

CDMA 2000 1x WIRELESS LOCAL LOOP TERMINAL ACW-1xT800/1xT1900 USER'S MANUAL

Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance Information

This device complies with part 15 of FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received.

Including interference that may cause undesired operation.

Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, Pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio Frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.



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Description

The Fixed Wireless Terminal(FWT)s are next generation telecommunication terminals that provide the economic efficiency of wireless and integrated service of wireline.

Axess Telecom ACW-1xT800 & ACW-1xT1900 terminals connect traditional wired telephones to a wireless base station which delivers the call to the public telephone network, instead of direct wired connection the network.

Due to its wireless characters : the user can easily install the terminal and can relocate it anywhere within the serviced local area. It is very convenient to use in areas where the wired telephone installation is difficult.

The terminals will offer you with clear digital voice quality and various network service features that you will not know the difference with a conventional telephone.

FEATURES

- 1 Incoming Call Light
- 2 Received Signal Strength Indicator
- 3 Internal Back-up Battery (optional)
- 4 Analog Fax (optional)

TABLES OF CONTENTS

Safety Precautions	4
FCC NOTE	5
Checking The Parts	6
Terminal Information	7
Setting Up Your Terminal	8

Basic Operational

Placing a Call	12
Receiving a Call	12
Ending a Call	12
Important Tones and Alerts	12

Advanced Features

Setting Connecting Tone	14
Changing The Lock Code	14
Restricting Outgoing Calls	15
Terminal Reset	16
Adjusting Voice Volume	16
Setting Alarm	17
Setting Caller ID Mode	17
Setting 1Min. Alert Beep	18
Memory Dial (phone book function)	18

FAX Service(Optional)

Fax Set-up	20
Sending Fax Message	20
Fax Always Send Mode	21
Receiving Fax Message	22
Configuring The Fax Service Option	22

Optional Features

Call Waiting	24
Three-Way Calling	24
Call Forwarding	24
Caller ID	24
Voice Mail Service	24

Miscellaneous

Menu Options Table	26
Troubleshooting	27
Specifications	27

SAFETY PRECAUTIONS

1. Avoid places where there are dust, gas or fire.
 - Install the unit indoors.
 - Install the unit on a hard, flat surface for proper ventilation.
 - Do not expose the unit to rain or moisture.
 - Do not place the unit on or close to sources of heat.
2. Do not shake, hit or impact the phone.
3. If you wish to clean the outside of the terminal, use only a soft dry cloth.
Such chemicals as alcohol, benzine or acetone can damage the surface of the terminal.
4. Do not twist or pull the cord out of the terminal.
5. Do not disassemble the FWT.
6. DO NOT use the power adapter if:
 - The power cord is damaged.
 - The terminal has been dropped or damaged in any way.
7. Use only the Axess Telecom provided adapter. Do not use the Axess Telecom adapter for any other usage.
8. Use only the Axess Telecom provided antenna. Do not use the antenna for any other usage.
9. Do not install the terminal near water, for example, near a bathtub, sink, wet basement, or swimming pool.
10. Do not allow children to play with any radio equipment containing a transmitter. Children could hurt themselves or others (by poking themselves or others in the eye with the antenna for example). Children could also damage the FWT.

NOTE: The input voltage and the shape of the plug on this terminal may vary from country to country.

Power Supply: Important safety instructions-Save these instructions. Danger-To reduce the risk of fire or electric shock. Carefully follow these instructions. For connection to a supply not in the U.S.A., use an attachment plug adaptor of the proper configuration for the power outlet.

FCC RF EXPOSURE INFORMATION

WARNING! Read this information before using you phone



In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

CAUTION

Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations.

Near-body operation

To maintain compliance with FCC RF exposure requirements, maintain a 2.5 cm. separation distance between the user's body and the phone, including the antenna, whether extended or retracted.

