



Handicapping

All handicapping systems are designed to even the odds between players of different skill levels. In the Arachnid league system there are three handicapping methods. In X01 games, **Spot Points** uses the player's PPD and reduces the number of points a player has to get to win the game. In Cricket style games, **Spot Marks** reduces the amount of marks necessary to close a number. **Spot Darts** can be used for both game types. This method reduces the number of darts that the better player gets to throw.

Which is better? That is for you and your players to decide. The NDA currently uses Spot Marks and Spot Points. This document describes all of the handicapping systems available in the Arachnid League System. Not only does it explain how to set up each handicapping system but the rules and secrets behind them.

Spot Marks/Points

Spot Marks and Spot Points are used in all NDA sanctioned tournaments and leagues. They use the players' Marks Per Round (MPR) for cricket and Points Per Dart (PPD) for X01. When two or more players are on the same score their MPR/PPD's are averaged. This average is used instead of individual MPR/PPD.

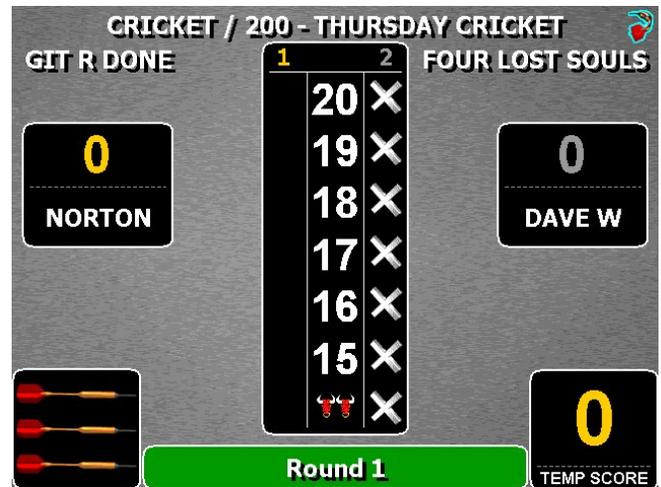
Spot Marks

Spot Marks is used only with Cricket style games. It uses the average Marks Per Round (MPR) of each player in the game. Multiple players on the same number will be averaged together to determine the "Team" MPR. The team, or player, with the lower MPR "deserves" the extra marks and will place them accordingly.

Starting marks are awarded based on a players MPR. The best player will not get any starting marks, but the rest of the players could have anywhere from one starting mark to 14 starting marks.

Using the SPOT MARK HANDICAPPING CHART, calculates the difference in MPR between the best player to the other player. Depending on the difference, it will choose column 1, 2, or 3, using the following criteria:

1. If both teams have a MPR average below 2.0, use Column 1.
2. If at least one team has a MPR of 2.0+, use Column 2
3. If both teams have a MPR of 3.0+, use Column 3.
4. In league play, average each team's MPR and use the appropriate Column.



| COLUMN 1 | COLUMN 2 | COLUMN 3 | | | | | | | |
|----------------|----------------|-----------------|-----|-----|-----|-----|-----|-----|------|
| MPR AVE. 0-1.9 | MPR AVE. 2.0+ | BOTH TEAMS 3.0+ | 20 | 19 | 18 | 17 | 16 | 15 | BULL |
| MPR DIFFERENCE | MPR DIFFERENCE | MPR DIFFERENCE | | | | | | | |
| 0.0 | 0.0 | 0.0 - 0.1 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| 0.1 | 0.1 - 0.2 | 0.2 - 0.3 | X00 | 000 | 000 | 000 | 000 | 000 | 000 |
| 0.2 | 0.3 | 0.4 - 0.5 | X00 | 000 | 000 | 000 | 000 | 000 | X00 |
| 0.3 | 0.4 - 0.5 | 0.6 - 0.7 | X00 | X00 | 000 | 000 | 000 | 000 | X00 |
| 0.4 | 0.6 | 0.8 - 0.9 | X00 | X00 | X00 | 000 | 000 | 000 | X00 |
| 0.5 | 0.7 - 0.8 | 1.0 - 1.1 | X00 | X00 | X00 | X00 | 000 | 000 | X00 |
| 0.6 | 0.9 | 1.2 - 1.3 | X00 | X00 | X00 | X00 | X00 | 000 | X00 |
| 0.7 | 1.0 - 1.1 | 1.4 - 1.5 | X00 |
| 0.8 | 1.2 | 1.6 - 1.7 | XX0 | X00 | X00 | X00 | X00 | X00 | X00 |
| 0.9 | 1.3 - 1.4 | 1.8 - 1.9 | XX0 | XX0 | X00 | X00 | X00 | X00 | X00 |
| 1.0 | 1.5 | 2.0 - 2.1 | XX0 | XX0 | XX0 | X00 | X00 | X00 | X00 |
| 1.1 | 1.6 - 1.7 | 2.2 - 2.3 | XX0 | XX0 | XX0 | XX0 | X00 | X00 | X00 |
| 1.2 | 1.8 | 2.4 - 2.5 | XX0 | XX0 | XX0 | XX0 | XX0 | X00 | X00 |
| 1.3 | 1.9 - 2.0 | 2.6 - 2.7 | XX0 | XX0 | XX0 | XX0 | XX0 | XX0 | X00 |
| 1.4+ | 2.1+ | 2.8+ | XX0 |
| Ave. - 14 Rds. | Ave. - 10 Rds. | Ave. - 8 Rds. | | | | | | | |

