Jumper Course Design
Course Designers have a Responsibility Toward:

- Horses
- Riders
- Shows
- Spectators
- Sponsors
- The Sport, as a whole.
Good Course Designers

- Are good horsemen with extensive knowledge and background in the sport.
- Take the responsibilities of the job seriously.
- Have an ability to organize, set priorities, and manage details.
- Use tact and skill in working with show officials and their helpers and crew.
- Are flexible enough to cope with anything that might come up.
Course Designers must always consider:

- **Safety**, first and last.
- Producing fair and fun sport.
- Promoting horsemanship by always rewarding good training and riding.
- Presenting the sport in a beautiful and natural way.
- Directing the future of the sport.
A Course is only as Good as it is Suitable!

Every course must suit:

• The level of the event.
• The purpose of that particular class.
• The size of the arena.
• The weather conditions and the footing.
• The day’s time schedule.
Young Horse Classes

• This is where future open horses start out be sure to give them a chance for long and successful careers.
• Remember 5 year olds are Jumping’s equivalent of Baby Green Hunters; keep the courses INVITING.
• Table II and Table IV classes are meant to produce clear rounds, do not make them overly difficult.
• Measure the course generously; keep the beginning of the course and all combinations and lines simple for 5 year olds. Gradually educate 6 and 7 year olds.
• Be aware of all the specific rules for YJC classes.
Children, Adult Amateurs & Ponies

• These riders have little experience (and/or skill), but often their horses are “over-qualified”.

• Some riders, though not all, are planning to move up and are looking for preparation.

• Always avoid rewarding “reckless speed”; emphasize turns!

• Never use two stride combinations when speed counts.

• Always avoid long runs to jumps, especially at the end of the course or the jump-off!
Experienced Horses

• Consider what will be the final/most important class of the show and build toward it. Always avoid starting too strong...

• Challenge, but do not overwhelm or over-tire.

• Consider how many total efforts are being asked in II 2(b) classes.

• Keep your combination(s) from being the main source of difficulty in the course.
What is a course?
Good Courses Are Tests Of:

1. The **TRAINING LEVEL** of the horse and the rider.

2. The **COMMUNICATION** and **CO-OPERATION** between the horse and rider.

3. The horse’s degree of **BOLDNESS**, **CAREFULNESS**, and **CONCENTRATION**.

4. The **JUDGMENT** and **CONCENTRATION** of the rider.

5. The adjustability of the horse’s **STRIDE** and **BALANCE**.

6. And lastly, **SCOPE**.
Elements of a Course

• The “track”.
• Types and locations of jumps. Especially the position of combinations and “related lines”.
• Jump construction. (Solid, airy, top cups & poles).
• Distances between jumps.
• Height and width of the jumps.
• Speed and measurement for the time allowed.
• Footing, light, the in-gate, and all of the other component factors.
Parameters of a Good Course

• **Forward track**, suitable to the type of competition.
• Balance between spreads and uprights.
• Good proportion between left and right turns.
• Variety in the types of combinations used.
• Changes on the lead of approach to combinations.
• Avoid repetition of related lines (short, long, 3-4-5-6 strides, oxer-vertical, vertical-oxer).
• Noticeable differences of fence construction.
• Difficulty compatible with the level of competitors.
**Difficulty Factors**

**Obvious:**

- The height of the jumps.
- The width of the jumps.
- The distances between the jumps.
- The time allowed.
Difficulty Factors

Less Obvious:

• The track
• The types of combinations and lines
• The approaches
• The distractions
• The construction of the jumps
Difficulty Factors

Subtle:

• The fence material
• The colors and the background
• The decorations
• The length and the number of efforts
• The balance and flow of the course
Relative Degrees of Difficulty

- Poles set at back of wall, with a take off
- Poles set over centre of wall
- Poles set flush with face of wall
- Poles set over an open gate
- Just poles (can be made more difficult by spacing poles further apart or using shorter poles)

EASY TO MORE DIFFICULT
Difficulty Factors

Combinations:

- Use variety
- Do not compound the questions
- Save distance problems for special circumstances
- Watch the number of spreads
- Be careful with the approaches
Jump-Offs

Considerations:

- How many jumps?
- Balance of left and right turns
- Inside turns.
- Combinations
- “Handy vs. Galloping”
- Changing the jump dimensions / direction
- Verticals and Oxers
- Turns with Oxers
- Triple Bars
- Swedish Oxers
Think about the *Consequences*!

