1. **Definitions –** per <u>CH-01</u>.

2. **Overview –** This handbook describes Alchemy League Season 1, an Age of Empires II 1v1 Round Robin competition hosted by the Alchemy AOE Community in the first Quarter of 2024. Season 1 of Alchemy League introduces the following uncommon features, all in a never-before seen combination. Their general ideas are summarized for reference below:
   A. Participants will not face an opponent who is more than 200 elo higher than they are.
   B. Prize pool distribution among divisions is proportional to the amount of content they generate for the community, instead of pre-defining a breakdown and hoping enough people of the right elos sign up for it to make sense.
   C. Tournament elo automatically calculated from online match history based on weighted average and refactored to account for aberrant win rates.
   D. Handicap used sparingly to include extremities of the bell curve, so that no player will be turned away based on skill.
   E. Detailed guidance is provided to assure quality of custom maps used in this event. Maps deemed technically acceptable/competitive are voted on by the community for a final decision to include in the custom map pool.

   It is the Alchemy AOE Guild's hope that these features will compel further review of the details presented in the following pages.

3. **Tournament Host –** Direct questions/correspondence to TechChariot#4776 on discord.

4. **Timeline –** Table 1 below defines important milestones for Season 1 of the Alchemy League:

Start Date (YY-MM-DD)	End Date (YY-MM-DD)	Milestone(s):
~	23-11-27	Scripters Develop Potential Custom Maps for Season 1
23-11-28	23-12-16	Custom-Map Contest Submissions Evaluated & Selected
23-12-16	23-12-31	Custom-Maps Practiced, Improvements Implemented
23-12-16	24-01-02	Registration Open
24-01-03	24-03-06	Round Robin Stage Played
24-03-07	24-03-14	Semifinal Stage Played
24-03-15	24-03-22	Final Stage Played, Prizes Disbursed Within A Week

Table 1: Alchemy League Season 1 Timeline

Bill of Materials:		Alchemy AOE	HDBK-L1	Revision
CH-01	Defintions			-
CH-03	Discord Server Rules			
SPC-1	Prize Distribution, Community	Handbook, Alchemy League Season 1		
SPC-2	Calculation, Tournament Elo			
SPC-3	Elo Correction, Handicap	--------- Document Approvals ----------		Date:
SPC-4	Contest, Custom Random Maps	Prepared: TechChariot#4776		2023/10/26
SPC-5	Random Map Requirements, General	Checked: JC3#2990		2023/10/30
SPC-6	Competitivity, Random Map	Approved: BPDrej#8635		2023/11/01
		Approved: Smokey#4697		2023/11/04
		Used In:	-	
		Change Authority: N/A		Page 1 of 8

5. **Prize Earnings** – The Alchemy AOE Community places no emphasis on monetary gain, but would still like to offer prizes to attract talent and boost excitement in the League.
   A. **Total Prize Pool** – The total prize pool for Alchemy League Season 1 shall be published as a channel name in the discord server until Season 1 of Alchemy League is concluded, and estimated to end up at a few hundred USD.
   B. **Disbursement** – Eligible participants shall use the Paypal web application to receive prizes within one week of the final playoffs.
   C. **Distribution Across Divisions** – Prize pool for each division shall be calculated per SPC-1, accounting for the proportion of games generated by each. The top four tiers are eligible for monetary winnings per the following skill-bias array: $r = [8, 4, 2]$.
   D. **Distribution Within Division** – All tournament semifinalists and above shall be eligible to receive a portion of the prize money allocated to their division per section 5.C, whose breakdown is described by Table 2 below:

Status	Personal Earning of Division Prize Pool [%]	Expected Number	Total Proportion of Division Prize Pool [%]
Player(s) Who Lost the Semi-Finals	15	2	30
Player(s) Who Won the Semi-Finals but Lost in the Final	25	1	25
Player(s) Who Won the Semi-Finals and Won in the Final	45	1	45
Totals:		4	100

Table 2: Intra-Division Prize Distribution

6. **Division Elo Window** – The Alchemy AOE Community does not send players to inevitable defeat.
   A. Participants shall have 100 1v1 games minimum and win rate between 15% and 85%.
   B. Maximum difference between highest and lowest skilled players in a division shall not exceed 200 tournament-elo except as noted per 5.D.
   C. Shall be calculated from the most recent 50 1v1 games, linearly weighted per SPC-2.
   D. In the event that seeding would place fewer than 4 players in a division, then they will be given the choice to either:
      1. Compete against participants from a division below theirs, but such lower-skilled players would receive a handicap correction per SPC-3 to compensate for any tournament-elo disadvantage *beyond* 200 pts. E. G. If a division consisted of a 2.45k player, a 2.41k player, and a 2.37k player, but the next highest player was 2.15k, then handicap would be used to "raise" their tournament-elo to 2.25k, since 2.45k-2.25k = 200. Note that handicap may only be assigned in increments of 5%.
      2. Withdraw from the Alchemy League Season 1 under good terms.
   E. Match history shall be inspected to confirm the absence of anomalous behavior, such as elo-tanking, prior to calculating tournament elo or seeding any player.

