

iOptron Commander Lite Application Note

Nov. 2022

iOptron Commander Lite is a smartphone/tablet app to control an iOptron mount wirelessly. If you prefer a full function operation of the mount, please use a hand controller, iOptron Commander or planetarium software.

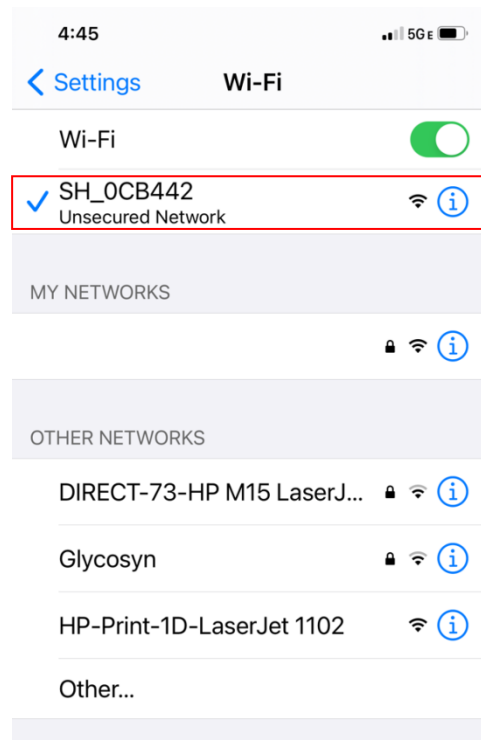
Commander Lite supports an iOptron mount using Command Language V3.0 or later with Wi-Fi capability. Currently it includes:

- (1) SkyHunter (both EQ and AA mode)
- (2) Strain Wave Gear Mount (HEM, HAE, HAZ)
- (3) CEM26
- (4) GEM28
- (5) CEM40 with iStarFi #7434
- (6) GEM45 with iStarFi #7434
- (7) CEM70 mount with built-in WiFi (CEM70G/CEM70W/CEM70WEC/CEM70WEC2)
- (8) CEM120/CEM120EC/CEM120EC2

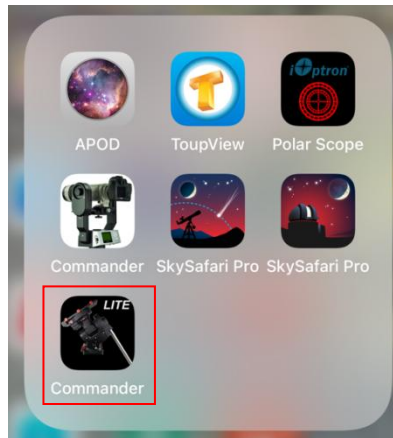
iOptron Commander Lite has two versions: iOS and Android. They can be downloaded free from iOS App Store or Google Play Store (coming soon).

Here is an example of how to use Commander Lite for a SkyHunter mount. The Menu for other mounts may be a little different.

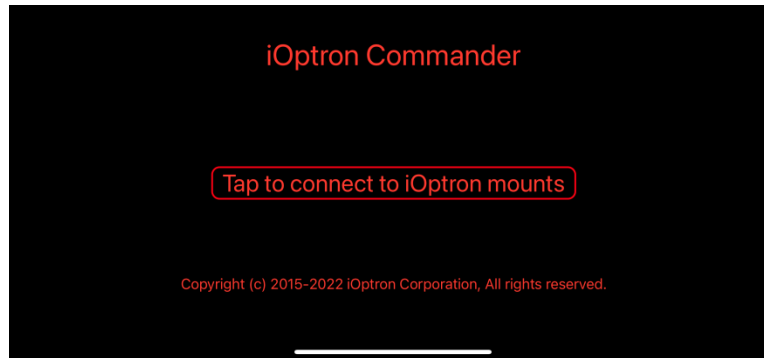
1. Power On the SkyHunter mount
2. Check your iPhone Wi-Fi network to find a network named SH_XXXXXX. Click on it to make the connection.



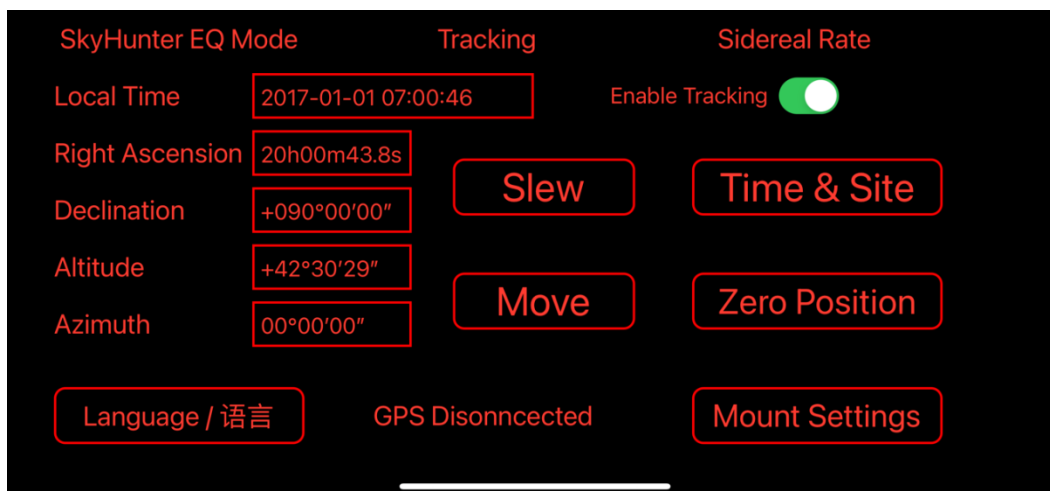
3. Find downloaded iOptron Commander Lite in your iPhone and tap it to open.