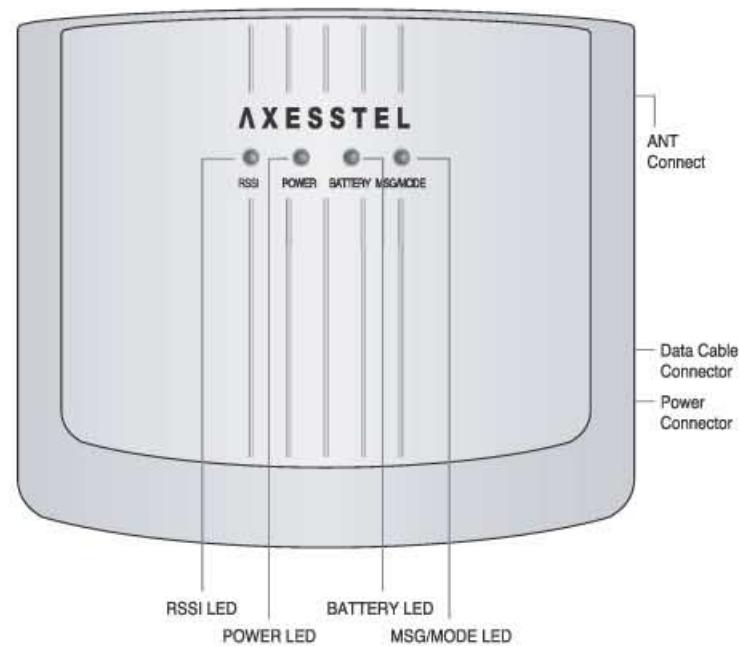
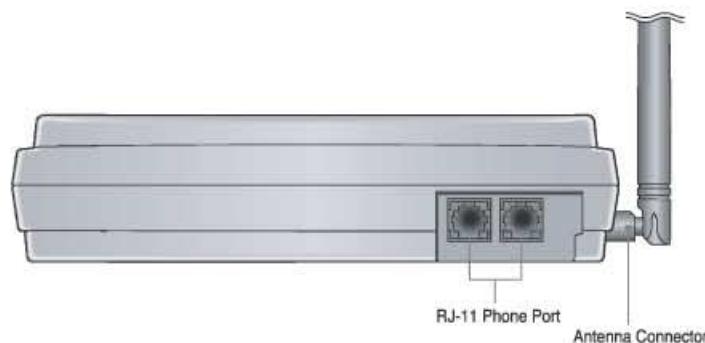
CHECKING THE PARTS

Once you have unpacked your terminal package, check to make sure that you have all the parts shown below. If any piece is missing or broken, please call your agent or customer service.

- 1. Main Set
- 2. Power Supply
- 3. AC Power Cord Line
- 4. Antenna
- 5. User's Manual
- 6. Back-up Battery(Optional)
- 7. Data Cable-USB(Optional)
- 8. Data Cable-RS 232C(Optional)