7. **League Format** – Alchemy League Season 1 shall consist of a point-system Round-Robin, with the top four scoring players from each division proceeding to their own single-elimination tournament.

A. **Round-Robin** – The Round-Robin format is designed to give participants an opportunity to meet and play against others with similar skill.

1. **Subdivisions** – Subdivisions of four to eight randomly selected players within a division may be formed to mitigate the challenges of excessive scheduling. In such a case, an Alchemy League participant would not play each other player in the elo range of their subdivision, but a handful of such players, since there are too many to play in the allowed time-frame.

   a. Total scores from each subdivision shall be divided by player count, to correct for groups of different sizes.

   b. It is possible (but unlikely) to win every set and still not proceed to the division's single-elimination tournament after the Round Robin. This is the disadvantage of a simple subdivision system, but pending feedback and experience from this season of the League, the Alchemy Guild may introduce a more complex system for future events.

2. **Play-Frequency** – Each participant shall complete one set per week against a different player in their subdivision, until having played against every eligible opponent.

3. **Set-Size** – Unless otherwise noted, each set in the Round-Robin is "Play-All-Three".

4. **Maps** – The first game in the set shall be played on the "Map-of-the-Week", with subsequent maps selected from the pool by whoever lost the previous game. The "Map-of-the-Week" shall be whichever map was played the least during the previous week across all divisions. It is not possible for a map to be "Map-of-the-Week" twice. The first "Map-of-the-Week" shall be selected by the tournament host from the pool.

5. **Civilizations** – Civilizations are free-pick, no repeat within the same set. New "Mountain Royals DLC" Civilizations (Armenians & Georgians) are globally banned. The reworked Persians are also banned.

6. **Scoring** – Table 3 below provides a summary of how points are added to personal Round-Robin scores, based on results:

Set Result	Winner Score	Loser Score
3 - 0	+17	+5
2 - 1	+13	+7

Table 3: Points Awarded For Results of a Set

Note that administrative wins/losses are done on a game-by-game basis. For example, if an entire set must be forfeited, then the opponent wins 3 games, and both players gain points despite not "*earning*" them.

7. **Ties** – If all sets are complete, and a tied-score would call into question who the top four players are in the division, then tie-breaker games are needed.

   a. A Play-All-One Tiebreaker-Round-Robin on standard "Arabia" shall be played between all relevant tied players, with one point awarded to the winner of each set.

   b. The process described above shall be repeated until all relevant ties are resolved.

   c. For example, if the highest scores in a division are: [19, 17, 15, 15, 15, 15, 14, 14, etc…], then the four players with score of "15" would play six games in another Round-Robin to determine who moves on to the tournament-stage. If the scores

after this first Round-Robin were [2, 2, 1, 1], then the top two players would proceed. If they were instead [3, 1, 1, 1], then the player scoring 3 would proceed, and the remaining three players would play another Play-All-One Round-Robin to identify the final tournament player.

d. Nine Weeks are provided for the Round Robin. Assuming a maximum subdivision size of 8, each player would have 7 sets to play, and if one set is played per week, then there would be two weeks to resolve ties. If scheduling proves excessively difficult due to a large number of ties, then tournament administrators reserve the right to either ask the busiest players to step aside OR add another Best-of-Three round to the subsequent single-elimination tournament, so that the top eight scores are included, rather than top four.

e. Tie-breaker sets played in Round-Robins are not counted in the breakdown of prize according to division, per Section 4.D.

B. **Single Elimination Tournament –** A Single Elimination Tournament shall take place among winners of the Round Robin in each division.

1. **Length –** Unless extended to resolve excessive ties in the Round Robin phase, the tournament shall consist of two rounds.

2. **Set Size –** Semifinals shall be a Best of Five, and Finals a Best of Seven.

3. **Maps –** The first map shall be selected using a discard system. Starting with the lowest seed, players will take turns banning until only one map remains, and that will be the first one they play. Additional maps will be decided by whoever lost the previous game.

4. **Civilization Picks** – Civilizations shall be drafted after the starting map of the set is decided, but before any games are played, using the following Captain's Mode link: https://www.aoe2cm.net/preset/jGoJA. Note that this draft mode enables 11 civilizations per player, but the maximum number that could be needed is only 7. Also note that the reworked Persians are not an option in the draft.

