be displayed on the LCD display and the buzzer will start beeping. Check the real time on an accurate clock e.g. mobile phone or computer. When the current time matches the displayed time, press the mute button on the AS300 Communicator. The real time clock will now be set to the correct time.

Method 2
Example for setting 19th January 2010, 1:45pm (13:45) and 30 seconds.
Send the following text message to the AS300 Communicator,

2222spaceclockspace19/01/11,13:45:30

2222 clock 19/01/11,13:45:30

Master Pin Required

The time will now be set in the unit.

18.2 Query Date & Time in the AS300 Communicator

This will query the current time and date in the AS300 Communicator.

- time= time and date set in the AS300 Communicator.
- ? = query

Send the following text message to the AS300 Communicator,

time?

time?

Master, User or No Pin Required

18.3 Initiate a Current Download of Data

The data is sent to the server every 24 hours, if current data is required since the last download, send a text a message to the AS300 Communicator.
Useful information for setting an alarm.

- To setup any values the master pin has to be used.
- DNLD = download data (DNLD upper case)

Send the following text message to the AS300 Communicator,

2222spaceDNLD

This will immediately initiate a download to the server.

18.4 Network Settings (APN Settings) Default setting O2 PAYG SIM

For data to be sent to the server the network settings must be set up in the AS300 Communicator. Each network has different settings, the AS300 Communicator by default is setup for a 02 PAYG SIM.
If you have purchased your PAYG SIM with the AS300 Communicator the relevant network settings will have been set for you. A list of all network settings can be found in the document Network Settings which can be downloaded from www.asper.co.uk/downloads.htm.

18.5 Access to the Data Server

The data from the AS300 Communicator can be accessed from the following web location.

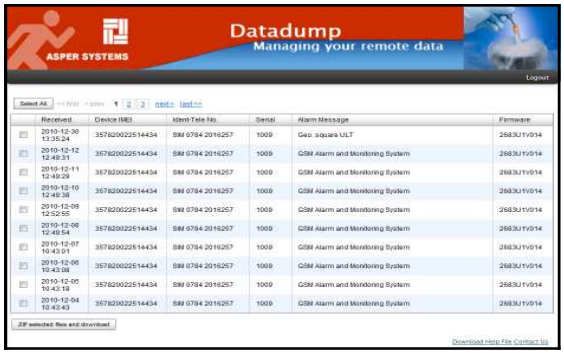
http://datadump.co:8080/login

A Username and Password will be required to access the data.

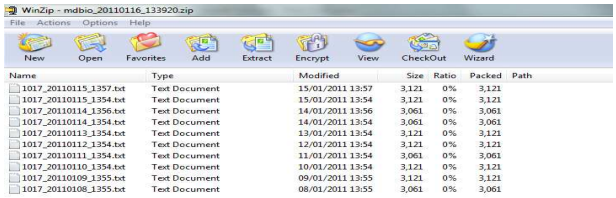
18.6 Download Data Required

Tick on the data you wish to download, then click on "Zip Selected Files and Download" button.

A new screen will be displayed, click on button "Your Zip Files are ready click here to Download"



18.7 Winzip Data Files



The files will now be presented in winzip or a zip application that is running on your computer. These file now should be stored in a folder on your computer for later analysis.

It is the customers responsibility to regularly download their data files for backup. The data files on the server are not deleted once they have been downloaded

Section 19 ► Data Logging Software

19.0 AS300 Communicator Data Analysis Software Overview

- Numerical & Graph information easily displayed.
- Easy print facility for data required.
- Filtering of data is possible between specific dates and times.
- Statistical Information of the following is recorded : First Reading; Date and Time, Last Reading; Date and Time, Number of Readings, Maximum Temperature, Minimum Temperature, Average Temperature, Time in High Alarm and Time in Low Alarm.
- AS300 Communicator Data Analysis software can be used on as may computers as required.

19.1 Installing Data Analysis Software

Double click on the AS300 Communicator Alarm and Monitoring Data Analysis file, prompts will guide the installation. Once installed the program can be accessed from the program bar under the heading Asper.

19.2 Opening a Data File

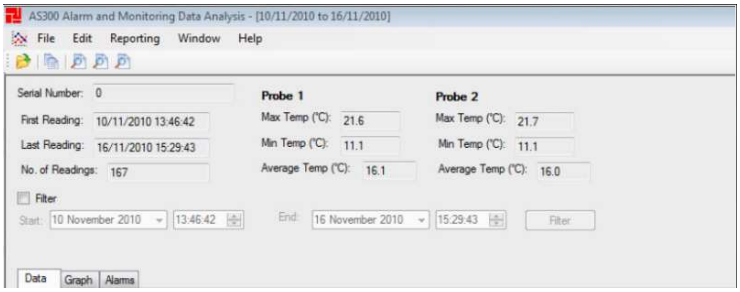
To open a data file go to File > Open. The files are automatically saved in a date form.