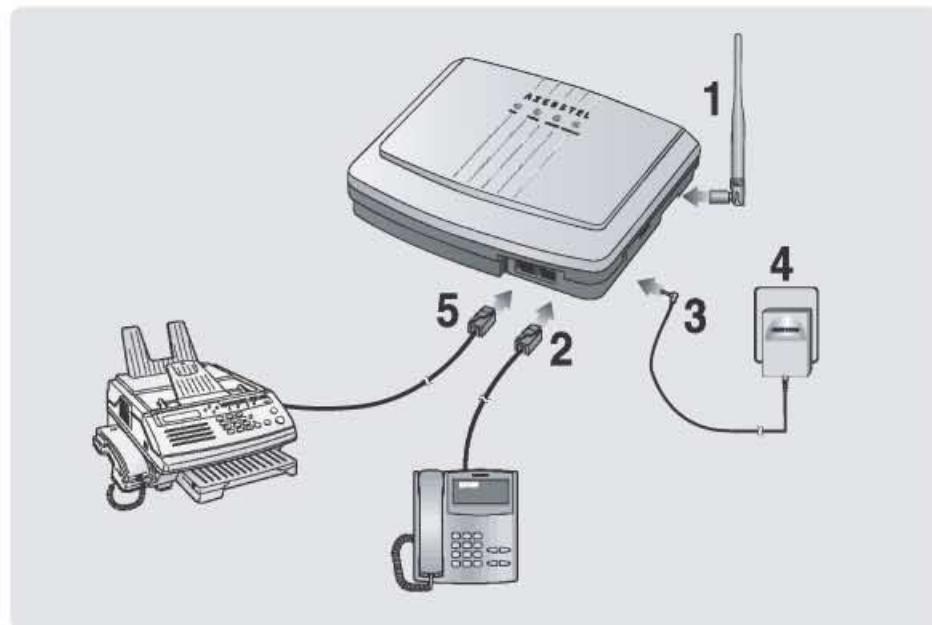
TERMINAL INFORMATION



SETTING UP YOUR TERMINAL

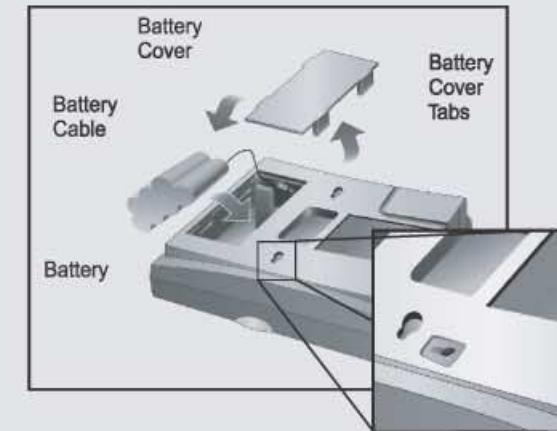
This FWT ACW-1x T800/1x T1900 operates by receiving electricity from an electrical outlet or internal battery.

1. Connect the terminal mounted antenna on the side of the terminal.
2. Connect a conventional wired telephone to a RJ-11 phone port. **Use the telephone compatible to FCC part 68 as possible, otherwise It may not work properly.**
3. Plug the Power Supply into the rear DC 12V jack of the Terminal.
4. Plug the Power Cord Line into an appropriate electrical outlet.
5. Connect a G3 analog facsimile machine to a dedicated RJ-11 port.



How to install internal battery(optional)

1. Open battery cover on the bottom side of the FWT.
2. Connect the DC power cable to FWT.
3. Insert the battery pack in the right position between the hold bars.
4. Close the battery cover.
5. Place switch in "I" position. If AC power is lost, the unit will switch to the battery if the switch is in the "I" position. The unit will not switch to battery backup if the unit is in the "O" position.



In battery backup mode ("I" position.)

LED indications are described in the following table

RSSI Status LED

LED Color	LED Activity	Description
GREEN	Continuous	Best cellular signal strength
YELLOW	Continuous	Good cellular signal strength
RED	Continuous	Poor cellular signal strength
NONE (DARK)	Off	No cellular service
ANY COLOR	Alternating Colors	Incoming Call
ANY COLOR	Blinking	In Power Save Mode

Power Status LED

LED Color	LED Activity	Description
GREEN	Continuous	Power ON
NONE (DARK)	Off	No Power

Battery Status Indicator LED

LED Color	LED Activity	Description
GREEN	Continuous	Battery is fully charged or supplying power
RED	Continuous	Battery is not at full strength or is charging
NONE (DARK)	Off	Battery is not installed or switched off
RED/GREEN	Blinking	Low battery warning

MSG/MODE Status Indicator LED

LED Color	LED Activity	Description
GREEN	Continuous	You have a voicemail.
GREEN	Blinking	Data in progress
GREEN	Alternating/Continuous/bling	You have a voicemail message while in a data session
NONE (DARK)	Off	Normal operation without any voice mail messages



BASIC OPERATION

Placing a Call

Receiving a Call

Ending a Call

Important Tones and Alerts



PLACING A CALL

1. First, check to see that your FWT Phone is turned on.
2. Pick up the handset. You hear a dial tone.
3. Using the number keypad, dial the desired telephone number.

When you finish entering phone number, press button .

Then, the call is connected immediately. If you don't press button , the call will be connected automatically after 4 seconds.