8. **Custom Map Pool –** Alchemy League Season 1 is designed to give community members an opportunity to exhibit creative strategies on a custom map pool, with the following details:
   A. A total of 15 maps shall be used in the first season of Alchemy League:
      1. Five custom maps to be procured from Guild Members.
      2. Ten custom maps to be procured via Map Contest.
         a. Contest performed according to the process described in SPC-4.
         b. Contest submissions only accepted from approved sources of supply. Map makers are eligible, although not required, to participate in the League, playing competitively on their own creations.
         c. Map Contest Leader: TechChariot#4776
         d. "Originality" to be weighted at double the value of "Visual Appeal" and "Thematic Appropriateness" during final voting stage described in SPC-4.
   B. All random maps used for Alchemy League Season 1 shall meet the general requirements of SPC-5.
   C. All random maps used for Alchemy League Season 1 shall have a technical competitivity score of 100 minimum for 1v1s, as defined by SPC-6.

9. **General Rules –** The following general rules apply:
   A. **Restarts –** are allowed only if a map is bugged from one at least one of the following are true:
      1. Resources are missing, inaccessible, or at least 50% of their surface area is blocked by terrain or another resource.
      2. Starting player-controlled units are missing or trapped by terrain or resources.
      Note that per SPC-5, maps are designed to mitigate/eliminate the risk of needing restarts.
   B. **Cheating –** is forbidden. Bug exploits are considered cheating.
   C. **Laming/Tower Rushes/Town Center Drops –** All 100% allowed. Creative strategies are important to the success of the League.
   D. **Nomad Unit Entrapment –** is not allowed. Trapping an enemy unit against a forest or another resource using quick-walling before minute 5 is forbidden.

10. **Lobby Settings –** Table 4, shown below, summarizes the lobby settings required in every game played for the League:

Setting	Requirement
Data Mod	Default
Game Mode	Random Map
Map Style	Custom
Location	[A Map From The Map Pack]
Map Size	Tiny (2 Player)
AI Difficulty	Standard
Resources	Standard
Population	200
Game Speed	Normal
Reveal Map	Normal
Starting Age	Standard
Ending Age	Standard
Treaty Length	<None>
Victory	Standard
Lock Teams?	Yes
Team Together?	Yes
Team Positions?	No
Shared Exploration?	No
Lock Speed?	Yes
Allow Cheats?	No
Turbo Mode?	No
Full Tech Tree?	No
Empire Wars Mode?	No
Sudden Death Mode?	No
Regicide Mode?	No
Record Game?	Yes

Table 4: Lobby Settings for All League Games

11. **Recording Availability –** After playing in each round, recordings proving the outcome shall be uploaded to the appropriate channel in the Alchemy AOE Server before the start of the next round. There will be a channel for each Division. Although such an upload is ultimately the responsibility of whoever won the set, we would appreciate not being able to predict the winner based on who posted the results. Random save game files shall be included (and appropriately named) if not all games were required to determine the outcome –this will prevent anyone from working out the results before viewing the games.

    The following information shall also be included:
    A. Division (an extra step to confirm proper location for post)
    B. Round/Stage Designation
    C. @Player names
    D. Match Result (Use spoiler tag, sandwich between players)
    E. Names of maps that were played
    F. Game Recording Files

    A spoiler tag may be attached through use of two vertical bars at the start and end of the message:

    || this is a spoiler message ||

    For example, if TechChariot were wiped out by BPDrej in the Quarterfinals of the Division 3. Then the results could be posted by either player as follows:

    Division 3 Quarterfinals @TechChariot#4776 || 0 - 3 || @BPDrej#8635 – Map1, Map2, Map3
    TechChariot_vs_BPDrej_G1.aoe2record
    TechChariot_vs_BPDrej_G2.aoe2record
    TechChariot_vs_BPDrej_G3.aoe2record
    TechChariot_vs_BPDrej_G4.aoe2record (secretly a dummy file)
    TechChariot_vs_BPDrej_G5.aoe2record (secretly a dummy file)

12. **Accessibility –** It is important for all League participants to be able to find and communicate with each other. Registration will only be processed for persons in the Alchemy AOE Discord Server: https://discord.gg/h9DvzHBNPr.

13. **Code of Conduct –** The requirements of CH-03 apply to all activities related to Season 1 of Alchemy League, including direct messaging and in-game chat.

14. **Eligibility –** The Alchemy Guild does not exclude people on the basis of protected class or unpopular beliefs/associations, and our events are designed to unify the community around a love of Age of Empires II. Anyone is welcome to sign up for our events, as long as they:
    A. Meet the requirements of this handbook.
    B. Provide an honest estimation of their skill, and we can be confident in our ability to find them worthy opponents.

15. **Registration –** Relevant links provided below:
    A. **To Sign Up –**
       https://forms.gle/CspfR9Chzmjc2vcn8
    B. **To View Sign-ups –**
       https://docs.google.com/spreadsheets/d/1o_WdIYKkZGOO_y58112Hci4EXWvqJWgam8
       MM2ocO6Y0/edit?resourcekey#gid=1671218801

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