19.3 Using a Data File

Once the required date or dates are open, data for this unit is displayed.

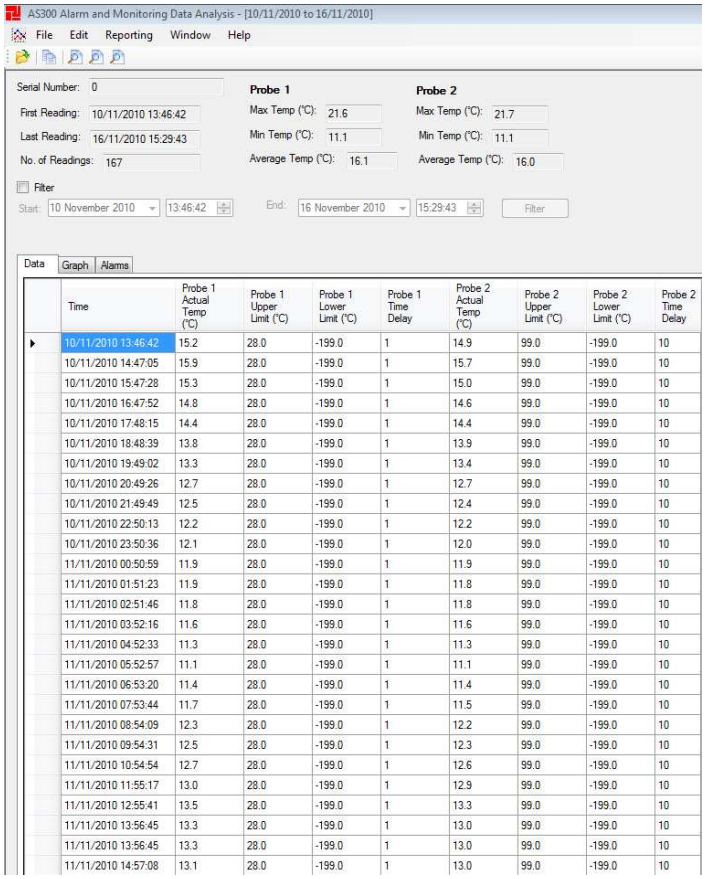
19.4 Top Screen Displayed Information

Information at the top of the screen is displayed for the selected transmitter. The information is Serial Number, First Reading, Last Reading, Number of Readings, Max Temp, Min Temp and Average Temp for I/P1 and I/P2.



19.5 Column Data

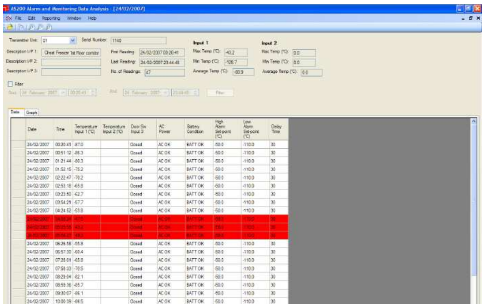
The data in the columns gives easy access to the following :-
Date, Time, Temperature input 1, Temperature Input 2, High Alarm Set-point, Low Alarm Set-point and Delay Time.