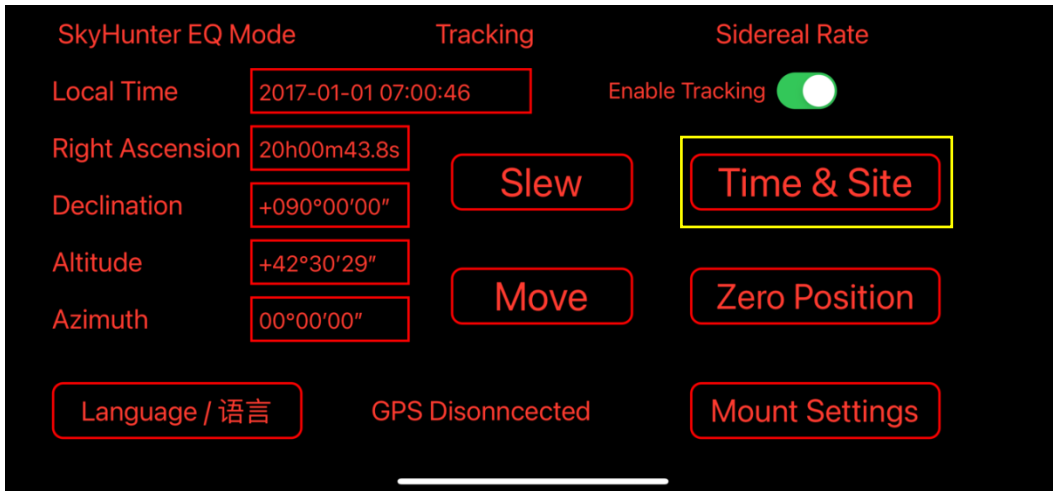
4. Tap to connect the Commander to the mount.



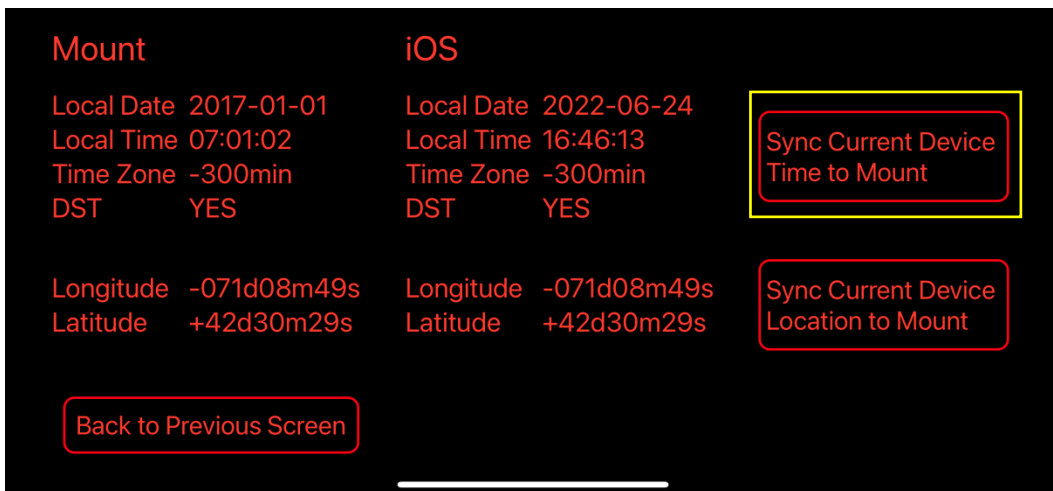
5. It will bring up the Commander Main Screen. It indicates:
 - (1) The mount is SkyHunter and is at EQ mode.
 - (2) The mount is tracking. Tap the **Enable Tracking** button can turn the tracking ON/OFF. GREEN indicated tracking is ON.
 - (3) There is no GPS
 - (4) The mount Time and Site Information may not be correct



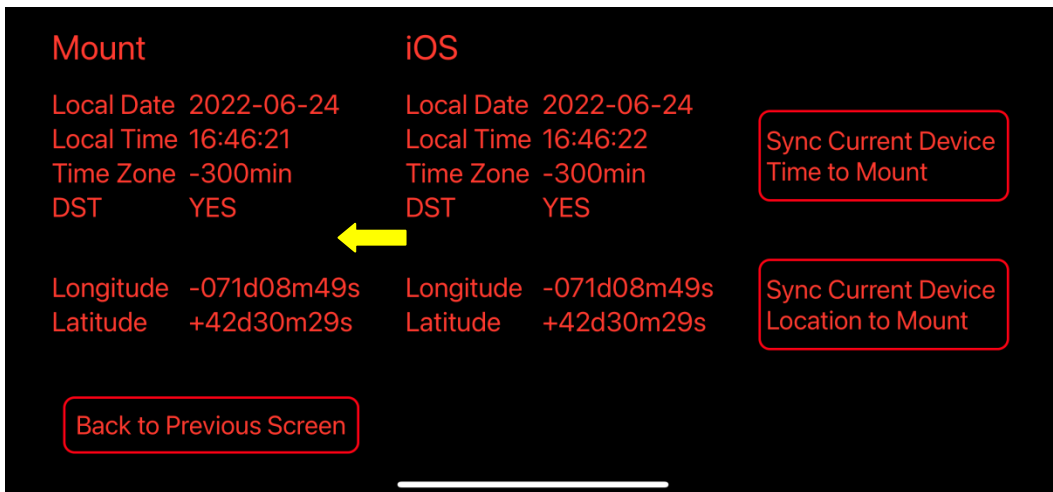
6. Tap on **Time and Site**.



