AUTO TRANSMIT TURBOWIN+ FUNCTIONALITY

Newest TurboWin+ 4.0 software includes an auto transmit function for marine observations when coupled with the NOAA Enhanced Manual Observing System (EMOS). Function can be turned on or off easily.

Requirements:

    64 Bit computer with Internet connectivity
    EMOS unit consisting of a Mintaka StarX and Mintaka Star
    NOAA supplied Windows USB Driver (Windows 7)
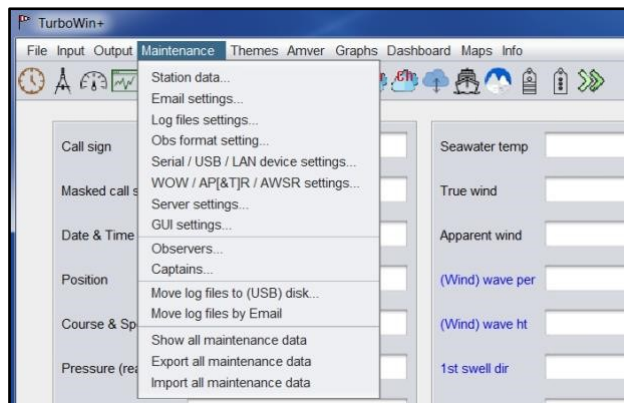   NOAA supplied TurboWin+ 4.0 software

Configuring TW+ 4.0 for auto reporting: A few changes to the TW+ setup must be made first to the following maintenance screens.   **Password is   JWS01 (is case sensitive)**

    E-Mail Settings:
    WOW and AP(&T)R and AWSR Settings:
    Serial/USB or LAN Connection Settings:

Note: TW+ 4.0 will have to be restarted for changes to take effect.

Any questions or problems please notify :   james.luciani@noaa.gov 908-271-3477
                                   chris.fakes@noaa.gov   832-703-8113

Shipboard Technologies

If you are interested in tracking your observation numbers and quality go to MeteoFrance at

        http://esurfmar.meteo.fr/vos-monitoring/info.php

Enter ships call sign and click OK to see your QC.

E-Mail Settings:

Address Receipt:	shipobs@noaa.gov
Email Subject:	Weather Observation
Gmail address:	VOSObservations@gmail.com
Gmail app password:	fmpkwgztevezptgv *(all lower case)* SSL
Log Email Receipt:	james.luciani@noaa.gov

If company prefers to transmit via SMTP, following info required.

SMTP Host:	*Company IT to provide*
Server:	*Company IT to provide*
Password:	*Company IT to provide*
Port:	*Company IT to provide*