Time	Probe 1 Actual Temp (°C)	Probe 1 Upper Limit (°C)	Probe 1 Lower Limit (°C)	Probe 1 Time Delay	Probe 2 Actual Temp (°C)	Probe 2 Upper Limit (°C)	Probe 2 Lower Limit (°C)	Probe 2 Time Delay
10/11/2010 13:46:42	15.2	28.0	-199.0	1	14.9	99.0	-199.0	10
10/11/2010 14:47:05	15.9	28.0	-199.0	1	15.7	99.0	-199.0	10
10/11/2010 15:47:28	15.3	28.0	-199.0	1	15.0	99.0	-199.0	10
10/11/2010 16:47:52	14.8	28.0	-199.0	1	14.6	99.0	-199.0	10
10/11/2010 17:48:15	14.4	28.0	-199.0	1	14.4	99.0	-199.0	10
10/11/2010 18:48:39	13.8	28.0	-199.0	1	13.9	99.0	-199.0	10
10/11/2010 19:49:02	13.3	28.0	-199.0	1	13.4	99.0	-199.0	10
10/11/2010 20:49:26	12.7	28.0	-199.0	1	12.7	99.0	-199.0	10
10/11/2010 21:49:49	12.5	28.0	-199.0	1	12.4	99.0	-199.0	10
10/11/2010 22:50:13	12.2	28.0	-199.0	1	12.2	99.0	-199.0	10
10/11/2010 23:50:36	12.1	28.0	-199.0	1	12.0	99.0	-199.0	10
11/11/2010 00:50:59	11.9	28.0	-199.0	1	11.9	99.0	-199.0	10
11/11/2010 01:51:23	11.9	28.0	-199.0	1	11.8	99.0	-199.0	10
11/11/2010 02:51:46	11.8	28.0	-199.0	1	11.8	99.0	-199.0	10
11/11/2010 03:52:16	11.6	28.0	-199.0	1	11.6	99.0	-199.0	10
11/11/2010 04:52:33	11.3	28.0	-199.0	1	11.3	99.0	-199.0	10
11/11/2010 05:52:57	11.1	28.0	-199.0	1	11.1	99.0	-199.0	10
11/11/2010 06:53:20	11.4	28.0	-199.0	1	11.4	99.0	-199.0	10
11/11/2010 07:53:44	11.7	28.0	-199.0	1	11.5	99.0	-199.0	10
11/11/2010 08:54:09	12.3	28.0	-199.0	1	12.2	99.0	-199.0	10
11/11/2010 09:54:31	12.5	28.0	-199.0	1	12.3	99.0	-199.0	10
11/11/2010 10:54:54	12.7	28.0	-199.0	1	12.6	99.0	-199.0	10
11/11/2010 11:55:17	13.0	28.0	-199.0	1	12.9	99.0	-199.0	10
11/11/2010 12:55:41	13.5	28.0	-199.0	1	13.3	99.0	-199.0	10
11/11/2010 13:56:45	13.3	28.0	-199.0	1	13.0	99.0	-199.0	10
11/11/2010 13:56:45	13.3	28.0	-199.0	1	13.0	99.0	-199.0	10
11/11/2010 14:57:08	13.1	28.0	-199.0	1	13.0	99.0	-199.0	10

19.6 Alarm Highlighting Column Data

If an alarm occurs it will be highlighted in red for a high alarm and blue for a low alarm in the column



19.7 Filtering Data

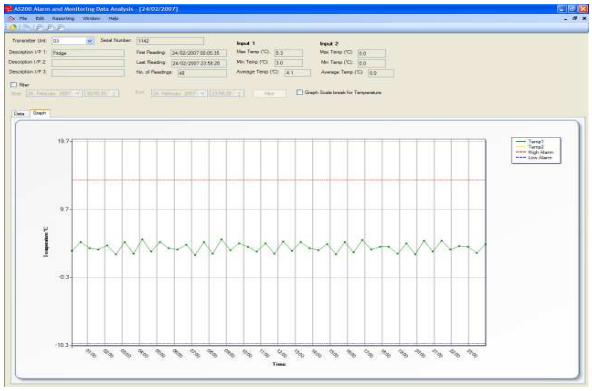
Data can be filtered by ticking the filter box and selecting a start date and time and end date and time. Once this has been done click on the filter button.

19.8 Displaying Graphs

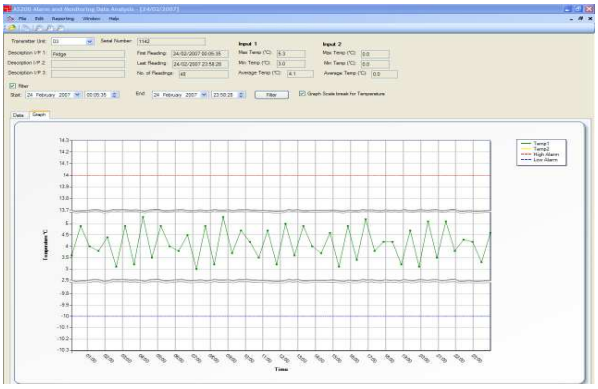
A graph of the current data can be displayed by clicking on the Graph Tab. To return to the column data, click on the Data Tab.

19.9 Graph Scale Break for Temperature

When the graph is displayed, if there is a relatively large difference between the High Alarm, Low Alarm and I/P1, I/P2 measurements, the I/P1 and I/P2 variations can be hard to distinguish. To make this clearer, the "Axis Scale Break" feature collapses the gap between the highest data line and lowest data line. This allows the variations between the data lines to become more visible.