Then tap on **Sync Current Device Time to Mount** and **Sync Current Device Location to Mount**.

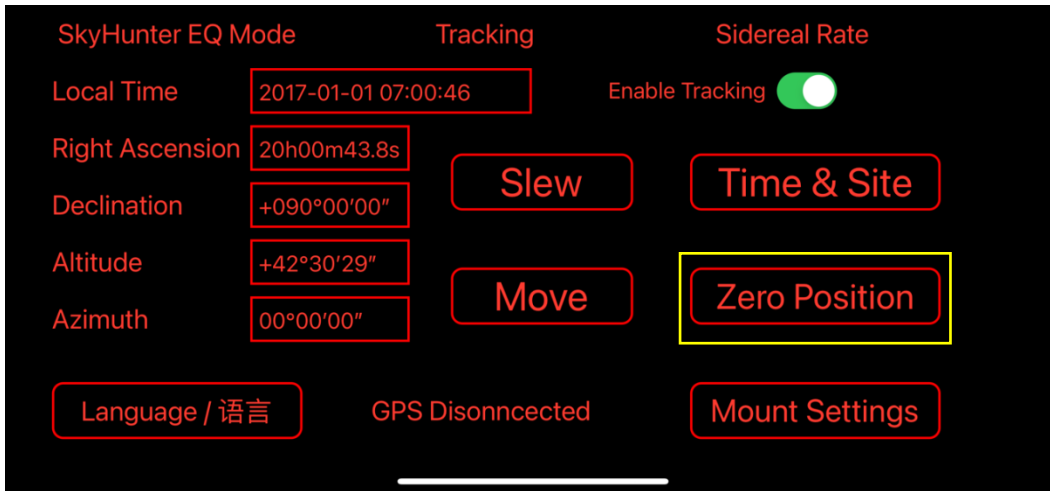


The mount will have updated Time and Site info.

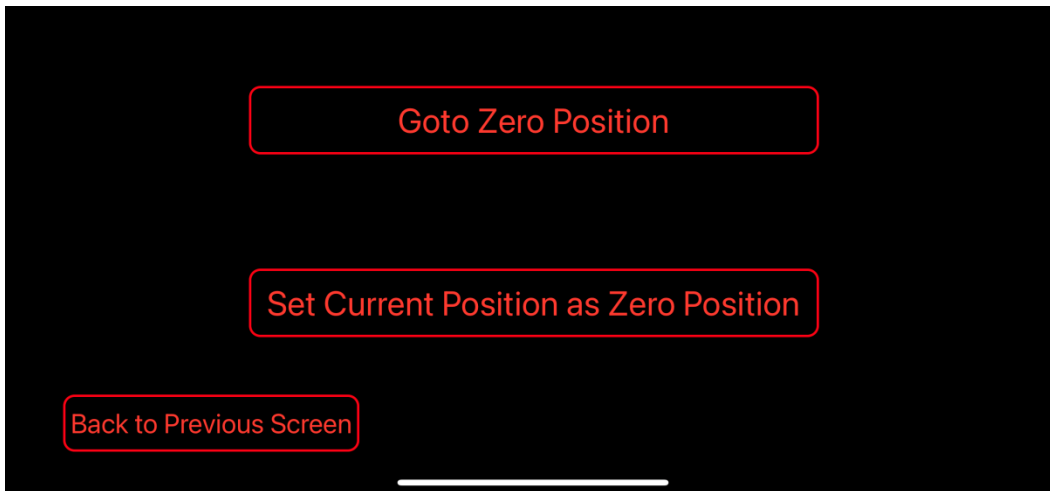


Tap on **Back to Previous Screen** to Main Screen

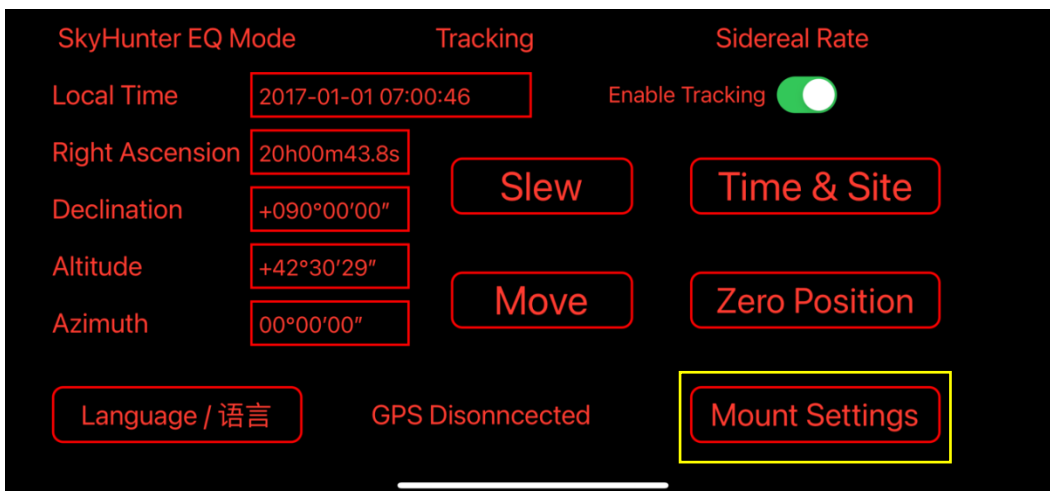
7. Next, tap on **Zero Position**.



