Edit Fields: How to use, change and select

The CTW Probe Software has a very powerful way to allow the User to have a "notes" section that is saved with each and every data collection. This feature is called the "Field Set" and using it allows you to create a page of information that is customized to your needs for information and record keeping.

These "Fields" can be thought of as a notes page where you can keep important information concerning the damper build and data collection. This information can be anything that the User wants including items like: including shock valving, piston, bleeds, customer names, type of race car, or location of that shock on the car. Multiple different Fields can be created and saved and then called out for different needs. Sometimes you need a lot of information and sometimes you just need a few items for a given test. It is all up to the User. This information is later used in the Report section after the collection is finished and can be printed out with the graphs.

We need to first learn how to create and edit our Fields to make them usable. Then we will learn how to bring them into a given Test sequence.

How to create and Edit a Field Set

User created Fields are stored as a "*.SET" file type and can be stored anywhere on the computer. Field files can be copied and pasted into multiple computers, making it easy to have the same fields layout on different computers or dynos. You can even share them with other CTW users.

The generic "demo.SET" file that is preloaded with the software is located at:

In Documents in the "CTW Automation/Tests" folder.

You can modify this file or save it as a different name. You can also have multiple files saved to create different note sections that might be specific to a particular shock or track or customer. The user can then select from these saved "*.SET" files when building a test. You should think of these as lines on a piece of paper that you are using for notes; this is just the computer language to make it happen.

To Edit, create or copy a Field file.

Below are the five basic ways to create your Field lines for entering notes. They allow you to have a wide variety of ways to enter data and notes about your shock.

Field types are:

- 1. **String** Allows one line of text.
- 2. **Multiline string** allows unlimited lines of text. Use this field to type sentences or paragraphs.
- 3. Value enter a single value by typing or with a scroll bar. In the demo 0-9.75 in/sec
- 4. **Choose** Allows the user to select from a user defined list, in the demo A, B, C, D are the options available.
- 5. Check- adds true/false

To begin creating your own, open the "demo.set" file with notepad. It will look like the image below:

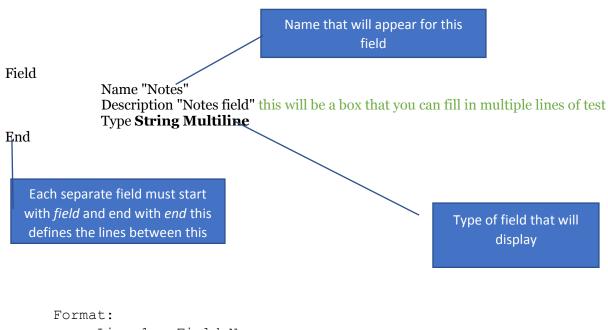
Basic field layout

| FieldS | Name | "Demo" ption "Demo field set" |
|--------|-------|--|
| | Field | Name "Notes" Description "Notes field" this will be a box that you can fill in multiple lines of test Type String Multiline |
| | End | |
| | Field | Name "SingleLine" Description "A line of text" single line will give you a single line to type text |
| | End | Type String |
| | Field | Name "Value" Description single line with a scroll arrow on the right |
| | End | Type Value in/s Min o Max 9.75 |
| | Field | Name "Choices" Description pull down list of options the user defines |
| | End | Type Choice "a", "b", "c", "d" |
| | Field | Name "Is this working" Description check box |
| End | End | Type Check |

This is what it would look like in the Probe Software:

| ield Set | Notes: | |
|----------|------------------|--|
| | SingleLine: | |
| | | Sat source of the first state of the sector of the |
| | Value: | 0.000 in/s |
| | Choices: | • |
| | Is this working: | |

Description of an individual field



Line 1 - Field Name Line 2 - Description (optional) Line 3 - Type (See below.)

Formatting of the "Type" line

Multiline String - Type String Multiline

No other entries required or allowed

String- Type String

No other entries required or allowed

Value -Type Value XXXX Min YYYY Max ZZZZ

XXXX = units of value. *YYYY* = minimum allowable value. *ZZZZ* = maximum allowable value.

Choose - Type Choice XXX, YYY,

After the word "Choice" the user builds the list of choices. Each item must be enclosed in quotes. The different items must be separated by a space.

Check – Type Check

No other entries required or allowed

Remember the "description" is only used in the .set, not visible on the create field window

User modified field file example.

| FieldSe | t | |
|---------|--------|--|
| | Name " | 'customer notes" |
| | Field | |
| | | Name "Notes" |
| | | Type String Multiline |
| | End | |
| | Field | |
| | | Name "race track" |
| | | Type String Multiline |
| | End | |
| | Field | |
| | | Name "piston" |
| | _ | Type String Multiline |
| | End | |
| | Field | |
| | | Name "bleed" |
| | - 1 | Type String |
| | End | |
| | Field | NT 1 1 1 |
| | | Name "shock length" |
| | Des J | Type Value in Min 0 Max 15 |
| | End | |
| | Field | Name "webser dation" |
| | | Name "rebound shim" Type Choice "a", "b", "c", "d", "e" |
| | End | Type Choice a, b, c, u, e |
| | Field | |
| | Field | Name "corner" |
| | | Type Choice "RF", "RR", "LF", "LR" |
| | End | Type Choice KF, KK, LF, LK |
| | Field | |
| | i iciu | Name "custom build" |
| | | Type Check |
| | End | 1)po onock |
| | | |