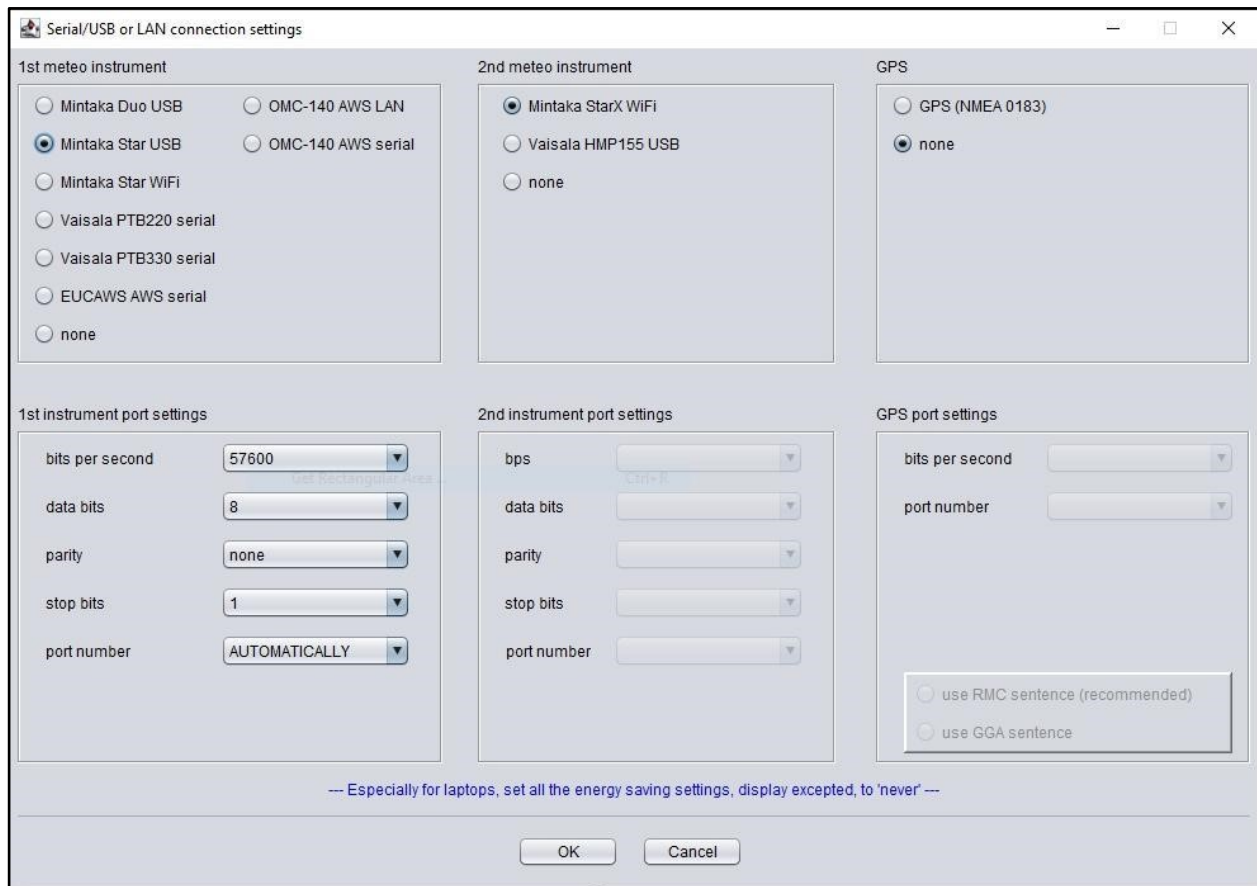**WOW and AP(&T)R and AWSR Settings:**
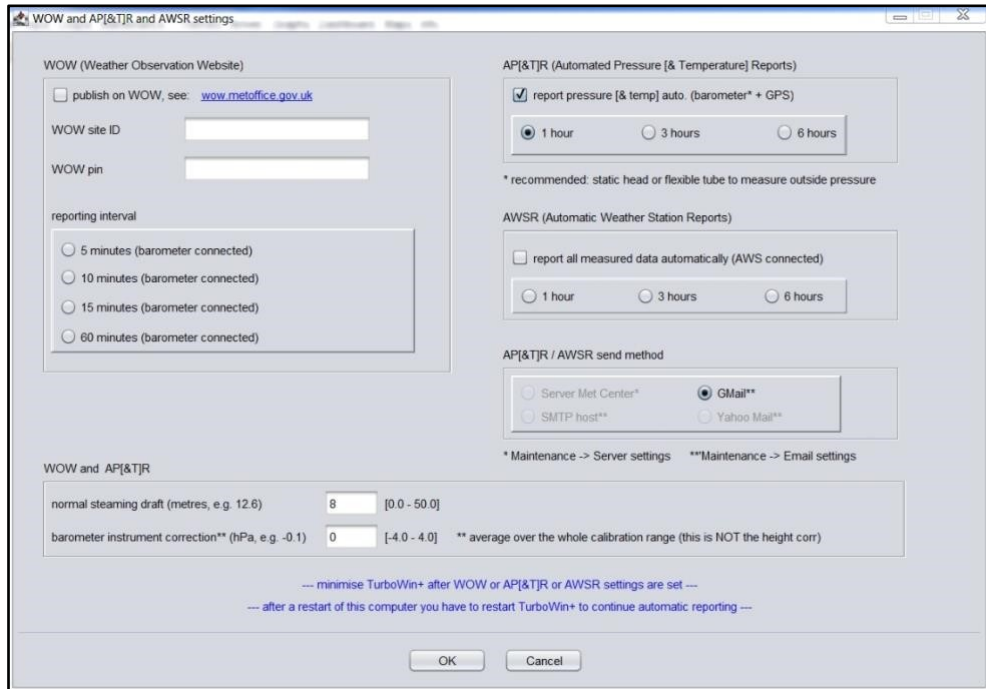
AP(&T)R (Automated Pressure & Temperature Reports):   Check
          report pressure & temp auto
          Check 1 Hour