Cricket Spot Mark Handicapping Chart

Spot Points

Spot Points is a percentage based handicap method using a player's Points Per Dart (PPD). Using this method, each player is compared to the highest PPD in the game to determine their starting score. Players can use the NDA charts listed on the next few pages to determine starting scores, or they may calculate the starting score for each player using the following formula:

$$(\text{Current Player's Start Score}) = (\text{Normal X01 Start Score}) \times (\text{Current Player's PPD}) / (\text{Strongest Player's PPD}) + 0.5$$

Note: The Arachnid League System calculates these values automatically.



The Arachnid League System can also set up a minimum start score to be used for the weaker player's PPD. Our dartboards allow you to configure this from anywhere between 40% to 95% of the original score. The Arachnid League System automatically calculates these values using the following formula:

$$(\text{Minimum Start Score}) = (\text{Normal X01 Start Score} - 1) \times (\text{Minimum Start Percentage}) + 1$$

The best player will always start at the highest X01 score. The rest of the players could have anywhere from the minimum starting score to equal with the highest player. Multiple players on the same number will be averaged together to determine the "Team" PPD. The dartboard will then determine who "deserves" the break on points. In this case the best "Team" will start at the highest X01 starting score.

501 Spot Point Chart

GAME OF 501

HIGHER PPD

| | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 10 | 501 | 455 | 418 | 385 | 358 | 334 | 313 | 295 | 278 | 264 | 251 | 239 | 228 | 218 | 209 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | |
| 11 | 501 | 459 | 424 | 394 | 367 | 344 | 324 | 306 | 290 | 276 | 262 | 251 | 240 | 230 | 220 | 212 | 204 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 12 | 501 | 462 | 429 | 401 | 376 | 354 | 334 | 316 | 301 | 286 | 273 | 261 | 251 | 240 | 231 | 223 | 215 | 207 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 13 | 501 | 465 | 434 | 407 | 383 | 362 | 343 | 326 | 310 | 296 | 283 | 271 | 261 | 251 | 241 | 233 | 225 | 217 | 210 | 204 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 14 | 501 | 468 | 438 | 413 | 390 | 369 | 351 | 334 | 319 | 305 | 292 | 281 | 270 | 260 | 251 | 242 | 234 | 226 | 219 | 213 | 206 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 15 | 501 | 470 | 442 | 418 | 396 | 376 | 358 | 342 | 327 | 313 | 301 | 289 | 278 | 268 | 259 | 251 | 242 | 235 | 228 | 221 | 215 | 209 | 203 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 16 | 501 | 472 | 445 | 422 | 401 | 382 | 364 | 349 | 334 | 321 | 308 | 297 | 286 | 276 | 267 | 259 | 251 | 243 | 236 | 229 | 223 | 217 | 211 | 206 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 17 | 501 | 473 | 448 | 426 | 406 | 387 | 370 | 355 | 341 | 328 | 315 | 304 | 294 | 284 | 275 | 266 | 258 | 251 | 243 | 237 | 230 | 224 | 218 | 213 | 208 | 203 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| 18 | 501 | 475 | 451 | 429 | 410 | 392 | 376 | 361 | 347 | 334 | 322 | 311 | 301 | 291 | 282 | 273 | 265 | 258 | 251 | 244 | 237 | 231 | 225 | 220 | 215 | 210 | 205 | 201 | 201 | 201 | 201 | 201 | 201 |
| 19 | 501 | 476 | 453 | 433 | 414 | 397 | 381 | 366 | 353 | 340 | 328 | 317 | 307 | 297 | 288 | 280 | 272 | 264 | 257 | 251 | 244 | 238 | 233 | 228 | 223 | 218 | 213 | 208 | 203 | 201 | 201 | 201 | 201 |
| 20 | 501 | 477 | 455 | 436 | 418 | 401 | 385 | 371 | 358 | 346 | 334 | 323 | 313 | 304 | 295 | 286 | 278 | 271 | 264 | 257 | 251 | 245 | 239 | 233 | 227 | 221 | 215 | 210 | 205 | 201 | 201 | 201 | 201 |
| 21 | 501 | 478 | 457 | 438 | 421 | 405 | 390 | 376 | 363 | 351 | 339 | 329 | 319 | 309 | 301 | 292 | 284 | 277 | 270 | 263 | 257 | 251 | 245 | 239 | 233 | 227 | 221 | 215 | 210 | 205 | 201 | 201 | 201 |
