FOLD SEQUENCE
VERSION 2 & 3 ISO\textsuperscript{6}™
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SAFETY NOTICES

Safety notices are one of the primary ways to call attention to potential hazards.

This Safety Alert Symbol identifies important safety messages in this manual. When you see this symbol, carefully read the message that follows. Be alert to the possibility of personal injury or death.

⚠️ WARNING ⚠️
Use of the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION ⚠️
Use of the word CAUTION with the Safety Alert Symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠️ CAUTION ⚠️
Use of the word CAUTION without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in equipment damage.

DISCLAIMER
DICKEY-john reserves the right to make engineering refinements or procedural changes that may not be reflected in this manual. Material included in this manual is for informational purposes and is subject to change without notice.
FRAME FOLD/WORKING HYDRAULICS

There are two types of frame fold functions:

1. Standard frame fold
2. Working hydraulics

STANDARD FRAME FOLD

The frame fold function is a hydraulic control system that reconfigures the implement from a field planting configuration to a folded road transport position. A fold sequence step may use proximity sensors to verify position of a machine element.

A total of 8 “fold-step” functions are available with another 8 “working hydraulic” functions. Each function can be assigned up to 8 outputs and 8 binary inputs.

WORKING HYDRAULICS

The Working Hydraulics function is used to configure height adjustment for disc-depth control, cultivator-depth control, bout-marker control, and implement lift that is controlled via the IntelliAg ISO6. A total of 8 functions can be setup.

FRAME FOLD/WORKING HYDRAULIC DISTINCTIONS

Each folding operation is accomplished by assigning one or more outputs to a frame fold function. When a frame fold function is activated, it activates all of the outputs assigned to it.

Standard frame fold functions are only available at the Fold Sequence screen. This ensures that the implement is not in Work mode while performing folding operations.

Frame fold functions using working hydraulics are controlled from the Fold Sequence screen and at the Work screen. Only one working hydraulics function can be active at any point, the function must be inactive, and the implement must be raised in order for the user to navigate out of the Work Screen and back to the Home screen.

NOTE: A list of Feature Key software add-ons is found at the System screen and pressing the Feature Keys button.

DANGER

Do not fold implement while moving.
FRAME CONTROL OUTPUT MODULE

A Frame Control Output Module (FCOM) provides control over fold/unfold functionality as well as controlling other machine hydraulics, i.e., using an implement lift to control height for tilling operations. Each FCOM module can have up to 8 outputs and 4 inputs. Up to two modules can be installed for a total of 16 outputs and 8 inputs. A combination of frame fold and working hydraulics is acceptable as long as the total inputs and outputs do not exceed the maximum capacity of installed modules.

A solenoid driver is required if output amperage is greater than 2 Amps.

Figure 1
Frame Fold Module

HARNESSING

The Frame Control Output Module harness connects to the WSMT ISO6 T harness. An extension harness is also available to connect the two harnesses, if required.

Figure 2
Frame Control Output Module Harness
REQUIREMENTS

Fold Sequence is an optional customer add-on feature available with the IntelliAg ISO₆ system and requires the following components to operate:

- Frame Control Output Module (FCOM)
- Frame Control Output Module Sequence Harness
- Solenoid Drivers (optional)
- Proximity Sensors (optional)

A **Fold Sequence** button is found on the IntelliAg Main screen or on one of the IntelliAg Button Selection Menu screens as depicted in (Figure 3).

**NOTE:** Fold Sequence setup can only be accessed in User Level 2 Dealer or Level 3 OEM mode.

**MAIN FOLD SEQUENCE SCREEN**

The Main Fold Sequence screen is divided into Fold Steps and Working Hydraulics with a total of 16 fold operations. Up to two modules can be installed for a total of 16 outputs and 8 inputs (1 module is capable of 8 outputs and 4 inputs). A combination of frame fold and working hydraulics is acceptable as long as the total inputs and outputs do not exceed the maximum capacity of installed modules.

The 16 buttons that appear on the Main Fold Sequence Setup screen are blank until a corresponding function has outputs assigned to it at the Function Setup screen. Once frame fold and/or working hydraulic operations are assigned, each button displays a short name that was designated for that function.

At the Main Fold Sequence screen, the activated button changes background color and displays the function short name.

**To Setup Fold Sequence:**

1. At the Home screen, press the **Fold Sequence** button (Figure 3) to display the Fold Sequence screen.
   - Or press the **Next Page** button to navigate to the next screens to find the Fold Sequence button.
NAME ASSIGNMENT

Name Assignment allows for assigning names and descriptions to fold sequence and working hydraulics functions. Generic identifier names are provided and are changeable to more thoroughly define functionality.

FOLD STEP

The short name (FOLD-1) displays on the Fold Sequence screen and the Function buttons. Maximum 8 characters allowed.

The description name (FOLD FUNCTION 1) displays on the Function Setup screen. Maximum 20 characters allowed.

WORKING HYDRAULICS


The description name (Implement Lift) displays on the Function Setup screen. Maximum 20 characters allowed.

IMPORTANT: All outputs are deactivated by the system before entering the Name Assignment screen.

To Enter a Name:

1. At the Fold Sequence screen, press the Name Assign button.
2. At the Name Assign screen, press the Name input box and enter desired name, i.e. LOCK.
3. Press the Description input box and enter desired description, i.e. TRANSPORT LOCK CYL.
4. When finished adding names, press the Back button to return to the previous screen.
FUNCTION SETUP

The Function Setup screen is the setup for assigning outputs and inputs to fold sequence and working hydraulics functions.