4. When the other person answers, begin your conversation.

NOTE :

- You can dial by 16 digit including  or .
- You can dial emergency call by pressing and holding  without inputting any digits. You can't change the emergency call number. (Dependent System Provider)

RECEIVING A CALL

The terminal signals the telephone(s) to ring when an incoming call is detected. Pick up the telephone handset and begin talking into the microphone on the handset.

- To disconnect when you're through, replace the handset.

NOTE :

- Be sure the phone's ringer is enabled.
- If you heard incoming call in picking up the handset, you can receive the call by pressing any key.

ENDING A CALL

- Hang up the phone (place the handset onto the cradle).

IMPORTANT TONES AND ALERTS

- Normal Dial Tone- When cellular service is available, the receiver emits a standard (steady) dial tone.
- No Service Tone - A fast beeping tone indicates that no cellular service is available.
- Outgoing Call Restriction - A slower beeping is an indication that calls may be received, but not made, from this particular phone.
- Voice Mail Tone - The receiver will emit a tone two times to indicate that voice mail is waiting. This will only occur after having dialed a number or after receiving a call.



ADVANCED FEATURE

Setting Connecting tone

Changing the Lock Code

Restricting Outgoing Calls

Terminal Reset

Adjusting Voice Volume

Setting Alarm

Setting Caller ID Mode

Setting 1 min. Alert Beep

Memory Dial (phone book function)

SETTING CONNECTING TONE

A discrete tone is generated when a call is connected successfully.

1. Pick up the handset.
2. Press  and .
3. Press .
4. Press  to set connecting tone.
Press  to cancel connecting tone.

CHANGING THE LOCK CODE

Used when you wish to change the lock code of the terminal. The programmed lock code prevents the terminal from being operational to any other people without your permission. This feature can be disabled and enabled through simple keypad number code entry. When you first buy the phone, the lock number is 0000.

1. Pick up the handset.
2. Press  and .
3. Press .
4. Press .
5. Enter 4 digits Lock Code Number.
(The default lock code is preset to 0000 at the factory.)
- NOTE :** If the code is correct, it will confirm with a tone. If
the code is incorrect, it returns to the standby mode with error beep.
6. Enter 4 digits new Lock Code Number. It sounds confirmation beep.

7. Enter 4 digits new Lock Code Number again. If it is different from the new Lock code you entered in the beginning, it returns to the standby mode with error tone.
8. Press  to store new Lock Code. If you press other key, it returns to the standby mode with error tone.

NOTE : If it is correct, it sounds confirmation beep.

RESTRICTING OUTGOING CALLS

Used when you wish to block outgoing calls from being made, but still wish to receive incoming calls at any time. This feature can be disabled and enabled through simple keypad number code entry.

1. Pick up the handset.
2. Press  and .
3. Press .
4. Press .
5. Enter 4 digits Lock Code Number.
(The default lock code is preset to 0000 at the factory.)
- NOTE :** If the code is correct, it sounds confirmation beep. If not, it returns to the stand by mode with error beep.
6. Press  to set outgoing call restrict.
Press  to release outgoing call restrict.
- NOTE :** If someone tries to make a call when outgoing call restriction is set, it sounds outgoing call restriction tone and howler tone.

TERMINAL RESET

Resets the terminal back to the initial service status of factory pre-programmed state. This feature can be disabled and enabled through simple keypad number code entry.

1. Pick up the handset.
2. Press and .
3. Press 4.
4. Press #.
5. Enter 4 digits Lock Code Number.
(The default lock code is preset to 0000 at the factory.)
- NOTE : If the code is correct, it will confirm with a tone.
If not, it returns to the stand by mode with error beep.
6. Press .
7. Wait until you hear confirmation tone.

ADJUSTING VOICE VOLUME

You can control the sound volume on your phone by 4 level.

1. Pick up the handset.
2. Press and .
3. Press 5.
4. (Volume up) or (Volume down).
5. Press 0. (This will save your setting followed by a confirmation tone.)

NOTE : This feature is automatically set after 3 seconds with a confirmation tone.

SETTING ALARM

You can set alarm on your phone

1. Pick up the handset.
2. Press and .
3. Press 8.
4. Enter alarm time(00:00~23:59).
5. Press to set alarm.
Press # to release alarm setting.