End

How to use the Fields within the CTW Probe Software

Below is the Test Builder page from CTW Probe software. You choose which Field Set you want in the Start Recording box. The right column has a File Folder image, click on this and select which Field Set you want for this Test.

| CTW Probe Version: 1.0.228.272 | | | | - 0 : |
|--|--|--|--|----------------|
| File Tools Analysis Views | | | | Key 🏲 👖 |
| Test Execution 👻 👎 🗙 | Test Builder Force vs. Velocity Force vs. Absolute Velocity Force vs. Displacer | $nent^\mathcal{V}Compression$ Close / Rebound Open $^\mathcal{V}$ Rebound Close / Compression Open | | ~ × |
| Shock Dyno | Shock Dyno Test Builder | | 📑 Open 📮 Save 🔻 Save | As 🖀 Clear |
| Force Temperature | Test C:\Users\MichaelK\Documents\CTW Automation\Tests\RC-D 4 speeds A.ctw | | | |
| | Commands | Test Sequence | 4 Command Parameters | |
| Abort Move To BDC Reset Zero Force | Data - | | Field Set Notes: | |
| BDC. Actuator | Read Average Constant Set Constant Ster Rod Diameter Start Recording Stop | StartRecording | × | - |
| | Move To Location | EditFields | × | |
| | Move To BDC Move To TDC Move To Zero | RodForce : Speed: 0.200 in/s | × | |
| | Sensors | TestVelocity : Speed: 1.000 in/s Wait Cycles:5 Run Cycles: 5 | × | |
| xecute Test 🔂 Load | Clear Sensors Measure Zero Force Zero Sensor | TestVelocity : Speed: 3.000 in/s Wait Cycles:8 Run Cycles: 5 | × | |
| est | Zero Stroke | TestVelocity : Speed: 5.000 in/s Wait Cycles:6 Run Cycles: 5 | × | |
| C:\Users\MichaelK\Documents\CTW Automation\Tests\RC-D | Speciman Temperature Control Temperature Temperature Timed | TestVelocity : Speed: 10.000 in/s Wait Cycles:6 Run Cycles: 6 | × | |
| 4 speeds A.ctw | Cooldown Warmup Warmup | TestVelocity : Speed: 12.000 in/s Wait Cycles:8 Run Cycles: 5 | × | |
| | Testing | StopRecording | × | |
| | Create PVP Rod Force Test Velocity | MoveToBDC : 0.250 in/s | × | |
| | User Interaction | | | |
| fest Sequence | Edit Fields Prompt Set File Name | | | |
| StartRecording | | | | |
| RodForce : Speed: 0.200 in/s | | | | |
| TestVelocity : Speed: 1.000 in/s Wait Cycles:5 Run Cycles: 5 | | | | |
| TestVelocity : Speed: 3.000 in/s Wait Cycles:8 Run Cycles: 5 | | | | |
| | | | | |
| estVelocity : Speed: 5.000 in/s Wait Cycles:6 Run Cycles: 5 | | | | |
| lestVelocity : Speed: 10.000 in/s Wait Cycles:6 Run Cycles: | | | | |
| estVelocity : Speed: 12.000 in/s Wait Cycles:8 Run Cycles: | | | | |
| topRecording | | | | |
| loveToBDC : 0.250 in/s | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Field Set Fields to use for this test, with default values. | |
| | | | rields to use for this test, with default values. | |
| splay Data Test Execution | | | | |

Then using the "Edit Fields" command, add this to your Test. It is best to add just after the "Start Recording". Then, during the Test (when the dyno is running) a window will show up on the screen for you to enter all the information that you have called out in the Field Set. This information will be saved with the data collection and will appear in the report for that collection.



Test Builder – "Edit Fields" tab

Report with no data entered, user modified fields example above

| 2.500 | | 0.18 | 0.14 | 0.13 | C |
|--------------|------------|------|------|------|---|
| Field | Value | | | | |
| bleed | | | | | |
| corner | | | | | |
| custom build | False | | | | |
| Notes | | | | | |
| piston | | | | | |
| race track | | | | | |
| rebound shim | | | | | |
| shock length | 0.00000 in | | | | |

Report with data entered from user modified example above.

| Field | Value |
|--------------|--|
| bleed | .02 |
| corner | RR |
| custom build | True |
| Notes | enter note DIRT modified 2500 LBS set up used in feature, driver said to tight |
| piston | DL penske |
| race track | Ransomville speedway 5/5/17100 lap feature |
| rebound shim | c |
| shock length | 8.00000 in |

Fields can be modified after a data file is saved. Right click on the file name in the data display column. Select "edit". File editor window allows the user to modify any field.

| | 2.500 in/s - display fiel E-display failure are | d te |
|------------------|---|------|
| | Speed 2.500 tar's | |
| File Editor | | |
| H:\display field | test.dctw: | |
| Notes: | enter note DIRT modified 2500 LBS set up used in feature, driver said to tight | |
| race track: | Ransomville speedway 5/5/17 100 lap feature | |
| piston: | DL <u>penske</u> | |
| | Copy from file Copy from most recent test Reset Okay Cancel | |