- How *likely* is a mistake?
- What will be the *result* of a mistake?
- Can you make the price of an error more educational and less of a punishment, *especially* for the horse?
What makes a Great Result?

• Every competitor has a *chance* to finish the course.
• No *bad* crashes.
• Every competitor up to the standard *and* without an error can produce a clear round.
• Weaknesses in training or riding mistakes produce the faults, *not* traps in the course.
• Faults are “*educational*” and not “*punishing*”.
• Many competitors have only one fault, and the faults are spread evenly around the course.
And a good Jump Off?

- Viewable and exciting for the audience
- Use of the entire field
- Balance of left and right turns
- Turns before and after jumps
- Places to gallop and make up time
- “Inside/outside” options
- Luck of the draw
Statistics

Evaluating your Jumper Course:

• Watch every horse go.
• Keep track of fences that come down.
• Look for “balanced” results.
• Note unexpected trouble spots.
Arriving at the Show

• Meet the Organizers/Manager
• Check for any schedule changes and update your time schedule
• Look at the arena(s) and check their size, footing, lighting and any irregularities
• Meet with your assistants/crew
• See if a tractor and trailer are available
• Locate and try out the copy machine
Getting to Work

• Make a detailed inventory of the material you have to work with
• Finalize your first day’s plans and make copies for the crew
• Build the course
• Confirm when everyone will arrive the next day (It is better to work the night before)
• Leave a set of the day’s plans with the TC to post
What needs to be on a Course Plan?

• Class Name and Number
• Start & Finish lines
• Fences numbered and with arrows to show direction, compulsory turning points, etc.
• Table, Speed, Length of Course, Time Allowed, Time Limit, Jump-Off information
• Indicate: Option Jumps, Closed Combinations
• Helpful items: Day, Date, In/Out gate, Show Name, Class type/height
Useful Tips

• Get a track first then add combinations, fences and distances.
• Do not forget if a fence is part of the jump-off, becomes #1 or part of a combination or moves for later classes. This can affect the material you choose.
• Learn how to make simple and easy changes to the course that will make different and more suitable courses for later classes. This takes practice and thought.
Course Plan Copies

How many?

• Keep a copy of your “Master”.
• Make enough “Clean Copies” of the plan for the judges, the in-gate, and the press or office, if requested. Keep one extra just in case!
• Prepare plans showing the adjustments and dimensions for each course change during the day; copy these for assistants and crew.
• Avoid making more copies than you need!
Building a Course

From an empty ring to ready for the first horse
“Lay Out” the Rails

- From your build sheet get the rails needed:
  - 1 for each element of every jump to be built
- Position each rail on the ground; walking the distances to get things close
- Look at the track as a whole!
- Now is the time to make any needed changes to the course!
“Frame” the Jumps

• Measure distances and spreads as you go
• Cross measure the lines and combinations so they are straight
• Put your chosen wings on the ends of the laid out poles
• Put up the top poles (at the correct height) on each jump
• Keep the wings straight.
Step One of Getting Lines Straight:
Step Two:
And, finally...
“Fill” & Decorate

• Add the correct walls, gates, ladders and fill for each fence
• Determine spacing of elements
• Add flower boxes, take-offs, etc.
• Add plants or shrubs to sides of jumps
• Check the flags and numbers
• Position the start and finish markers
“Finish” the Course

• Walk the whole course (including the jump-off) to see all the details
• Check for proper cups, and extra material
• Check for tight poles
• Use the straightest and lightest poles for the top of each jump, and re-check the heights, spreads and distances
• Measure jumper (and some equitation) courses to calculate the time allowed
• Cross off (or remove flags) from unused jumps
“Start and Finish”

Things to Keep in Mind:

• How the timer eyes work
• Moving them between classes
• Moving them for the jump-off
• Width of Start and Finish lines
• How far away from the jumps
• Straight or angled?
• Positioning the flags
“Wheeling” the Course

