

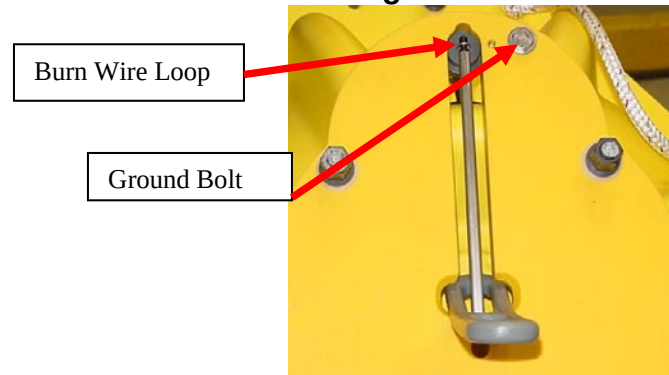
Commands

Command	Command Name	Result
+++	Online Interrupt	Enter command mode
ATO	Online	Causes local modem to go into online.
ATXn	Acoustic Link Test	Tests the acoustic link with modem at n.
ATYn	Multiple Baud Rate Test	Tests the acoustic link with modem at n at multiple baud rates
AT\$Pn,m	Remote power	Sets transmit power of remote modem at n, level m.
AT\$An,m	Remote Baud Rate	Sets Baud Rate of remote modem at n.
AT\$Sn	Read Remote Register	Displays remote modem S register n.
ATRn	Range	Displays range from local modem to modem at n.
AT\$Vn	Remote Battery Voltage	Displays power supply voltages of remote modem at n.
AT\$Tn	Release Status	Display the status of the SMART release at n.
AT\$Nn,m	Burn Wire Release	Activates burn wire release for 10 minutes at address n with release code m.
@<config> = <value>	Set configuration parameter	Will set the configuration parameter to the value
#<address> @<config> = <value>	Set remote configuration Parameter	command sets the configuration parameter of the remote modem at the specified address to the desired setting.
cfg store	Store Configuration	Saves the current modem configuration .
#n getcurrent		displays the sampled currents in amperes of a remote SM-975 SMART modem at address n.

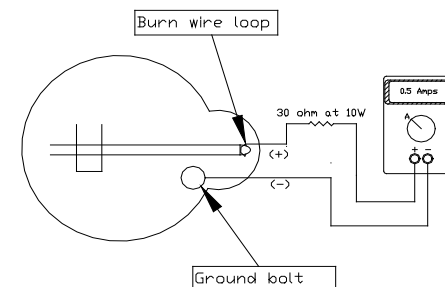
Configuration Parameters

Register	Name	Default Setting
RemoteAddr	remote modem address.	0
LocalAddr	Local modem address.	0
TxPower	Transmit power level	8 (Max)
TxRate	Transmitting acoustic bit rate	5 (800)
IdleTimer	Low power idle timer.	00:03:00
LBLmode.	Modem transponder enable	Off
P1Baud	Serial port 1 baud rate	9600
Verbose	Display verbosity.	1

In Air Testing the SM-75-4G Burn Wire



- Set up the UDB-9400 Deck Box to communicate with the SM-975.
- Place the remote transducer within 1 foot of the SM-75 transducer. This distance may need to be adjusted.
- Attach the positive lead of a multimeter to a 30Ω, 10 watt resistor. Attach the other lead of this resistor to the burn wire loop.
- Attach the negative wire of the multimeter to the ground bolt on the SM-975 release plate. As shown below.
- Set the multimeter scale correctly for measuring 0.5 Amps ± 20%
- Remove the magnet from the bracket on the SM-975. An audible tone will be heard when the SM-795 turns on.
- Turn on the UDB-9400 Deck Box.
- If using a terminal program, first connect serial cable from terminal to UDB port 1. Enter command mode using the +++ sequence, then send the release command by typing AT\$Nn,m, where n is the address of the SM-975 under test, and m is the release code. The factory default address = 0. The release code is the serial number of the SM-975. If using UDB-9400 follow instruction on the following page.
- The message “VALID RELEASE CODE – WAITING FOR BURN” should be displayed. The multimeter should read approx. 0.5 Amps.
- Disconnect the multimeter leads and replace that magnet.
- If connecting an instrument, ensure that the instrument is both sending data and receiving commands if applicable.
- Remove the magnet and deploy the system without changing settings if the above test was successful.



Instruction for Recovering the SM-975 using the Command Line

1. Repeatedly send the Range command by typing `ATRn` [Enter], where `n` is the address of the SM-975, until the range can be acquired.

2. While continuing to acquire range, navigate the vessel to position it such that it will be easy to sight the SM-975 once it surfaces yet ensure it will surface a safe distance from the vessel.

3. Send the Release command by typing `AT$Nn,m` [Enter], where `n` is the address of the SM-975 and `m` is the release code. The message "Valid Release Code-Waiting for Burn..." should be displayed. If the release code is incorrect, the message "Invalid Release Code" will be displayed, instead.

4. If the correct release code was received, the dissolving wire module will be activated, during which the SM-975 will continue to respond to acoustic commands if they are sent. To check the status of the SM-975 should display the message "Burn Wire Activated," which acknowledges that the dissolving wire module is currently activated. Once the burn wire is activated and begins to dissolve, it can take anywhere from 5 to 30 minutes, depending on the water salinity, for it to break through and the SM-975 to release from its mooring. While the burn wire is activated, the burn wire current is sampled and stored once per minute, and the `#n getcurrent` command can be used to display the sampled currents. Even after breaking through, what remains of the wire loop will continue to dissolve and draw current.

5. Once the SM-975 has been released from its mooring, it will flip over and trigger the tilt sensor. Once this happens the message "Burn Wire Released, Unit Tilted" will be displayed, indicating the SM-975 has been released and is floating to the surface. However, if the deck box or other surface modem that was used to send the acoustic commands is transmitting, this message may not be received. But again, the Release status can be checked and should display the message "Burn Wire Released, Unit Tilted," which acknowledges that it has been released.

Instructions for Using the UDB-9400 with SM-975

1. Select the Release icon located at the upper left on the UDB-9400.

2. From the drop down menu select Benthos Smart Release/Modem.
3. The remote address defaults to 0, if this has been changed, select Remote address. Type in the address on the number pad and select ok.
4. Select update status. This will communicate with the remote modem and come back with status.
5. To enter the release code, select the button labeled code. Enter the release code (same as serial number) on the number pad.
6. To test the release mechanism, Select and hold down the send button for two full seconds.
7. To verify the voltage of the unit select the config button on the lower left hand side of the UDB. 
8. Select the remote tab
9. Select Get Battery.