AP(&T)R Send Method: Check Gmail or SMTP if preferred by your company

Average draught: Input average ship's draft (used to compute Sea level Pressure)

Barometer Instrument Correction: Leave blank

Serial/USB or LAN Connection Settings:
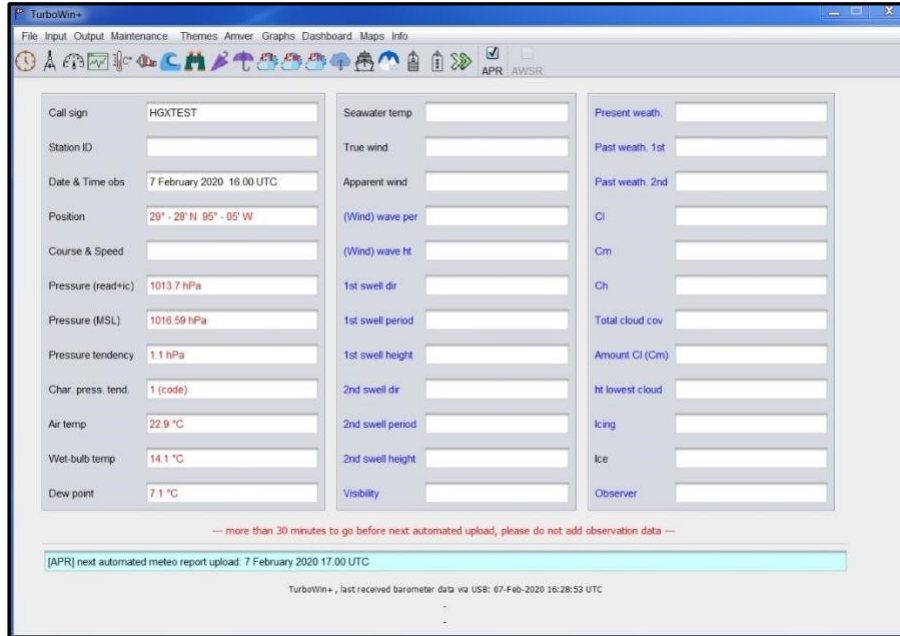
1st meteo instrument: check Mintaka Star USB
2nd meteo instrument: check Mintaka StarX

Verify Port Settings: (*for 1st instrument only*)
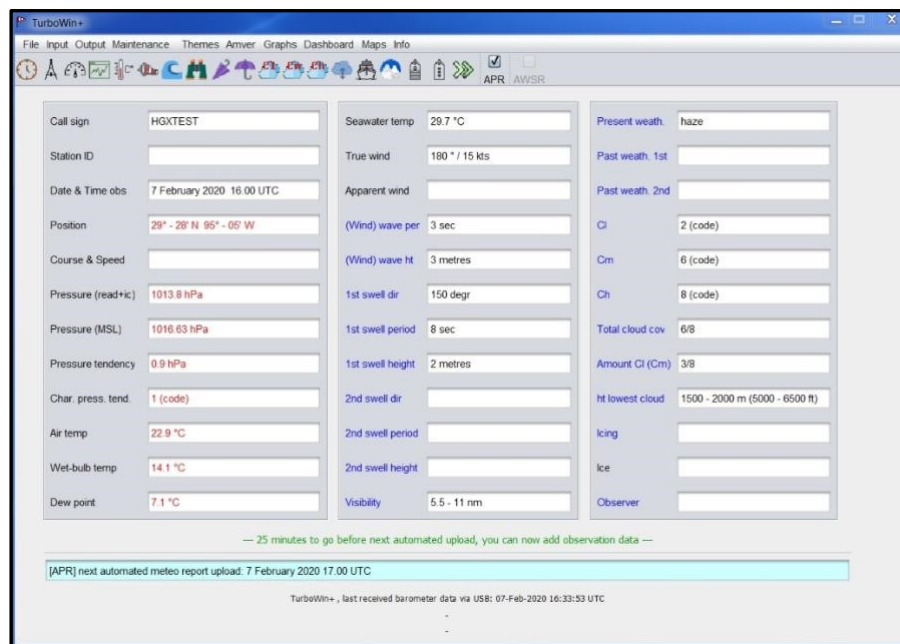
bits per second	57600
data bits	8
parity	none
stop bits	1
port number	AUTOMATICALLY

GPS: Click none
GPS Port Settings: Leave Blank

Auto Input of EMOS Data

Auto EMOS data will be displayed in Red. Updated automatically every 5 minutes.
Message will be displayed in blue shaded box indicating when next observation is to be sent.

