



EMS 2000_{IU}

INSTALLATION MANUAL

**HMRU and Hand Mounted
Transmitter**

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AT THE MONITOR CENTER/ PROBATION AGENCY

1. Enter the offender's data in the EMS-2000 application. This can be done well in advance, even when the actual equipment to be installed is not allocated yet.



The EMS 2000IU HMRU works with MWS Ver 2.05 and later, and DCC Ver 1.07N and later.

2. Immediately before the installation, when the actual HMRU and Transmitter to be installed are already known, enter the equipment data in the EMS-2000 application.
 - HMRU Serial No. - Check that the entered number matches the number on the HMRU.
 - Transmitter Serial No. - Check that the entered number matches the number on the Transmitter.
3. Check that you have all the required equipment:
 - HMRU
 - Transmitter
 - Electronic key
 - Locking device
 - Strap holder
 - Clip (male and female)
 - Screwdriver (to open a clip if necessary). It is recommended to use a 5-mm flat head screwdriver.



It is a good practice to bring an extra set of clips, to cater for the case where the first set is accidentally damaged during the installation.

It is also recommended to bring an extra set of telephone adapters.

AT THE OFFENDER'S PREMISES

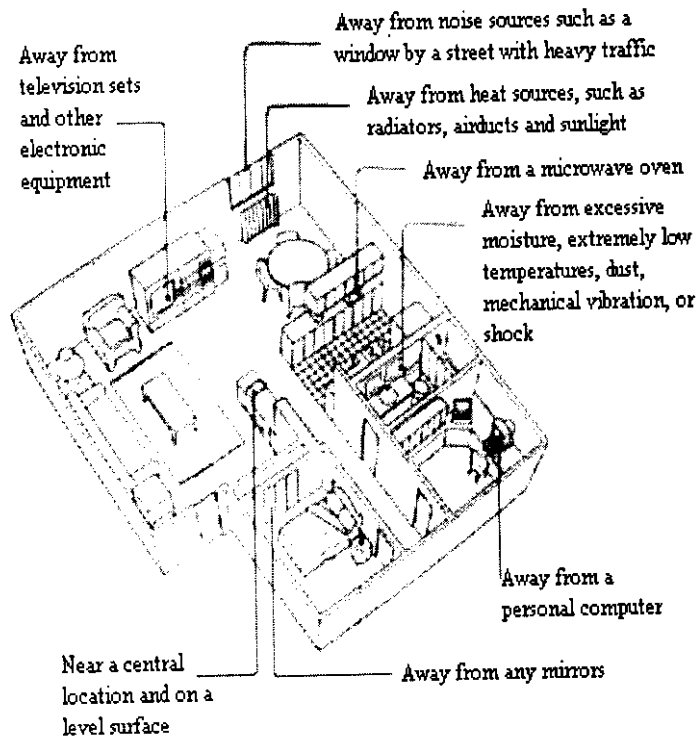
Installing the HMRU

1. Find the best location for the HMRU. The ideal place for the HMRU is in the centre of the house, 3 feet off the ground and at least 1 foot off the wall. The system should be in an open area away from other electrical appliances or metal objects.



The HMRU must be placed in such a position that both a phone jack and a power outlet can be reached. The distance between them can be approx. 10 feet.

2. Plug a phone cord (included in the HMRU box) to the socket marked "Line" in the back of the HMRU. Plug the other side of the same cord to telephone socket in the wall.
3. Disconnect the telephone from the socket where you would like to connect the HMRU. Instead, connect the phone to the socket marked "Phone" in the back of the HMRU
4. Plug the 12 VDC power adapter cord to the socket marked "Power" in the back of the HMRU. Plug the power adapter into a wall power socket. When power is connected, the HMRU will beep and then run through a series of Built-In-Tests (BIT) to check that everything is in order.



5. After having completed the tests successfully the HMRU beeps again and the two external LED's are turned on. This is an indication that the HMRU is in a working state. The left LED indicates that power is connected and the right indicates that the HMRU is connected to the telephone network.



If the phone line is not connected, a series of beeps will be heard for about 15 seconds.

The beeps duration and frequency varies according to the HMRU's operational status.

In MONITOR-mode the HMRU beeps for 15-20 seconds.

In INSTALL-mode the HMRU beeps in a slower rate, and does not stop beeping until it is connected to a telephone line.

Downloading the curfew Schedule

After having installed the HMRU perform the following:

1. Verify that the HMRU's right LED is **not** blinking (i.e. the line is not busy).
2. Using a mobile phone call the Monitoring Center and ask them to perform a download.



If a mobile phone is not available you may use the phone connected to the HMRU. In such a case hang the phone immediately upon call completion. Failing to do so will cause the central computer to get a busy line when attempting to perform the download.