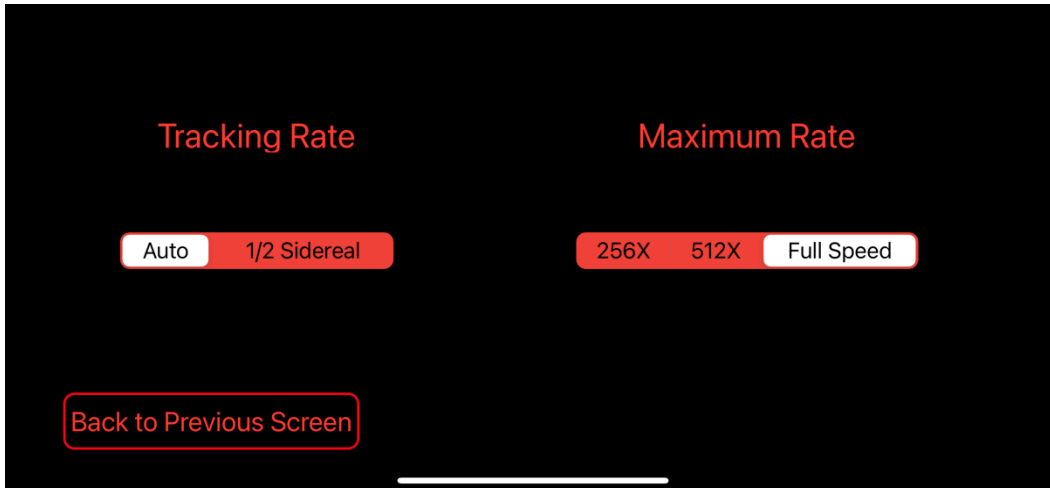
Adjust the mount to Zero Position. Then tap on **Set Current Position as Zero Position**. Back to Previous Screen.



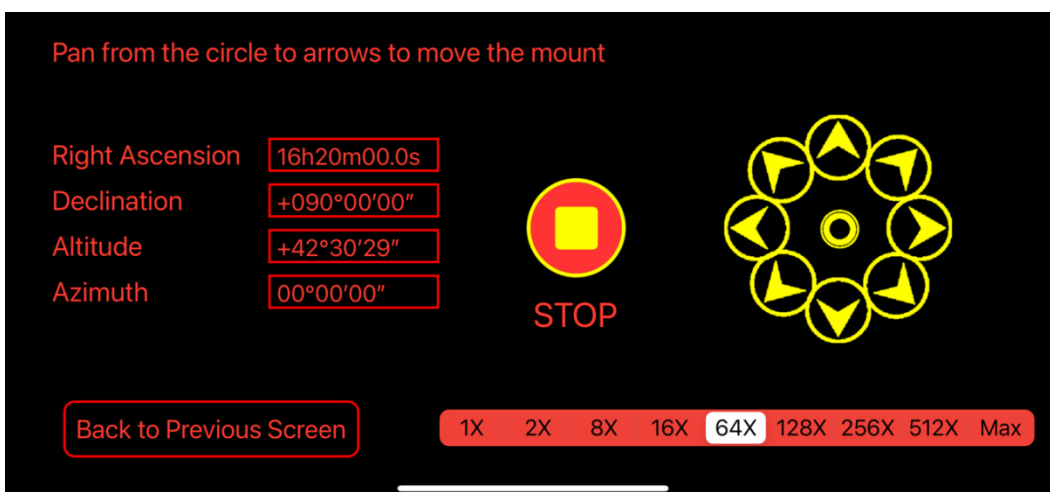
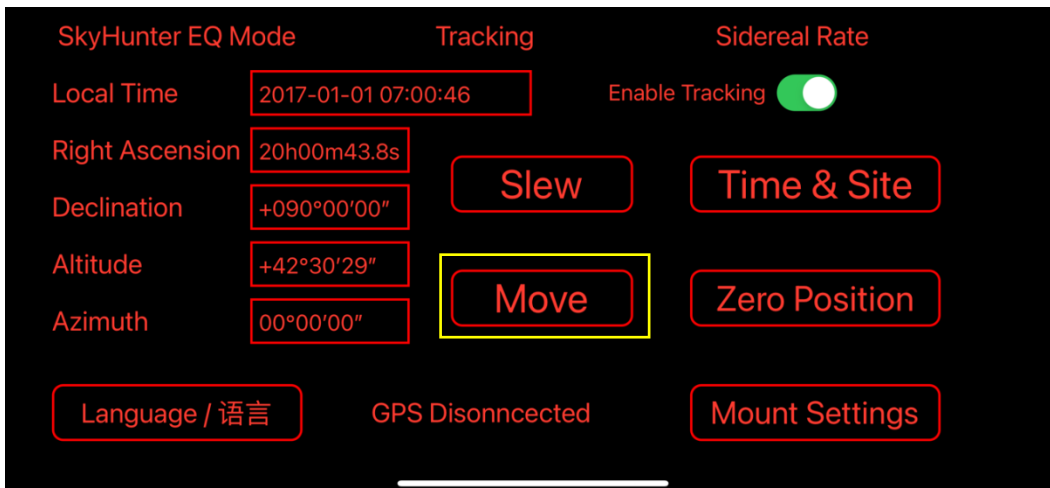
8. Tap on **Mount Settings**.



Select Tracking Rate either **Auto** for Celestial Object tracking or **1/2 Sidereal** (special tracking rate only for SkyHunter) for combined landscape and sky imaging. You can also set the mount maximum slew speed (MAX).