| 22 | 501 | 479 | 459 | 441 | 424 | 408 | 394 | 380 | 367 | 356 | 344 | 334 | 324 | 315 | 306 | 298 | 290 | 283 | 276 | 270 | 264 | 258 | 252 | 246 | 240 | 234 | 228 | 222 | 216 | 210 | 204 | 201 | 201 |
| 23 | 501 | 480 | 461 | 443 | 427 | 412 | 397 | 384 | 372 | 360 | 349 | 339 | 329 | 320 | 311 | 303 | 295 | 288 | 281 | 274 | 267 | 260 | 253 | 246 | 240 | 234 | 228 | 222 | 216 | 210 | 204 | 201 | 201 |
| 24 | 501 | 481 | 462 | 445 | 429 | 415 | 401 | 388 | 376 | 364 | 354 | 344 | 334 | 325 | 316 | 308 | 301 | 294 | 287 | 280 | 273 | 266 | 259 | 252 | 245 | 238 | 231 | 224 | 217 | 210 | 204 | 201 | 201 |
| 25 | 501 | 482 | 464 | 447 | 432 | 418 | 404 | 391 | 380 | 368 | 358 | 348 | 339 | 330 | 321 | 313 | 305 | 298 | 291 | 284 | 277 | 270 | 263 | 256 | 249 | 242 | 235 | 228 | 221 | 214 | 207 | 201 | 201 |
| 26 | 501 | 482 | 465 | 449 | 434 | 420 | 407 | 395 | 383 | 372 | 362 | 352 | 343 | 334 | 326 | 318 | 310 | 302 | 294 | 286 | 278 | 270 | 262 | 254 | 246 | 238 | 230 | 222 | 214 | 206 | 201 | 201 | 201 |
| 27 | 501 | 483 | 466 | 451 | 436 | 423 | 410 | 398 | 386 | 376 | 366 | 356 | 347 | 338 | 330 | 322 | 314 | 306 | 298 | 290 | 282 | 274 | 266 | 258 | 250 | 242 | 234 | 226 | 218 | 210 | 202 | 201 | 201 |
| 28 | 501 | 484 | 468 | 453 | 438 | 425 | 413 | 401 | 390 | 379 | 369 | 360 | 351 | 342 | 333 | 324 | 315 | 306 | 297 | 288 | 279 | 270 | 261 | 252 | 243 | 234 | 225 | 216 | 207 | 201 | 201 | 201 | 201 |
| 29 | 501 | 484 | 469 | 454 | 440 | 427 | 415 | 404 | 393 | 382 | 373 | 363 | 354 | 345 | 336 | 327 | 318 | 309 | 299 | 290 | 281 | 272 | 263 | 254 | 245 | 236 | 227 | 218 | 209 | 201 | 201 | 201 | 201 |
| 30 | 501 | 485 | 470 | 455 | 442 | 429 | 418 | 406 | 396 | 385 | 376 | 367 | 358 | 349 | 340 | 331 | 322 | 313 | 304 | 295 | 286 | 277 | 268 | 259 | 250 | 241 | 232 | 223 | 214 | 205 | 201 | 201 | 201 |
| 31 | 501 | 485 | 471 | 457 | 444 | 431 | 420 | 409 | 398 | 388 | 379 | 370 | 361 | 352 | 343 | 334 | 325 | 316 | 307 | 298 | 289 | 280 | 271 | 262 | 253 | 244 | 235 | 226 | 217 | 208 | 201 | 201 | 201 |
| 32 | 501 | 486 | 472 | 458 | 445 | 433 | 422 | 411 | 401 | 391 | 382 | 373 | 364 | 355 | 346 | 337 | 328 | 319 | 310 | 301 | 292 | 283 | 274 | 265 | 256 | 247 | 238 | 229 | 220 | 211 | 202 | 201 | 201 |
| 33 | 501 | 486 | 472 | 459 | 447 | 435 | 424 | 413 | 403 | 393 | 384 | 375 | 366 | 357 | 348 | 339 | 330 | 321 | 312 | 303 | 294 | 285 | 276 | 267 | 258 | 249 | 240 | 231 | 222 | 213 | 204 | 201 | 201 |
| 34 | 501 | 487 | 473 | 460 | 448 | 437 | 426 | 415 | 405 | 395 | 386 | 377 | 368 | 359 | 350 | 341 | 332 | 323 | 314 | 305 | 296 | 287 | 278 | 269 | 260 | 251 | 242 | 233 | 224 | 215 | 206 | 201 | 201 |
| 35 | 501 | 487 | 474 | 461 | 450 | 438 | 427 | 416 | 406 | 396 | 387 | 378 | 369 | 360 | 351 | 342 | 333 | 324 | 315 | 306 | 297 | 288 | 279 | 270 | 261 | 252 | 243 | 234 | 225 | 216 | 207 | 201 | 201 |
| 36 | 501 | 487 | 475 | 462 | 451 | 440 | 429 | 418 | 408 | 398 | 389 | 380 | 371 | 362 | 353 | 344 | 335 | 326 | 317 | 308 | 299 | 290 | 281 | 272 | 263 | 254 | 245 | 236 | 227 | 218 | 209 | 201 | 201 |
| 37 | 501 | 488 | 475 | 463 | 452 | 441 | 430 | 419 | 409 | 399 | 390 | 381 | 372 | 363 | 354 | 345 | 336 | 327 | 318 | 309 | 299 | 290 | 281 | 272 | 263 | 254 | 245 | 236 | 227 | 218 | 209 | 201 | 201 |
| 38 | 501 | 488 | 476 | 464 | 453 | 442 | 431 | 420 | 410 | 400 | 391 | 382 | 373 | 364 | 355 | 346 | 337 | 328 | 319 | 310 | 301 | 292 | 283 | 274 | 265 | 256 | 247 | 238 | 229 | 220 | 211 | 202 | 201 |
| 39 | 501 | 488 | 477 | 465 | 454 | 443 | 432 | 421 | 411 | 401 | 392 | 383 | 374 | 365 | 356 | 347 | 338 | 329 | 320 | 311 | 302 | 293 | 284 | 275 | 266 | 257 | 248 | 239 | 230 | 221 | 212 | 203 | 201 |
| 40 | 501 | 488 | 478 | 466 | 455 | 444 | 433 | 422 | 412 | 402 | 393 | 384 | 375 | 366 | 357 | 348 | 339 | 330 | 321 | 312 | 303 | 294 | 285 | 276 | 267 | 258 | 249 | 240 | 231 | 222 | 213 | 204 | 201 |