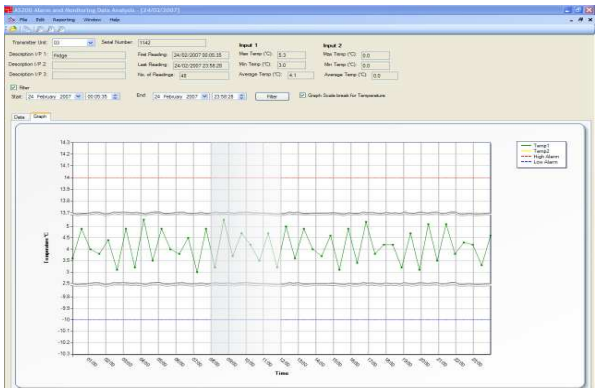
Scale Break Off



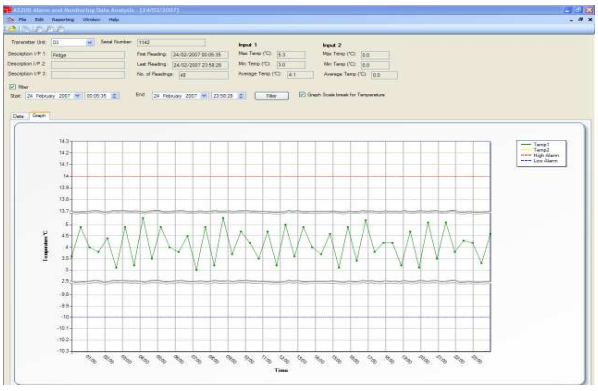
Scale Break On

19.10 X Axis Zooming

As well as the existing "Filter" functionality of the analysis application, which allows the user to filter a subset of the transmitter readings using a smaller time span, there is also the "Graph Zoom" function. This allows the user to zoom into a specific X-axis range of the graph. This is achieved by clicking on the start of the range required and then dragging the mouse to the end of the range, the zoomed data is then displayed.

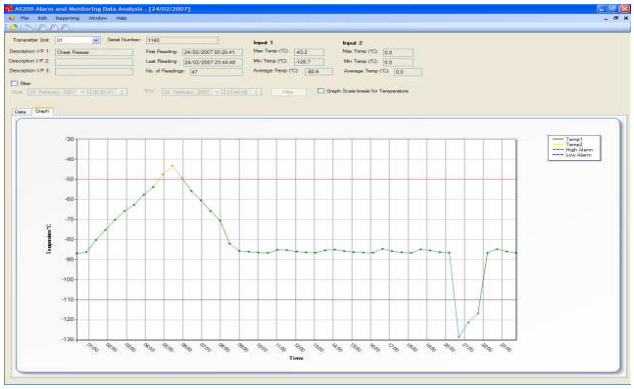


Highlighted Area to be Zoomed



Zoomed Graph

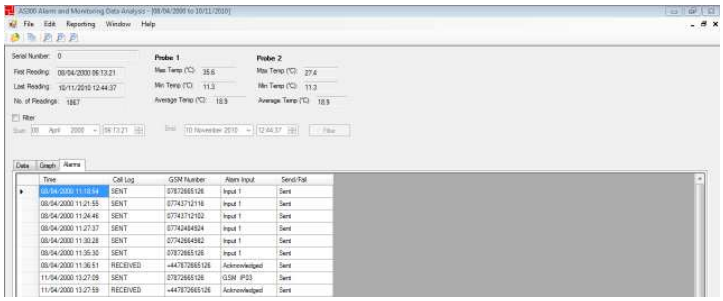
19.11 Alarm Highlighting



If either I/P1 (Temp1) or I/P2 (Temp2) value goes into the high alarm, the graph line is coloured red. If the input value goes below the low alarm set-point, the graph line is coloured blue.

19.12 Alarm Log

To view the alarm log, click on the alarm tab, the log will then be displayed giving time, date, call direction, telephone number, alarm input and whether the call was sent or failed.

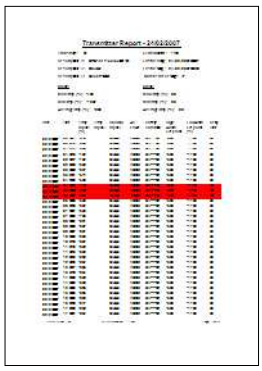


19.13 Reporting

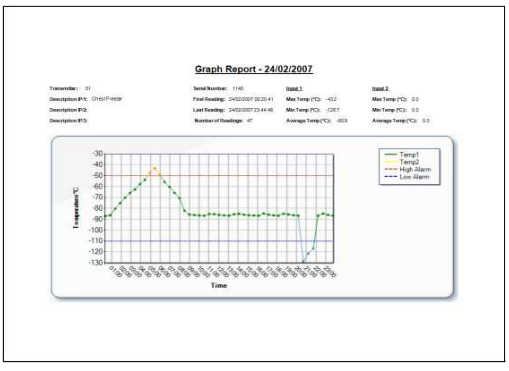
Print out of data can be done in three ways.