Each fold function allows for:
• an output to be assigned to multiple functions
• an input to be assigned to multiple functions
• a fold function that can have a maximum of 8 outputs assigned
• a fold function that can have a maximum of 8 inputs assigned

IMPORTANT: All outputs are deactivated by the system before entering the Function Setup screen.

To Setup a Function:
1. At the Fold Sequence screen, press the Function Setup button.
2. At the Function Setup screen, press the Function input box and select the function from the drop down list.

Outputs:
3. Press the FCOM Address box and select the output to assign to a fold function.
4. Select the output number from the selected FCOM.
   – An FCOM module address and serial number can be found at the Module Setup screen.

Inputs:
5. Press the Input Source box and select the input source as FCOM or implement lift switch input from the IntelliAg ISO6.
   – Only FCOM modules that are online are listed in the drop-down list.
6. Press the FCOM Input # box and enter the input number of the selected FCOM. Input # is found on the harness.
   - If the input source is the Implement lift switch input, no input # is required and will be grayed out.
7. Press the Valid State box and select the input of the sensor as either Active or Inactive, i.e., the state of the sensor (normally open or normally closed).
8. Press the Pre/Post box and select if the input is a pre-condition or post condition.
   - If an input is a pre-condition, then a fold function must NOT activate its assigned outputs until all of its assigned pre-condition inputs have a valid state. Precondition inputs are typically used for safety inputs to prevent personal injury and/or mechanical damage. Pre-condition inputs MUST be in a valid state before any outputs are activate.
   - If an input is a post-condition, then a fold-function activates its assigned outputs. Post-condition inputs are typically used as feedback, i.e., proximity sensors, to communicate when a folding operation is successfully completed.

**IMPORTANT:** If Timeout is enabled and the post-conditions have not achieved valid state with the timeout period, the function will deactivate all of its outputs. Refer to Timeout Setup section.

**NOTE:** Setup of Working Hydraulics follows the same setup steps as folding functions.
TIMEOUT SETUP

Timeout is a safety feature that disables the active function and its outputs after a defined period of time. The timeout setting applies to all fold functions and does not apply to working hydraulics operations.

IMPORTANT: If a fold sequence screen is exited while an output is active, all outputs are turned off.

To Enable Fold Timeout Setup:

1. At the Fold Sequence screen, press the Timeout Setup button.
2. At the Timeout Setup screen, press the Enable Fold Step Timeout box to add a check.
3. Enter the seconds for a timeout to occur.
   - Range values are 20-360 seconds.

Figure 7
Timeout Setup Screen
SELECTING HYDRAULICS AS AN INSTRUMENT TYPE

Hydraulics must be selected as an instrument display type to appear on the Work screen (Figure 8). All active hydraulics and status appears on the Hydraulics Instrument screen at the Main Work screen. Work screen view is a 1x1 column spread.

To Select a Hydraulics Instrument Display Type:
1. At the Home screen, press the Instruments button.
2. Select one of the open quadrants.
3. At the Display Type screen, select the Hydraulics button.
4. Select the instrument and press the Done button to accept.
   – Press the Clear button to remove the selected data item

Figure 8
Selecting a Quadrant and Hydraulics Instrument Type

NOTE: The Folding sequence function does not have an instrument type that appears on the Work screen.

NOTE: Refer to the IntelliAg ISO 6 Operator’s Manual (Customizing the Work screen).
WORK MODE

While operating, constants defined at the Fold Sequence Setup screen for working hydraulics will display on the Work screen when the master switch is turned on.

WORK MODE HYDRAULICS INFORMATION SCREEN

At the Work Screen, a Hydraulics Information screen is accessible for controlling all configured working hydraulic functions. Pressing the respective button turns on the outputs for the specified function.

To View the Information Screen:

1. At the Work screen, press the Hydraulics Instrument box to highlight.
2. All configured hydraulics are controlled by pressing the respective button on the screen. The hydraulics active state appears on the button.
   - If desired, press the Stop button to turn off the current active hydraulics function or press the active green working hydraulic button to turn on/off.
**DIAGNOSTICS**

The Diagnostics screen displays the current output and input states while viewing/controlling one function. Performing a diagnostics test aids in checking if inputs and outputs are functioning correctly, setup is correct, and inputs are wired correctly.

**To View Diagnostics:**

1. At the Fold Sequence screen, press the **Function Diagnostics** button.
2. At the Diagnostics screen, select the Function from the drop down box.
   - The function’s name, description, and type display with its parameters.
3. Press the **Activate** button to begin diagnostics. The button indicates the current state as activate, moving, done.
   - If desired, press the **Stop** button to turn off the current active hydraulics function.

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**DANGER**

When the START key is engaged, the machine will become operational. All necessary precautions must be taken to ensure user safety. Failure to practice all necessary caution may result in serious injury or death.

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**NOTE:** For troubleshooting and technical assistance, please contact your implement manufacturer.
FOLD SEQUENCE
VERSION 2 & 3 ISO™

DICKEY-john Sales
800-637-2952
agsales@dickey-john.com

DICKEY-john Technical Support
800-637-3302
service@dickey-john.com