NOTE : When you will hear the alarm sound, pick up the handset to turn off alarm.

SETTING CALLER ID MODE

If your phone connected to the FWT is caller ID enabled, you can set the FWT to display the caller number or name on the phone.

1. Pick up the handset.
2. Press and .
3. Press 7.
4. Press #.
5. Press for DTMF type phone.
Press # for Bellcore type phone.
Press 0 to release caller ID setting

NOTE : The default setting of caller ID is DTMF type.

SETTING 1 Min. ALERT BEEP

A discrete tone is generated after each minute interval into the call conversation to notify you that a minute has passed since the beginning of the call or after the previous time of discrete tone, regardless of when you make or receive a call.

1. Pick up the handset.
2. Press **•** and **•**
3. Press **8**.
4. Press **•** to set 1 minute alert beep.
Press **#** to cancel 1 minute alert beep.

MEMORY DIAL (Phone book function)

Strong memory dial

1. Pick up the handset.
2. Press **#**, **#**, **0**, **0** go into "Memory Strong Mode".
3. You may store up to 99 numbers. Press any number location and then press **•** for confirmation tone.
4. Enter the phone number (of up to 16 digits), and then press **•** (there will be 2 confirmation tones).
Dial Using the Memory Dial Function.
5. Press and hold the memory stored number location for two seconds (for double digit location numbers press the first digit then press the second digit and hold for two seconds) then the memory number location will be dialed.

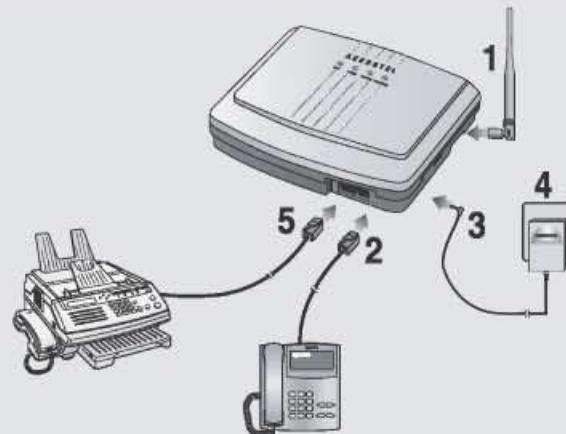


FAX SERVICE(OPTIONAL)

- Fax Set-Up
- Sending Fax Message
- Fax Always Send Mode
- Receiving Fax Message
- Configuring The Fax Service Option

FAX SET-UP

To send or receive analog fax messages, the FWT should be equipped with an analog fax module (optional), connected a conventional fax machine the FWT.



SENDING FAX MESSAGE

There are 2 methods for sending a fax, Dual Dialing and Pre-Digits. These two methods use 2 different commands and 2 different instructions. It is a matter of personal preference on which one to use. Dual Dialing ensures that you have dial tone before you send a fax.

Dual dialing Method

1. Load documents to send into a fax machine.
2. Pick up the handset or press On-hook of the fax machine.
3. Press **1** and wait for dial tone.
4. Dial destination fax number when you hear dial tone.
5. When you hear fax tones, hit the "send" or "start" button if applicable.

NOTE : The unit will return to Fax Receive Mode unless the unit is in "Fax Always Send Mode".

Pre-digit method

1. Load documents to send into a fax machine.
2. Pick up the handset or press On-hook button of the fax machine.
3. Press **9 1** destination fax number and "send" or "start" in sequence.
The FWT Will make a call automatically.

NOTE : That the unit will return to Fax Receive mode unless it is in "Fax Always Send Mode".

FAX ALWAYS SEND MODE

1. The **9 0** Command will place the FWT unit in a Fax Always Send Mode until it is rebooted or reset.
2. If you wish the unit to remain in Fax Always Send Mode even after a reboot or reset, use the **9 0 8** command.
3. To disable this command use the **9 0 8 ***
4. Please note that these commands force the unit to reset
5. Even in a Fax Always Command Mode you can still make a voice call by entering **9 0 1**

RECEIVING FAX MESSAGE

You can set the FWT to "Always Mode" or "Once" fax reception mode.