• You must follow the natural line of the track, i.e., the line that links one jump to another
• There is only one track for each course
• You can adjust the time, not the track
• Pay attention to the speed of the class
• Be careful of overly tight turns
• Do not be too generous with jump-off times
• Always watch the first riders in the class
• Decide with the Judge, if the T.A. is good
Building for the Second Day

Use the same basic technique, except:

• Work around the “old” jumps
• Move *only* the “lay out” poles first
• Keep extra material in the ring whenever you *may* need it later by using “dummy” jumps, islands or “winging” material to the side
• Take extra material out last of all
The Building Process Simplified

• Lay out poles in the correct locations. (This is the **MOST** important thing to get right!)
• Frame each jump, being sure all distances are measured correctly
• Fill each jump
• Decorate, flag and number the jumps
• Measure the track
• Check, double check and re-check
DISTANCES

Practical application
Tests, Problems and Related Distances

In setting tests for horses and riders, it is necessary to study:

• Distances between fences, both in and out of combination
• Factors that affect length of stride and impulsion
• How the Course Builder must understand the instinctive reaction that a horse will produce under a given set of circumstances
What “Distance Questions” test:

• The rider’s eye

• The horse’s response to the aids

• Harmony between rider and horse

• The horse’s scope
Distances Between Similar Fences

Upright to Upright

Spread to Spread
However...

• If you apply this principal to fences that are less than 3 strides apart, you will come up with a distance that may be too short. Why?
• Because the horse and rider, upon seeing fences very close together, increase their forward movement (impulsion) so as to have enough energy to jump the second and third parts of the combination.
• Therefore, you must take this into account when choosing a distance.
Similar Combinations

**Fig. 19**
Upright to upright.
AB = BC = DE = EF = 6 ft (1.80 m).

**Fig. 20**
Parallel to parallel.
AB = EF. CD is greater than EF. The horse lands further out from the first fence, so its single stride brings it closer to the second, which is the right place to take off at a parallel.
Fences that are Not Alike

• The distance from spread to upright should be longer than standard, and the distance from upright to spread shorter. Why?

• Because the take-off distance for verticals is further back than for oxers, which is further back than for triple bars. Water jumps have the shortest take-off distance of all.

• Landing distance for verticals is longer than for oxers and triple bars. Water jumps have a very short landing distance.
Jumping Arcs

**VERTICAL**
- Take-off
- Somewhat greater than the jump's height
- Landing
- Slightly greater than the jump's height

**OXER**
- Take-off
- Approximately 1 1/2" less than for a vertical of the same height
- Landing
- Less than for a corresponding height vertical, depending on the height and width of the oxer

**TRIPLE BAR**
- Take-off
- Approximately 3 1/2" less than for a vertical of the same height
- Landing
- Less than for a corresponding height vertical, depending on the height and width of the oxer

**WATER JUMP**
- Take-off
- 1" to 19"
- Landing
- 4" to 12"
Jumping Arcs

- **Vertical**: On average 6 ft 6 in. to 7 ft.
  - Based on fences 3 ft 6 in. to 4 ft 6 in. high.
  - Centre of horses arc is marked with an "X." 

- **Oxer**: On average 4 ft 6 in. to 5 ft. depending on width of oxer and if square or ascending.
  - On average 5 ft to 6 ft depending on width of oxer and if square or ascending.

- **Triple Bar**: On average 4 ft depending on the height of the front pole.
  - On average 4 ft 6 in. depending on the width and height of the front pole.
Examples:

- Spread to Upright

- Upright to Spread
# FEI Suggested Jumping Distances

Table of suggested minimum and maximum distances to be used in open combinations on level ground in normal weather conditions

| 3 Strides | from 14.30 m (47') | to 15.00 m (49') |
| 4 Strides | from 17.50 m (57'6") | to 18.60 m (61') |
| 5 Strides | from 21.50 m (70'6") | to 22.50 m (74') |
| 6 Strides | from 25.00 m (82') | to 26.00 m (85'6") |

