TrolMaster

ARS-1
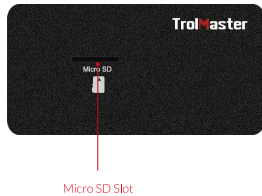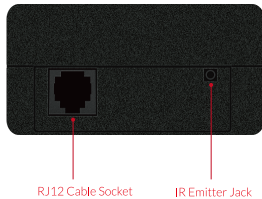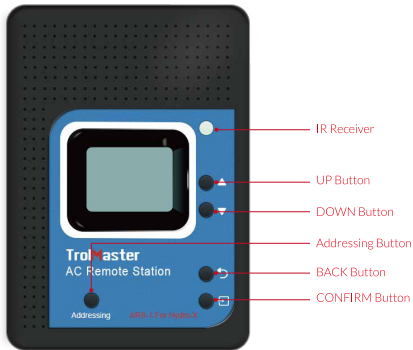### AC Remote Station

For Hydro-X Control System

Overview

Thank you for purchasing TrolMaster's ARS-1 AC Remote Station. ARS-1 offers universal remote control for any IR (infrared) remote controlled AC such as a mini-split AC system. Connecting to the Hydro-X Control System, the user can use the ARS-1 Remote Station to learn and control any remote-controlled air conditioner easily and automatically. Choose your desired temperature setpoint for the Day / Night mode (see Temperature Settings in Hydro-X's instructions), the ARS-1 will send the day / night setpoint to the remote-controlled AC based on the photocell sensor status automatically.

IR Receiver
UP Button
DOWN Button
Addressing Button
BACK Button
CONFIRM Button

RJ12 Cable Socket
IR Emitter Jack

Micro SD Slot

Features

- LED Display, Easy Operation
- Seamless Connectivity with Hydro-X
- Universal Remote Control for Mini-Split AC System
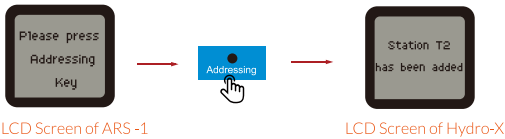- No Extra Power Needed
- Micro-SD for Firmware Update

Installation

1. Pull the 2 tabs outward to release the bracket from the unit, mount the bracket to wall or surface near the remote controlled AC.
2. Connect the ARS-1 to the Hydro-X with a RJ12 cable.
3. Connect the accessory IR Emitter to the ARS-1 unit through the jack on the top panel. Finally, fix the IR Emitter on the wall or surface and point the IR Emitter to the AC IR receiver.
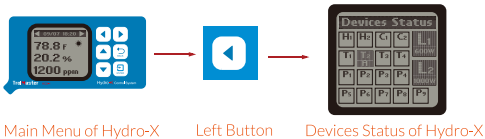
Operation Instructions

1. Address Assignment

For the first use of AC Remote Station, the LCD screen will display "Please press Addressing button key" after power-on. It indicates that the Hydro-X Control System has not assigned an address to the AC unit. Press the Addressing button for address assignment so that the Hydro-X will assign an address for the connected AC unit accordingly. The LCD screen of Hydro-X will display "Station T2 has been added". T2 is not the constant product code, it can be T1, T3, T4 - depending on the connection sequence of the temperature devices. The first one is marked as T1, the second one as T2, and so on.
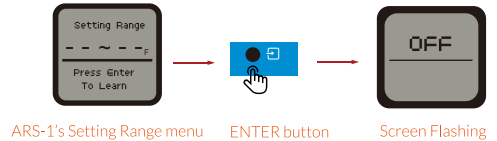

LCD Screen of ARS -1   LCD Screen of Hydro-X

You can also check on the Hydro-X as shown below:

Main Menu of Hydro-X   Left Button   Devices Status of Hydro-X

2. Remote Code Learning Process

When the ARS-1 has not yet learned your infrared remote control codes, the LCD screen will show the Setting Range page as below. The upper half part of the LCD screen will show the Setting Range as -- ~ -- F. It indicates that the ARS-1 unit has not learned the infrared remote control codes. The lower half part of the LCD screen will show "Press Enter To Learn". User can press Enter button to relearn the setting range for an AC unit.