3. The downloaded data contains:

- Transmitter code
- The curfew schedule
- Schedule flexibility
- Left violation sensitivity
- Sanity calls intervals

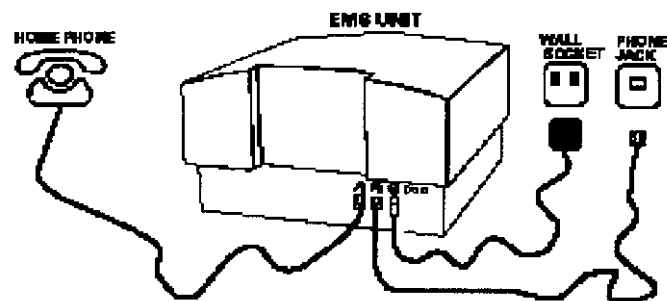
4. The download communication can be monitored directly on the HMRU at the offender's premises:
 - The offender's telephone will ring. Let it ring until it stops. Watch for the blinking of the telephone line LED on the HMRU. The blinking indicates that a contact was made between the central computer and the HMRU. The LED will then return to its steady state.
 - After a short while the telephone line LED will start blinking for a second time, indicating a call from the HMRU to the central computer (the phone does not ring). It will then stop blinking.
 - After another short wait the telephone line LED will start blinking for the third time, indicating the last call from the HMRU to the central computer (the phone does not ring). When the LED stops blinking the HMRU have all the information it requires and the monitoring begins.
5. The monitor center will call back (optional) to confirm a successful download or to inform that the download failed and has to be performed again.



If the HMRU, before receiving the download data, receives three successive transmissions from a working Transmitter (i.e. one which is calibrated and locked around a person's limb), it locks on that Transmitter.

If the HMRU 'locks' on other than the intended Transmitter, for example if the installation is done "in the office" where other offenders may be present at that time, the first successful download will be ignored by the HMRU (due to Transmitter Id mismatch) and a second download should be performed by the monitor center personnel.

HMRU Installation Setup:



Installing the Transmitter

The officer should bring the following equipment to a transmitter installation:

- Transmitter
- Male and female Clips
- Electronic key
- Strap holder
- Locking tool
- Flat-head screwdriver

Calibration of the transmitter

Before any transmitter installation, the transmitter has to be calibrated. When the HMRU is connected, do the following:

1. Stand next to the HMRU to be able to hear the audible confirmation of the calibration.
2. Hold the transmitter in your hand with the 2 metal pins pointing forward.
3. Hold the Electronic Key in your other hand, with the black button pointing toward the end of the strap.
4. Press the Electronic Key down over one of the pairs of metal pins (it does not matter which) with the two touch points on the Electronic Key matching the pair of metal pins on the transmitter.

5. To calibrate the transmitter press the RED button down for one second, the red light turns steadily ON for two (2) seconds.
6. If the transmitter successfully received the calibration command the red light, on the Electronic Key, will flash for two (2) seconds.
7. Note that if the transmitter has failed to receive the calibration command the red light will turn off after the initial two (2) seconds ON.
8. If the Electronic Key battery is low the red light will immediately flash for two (2) seconds, once the red button is pressed. (No command is sent to the transmitter).

Place the transmitter on the side on a non-metal table and wait 30 to 60 seconds, until audible beeps are heard from the HMRU. These beeps mean that the transmitter has been reset (calibrated) and is ready to be mounted on the offender.



If a number of transmitters are calibrated at the same time it is important to wait for the beeps to be sure that the calibration went OK. Hereafter the next transmitter can be calibrated.

Mounting of the transmitter

1. Flip a strap holder over the short strap of the Transmitter.
2. Attach the female Clip to the underside of the Transmitter's short strap. Verify that the closed end of the clip fits with the edge of the strap. Make sure the silver line is visible.
3. Wrap the Transmitter around the offenders' wrist. It is important that the Transmitter is fitting tight around the offender's wrist, but isn't squeezing.
4. In the male Clip you will find two pins. Cover the female Clip with the male Clip (the markings on the side of each clip has to match).
5. Ask the offender whether the Transmitter is comfortable.
6. Fasten the clip with the locking tool. Be sure to fasten all pins well. An audible clicking sound should be heard, indicating that the clip is properly closed.

DAILY OPERATING INSTRUCTIONS

In general, the installed HMRU is transparent to the user of the telephone. All incoming calls will trigger a pre-defined number of rings (system default setting is 6 times) through out the house before the HMRU picks up the call.

Incoming calls

The central computer may, from time to time, call the HMRU. Therefore, the offender may receive two types of phone calls: Regular phone calls from other people, and occasional calls from the central computer. The following is a guide to proper use.

Regular Incoming call from a person

The phone will ring up to 6 times (default), during which the call may be answered. After 6 rings (default) the unit will answer and disconnect the call.

If the offender hears a light sound on the line in the first few seconds of the conversation he/she should not be alarmed. The HMRU interacts with each incoming call for a few seconds.

During the conversation the offender might hear a short tune from the HMRU. This tune means that the HMRU needs to call the central computer. The offender should complete the conversation as soon as possible to enable the HMRU to make its call. **It is imperative** that the

offender gives up the line when the HMRU needs to call. Failure to do so will be detected and could result in a violation situation.

The central computer is calling in

When the central computer calls, after answering the phone, a sharp modem sound will be heard clearly on the other end. The offender must hang up the phone immediately.

The HMRU will go ahead and process the call even after the phone is disconnected.