<table>
<thead>
<tr>
<th>Distance</th>
<th>Minimum</th>
<th>Maximum</th>
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</thead>
<tbody>
<tr>
<td>7.60 - 8.00</td>
<td>24' 11&quot; - 26' 3&quot;</td>
<td>7.50 - 7.80</td>
</tr>
<tr>
<td>10.60 - 11.00</td>
<td>34' 9&quot; - 36' 1&quot;</td>
<td>10.40 - 10.70</td>
</tr>
<tr>
<td>7.60 - 7.80</td>
<td>24' 11&quot; - 25' 7&quot;</td>
<td>7.30 - 7.70</td>
</tr>
<tr>
<td>10.60 - 11.00</td>
<td>34' 9&quot; - 36' 1&quot;</td>
<td>10.40 - 10.70</td>
</tr>
<tr>
<td>7.60 - 8.00</td>
<td>24' 11&quot; - 26' 3&quot;</td>
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</tr>
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<td>34' 9&quot; - 36' 1&quot;</td>
<td>10.40 - 10.70</td>
</tr>
<tr>
<td>7.70 - 8.00</td>
<td>25' 3&quot; - 26' 3&quot;</td>
<td>7.60 - 7.80</td>
</tr>
<tr>
<td>10.70 - 11.00</td>
<td>35' 1&quot; - 36' 1&quot;</td>
<td>10.50 - 10.80</td>
</tr>
</tbody>
</table>
Remember...
Distances are influenced by:

Type of fence
- Oxer
- Vertical
- Triple Bar
- Water

Footing
- Sand or Grass
- Soft or Hard
- Slippery or “Cupping”

Slope
- Uphill
- Downhill

Direction
- Toward In-Gate
- Away from In-Gate
- And, what comes before...
# Feet to Metres Conversion Table

<table>
<thead>
<tr>
<th>Distance Feet/Metres</th>
<th>Distance Feet/Metres</th>
<th>Height/Spread Feet/Metres</th>
<th>1 Stride Feet/Metres</th>
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<td>73 = 22.25</td>
<td>2'11” = 0.90</td>
<td>23' 11” = 7.30</td>
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<tr>
<td>46 = 14.00</td>
<td>74 = 22.55</td>
<td>3' 1” = 0.95</td>
<td>24' 3” = 7.40</td>
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<td>47 = 14.30</td>
<td>75 = 22.85</td>
<td>3' 3” = 1.00</td>
<td>24' 7” = 7.50</td>
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<tr>
<td>48 = 14.60</td>
<td>76 = 23.15</td>
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<td>24' 11” = 7.60</td>
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<tr>
<td>49 = 14.90</td>
<td>77 = 23.50</td>
<td>3' 7” = 1.10</td>
<td>25' 3” = 7.70</td>
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<td>50 = 15.25</td>
<td>78 = 23.80</td>
<td>3' 9” = 1.15</td>
<td>25' 7” = 7.80</td>
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<tr>
<td>51 = 15.55</td>
<td>79 = 24.10</td>
<td>3' 11” = 1.20</td>
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<td>52 = 15.85</td>
<td>80 = 24.40</td>
<td>4' 1” = 1.25</td>
<td>26’ 3” = 8.00</td>
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<tr>
<td>53 = 16.15</td>
<td>81 = 24.70</td>
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<td>4' 9” = 1.45</td>
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<td>87 = 26.50</td>
<td>5' 3” = 1.60</td>
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<tr>
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<tr>
<td>62 = 18.90</td>
<td>90 = 27.40</td>
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<td>71 = 21.65</td>
<td>99 = 30.20</td>
<td>7’ 3” = 2.20</td>
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</tr>
<tr>
<td>72 = 21.95</td>
<td>100 = 30.50</td>
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</tr>
</tbody>
</table>

2 Strides Feet/Metres

| 34’ 5” = 10.50 |
| 34’ 9” = 10.60 |
| 35’ 1” = 10.70 |
| 35’ 5” = 10.80 |
| 35’ 9” = 10.90 |
| 36’ 1” = 11.00 |
| 36’ 5” = 11.10 |
| 36’ 9” = 11.20 |

Thank you to Richard Leslie Jeffery.
Scoring Tables

And their relevance to design
Table II Sec. 1 / Sec. 2 (a)

- Table II Sec.1 is **NOT** a speed class! It should be built the same as any other Table II course, **NOT** like a Table III course.