LOWER PPD

FORMULA FOR PPD

HPPD = HIGHER PPD OF THE TWO

LPPD = LOWER PPD OF THE TWO

$$= \text{Max} ((501 * \text{LPPD}/\text{HPPD} + 0.5) , (500 * \text{MinPercent} + 1.0))$$

+0.5 in first term is to round to the nearest percent. MinPercent defaults to 40.

Spot Darts

The Spot Dart method is the original handicapping system created by the NDA. It was designed to give weaker players an initial starting advantage.

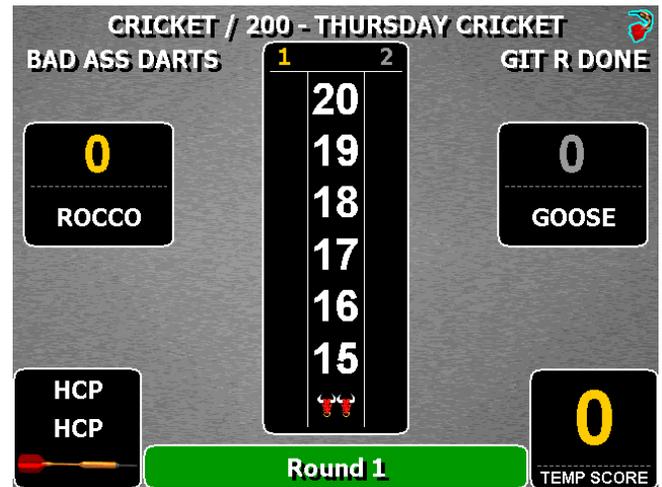
At the beginning of the game, the dartboard removes a number of darts from the better player. The number of darts taken away is determined by the weaker player's handicap. Depending on the number of spot darts allowed, it is possible that the better player may not shoot for several rounds.