1. Pick up the handset or press On-hook button of the fax machine.
2. Press **①, ②, ⑨, ②** to set "Always On Mode" receive analog fax mode.
Press **①, ②, ⑨, ⑤** to set "One Time Mode" receive analog fax mode.
3. Wait for a confirmation dial tone. The FWT is ready to receive fax machine

NOTE 1 : If you set the FWT to **always on mode**, the FWT will transfer every call to the fax machine connected. If you set the FWT to **one time mode**, the FWT will transfer the first incoming call to the fax machine and set back to **voice call mode** automatically.

NOTE 2 : To set back the FWT from **always fax mode** to **voice call mode**.

1. Pick up the handset or press On-hook key.
2. Press **①, ②, ⑨, ③** sequence.
3. Wait for a confirmation dial tone.

CONFIGURING THE FAX SERVICE OPTION

1. A.4 Fax Mode (Service Option 5,13): **①, ②, ③, ④, ⑨, ③**
2. A.7 Fax Mode (Service Option 20,21): **①, ②, ③, ④, ⑨, ③, ④**
3. The default mode is A.4.

NOTE : Please contact your service provider for the proper fax mode setting for your network.



OPTIONAL FEATURES

(Network Dependent)

- Call Waiting
- Three-Way Calling
- Call Forwarding
- Caller ID
- Voice Mail Service

OPTIONAL FEATURES (Network Dependent)**Call Waiting**

Call Waiting enables you to be alerted to an incoming call while you are already on a call. You have the option of responding to the second call while putting the first call on hold. You can also disable the call waiting option during a particular call. Contact your service provider to activate Call Waiting. Depending on your phone, there are two ways to initiate the Hookflash function for call waiting:

- Press the dedicated "HOOKFLASH" or "FLASH" key on your telephone.
- Press the hang-up or switch-hook mechanism on your phone once quickly (approximately 1/2 second).

Three-Way Calling

Three-Way Calling enables you to set up a three-way conversation with two other different-numbered users. Contact your service provider to activate Three-Way Calling. To use Three-Way calling, use the following steps:

1. Call 1st party
2. While in call with 1st party, dial the number of the 2nd party
3. Press hookswitch (or flash button)
4. When connected to 2nd party, press hookswitch (or flash button) again to connect all parties.

Call Forwarding

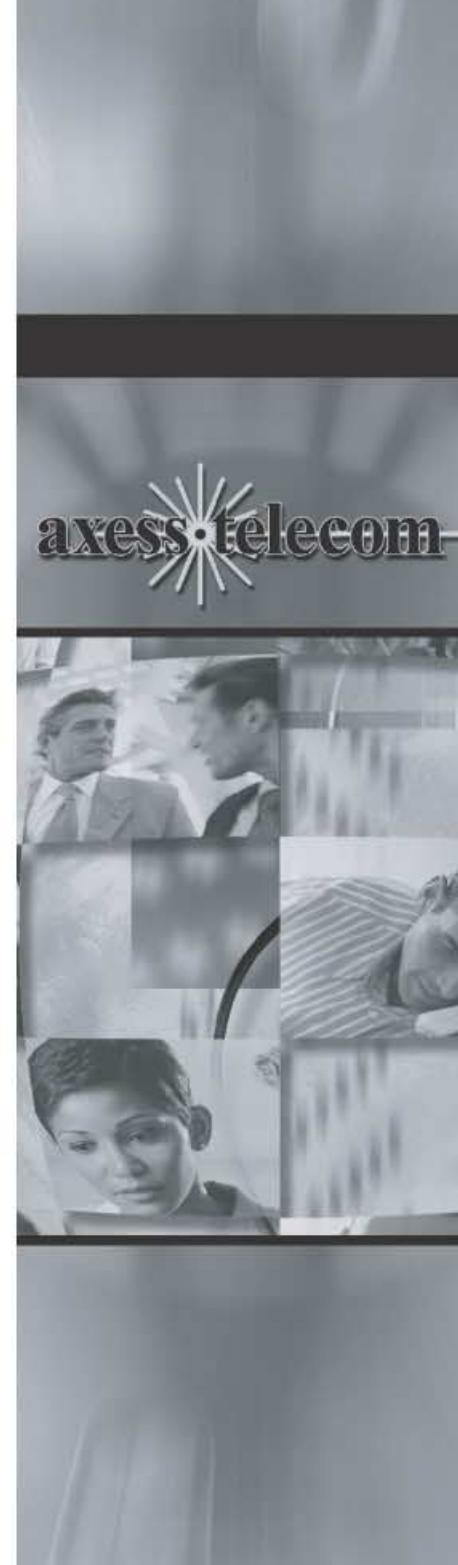
Call Forwarding is a feature that enables you to forward all your incoming calls to another phone number, even if your telephone is turned off. You can still make calls from your telephone even when Call Forwarding is activated. Contact your service provider to activate or deactivate Call Forwarding.