- Table II Sec.2 (a) gives you the opportunity to adjust the jumps for the jump-off; and does not make the horses run over 6 to 8 more jumps only 45 sec. after completing the first round.
Table II Sec. 2 (b)

• Pay attention if horses will be doing multiple classes in a day.

• Remember how much jumping is required in a short time; keep the first round shorter than in a II 2 (a) class.

• Since you cannot raise anything for the jump-off, always try to include 2 extra jumps – at jump-off height.
Table II Sec. 2 (c)

- As we use this table, it is NOT “Power and Speed”, but is actually a “Two Phase” competition: a shortened first round phase, with a jump-off second phase.
- Use a combination in each phase, but beware of having a combination too early in Phase 1, especially for inexperienced horses.
- Eight to ten efforts for the first phase and five to seven in the second is the rule – avoid having too many jumps.
This IS a speed class. It is not permitted for Young Horses. In general, avoid square oxers, short combinations and other Table II questions. These are the best classes to use permanent obstacles such as banks, grobs, dry ditches, etc. There is no longer a time allowed; only a time limit.
• This is an optimum time class, optimum time being defined as four seconds less than the allotted time allowed.

• Basically a schooling class, it should be built like a Table II course.

• As it is used here, wheel it normally and subtract four seconds for the optimum time.

• Do not worry too much about the time allowed; it will be all over the place.
Special Classes

• Read your rule book for the specifications of these classes – *every time*!

• **Gamblers Choice/Top Score**: keep material light for spreads; difficulty (including height) should vary with the value of each jump; consider the position of the start/finish line.
Miscellaneous

An assortment of good things to know
Water Obstacles

• A water obstacle is a jump which requires a horse to jump over water. A water obstacle may be used as an open water jump, a rail over a water jump or as a liverpool.
Liverpools

a) **Definition**: A Liverpool is an obstacle built with water. The water may be used under, in front of or behind an obstacle (vertical or oxer). When used in this manner, the total width of the obstacle (including the water), may not exceed 2m. A vertical jump may be built over the center of a 3m or less water (up to a 3.60m water in 1.60m classes only). The rails may not exceed 1.50m in height and must be placed in safety cups.

b) **Scoring**: In all cases only the rail is scored.
Water Jumps

- MINIMUM 4.90 m (16’) WIDE FRONT
- NOT TOO DEEP (see JP126 for details)
- COVERED WITH RUBBER MAT
- TAKE OFF BOX NO HIGHER THAN 76 cm (2’6”)
- WHITE LATH OR PLASTICINE (OVER $50,000) ON LANDING SIDE
- SHOULD BE PRESENT FOR A GRAND PRIX
Rail Over Water Jump

• A water obstacle may have one rail no higher than 1.00m (3’3”) over it. The rail must never be placed behind the center point and approximately 1/3 from the front is preferable. When the obstacle is built in this manner, extreme care must be taken not to create an optical illusion to the horse with a large gap between the take-off element and the rail, or of the lath and the rail appearing to produce a false ground line.
Natural Obstacles

Dry Ditches

Normandy Bank

Devil’s Dike /Grob
Option Fences

- Use sparingly and for a specific reason.
- An option for lower level jumpers can be a useful training aid.
- However, in higher level classes, the option fence is often used as a way encourage entries by allowing riders to avoid the desired test.
- Options in Table III classes, on the other hand, may make the class more interesting due to the risk / reward factor.
Safety Cups

• Are required on *ALL* rails of a vertical built over a water jump.
• *ONLY* for back poles of spreads (including the middle poles of triple bars.)
• FEI approved cups are essential because they come with official certification to release consistently at 140 Kg (308 lbs.) of pressure.
• A list of FEI approved cups is available via the USEF or FEI website.
DIFFERENT TYPES OF CUPS
Safety Issues

- Extra heavy equipment
- Jammed poles
- Extra poles and cups.
- Too deep cups
- Use of natural obstacles, (banks, grobs, dry ditches, etc.)
- Use of water obstacles
The USEF extends its thanks and gratitude to Linda Allen, Guilherme Jorge, Leopoldo Palacios, Richard Jeffery and Jack C. Robson, without whose contributions this presentation would not have been possible.