Use the formula below to determine the number of darts taken away from the stronger player.

$(\text{Weaker Player's Spot Darts}) - (\text{Stronger Player's Spot Darts}) = (\text{number of darts removed from the Stronger player})$

Note: The Arachnid League System does these calculations automatically.

Within the Spot Dart method there are two ways to calculate spot darts: The **Bell Curve** - where the program calculates the partition's set points; and the **Lookup Table** - where the operator enters the partition set points. Choose which method to use during League Creation. Once finished, click on the **Handicap Setup** link under the League heading.



Definitions of Averages

Below are the various averages that can be used with any of the handicapping systems listed in this document.

Hits Per Round - The number of darts that hit active segments, divided by number of darts thrown.

Marks Per Dart - (MPD) The system for averaging the marks that a player earns each dart in a Cricket game. It is calculated by total marks earned, divided by the number of actual darts thrown.

Marks Per Round - (MPR) The system for averaging the marks that a player throws each turn in a game of Cricket. The higher the MPR, the better the player. It is calculated by taking the total marks scored divided by the actual darts thrown, then multiplying it by 3.

Points Per Dart - (PPD) The system for averaging the points that a player throws each dart in an '01 game. The higher the PPD, the better the player. It is calculated by total points scored, divided by the number of actual darts thrown.

Points Per Round Average - (PPR) The system for averaging the points that a player earns each turn in a game of X01. It is calculated by taking the total marks scored divided by the actual darts thrown, then multiplying it by 3.

Spot Darts Used - The number of Spot Darts that were actually applied to a player during a game.

Spot Points Used - The Spot Points that were actually applied to a player during a game.

Spot Round - The first or opening rounds of a spot handicapped game.

S.P.R.E.^(c) Average. The old NDA way of classifying a player's skill level. It is based upon feats achieved in 301 and Cricket games. The S.P.R.E. formulas are no longer used by the NDA. They are listed here for those that still wish to use this system.

301 S.P.R.E.^(c) Formula Example
(for 1990 thru 1992)

$$.5 (\text{Wins}) + 20 (6 \text{ Dart Outs}) + 9 (7 \text{ Dart Outs}) + 8 (8 \text{ Dart Outs}) \\ + 7 (9 \text{ Dart Outs}) + 3.5 (4\text{th Round Outs}) + 2 (\text{Low Tons}) \\ + 4 (\text{High Tons}) + 5 (\text{Hats})$$

Number Of Games Played

Cricket S.P.R.E.^(c) Formula Example
(for 1990 thru 1992)

$$.5 (\text{wins}) + .25 (\text{Assists}) + 17 (8 \text{ Dart Outs}) + 17 (9 \text{ Dart Outs}) \\ + 6.5 (\text{Whitehorses}) + 5.5 (9 \text{ Mark Rounds}) \\ + 4.5 (8 \text{ Mark Rounds}) + 3.5 (7 \text{ Mark Rounds}) \\ + 2.5 (6 \text{ Mark Rounds}) + 1.5 (5 \text{ Mark Rounds}) + 2.5 (\text{hatricks})$$

Number Of Games Played

S.S.P.R.E.^(c) Average. A system that allows the combining of Cricket, 301 and 501 stats to give a player one overall rank, instead of three separate ones. This has generally been superseded by Marks Per Round, and Points Per Dart ratings. S.S.P.R.E. uses the same weight system as S.P.R.E. Except that the weights are adjustable.

Note: The weight values listed in the formula below are the NDA standard weight values. Remember, these weight values are adjustable.

$$.5(X01 \text{ Wins}) + 20 (X01 6 \text{ Dart Outs}) + 9 (X01 7 \text{ Dart Outs}) + 8 (X01 8 \text{ Dart Outs}) \\ + 7 (X01 9 \text{ Dart Outs}) + 3.5 (X01 4\text{th Round Outs}) + 2 (\text{Low Tons}) + 4 (\text{High Tons}) + 5 (X01 \text{ Hatricks}) \\ +.5 (\text{Cricket Wins}) + .25 (\text{Assists}) + 17 (\text{Cricket } 8 \text{ Dart Outs}) + 17 (\text{Cricket } 9 \text{ Dart Outs}) + 6.5 (\text{Whitehorses}) \\ + 5.5 (9 \text{ Mark Rounds}) + 4.5 (8 \text{ Mark Rounds}) + 3.5 (7 \text{ Mark Rounds}) + 2.5 (6 \text{ Mark Rounds}) \\ + 1.5 (5 \text{ Mark Rounds}) + 2.5 (\text{Cricket Hatricks})$$

Total Games (or Total Weeks)