Caller ID

Caller ID is a feature, which notifies you who is calling by displaying the caller's number on the telephone's LCD when an incoming call comes through. This feature is available only with a telephone that has an LCD display on it. Contact your service provider to activate or deactivate Caller ID.

Voice Mail Service

Voice Mail Service is a feature that allows the terminal to receive voice mail and forward it to your telephone when you press a certain sequence of keypad number. Contact your service provider to activate or deactivate Voice Mail Service.

**MISCELLANEOUS**[Menu Options Table](#)[Troubleshooting](#)[Specifications](#)

MENU OPTIONS TABLE

	I	II	III	IV	V	VI	VII	Explanation
1. Setting connecting tone								Decides whether a discrete tone should sound when a call is connected.
2. Changing the lock code					Enter 4 digits lock code	Enter 4 new digits lock code		Used when you change the lock code of the phone.
3. Restricting outgoing calls					Enter 4 digits lock code			Used when you limit use of the outgoing calls.
4. Terminal reset					Enter 4 digits lock code			Return phone to factory settings.
5. Adjusting Voice Volume						Press 0(zero) to save		Adjusts the Volume of phone.
6. Setting Alarm				Enter alarm time (00:00-23:59)				Used when you want to set alarm time.
7. Setting Caller ID Mode								Used when you want to set the phone to display the caller number or name.
8. Setting 1 Min alert beep								Decides whether alert beep should sound at one minute intervals when you make or receive a call.
9. Fax transmission	Dual Dialing Pre Digits					Wait for dial tone	Enter fax number	Used when you want to send a message by a fax machine connected to the FWT.
10. Fax reception						Always mode Once mode Reset to voice mode		Used when you receive a message by a fax machine connected to the FWT.

TROUBLESHOOTING

• Troubleshoot the conventional wired telephone

In the event you are unable to place or receive telephone calls, first be sure that the connection wire is properly connected to the RJ-11 phone port on the terminal and to the RJ-11 port of the telephone. If unsure whether or not the telephone is operational, connect a telephone, which is known to be operational to the terminal. If service is available with the operational telephone, replace or repair your telephone equipment. If service is still not available, then follow instructions under "Troubleshoot the Fixed Wireless Terminal".

• Troubleshoot the Fixed Wireless Terminal

Check for the appropriate power indication on the LED. If no power, check the adapter (or External Power Supply) connection between the electrical outlet and the terminal. Check for the appropriate Received Signal Strength Indication (RSSI), Power, and MSG/MODE Indication through the designated LED, respectively.

SPECIFICATIONS

Frequency	ACW-T800	Tx : 824~849 MHz	Rx : 869~894 MHz
Range	ACW-T1900	Tx : 1850~1910 MHz	Rx : 1930~1990 MHz
Channel Bandwidth		CDMA 1.25 MHz	
Multi Connection		4 REN	
RJ-11 Phone / Analog Fax port		2	
Power Supply(Adapter)		Input : AC 110~240V / 50~60Hz	Output : DC 12V 1.2A
Temperature of operation		-20° C ~ +50° C	
Relative humidity		5% ~ 95%	
Temperature of storage		-25° C ~ +75° C	
Dimension		210X175X52.3(mm)	
Weight (with internal battery)		865g	

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