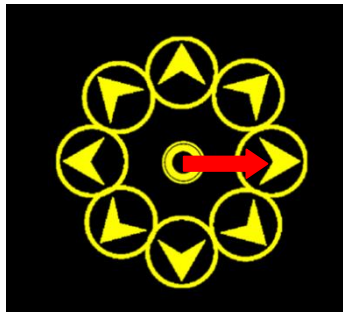


9. Tap on **Move** to bring the move submenu to move the mount manually.



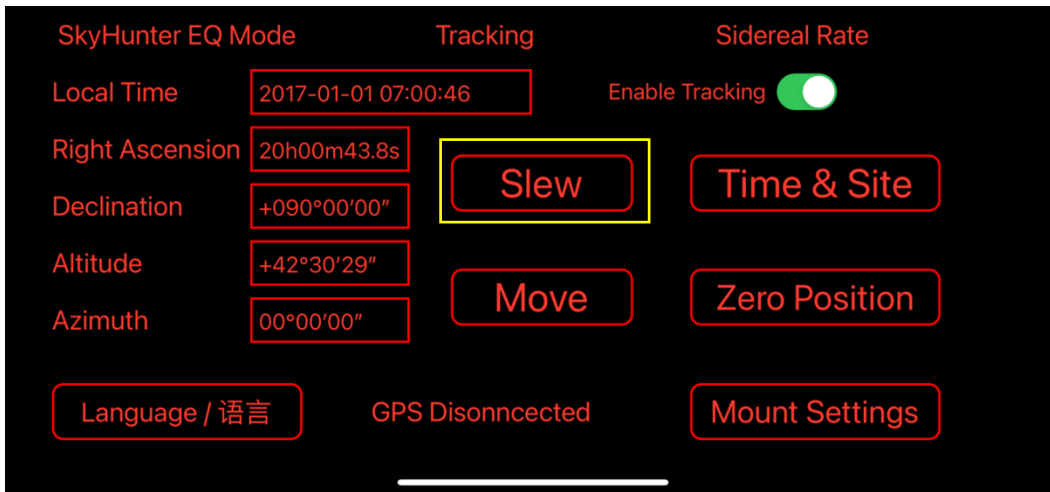
Tap on the speed bar to choose a slew speed

Put your finger on the **center circle** then **slide** to an arrow to move the mount in that direction. Four corner arrows will move the mount in both axes at the same time. Lift finger to stop the move.

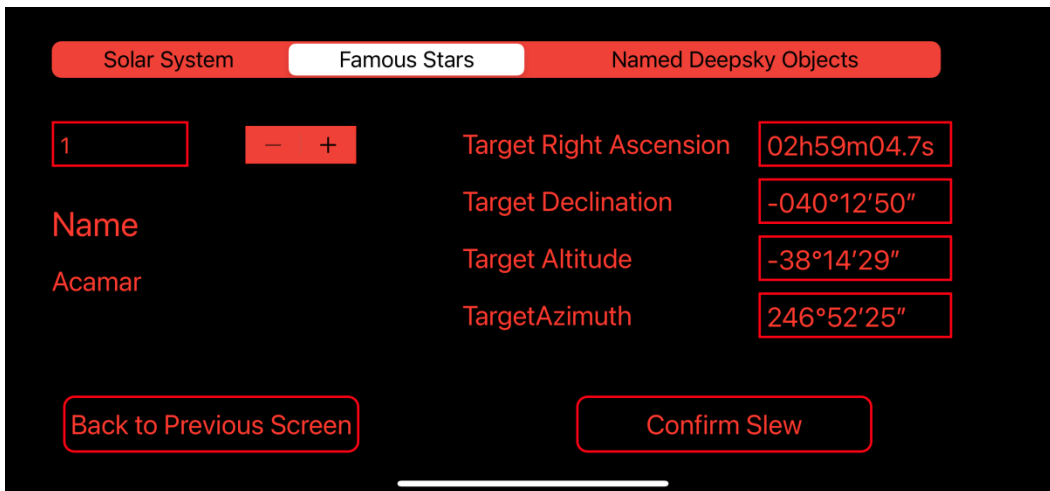


The STOP button is used for stopping the mount moving during GOTO.

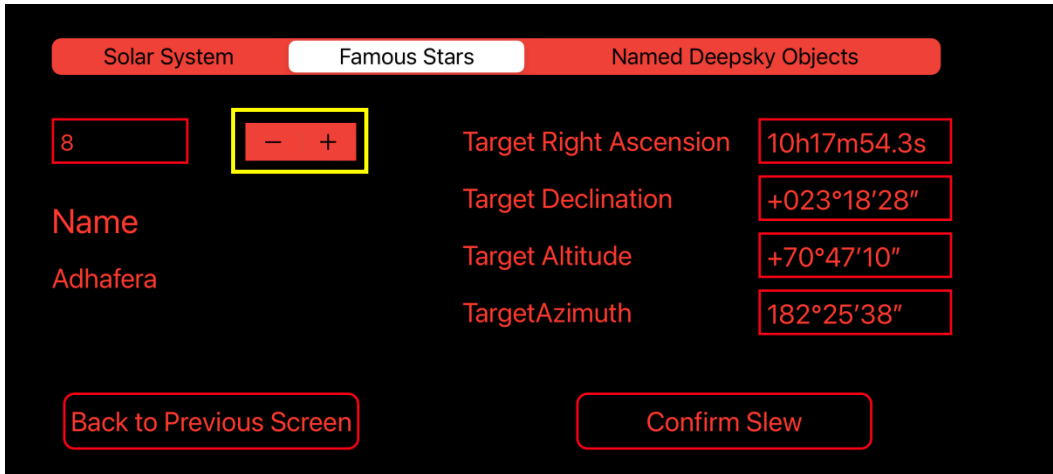
10. Tap on **Slew** button for GOTO menu.