Press the Enter button to relearn the infrared remote control codes accordingly. The upper half part of the LCD screen will display OFF and keep flashing for 2 minutes before it returns to previous menu.
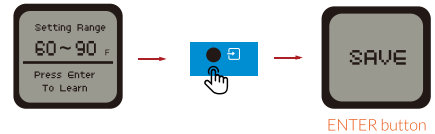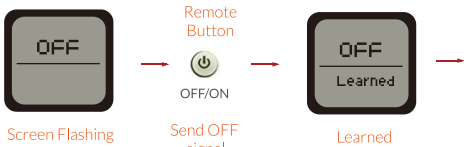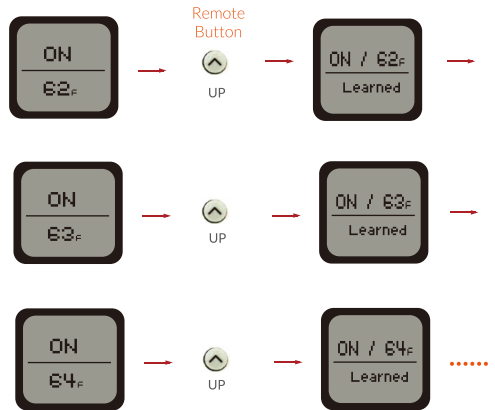

ARS-1's Setting Range menu   ENTER button   Screen Flashing

Tip : Point your remote to the IR receiver on ARS-1 during the programming process.

When the screen display "OFF" is flashing, adjust the remote setting to the ON mode, then point the remote to the IR receiver on the ARS-1, send the OFF signal by pressing the POWER button of the remote. Then the LCD screen will display "Learned", it indicates that the ARS-1 just learned the infrared remote control code of "OFF". Then the LCD screen will show the first temperature code value, the lowest temperature value (60°F or 16°C), and it keeps flashing for 2 minutes. Adjust the remote setting to the
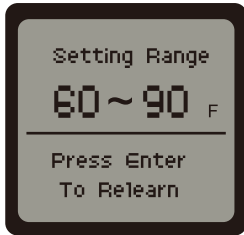
lowest temperature set-point and Off mode. Then adjust the learning set-point showed on the ARS-1 LCD to the same as the remote's lowest set-point. Point the remote to the IR receiver on the ARS-1, and send the lowest set-point signal to the IR receiver on the ARS-1.

The LCD will show "Learned" in one second.The learning set-point on the ARS-1 will be increased by 1 degree automatically during the learning process. Use the UP button on the remote to send the counter set-point signal to the IR receiver on the ARS-1. With the same procedure, the ARS-1 unit will learn the rest of the temperature code values one by one until the highest temperature value (90°F or 32°C) is reached. Finally, press ENTER button on the ARS-1 unit to confirm and save the setting range (60 - 90°F or 16 - 32°F) and the LCD screen will display "Saved". If you don't want to save the setting range, press the BACK button accordingly.

* If the ARS-1 failed to learn the Remote code during the process , the LCD will show "Error" and stay at the unlearned set-point. Adjust the remote set-point backwardly to send the same set-point signal to redo the learning process.

When the ARS-1 has already learned the infrared remote control codes, the LCD screen will show the Setting Range every time you use the ARS-1. The upper half part of the LCD screen will show the Setting Range, for example, 60 - 90 F. The lower half part of the LCD screen will show "Press Enter To Relearn". User can press ENTER button to relearn the setting range if necessary.

3. Temperature Mode – AUTO Mode

When the ARS-1 is connected to the Hydro-X and the temperature setting under AUTO mode for the Hydro-X, the LCD of ARS-1 will display the Setpoint (upper) and Current temperature (lower). Please note the current temperature is rounded up to the nearest value. When operating in Day mode, the LCD will display the Day Setpoint. When operating in Night mode, the LCD will display the Night Setpoint.

When the current temperature is beyond the setpoints, the Hydro-X will send signal (work instructions) to the ARS-1 via RJ12 cable. Then the ARS-1 will send the IR signal to the AC unit at the same time by the connected IR Emitter. When the AC unit receives the IR signal from ARS-1, it will start to work (Cooling or Heating) accordingly. When the measured temperature level reaches the Setpoint , the Hydro-X will instruct the ARS-1 to stop working accordingly.

Hydro-X's AUTO
Temperature Mode

ARS-1's Main menu

4. Temperature Mode – OFF Mode

When the ARS-1 is connected to the Hydro-X and the temperature setting is under OFF mode for the Hydro-X, the LCD will display the OFF (upper) accordingly. The Hydro-X will not control the AC unit under OFF temperature mode.

Hydro-X's OFF
Temperature Mode

ARS-1's Main menu

5. Firmware Upgrade

Press and hold "Addressing"button while replugging the RJ12 cable, the upgrade process will be done automatically.

Press&Hold

*NOTE: Make sure the file name of firmware upgrade should be named as "ars1_update.hex".

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