- "Transmitter Report" prints the data column view.
- "Graph Report" prints the graph view.
- "Summary Report" prints the "header" information for each transmitter and alarm log.

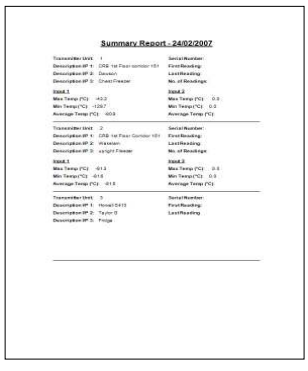
To access these functions go to Reporting > Transmitter Report etc.



Transmitter Report



Graph Report



Summery Report

ALARM LOG

Time	Call Log	GSM Number	Alarm Input	Send\ Fail
08/04/2000 11:18:54	SENT	07872665126	Input 1	Sent
08/04/2000 11:21:55	SENT	07743712116	Input 1	Sent
08/04/2000 11:24:46	SENT	07743712102	Input 1	Sent
08/04/2000 11:27:37	SENT	07742484924	Input 1	Sent
08/04/2000 11:30:28	SENT	07742664982	Input 1	Sent
08/04/2000 11:35:30	SENT	07872665126	Input 1	Sent
08/04/2000 11:36:51	RECEIVED	+447872665126	Acknowledged	Sent
11/04/2000 13:27:09	SENT	07872665126	GSM IP03	Sent
11/04/2000 13:27:59	RECEIVED	+447872665126	Acknowledged	Sent

Summery Report Alarm Log *(At end of Summery Report)*

Section 20 ► SETUP NOTES

AS300 Communicator AS300 COMM BASE No	Location	Contact	Master PW

Contact Number	Telephone Number	Contact Name
Tel No 1		
Tel No 2		
Tel No 3		
Tel No 4		
Tel No 5		

Section 21 ► Layouts of AS300 COMMUNICATOR and AS200TX

AS300 COMMUNICATOR

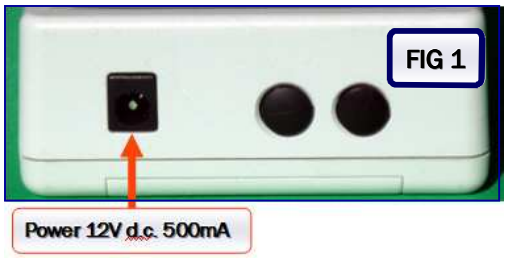


FIG 1 Power supply input for AS300 Communicator. Only use power supply supplied. 12V d.c. 500mA

FIG 2 Antenna positions for the AS300 Communicator Wireless antenna to the LHS and GSM antenna to the RHS.

FIG 3 Sim position and correct way up insertion.

FIG 4 1. AS300R Communicator battery position, push in the upward direction for ON.
2. (Eng Type) Sw 3 in the ON position locks the receiver . No master pin numbers will be accepted in this position.

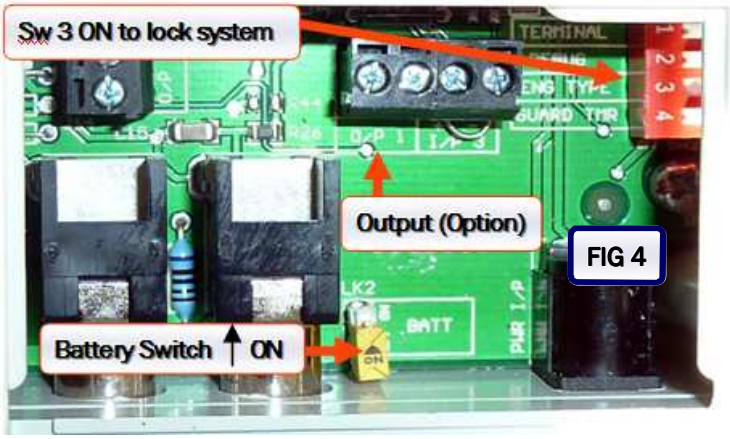


FIG 5 Layout of switches for the AS200TX transmitter.

FIG 6 1. AS200TX battery position, push in the upward direction for ON.
2. AS200TX calibration switch, push in the downward direction for ON.
3. Position of I/P1, I/P2 and I/P3.

AS200TX TRANSMITTER