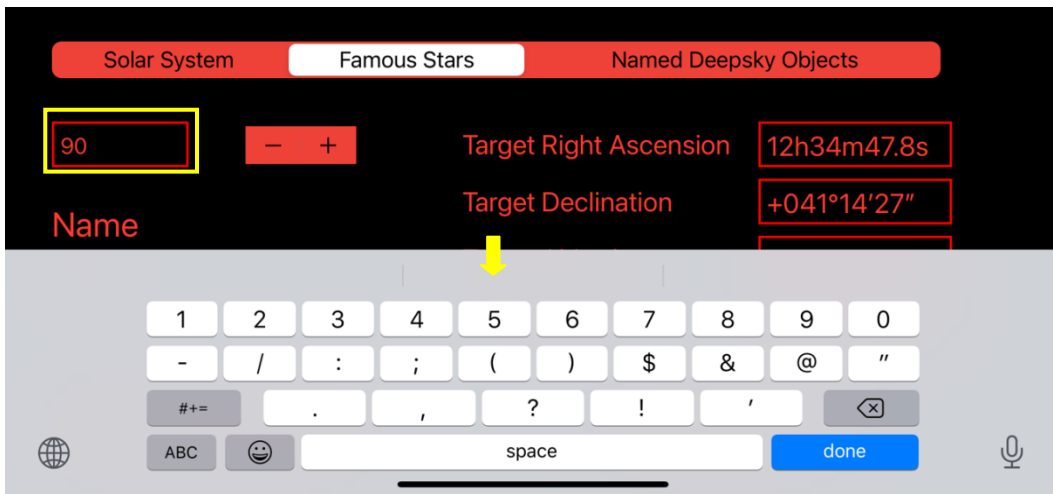
There are three catalogs, 9 Solar System 9 objects, 259 Famous Stars and 92 Named Deepsky Objects (see appendix).



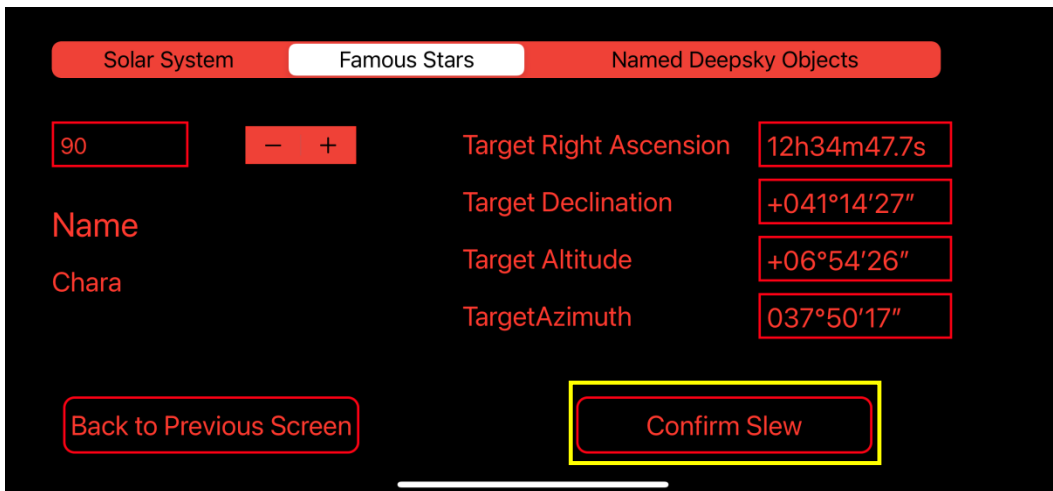
Click -/+ button to change the number.



You also can tap the number window to enter numbers. When done, slide the keypad downward to close it.

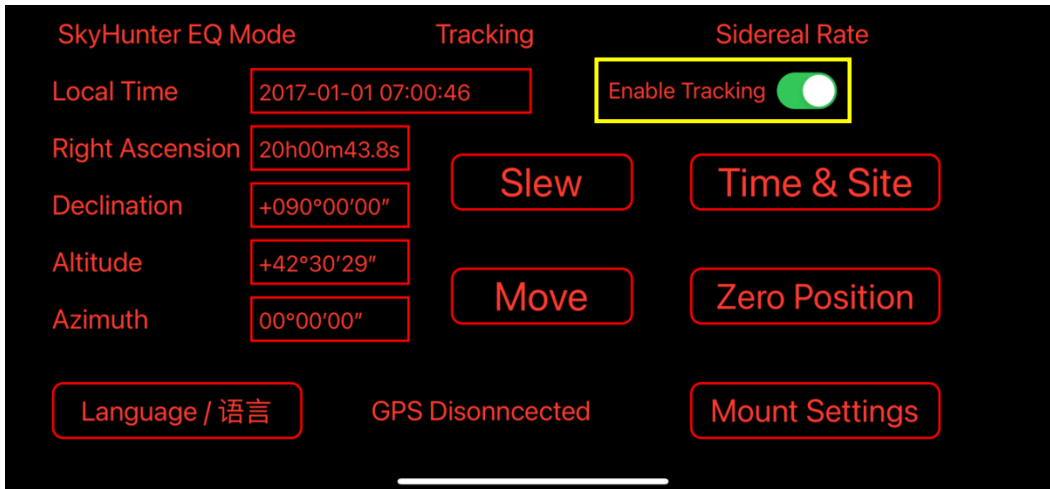


Click **Confirm Slew** to begin goto.