Mates can augment the observation any time 30 minutes after the hour. Click on the weather reporting element. We ask that the Mates record a complete observations every 6 hours at 0006-12-18Z, or when they encounter seas greater than 12 ft or winds greater than 34 kts.

After observation has been transmitted, data inputs will blank out until the next StarX reporting time. To verify if the observation was sent out correctly, Mates can check the System Log under the Info Menu.
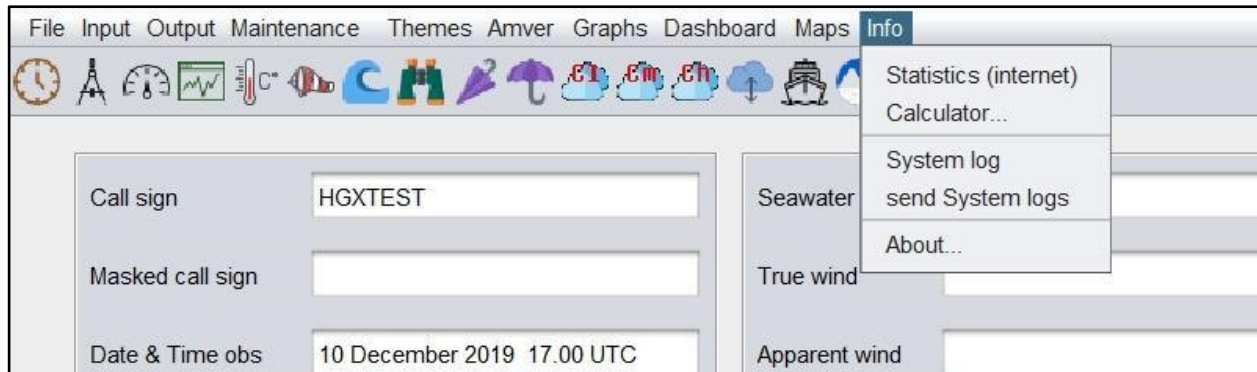
Observation sent correctly System Logs will look similar to this:

21-Nov-2019 01:00:04 UTC [APR] scheduled upload
21-Nov-2019 01:00:04 UTC [APR] air pressure at sensor height = 1014.96 hPa
21-Nov-2019 01:00:04 UTC [APR] air pressure height correction = 3.25 hPa
21-Nov-2019 01:00:04 UTC [APR] air pressure instrument correction = 0 hPa
21-Nov-2019 01:00:04 UTC [APR] air pressure MSL = 1018.21 hPa
21-Nov-2019 01:00:04 UTC [APR] pressure tendency at sensor height = 0.7 hPa
21-Nov-2019 01:00:04 UTC [APR] pressure characteristic at sensor height = 1 (code)
21-Nov-2019 01:00:04 UTC [APR] RH at sensor height = 65 %
21-Nov-2019 01:00:04 UTC [APR] dew-point at sensor height = 16.0 °C
21-Nov-2019 01:00:04 UTC [APR] air temp at sensor height = 22.9 °C
21-Nov-2019 01:00:04 UTC [APR] wet-bulb temp at sensor height = 18.5 °C
21-Nov-2019 01:00:04 UTC [APR] position parsing ok; GPS position (dd-mm [N/S] ddd-mm [E/W]): 29-31 N 95-03 W
21-Nov-2019 01:00:04 UTC [EMAIL] trying to send obs (body= "BBXX EMOSTEST 2101/ 99295 70950 41/// ///// 10229 20160 40182 51007 7//// 8//// 222// 0//// 2//// 80185=") to shipobs@noaa.gov cc none from EMOStest@comcast.net via SMTP_HOST_SHIP port 587 attachment none
21-Nov-2019 01:00:04 UTC [EMAIL] found: email_tbw.exe
21-Nov-2019 01:00:16 UTC [EMAIL] mail sent successfully
21-Nov-2019 01:00:16 UTC [IMMT] appended immt.log successfully

If not successfully transmitted, there will be a statement concerning why the observation was not sent.

