

Safety First

Please read and understand your Falcon F5 system Operator's Manual and all supplements completely before operating the equipment described in this guide.

Identifying Sub-k™ Rebar Transmitters

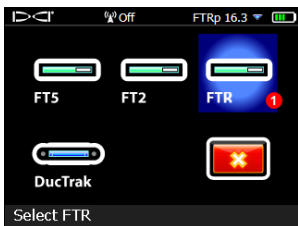
The following Sub-k™ Rebar transmitters are available (**R** identifies Rebar): FTR5Lp (19-inch fluid pressure), FTR5p (15-inch fluid pressure), and FTR5s (8-inch). Sub-k transmitters are only available for the updated Falcon F5 system.

Available Frequency Bands

The Sub-k Up band provides standard-power depth/data capability with options for Bands 7, 11, and 16 for active interference. The mid-power Down band uses these same frequencies for data, but assigns depth/locates to new ultra-low bands 0.3, 0.5, and 0.7 to combat passive interference.

Selecting Rebar

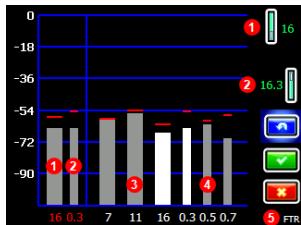
From the Main menu, select **Transmitter selection** , **Transmitter selection** , then **FTR Falcon Transmitter Rebar** .









1. Select FTR transmitter

Optimizing with Sub-k™ Rebar

The frequency optimizer (FO) has a slightly different look when you have a Sub-k Rebar (FTR) transmitter selected. In addition to the currently optimized FO bars at the left, the remaining bars show the active interference (noise) in just six low-frequency bands.

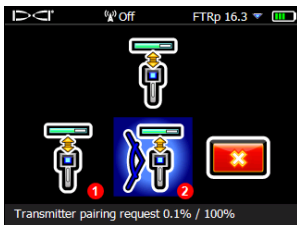


1. Current Up band
2. Current Down band (depth)
3. Interference in data bands 7-16
4. Interference in depth bands 0.3-0.7
5. Current transmitter

1. From the Main menu, select **Transmitter Selection** , then **Frequency Optimization** .
2. With the transmitter off, walk the bore while observing active interference levels in the two currently optimized bands (left side of screen). Interference will be greatest where two bars are highest, and recorded by the red Maximum marks.
3. At the point of greatest interference, select **Scan**  to optimize frequencies in the three data and three depth bands. *If the current optimized bands are already performing as well as these newly optimized bands and you want to continue using them, select **Exit**  and skip to the last step.*
4. Toggle to a wide band (7, 11, or 16) and click twice to select and assign as the Up band.
5. Toggle to a narrow band (0.3, 0.5, or 0.7) and click twice to select and assign as the Down band. This ultra-low frequency band is for depth/locate signal; data signal is sent on the Up band frequency.
6. Insert batteries to power on the transmitter, which will cause interference levels on the graph to spike and confirm that the transmitter is on. If the levels do not change, the transmitter is not powered on.
7. Select **OK**  to assign the bands.
8. At the next screen, select **Transmitter pairing request**  to pair with the Sub-k transmitter.

The lowest band in the ultra-low frequency range (0.3) is always best for passive interference alone. However, if active interference in that band (shown on the FO graph) is high compared to the other bands, consider using 0.5 or 0.7.

9. At the transmitter pairing request screen, select whether to pair in standard pitch or Full Scale Sensitive Pitch mode (FSSP requires an FSSP-capable transmitter; see next page).



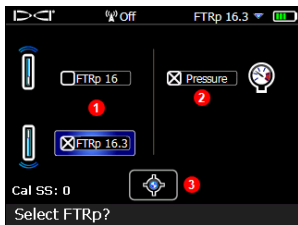
1. Standard pitch mode
2. FSSP mode

10. Pair the transmitter by aligning the IR ports (the divot on the transmitter and the small round port in the upper center portion of the receiver front) and clicking the trigger.
11. After pairing, the Sub-k transmitter defaults to using the Down band. Calibrate with the transmitter in a housing in both the Up and Down bands, then perform an AGR test as described in the Falcon F5 operator's manual.

Switching Bands

Switch the transmitter between Up and Down bands pre- or mid-bore using any of the methods described in the Falcon F5 QSG or operator's manual.

On the receiver, hold-toggle right at the Locate screen to open the Band Selection Menu, where you can switch between the optimized bands and turn on pressure monitoring.






1. Up or Down band
2. Pressure on/off
3. Locate mode

Full Scale Sensitive Pitch (FSSP)

FSSP mode requires an FSSP-capable transmitter. FSSP provides 0.1% pitch resolution throughout the entire range of $\pm 99.9\%$ slope for precision grade work.



FSSP is included on Falcon F5 19- and 15-inch fluid pressure transmitters with software v2.1.1.0 or higher. You can view a transmitter's software version by selecting **Transmitter selection**  from the Main menu, then **Transmitter information** , then **Transmitter information request**  while holding the IR port to the receiver as if you were pairing. If you select FSSP mode while pairing but it is not available on the transmitter, the transmitter will pair but only provide the standard pitch resolution.

Standard fluid pressure resolution is values of 1 psi at 0–75 and 5 at 75–250. However, while in FSSP mode, fluid pressure resolution decreases to values of 5 psi at 0–50, 10 at 50–150, and 20 at 150–250.

Availability

For information on updating your earlier-release Falcon F5 receiver to support Sub-k and FSSP, contact customer service.

Watch our DigiTrak[®] training videos at
www.YouTube.com/DCIKent

For detailed information, see your system operator's manual, available at digital-control.com. If you have questions, contact Customer Service at 425.251.0559 or 800.288.3610 US/CA.