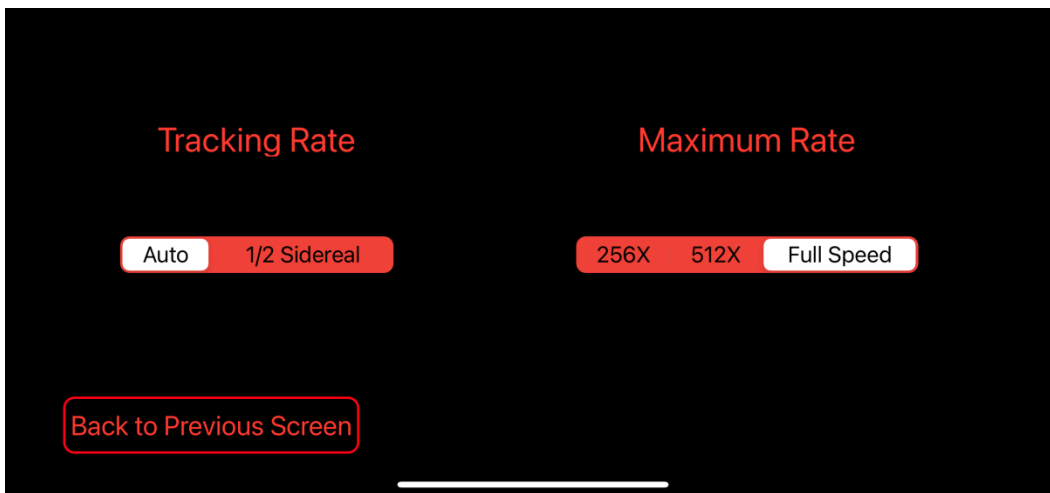


If you want to stop the goto, tap on **Back to Previous Screen => Move => STOP**

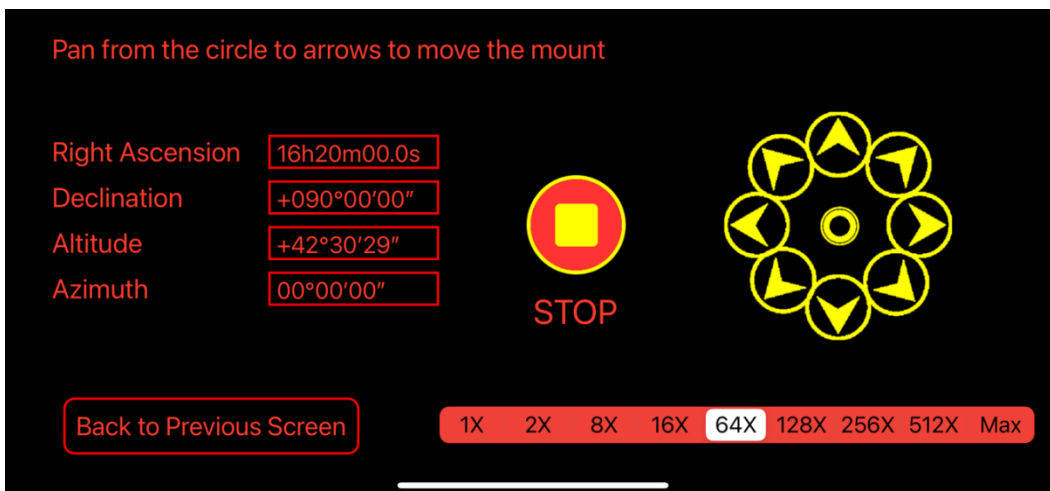
11. To manually operate a mount, make sure that **Enable Tracking** is turned on so the mount is at tracking mode.



Tap on **Mount Settings** to choose a Tracking Rate.



Tap on **Move**. Use Arrow Key to move the mount to the target.



Appendix: Star List

Famous Stars

1	Acamar	50	Alrescha	99	Deneb el Okab	148	Lalande 21185
2	Achernar	51	Alshain	100	Deneb Kaitos	149	Lesath
3	Achird	52	Altair	101	Denebakrab	150	Mahasim
4	Acrab	53	Altais	102	Denebola	151	Maia
5	Acrux A	54	Alterf	103	Dschubba	152	Marfik
6	Acrux B	55	Aludra	104	Dubhe	153	Marfikent
7	Acubens	56	Alula Australis	105	Edasich	154	Markab
8	Adhafera	57	Alula Borealis	106	El Rehla	155	Markeb
9	Adhara	58	Alya	107	Electra	156	Matar
10	Adid Australis	59	Ancha	108	Elnath	157	Mebsuta
11	Ahadi	60	Ankaa	109	Eltanin	158	Megrez
12	Al Dhanab	61	Antares	110	Enif	159	Meissa
13	Al Dhibain Prior	62	Apollyon	111	Errai	160	Mekbuda
14	Al Kab	63	Arcturus	112	Fomalhaut	161	Menkalinan
15	Al Nair	64	Arkab Prior	113	Furud	162	Menkar
16	Al Nair al Baten	65	Arneb	114	Gacrux	163	Menkent
17	Al Niyat(Sigma)	66	Ascella	115	Gatria	164	Menkib
18	Al Niyat(Tau)	67	Asellus Australis	116	Giausar	165	Merak
19	Albaldah	68	Asellus Borealis	117	Gienah Corvi	166	Merope
20	Albali	69	Aspidiske	118	Gienah Cygni	167	Mesartim
21	Albireo	70	Atik	119	Girtab	168	Miaplacidus
22	Alchiba	71	Atlas	120	Gliese 1	169	Mimosa
23	Alcor	72	Atria	121	Gomeisa	170	Mintaka
24	Alcyone	73	Avior	122	Graffias(Zeta)	171	Mira
25	Aldebaran	74	Azha	123	Groombridge 1830	172	Mirach
26	Alderamin	75	Barnard's Star	124	Gruid	173	Mirfak
27	Alfirk	76	Baten Kaitos	125	Grumium	174	Mirzam
28	Algenib	77	Beid	126	Hadar	175	Mizar
29	Algenubi	78	Bellatrix	127	Hamal	176	Mu Velorum
30	Algieba	79	Beta Hydri	128	Han	177	Muhlifain
31	Algiedi Secunda	80	Betelgeuse	129	Hatsya	178	Muphrid
32	Algol	81	Betria	130	Head of Hydrus	179	Muscida
33	Algorab	82	Biham	131	Homam	180	Naos
34	Alhakim	83	Birdun	132	Iritjinga(Cen)	181	Nashira
35	Alhena	84	Canopus	133	Izar	182	Navi
36	Alioth	85	Capella	134	Kakkab Su-gub Gud-Elim	183	Nekkar
37	Alkaid	86	Caph	135	Kapteyn's Star	184	Nihal
38	Alkalurops	87	Castor A	136	Kaus Australis	185	Nunki
39	Alkes	88	Castor B	137	Kaus Borealis	186	Nusakan
40	Almaaz	89	Cebalrai	138	Kaus Media	187	Palida
41	Almach	90	Chara	139	Keid	188	Peacock
42	Alnasi	91	Chertan	140	Kekouan	189	Phact
43	Alnilam	92	Choo	141	Kitalpha	190	Phecda
44	Alnitak	93	Cor Caroli	142	Kochab	191	Pherkad
45	Alpha Muscae	94	Cursa	143	Koo She	192	Polaris
46	Alpha Tucanae	95	Dabih	144	Kornephoros	193	Pollux
47	Alphard	96	Deltotum	145	Kraz	194	Porrina
48	Alphecca	97	Deneb	146	Kurhah	195	Procyon
49	Alpheratz	98	Deneb Algedi	147	Lacaille 9352	196	Propus