The offender should not attempt to use the phone in the next 8 minutes.

If the phone is not picked up during the 6 rings (default) interval, the unit will automatically pick up the incoming call.

GENERAL RULES FOR THE OFFENDER

- Do not move the HMRU once it has been installed.
- Do not place any objects on top of the HMRU.
- Any attempt to disconnect one of the cords will be a cause for violation.
- Any attempt to open the HMRU will be a cause for violation.

The following appliances are prohibited:

- Answering Machine.
- Fax
- Fax\Modem.
- Special services, which may be available from the Telephone Company, are not allowed as they may interfere with the work of the system. In particular, if present, verify that any Call forwarding and/or Call Waiting services are disconnected while the system is in use.

Cordless Phones may be used but sometimes there is a little noise at the beginning of the call. If the noises don't disappear we recommend that the cordless telephone be disconnected.

REMOVING THE HMRU

It is recommended that officer remove the HMRU. The following steps should be followed:

1. Remove the power adapter from the wall.
2. Remove the telephone line from the wall.
3. Disconnect the offenders telephone from the socket in the back of the HMRU
4. Place the HMRU in its original package. Pack the telephone cords, and the power-cord plus adapter in the original box. For practical reasons please note to place the accessories in the original box. The HMRU serial number will be written on the front side of the box.
5. Carry the unit in its original packaging.



Sometime it is required to remove the HMRU before the defined confinement period is completed. Before disconnecting the HMRU, contact the monitoring center and request an operator to perform an HMRU “end of service”. This is essential in order to disconnect and preserve the HMRU internal backup battery.

REMOVING THE TRANSMITTER

Only an officer can do removing the Transmitter. To remove the Transmitter perform the following steps:

1. Check to see if the Clip has been tampered with.



Be aware of the following signs:

- Cracks on the clips.
- Broken pins.
- Sign of adhesive or glue.

2. Use a screwdriver to brake the disposable Clips.



Be careful not to damage or cut the strap.

3. Collect all the fragments of the Clip. Do not leave disposable items.
4. Don't forget the Strap Holder.
5. To turn off the transmitter perform the following:
 - Hold the transmitter in your hand with the 2 metal pins pointing forward.

- Hold the Electronic Key in your other hand, with the black button pointing toward the end of the strap.
- Press the Electronic Key down over the pair of metal pins with the two touch points on the Electronic Key matching the pair of metal pins on the transmitter.
- To turn the transmitter off, press the BLACK button down for one second, the red light turns steadily ON for two (2) seconds.
- If the transmitter successfully received the shut down command the red light on the Electronic Key will flash for two (2) seconds.
- Note that if the transmitter has failed to receive the shut down command the red light will turn off after the initial two (2) seconds ON.
- If the Electronic Key battery is low the red light will immediately flash for two (2) seconds, once the red button is pressed. (No command is sent to the transmitter).

TRANSMITTER CLEANING INSTRUCTIONS

The EMS-2000 Transmitter is especially designed to protect the integrity of the electronic circuits, during daily use and while it is being cleaned. A soft brush and any cleaning solution are all that is needed to clean the Transmitter.

Alcohol based solutions, Soapy water or Lysol can be used to clean the Transmitter. For additional safety and user comfort it is Recommended that after cleaning with any of the above the Transmitter be washed with clear water before it is reused.

Cleaning the Transmitter:

1. Remove the "female" clip and rubber band from the short strap. If the Storage Clip is on, remove it until you finish cleaning the Transmitter.
2. Holding it at the end of the long strap, spray the Transmitter with cleaning solution of choice (see above).
* Alternatively you can simply drop the Transmitter in same.
3. Using a piece of cloth or a paper towel, dry the outer side of the Transmitter. Lay the Transmitter on the towel with its inner side facing up. Using a soft brush or another piece of cloth/towel gently scrub the inner side of the Transmitter along the "tracks".
4. Wash the Transmitter in clear water. Dry the Transmitter using a piece of cloth/paper towel or simply let it dry.

FCC Notices

HMRU FCC Notices

The HMRU Model 500 has been tested and found to comply with the limits of 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 device generates, uses, and can radiate radio frequency energy and, if installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device 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 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.

CAUTION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

HMRU CUSTOMER INFORMATION

1. The HMRU complies with FCC part 68 Rules. On the bottom panel of this equipment is a label that contains, among other information, the FCC Number and Ringer Equivalence Number (REN is 1.0 B).
2. If the HMRU is not operating properly it may cause harm to the telephone network and the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, you will be notified as soon as possible. Also, you will be advised of your right to file a complaint with the FCC.

3. The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.
4. If trouble is experienced with the HMRU, please contact SecurityLink from Ameritech, Tel (630) 572-1200.
5. The HMRU installation is described in the installation chapter. Connection to Telephone Company provided coin service is prohibited. Connection to party lines service is subject to state tariffs.

Transmitter FCC Notices

The Transmitter Model 500/EP complies with Part 15 of the 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.

This device has been tested and found to comply with the limits of the 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 device generates, uses and can radiate radio frequency energy and, if installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device 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 correct the interference by one or more of the following measures

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