We may request Mates email the system log during any troubleshooting. Click "send System Log" and follow directions.

Fallback Procedures:

If the Auto transmit function fails, you can easily fall back to manual transmit of observation by unchecking the APR box on the main page. In manual mode data from the StarX is inputted in TW+ 4.0 but not displayed on the main screen.

If the StarX fails, you can fall back to the Mintaka Star reports only. In the Serial/USB maintenance screen, click None for 2nd meteo instrument. Verify Port Settings. Click OK.
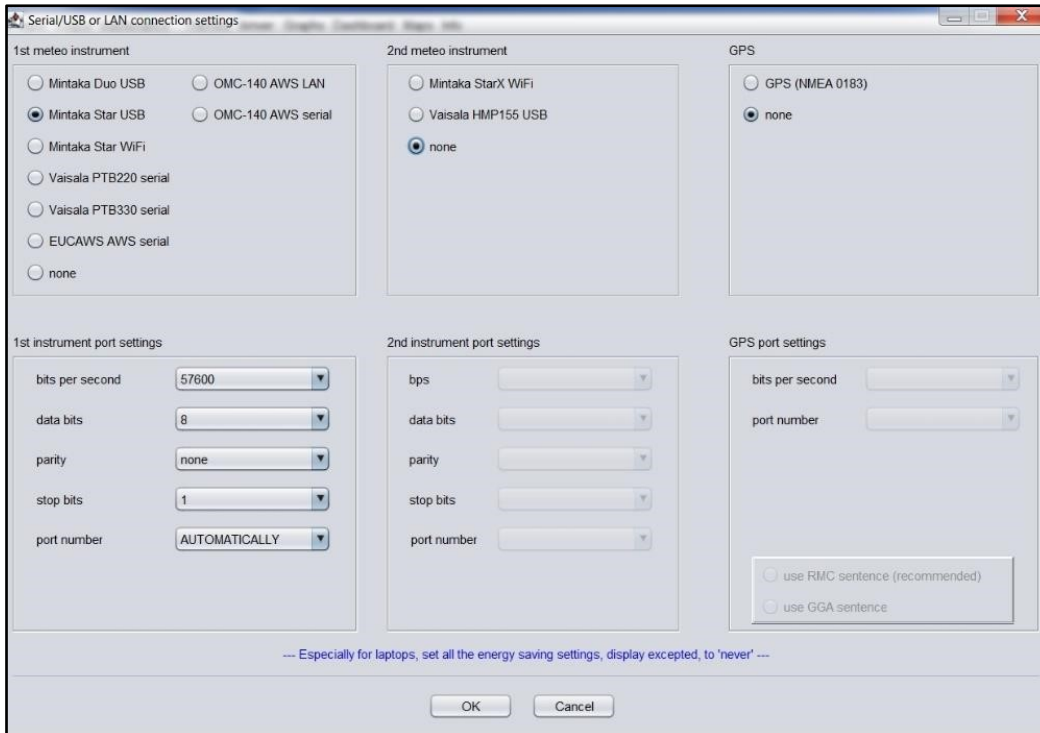
GuardX Placement (StarX Shelter)
-

Attach GuardX on bridge wing in a location with unrestricted air flow, and within 60 ft of the bridge mounted Star.•

StarX should be placed upside down in the GuardX. This is to keep water from puddling on the sensor port. •

Ensure lid is securely attached.

StarX Report Screen

•

Recommend you keep the Mintaka Star display on the StarX Report screen. Report shows all observational data, battery voltage, and the last time a report was received from the StarX.•   To get to the StarX report○   ○ Press green "EXIT" button on the Mintaka Star

Using the green "+ or −" buttons scroll down to "GPS, WiFi, StarX" and press the ○ green "SELECT" button

Using the green "+ or −" buttons scroll down to "STARX Report" and press the green "SELECT" button