197	Proxima Centauri	213	Sadalbari	229	Sulafat	245	Vindemiatrix
198	Rasalas	214	Sadalmelik	230	Syrma	246	Vrischika
199	Rasalgethi	215	Sadalsuud	231	Talitha	247	Wasat
200	Rasalhague	216	Sadr	232	Tania Australis	248	Wazn
201	Rastaban	217	Saiph	233	Tania Borealis	249	Wei
202	Regor	218	Sargas	234	Tarazed	250	Wezen
203	Regulus	219	Scheat	235	Taygeta	251	Yed Posterior
204	Rigel	220	Schedar	236	Tejat Posterior	252	Yed Prior
205	Rigel Kentaurus A	221	Seginus	237	Thuban	253	Zaniah
206	Rigel Kentaurus B	222	Shaula	238	Thusia	254	Zaurak
207	Ruchbah	223	Sheliak	239	Tien Kwan	255	Zavijava
208	Rukbat	224	Sheratan	240	Turais	256	Zeta Persei
209	Rukh	225	Sirius	241	Unukalhai	257	Zosma
210	Rutilicus	226	Skat	242	Vasat-ul-cemre	258	Zubenelgenubi
211	Sabik	227	Spica	243	Vathorz Posterior	259	Zubeneschamali
212	Sadachbia	228	Suhail	244	Vega		

Named Deep Sky Object

1	47 Tucanae	47	Integral Sign Galaxy
2	Andromeda Galaxy	48	Iris Nebula
3	Antennae Galaxies	49	Jellyfish Nebula
4	Barnard's Galaxy	50	Jewel Box Cluster
5	Bear-Paw Galaxy	51	Lagoon Nebula
6	Beehive Cluster	52	Lambda Centauri Nebula
7	Black Eye Galaxy	53	Large Magellanic Cloud
8	Blinking Planetary	54	Leo Triplet
9	Blue Flash Nebula	55	Little Dumbbell Nebula
10	Blue Planetary	56	Little Gem Nebula
11	Blue Snowball Nebula	57	Little Ghost Nebula
12	Bode's Galaxy	58	Mice Galaxies
13	Box Nebula	59	Monkey Head Nebula
14	Bubble Nebula	60	North America Nebula
15	Bug Nebula	61	Northern Jewel Box
16	Butterfly Cluster	62	Omega Nebula
17	Butterfly Galaxies	63	Orion Nebula
18	California Nebula	64	Owl Nebula
19	Carina Nebula	65	Pacman Nebula
20	Cat's Eye Nebula	66	Pelican Nebula
21	Cave Nebula	67	Phantom Streak Nebula
22	Christmas Tree Cluster	68	Pinwheel Galaxy
23	Cigar Galaxy	69	Pleiades
24	Cocoon Nebula	70	Ring Nebula
25	Coma Pinwheel	71	Rosette Nebula
26	Copeland Septet	72	Saturn Nebula
27	Crab Nebula	73	Sextans B
28	Crescent Nebula	74	Small Magellanic Cloud
29	Draco Dwarf Galaxy	75	Sombrero Galaxy
30	Dumbbell Nebula	76	Soul Nebula
31	Eagle Nebula	77	Southern Pinwheel Galaxy
32	Eight-Burst Nebula	78	Spindle Galaxy(3115)
33	Elephant Trunk Nebula	79	Spindle Galaxy(5866)
34	Eskimo Nebula	80	Stephan's Quintet
35	Eyes Galaxies	81	Sunflower Galaxy
36	Flame Nebula	82	Tarantula Nebula
37	Flaming Star Nebula	83	The Witch Head Nebula
38	Ghost of Jupiter	84	The Wizard Nebula
39	Heart Nebula	85	Thor's Helmet
40	Helix Nebula	86	Triangulum Galaxy
41	Hercules Globular Cluster	87	Trifid Nebula
42	Hind's Variable Nebula	88	Ursa Minor Dwarf Galaxy
43	Hockey Stick Galaxies	89	Veil Nebula
44	Horsehead Nebula	90	Whale Galaxy
45	Hubble's Variable Nebula	91	Whirlpool Galaxy
46	Hyades Cluster	92	Wild Duck Cluster