•

Battery voltage should be checked occasionally on the StarX Report screen. Once voltage gets below 3.10V, you should consider changing the battery. Notify your servicing PMO when battery is changed.
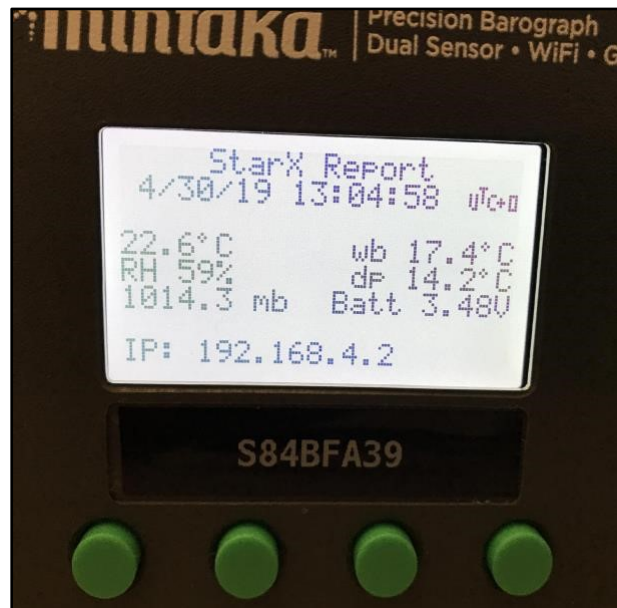
Trouble Shooting StarX

1. Data not getting into TurboWin+.●

    ● Check TW+ USB/Serial/Lan settings.

    ● Check Mintaka Star settings. Refer to manual. Baud rate is 57600.

    Unplug Mintaka Star from computer. Wait 2 minute then plug back in to reset. You should see "Creating Network" displayed. It will take up to 5 minutes before a StarX report is sent.

2. No Reports Received from Mintaka StarX

    ●
    Press "Select" button on StarX. Should see a quick double green flash.
    ● This will wake up the StarX.
    After double flash press "Select" again. Should see one green flash. ●
    This means a report was sent to the Mintaka Star.
    If no green lights are seen, replace battery.

3. Notify your PMO if StarX stops reporting.
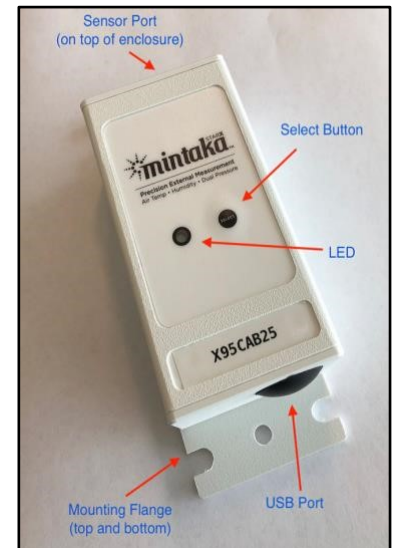
Replacing Battery *(Tadiran Batteries are the only authorized battery for the StarX, if you have any other battery please dispose of locally)*
●
    Battery should be replaced about every 6 to 9 months. ●
    On the back of the StarX, carefully remove the 6 small screws that hold the backplate in place.
●
    Remove old battery and replace. *Take care – try not to put too much pressure on the circuit board* ●
when inserting new battery.

    Press the "Select" button on front of the unit. You should see two quick green flashes. Quickly press "Select" again to send report. ●
    On the Mintaka StarX Report screen, battery voltage should be between 3.1V and 3.6V
●
    Notify your PMO when battery is replaced.
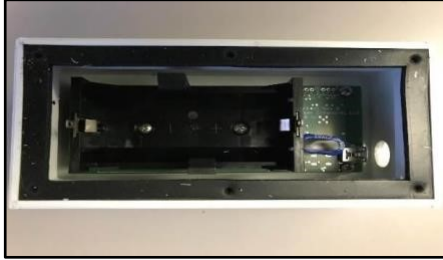
Fall-back if Mintaka StarX Stops Reporting

●
  If the StarX stops reporting and replacing the battery does not correct it, in TW+ Maintenance/Serial USB/LAN settings, under 2st meteo Instrument select "none".

●
  Verify the instrument port settings for 1st meteo instrument are correct. See *Appendix A.*

●

●
  You will have to restart TW+ for setting change to take effect.

  Falling back to the Mintaka Star will at least provide TW+ input of Ship's Lat/Long, Course/Speed, pressure and pressure tendency.

●
  Also use the RH-300 or PHT-771 Digital Psychrometer for air and wet bulb temperature readings.

●
  Notify your PMO if the Mintaka StarX stops working.